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NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Draper Aden Associates

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Karen Weber Phone: 540-552-0444

E-mail: kweber@daa.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Watauga County Landfill	336 Landfill Road Boone, NC 28607	95-02	.0500	March 3-4, 2014

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☐ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☒ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Karen Weber, P.G. Senior Project Geologist 540-552-0444

Facility Representative Name (Print) Title (Area Code) Telephone Number

Karen Weber 7/1/2014

Signature Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 2155 GEOLOGIST KAREN M. WEBER

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C-0861

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009

GROUNDWATER AND SURFACE WATER ASSESSMENT MONITORING REPORT

March 3-4, 2014 Event

Watauga County Landfill
Watauga County, North Carolina
NCDENR Permit No. 95-02

Prepared For:
Watauga County Board of Commissioners
And
North Carolina Department of Environment and Natural Resources
Division of Solid Waste Management
Solid Waste Section

July 1, 2014

Prepared By:

Draper Aden Associates
Engineering • Surveying • Environmental Services

DAA Project Number: 6520-39

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1.0 INTRODUCTION

This report summarizes the results of the March 2014 Assessment groundwater and surface water sampling event at the Watauga County Landfill, North Carolina Department of Environment and Natural Resources (NCDENR) Permit No. 95-02 (facility). Assessment monitoring was conducted in accordance with the *Watauga County Landfill Assessment Plan* (Draper Aden Associates, 1993) and subsequent monitoring program revisions as approved by NCDENR. This monitoring event represents the first semiannual Assessment monitoring event for 2014.

A remedial cap was installed at the facility in the fall of 1996. The remedial cap constitutes source containment as an intermediate remedial action, as established by the EPA's presumptive remedy directive (EPA 540-F-93-035, 1993). Source containment, institutional controls, monitored natural attenuation, and continued assessment monitoring comprise the broad package of corrective measures currently being conducted at the site. A risk assessment to support the corrective action was completed for the landfill and documented in 1993 and 1996 (Draper Aden Associates 1993, 1996) and updated in 2000 (Draper Aden Associates, 2000) in response to a Consent Agreement between DENR and the County dated July 7, 1993. Continued groundwater monitoring and MNA evaluation support the results of assessment of the 2000 update to the risk assessment conceptual site model.

1.1 Organization of Report

This report is presented in a fully electronic version and as a bound hard copy version.

Electronic Version:

The electronic version of this report is presented in Portable Document Format (PDF; Adobe Systems Inc.) via electronic file transfer, a compact disc (CD), or other electronic media transfer process. Depending upon file size (limited to 50 MB per file), the laboratory analytical reports associated with this report may be presented as separate PDF files.

Hardcopy Version:

Certain appendices associated with this report are presented only in PDF and provided on the CD enclosed with the hard copy version of the report. A complete version of this report, including all appendices is provided on the CD that is enclosed with the hard copy report. The specific information that is not presented in hard copy is identified on the Appendix cover(s) in the hard copy report, and is included in the PDF of the report on the enclosed compact disc.

1.2 Data Transmittal Guidelines

Notification tables are included with this submittal including: 1) Concentrations that exceed North Carolina 2L Groundwater Standards and 2B Surface Water Standards, and 2) Concentrations that Exceed Reporting Limits as outlined in the NCDENR Guidance, dated October 27, 2006, and updated October 16, 2007 for electronic submittal of monitoring data. The Guidance also encourages the electronic submittal of additional reports (including narrative text, additional tables, and figures such as this report), and laboratory data (Appendix E) conforming to the format required by NCDENR electronic submittal guidelines. Note that the laboratory data files provide un-validated results; the validation process is discussed in data validation summary reports presented with the laboratory data. The results presented within this report narrative are based on the validated results.

2.0 SITE DESCRIPTION AND MONITORING PROGRAM

2.1 Site Description

The facility is located approximately 2.75 miles east of the City of Boone, Watauga County, North Carolina south of U.S. Route 421. Development in the vicinity of the landfill is mixed use including residential, commercial, an active quarry, and undeveloped woodland (Figure 1).

The facility is located within the Blue Ridge Belt geologic province in northwestern North Carolina. Geology underlying the site includes an assemblage of metamorphic and plutonic rocks primarily consisting of amphibolite interlayered with granitic gneiss, porphyroclastic biotite-hornblende-plagioclase schist and gneiss, hornblende-biotite gneiss, and hornblende gneiss (Batholemew and Lewis, 1984; Bryant, 1963).

Two aquifer systems exist beneath the facility: an unconfined overburden aquifer and a semi-confined fractured bedrock aquifer. A portion of the groundwater from the fracture controlled aquifer is discharged to the overburden at lower elevations where it eventually migrates to the South Fork of the New River and its tributaries. A similar potentiometric surface inferred from elevation data in groundwater monitoring wells and local private wells installed in both aquifer systems indicate the overburden and fracture controlled aquifers are somewhat interconnected by hydraulically conducive fractures, joints, and/or shear zones. Groundwater flow direction is likely influenced by fracture orientation. Figure 2 illustrates groundwater flow direction at the facility inferred from groundwater elevation data obtained from monitoring wells during the March 2014 monitoring event. Groundwater elevation data are provided on Tables 1A and 1B (Appendix A).

The facility resides within the South Fork of the New River watershed. Three primary drainages are identified at the site (Figure 2): an unnamed tributary of Rocky Branch located directly below the surficial drainage of the fill area (referred to as the North Drainage); an unnamed drainage located below the Bolick Site (referred to as the West Drainage); and an unnamed tributary of Mutton Creek located within the nearby Rock Mountain Heights subdivision (referred to as the Southern Saddle). The North Drainage is the only drainage directly influenced by surface flow from the fill area. Rocky Knob, a topographic knoll located east of the facility and a smaller knoll located southwest are the primary recharge areas at the site.

Along the base of Rocky Knob, discharge is expressed by the presence of surface springs along a northwest trending geologic contact. A series of previously documented springs subsequently covered by landfilling also follow this trend. A spring capture outfall system was installed prior to waste disposal, monitored as surface water sample location S2 (discussed further in Section 1.4).

2.2 Groundwater Monitoring Well Network

Nineteen groundwater monitoring wells (MW-1 through MW-19) were installed at the Watauga County Landfill. Monitoring well locations are shown on the Groundwater and Surface Water Monitoring Program Site Map (Figure 1) and the March 2014 Potentiometric Map (Figure 2). As noted on Figure 2, MW-6 and MW-16 were abandoned in April 1996 due to their proximity to construction of the landfill cap and Route 421 bypass, respectively. Additionally, MW-7 was abandoned in October 2002 to permit the extension of the transfer station access routes at the site.

In 2012, to accommodate development near MW-11 and MW-12 these wells were extended and completed to surface grade. Flush mounted 6" steel covers were installed atop each well. Both locations are accessible for groundwater monitoring.

In order to maximize the effectiveness and efficiency of the groundwater monitoring program, the assessment well network is defined as "core" wells or "boundary" wells. Core wells were selected based on each well's ability to monitor and characterize migration of potential impacts. Boundary wells were selected based on each well's ability to monitor and characterize the horizontal and vertical extent of impact. Core wells include MW-1, MW-2, MW-3, MW-8, MW-9, MW-10, MW-11, MW-12, MW-15, MW-17, and MW-19 (Figure 2). Boundary wells include MW-4 MW-5, MW-13, MW-14, and MW-18 (Figure 2).

The overburden aquifer is absent upgradient of the fill area. Compliance monitoring wells were primarily completed in the fracture controlled aquifer. Monitoring wells MW-3 (paired with deep well MW-17) and MW-11 (paired with deep well MW-12) were completed in the shallow soil aquifer within the West Drainage. Depth to groundwater observed in March 2014 ranges from approximately 5 to 65 ft. below the ground surface, consistent with historical depth to water measurements.

2.3 Surface Water Sampling Network

The goal of the surface water monitoring system at the Watauga County Landfill is to provide representative surface water samples for assessing the water quality downgradient of the waste disposal area. Five surface water monitoring points serve to meet this objective, as illustrated on Figure 2 and outlined below:

- S-1 Sampled to assess the surface water originating from the landfill before the water discharges into the stream.
- S-2 Sampled to assess the surface water originating from the spring capture system located beneath the fill area.
- S-3 Sampled to assess the surface water of the stream below the waste disposal area. (No sampling location is available upstream of the waste disposal area since the stream originates immediately below and adjacent to the disposal area.)
- S-4 Sampled to assess the surface water beneath the Bolick site. (This sampling location was chosen instead of the sediment pond located on the Bolick site to provide a sample that is more representative of the potential influence of groundwater from the shallow soil aquifer.)
- S-5 Sampled to assess a seep located below the waste disposal area observed in June 1994.

Previously, surface location S-6 was sampled to assess the persistence of surface water impacts further downgradient of S-4. During construction of the adjacent property in 2012, location S-6 was filled and concealed during site grading and is no longer present. Samples continue to be collected from S-4.

During each sampling event, a reconnaissance of the landfill is conducted to identify the presence or absence of leachate production at the surface of the landfill. No leachate production zone has been observed during the sampling events conducted since the initiation of monitoring in 1994.

2.4 Sampling and Analysis Schedule

Background monitoring began in 1993 at the Watauga County Landfill. The results of background sampling were provided in the facility's Assessment Plan (Draper Aden Associates, 1993). Based

on the results of background sampling and successive assessment sampling events the following inorganic and organic parameters are currently included on the facility's target parameter lists:

- Inorganic Parameters – Barium, chromium, cobalt, iron, nickel, and vanadium.
- Organic Parameters – Benzene, chloroethane, dichlorodifluoromethane, 1,1-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, tetrachloroethene, trichloroethene, methylene chloride, vinyl chloride, 1,1,1-trichloroethane, chlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, and 1,2-dichloropropane.

As approved by NCDENR, monitoring of additional parameters outlined in 40CFR Part 258 Appendix II – List of Hazardous Organic and Inorganic Constituents that have not been confirmed in monitoring wells to date is no longer required.

In 1998 NCDENR approved a subset of wells to reduce sampling parameters within the core network. As noted below, boundary wells are not included in the current monitoring program; however, these wells are maintained at the site and used to collect periodic water level measurements. Groundwater monitoring wells and surface water locations are currently sampled as follows:

Sample Locations	Sample Frequency	Sample Parameters
Core Well Subset (MW-2, MW-3, MW-8, MW-9, MW-12, MW-17)	Semiannual	Organic Target Parameters
	Annual (Spring Event)	Inorganic Target Parameters
Remaining Core Well (MW-1, MW-10, MW-11, MW-15, MW-19)	Annual (Fall Event)	Organic Target Parameters
Boundary Wells (MW-4 MW-5, MW-13, MW-14, MW-18)	n/a	n/a
Surface Sample Locations (S-1, S-2, S-3, S-4, S-5)	Semiannual	Organic Target Parameters

The March 2014 event included semiannual sampling and analysis of organic target parameters for the core well subset and the surface water sampling locations and annual sampling and analysis of inorganic target parameters in the core well subset.

Additionally, six residential/commercial private wells are sampled semiannually for 59 volatile organic compounds by USEPA method 524.2 (see Chain-of-Custody documentation with laboratory data for a list of compounds analyzed by 524.2). The parameters analyzed at each residence include the facility's organic COCs.

2.5 Monitored Natural Attenuation for Groundwater Remedy

Site specific sampling provides historical data for evidence that natural attenuation processes occur in groundwater to reduce solid waste constituent mass and concentration. The core monitoring wells are located at upgradient, cross-gradient, and downgradient locations relative to the groundwater plume and waste unit. Historical data tables are provided in Appendix D, and along with 2013 data (Appendix B) show decreasing concentrations over time and changing relative ratios of parent-daughter chlorinated organic compounds. The results, discussed later in this report are demonstrative of intrinsic bioremediation, which is the primary means by which natural attenuation processes reduce constituent mass. Although NC2L groundwater protection standards continue to be exceeded at the site, natural attenuation processes are successfully reducing the concentration, extent, and total mass of impact.

3.0 FIELD SAMPLING PROCEDURES

Groundwater and surface water samples were collected in accordance with the facility's Assessment Plan (Draper Aden Associates, 1993). Field procedures conducted during the sampling event are presented in the following sections. Field sample collection procedures also generally conform to current USEPA guidance. Copies of field notes recorded during the March 2014 event are included in Appendix C.

3.1 Well Purging and Sample Collection

Prior to conducting field activities, field personnel donned disposable powder-free nitrile gloves and applicable personal protection equipment. New gloves were donned prior to conducting each purging and sample collection activity. Prior to the start of groundwater sample collection activities, a water level indicator was used to measure the depth to water in each monitoring well. Monitoring wells are generally purged and sampled using a dedicated submersible electric pump. All non-dedicated equipment (i.e., water level indicator) was decontaminated between sampling of each monitoring well.

The volume of water residing in each well was calculated from depth to water measurements and a minimum of three well casing volumes of water was purged from each well or until the well was purged dry prior to sample collection. During well purging, indicator parameters pH, specific conductance (SC), and temperature were measured to evaluate physicochemical groundwater quality prior to sample collection. Each monitoring well was purged until the field parameters approached general steady state conditions. Approximate stabilization of field measurements of pH, SC, and temperature suggested that groundwater being sampled was representative of the near-aquifer. The field measurements were recorded in the field notes included in Appendix C.

Within 24 hours of purging, groundwater samples were collected from each monitoring well in order of decreasing volatility: volatile organic compounds (method 8260B) and total metals (6000 and 7000 series methods). All groundwater samples were containerized and preserved in accordance with USEPA protocols, labeled and immediately placed on ice in a cooler.

Each private well is sampled from exterior spigots at each location; prior to sampling an attempt is made to confirm that no new filters have been added that would affect the sample results. Water is allowed to run for approximately 5 minutes to clear the water line before samples are collected. Discharge water is diverted toward vegetative areas to allow for infiltration into the soil.

3.2 Field Meter Equipment and Calibration

Field measurements of pH, SC, oxidation-reduction potential (ORP), dissolved oxygen (DO), and temperature were analyzed at each well by completing multiple measurements throughout the purge. A YSI model 650 pH/SC/ORP/DO/temperature meter was used for the field measurements of these parameters. The meter was calibrated in the field using laboratory-grade buffers for pH and KCl solution for SC. Field calibration and measurements are documented in the field notes taken for this event and are presented in Appendix C.

3.3 Quality Control Samples

Quality control (QC) field samples consisted of trip blanks for all required analyses. The trip blanks were prepared and supplied by the analytical laboratories and utilized sample containers identical in physical and chemical integrity to the containers used for actual sample collection. The trip blanks were filled with a water matrix, preserved, and sealed by the analytical laboratories. The trip blanks accompanied the actual field samples throughout the sample collection event and served to evaluate potential extraneous sample contamination associated with sample kit preparation, field activities, and/or transportation. Field blanks were not collected, due to the use of dedicated purging/sampling equipment. Additional quality control samples were prepared and analyzed by the laboratory, such as method blanks, reagent blanks, and matrix spikes.

3.4 Sample Containers and Shipment

Groundwater samples were collected in USEPA approved containers prepared and supplied by the analyzing laboratory. The types and volumes of sample containers used, as well as the respective methods of preservation, were recorded on chain-of-custody (COC) documentation (included with the laboratory data). Groundwater samples were containerized and preserved in accordance with USEPA protocols, labeled, and immediately placed on ice in a cooler. A custody seal was placed on each sample cooler prior to shipping to verify samples were not disturbed during transport. Each

cooler containing groundwater samples was transported via overnight carrier to the analytical laboratory with appropriate COC documentation.

3.5 Chain of Custody Documentation

Standardized COC forms were used to document custody of the samples from the time they were collected in the field to the time the samples were relinquished to the analytical laboratory. COC documentation includes site location information, sample collection locations, numbers and types of sample containers, sample preservation methods, filtration procedures, MS/MSD samples, blank samples, dates and times of sample collections, names of sample collectors, and dates and times of each custody change. COC documentation was transported with the samples to the respective analytical laboratories. COC documentation is included with the analytical laboratory reports (Appendix E).

4.0 PRESENTATION OF VALIDATED RESULTS

As required under NCDENR Memorandum for *Environmental Monitoring Data for North Carolina Solid Waste Management Facilities* dated October 16, 2007, the following additional information is presented on CD-ROM under the folder Electronic Data Deliverables (EDD):

- NCDENR Environmental Monitoring Data Form,
- Original Laboratory Analytical Reports, and
- Analytical Results based on NCDENR EDD templates.

Please note the data on EDD are presented as received from the laboratory (i.e., unvalidated data). The following sections discuss results after Draper Aden Associates completed third party validation of the data. Validated results are presented on Table 2A Organic Results – Core Wells, Table 2B Organic Results – Surface Water Samples, and Table 2C Inorganic Results, Appendix B. Historic Data Tables are presented in Appendix D.

4.1 Laboratory Analysis

Commercial analytical laboratories were contracted to provide identification and quantitation of target parameters. Analysis for VOCs by Methods 8260B was performed by CompuChem Environmental Corporation, a division of Liberty Analytical Corporation of Cary, North Carolina. Analysis for VOCs by EPA Method 524.2 for private well samples was performed by Lancaster Laboratories of Lancaster, Pennsylvania (NC state-certified lab for Method 524.2). Quality assurance and quality control objectives were established to ensure the groundwater monitoring data were of adequate quality for the intended use. The objectives include: precision, accuracy, representativeness, completeness and comparability along with internal quality control methods for field procedures. The use of these quality control measures help to validate the findings of this monitoring even

Analytical methods were performed in accordance with the procedures outlined in the USEPA document *Test Methods for Evaluating Solid Waste – Physical/Chemical Methods, SW-846, 3rd ed., Final Update I, II/IIA and III* (USEPA, 1996) (commonly referred to as SW-846). The analytical methods used for this project were the most appropriate methods available within the

framework of NCDENR and SW-846. The laboratory analytical reports and associated data validation documentation are presented in Appendix E on CD-ROM.

Draper Aden Associates validated the data set in general accordance with SW-846, the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999),* and *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008),* where applicable and the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004),* and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010),* where applicable.. In addition, the analytical laboratory QA/QC data were evaluated for conformance with and adherence to prescribed data quality objectives (DQOs). Predefined standardized data validation qualifiers were used to communicate unique characteristics of the data identified in the review process.

4.2 Analytical Results - Target Organic Parameters and Regulatory Exceedances

Analytical results of target organic parameters are presented on Table 2A (Appendix B). Organic detections are compared to USEPA Maximum Contaminant Limits and NC2L Groundwater Standards, listed on Table 2A. If a NC 2L Groundwater Standard does not exist, then a designated Groundwater Protection Standard (GPS) is used pursuant to 15 A NCAC 13B.1634; GPSs are also listed on Table 2A. Solid Waste Section Limits (SWSLs), which are also presented on Table 2A, define quantification limits for environmental monitoring data collected at North Carolina Solid Waste Management Facilities.

Figure 3 illustrates the location of wells where target organic parameters were detected at a concentration that exceeded the NC2L standard during this event. The following list identifies the target organic parameters that exceed the NC2L standards on the March 2014 monitoring event, and the monitoring well(s) in which the parameters were observed:

- 1,1-Dichloroethane in wells MW-2 and MW-12.
- 1,1-Dichloroethene in MW-2.
- Tetrachloroethene in wells MW-2.

- 1,1,1-Trichloroethane in well MW-2.

Target organic parameters were detected in surface water samples collected from S-2, S-4, and S-5 (Table 2B); however no surface water detections were observed above the USEPA MCL or current NC 15A NCAC 2B Surface Water Quality Standard (Human Health).

4.3 Analytical Results - Target Inorganic Parameters and Regulatory Exceedances

Analytical results of target inorganic parameters are presented on Table 2C (Appendix B).

- Detections of iron, a common naturally occurring element, exceeded the NC 2L standard in wells MW-3 (west drainage: located near the property boundary) and MW-8 (north drainage: located near the facility boundary).

- Chromium in MW-3 exceeded its 2L standard, but was below the MCL of 100 µg/l.

- Detections of cobalt in MW-3, MW-8, MW-9, MW-12, and MW-17 were observed at values exceeding the interim 2L standard of 1.0 µg/l; however, all results were less than NCDENR's posted Solid Waste Section Limits (SWSL) of 10 µg/l.

- Detections of vanadium in MW-3, MW-8, and MW-12 were observed at values exceeding the 2L standard of 0.3 µg/l; however, all results were less than NCDENR's posted Solid Waste Section Limits (SWSL) of 25 µg/l.

4.4 Analytical Results - Non-target Organic Parameters

Though not part of the routine target parameter list, additional volatile organic compounds are analyzed and reported by Method 8260B. Estimated concentrations (less than the laboratory QL) of the following were observed during the March 2014 event including: chloroform in well MW-12, acetone in MW-8, toluene in MW-3, and 1,2-dichlorobenzene in MW-12 (Table 3, Appendix B). All detections were significantly lower than their respective NC2L standard. Of these, chloroform has historically been detected at estimated concentrations in well MW-2, MW-12 and MW-17. These additional non-target organic parameters will continue to be monitored semiannually by Method 8260B.

4.5 Private Well Sampling Results

Private well sampling began in 1993. Sampling between 1994 and 2000 was jointly conducted by the Appalachian District Health Department (ADHD) and the NC State Laboratory of Public Health. Private well sampling between 2001 and the present were conducted by Draper Aden Associates at the direction of Watauga County with oversight by State officials. The objective of the private well sampling and analysis program is to investigate and evaluate the potential influence and associated risks from the landfill on neighboring groundwater resources.

As noted previously, six residential/commercial private wells are sampled semiannually for volatile organic compounds by USEPA method 524.2 as follows (see Figure 2 for approximate well locations):

- 2239 Hwy 421 South (Well Reference No. 1) – Not In Use
- 2347 Hwy 421 South (Well Reference No. 2) – Non-potable Use Only
- BREMCO, 2491 Hwy 421 South (BREMCO previously Well Reference NO. 5) – Not In Use
- Hollar and Greene Produce, 230 Cabbage Row (H+G Produce previously Well Reference No. 6) – In Use
- 2711 Hwy 421 South (Well Reference No. 15) – Non-potable Use Only
- 2737 Hwy 421 South (Well Reference No. 16) – Non-potable Use Only

All locations, except Hollar and Greene Produce were apparently connected to the City of Boone public drinking water supply. Analytical results from the March 2014 sampling of these wells are discussed below. Target analytes that were detected on the March 2014 sampling event are presented on Table 4 (Appendix B); historical private well results are provided in Appendix D. No analytes were detected in well No. 16. Note, during the field event, no electricity was available at Well Reference No. 1 and the pump was inoperable; therefore, samples could not be collected.

Draper Aden Associates reviewed the data prior to submitting results to the individual property owners; however, a formal validation of the data was not conducted. The following NC2L or MCL exceedances were identified in samples collected during the March 2014 sampling event:

- Similar to historic data, 1,1-Dichloroethane concentrations reported for the BREMCO well (Well No. 5) and Well No. 2 exceed the NC2L standard. Both locations are connected to the public water system. Since groundwater is not used as a drinking water source at these locations, no immediate action is planned in response to the detection of 1,1-Dichloroethane at this time.

The March 2014 target parameter results observed in the six private well samples are consistent with historical results from these wells. The Hollar & Greene Produce well is the only private well sampled that is apparently still in use as a potable water source. No target organic parameters were detected above the laboratory quantitation limit (QL) in Hollar & Greene Produce well, which is consistent with historical monitoring.

Given that the remaining private wells are either not in use (BREMCO, Well Reference No. 1), or are non-potable water sources (Well References No. 2, 15 and 16), no further immediate action is proposed. Semiannual monitoring of the six residential/commercial private wells will continue.

Historically, 61 wells that are adjacent to the landfill were sampled at least once for potential impact from the landfill. Residences primarily in the southern saddle and western drainage were connected to public water as noted on Figure 2. 18 of the 61 wells were sampled multiple times as part of the private well sampling program, most recently in 2008 with no indication of impact from the landfill. No further sampling of these wells is planned at this time.

5.0 SUMMARY OF MONITORING

The following discussions summarize the observed parent-daughter relationships that suggest MNA processes are progressing toward diminishing the mass and concentration of target organic parameters in groundwater.

5.1 Field Data

Field measurements of oxidation-reduction potential (ORP) and dissolved oxygen (DO) are monitored during well purging and immediately before sample collection and documented in the field notes (Appendix C). Field measurements of ORP and DO during the March 2014 event were consistent with historical observations in the same wells.

While field-measured parameters are useful indicators, intrinsic biodegradation susceptibility and progress toward target organic parameter degradation via MNA processes are reflected by the ratios of parent (source) to daughter (product) analyte concentrations discussed in the following sections.

5.2 Parent-Daughter Compounds

Both parent and daughter compounds are observed in each of the three flow paths: western drainage, northern drainage, and southern saddle. The biotic degradation (microbially mediated oxidation-reduction reactions that degrade contaminants) of tetrachloroethene(PCE)→trichloroethene(TCE)→cis-1,2-dichloroethene(cis-1,2-DCE)→vinyl chloride (VC) is observed in all three drainage areas and the degradation of 1,1,1-trichloroethane (1,1,1-TCA)→1,1-dichloroethane(1,1-DCA)→Chloroethane is observed in the northern drainage area and to a lesser degree in the southern saddle. Additional abiotic degradation (chemical transformation that degrades without microbial facilitation) of 1,1,1-trichloroethane→1,1-dichloroethene (1,1-DCE)→vinyl chloride is also evident in the northern drainage.

The private well associated with the BREMCO facility has historically detected a suite of target organic parameters. The analytical data from this well and parent-daughter compounds present help define the extent of plume migration in the northern drainage.

5.3 Temporal Trend Evaluation

Trends in organic data are evaluated annually when all core monitoring wells are sampled (Fall event) since only a subset of wells are sampled during the Spring event and will be presented in the facility's second semiannual groundwater monitoring report. However, a review of March 2014 data indicated similar concentrations of organic parameters in the core subset compared to results from data collected from the same wells in September 2013.

Monitoring results indicate reductions in the extent and concentration of impact to groundwater have occurred across the site. Although target constituents continue to be observed in off-site locations, reductions in concentrations and extent are observed. Analytical data collected from the core monitoring wells are used to evaluate groundwater quality in the western drainage, northern drainage, and southern saddle and provide continuous data for evaluation of plume degradation.

6.0 CONCLUSIONS

Assessment groundwater monitoring data collected to date provides evidence of solid waste constituent plume attenuation. Ongoing monitoring will provide temporal data necessary to continue assessing constituent transport, migration, and fate. As plume attenuation continues, source controls (cap) will reduce leachate production. Natural attenuation processes will continue to reduce plume mass and concentrations and provide for a continuously diminished plume boundary.

Ongoing natural attenuation indicator monitoring is expected to enable the identification of conditions affecting reductive dechlorination and aerobic degradation processes existing at impacted locations across the site. The identification of favorable and/or unfavorable site conditions that can either promote or limit active natural attenuation processes may enable the relaxation of factors impeding intrinsic reduction and oxidation reactions at the site.

Private well sampling will continue at the site to evaluate potential risk to these water sources. Environmental receptors, such as surface streams, have been identified and impact is not anticipated based on surface and groundwater data collected to date.

6.1 Recommended Actions

Source containment, institutional controls, monitored natural attenuation under assessment monitoring, and private well sampling comprise the broad package of corrective measures currently being conducted at the site. It is recommended that these activities continue at the site.

The second assessment monitoring event for 2014 is currently scheduled for September. Subsequent monitoring events will be conducted in accordance with the following monitoring program schedule:

- Semiannual monitoring of the core monitoring well subset;
- Annual analysis for target metals;
- Semiannual surface water monitoring; and
- Semiannual private well sampling.

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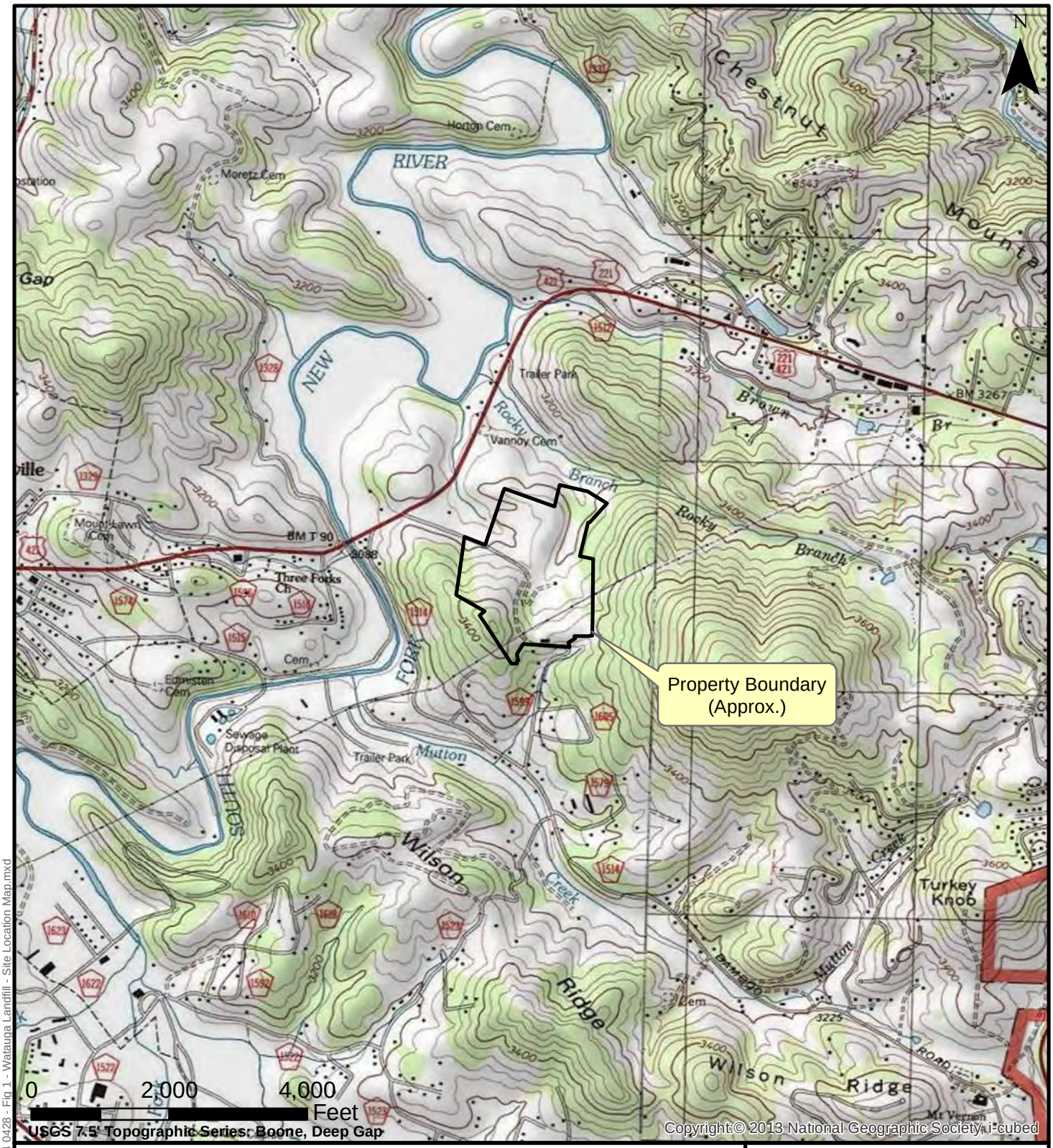
FIGURES



Site Location Map

Watauga County Landfill
Watauga County, North Carolina

SCALE 1"=2000'

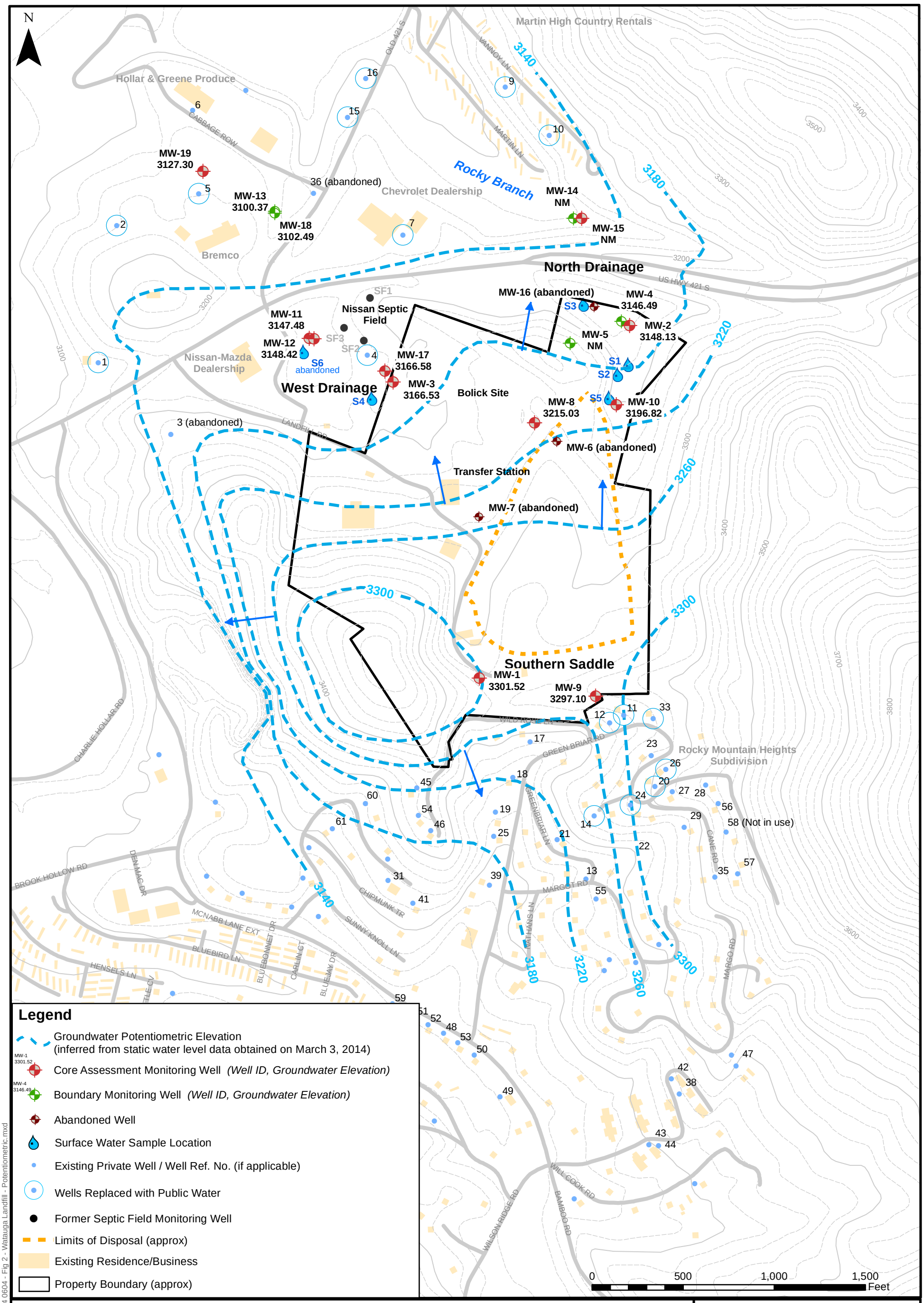
PLAN NO. 6520-39

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services
2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291
Richmond, VA
Charlottesville, VA
Hampton Roads, VA

DESIGNED JW
DRAWN MF
CHECKED JW
DATE 04-28-14

FIGURE
1

Path: P:\06\500\06520\06520-39\GIS\MAP - 14 0428 - Fig 1 - Watauga Landfill - Site Location Map.mxd



Potentiometric Surface Map
March 2014

Watauga County Landfill
Watauga County, North Carolina

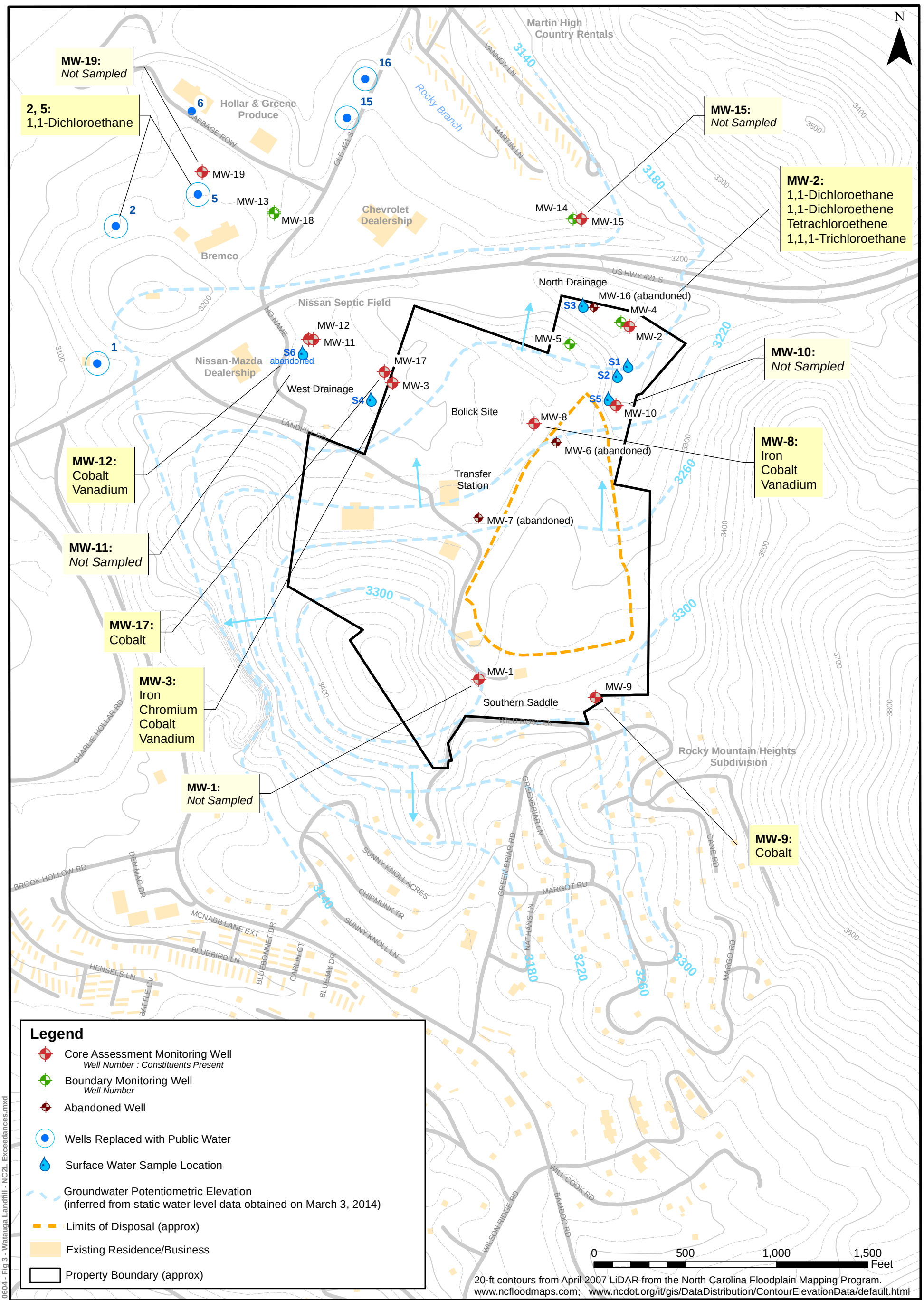
SCALE 1" = 500'
PLAN NO. 6520-39

Draper Aden Associates
Engineering • Surveying • Environmental Services
2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291
Richmond, VA
Charlottesville, VA
Hampton Roads, VA

DESIGNED JW
DRAWN MF
CHECKED JW
DATE 06-04-14

FIGURE 2

Path: P:\06\500\06520\06520-39\GIS\MAP - 14 0604 - Fig 2 - Watauga Landfill - Potentiometric.mxd



NC2L Exceedances
March 2014

Watauga County Landfill
Watauga County, North Carolina

SCALE 1" = 500'

PLAN NO. 6520-39

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services
2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291
Richmond, VA
Charlottesville, VA
Hampton Roads, VA

DESIGNED JW
DRAWN MF
CHECKED JW
DATE 06-04-14

FIGURE
3

Path: P:\06\500\06520\06520-39\GIS\MAP - 14 0604 - Fig 3 - Watauga Landfill - NC2L Exceedances.mxd

APPENDIX A

Groundwater Elevation Data

Table 1A. Groundwater Elevation Data

Watauga County Landfill, Facility ID No. 95-02

Well ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8*	MW-9	MW-10
GS Elevation	3339.03	3151.24	3182.25	3150.06	3263.81	3262.55	3270.56	3235.39	3356.65	3202.18
MP Elevation	3341.80	3152.94	3183.12	3152.52	3267.69	3266.04	3273.53	3239.77	3359.23	3203.87
DATE	**GROUNDWATER ELEVATION**									
6/20/94	3303.80	3145.06	3164.69	3139.04	NM	3221.92	3250.50	3222.09	3299.88	3195.69
9/27/94	3302.11	3145.43	3165.70	3142.07	NM	3222.05	3242.80	3222.39	3301.44	3195.78
2/6/95	3304.23	3147.36	3166.92	3144.34	3217.30	3223.19	3227.65	3224.36	3299.69	3196.14
4/11/95	3303.86	3146.48	3166.27	3143.30	3218.74	3223.23	3224.42	3223.72	3299.93	3195.97
7/10/95	3300.60	3146.34	3165.69	3143.58	NM	3222.31	3224.55	3222.35	3279.06	3195.96
4/9/96	3303.09	3147.09	3176.11	3144.12	3217.82	3223.17	3229.21	3222.97	3297.95	3196.2
4/8/97	3303.50	3147.35	3166.77	NM	NM	AB	3233.03	3222.34	3296.76	3196.2
1/13/98	3298.09	3145.94	3165.61	3143.98	3212.23	AB	3229.35	3219.45	3295.67	3195.62
6/23/98	3304.96	3147.00	3169.11	NM	NM	AB	3230.46	3222.85	3297.08	3196.55
1/11/99	3297.24	3145.28	3164.25	3143.67	3212.58	AB	3235.64	3216.94	3294.84	3195.19
7/12/99	3298.93	3146.16	3167.96	NM	NM	AB	3227.74	3219.85	3295.18	3195.62
2/1/00	3297.70	3145.32	3166.07	3143.40	3211.61	AB	3232.28	3218.37	3294.82	3195.46
8/8/00	3299.43	3145.52	3165.84	NM	NM	AB	3227.88	3218.52	3295.53	3195.33
2/12/01	3295.00	3144.89	3164.20	3143.42	3209.02	AB	3230.81	3215.50	3294.63	3194.74
8/7/01	NM	3145.78	3168.47	NM	NM	AB	NM	3220.24	3295.29	NM
2/11/02	3297.01	3146.02	3166.87	3144.52	3209.28	AB	3229.42	3217.02	3295.24	3195.22
8/12/02	3297.14	3143.80	3164.49	NM	NM	AB	3226.19	NM	3294.99	3194.51
1/21/03	NM	3146.22	3168.52	NM	NM	AB	AB	NM	3294.99	NM
7/14/03	3302.39	3147.69	3169.23	NM	NM	AB	AB	NM	3296.84	3196.4
3/16/04	3301.23	3148.28	3168.11	NM	3216.32	AB	AB	NM	3296.19	3196.21
9/30/04	NM	3149.83	3169.62	NM	NM	AB	AB	NM	3296.79	3196.38
3/30/05	3302.06	3149.09	3168.89	NM	NM	AB	AB	NM	3296.24	3196.57
10/03/05	NM	3146.81	3165.31	NM	NM	AB	AB	NM	3294.74	3196.02
4/3/06	NM	3147.74	3166.32	NM	NM	AB	AB	NM	3295.10	3196.18
9/27/06	3300.67	3147.49	3167.52	NM	NM	AB	AB	NM	3294.85	3195.85
4/3/07	NM	3148.25	3167.58	NM	NM	AB	AB	NM	3295.41	NM
9/18/07	NM	3145.90	3162.22	NM	NM	AB	AB	NM	3293.98	3195.06
3/10/08	NM	3147.54	3167.15	NM	NM	AB	AB	3230.95	3294.67	NM
9/8/08	NM	3146.05	3163.29	NM	NM	AB	AB	3210.28	3294.62	3195.16
3/11/09	NM	3147.11	3164.29	NM	NM	AB	AB	3214.63	3294.81	NM
9/1/09	NM	3147.34	3165.14	NM	NM	AB	AB	3215.32	3295.72	3196.09
3/17/10	NM	3149.62	3168.37	NM	NM	AB	AB	3225.45	3297.28	NM
9/13/10	NM	3146.86	3162.43	NM	NM	AB	AB	NM	3294.89	3195.97
3/16/11	3299.25	3147.91	3164.80	3146.92	3205.59	AB	AB	NM	3295.61	3195.89
9/6/11	3299.92	3147.32	3163.31	3146.47	3211.23	AB	AB	3233.87	3296.39	3195.92
3/7/12	3302.26	3147.96	3166.74	3146.82	3212.78	AB	AB	3215.99	3296.10	3196.78
9/4/12	3299.82	3146.51	3162.13	3144.96	3214.11	AB	AB	3211.74	3295.83	3196.15
3/4/13	3302.04	3148.42	3165.89	3146.45	3208.92	AB	AB	3219.49	3296.62	3196.83
9/3/13	3305.92	3148.62	3169.34	3146.60	3221.14	AB	AB	3220.47	3298.20	3198.16
3/3/14	3301.52	3148.13	3166.53	3146.49	3212.11	AB	AB	3215.03	3297.10	3196.82

* MW-8 was damaged and the steel casing bent affecting the ability to accurately measure depth to groundwater.

1) All measurements in feet above mean sea level.
2) GS = Ground Surface.
3) MP = Measuring Point (Top of PVC).
4) NM = Not measured.
5) AB = Well Abandoned.

Table 1B. Groundwater Elevation Data

Watauga County Landfill, Facility ID No. 95-02

Well ID	MW-11	MW-11*	MW-12	MW-12*	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19
GS Elevation	3156.44	3164.50	3156.82	3164.05	3117.39	3117.00	3117.15	3141.42	3181.14	3117.12	3125.00
MP Elevation	3159.60	3164.30	3159.15	3163.85	3119.72	3120.00	3120.65	3142.72	3183.62	3119.63	3140.00
DATE	**GROUNDWATER ELEVATION**										
6/20/94	3146.25	New Measuring Point Elevation as of September 2012.	3148.11	New Measuring Point Elevation as of September 2012.	3100.06	3112.06	3108.73	3137.40	3165.69	3101.70	-
9/27/94	3146.38		3148.37		3100.15	3112.11	3108.83	3137.04	3165.79	3101.77	-
2/6/95	3146.38		3148.54		3100.33	3112.48	3109.10	3138.11	3166.57	3102.05	-
4/11/95	3146.60		3148.57		3100.19	3112.25	3108.78	3137.61	3166.14	3101.98	-
7/10/95	3147.07		3148.67		3100.10	3112.26	3108.69	3138.18	3165.51	3101.69	-
4/9/96	3146.87		3148.77		3100.16	3112.41	3108.80	3138.05	3165.84	3101.82	-
4/8/97	3147.32		3149.67		NM	NM	3108.74	AB	3166.45	NM	3135.15
1/13/98	3147.12		3149.50		3099.97	3112.56	3108.91	AB	3165.02	3101.31	3129.79
6/23/98	3147.78		3150.04		NM	NM	3108.86	AB	3168.79	NM	NM
1/11/99	3147.19		3149.69		3099.67	3112.81	3108.86	AB	3163.78	3101.07	NM
7/12/99	3148.23		3150.40		NM	NM	NM	AB	3166.54	NM	NM
2/1/00	3147.22		3149.97		3099.41	3112.28	3108.47	AB	3165.85	3100.86	NM
8/8/00	3147.81		3150.21		NM	NM	NM	AB	3165.76	NM	NM
2/12/01	3147.20		3149.92		3099.69	3112.32	3108.56	AB	3164.41	3101.40	NM
8/7/01	NM		3150.38		NM	NM	NM	AB	3168.15	NM	NM
2/11/02	3147.57		3150.29		3099.91	3112.58	3108.80	AB	3166.52	3101.58	3115.35
8/12/02	3147.44		3149.98		NM	NM	NM	AB	3163.58	NM	NM
1/21/03	NM		3150.50		NM	NM	NM	AB	3168.18	NM	NM
7/14/03	3148.51		3150.88		NM	NM	NM	AB	3168.76	NM	NM
3/16/04	3146.78		3149.91		NM	NM	NM	AB	3167.83	NM	NM
9/30/04	3147.54		3150.50		NM	NM	NM	AB	3168.35	NM	NM
3/30/05	3146.38		3149.13		NM	NM	NM	AB	3168.50	NM	NM
10/03/05	3145.09		3148.21		NM	NM	NM	AB	3165.09	NM	NM
4/3/06	3145.59		3148.50		NM	NM	NM	AB	3166.07	NM	3125.58
9/27/06	3145.77		3148.61		NM	NM	NM	AB	3167.21	NM	NM
4/3/07	NM		3148.65		NM	NM	NM	AB	3167.39	NM	NM
9/18/07	3144.83		3147.65		NM	NM	NM	AB	3163.46	NM	NM
3/10/08	NM		3148.52		NM	NM	NM	AB	3167.07	NM	NM
9/8/08	3145.45		3147.94		NM	NM	NM	AB	3163.49	NM	NM
3/11/09	NM		3148.25		NM	NM	NM	AB	3164.37	NM	NM
9/1/09	3146.12		3148.47		NM	NM	NM	AB	3165.28	NM	NM
3/17/10	NM		3149.14		NM	NM	NM	AB	3167.74	NM	NM
9/13/10	3145.02		3147.54		NM	NM	NM	AB	3163.74	NM	NM
3/16/11	3146.03		3148.01		3100.49	3113.40	3109.35	AB	3164.85	3102.28	3122.85
9/6/11	3147.41		3148.37		3100.68	NM	NM	AB	3164.09	3102.45	3124.58
3/7/12	3145.92		3147.94		3100.48	NM	NM	AB	3166.59	3102.60	3126.40
9/4/12	NM		NM		3100.29	3112.12	NM	AB	3162.67	3102.33	3125.45
3/4/13	-	3147.25	-	3147.95	3100.71	NM	NM	AB	3166.00	3102.65	3124.73
9/3/13	3143.70	3148.40	-	3149.10	3101.05	NM	NM	AB	3169.23	3103.43	3131.36
3/3/14	3142.78	3147.48	-	3148.42	3100.37	NM	NM	AB	3166.58	3102.49	3127.36

1) All measurements in feet above mean sea level.
2) GS = Ground Surface.
3) MP = Measuring Point (Top of PVC).
4) NM = Not measured.
5) AB = Well Abandoned.
*Wells MW-11 and MW-12 were extended in late 2012 as part of construction on the property on which they lie. Measuring point elevations were adjusted to reflect the well extensions.

APPENDIX B

Analytical Data Tables

Table 2A. Summary of Analytical Results for Groundwater Samples-Organic Parameters (2010 -present)

Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1

All Results in ug/L.

Date	*MW-1*	*Q*	*MW-2*	*Q*	*MW-3*	*Q*	*MW-8*	*Q*	*MW-9*	*Q*	*MW-10*	*Q*	*MW-11*	*Q*	*MW-12*	*Q*	*MW-15*	*Q*	*MW-17*	*Q*	*MW19*	*Q*	*LOQ*	*Method*	*MCL*	*GPS*	*NC 2L*	*SWSL*
Benzene																									***CAS#*** 71-43-2			
3/4/2014	-		-		U		U		0.12	J	-		-		U		-		U		-		0.5	8260B	5	-	1	1
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		0.13	J	-		U		U		-		U		U		0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		U		U		0.2	J	-		U		U		-		U		-		0.5	8260B				
9/4/2012	U		U	J	U		0.045	J	0.48	J	U	J	-		0.033	J	U		U		U		0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		U		U		0.74		-		-		0.034	J	-		U		-		0.5	8260B				
9/6/2011	U		U		U		U		1.68		0.0307	J	U		U		-		U		U		0.5	8260B				
3/16/2011	-		U		U		U		2		-		-		0.15	J	-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		0.16	J	-		-		-		0.84	8260B				
9/14/2010	U		U		U		U		2.8		U		U		-		U		U		U		0.5	8260B				
3/18/2010	-		U		U		U		3		-		-		0.23	J	-		U		-		0.5	8260B				
Chlorobenzene																									***CAS#*** 108-90-7			
3/4/2014	-		-		U		U		0.024	J	-		-		U		-		U		-		0.5	8260B	100	-	50	3
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		0.031	J	-		U		U		-		U		U		0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		U		U		0.048	J	-		U		U		-		U		-		0.5	8260B				
9/4/2012	U		U	J	U		U		U		U	J	-		U		U		U		U		0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		U		U		U		-		-		U		-		U		-		0.5	8260B				
9/6/2011	U		U		U		U		0.285	J	U		U		0.156	J	-		U		U		0.5	8260B				
3/16/2011	-		U		U		U		0.37	J	-		-		0.21	J	-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		U		-		-		-		0.84	8260B				
9/14/2010	U		U		U		U		0.42	J	U		U		-		U		U		U		0.5	8260B				
3/18/2010	-		U		U		U		0.41	J	-		-		0.23	J	-		U		-		0.5	8260B				

Table 2A. Summary of Analytical Results for Groundwater Samples-Organic Parameters (2010 -present)

Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1

All Results in ug/L.

Date	MW-1	Q	MW-2	Q	MW-3	Q	MW-8	Q	MW-9	Q	MW-10	Q	MW-11	Q	MW-12	Q	MW-15	Q	MW-17	Q	MW19	Q	LOQ	Method	MCL	GPS	NC 2L	SWSL
Chloroethane																									CAS# 75-00-3			
3/4/2014	-		-		0.48	J	U		U		-		-		0.68		-		U		-		0.5	8260B	-	-	3000	10
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		U		-		0.73		0.92		-		U		U		0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		0.64		U		0.26	J	-		1.3		1.8		-		0.23	J	-		0.5	8260B				
9/4/2012	U		U	J	1.4		3		0.54		U	J	-		2		U		U		U		0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		1		0.85		1.2		-		-		3.3		-		U		-		0.5	8260B				
9/6/2011	U		U		1.94		3.51		2.02		U		1.96		5.04		-		U		U		0.5	8260B				
3/16/2011	-		U		1.9		U		1.9		-		-		6.4		-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		7	J	-		-		-		0.84	8260B				
9/14/2010	U		U		5.1	J	2.2	J	4.2	J	U		2.1	J	-		U		U		U		0.5	8260B				
3/18/2010	-		U		2.6		U		3.8		-		-		6.5		-		U		-		0.5	8260B				
1,4-Dichlorobenzene																									CAS# 106-46-7			
3/4/2014	-		-		U		U		U		-		-		U		-		U		-		0.5	8260B	75	-	6	1
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		0.75		-		U		U		-		U		U		0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		U		U		0.93		-		U		0.063	J	-		U		-		0.5	8260B				
9/4/2012	U		U	J	U		U		0.93		U	J	-		U		U		U		U		0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		U		U		1.2		-		-		U		-		U		-		0.5	8260B				
9/6/2011	U		U		U		0.182	J	1.53		U		0.21	J	1.4		-		U		U		0.5	8260B				
3/16/2011	-		U		U		U		1.7		-		-		1.7		-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		1.4		-		-		-		0.84	8260B				
9/14/2010	U		U		U		U		1.6		U		U		-		U		U		U		0.5	8260B				
3/18/2010	-		U		U		U		1.2		-		-		1.5		-		U		-		0.5	8260B				

See last page of this report for definitions.

Table 2A. Summary of Analytical Results for Groundwater Samples-Organic Parameters (2010 -present)
Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1
All Results in ug/L.

Date	MW-1	Q	MW-2	Q	MW-3	Q	MW-8	Q	MW-9	Q	MW-10	Q	MW-11	Q	MW-12	Q	MW-15	Q	MW-17	Q	MW19	Q	LOQ	Method	MCL	GPS	NC 2L	SWSL
Dichlorodifluoromethane																									CAS# 75-71-8			
3/4/2014	-		-		U		U		0.072	J	-		-		U		-		U		-		0.5	8260B	-	-	1000	5
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U	J	-		U	J	U	J	0.24	J	-		U	J	U	J	-		U	J	0.12	J	0.5	8260B				
9/3/2013	-		U	J	-		-		-		U	J	-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		U		U		0.18	J	-		U		U		-		U		-		0.5	8260B				
9/4/2012	U		U	J	U		U		U		U	J	-		U		U		U		U		0.5	8260B				
3/9/2012	-		U	J	-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		U	J	U	J	U	J	-		-		U	J	-		U	J	-		0.5	8260B				
9/6/2011	U		U		U		U		0.538		U		U		U		-		U		U		0.5	8260B				
3/16/2011	-		U		U		U		0.49	J	-		-		U		-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		U		-		-		-		0.84	8260B				
9/14/2010	U		U		U		U		0.55		U		U		-		U		U		U		0.5	8260B				
3/18/2010	-		U	J	U	J	U	J	0.43	J	-		-		0.14	J	-		0.038	J	-		0.5	8260B				
1,1-Dichloroethane																									CAS# 75-34-3			
3/4/2014	-		-		2.7		U		1.5		-		-		9.3		-		0.74		-		0.5	8260B	-	NE	6	5
3/2/2014	-		43		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		1.7		U		2.6		-		5.2		9.3		-		0.79		0.62		0.5	8260B				
9/3/2013	-		45		-		-		-		32		-		-		-		-		-		6.3	8260B				
3/5/2013	-		34		2.6		U		3.7		-		7.6		11		-		0.92		-		0.5	8260B				
9/6/2012	-		-		-		-		-		4.8		-		-		-		-		-		1	8260B				
9/6/2012	-		45		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2012	U		-		4.7		0.3	J	4.8		-		-		11		0.11	J	0.95		1.9		0.5	8260B				
3/9/2012	-		31		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		2.5		0.26	J	5.7		-		-		13		-		0.93		-		0.5	8260B				
9/6/2011	U		30.4		5.69		0.704		7.08		7.94		10.3		14.6		-		1.03		0.238	J	0.5	8260B				
3/16/2011	-		21		7.5		0.12	J	7.7		-		-		17		-		2		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		17		-		-		-		0.84	8260B				
9/14/2010	U		48		10		0.71		10		8.9		11		-		0.1	J	2.2		1.4		0.5	8260B				
3/18/2010	-		56		7.8		0.057	J	13		-		-		19		-		1		-		0.5	8260B				

See last page of this report for definitions.

Table 2A. Summary of Analytical Results for Groundwater Samples-Organic Parameters (2010 -present)

Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1

All Results in ug/L.

Date	*MW-1*	*Q*	*MW-2*	*Q*	*MW-3*	*Q*	*MW-8*	*Q*	*MW-9*	*Q*	*MW-10*	*Q*	*MW-11*	*Q*	*MW-12*	*Q*	*MW-15*	*Q*	*MW-17*	*Q*	*MW19*	*Q*	*LOQ*	*Method*	*MCL*	*GPS*	*NC 2L*	*SWSL*
1,2-Dichloroethane																									***CAS#*** 107-06-2			
3/4/2014	-		-		U		U		U		-		-		U		-		U		-		0.5	8260B	5	-	0.4	1
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		U		-		U		U		-		U		U		0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		U		U		U		-		0.085	J	0.12	J	-		U		-		0.5	8260B				
9/4/2012	U		U	J	U		U		U		U	J	-		U		U		U		U		0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		U		U		U		-		-		U		-		U		-		0.5	8260B				
9/6/2011	U		U		U		U		U		U		0.104	J	0.189	J	-		U		U		0.5	8260B				
3/16/2011	-		U		U		U		U		-		-		0.32	J	-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		0.34	J	-		-		-		0.84	8260B				
9/14/2010	U		U		0.18	J	U		U		U		0.12	J	-		U		U		U		0.5	8260B				
3/18/2010	-		U		0.11	J	U		0.065	J	-		-		0.4	J	-		U		-		0.5	8260B				
1,1-Dichloroethene																									***CAS#*** 75-35-4			
3/4/2014	-		-		U		U		U		-		-		0.084	J	-		U		-		0.5	8260B	7	-	7	5
3/2/2014	-		61		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		U		-		U		U		-		U		U		0.5	8260B				
9/3/2013	-		82		-		-		-		57		-		-		-		-		-		6.3	8260B				
3/6/2013	-		55		-		-		-		-		-		-		-		-		-		5	8260B				
3/5/2013	-		-		U		U		U		-		U		0.16	J	-		U		-		0.5	8260B				
9/6/2012	-		63		-		-		-		-		-		-		-		-		-		5	8260B				
9/6/2012	-		-		-		-		-		6.3		-		-		-		-		-		1	8260B				
9/4/2012	U		-		U		U		U		-		-		0.14	J	U		U		U		0.5	8260B				
3/9/2012	-		60		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		U		U		U		-		-		U		-		U		-		0.5	8260B				
9/6/2011	-		62.9		-		-		-		-		-		-		-		-		-		4.17	8260B				
9/6/2011	U		-		U		U		U		13.7		U		U		-		U		U		0.5	8260B				
3/16/2011	-		39		U		U		U		-		-		0.25	J	-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		0.23	J	-		-		-		0.84	8260B				
9/14/2010	U		70		U		U		U		12		0.083	J	-		U		U		U		0.5	8260B				
3/18/2010	-		89		0.072	J	U		U		-		-		0.27	J	-		U		-		0.5	8260B				

See last page of this report for definitions.

Table 2A. Summary of Analytical Results for Groundwater Samples-Organic Parameters (2010 -present)

Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1

All Results in ug/L.

Date	MW-1	Q	MW-2	Q	MW-3	Q	MW-8	Q	MW-9	Q	MW-10	Q	MW-11	Q	MW-12	Q	MW-15	Q	MW-17	Q	MW19	Q	LOQ	Method	MCL	GPS	NC 2L	SWSL
cis-1,2-Dichloroethene																									CAS# 156-59-2			
3/4/2014	-		-		4.3		U		0.39	J	-		-		14		-		1.2		-		0.5	8260B	70	-	70	5
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		2.7		U		0.56		-		8.3		16		-		1.2		0.086	J	0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		4.5		U		0.9		-		13		19		-		1.4		-		0.5	8260B				
9/4/2012	U		U	J	9.6		0.47	J	1.7		U	J	-		21		U		1.3		0.18	J	0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		6.9		0.21	J	3.4		-		-		32		-		2.1		-		0.5	8260B				
9/6/2011	U		U		14.6		0.489	J	4.47		U		18.9		33.4		-		1.81		U		0.5	8260B				
3/16/2011	-		U		17		0.042	J	5.2		-		-		35		-		3.5		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		35		-		-		-		0.84	8260B				
9/14/2010	U		0.2	J	25		0.51		6.9		U		19		-		U		3.5		0.17	J	0.5	8260B				
3/18/2010	-		0.26	J	21		U		8.2		-		-		41		-		1.9		-		0.5	8260B				
trans-1,2-Dichloroethene																									CAS# 156-60-5			
3/4/2014	-		-		0.09	J	U		U		-		-		0.22	J	-		U		-		0.5	8260B	100	-	100	5
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		U		-		0.1	J	0.19	J	-		U		U		0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		0.078	J	U		U		-		0.16	J	0.25	J	-		U		-		0.5	8260B				
9/4/2012	U		U	J	0.14	J	U		0.059	J	U	J	-		0.24	J	U		U		U		0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		0.088	J	U		U		-		-		0.22	J	-		U		-		0.5	8260B				
9/6/2011	U		U		0.193	J	U		0.211	J	U		0.259	J	0.383	J	-		U		U		0.5	8260B				
3/16/2011	-		U		0.26	J	U		0.24	J	-		-		0.44	J	-		0.059	J	-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		0.49	J	-		-		-		0.84	8260B				
9/14/2010	U		U		0.35	J	U		0.32	J	U		0.24	J	-		U		0.082	J	U		0.5	8260B				
3/18/2010	-		U		0.29	J	U		0.34	J	-		-		0.54		-		U		-		0.5	8260B				

Table 2A. Summary of Analytical Results for Groundwater Samples-Organic Parameters (2010 -present)

Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1

All Results in ug/L.

Date	MW-1	Q	MW-2	Q	MW-3	Q	MW-8	Q	MW-9	Q	MW-10	Q	MW-11	Q	MW-12	Q	MW-15	Q	MW-17	Q	MW19	Q	LOQ	Method	MCL	GPS	NC 2L	SWSL
1,2-Dichloropropane																									CAS# 78-87-5			
3/4/2014	-		-		U		U		U		-		-		0.28	J	-		U		-		0.5	8260B	5	-	0.6	1
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		U		-		0.14	J	0.27	J	-		U		U		0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		U		U		U		-		0.22	J	0.3	J	-		U		-		0.5	8260B				
9/4/2012	U		U	J	0.15	J	U		U		U	J	-		0.38	J	U		U		U		0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		U		U		U		-		-		0.37	J	-		U		-		0.5	8260B				
9/6/2011	U		U		0.156	J	U		0.133	J	U		0.301	J	0.434	J	-		U		U		0.5	8260B				
3/16/2011	-		U		0.21	J	U		0.15	J	-		-		0.54		-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		0.56	J	-		-		-		0.84	8260B				
9/14/2010	U		U		0.37	J	U		0.24	J	U		0.41	J	-		U		U		U		0.5	8260B				
3/18/2010	-		U		0.31	J	U		0.28	J	-		-		0.77		-		U		-		0.5	8260B				
Methylene chloride																									CAS# 75-09-2			
3/4/2014	-		-		U		U		U		-		-		U		-		U		-		0.5	8260B	5	-	5	1
3/2/2014	-		0.49	J	-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		U		-		U		U		-		U		U		0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		U		U		U		U		-		U		U		-		U		-		0.5	8260B				
9/4/2012	U	J	U	J	U	J	U	J	U	J	U	J	-		U	J	U	J	U	J	U	J	0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		U		U		U		-		-		U		-		U		-		0.5	8260B				
9/6/2011	U		U		U		U		U		U		U		0.0655	J	-		U		U		0.5	8260B				
3/16/2011	-		U		U		U		U		-		-		U	A	-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		U		-		-		-		0.84	8260B				
9/14/2010	U		U		U		U		U		U		U		-		U		U		U		0.5	8260B				
3/18/2010	-		U		U		U		U		-		-		U		-		U		-		0.5	8260B				

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Table 2A. Summary of Analytical Results for Groundwater Samples-Organic Parameters (2010 -present)

Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1

All Results in ug/L.

Date	*MW-1*	*Q*	*MW-2*	*Q*	*MW-3*	*Q*	*MW-8*	*Q*	*MW-9*	*Q*	*MW-10*	*Q*	*MW-11*	*Q*	*MW-12*	*Q*	*MW-15*	*Q*	*MW-17*	*Q*	*MW19*	*Q*	*LOQ*	*Method*	*MCL*	*GPS*	*NC 2L*	*SWSL*
Tetrachloroethene																									***CAS#*** 127-18-4			
3/4/2014	-		-		U		U		0.28	J	-		-		0.12	J	-		0.52		-		0.5	8260B	5	-	0.7	1
3/2/2014	-		3.9	J	-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		0.43	J	-		0.071	J	0.13	J	-		1.7		0.37	J	0.5	8260B				
9/3/2013	-		3.9	J	-		-		-		13		-		-		-		-		-		6.3	8260B				
3/5/2013	-		1.8	J	U	J	U	J	0.32	J	-		0.063	J	0.13	J	-		0.61	J	-		0.5	8260B				
9/6/2012	-		-		-		-		-		4.5		-		-		-		-		-		1	8260B				
9/4/2012	U		2.6	J	0.063	J	U		0.37	J	-		-		0.28	J	0.074	J	0.46	J	0.58		0.5	8260B				
3/9/2012	-		3.2	J	-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		0.1	J	U		0.58		-		-		0.29	J	-		3.2		-		0.5	8260B				
9/6/2011	U		3.15		0.173	J	U		0.682		2.41		0.219	J	0.423	J	-		0.751		0.276	J	0.5	8260B				
3/16/2011	-		1.3	J	0.19	J	U	J	0.56	J	-		-		1.7	J	-		0.53	J	-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		0.82	J	-		-		-		0.84	8260B				
9/14/2010	U		3.3		U		U		0.83		2.1		0.39	J	-		U		0.43	J	0.84		0.5	8260B				
3/18/2010	-		4.8		0.13	J	U		0.36	J	-		-		2.8		-		1.5		-		0.5	8260B				

See last page of this report for definitions.

Table 2A. Summary of Analytical Results for Groundwater Samples-Organic Parameters (2010 -present)

Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1

All Results in ug/L.

Date	MW-1	Q	MW-2	Q	MW-3	Q	MW-8	Q	MW-9	Q	MW-10	Q	MW-11	Q	MW-12	Q	MW-15	Q	MW-17	Q	MW19	Q	LOQ	Method	MCL	GPS	NC 2L	SWSL
1,1,1-Trichloroethane																									***CAS#*** 71-55-6			
3/4/2014	-		-		U		U		U		-		-		U		-		U		-		0.5	8260B	200	NE	200	1
3/2/2014	-		290		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		U		U		U		-		U		U		-		U		U		0.5	8260B				
9/3/2013	-		360		-		-		-		280		-		-		-		-		-		6.3	8260B				
3/6/2013	-		240		-		-		-		-		-		-		-		-		-		5	8260B				
3/5/2013	-		-		U		U		U		-		U		U		-		U		-		0.5	8260B				
9/6/2012	-		300		-		-		-		-		-		-		-		-		-		5	8260B				
9/6/2012	-		-		-		-		-		32		-		-		-		-		-		1	8260B				
9/4/2012	U		-		U		U		U		-		-		U		0.17	J	U		U		0.5	8260B				
3/9/2012	-		280		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		U		U		U		-		-		U		-		U		-		0.5	8260B				
9/6/2011	-		253		-		-		-		-		-		-		-		-		-		4.17	8260B				
9/6/2011	-		-		-		-		-		57.6		-		-		-		-		-		1.04	8260B				
9/6/2011	U		-		U		U		U		-		U		U		-		U		U		0.5	8260B				
3/16/2011	-		160		U		U		U		-		-		U		-		U		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		U		-		-		-		0.84	8260B				
9/14/2010	U		330		U		U		U		58		U		-		0.35	J	U		U		0.5	8260B				
3/18/2010	-		470		U		0.1	J	U		-		-		0.082	J	-		U		-		0.5	8260B				
Trichloroethene																									***CAS#*** 79-01-6			
3/4/2014	-		-		0.41	J	U		0.12	J	-		-		1.3		-		0.3	J	-		0.5	8260B	5	-	3	1
3/2/2014	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
9/4/2013	U		-		0.31	J	U		0.23	J	-		0.79		1.5		-		0.32	J	U		0.5	8260B				
9/3/2013	-		U		-		-		-		U		-		-		-		-		-		6.3	8260B				
3/5/2013	-		0.28	J	0.54		U		0.31	J	-		1.1		1.8		-		0.31	J	-		0.5	8260B				
9/4/2012	U		0.42	J	1		0.2	J	0.37	J	0.098	J	-		2.2		U		0.34	J	U		0.5	8260B				
3/9/2012	-		U		-		-		-		-		-		-		-		-		-		5	8260B				
3/8/2012	-		-		0.64		0.11	J	0.54		-		-		2.7		-		0.55		-		0.5	8260B				
9/6/2011	U		0.296	J	1.49		0.244	J	0.763		0.13	J	1.79		3.28		-		0.384	J	U		0.5	8260B				
3/16/2011	-		0.22	J	2.1		U		0.83		-		-		3.4		-		0.66		-		0.5	8260B				
9/15/2010	-		-		-		-		-		-		-		3.6		-		-		-		0.84	8260B				
9/14/2010	U		0.44	J	2.8		0.29	J	1.1		U		2.1		-		U		0.73		U		0.5	8260B				
3/18/2010	-		0.54		2.3		U		1.2		-		-		3.9		-		0.43	J	-		0.5	8260B				

See last page of this report for definitions.

Table 2A. Summary of Analytical Results for Groundwater Samples-Organic Parameters (2010 -present)

Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1

All Results in ug/L.

Date	*MW-1 Q*	*MW-2 Q*	*MW-3 Q*	*MW-8 Q*	*MW-9 Q*	*MW-10 Q*	*MW-11 Q*	*MW-12 Q*	*MW-15 Q*	*MW-17 Q*	*MW19 Q*	*LOQ*	*Method*	*MCL*	*GPS*	*NC 2L*	*SWSL*
Vinyl chloride														***CAS#*** 75-01-4			
3/4/2014	-	-	U	U	U	-	-	U	-	U	-	0.5	8260B	2	-	0.03	1
3/2/2014	-	U	-	-	-	-	-	-	-	-	-	5	8260B				
9/4/2013	U J	-	U J	U J	U J	-	U J	U J	-	U J	U J	0.5	8260B				
9/3/2013	-	U J	-	-	-	U J	-	-	-	-	-	6.3	8260B				
3/5/2013	-	0.27 J	U	U	U	-	0.082 J	U	-	U	-	0.5	8260B				
9/4/2012	U	0.39 J	U	U	0.21 J	U J	-	U	U	U	U	0.5	8260B				
3/9/2012	-	U	-	-	-	-	-	-	-	-	-	5	8260B				
3/8/2012	-	-	U	U	0.5 J	-	-	U	-	U	-	0.5	8260B				
9/6/2011	U	0.234 J	U	U	1.21	U	0.345 J	0.743	-	U	U	0.5	8260B				
3/16/2011	-	U	U	U	1.2	-	-	1.2	-	U	-	0.5	8260B				
9/15/2010	-	-	-	-	-	-	-	1.3 J	-	-	-	0.84	8260B				
9/14/2010	U	0.37 J	U	U	2 J	U	0.37 J	-	U	U	U	0.5	8260B				
3/18/2010	-	0.55 J	0.23 J	U	1.9 J	-	-	1.7 J	-	U	-	0.5	8260B				

Definitions: Q Denotes qualifier. LOQ Denotes limit of quantitation. U Denotes parameter not detected above LOQ. J Denotes parameter reported above LOQ and associated result is estimated. When used with a "U" (i.e., "UJ"), denotes LOQ is estimated. UA Denotes parameter not detected above adjusted sample LOQ. R Denotes result rejected. MCL - EPA Maximum Contaminant Limit. GPS - NC Groundwater Protection Standards. (-) denotes undefined by NC DENR. NC 2L - North Carolina Groundwater Standard (15A NCAC 2L.0202) April 1, 2013. SWSL - NCDENR Solid Waste Section Limit. For analytical results, (-) denotes not analyzed. For MCL, GPS, NC2L, and SWSL (-) denotes not established.

Notes: Due to a reporting format issue and differing quantitation limits, multiple dates are used to present data from each event (i.e., both 3/2/2014 and 3/4/2014 data represent the March 2014 event data).

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MW-11 could not be sampled during September 2012 due to construction activities on the adjacent property.

Table 2B. Summary of Analytical Results for Surface Water Samples-Organic Parameters (2010-present)
Watauga Landfill, Facility ID 95-02

All Results in ug/L.

Date	*S-1*	*Q*	*S-2*	*Q*	*S-3*	*Q*	*S-4*	*Q*	*S-5*	*Q*	*S-6*	*Q*	*LOQ*	*Method*	*MCL*	*NC 2B*	*SWSL*
Benzene															***CAS#*** 71-43-2		
3/4/2014	U		0.12	J	U		U		U		-		0.5	8260B	5	1.9	1
9/4/2013	U		0.19	J	0.043	J	U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		0.63	J	U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		1.1	J	U		U		U		U		5	SOM01.2			
Chlorobenzene															***CAS#*** 108-90-7		
3/4/2014	U		0.1	J	U		U		U		-		0.5	8260B	100	488	3
9/4/2013	U		U		0.043	J	U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		0.7	J	U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		0.76	J	U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		0.58	J	U		U		U		U		5	SOM01.2			
Chloroethane															***CAS#*** 75-00-3		
3/4/2014	U		2.5		U		U		U		-		0.5	8260B	-	NE	10
9/4/2013	U		3		U		U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		6.6		U		1.8	J	U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		4.3	J	U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		24		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		27		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		25		U		2.4	J	U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		16		U		U		U		U		5	SOM01.2			

See last page of this report for definitions.

Table 2B. Summary of Analytical Results for Surface Water Samples-Organic Parameters (2010-present)
Watauga Landfill, Facility ID 95-02

All Results in ug/L.

Date	*S-1*	*Q*	*S-2*	*Q*	*S-3*	*Q*	*S-4*	*Q*	*S-5*	*Q*	*S-6*	*Q*	*LOQ*	*Method*	*MCL*	*NC 2B*	*SWSL*
1,4-Dichlorobenzene															***CAS#*** 106-46-7		
3/4/2014	U		0.56		U		U		U		-		0.5	8260B	75	488	1
9/4/2013	U		0.76		U		U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		1.6	J	U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	0.53	J	1.8	J	U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		2.5	J	U		U		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		2.2	J	U		U		U		U		5	SOM01.2			
Dichlorodifluoromethane															***CAS#*** 75-71-8		
3/4/2014	U		0.093	J	U		U		U		-		0.5	8260B	-	NE	5
9/4/2013	U	J	0.16	J	U	J	U	J	0.46	J	-		0.5	8260B			
3/5/2013	U		U		U		U		1.8	J	-		5	SOM01.2 VOA LOW			
9/4/2012	U		0.6	J	U		U		3.6	J	-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		3.3	J	U		5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		U		0.43	J	U		5	SOM01.2			
1,1-Dichloroethane															***CAS#*** 75-34-3		
3/4/2014	U		0.4	J	U		0.56		U		-		0.5	8260B	-	NE	5
9/4/2013	U		0.63		0.13	J	0.4	J	0.083	J	-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		2.1	J	U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		2.7	J	U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		1.5	J	U		1.5	J	U		U		5	SOM01.2 VOA LOW			
9/14/2010	0.59	J	2.5	J	U		3.9	J	U		U	J	5	SOM01.2 VOA LOW			
3/18/2010	U		2	J	U		1.4	J	U		U		5	SOM01.2			

Table 2B. Summary of Analytical Results for Surface Water Samples-Organic Parameters (2010-present)
Watauga Landfill, Facility ID 95-02

All Results in ug/L.

Date	S-1	Q	S-2	Q	S-3	Q	S-4	Q	S-5	Q	S-6	Q	LOQ	Method	MCL	NC 2B	SWSL
1,2-Dichloroethane															CAS# 107-06-2		
3/4/2014	U		U		U		U		U		-		0.5	8260B	5	NE	1
9/4/2013	U		U		U		U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		U		U		U		5	SOM01.2			
1,1-Dichloroethene															CAS# 75-35-4		
3/4/2014	U		U		U		U		U		-		0.5	8260B	7	NE	5
9/4/2013	U		U		U		U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		U		U		U		5	SOM01.2			
cis-1,2-Dichloroethene															CAS# 156-59-2		
3/4/2014	U		0.065	J	U		0.71		U		-		0.5	8260B	70	NE	5
9/4/2013	U		0.15	J	0.046	J	0.57		U		-		0.5	8260B			
3/5/2013	U		U		U		0.81	J	U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		4.2	J	U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		0.9	J	U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		0.65	J	U		2.9	J	U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		0.79	J	U		8.3		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		0.96	J	U		3.4	J	U		U		5	SOM01.2			

See last page of this report for definitions.

Table 2B. Summary of Analytical Results for Surface Water Samples-Organic Parameters (2010-present)
Watauga Landfill, Facility ID 95-02

All Results in ug/L.

Date	S-1	Q	S-2	Q	S-3	Q	S-4	Q	S-5	Q	S-6	Q	LOQ	Method	MCL	NC 2B	SWSL
trans-1,2-Dichloroethene															CAS# 156-60-5		
3/4/2014	U		U		U		U		U		-		0.5	8260B	100	NE	5
9/4/2013	U		U		U		U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		U		U		U		5	SOM01.2			
1,2-Dichloropropane															CAS# 78-87-5		
3/4/2014	U		U		U		U		U		-		0.5	8260B	5	NE	1
9/4/2013	U		U		U		U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		U		U	J	5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		U		U		U		5	SOM01.2			
Methylene chloride															CAS# 75-09-2		
3/4/2014	U		U		U		U		U		-		0.5	8260B	5	NE	1
9/4/2013	U		U		U		U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		U		U		U		5	SOM01.2			

Table 2B. Summary of Analytical Results for Surface Water Samples-Organic Parameters (2010-present)

Watauga Landfill, Facility ID 95-02

All Results in ug/L.

Date	*S-1*	*Q*	*S-2*	*Q*	*S-3*	*Q*	*S-4*	*Q*	*S-5*	*Q*	*S-6*	*Q*	*LOQ*	*Method*	*MCL*	*NC 2B*	*SWSL*
Tetrachloroethene															***CAS#*** 127-18-4		
3/4/2014	U		U		U		U		U		-		0.5	8260B	5	0.7	1
9/4/2013	U		U		U		U		U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		U		U		U		5	SOM01.2			
1,1,1-Trichloroethane															***CAS#*** 71-55-6		
3/4/2014	U		U		U		U		1		-		0.5	8260B	200	NE	1
9/4/2013	U		0.027	J	U		U		0.52		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		1.2	J	U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		2.3	J	U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		1.6	J	U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		0.89	J	U		5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		U		0.71	J	U		5	SOM01.2			
Trichloroethene															***CAS#*** 79-01-6		
3/4/2014	U		U		U		0.14	J	U		-		0.5	8260B	5	2.5	1
9/4/2013	U		U		U		0.11	J	U		-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		0.81	J	U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		1.5	J	U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		0.52	J	U		U		5	SOM01.2			

See last page of this report for definitions.

Table 2B. Summary of Analytical Results for Surface Water Samples-Organic Parameters (2010-present)
Watauga Landfill, Facility ID 95-02

All Results in ug/L.

Date	*S-1*	*Q*	*S-2*	*Q*	*S-3*	*Q*	*S-4*	*Q*	*S-5*	*Q*	*S-6*	*Q*	*LOQ*	*Method*	*MCL*	*NC 2B*	*SWSL*
Vinyl chloride															***CAS#*** 75-01-4		
3/4/2014	U		U		U		U		U		-		0.5	8260B	2	0.025	1
9/4/2013	U	J	U	J	U	J	U	J	U	J	-		0.5	8260B			
3/5/2013	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
9/4/2012	U		U		U		U		U		-		5	SOM01.2 VOA LOW			
3/8/2012	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/6/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/16/2011	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
9/14/2010	U		U		U		U		U		U		5	SOM01.2 VOA LOW			
3/18/2010	U		U		U		U		U		U		5	SOM01.2			

Definitions: *Q Denotes qualifier. LOQ Denotes limit of quantitation. U Denotes parameter not detected above LOQ. J Denotes parameter reported above LOQ and associated result is estimated. When used with a "U" (i.e., "UJ"), denotes LOQ is estimated. UA Denotes parameter not detected above adjusted sample LOQ. R Denotes result rejected. MCL - EPA Maximum Contaminant Limit. NC 2B - North Carolina Surface Water Standard (15A NCAC 2B.0200). For analytical results (-) denotes not analyzed. For MCL and NC2B standards (-) or NE denotes not established.*

Notes: *Sample location S-6 was removed during construction on the adjacent property and is no longer a part of the surface water monitoring network as of the Septmeber 2012 event.*

Table 2C. Summary of Analytical Results for Groundwater Samples-Inorganic Parameters (2010 -present)
Core Groundwater Monitoring Wells
Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1
All Results in ug/L.

Date	*MW-2*	*Q*	*MW-3*	*Q*	*MW-8*	*Q*	*MW-9*	*Q*	*MW-12*	*Q*	*MW-17*	*Q*	*LOQ*	*Method*	*MCL*	*GPS*	*NC 2L*	*SWSL*
Barium															***CAS#*** 7440-39-3			
3/4/2014	237		187		62.3		380		298		238		10	6020A	2000	-	700	100
3/5/2013	213		104		34.8		464		287		220		10	ILM05.4				
3/8/2012	187	J	107	J	148	J	542		285		225		200	ILM05.4				
3/16/2011	214		156	J	48.5	J	612		303		355		200	ILM05.4				
3/18/2010	304	J	128	J	232	J	604	J	330	J	521	J	200	ILM05.4				
Chromium															***CAS#*** 7440-47-3			
3/4/2014	0.236	J	10.1		2.83		0.432	J	0.312	J	0.4	J	2	6020A	100	-	10	10
3/5/2013	U	J	21.7	J	U	J	U	J	2	J	U	J	2	ILM05.4				
3/8/2012	U		11.9		9.8	J	U		U		U		10	ILM05.4				
3/16/2011	U		7.4	J	8.7	J	U		U		U		10	ILM05.4				
3/18/2010	U		U		30		U		U		U		10	ILM05.4				
Cobalt															***CAS#*** 7440-48-4			
3/4/2014	0.128	J	1.69		1.12		4		1.38		1.25		1	6020A	-	1	1	10
3/5/2013	U		U		2		5.2		2		1.4		1	ILM05.4				
3/8/2012	U		U		12.2	J	6.7	J	U		U		50	ILM05.4				
3/16/2011	U		U		U		U		U		U		50	ILM05.4				
3/18/2010	U		U		9.3	J	6.8	J	U		3.7	J	50	ILM05.4				
Iron															***CAS#*** 7439-89-6			
3/4/2014	U		7340		2220		142	J	U		U		200	6010C		-	300	300
3/5/2013	U		2030		399		127		329		U		100	ILM05.4				
3/8/2012	41.8	J	406		4460		253		U		103		100	ILM05.4				
3/16/2011	U		3040		3200		545		95.9	J	249		100	ILM05.4				
3/18/2010	1600	J	1860	J	9620	J	67.8	J	U	J	455	J	100	ILM05.4				
Nickel															***CAS#*** 7440-02-0			
3/4/2014	0.803	J	4.74		2.48		1.79		3.16		1.57		1	6020A	-	-	100	50
3/5/2013	U		4.2		1.1		2		3.1		1.4		1	ILM05.4				
3/8/2012	U		4.9	J	8.1	J	1.1	J	2	J	0.88	J	40	ILM05.4				
3/16/2011	U		U		U		U		U		U		40	ILM05.4				
3/18/2010	2.8	J	3.3	J	14.1	J	U		3.4	J	4.1	J	40	ILM05.4				

See last page of this report for definitions.

Table 2C. Summary of Analytical Results for Groundwater Samples-Inorganic Parameters (2010 -present)
Core Groundwater Monitoring Wells
Watauga Landfill, Facility ID 95-02

Upgradient Well = MW-1
All Results in ug/L.

Date	*MW-2*	*Q*	*MW-3*	*Q*	*MW-8*	*Q*	*MW-9*	*Q*	*MW-12*	*Q*	*MW-17*	*Q*	*LOQ*	*Method*	*MCL*	*GPS*	*NC 2L*	*SWSL*
Vanadium															***CAS#*** 7440-62-2			
3/4/2014	1.11	J	13.8		3.74	J	0.137	J	0.694	J	0.148	J	5	6020A	-	0.3	0.3	25
3/5/2013	2	J	U		0.84	J	U		0.48	J	U		5	ILM05.4				
3/8/2012	0.81	J	U		8.3	J	U		U		U		50	ILM05.4				
3/16/2011	U		U		U		U		U		U		50	ILM05.4				
3/18/2010	3.9	J	4.6	J	19.5	J	U		0.9	J	1.1	J	50	ILM05.4				

Definitions: Q Denotes qualifier. LOQ Denotes limit of quantitation. U Denotes parameter not detected above LOQ. J Denotes parameter reported above LOQ and associated result is estimated. When used with a "U" (i.e., "UJ"), denotes LOQ is estimated. UA Denotes parameter not detected above adjusted sample LOQ. R Denotes result rejected. MCL - EPA Maximum Contaminant Limit. GPS - NC Groundwater Protection Standards. NC 2L - North Carolina Groundwater Standard (15A NCAC 2L.0202) April 1, 2013. SWSL - NCDENR Solid Waste Section Limit. For MCL, GPS, or NC2L (-) or NE denotes not established.

See last page of this report for definitions.

Table 3. Detected Non-Target Organic Parameters - March 2014

Watauga County Landfill, Facility ID 95-02

Sample ID	NC2L Standard	MW-3		MW-8		MW-12	
Parameter		Concentration/Qualifier					
Acetone	6000	2.5	U	0.89	J	2.5	U
Chloroform	70	0.5	U	0.5	U	0.1	J
1,2-dichlorobenzene	20	0.5	U	0.5	U	0.083	J
Toluene	600	0.03	J	0.5	U	0.5	U

Notes:

J Denotes an estimated value.

U Denotes not detected (the associated numerical value is the laboratory Limit of Quantitation).

NC 2L Standard - North Carolina Groundwater Standard (15A NCAC 2L.0202) April 1, 2013

Organic parameters were analyzed in accordance with EPA SW-846 Method 8260 (25 ml purge volume).

This table does not include private well sample results.

Table 4. Summary of Private Well Sampling Results - March 2014
Watauga County Landfill, Facility ID No. 95-02

Analyte	Result (µg/l)	QL/CRQL (µg/l)	MCL(µg/l)	NC 2L(µg/l)
Well Reference No. 1 - Residential 2239 Hwy. 421 S.				
Sample not collected, No Electricity at Site to Operate Well Pump				
Well Reference No. 2 - Residential 2347 Hwy. 421 S. (Bolick Rental)				
Benzene	0.1 J	0.5	5	1
Chloroethane	1.4	0.5	n/a	3,000
1,4-Dichlorobenzene	0.4 J	0.5	75	6
1,1-Dichloroethane	9.0	0.5	n/a	6
1,1-Dichloroethene	0.2 J	0.5	7	7
cis-1,2-Dichloroethene	1.4	0.5	70	70
Trichloroethene	0.1 J	0.5	5	3
Well Reference BREMCO - Commercial 2491 Hwy 421 S.				
Benzene	0.4 J	0.5	5	1
sec-Butylbenzene[a]	0.2 J	0.5	n/a	70
Chlorobenzene	0.6	0.5	100	50
Chloroethane	12	0.5	n/a	3,000
1,2-Dichlorobenzene	0.1 J	0.5	600	20
1,4-Dichlorobenzene	4.3	0.5	75	6
1,1-Dichloroethane	27	0.5	n/a	6
1,2-Dichloroethane	0.2 J	0.5	5	0.4
1,1-Dichloroethene	1.0	0.5	7	7
cis-1,2-Dichloroethene	5.3	0.5	70	70
trans-1,2-Dichloroethene	0.2 J	0.5	100	100
1,2-Dichloropropane	0.3 J	0.5	5	0.6
Methylene Chloride	1.3	0.5	n/a	5
Tetrachloroethene	0.2 J	0.5	5	0.7
Trichloroethene	0.6	0.5	5	3
Vinyl Chloride	0.3 J	0.5	2	0.3
Well Reference No. 15 - Residential 2711 Hwy. 421 S. (Greer Residence)				
Tetrachloroethene	0.2 J	0.5	5	0.7
Well Reference No. 16 - Residential 2737 Hwy 421 S. (Williamson Residence)				
No Detections March 2014				
Well Reference H+G Produce - Commercial 230 Cabbage Row				
Chloroform	0.1 J	0.5	n/a	70
1,1-Dichloroethane	0.1 J	0.5	n/a	6
Tetrachloroethene	0.3 J	0.5	5	0.7

Definitions:

QL - Laboratory quantitation limit.
CRQL - Laboratory contract required quantitation limit.
J - Analyte is estimated; analyte detected between the laboratory detection limit and QL/CRQL.
NC 2L - North Carolina 15A NCAC 02.0202 Groundwater Standards effective April 1, 2013.

Notes:

1. All samples were analyzed by EPA Method 524.2 at Eurofins Lancaster Laboratories of Lancaster, PA.
2. Eurofins Lancaster Laboratories NC Certification Number 42705.
3. Target analytes not listed above were not detected at or above the laboratory detection limit; see laboratory analytical data package for full analyte reporting list.
4. For method reference CLP SOW - use CRQL.

a - Non-target organic COC.

APPENDIX C

Field Notes

3/3/14 Watauga Co LF FB#2
6520-39
DAS/TRE

General Notes
Weather - Overcast, Rain, 30-40's
PPE - Eye Protection, Nitrile gloves
Calibrations - YSI 650 MDS
- pH: 4.00 = 4.00, 7.00 = 7.00, 10.00 = 10.00
- Conductivity reads 1413 us in 1413 us std
- DO% = 100
HACH 2100Q Turbidimeter: 0.02-1000 ntu

State Water Level Table

WELL	DTW	Notes
MW-2	4.81	
MW-3	16.59	
MW-8	24.74	
MW-9	62.13	
MW-11	16.82	
MW-12	15.43	
MW-17	17.04	
MW-15	NA	Gate Locked
MW-1	40.28	
MW-10	7.05	
MW-13	19.35	
MW-18	17.14	
MW-19	12.64	
MW-4	6.03	
MW-5	55.58	

3/3/14 Watauga Co LF FB#2
6520 J-39
DAS/TQE

MW-9

TD - 86.40 Begin Purge (1041)
DTW - 62.13 Initial Purge - Clear
24.27 X 0.163 = 3.95 X3 = 11.86 gallons

~~Begin Purge~~ DS 3/3/14

Time	Temp(°C)	Cond(us)	DO mg/L	pH	ORP(mV)	Tur(NTU)	Purge K	Vol(gal)	Desc
(1042)	12.68	246	3.08	6.04	103.4	0.75	0.5gpm	0.50	Clear
(1049)	13.33	222	0.95	6.01	57.9	0.37	"	4.0	Clear
(1057)	14.26	221	0.82	6.00	39.8	0.37	"	8.0	Clear
(1105)	14.68	208	0.30	6.10	31.1	0.37	"	12.0	Clear

(1105) Well purged @ 12.0 gallons

Sample Time (1110)
Samples Collected: (3)8260C, (1)TM

MW-17

TD - 94.54 Begin Purge (1119)
DTW - 17.04 Initial Purge - Clear
77.50 x 0.163 = 12.63 X3 = 37.89 gallons

Time	Temp(°C)	Cond(us)	DO mg/L	pH	ORP(mV)	Tur(NTU)	Purge K	Vol(gal)	Desc
(1151)	12.35	267	8.11	4.16	131.9	0.62	1.0gpm	2.0	Clear
(1201)	12.57	260	2.16	5.90	173.9	0.19	"	12.0	Clear
(1211)	12.65	220	1.58	6.04	182.1	0.29	"	22.0	Clear
( )									
(1211)	Well purged dry @ 22.0 gallons								

Sample Time (1220)
Samples Collected: (3)8260C, (1)TM

3/3/14 Watauga Co LF FB#2

6520-39
DAS/TQE

MW-3

TD- 39.60 Begin Purge (1241)
DTW- 16.59 Initial Purge-
23.01 X0.163= 3.75 X3= 11.25 gallons

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Turb(ntu)	Bar(#)	Vol(gal)	Desc
(1242)	13.01	161	2.55	6.27	165.5	2.35	1	0.50	
(1248)	12.94	163	2.10	6.18	175.0	28.1	8	4.0	
(1253)	12.86	160	1.81	6.10	182.2	58.8	15	7.50	
(1259)	12.89	152	1.70	6.13	184.9	124	23	11.50	

(1259) Well purged @ 11.50 gallons

Sample Time (1300)
Samples Collected: (9)8260C, (3)8011

MW-8

TD- 67.00 Begin Purge (1348)
DTW- 24.74 Initial Purge- Cloudy
46.26 X0.163= 6.38 X3= 20.66 gallons

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Turb(ntu)	Purge k	Vol(gal)	Desc
(1350)	12.64	119	2.93	6.60	70.6	192	0.5gpm	1.0	Sl. Cloudy
(1402)	13.43	118	1.30	6.37	100.4	12.4	"	7.0	clear/ Tannic
(1412)	13.75	115	1.12	6.45	110.2	24.9	"	12.0	clear/Tannic

(1412) Well purged dry @ ≈12.0 gallons

Will return tomorrow to collect samples.

3/3/14 Watauga Co LF FB#2
6520-39
D75/T9E

MW-12

TD - 74.95 Begin Purge (1454)
DTW - 15.43 Initial Purge - Clear
59.52 x 0.163 = 9.70 x3 = 29.10 gallons

Time	Temp (°C)	Cond (µs)	DO (mg/L)	pH	ORP (mv)	Turb (NTU)	Purge (Kgpm)	Vol (gal)	Desc
(1455)	12.68	412	5.58	6.25	164.1	17.3	0.50	0.50	Clear
(1513)	13.13	408	0.47	6.26	184.2	0.45	"	9.50	Clear
(1533)	13.08	424	0.31	6.10	188.5	0.30	"	19.50	Clear
(1553)	13.10	425	0.27	6.25	192.7	0.26	"	29.50	Clear

(1553) Well purged @ 29.50 gallons

Sample Time (1555)
Samples Collected: (3) 8260C, (1) TM

MW-15

Gate locked at entrance to property. Called owner (Mr + Mrs Neely) and left message.

RES-1

House not occupied and no electricity.
No samples collected.

3/4/14 Watauga Co LF FB#2 81

6520-39
DAS/TRE

General Notes
Weather - Mostly Sunny, 20's - 30's
PPE - Eye Protection, Nitrile gloves
Calibrations - YSI 650 MDS
- pH: 4.00 = 4.00, 7.00 = 7.00, 10.00 = 9.98
- Conductivity reads 1413 us in 1413 us std.
- DO % = 100
HACH 2100Q Turbidimeter: 0.02 - 1000 ntu

MW-8

Sample Time (0815)
Samples Collected: (3) 8260C, (1) TM

MW-2

TD - 177.50 Begin Purge (0844)
DTW - 4.81 Initial Purge - Clear
172.69 X 0.65 = 112.24 X 3 = 336.74 gallons

Time	Temp (°C)	Cond (us)	DO (mg/L)	pH	ORP (mv)	Turb (ntu)	Purge Rate (gpm)	Vol (gal)	Desc
(0845)	11.45	456	4.23	7.86	-164.0	0.37	3.0	3.0	Clear
(0922)	11.93	395	2.34	6.85	-89.4	0.34	"	114.0	Clear
(0957)	11.86	304	2.26	7.30	-68.9		"	225.0	Clear
(1034)	11.89	301	0.65	7.43	-61.5		"	336.0	

(1034) Well purged @ 336.0 gallons

Sample Time (1035)
Samples Collected: (3) 8260C, (1) TM

ENTERED
APR 07 2014
BY:

#2, 8/4/14 Augusta Co LF FB#2
6570-39
DASITQE

Stream Sample Collection Table

Location	Temp(C)	Cond(uc)	DO mg/L	pH	ORP(mv)	Sample Time	Samples Collected
S-1	3.10	157	9.96	8.05	43.8	(1115)	(3)8260C
S-2	7.31	587	7.85	7.17	-60.5	(1135)	(3)8260C
S-3	5.70	440	8.08	7.64	-110.3	(1050)	(3)8260C
S-4	9.53	253	9.94	6.26	98.7	(1215)	(3)8260C
S-5	7.15	346	9.30	7.30	-44.6	(1155)	(3)8260C

Residential Sample Collection Table

Location	Sample Time	Samples Collected
RES-2	(1245)	(3)524.2 Volatiles
RES-15	(1345)	(3)524.2 Volatiles
RES-16	(1350)	(3)524.2 Volatiles
H+G Produce	(1320)	(3)524.2 Volatiles
BREMCO	(1300)	(3)524.2 Volatiles

APPENDIX D

Historical Data Tables

(Presented in PDF only)

This report is presented in an electronic version and as a bound hard copy version.

Electronic Version: Depending upon the file size (limited to 50 MB per file), this Attachment/Appendix may be presented in a separate Portable Document Format (PDF) file associated with this report.

Hardcopy Version: This Attachment/Appendix is only provided in PDF on the enclosed compact disc (CD-ROM).

Watauga County Landfill
Watauga County, North Carolina

Table 3
March 17-18 , 2010
Semi-Annual Assessment Monitoring Event
Detected Non-Target Organic Parameters

Parameter	MW-2		MW-12		MW-17	
Chloroform	0.06	J	0.29	J	0.06	J
1,2-Dichlorobenzene	0.50	U	0.15	J	0.50	U
1,1,2-Trichloroethane	0.09	J	0.50	U	0.50	U

Notes:

All concentrations are in ug/l.

J Denotes an estimated value.

U Denotes not detected (the associated numerical value is the Limit of Quantitation).

Organic parameters were analyzed in accordance with EPA SW-846 Method 8260 (25 ml purge).

Table 3. Detected Non-Target Organic Parameters - March 2011

Watauga County Landfill, Facility ID 95-02

Sample ID	MW-3		MW-12	
Parameter	Results (µg/L)			
Chloroform	0.18	J	0.31	J

Notes:

J Denotes an estimated value.

U Denotes not detected (the associated numerical value is the laboratory Limit of Quantitation).

Organic parameters were analyzed in accordance with EPA SW-846 Method 8260 (25 ml purge).

Table 3. Detected Non-Target Organic Parameters - March 2012
Watauga County Landfill, Facility ID 95-02

Sample ID	NC2L Standard	MW-2		MW-3		MW-9		MW-12		MW-17	
Parameter		Results (µg/L)									
Acetone	6,000	14.00	J	0.96	J	0.72	J	1.80	J	1.10	J
Chloroform	70	5.00	U	0.18	J	0.50	U	0.29	J	0.50	U
Carbon Disulfide	700	5.00	U	0.09	J	0.50	U	0.50	U	0.50	U
Toluene	600	0.93	J	0.50	U	0.50	U	0.50	U	0.50	U

Notes:

J Denotes an estimated value.

U Denotes not detected (the associated numerical value is the laboratory Limit of Quantitation).

Organic parameters were analyzed in accordance with EPA SW-846 Method 8260 (25 ml purge volume).

Table 3. Detected Non-Target Organic Parameters - March 2013
Watauga County Landfill, Facility ID 95-02

Sample ID	NC2L Standard	MW-3		MW-11		MW-12		MW-17	
Parameter									
Chloroform	70	0.045	J	0.22	J	0.21	J	0.046	J
1,2-dichlorobenzene	20	0.5	U	0.052	J	0.094	J	0.5	U

Notes:

J Denotes an estimated value.

U Denotes not detected (the associated numerical value is the laboratory Limit of Quantitation).

NC 2L Standard - North Carolina Groundwater Standard (15A NCAC 2L.0202) April 1, 2013

Organic parameters were analyzed in accordance with EPA SW-846 Method 8260 (25 ml purge volume).

This table does not include private well sample results.

Table 3. Detected Non-Target Organic Parameters - September 2013
Watauga County Landfill, Facility ID 95-02

Sample ID	NC2L Standard	S-2		MW-8		MW-9		MW-11		MW-12		MW-19	
Parameter		Concentration/Qualifier											
Acetone	6000	2.5	U	0.71	J	2.5	U	2.5	U	2.5	U	2.5	U
Chloroform	70	0.50	U	0.5	U	0.5	U	0.14	J	0.14	J	0.065	J
1,2-dichlorobenzene	20	0.5	U	0.5	U	0.5	U	0.074	J	0.094	J	0.5	U
1,4-dichlorobenzene	6	0.76		0.5	U	0.75		0.50	U	0.50	U	0.50	U

Notes:

J Denotes an estimated value.

U Denotes not detected (the associated numerical value is the laboratory Limit of Quantitation).

NC 2L Standard - North Carolina Groundwater Standard (15A NCAC 2L.0202) April 1, 2013

Organic parameters were analyzed in accordance with EPA SW-846 Method 8260 (25 ml purge volume).

This table does not include private well sample results.

Table 3. Detected Non-Target Organic Parameters - September 2010
Watauga County Landfill, Facility ID 95-02

Sample ID	**MW-19**	
Parameter	**Results** (µg/L)	
Chloroform	0.20	J
Carbon Disulfide	0.03	J

Notes:

J Denotes an estimated value.

U Denotes not detected (the associated numerical value is the laboratory Limit of Quantitation).

Organic parameters were analyzed in accordance with EPA SW-846 Method 8260(25 ml purge).

Table 3. Detected Non-Target Organic Parameters - September 2011

Watauga County Landfill, Facility ID 95-02

Sample ID		MW-3		MW-8		MW-10		MW-19	
Parameter	**NC2L Standard (µg/L)**	**Results** (µg/L)							
Chloroform	70	0.34	J	U		U		0.59	J
Hexachlorobutadiene	0.4	U		U		0.03	J	U	
Naphthalene	6	U		U		0.56		U	
Toluene	600	U		23.40		U		U	

Notes:

J Denotes an estimated value.

U Denotes not detected (the associated numerical value is the laboratory Limit of Quantitation).

No detections exceed their respective NC2L standard.

Organic parameters were analyzed in accordance with EPA SW-846 Method 8260 (25 ml purge).

Table 3. Detected Non-Target Organic Parameters - September 2012
Watauga County Landfill, Facility ID 95-02

Sample ID	NC2L Standard	MW-3		MW-8		MW-12		MW-17		MW-19	
Parameter											
Acetone	6,000	2.5	U	0.6	J	2.5	U	2.5	U	2.5	U
2-Butanone	4,000	2.5	U	0.96	J	2.5	U	2.5	U	2.5	U
Chloroform	70	0.073	J	0.5	U	0.33	J	0.03	J	0.2	J
Carbon Disulfide	700	0.13	J	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	600	0.5	U	0.5	U	0.055	J	0.5	U	0.5	U
Hexachlorobutadiene	0.4	0.5	U	0.5	U	0.052	J	0.5	U	0.5	U
Toluene	600	0.5	U	500	*	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	2,000	0.5	U	0.5	U	0.088	J	0.5	U	0.5	U
Xylenes (Total)	500	0.5	U	0.5	U	0.086	J	0.5	U	0.5	U

Notes:

J Denotes an estimated value.

U Denotes not detected (the associated numerical value is the laboratory Limit of Quantitation).

*Sample dilution 20X.

NC 2L Standard - North Carolina Groundwater Standard (15A NCAC 2L.0202)

Organic parameters were analyzed in accordance with EPA SW-846 Method 8260 (25 ml purge volume).

This table does not include private well sample results.

Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																										
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
Organics																												
Benzene	6/20/94	10	U	120	U	10	U	9	J	0.42	J	0.72	J	0.4	J	5.3	U	5.3	U	5.3	U	5.3	U	5.3	U			CLP/8021
	9/27/94	10	U	9	J	2	J	12	J	3	J	5	J	4	J	10	U	10	U	10	U	10	U	2	J			CLP
MCL= 5 ug/l	2/06/95	10	U	150	U	2	J	12	J	3.6		5	J	2	J	50	U	10	U	10	U	1	U	10	U			CLP
NCS = 1 ug/l	4/11/95	10	U	200	U	1	J	10	J	3	J	6	J	3	J	71	U	10	U	10	U	10	U	10	U			CLP
	7/10/95	2	U	2	U	2.3		14		2.2		6.2		4		2	U	2	U	2	U	10	U	2	U			8021
	7/10/95	5	U	5	U	2.6	J	13		2.7	J	5.5		3.8	J	5	U	5	U	5	U	-		5	U			8260
	4/10/96	1	J	91	U	2	J	11	J	5	J	5		4	J	23	U	10	U	1	J	10	U	10	U			CLP
	4/8/97	1	U	100	U	2		-		4.8		2.3		3.9		100	U	1	U	1.4		1	U	1				8021
	1/15/98	10	U	20	U	3	J	-		2	J	2	J	3	J	14	U	10	U	2	J	10	U	2	J			CLP
	6/23/98	-		25	UJ	1	J	-		-		3	J	3	J	-		-		2	J	-		2	J			CLP
	1/12/99	1	U	1	U	3.6		-		2.4		2		3.2		1	U	1	U	2.5		1	U	1.4				8021B
	7/12/99	-		10	U	2	J	-		-		1	J	2	J	-		-		10	U	-		2	J			CLP
	2/1/00	1	U	1	U	2.5		-		2.3		1.6		3.2		1	U	1.4		2.2		1	U	2.4				8021B
	8/8/00	-		10	U	4	J	-		-		2	J	4	J	-		-		2	J	-		1	J			CLP
	2/12-14/01	1	U	1	U	3.9		-		2.3		1.3		4.3		1	U	1.8		2.8		1	U	5				8021B
	8/7-8/01	-		10	U	1	J	-		-		1	J	2	J	-		-		2	J	-		4	J			CLP
	2/11-14/02	0.5	U	0.5	U	3	U	-		1		0.5	U	2		0.5	U	1		2		0.5	U	3		0.5	U	8260B
	8/12-14/02	0.5	U	10	U	3	J	-		1	U	10	U	10	U	1	U	0.5	U	10	U	0.5	U	2	J	0.5	U	CLP/8260B
	1/21-22/03	-		10	U	0.8	J	-		-		-		3	J	-		-		2	J	-		3	J			CLP
	7/14-15/03	1	U	17	U	4	U	-		-		1	U	1	U	4.2	U	1	UJ	1	U	1	UJ	1	U	1	J	8260B
	3/16-17/04	-		10	U	10	U	-		-		10	U	10	U	-		-		10	U	-		10	U			CLP
	9/29-30/04	0.5	U	0.5	U	0.46	J	-		-		0.5	U	3.8	J	0.84	U	0.33	J	0.68		0.5	U	0.22	J			8260B
	3/30-31/05	-		67	U	10	U	-		-		10	U	10	U	-		-		10	U	-		10	U			CLP
	10/3-4/05	-		25	U	0.62		-		-		0.5	U	4.1		0.5	U	0.29	J	0.61		0.5	U	0.5	U	0.5	U	8260B
	4/4-5/06	-		10	U	10	U	-		-		10	U	3	J	-		-		10	U	-		10	U	-		CLP
	9/27-28/06	0.50	U	0.50	U	2.5	U	-		-		0.50	U	1.6		0.50	U	0.27	J	0.36	J	0.50	U	0.50	U	0.50	U	8260B
	4/2-3/07	-		13	U	10	U	-		-		0.50	U	2.8		-		-		2,5	U	-		0.50	U	-		8260B
	9/18-19/07	0.50	U	0.50	U	0.34	J	-		-		0.50	U	3.1		0.50	U	0.31	J	0.38	J	0.50	U	0.50	U	0.50	U	8260B
	3/11/08	-		10	UJ	0.50	UJ	-		-		0.50	UJ	2.5	J	-		-		0.50	UJ	-		0.50	UJ	-		8260B
	9/8-9/08	0.50	U	8.3	U	0.50	U	-		-		0.50	U	3.1		0.50	U	0.29	J	0.36	J	0.50	U	0.50	U	0.50	U	8260B
	3/11-12/09	-		0.50	U	0.50	U	-		-		0.50	U	2.9		-		-		0.4	J	-		0.50	U	-		8260B
	9/1-2/09	0.50	U	0.50	U	0.50	U	-		-		0.50	U	3.1		0.50	U	.18	J	0.26	J	0.50	U	0.50	U	0.50	U	8260B
	3/17-18/10	-		0.50	U	0.50	U	-		-		0.50	U	3		-	-	-		0.23	J	-		0.50	U	-		8260B
	9/13-14/10	0.50	U	0.50	U	0.50	U	-		-		0.50	U	2.8		0.50	U	0.50	U	0.16	J	0.50	U	0.50	U	0.50	U	8260B

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Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																											
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
Chloroethane	6/20/94	10	U	120	U	6	J	8	J	7.33	J	9.44		56.78	J	9.29	U	1.16	J	20.23		9.29	U	28.21				CLP/8021
	9/27/94	10	U	170	U	8	J	10	J	16		7	J	18		10	U	10	U	5	J	10	U	7	J			CLP
no MCL established	2/06/95	10	U	150	U	7	J	11	J	28		7	J	17		50	U	10	U	4	J	1	U	5	J			CLP
NCS = 3000 ug/l	4/11/95	10	U	200	U	6	J	8	J	16		7	J	15		71	U	10	U	2	J	10	U	4	J			CLP
	7/10/95	2	U	2	U	10	U	15	U	9.2		10	U	20	U	2	U	2	U	5	U	10	U	5	U			8021
	7/10/95	5	U	5	U	8.7		16		22		9.3		21		5	U	5	U	6.4		-		4.9	J			8260
	4/10/96	10	U	91	U	8	J	14	J	41		10	J	16		23	U	10	U	5	J	10	U	5	J			CLP
	4/8/97	1	U	1	U	46		-		58		38		110		1	U	12		40		1	U	30				8021
	1/15/98	10	U	20	U	10		-		19		12		12		20		10	U	5	J	10	U	9	J			CLP
	6/23/98	-		25	UJ	5	J	-		-		11	J	8	J	-		-		5	J	-		6	J			CLP
	1/12/99	2	U	2	U	100	U	-		43		40	U	60	U	2	U	25		50	U	2	U	40	U			8021B
	7/12/99	-		10	U	8	J	-		-		10	U	10	U	-		-		10	U	-		7	J			CLP
	2/1/00	2	U	2	U	40	U	-		34	J	40	U	40	U	2	U	28	J	50	U	2	U	40	U			8021B
	8/8/00	-		10	U	13		-		-		16		8	J	-		-		7	J	-		7	J			CLP
	2/12-14/01	2	U	2	U	60	U	-		44	J	40	U	40	U	2	U	34	J	40	U	2	U	60	U			8021B
	8/7-8/01	-		10	UJ	6	J	-		-		28	J	5	J	-		-		8	J	-		14	J			CLP
	2/11-14/02	0.5	U	0.5	U	8		-		23		4		3		0.5	U	7		8		0.5	U	10		0.5	U	8260B
	8/12-14/02	0.5	U	10	U	21		-		18		38		10	U	1	U	0.5	U	17		0.5	U	17		0.5	U	CLP/8260B
	1/21-22/03	-		10	U	4	J	-		-		-		4	J	-		-		4	J	-		7	J			CLP
	7/14-15/03	1	U	17	U	4		-		-		1	U	1	U	4.2	U	5.6	J	1	U	1	UJ	2.9	J	1	J	8260B
	3/16-17/04	-		10	U	20		-		-		17		9	J	-		-		10	U	-		10	U			CLP
	9/29-30/04	0.5	U	0.44	J	7.8	J	-		-		0.5	U	6.3	J	0.84	U	6.6	J	6.2		0.5	U	5.3	J			8260B
	3/30-31/05	-		67	U	10	U	-		-		10	U	3	J	-		-		10	U	-		10	U			CLP
	10/3-4/05	-		25	U	10		-		-		0.5	U	6.6		0.5	U	7		9.7		0.5	U	0.89	J	0.5	U	8260B
	4/4-5/06	-		10	U	11		-		-		11		7	J	-		-		12		-		10	U	-		CLP
	9/27-28/06	0.50	U	0.39	J	8.7		-		-		0.50	U	2.9		0.50	U	7.5	J	4.9		0.50	U	0.71		0.50	U	8260B
	4/2-3/07	-		13	U	11		-		-		1.5		6.5		-		-		12		-		0.50	U	-		8260B
	9/18-19/07	0.50	U	0.39	J	7.8		-		-		1.2		5.8		0.50	U	8.7		9.4		0.50	U	0.7		0.50	U	8260B
	3/11/08	-		10	U	1.5		-		-		0.50	U	5.1		-		-		11		-		0.9		-		8260B
	9/8-9/08	0.50	U	8.3	U	1.2	J	-		-		0.50	U	4.9		0.50	U	7.3		9.4		0.50	U	0.9		0.50	J	8260B
	3/11-12/09	-		0.5	U	2.4		-		-		0.50	U	5.8		-		-		9.9		-		0.50	U	-		8260B
	9/1-2/09	0.50	U	0.5	U	2.3		-		-		0.50	U	4.7		0.50	U	5.5		7		0.50	U	0.50	U	0.50	U	8260B
	3/17-18/10	-	-	0.5	U	2.6		-		-		0.50	U	3.8		-	-	-		6.5		-		0.50	U	-		
	9/13-14/10	0.50	U	0.50	U	5.1	J	-		-		2.2	J	4.2	J	0.50	U	2.1	J	7	J	0.50	U	0.50	U	0.50	U	8260B

Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																											
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
Dichlorodifluoromethane	6/20/94	10	U	120	U	7	J	25	U	46.64	U	2.26	J	13.92	J	46.64	U	1.88	J	9.83	J	46.64	U	1.44	J			CLP/8021
	9/27/94	10	U	10	J	4	J	25	U	10	U	2	J	9	J	10	U	10	U	4	J	10	U	4	J			CLP
no MCL established	2/06/95	10	U	150	U	10	U	25	U	1	U	14		27		50	U	2	J	10	U	1	U	12				CLP
NCS = 1000 ug/l	4/11/95	10	U	200	U	10	U	25	U	10	U	7	J	9	J	71	U	10	U	4	J	10	UJ	3	J			CLP
	7/10/95	2	UJ	2	UJ	6.9	J	2	UJ	2	UJ	16	J	2	UJ	2	UJ	2	UJ	5.7	J	10	U	5.3	J			8021
	7/10/95	5	U	5	U	7.2		2.2	J	5	U	6.7		2.8	J	5	U	1.7	J	4	J	-		4.2	J			8260
	4/10/96	10	U	91	U	10	U	25	U	10	U	10	U	10	U	23	U	10	U	10	U	10	U	10	U			CLP
	4/8/97	1	U	1	U	6.4		-		1	U	17		11		1	U	3		10		1	U	1	U			8021
	1/15/98	10	U	20	U	11		-		10	U	12		10	U	14	U	10	U	10	U	10	U	10	U			CLP
	6/23/98	-		25	UJ	3	J	-		-		10	UJ	10	UJ	-		-		3	J	-		10	UJ			CLP
	1/12/99	1	U	1	U	1	U	-		1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U			8021B
	7/12/99	-		10	U	10	U	-		-		10	U	10	U	-		-		10	U	-		10	U			CLP
	2/1/00	1	U	1	U	3		-		1.3		8.1		3.7		1	U	3		4.8		1	U	3.9				8021B
	8/8/00	-		10	U	3	J	-		-		2	J	1	J	-		-		3	J	-		1	J			CLP
	2/12-14/01	1	U	1	U	3.9		-		1	U	1	U	6.6		1	U	3		2.8		1	U	2.5				8021B
	8/7-8/01	-		10	UJ	3	J	-		-		8	J	4	J	-		-		7	J	-		9	J			CLP
	2/11-14/02	0.5	U	0.5	U	4		-		2		0.5	U	1		0.5	U	3		4		0.5	U	6		0.5	U	8260B
	8/12-14/02	0.5	UJ	10	U	10	U	-		1	U	10	U	10	U	1	U	0.5	UJ	10	U	0.5	UJ	10	U	0.50	J	CLP/8260B
	1/21-22/03	-		10	U	10	U	-		-		-		0.5	J	-		-		0.9	J	-		0.9	J			CLP
	7/14-15/03	1	U	17	U	4	U	-		-		1	U	1	U	4.2	U	1	UJ	1	U	1	UJ	1	U	1	J	8260B
	3/16-17/04	-		10	U	10	U	-		-		10	U	3	J	-		-		10	U	-		3	J			CLP
	9/29-30/04	0.5	U	0.15	J	0.5	U	-		-		0.5	U	3.3	J	0.84	U	0.76	J	1.1		0.5	U	0.6	J			8260B
	3/30-31/05	-		67	UJ	10	UJ	-		-		10	UJ	0.8	J	-		-		10	UJ	-		10	U			CLP
	10/3-4/05	-		25	U	3.2		-		-		0.5	UJ	1.2	J	0.5	UJ	1	UJ	0.31	J	0.5	UJ	0.18	J	0.50	J	8260B
	4/4-5/06	-		10	U	10	U	-		-		10	U	2	J	-		-		10	U	-		10	U	-		CLP
	9/27-28/06	0.50	U	0.50	U	2.5	U	-		-		0.50	U	0.44	J	0.50	U	0.50	U	1.6	U	0.50	U	0.50	U	0.50	U	8260B
	4/2-3/07	-		13	U	10	U	-		-		0.50	U	0.7	J	-		-		2,5	U	-		0.50	U	-		8260B
	9/18-19/07	0.50	U	0.50	U	2.5	U	-		-		0.50	U	0.73		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	8260B
	3/11/08	-		10	U	0.50	U	-		-		0.50	U	0.5	J	-		-		2.5	U	-		0.50	U	-		8260B
	9/8-9/08	0.50	U	8.3	U	0.50	U	-		-		0.50	U	0.58		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	8260B
	3/11-12/09	-		0.50	U	0.50	U	-		-		0.50	U	0.4	J	-		-		0.50	U	-		0.50	U	-		8260B
	9/1-2/09	0.50	U	8.3	U	0.50	U	-		-		0.50	U	0.66		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	8260B
	3/17-18/10	-		0.5	UJ	0.50	UJ	-		-		0.50	UJ	0.43	J	-	-	-		0.14	J	-		0.038	J	-		
	9/13-14/10	0.50	U	0.50	U	0.50	U	-		-		0.50	U	0.55		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	8260B

Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																											
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
1,1-Dichloroethane	6/20/94	10	U	75	J	160		97		10.42	J	35.33	J	13.63	J	28.62	J	25.23	J	82.77	J	0.26	J	105.03	J			CLP/8021
	9/27/94	10	U	110	J	200		110		1	J	70		23		84		27		130		10	U	230				CLP
no MCL established	2/06/95	10	U	160		180		140		2.9		74		30		37	J	28		120		1	U	170				CLP
NCS = 6 ug/l	4/11/95	10	U	98	J	130		94		4	J	58		35		67	J	18		77		10	U	130				CLP
	7/10/95	2	U	81		130		100	J	4.8		60	J	36		58	J	22		100		10	U	102	J			8021
	7/10/95	5	U	94		160		130		6.8		71		40		55		26		120		-		130				8260
	4/10/96	10	U	130		150		120		5	J	80		36		22	J	26		120		10	U	130				CLP
	4/8/97	1	U	84		90		-		9.4		52		28		27		26		82		1	U	76				8021
	1/15/98	10	U	29		97		-		13		55		27		11	J	30		82		10	U	88				CLP
	6/23/98	-		100	J	67	J	-		-		48	J	24	J	-		-		66	J	-		10	UJ			CLP
	1/12/99	1	U	36		92		-		13		35		22		16		27		70		1	U	65				8021B
	7/12/99	-		24		72		-		-		47		20		-		-		10	U	-		71				CLP
	2/1/00	1	U	12		78		-		14		37		19		15		37		74		0.86	J	90				8021B
	8/8/00	-		28		73		-		-		33		19		-		-		58		-		59				CLP
	2/12-14/01	1	U	11		100		-		12		1	U	23		27		34		70		0.56	J	95				8021B
	8/7-8/01	-		8	J	32		-		-		46		15		-		-		47		-		81				CLP
	2/11-14/02	0.5	U	5		51		-		12		16		0.5	U	10		38		61		0.5	U	85		0.5	U	8260B
	8/12-14/02	0.5	U	14		58		-		16		42		13		7		0.5	U	47		0.5	U	53		0.5	U	CLP/8260B
	1/21-22/03	-		18		29		-		-		-		13		-		-		42		-		59				CLP
	7/14-15/03	1	U	53		28		-		-		1	U	1	U	8.2		30	J	1	U	1	UJ	11		1	J	8260B
	3/16-17/04	-		100		33		-		-		36		45		-		-		18		-		21				CLP
	9/29-30/04	0.5	U	92	J	29	J	-		-		0.17	J	25	J	7.4	J	24	J	34	J	0.32	J	15	J			8260B
	3/30-31/05	-		110		28		-		-		10	U	19		-		-		32		-		7	J			CLP
	10/3-4/05	-		110		30		-		-		0.21	J	25		21		21		33		0.19	J	6.4	J	0.5	U	8260B
	4/4-5/06	-		85		38		-		-		11		20		-		-		34		-		5	J	-		CLP
	9/27-28/06	0.50	U	46		17		-		-		0.50	U	6.3		3.3		21		20		0.50	U	3.2		0.50	U	8260B
	4/2-3/07	-		67	J	38		-		-		1.1	J	16	J	-		-		33	J	-		5	J	-		8260B
	9/18-19/07	0.50	U	74		24		-		-		0.76		16		4.5		28		32		0.11	J	3.8		0.12	J	8260B
	3/11/08	-		56		8.5		-		-		0.50	U	15		-		-		30		-		3.7		-		8260B
	9/8-9/08	0.50	U	42		12		-		-		0.39	J	15		13		21		24		0.26	J	2.9		0.50	U	8260B
	3/11-12/09	-		25		8.1		-		-		0.20	J	15		-		-		25		-		3.7		-		8260B
	9/1-2/09	0.50	U	42		7.9		-		-		0.50	U	13		9.5		18		20		0.10	J	1.5		0.15	J	8260B
	3/17-18/10	-		56		7.8		-		-		0.057	J	13		-		-		19		-		1		-		
	9/13-14/10	0.50	U	48		10		-		-		0.71		10		8.9		11		17		0.1	J	2.2		1.4		8260B

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Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																										
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
1,1-Dichloroethene	6/20/94	10	U	160		5	J	25	U	9.75	U	0.3	J	9.75	U	32.29		9.75	U	1.15	J	9.75	U	1.09	J			CLP/8021
	9/27/94	10	U	210		6	J	25	U	10	U	4	J	10	U	160		10	U	5	J	10	U	3	J			CLP
MCL= 7 ug/l	2/06/95	10	U	360		6	J	25	U	1	U	6	J	10	U	100		10	U	4	J	1	U	3	J			CLP
NCS = 7 ug/l	4/11/95	10	U	150	J	3	J	25	U	10	U	3	J	10	U	120		10	U	2	J	10	U	1	J			CLP
	7/10/95	2	U	170		4		2	U	2	U	5.7		2	U	160	J	0.86	J	3.9		10	U	1.8	J			8021
	7/10/95	5	U	170	J	3.7	J	1.3	J	5	U	4.1	J	5	U	88		5	U	3.6	J	-		1.6	J			8260
	4/10/96	10	U	210		3	J	25	U	10	U	6	J	10	U	51		10	U	3	J	10	U	2	J			CLP
	4/8/97	1	U	180		1.9		-		1	U	4.9		0.54	J	84		1.1		2.7		0.77	J	1.2				8021
	1/15/98	10	U	50		2	J	-		10	U	3	J	10	U	20		10	U	2	J	10	U	1	J			CLP
	6/23/98	-		160	J	10	UJ	-		-		2	J	10	UJ	-		-		2	J	-		1	J			CLP
	1/12/99	1	U	77		1.9		-		1	U	3.2		1	U	26		1.2		1.9		1	U	1	U			8021B
	7/12/99	-		47		1	J	-		-		2	J	10	U	-		-		10	U	-		10	U			CLP
	2/1/00	1	U	26		1.2		-		1	U	2.4		1	U	31		1.4		1.6		0.96	J	1.2				8021B
	8/8/00	-		56		1	J	-		-		2	J	10	U	-		-		1	J	-		10	U			CLP
	2/12-14/01	1	U	19		1.3		-		1	U	1	U	1	U	63		1.2		1.3		0.61	J	1.4				8021B
	8/7-8/01	-		14		10	U	-		-		2	J	10	U	-		-		10	U	-		0.8	J			CLP
	2/11-14/02	0.5	U	9		3	U	-		0.8		0.8		12		16		0.8		0.9		0.5	U	0.8		0.5	U	8260B
	8/12-14/02	0.5	U	22		10	U	-		1	U	10	U	10	U	7		0.5	U	10	U	0.5	U	10	U	0.5	U	CLP/8260B
	1/21-22/03	-		32		0.3	J	-		-		-		10	U	-		-		0.8	J	-		0.8	J			CLP
	7/14-15/03	1	U	79		4	U	-		-		1	U	1	U	15		1	UJ	1	U	1	UJ	1	UJ	1	U	8260B
	3/16-17/04	-		150		10	U	-		-		1	J	10	U	-		-		10	U	-		10	U			CLP
	9/29-30/04	0.5	U	180	J	0.5	U	-		-		0.48	J	0.28	J	11		0.86	J	1.4		0.43	J	0.32	J			8260B
	3/30-31/05	-		150		10	U	-		-		10	U	10	U	-		-		10	U	-		10	U			CLP
	10/3-4/05	-		160		0.52		-		-		0.5	U	0.5	U	26		0.6	J	0.7		0.2	J	0.5	U	0.5	U	8260B
	4/4-5/06	-		110		10	U	-		-		10	U	10	U	-		-		10	U	-		10	U	-		CLP
	9/27-28/06	0.50	U	75		2.5	U	-		-		0.50	U	0.50	U	5.9		0.45	J	0.36	J	0.27	J	0.50	U	0.50	U	8260B
	4/2-3/07	-		75		10	U	-		-		0.50	U	0.50	U	-		-		2,5	U	-		0.50	U	-		8260B
	9/18-19/07	0.50	U	130		0.26	J	-		-		0.50	U	0.50	U	4.2		0.46	J	0.52		0.50	U	0.50	U	0.50	U	8260B
	3/11/08	-		83		0.50	U	-		-		0.50	U	0.50	U	-		-		J	J	-		0.50	U	-		8260B
	9/8-9/08	0.50	U	61		0.50	U	-		-		0.50	U	0.50	U	20		0.30	J	0.35	J	0.50	U	0.50	U	0.50	U	8260B
	3/11-12/09	-		46		0.50	U	-		-		0.50	U	0.50	U	-		-		0.30	J	-		0.50	U	-		8260B
	9/1-2/09	0.50	U	80		0.10	J	-		-		0.50	U	0.50	U	15		0.19	J	0.26	J	0.50	U	0.50	U	0.50	U	8260B
	3/17-18/10	-		89		0.072	J	-		-		0.50	U	0.50	U	-		-		0.27	J	-		0.50	U	-		
	9/13-14/10	0.50	U	70		0.50	U	-		-		0.50	U	0.50	U	12		0.83	J	0.23	J	0.50	U	0.50	U	0.50	U	8260B

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Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																											
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
cis 1,2-Dichloroethene(2)	6/20/94	10	U	120	U	37		330		0.97	J	28.9		0.95	J	9.49	U	5.05	J	28.13		9.49	U	60.79	J			CLP/8021
	9/27/94	10	U	170	U	61		380		3	J	93		2	J	10	U	8	J	47		10	U	120				CLP
MCL= 70 ug/l	2/06/95	10	U	150	U	54		370		7.2		91		2	J	50	U	8	J	37		1	U	80				CLP
NCS = 70 ug/l	4/11/95	10	U	200	U	44		330		9	J	100		4	J	71	U	6	J	30		10	U	70				CLP
	7/10/95	2	U	2	U	65		440	J	4.4		110	J	7.4		2	U	11		37		10	U	72	J			8021
	7/10/95	5	U	5	U	50		430		7.9		89		6.2		5	U	7.6		42		-		63				8260
	4/10/96	10	U	91	U	64		420		6	J	78		11		23	U	11		54		10	U	87				CLP
	4/8/97	1	U	1	U	58		-		4.4		34		13		1	U	17		60		1	U	100				8021
	1/15/98	10	U	20	U	62		-		11		29		14		14	U	18		56		10	U	87				CLP
	6/23/98	-		25	UJ	50	J	-		-		43	J	12	J	-		-		52	J	-		79	J			CLP
	1/12/99	1	U	1	U	90		-		7.1		20		14		1	U	19		63		1	U	89				8021B
	7/12/99	-		10	U	69		-		-		21		12		-		-		10	U	-		88				CLP
	2/1/00	1	U	1	U	97		-		5.6		13		15		1	U	39		77		1	U	120				8021B
	8/8/00	-		10	U	120		-		-		13		16		-		-		69		-		90				CLP
	2/12-14/01	1	U	1	U	170		-		3.8		1	U	22		1	U	52		97		1	U	160				8021B
	8/7-8/01	-		10	U	59		-		-		13		14		-		-		83		-		180				CLP
	2/11-14/02	0.5	U	0.5	U	89		-		6		6		10		0.5	U	50		86		0.5	U	160		0.5	U	8260B
	8/12-14/02	0.5	U	10	U	110		-		5		9	J	11		1	U	0.5	U	75		0.5	U	110		0.5	U	CLP/8260B
	1/21-22/03	-		10	U	62		-		-		-		13		-		-		80		-		150				CLP
	7/14-15/03	1	U	17	U	66		-		-		1	U	1	U	4.2	U	35	J	1	U	0.5	UJ	21		0.5	J	8260B
	3/16-17/04	-		10	U	11		-		-		17		59		-		-		10		-		48				CLP
	9/29-30/04	0.16	J	0.37	J	64	J	-		-		0.5	U	16	J	0.84	U	25	J	61	J	0.16	J	37				8260B
	3/30-31/05	-		67	U	82		-		-		10	U	12		-		-		63		-		17				CLP
	10/3-4/05	-		25	U	73		-		-		0.27	J	15		0.5	U	24		56		0.5	U	13	J	0.5	U	8260B
	4/4-5/06	-		10	U	98		-		-		6	J	11		-		-		61		-		11		-		CLP
	9/27-28/06	0.50	U	0.25	J	59		-		-		0.50	U	5.3		0.50	U	18		43		0.50	U	11		0.50	U	8260B
	4/2-3/07	-		13	U	98		-		-		1.1		9.1		-		-		59		-		11		-		8260B
	9/18-19/07	0.50	U	0.25	J	75		-		-		0.47	J	11		0.50	U	39		69		0.50	U	9		0.50	U	8260B
	3/11/08	-		10	U	23		-		-		0.50	U	9.2		-		-		66		-		9.9		-		8260B
	9/8-9/08	0.50	U	8.3	U	34		-		-		0.22	J	9.4		0.50	U	37		52		0.50	U	7		0.50	U	8260B
	3/11-12/09	-		0.50	U	24		-		-		0.50	U	9.1		-		-		59		-		6.1		-		8260B
	9/1-2/09	0.50	U	0.20	J	20		-		-		0.50	U	8.1		0.50	U	28		41		0.50	U	2.9		0.50	U	8260B
	3/17-18/10	-		0.26	J	21		-		-		0.50	U	8.2		-		-		41		-		1.9		-		
	9/13-14/10	0.50	U	0.2	J	25		-		-		0.51		6.9		0.50	U	19		35		0.50	U	3.5		0.17	J	

Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
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Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																											
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
Methylene Chloride	6/20/94	8	J	120	U	6	J	11	J	36.2	UJ	36.2	UJ	140.1	J	36.2	UJ	36.2	UJ	8.58	J	36.2	UJ	36.2	UJ			CLP/8021
	9/27/94	10	U	490		14	U	25	U	10	U	4	J	73		180		10	U	28	U	10	U	58	U			CLP
MCL= 5 ug/l	2/06/95	10	U	150	U	10	U	25	U	1.5		10	U	93		50	U	10	U	10	U	1	U	10	U			CLP
NCS = 5 ug/l	4/11/95	10	U	200	U	10	U	25	U	10	U	10	U	120		71	U	10	U	10	U	10	U	10	U			CLP
	7/10/95	2	U	2	U	2.4		1.2	J	2	U	4.7		89		2	U	2.9		3.3		10	U	2.2				8021
	7/10/95	5	U	5	U	5	U	5	U	5	U	5	U	160		5	U	5	U	5.9	U	-		5	U			8260
	4/10/96	10	U	91	U	10	U	25	U	10	U	10	U	120		23	U	10	U	10	U	10	U	10	U			CLP
	4/8/97	1	U	1	U	0.71	J	-		1.4		1.6		100		1	U	0.7	J	1.1		0.656	J	0.63	J			8021
	1/15/98	1	J	20	U	2	J	-		2	J	3	J	90		4	J	1	J	2	J	1	J	2	J			CLP
	6/23/98	-		25	UJ	10	UJ	-		-		10	UJ	10	UJ	-		-		10	UJ	-		10	UJ			CLP
	1/12/99	1	U	1	U	1	U	-		1	U	1.8		2.3		1	U	1	U	1	U	1	U	1	U			8021B
	7/12/99	-		10	UJ	10	UJ	-		-		10	UJ	10	UJ	-		-		10	UJ	-		10	UJ			CLP
	2/1/00	1	J	1	U	0.76	J	-		0.7	J	1.5		1	U	1	U	1		0.82	J	1	U	0.98	J			8021B
	8/8/00	-		10	UJ	10	UJ	-		-		10	UJ	10	UJ	-		-		10	UJ	-		10	UJ			CLP
	2/12-14/01	1	J	1	U	0.71	J	-		0.7	J	1	U	1	U	1	U	0.93	J	0.54	J	1	U	1.4				8021B
	8/7-8/01	-		2	J	2	J	-		-		3	J	10	U	-		-		10	U	-		10	U			CLP
	2/11-14/02	0.5	U	0.5	U	3	U	-		0.5	U	0.5	U	0.5	U	0.5	U	0.7	J	0.5	J	0.5	U	0.8	J	0.50	U	8260B
	8/12-14/02	0.5	UJ	10	U	10	U	-		1	UJ	10	U	10	U	1	UJ	0.5	UJ	10	U	0.5	UJ	10	U	0.50	J	CLP/8260B
	1/21-22/03	-		10	U	10	U	-		-		-		10	U	-		-		10	U	-		10	U			CLP
	7/14-15/03	1	U	17	U	4	U	-		-		1	U	1	U	4.2	U	1	UJ	1	U	1	UJ	1	U	0.50	J	8260B
	3/16-17/04	-		10	U	10	U	-		-		-		10	U	-		-		10	U	-		10	U			CLP
	9/29-30/04	0.5	U	0.65	U	0.88	U	-		-		0.5	U	0.5	U	0.5	U	0.55	U	0.5	U	0.5	U	0.5	U			8260B
	3/30-31/05	-		67	U	10	U	-		-		10	U	10	U	-		-		10	U	-		10	U			CLP
	10/3-4/05	-		25	U	0.66		-		-		0.5	U	0.31	J	0.5	U	0.38	J	0.76		0.5	U	0.5	U	0.50	U	8260B
	4/4-5/06	-		10	U	10	U	-		-		10	U	10	U	-		-		10	U	-		10	U	-		CLP
	9/27-28/06	0.50	U	0.43	J	0.68	J	-		-		0.50	U	0.31	J	0.50	U	0.39	J	0.53	J	0.50	U	0.50	U	0.50	U	8260B
	4/2-3/07	-		3.3	J	10	U	-		-		0.50	U	0.3	J	-		-		1.3	J	-		0.50	U	-		8260B
	9/18-19/07	0.50	U	0.49	J	0.48	J	-		-		0.50	U	0.50	U	0.1	J	0.49	J	0.64		0.50	U	0.1	J	0.50	U	8260B
	3/11/08	-		10	UJ	0.50	UJ	-		-		0.50	UJ	0.5	J	-		-		0.50	UJ	-		0.50	UJ	-		8260B
	9/8-9/08	0.50	U	8.3	U	0.50	U	-		-		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	J	8260B
	3/11-12/09	-		0.50	U	0.50	U	-		-		0.50	U	0.50	U	-		-		0.50	U	-		0.50	U	-		8260B
	9/1-2/09	0.50	U	0.50	U	0.50	U	-		-		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	8260B
	3/17-18/10	-		0.50	U	0.21	J	-		-		0.50	U	0.50	U	-		-		0.34	J	-		0.50	U	-		
	9/13-14/10	0.50	U	0.50	U	0.50	U	-		-		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	

Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
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Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																											
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
Tetrachloroethene	6/20/94	10	U	120	U	44		6	J	0.88	J	7.55	J	2.15	J	1.3	J	7.47	J	22.78		7.84	U	37.43				CLP/8021
	9/27/94	10	U	170	U	53		26		10	U	33		5	J	12	J	9	J	36		10	U	64				CLP
MCL= 5 ug/l	2/06/95	10	U	18	J	46		33		1	U	31		4	J	6	J	8	J	32		1	U	48				CLP
NCS = 0.7 ug/l	4/11/95	10	U	200	U	33		13	J	10	U	33		5	J	10	J	7	J	28		10	U	41				CLP
	7/10/95	2	U	12		31		13		2	U	42	J	5		13		10		27		10	U	40				8021
	7/10/95	5	U	9.9		37		14		5	U	38		3.6	J	5.7		8.1		31		-		30				8260
	4/10/96	10	U	20	J	46		10	J	10	U	36		4	J	4	J	12		37		10	U	41				CLP
	4/8/97	1	U	11		21		-		1	U	13		3.4		4.4		11		23		1	U	21				8021
	1/15/98	10	U	4	J	21		-		10	U	11		3	J	3	J	10		25		10	U	28				CLP
	6/23/98	-		12	J	16	J	-		-		18	J	3	J	-		-		19	J	-		26	J			CLP
	1/12/99	1	U	4.2		19		-		1	U	7.6		1.9		2.6		7		13		1	U	16				8021B
	7/12/99	-		3	J	19		-		-		8	J	2	J	-		-		10	U	-		29	J			CLP
	2/1/00	1	U	1.5		15		-		1	U	5.4		1.8		2.7		8.4		14		1	U	21				8021B
	8/8/00	-		4	J	24		-		-		7	J	1	J	-		-		14		-		16				CLP
	2/12-14/01	1	U	1.4		20		-		1	U	1	U	2		3.3		8		12		1	U	23				8021B
	8/7-8/01	-		3	J	9	J	-		-		5	J	1	J	-		-		11		-		25				CLP
	2/11-14/02	0.5	U	2		12		-		0.5	U	5		0.8		2		6		10		0.5	U	16		0.4	J	8260B
	8/12-14/02	0.5	U	2	J	14		-		1	U	3	J	1	J	1	U	0.5	U	11		0.5	U	15		0.50	U	CLP/8260B
	1/21-22/03	-		2	J	7	J	-		-		-		1	J	-		-		10		-		17				CLP
	7/14-15/03	1	U	17	U	4.4		-		-		1	U	1	U	4.2	U	5	J	1	U	1	UJ	2.3		U	U	8260B
	3/16-17/04	-		7	J	3	J	-		-		4	J	9	J	-		-		8	J	-		10				CLP
	9/29-30/04	0.5	U	6	J	5.2	J	-		-		0.65	J	1.6	J	1.3		3.1	J	5.9		0.5	U	5	J			8260B
	3/30-31/05	-		8	J	5	J	-		-		10	U	1	J	-		-		5	J	-		3	J			CLP
	10/3-4/05	-		25	U	5.9		-		-		0.53		1.5		2.6		3.4		5		0.5	U	5.1	J	0.50	U	8260B
	4/4-5/06	-		5	J	6	J	-		-		2	J	1	J	-		-		5	J	-		3	J	-		CLP
	9/27-28/06	0.50	U	5.6	J	5.4		-		-		0.50	U	0.85		1.5		2.7		3.1		0.50	U	1.6		0.50	J	8260B
	4/2-3/07	-		13	U	6	J	-		-		0.4	J	1.1	J	-		-		4.0	J	-		3	J	-		8260B
	9/18-19/07	0.50	U	6.2		2.7		-		-		0.19	J	1.4		1.3		2.7		3.9		0.50	U	2.2		0.50	U	8260B
	3/11/08	-		2.9	J	0.7	J	-		-		0.5	UJ	0.6	J	-		-		2.7	J	-		3.3	J	-		8260B
	9/8-9/08	0.50	U	3.5	J	1.2	J	-		-		0.50	U	1.3		3		1.7		2.7		0.50	U	3.9		0.50	U	8260B
	3/11-12/09	-		3.4	J	0.9	J	-		-		0.5	UJ	0.9	J	-		-		4.6	J	-		4.2	J	-		8260B
	9/1-2/09	0.50	U	4.5		0.43	J	-		-		0.50	U	1.1		2.7		0.89		1.4		0.50	U	0.80		0.50	U	8260B
	3/17-18/10	-		4.8		0.13	J	-		-		0.50	U	0.36	J	-		-		2.8		-		1.5		-		
	9/13-14/10	0.50	U	3.3		0.50	U	-		-		0.50	U	0.83		2.1		0.39	J	0.82	J	0.50	U	0.43	J	0.84		

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Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
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Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																											
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
Trichloroethene	6/20/94	10	U	120	U	16		21	J	21.2	U	21.2	U	21.2	U	21.2	U	21.2	U	5.74	J	21.2	U	15.7	J			CLP/8021
	9/27/94	10	U	170	U	23		71		10	U	15		6	J	10	U	3	J	14		10	U	34				CLP
MCL= 5 ug/l	2/06/95	10	U	150	U	19		88		2.5	U	14		6	J	50	U	3	J	13		2.5	U	24				CLP
NCS = 3 ug/l	4/11/95	10	U	200	U	12		53		1	J	13		6	J	71	U	2	J	10		10	U	19				CLP
	7/10/95	2	U	1.2	J	20		67	J	1.6	J	28		8.6		2	U	5.8		16		10	U	21	J			8021
	7/10/95	5	U	5	U	16		47		1.2	J	15		6		5	U	3.1	J	13		-		17				8260
	4/10/96	10	U	91	U	21		28		10	U	16		6	J	23	U	4	J	15		10	U	19				CLP
	4/8/97	1	U	1.9		12		-		53	U	11		5.1		1.2		6		14		1	U	16				8021
	1/15/98	10	U	20	U	11		-		1	J	8	J	4	J	14	U	5	J	12		10	U	16				CLP
	6/23/98	-		25	UJ	8	J	-		-		9	J	3	J	-		-		10	J	-		15	J			CLP
	1/12/99	1	U	1	U	14		-		1	U	6.9		3.1		1	U	5		9.5		1	U	13				8021B
	7/12/99	-		3	J	10		-		-		10		3	J	-		-		10	U	-		15				CLP
	2/1/00	1	U	1	U	11		-		1	J	6.3		2.7		1	U	6.6		10		1	U	17				8021B
	8/8/00	-		10	U	12	J	-		-		10	U	10	U	-		-		10	U	-		11	J			CLP
	2/12-14/01	1	U	1	U	13		-		0.8	J	1	U	3.1		0.59	J	6.6		8.7		1	U	16				8021B
	8/7-8/01	-		10	U	5	J	-		-		6	J	2	J	-		-		7	J	-		15				CLP
	2/11-14/02	0.5	U	0.5	U	7		-		0.6		3		1		0.5	U	4		6		0.5	U	9		0.50	U	8260B
	8/12-14/02	0.5	U	10	U	12		-		1	U	6	J	4	J	1	U	0.5	U	9	J	0.5	U	12		0.50	U	CLP/8260B
	1/21-22/03	-		0.3	J	5	J	-		-		-		2	J	-		-		8	J	-		12				CLP
	7/14-15/03	1	U	17	U	4	U	-		-		2.1	J	1	U	4.2	U	3.5	J	1	U	1	UJ	1.5		0.50	J	8260B
	3/16-17/04	-		10	U	4	J	-		-		6	J	5	J	-		-		4	J	-		6	J			CLP
	9/29-30/04	0.5	U	0.97	J	4.6	J	-		-		1.1	J	2.6	J	0.84	U	3.2	J	4.7		0.5	U	4.6	J			8260B
	3/30-31/05	-		11	J	7	J	-		-		2	J	2	J	-		-		5	J	-		2	J			CLP
	10/3-4/05	-		25	U	5.5		-		-		2.2		2.6		0.21	J	2.5		5.3		0.5	U	2.1	J	0.50	U	8260B
	4/4-5/06	-		10	U	5	J	-		-		2	J	2	J	-		-		4	J	-		1	J	-		CLP
	9/27-28/06	0.50	U	0.73	J	5.4	J	-		-		0.39	J	1.2	J	0.21	J	2.7	J	3.1	J	0.50	U	1.6	J	0.50	J	8260B
	4/2-3/07	-		13	U	5	J	-		-		0.4	J	1.4		-		-		2.9		-		1	J	-		8260B
	9/18-19/07	0.50	U	0.63	J	5.6	J	-		-		0.73		1.7		0.50	U	2.8		4.6		0.50	U	1.2	J	0.50	U	8260B
	3/11/08	-		10	U	2.1		-		-		0.2	J	1.2		-		-		4.1		-		1.3		-		8260B
	9/8-9/08	0.50	U	8.3	U	3.4		-		-		0.41	J	1.6		0.19	J	2.7		4.7		0.50	U	1.3		0.50	U	8260B
	3/11-12/09	-		0.50	U	2.5		-		-		0.4	J	1.4		-		-		5.1		-		1.1		-		8260B
	9/1-2/09	0.50	U	0.44	J	2.3		-		-		0.50	U	1.4		0.16	J	2.6		4.4		0.50	U	0.47	J	0.50	U	8260B
	3/17-18/10	-		0.54		2.3		-		-		0.50	U	1.2		-		-		3.9		-		0.43	J	-		
	9/13-14/10	0.50	U	0.44	J	2.8		-		-		0.29	J	1.1		0.50	U	2.1		3.6		0.50	U	0.73		0.50	U	

Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																											
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
1,1,1-Trichloroethane	6/20/94	10	U	1800		31		25	U	30.11	U	2.42	J	11.89	J	130.14	J	4.83	J	16.79	J	0.08	J	13.39	J			CLP/8021
	9/27/94	10	U	1900		35		25	U	10	U	6	J	18		1830		5	J	24		5	J	16				CLP
MCL= 200 ug/l	2/06/95	10	U	2700		31		25	U	1	U	6	J	14		650		5	J	18		2.5		14				CLP
NCS = 200 ug/l	4/11/95	10	U	2000		21		25	U	10	U	5	J	16		1300		5	J	17		3	J	10				CLP
	7/10/95	2	U	1600		26		2	U	2	U	6		12		990		5.9		17		10	U	7.8				8021
	7/10/95	5	U	1600		21		5	U	5	U	4.9	J	9.8		740		4.8	J	16		-		7				8260
	4/10/96	10	U	1300		21		25	U	10	U	8	J	8	J	290		6	J	15		4	J	7	J			CLP
	4/8/97	1	U	770		8.2		-		1	U	4.5		1.5		570		6.1		11		4.1		2.9				8021
	1/15/98	10	U	320		7	J	-		10	U	4	J	10	U	150		7	J	9	J	5	J	3	J			CLP
	6/23/98	-		710	J	3	J	-		-		3	J	10	UJ	-		-		6	J	-		3	J			CLP
	1/12/99	1	U	310		4.7		-		1	U	2.5		1	U	170		6.3		5.4		3.4		1.2				8021B
	7/12/99	-		190		3	J	-		-		2	J	10	U	-		-		10	U	-		1	J			CLP
	2/1/00	1	U	110		2.8		-		1.7		1	U	180	J	6		3.9		3.9		1.7		1.7				8021B
	8/8/00	-		250	J	3	J	-		-		2	J	10	U	-		-		10	U	-		1	J			CLP
	2/12-14/01	1	U	89		3.4		-		1	U	1	U	1	U	380		1	U	2.5		2.4		2.8				8021B
	8/7-8/01	-		89		1	J	-		-		10	U	10	U	-		-		2	J	-		2	J			CLP
	2/11-14/02	0.5	U	41		3	U	-		0.5	U	0.5	U	0.5	U	130		3		2		1		2		0.50	U	8260B
	8/12-14/02	0.5	U	130		10	U	-		1	U	10	U	10	U	58		0.5	U	10	U	0.5	U	10	U	0.50	U	CLP/8260B
	1/21-22/03	-		180		1	J	-		-		-		10	U	-		-		2	J	-		1	J			CLP
	7/14-15/03	1	U	550		4	U	-		-		1	U	1	U	70		3.3	J	1	U	1.1	J	1	U	0.50	J	8260B
	3/16-17/04	-		630		10	U	-		-		10	U	3	J	-		-		10	U	-		10	U			CLP
	9/29-30/04	0.5	U	580	J	0.5	U	-		-		0.95	J	0.37	J	40		3.2	J	2.1		1.2		0.33	J			8260B
	3/30-31/05	-		760	U	10	U	-		-		10	U	10	U	-		-		10	U	-		10	U			CLP
	10/3-4/05	-		740		0.5	U	-		-		0.5	U	0.5	U	150		1	U	1.4		0.86		0.5	U	0.50	U	8260B
	4/4-5/06	-		700		10	U	-		-		10	U	10	U	-		-		1	J	-		10	U	-		CLP
	9/27-28/06	0.50	U	350	J	2.5	U	-		-		0.50	U	0.50	U	25	J	1.2		1.4		0.59	J	0.50	U	0.50	J	8260B
	4/2-3/07	-		300		10	U	-		-		0.50	U	0.50	U	-		-		2.5	U	-		0.50	U	-		8260B
	9/18-19/07	0.50	U	570		0.50	U	-		-		0.50	U	0.50	U	25		0.56		1.4		0.64		0.50	U	0.50	U	8260B
	3/11/08	-		320		0.50	U	-		-		0.50	U	0.50	U	-		-		2.5	U	-		0.50	U	-		8260B
	9/8-9/08	0.50	U	310	J	0.50	U	-		-		0.50	U	0.50	U	91		0.50	U	0.50	U	0.93		0.50	U	0.50	U	8260B
	3/11-12/09	-		200		0.50	U	-		-		0.50	U	0.50	U	-		-		0.50	U	-		0.50	U	-		8260B
	9/1-2/09	0.50	U	370		0.50	U	-		-		0.50	U	0.50	U	72		0.12	J	0.50	U	0.43	J	0.50	U	0.50	U	8260B
	3/17-18/10	-		470		0.50	U	-		-		0.1	J	0.50	U	-		-		0.082	J	-		0.50	U	-		
	9/13-14/10	0.50	U	330		0.50	U	-		-		0.50	U	0.50	U	58		0.50	U	0.50	U	0.35	J	0.50	U	0.50	U	8260B

Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																										
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type
Vinyl Chloride	6/20/94	10	U	120	U	10	U	10	J	6.6	UJ	6.6	UJ	6.6	UJ	6.6	UJ	6.6	UJ	6.6	UJ	6.6	UJ	6.6	UJ			CLP/8021
	9/27/94	10	U	170	U	3	J	10	J	10	U	5	J	10	U	10	U	10	U	10	U	10	U	14	U			CLP
MCL= 2 ug/l	2/06/95	10	U	150	U	2	J	20	J	3.6		6	J	10	U	50	U	10	U	10	U	1	U	10	U			CLP
NCS = 0.03 ug/l	4/11/95	10	U	200	U	10	U	10	J	2	J	6	J	10	UJ	71	U	10	U	10	UJ	10	UJ	10	U			CLP
	7/10/95	2	U	2	U	2.9	J	12	J	2	U	11	J	2	U	2	U	2	U	2.3		10	U	0.94	J			8021
	7/10/95	5	U	5	U	3.1	J	23		5	U	7.2		5	U	5	U	5	U	5	U	-		5	U			8260
	4/10/96	10	U	91	U	2	J	14	J	10	U	5	J	10	U	23	U	10	U	10	U	10	U	10	U			CLP
	4/8/97	1	U	1	U	0.98		-		1	U	3	J	1	U	1	U	2.8	J	1	U	1	U	4	J			8021
	1/15/98	10	U	20	U	10	U	-		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U			CLP
	6/23/98	-		25	UJ	10	UJ	-		-		2	J	10	UJ	-		-		2	J	-		2	J			CLP
	1/12/99	1	U	1	U	5		-		1	U	1.8		2		1	U	1	U	2.8		1	U	3.1				8021B
	7/12/99	-		10	U	2	J	-		-		10	U	10	U	-		-		10	U	-		2	J			CLP
	2/1/00	1	U	1	U	4.2		-		0.75	J	1.7		3.1		1	U	2.4		3.8		1	U	5.5				8021B
	8/8/00	-		10	U	5	J	-		-		10	U	2	J	-		-		2	J	-		2	J			CLP
	2/12-14/01	1	U	1	U	6.6	J	-		1	U	1	U	2.8	J	1	U	2.9	J	3.9	J	1	U	8	J			8021B
	8/7-8/01	-		10	U	10	U	-		-		10	U	2	J	-		-		3	J	-		8	J			CLP
	2/11-14/02	0.5	U	0.5	U	4		-		2		0.5	U	1		0.5	U	3		4		0.5	U	6		0.50	U	8060B
	8/12-14/02	0.5	U	10	U	5	J	-		2	J	10	U	10	U	1	U	0.5	U	3	J	0.5	U	4	J	0.50	U	CLP/8260B
	1/21-22/03	-		10	U	0.9	J	-		-		-		0.9	J	-		-		2	J	-		4	J	-		CLP
	7/14-15/03	1	U	17	U	4	U	-		-		1	U	1	U	4.2	U	1.8	J	1	U	1	UJ	1.2		0.50	J	8060B
	3/16-17/04	-		10	U	10	U	-		-		10	U	3	J	-		-		10	U	-		10	U	-		CLP
	9/29-30/04	0.5	U	1.3	J	4.7	J	-		-		0.5	U	2.9	J	0.84	U	3.1	J	3.3		0.5	U	2.4	J	-		8260B
	3/30-31/05	-		67	U	10	U	-		-		10	U	10	U	-		-		10	U	-		10	U	-		CLP
	10/3-4/05	-		25	UJ	5.8	J	-		-		0.5	UJ	2.4	J	0.5	UJ	3.4	J	4.3	J	0.5	UJ	0.25	J	0.50	J	8260B
	4/4-5/06	-		10	U	8	J	-		-		10	U	10	U	-		-		5	J	-		10	U	-		CLP
	9/27-28/06	0.50	U	0.48	J	3.6		-		-		0.50	U	0.76		0.50	U	2.8		2.6		0.50	U	0.50	U	0.50	U	8260B
	4/2-3/07	-		13	U	1.2	J	-		-		0.50	U	1.5		-		-		3.4		-		0.50	U	-		8260B
	9/18-19/07	0.50	U	0.41	J	3.2		-		-		0.50	U	1.3		0.50	U	3.1		4		0.50	U	0.50	U	0.50	U	8260B
	3/11/08	-		10	U	0.50	U	-		-		0.50	U	1.4		-		-		4.2		-		0.50	U	-		8260B
	9/8-9/08	0.50	U	8.3	U	0.50	U	-		-		0.50	U	1.4		0.50	U	2.6		3		0.50	U	0.50	U	0.50	U	8260B
	3/11-12/09	-		0.2	J	0.1	J	-		-		0.50	U	1.7		-		-		2.9		-		0.50	U	-		8260B
	9/1-2/09	0.50	U	0.38	J	0.18	J	-		-		0.50	U	1.8		0.50	U	1.5		1.9		0.50	U	0.50	U	0.50	U	8260B
	3/17-18/10	-		0.55	J	0.23	J	-		-		0.50	U	1.9	J	-		-		1.7	J	-		0.50	U	-		
	9/13-14/10	0.50	U	0.37	J	0.50	U	-		-		0.50	U	2	J	0.50	U	0.37	J	1.3		0.50	U	0.50	U	0.50	U	8260B

Watauga County Landfill
Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5A
Assessment Organic Target Parameter Analytical Results
1994-2010
Core Groundwater Monitoring Wells

Parameter	Event	Results ug/l(ppb)																													
		MW-1		MW-2		MW-3		MW-6		MW-7		MW-8		MW-9		MW-10		MW-11		MW-12		MW-15		MW-17		MW-19		Analysis Type

TABLE 5A NOTES:

U Denotes not detected (the associated numerical value is the CRQL/LOQ).
J Denotes an estimated value
CRQL Contract Required Quantification Limit (CLP Methods)
LOQ Limit of Quantitation (SW-846 Methods)
- Denotes Not Avaliable or Not Sampled
Shading - denotes Parameter results that exceed U.S. EPA Maximum Contaminant Levels.

NCS Denotes North Carolina Groundwater Quality Standard (T15A: 02L .0200)
MCL Denotes EPA Maximum Contaminant Level (EPA 822-R-94-001)

ANALYSIS TYPE:
1) Organic parameters were analyzed utilizing CLP Statement of Work OLMO1.9(3/90), SW-846 Method #8260 and/or #8021, as noted.
2) For the 6/94 event, monitoring wells MW-8, MW-9, MW-10, MW-11, MW-12, MW-15 and MW-17, SW-846 anlytical method #8021 analysis was performed.
For the 8//02 event, monitoring wells MW-1, MW-10, MW-11, and MW-15, SW-846 analytical method #8260b, 25 ml purge analysis was performed.
Other monitoring locations were analyzed using CLP analytical methods.

j:\6520-21\CORRESP\REPORTS\TABLE5A3.XLS

Table 5B

Watauga County, North Carolina — Assessment Organic Target Parameter Analytical Results (1994-2006)

Upgradient Well: MW-1 — Boundary Groundwater Monitoring Wells

Parameter Results ug/l(ppb)	Event	MW-4		MW-5		MW-13		MW-14		MW-15		MW-16		MW-18		Analysis Type	NCS (ug/L)	MCL (ug/L)
Benzene	6/20/94	10	U	-		5.3	U	5.3	U	5.3	U	5.3	U	5.3	U	8021	1	5
	9/27/94	2	J	-		10	U	10	U	10	U	2	J	1	J	CLP	1	5
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	1	5
	4/11/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	CLP	1	5
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	1	5
	4/10/96	-		-		-		-		10	U	-		-		CLP	1	5
	4/8/97	-		-		-		-		1	U	-		-		8021	1	5
	1/15/98	10	U	10	U	10	U	10	U	10	U	-		10	U	CLP	1	5
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	1	5
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	1	5
	8/12-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	1	5
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	1	5
Chloroethane	6/20/94	10	U	-		9.29	U	9.29	U	9.29	U	9.29	U	9.29	U	8021	3000	-
	9/27/94	18		-		10	U	10	U	10	U	10	U	10	U	CLP	3000	-
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	3000	-
	4/11/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	CLP	3000	-
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	3000	-
	4/10/96	-		-		-		-		10	U	-		-		CLP	3000	-
	4/8/97	-		-		-		-		1	U	-		-		8021	3000	-
	1/15/98	10	U	10	U	10	U	10	U	10	U	-		10	U	CLP	3000	-
	2/12-14/01	2	U	2	U	2	U	2	U	2	U	-		2	U	8021	3000	-
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	3000	-
	8/12-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	3000	-
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	3000	-
Dichlorodifluoromethane	6/20/94	10	U	-		46.64	U	46.64	U	46.64	U	46.64	U	46.64	U	8021	1000	-
	9/27/94	10	U	-		10	U	10	U	10	U	10	U	10	U	CLP	1000	-
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	1000	-
	4/11/95	10	U	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ	CLP	1000	-
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	1000	-
	4/10/96	-		-		-		-		10	U	-		-		CLP	1000	-
	4/8/97	-		-		-		-		1	U	-		-		8021	1000	-
	1/15/98	10	U	10	U	10	U	10	U	10	U	-		10	U	CLP	1000	-
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	1000	-
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	1000	-
	8/12-14/02	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	8260B	1000	-
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	1000	-
1,1-Dichloroethane	6/20/94	10	U	-		0.99	J	43.1	U	0.26	J	43.1	U	43.1	U	8021	6	-
	9/27/94	10	U	-		10	U	10	U	10	U	10	U	10	U	CLP	6	-
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	6	-
	4/11/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	CLP	6	-
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	6	-
	4/10/96	-		-		-		-		10	U	-		-		CLP	6	-
	4/8/97	-		-		-		-		1	U	-		-		8021	6	-
	1/15/98	10	U	10	U	10	U	10	U	10	U	-		10	U	CLP	6	-
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	6	-
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	6	-
	8/12-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	6	-
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	6	-

Table 5B

Watauga County, North Carolina — Assessment Organic Target Parameter Analytical Results (1994-2006)

Upgradient Well: MW-1 — Boundary Groundwater Monitoring Wells

Parameter Results ug/l(ppb)	Event	MW-4		MW-5		MW-13		MW-14		MW-15		MW-16		MW-18		Analysis Type	NCS (ug/L)	MCL (ug/L)
1,1-Dichloroethene	6/20/94	10	U	-		9.75	U	9.75	U	9.75	U	9.75	U	9.75	U	8021	7	7
	9/27/94	10	U	-		10	U	10	U	10	U	10	U	10	U	CLP	7	7
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	7	7
	4/11/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	CLP	7	7
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	7	7
	4/10/96	-		-		-		-		10	U	-		-		CLP	7	7
	4/8/97	-		-		-		-		0.77	J	-		-		8021	7	7
	1/15/98	10	U	10	U	10	U	10	U	10	U	-		10	U	CLP	7	7
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	7	7
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	7	7
	8/12-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	7	7
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	7	7
cis-1,2-Dichloroethene(3)	6/20/94	10	U	-		9.49	U	9.49	U	9.49	U	9.49	U	9.49	U	8021	70	70
	9/27/94	10	U	-		10	U	10	U	10	U	10	U	10	U	CLP	70	70
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	70	70
	4/11/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	CLP	70	70
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	70	70
	4/10/96	-		-		-		-		10	U	-		-		CLP	70	70
	4/8/97	-		-		-		-		1	U	-		-		8021	70	70
	1/15/98	10	U	10	U	10	U	10	U	10	U	-		10	U	CLP	70	70
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	70	70
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	70	70
	8/12-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	70	70
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	70	70
trans-1,3-Dichloropropene	6/20/94	10	U	-		24.49	U	24.49	U	24.49	U	24.49	U	24.49	U	8021	100	-
	9/27/94	10	U	-		10	U	10	U	10	U	10	U	10	U	CLP	100	-
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	100	-
	4/11/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	CLP	100	-
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	100	-
Methylene Chloride	6/20/94	10	U	-		36.2	UJ	36.2	UJ	36.2	UJ	36.2	UJ	36.2	U	8021	5	5
	9/27/94	13	U	-		10	U	10	U	10	U	33		27		CLP	5	5
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	5	5
	4/11/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	CLP	5	5
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	5	5
	4/10/96	-		-		-		-		10	U	-		-		CLP	5	5
	4/8/97	-		-		-		-		0.656	J	-		-		8021	5	5
	1/15/98	-		-		-		-		1	J	-		-		CLP	5	5
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	5	5
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	5	5
	8/12-14/02	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	8260B	5	5
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	5	5
Tetrachloroethene	6/20/94	10	U	-		7.84	U	0.24	J	7.84	U	7.84	U	7.84	U	8021	0.7	5
	9/27/94	10	U	-		10	U	10	U	10	U	10	U	10	U	CLP	0.7	5
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	0.7	5
	4/11/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	CLP	0.7	5
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	0.7	5
	4/10/96	-		-		-		-		10	U	-		-		CLP	0.7	5
	4/8/97	-		-		-		-		1	U	-		-		8021	0.7	5
	1/15/98	10	U	10	U	10	U	10	U	10	U	-		10	U	CLP	0.7	5
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	0.7	5
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	0.7	5
	8/12-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	0.7	5
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	0.7	5

Table 5B

Watauga County, North Carolina — Assessment Organic Target Parameter Analytical Results (1994-2006)

Upgradient Well: MW-1 — Boundary Groundwater Monitoring Wells

Parameter Results ug/l(ppb)	Event	MW-4		MW-5		MW-13		MW-14		MW-15		MW-16		MW-18		Analysis Type	NCS (ug/L)	MCL (ug/L)
Trichloroethene	6/20/94	10	U	-		21.2	U	21.2	U	21.2	U	21.2	U	21.2	U	8021	3	5
	9/27/94	10	U	-		10	U	10	U	10	U	10	U	10	U	CLP	3	5
	2/06/95	10	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	8021	3	5
	4/11/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	CLP	3	5
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	3	5
	4/10/96	-		-		-		-		10	U	-		-		CLP	3	5
	4/8/97	-		-		-		-		1	U	-		-		8021	3	5
	1/15/98	10	U	10	U	10	U	10	U	10	U	-		10	U	CLP	3	5
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	3	5
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	3	5
	8/12-14/02	0.5	U	0.5	U	0.5	U	1	J	0.5	U	0.5	U	0.5	U	8260B	3	5
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	3	5
1,1,1-Trichloroethane	6/20/94	10	U	-		30.11	U	30.11	U	0.08	J	30.11	U	30.11	U	8021	200	200
	9/27/94	10	U	-		10	U	10	U	5	J	10	U	10	U	CLP	200	200
	2/06/95	10	U	1	U	1	U	1	U	2.5		1	U	1	U	8021	200	200
	4/11/95	10	U	10	U	10	U	1	J	3	J	10	U	10	U	CLP	200	200
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	200	200
	4/10/96	-		-		-		-		4	J	-		-		CLP	200	200
	4/8/97	-		-		-		-		4.1		-		-		8021	200	200
	1/15/98	10	U	10	U	10	U	10	U	5	J	-		10	U	CLP	200	200
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	200	200
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	200	200
	8/12-14/02	0.5	U	0.5	U	0.5	U	1		0.5	U	0.5	U	0.5	U	8260B	200	200
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	200	200
Vinyl Chloride	6/20/94	10	U	-		6.6	UJ	6.6		6.6	UJ	6.6	UJ	6.6	U	8021	0.03	2
	9/27/94	10	U	-		10	U	10	U	10	U	10	U	10	U	CLP	0.03	2
	2/06/95	10	U	1	U	1	U	1	U	1	U	1	U	1	U	8021	0.03	2
	4/11/95	10	UJ	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ	CLP	0.03	2
	7/10/95	10	U	10	U	10	U	10	U	10	U	10	U	10	U	8021	0.03	2
	4/10/96	-		-		-		-		10	U	-		-		CLP	0.03	2
	4/8/97	-		-		-		-		1	U	-		-		8021	0.03	2
	1/15/98	10	U	10	U	10	U	10	U	10	U	-		10	U	CLP	0.03	2
	2/12-14/01	1	U	1	U	1	U	1	U	1	U	-		1	U	8021	0.03	2
	2/11-14/02	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	8260B	0.03	2
	8/12-14/02	0.5	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	0.5	U	8260B	0.03	2
	9/27-28/06	0.5	U	0.5	U	0.5	U	0.5	U	-		-		0.5	U	8260B	0.03	2

TABLE 5B NOTES:

U Denotes not detected above Instrument Detection Level (IDL) for Inorganics and not detected above CRQL/LOQ for Organics.

J Denotes an estimated value

CRQL Contract Required Quantification Limit (CLP Methods)

LOQ Limit of Quantitation (SW-846 Methods)

\- Denotes Not Avaliable or Not Sampled

NCS Denotes North Carolina Groundwater Quality Standard (T15A: 02L .0200)

MCL Denotes EPA Maximum Contaminant Level (EPA 822-R-94-001)

Shading - denotes parameter results that exceed U.S. EPA Maximum Contaminant Levels.

ANALYSIS TYPE NOTES:

1) Organic parameters were analyzed utilizing CLP Statement of Work OLMO3.2, SW-846 Method #8260B and/or #8021, as noted.

2) For CLP, 1,2-Dichloroethene was reported as total concentration; for 8021/8260B concentration was reported for cis-isomer.

P:\06\500\06520\06520-39\Reports\2010 tables\September 2010 Tables\[XLS - 10 1223 - NCDENR - TABLE5BC - JES.xls]SURFACE WATER

Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5C
Assessment Organic Target Parameter Analytical Results
Surface Water Sampling Locations

Results ug/l(ppb)

Parameter	Event	S1		S2		S3		S4		S5		S6		L1		Mt. Spring	
ORGANICS																	
Benzene	6/20/94	10	U	3	J	10	U	1	J	10	U	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 51 ug/l	2/06/95	10	U	10	U	10	U	10	U	10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	10	U	10	U	10	U	10	U	10	U	-		-		-	
	4/10/96	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	4/8/97	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	1/15/98	10	U	3	J	10	U	10	U	10	U	10	U	-		-	
	6/23/98	10	UJ	1	J	10	UJ	10	UJ	10	UJ	10	UJ	-		-	
	1/12/99	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	7/12/99	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	2/1/00	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	8/8/00	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	2/12-14/01	10	U	2	J	10	U	10	U	10	U	10	UJ	-		-	
	8/7-8/01	10	U	10	U	10	U	10	U	2	J	10	U	-		-	
	2/11-14/02	10	U	2	J	10	U	10	U	10	U	10	UJ	-		-	
	8/12-14/02	DRY		4	J	10	U	10	U	DRY		10	U	-		-	
	1/21-22/03	10	U	2	J	10	U	10	U	10	U	10	UJ	-		-	
	7/14-15/03	10	U	2	J	10	U	10	U	10	U	10	UJ	-		-	
	3/16-17/04	10	U	10	J	10	U	10	U	10	U	10	UJ	-		-	
	9/29-30/04	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	3/30-31/05	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	10/3-4/05	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	4/4-5/06	10	U	1	J	10	U	10	U	10	U	NS	U	-		-	
	9/27-28/06	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	4/2-3/07	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	9/18-19/07	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	3/11/08	10	U	1	J	10	U	10	U	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/1-2/09	5	U	5	U	5	U	5	U	5	U	5	U	-		-	
	3/17-18/10	5	U	1.1	J	5	U	5	U	5	U	5	U	-		-	
Chloroethane	6/20/94	10	U	56		10	U	10	U	11		-		-		-	
	9/27/94	-		-		-		-		-		-		13		10	U
WQS = 550 ug/l	2/06/95	10	U	26		10	U	2	J	7	J	-		6	J	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	15		10	U	10	U	4	J	10	U	-		-		-	
	4/10/96	8	J	46		10	U	3	J	5	J	10	U	-		-	
	4/8/97	10	U	50		10	U	1	J	23		10	U	-		-	
	1/15/98	10	U	56		10	U	10	U	10	U	10	U	-		-	
	6/23/98	2	J	26	J	10	UJ	1	J	4	J	10	UJ	-		-	
	1/12/99	10	U	71		10	U	3	J	10	U	10	U	-		-	
	7/12/99	10	U	58		10	U	10	U	10	U	10	U	-		-	
	2/1/00	1	J	70		10	U	2	J	10	U	10	U	-		-	
	8/8/00	5	J	44		10	U	2	J	10	U	10	UJ	-		-	
	2/12-14/01	10	U	110		23		10	U	4	J	10	U	-		-	
	8/7-8/01	10	U	10	U	10	U	10	U	72		10	U	-		-	
	2/11-14/02	10	U	55		23		10	U	10	U	10	U	-		-	
	8/12-14/02	DRY		150	J	10	UJ	10	UJ	DRY		10	UJ	-		-	
	1/21-22/03	10	U	57		10	U	2	J	10	U	10	U	-		-	
	7/14-15/03	10	U	47		10	U	10	U	10	U	10	U	-		-	
	3/16-17/04	10	U	9	J	10	U	10	U	10	U	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	3/30-31/05	10	U	31		10	U	10	U	10	U	DRY		-		-	
	10/3-4/05	10	U	44		10	U	10	U	10	U	10	U	-		-	
	4/4-5/06	10	U	39		10	U	10	U	10	U	NS		-		-	
	9/27-28/06	10	U	10	U	10	U	10	U	3	J	10	U	-		-	
	4/2-3/07	10	U	29		10	U	10	U	10	U	10	U	-		-	
	9/18-19/07	10	U	18		10	U	10	U	10	U	10	U	-		-	
	3/11/08	10	U	26		10	U	10	U	10	U	10	U	-		-	
	9/8-9/08	10	U	6	J	10	U	10	U	10	U	10	U	-		-	
	3/11-12/09	10	U	6	J	10	U	10	U	10	U	10	U	-		-	
	9/1-2/09	5	U	4.6	J	5	U	5	U	5	U	5	U	-		-	
	3/17-18/10	5	U	16		5	U	5	U	5	U	5	U	-		-	

Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5C
Assessment Organic Target Parameter Analytical Results
Surface Water Sampling Locations

Results ug/l(ppb)

Parameter	Event	S1		S2		S3		S4		S5		S6		L1		Mt. Spring	
Dichlorodifluoromethane	6/20/94	10	U	4	J	10	U	10	U	10	U	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 77000 ug/l	2/06/95	10	U	10	U	10	U	10	U	10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	-		-		-	
	4/10/96	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/8/97	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	1/15/98	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	6/23/98	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	-		-	
	1/12/99	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	7/12/99	10	U	17	U	10	U	10	U	10	U	10	U	-		-	
	2/1/00	10	U	10	U	10	U	10	U	10	UJ	10	UJ	-		-	
	8/8/00	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	2/12-14/01	10	U	14		10	U	10	U	10	U	10	U	-		-	
	8/7-8/01	10	UJ	10	UJ	10	UJ	10	UJ	3	J	10	UJ	-		-	
	2/11-14/02	10	UJ	10	UJ	10	UJ	10	UJ	10	U	10	UJ	-		-	
	8/12-14/02	DRY		10	UJ	10	UJ	10	UJ	DRY		10	UJ	-		-	
	1/21-22/03	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	7/14-15/03	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	-		-	
	3/16-17/04	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	3/30-31/05	10	U	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	-		-	
	10/3-4/05	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	-		-	
	4/4-5/06	10	U	10	J	10	J	10	J	4	J	NS		-		-	
	9/27-28/06	10	U	10	U	10	U	10	U	4	J	10	U	-		-	
	4/2-3/07	10	U	0.4	J	10	U	10	U	1	J	10	U	-		-	
	9/18-19/07	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	10	U	2	J	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/1-2/09	5	U	5	U	5	U	5	U	2.5	J	5	U	-		-	
	3/17-18/10	5	U	5	U	5	U	5	U	0.4	J	5	U	-		-	
1,1-Dichloroethane	6/20/94	1	J	23		10	U	59		2	J	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 170000 ug/l	2/06/95	10	U	10	U	10	U	45		10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	6	J	20		10	U	41		2	J	-		-		-	
	4/10/96	3	J	15		10	U	30		2	J	14		-		-	
	4/8/97	10	U	14		10	U	12		10	U	14		-		-	
	1/15/98	10	U	15		10	U	10	U	10	U	10	U	-		-	
	6/23/98	10	UJ	8	J	10	UJ	15	J	10	UJ	10	UJ	-		-	
	1/12/99	10	U	12		10	U	14		10	U	1	J	-		-	
	7/12/99	10	U	11	J	10	U	5	J	10	U	10	U	-		-	
	2/1/00	10	U	9	J	10	U	12		10	U	1	J	-		-	
	8/8/00	3	J	7	J	10	U	13		10	U	1	J	-		-	
	2/12-14/01	10	U	10	U	2	J	10	U	14		1	J	-		-	
	8/7-8/01	10	U	10	U	10	U	7	J	10	J	10	U	-		-	
	2/11-14/02	10	U	11		10	U	9	J	10	U	10	U	-		-	
	8/12-14/02	DRY		17		10	U	10		DRY		10	U	-		-	
	1/21-22/03	10	U	9	J	10	U	7	J	10	U	10	U	-		-	
	7/14-15/03	10	U	12		10	U	8	J	10	U	10	U	-		-	
	3/16-17/04	10	U	10	U	10	U	6	J	10	U	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	1	J	10	U	DRY		-		-	
	3/30-31/05	10	U	8	J	10	U	10	U	10	U	DRY		-		-	
	10/3-4/05	10	U	9	J	10	U	3	J	10	U	10	U	-		-	
	4/4-5/06	10	U	7	J	10	U	3	J	10	U	NS		-		-	
	9/27-28/06	10	U	6	J	10	U	2	J	10	U	10	U	-		-	
	4/2-3/07	10	U	5	J	10	U	2	J	10	U	10	U	-		-	
	9/18-19/07	10	U	6	J	10	U	3	J	10	U	10	U	-		-	
	3/11/08	10	U	3	J	10	U	2	J	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	4	J	10	U	10	U	-		-	
	0.54	0.54	J	5	U	5	U	1.8	J	0.81	J	10	U	-		-	
	3/17-18/10	5	U	2	J	5	U	1.4	J	5	U	5	U	-		-	

Watauga County, North Carolina
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Table 5C
Assessment Organic Target Parameter Analytical Results
Surface Water Sampling Locations

Results ug/l(ppb)

Parameter	Event	S1		S2		S3		S4		S5		S6		L1		Mt. Spring	
1,1-Dichloroethene	6/20/94	10	U	10	U	10	U	10	U	10	U	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 7100 ug/l	2/06/95	10	U	10	U	10	U	10	U	10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	10	U	10	U	10	U	10	U	10	U	-		-		-	
	4/10/96	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/8/97	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	1/15/98	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	6/23/98	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	-		-	
	1/12/99	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	7/12/99	10	U	17	U	10	U	10	U	10	U	10	U	-		-	
	2/1/00	10	U	10	U	10	U	10	U	10	U	10	UJ	-		-	
	8/8/00	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	2/12-14/01	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	8/7-8/01	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	2/11-14/02	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	8/12-14/02	DRY		10	U	10	U	10	U	DRY		10	U	-		-	
	1/21-22/03	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	7/14-15/03	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/16-17/04	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	3/30-31/05	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	10/3-4/05	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/4-5/06	10	U	10	U	10	U	10	U	10	U	NS		-		-	
	9/27-28/06	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/2-3/07	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/18-19/07	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	4	J	10	U	10	U	-		-	
	9/1-2/09	5	U	5	U	5	U	5	U	5	U	5	U	-		-	
	3/17-18/10	5	U	5	U	5	U	10	U	5	U	5	U	-		-	
cis-1,2-Dichloroethene(2)	6/20/94	10	U	4	J	10	U	58		10	U	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 4900 ug/l	2/06/95	10	U	10	U	10	U	42		10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	1	J	3	J	10	U	42		10	U	-		-		-	
	4/10/96	10	U	5	J	10	U	35		10	U	16		-		-	
	4/8/97	10	U	6	J	10	U	15		10	U	16		-		-	
	1/15/98	10	U	5	J	10	U	1	J	10	U	10	U	-		-	
	6/23/98	10	UJ	4	J	10	UJ	21	J	10	UJ	10	UJ	-		-	
	1/12/99	10	U	4	J	10	U	30		10	U	2	J	-		-	
	7/12/99	10	U	5	J	10	U	8	J	10	U	10	U	-		-	
	2/1/00	4	J	4	J	10	U	25		10	U	2	J	-		-	
	8/8/00	10	U	2	J	10	U	27		10	U	2	J	-		-	
	2/12-14/01	10	U	2	J	10	U	28		10	U	2	J	-		-	
	8/7-8/01	10	U	10	U	10	U	14		10	U	3	J	-		-	
	2/11-14/02	10	U	2	J	10	U	17		10	U	2	J	-		-	
	8/12-14/02	DRY		3	J	10	U	22		DRY		3	J	-		-	
	1/21-22/03	10	U	3	J	10	U	18		10	U	0.7	J	-		-	
	7/14-15/03	10	U	3	J	10	U	15		10	U	10	U	-		-	
	3/16-17/04	10	U	10	U	10	U	16		10	U	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	3	J	10	U	DRY		-		-	
	3/30-31/05	10	U	3	J	10	U	8	J	10	U	DRY		-		-	
	10/3-4/05	10	U	2	J	10	U	5	J	10	U	10	U	-		-	
	4/4-5/06	10	U	2	J	10	U	7	J	10	U	NS		-		-	
	9/27-28/06	10	U	1	J	10	U	6	J	10	U	10	U	-		-	
	4/2-3/07	10	U	1	J	10	U	7	J	10	U	10	U	-		-	
	9/18-19/07	10	U	10	U	10	U	5	J	10	U	10	U	-		-	
	3/11/08	10	U	10	U	10	U	6	J	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	3	J	10	U	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	9	J	10	U	10	U	-		-	
	9/1-2/09	5	U	0.29	J	5	U	4.8	J	5	U	5	U	-		-	
	3/17-18/10	5	U	1	J	5	U	3.4	J	5	U	5	U	-		-	

Watauga County, North Carolina
Upgradient Well: MW-1
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Table 5C
Assessment Organic Target Parameter Analytical Results
Surface Water Sampling Locations

Results ug/l(ppb)

Parameter	Event	S1		S2		S3		S4		S5		S6		L1		Mt. Spring	
Methylene Chloride	6/20/94	6	J	9	J	3	J	1	J	8	J	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 590 ug/l	2/06/95	10	U	2	J	3	J	1	J	10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	10	U	10	U	10	U	10	U	10	U	-		-		-	
	4/10/96	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/8/97	10	U	3	J	1	J	10	U	10	U	10	U	-		-	
	1/15/98	1	J	4	J	4	J	1	J	2	J	2	J	-		-	
	6/23/98	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	-		-	
	1/12/99	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	7/12/99	10	U	17	U	10	U	10	U	10	U	10	U	-		-	
	2/1/00	10	U	10	UJ	10	UJ	10	UJ	10	U	10	UJ	-		-	
	8/8/00	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	2/12-14/01	10	U	3	J	10	U	10	U	2	J	10	U	-		-	
	8/7-8/01	10	U	3	J	10	U	10	U	1	J	10	U	-		-	
	2/11-14/02	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	8/12-14/02	DRY		10	U	10	U	10	U	DRY		10	U	-		-	
	1/21-22/03	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	7/14-15/03	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/16-17/04	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	3/30-31/05	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	10/3-4/05	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	4/4-5/06	10	U	1	J	10	U	10	U	10	U	NS		-		-	
	9/27-28/06	2	J	2	J	1	J	10	U	10	U	10	U	-		-	
	4/2-3/07	10	U	1	J	10	U	10	U	10	U	10	U	-		-	
	9/18-19/07	10	U	0.9	J	10	U	10	U	10	U	10	U	-		-	
	3/11/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/1-2/09	5	U	5	U	5	U	5	U	5	U	5	U	-		-	
	3/17-18/10	5	U	5	U	5	U	2.2	J	1.5	J	5	U	-		-	
Tetrachloroethene	6/20/94	10	U	10	U	10	U	18		10	U	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 3.3 ug/l	2/06/95	10	U	10	U	10	U	12		10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	10	U	10	U	10	U	11		10	U	-		-		-	
	4/10/96	10	U	10	U	10	U	9	J	1	J	4	J	-		-	
	4/8/97	10	U	10	U	10	U	4	J	10	U	4	J	-		-	
	1/15/98	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	6/23/98	10	UJ	10	UJ	10	UJ	5	J	10	UJ	10	UJ	-		-	
	1/12/99	10	U	10	U	10	U	6	J	10	U	10	U	-		-	
	7/12/99	10	U	17	U	10	U	2	J	10	U	10	U	-		-	
	2/1/00	10	U	10	U	10	U	3	J	10	U	10	UJ	-		-	
	8/8/00	10	U	10	U	10	U	4	J	10	U	10	U	-		-	
	2/12-14/01	10	U	10	U	10	U	2	J	10	U	10	U	-		-	
	8/7-8/01	10	U	10	U	10	U	2	J	10	U	10	U	-		-	
	2/11-14/02	10	U	10	U	10	U	3	J	10	U	10	U	-		-	
	8/12-14/02	DRY		10	U	10	U	2	J	DRY		10	U	-		-	
	1/21-22/03	10	U	10	U	10	U	2	J	10	U	10	U	-		-	
	7/14-15/03	10	U	10	U	10	U	1	J	10	U	10	U	-		-	
	3/16-17/04	10	U	10	U	10	U	2	J	10	U	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	3/30-31/05	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	10/3-4/05	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/4-5/06	10	U	10	U	10	U	10	U	10	U	NS		-		-	
	9/27-28/06	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/2-3/07	10	U	10	U	10	U	0.5	J	10	U	10	U	-		-	
	9/18-19/07	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/1-2/09	5	U	0.36	J	0.54	J	0.33	J	5	U	5	U	-		-	
	3/17-18/10	5	U	5	U	5	U	5	U	5	U	5	U	-		-	

Watauga County, North Carolina
Upgradient Well: MW-1
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Table 5C
Assessment Organic Target Parameter Analytical Results
Surface Water Sampling Locations

Results ug/l(ppb)

Parameter	Event	S1		S2		S3		S4		S5		S6		L1		Mt. Spring	
Trichloroethene	6/20/94	10	U	1	J	10	U	13		10	U	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 30 ug/l	2/06/95	10	U	10	U	10	U	8	J	10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	10	U	1	J	10	U	8	J	10	U	-		-	-	-	-
	4/10/96	10	U	1	J	10	U	6	J	1	J	3	J	-		-	
	4/8/97	10	U	1	J	10	U	3	J	10	U	3	J	-		-	
	1/15/98	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	6/23/98	10	UJ	10	UJ	10	UJ	3	J	10	UJ	10	UJ	-		-	
	1/12/99	10	U	10	U	10	U	4	J	10	U	10	U	-		-	
	7/12/99	10	U	17	U	10	U	1	J	10	U	10	U	-		-	
	2/1/00	10	U	10	U	10	U	3	J	10	U	10	UJ	-		-	
	8/8/00	10	U	10	U	10	U	3	JB	10	U	10	UJ	-		-	
	2/12-14/01	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	8/7-8/01	10	U	10	U	10	U	2	J	10	U	10	U	-		-	
	2/11-14/02	10	U	10	U	10	U	2	J	10	U	10	U	-		-	
	8/12-14/02	DRY		10	U	10	U	10	U	DRY		10	U	-		-	
	1/21-22/03	10	U	0.5	J	10	U	2	J	10	U	10	U	-		-	
	7/14-15/03	10	U	10	U	10	U	1	J	10	U	10	U	-		-	
	3/16-17/04	10	U	10	U	10	U	2	J	10	U	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	3/30-31/05	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	10/3-4/05	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/4-5/06	10	U	10	U	10	U	10	U	10	U	NS		-		-	
	9/27-28/06	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/2-3/07	10	U	10	U	10	U	0.6	J	10	U	10	U	-		-	
	9/18-19/07	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/1-2/09	5	U	0.41	J	5	U	0.67	J	5	U	5	U	-		-	
	3/17-18/10	5	U	5	U	5	U	0.5	J	5	U	5	U	-		-	
1,1,1-Trichloroethane	6/20/94	10	U	2	J	10	U	3	J	10	U	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 2500 ug/l*	2/06/95	10	U	10	U	10	U	2	J	10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	10	U	1	J	10	U	2	J	10	U	-		-		-	
	4/10/96	10	U	10	U	10	U	2	J	2	J	1	J	-		-	
	4/8/97	10	U	10	U	10	U	10	U	10	U	1	J	-		-	
	1/15/98	10	U	10	U	10	U	10	U	2	J	10	U	-		-	
	6/23/98	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	-		-	
	1/12/99	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	7/12/99	10	U	17	U	10	U	10	U	10	U	10	U	-		-	
	2/1/00	10	U	10	U	10	U	10	U	3	J	10	UJ	-		-	
	8/8/00	10	U	10	U	10	U	10	U	10	U	10	UJ	-		-	
	2/12-14/01	10	U	10	U	10	U	3	J	3	J	10	U	-		-	
	8/7-8/01	10	U	10	U	10	U	10	U	10	U	10	UJ	-		-	
	2/11-14/02	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	8/12-14/02	DRY		10	U	10	U	10	U	DRY		10	U	-		-	
	1/21-22/03	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	7/14-15/03	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/16-17/04	10	U	10	U	10	U	10	U	5	J	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	3/30-31/05	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	10/3-4/05	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/4-5/06	10	U	10	U	10	U	10	U	10	U	NS		-		-	
	9/27-28/06	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/2-3/07	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/18-19/07	10	U	10	U	10	U	10	U	2	J	10	U	-		-	
	3/11/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/1-2/09	5	U	5	U	5	U	5	U	5	U	5	U	-		-	
	3/17-18/10	5	U	5	U	5	U	5	U	0.7	J	5	U	-		-	

Watauga County, North Carolina
Upgradient Well: MW-1
06/06/11

Table 5C
Assessment Organic Target Parameter Analytical Results
Surface Water Sampling Locations

Results ug/l(ppb)

Parameter	Event	S1		S2		S3		S4		S5		S6		L1		Mt. Spring	
Vinyl Chloride	6/20/94	10	U	10	U	10	U	10	U	10	U	-		-		-	
	9/27/94	-		-		-		-		-		-		10	U	10	U
WQS = 2.4 ug/l	2/06/95	10	U	10	U	10	U	2	J	10	U	-		10	U	-	
	4/11/95	-		-		-		-		-		-		-		-	
	7/10/95	10	U	10	U	10	U	3	J	10	U	-		-		-	
	4/10/96	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/8/97	10	U	2	J	10	U	10	U	10	U	10	U	-		-	
	1/15/98	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	6/23/98	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	-		-	
	1/12/99	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	7/12/99	10	U	17	U	10	U	10	U	10	U	10	U	-		-	
	2/1/00	10	U	10	U	10	U	10	U	10	UJ	10	UJ	-		-	
	8/8/00	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	2/12-14/01	10	U	10	U	10	U	10	U	4	J	10	U	-		-	
	8/7-8/01	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	2/11-14/02	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	8/12-14/02	DRY		10	U	10	U	10	U	DRY		10	U	-		-	
	1/21-22/03	10	U	0.9	J	10	U	10	U	10	U	10	U	-		-	
	7/14-15/03	10	U	1	J	10	U	10	U	10	U	10	U	-		-	
	3/16-17/04	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/29-30/04	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	3/30-31/05	10	U	10	U	10	U	10	U	10	U	DRY		-		-	
	10/3-4/05	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/4-5/06	10	U	10	U	10	U	10	U	10	U	NS		-		-	
	9/27-28/06	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	4/2-3/07	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/18-19/07	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/8-9/08	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	3/11-12/09	10	U	10	U	10	U	10	U	10	U	10	U	-		-	
	9/1-2/09	5	U	5	U	5	U	5	U	5	U	5	U	-		-	
	3/17-18/2010	5	U	5	U	5	U	5	U	5	U	5	U	-		-	

TABLE 5B NOTES:

U Denotes not detected (the associated numerical value is the CRQL).

J Denotes an estimated value

CRQL Contract Required Quantification Limit (CLP Methods)

\- Denotes Not Avaliable or Not Sampled

WQS Denotes North Carolina 15A NCAC 2B Surface Water Quality Standard (Human Health) or National Criteria per EPA, current 4/30/09

* freshwater aquatic life standard (no human health standard available).

Shading Denotes results that exceed North Carolina Surface Water Quality Standard.

ANALYSIS TYPE:

1) Organic parameters were analyzed utilizing CLP Statement of Work OLMO3.2.

2) For CLP analyses, 1,2-Dichloroethene is reported as total concentration.

PRIVATE WELL TESTING
WATAUGA COUNTY, NC
RESULTS OF BREMCO WELL ANALYSIS

CONSTITUENT	3/5/93*	4/6/94**	8/2/94**	12/7/94**	4/26/95**	10/24/95**	4/9/96**	10/9/96**	6/4/97**	2/10/98**	8/17/98**	2/18/99**	5/22/00**	NCS	MCL
Blue Ridge Electric Membership Company (BREMCO), 2491 Hwy 421 S (Well Ref. No. 5) Connected to public water in 2003.															
Benzene	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	3.2 (J)	trace	trace	trace	1	5
1.1-Dichloroethane	0.7	<1.0	1.4	1.0	1.2	1.8	1.5	1.5	2.0	3.2 (J)	1.6	1.5	5.0	6	---
1,1,1-Trichlorothane	0.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	trace	trace	trace	trace	200	200
Trichloroethene	0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2 (J)	0.5	trace	0.6	3	5
1,1-Dichloroethene	**ND**	1.0	1.9	<1.0	1.1	1.7	1.0	<1.0	1.7	3.9 (J)	2.6	**ND**	2.7	7	7
cis-1,2-Dichloroethene	**ND**	<1.0	**ND**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.5 (J)	trace	trace	0.5	70	70
Tetrachloroethene	**ND**	<1.0	<1.0	trace	<1.0	<1.0	<1.0	<1.0	<1.0	trace	trace	trace	trace	0.7	5
Cloroform	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	trace	**ND**	70	80
Methylene Chloride	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.8	5	5
Methyl-t-butyl-ether	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	trace	20	---
Tetrahydrofuran	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.5 (J)	**ND**	**ND**	---	---
Chloroethane	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	3000	---
Dichlorodifluoromethane	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	1000	---

CONSTITUENT	8/7/01***	2/11/02***	8/14/02****	1/22/03****	7/15/03****	3/16/04****	9/29/04****	3/30/05^^	10/5/05^^	4/05/06^^	9/27/06^^	4/3/07^^	9/18/07^^	3/11/08^^	9/9/08^^	3/12/09^^	9/2/09^^	3/18/10^^	NCS	MCL
Blue Ridge Electric Membership Company (BREMCO), 2491 Hwy 421 S (Well Ref. No. 5) Connected to public water in 2003.																				
Benzene	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.1	0.6	0.5	0.5	0.6	0.4(J)	0.5(J)	1	5
sec-Butylbenzene	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.01(J)	**ND**	0.01(J)	0.2(J)	70	---
1,4-Dichlorobenzene	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.3	0.8	1	1.3	1.4	1.6	2.3	6	75
1.1-Dichloroethane	6	6	7.7		8.8	5,7	4.1	**ND**	4.7	0.5	1.6	11	29	38	30	33	36	28	6	---
1,1,1-Trichlorothane	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	200	200
Trichloroethene	0.8	0.6	0.72		0.69	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	1	1	1	1	0.9	1	3	5
1,1-Dichloroethene	2	**ND**	1.6		1.4	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.8	1.8	1.7	1.5	1.5	1.3	1.4	7	7
cis-1,2-Dichloroethene	0.9	1	1.4		1.6	**ND**	**ND**	**ND**	0.7	**ND**	**ND**	1.9	5.3	6	6	6.5	5.5	6.2	70	70
trans-1,2-Dichloroethene	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.2(J)	0.2(J)	0.2(J)	0.2(J)	0.2(J)	100	70
Tetrachloroethene	**ND**	**ND**	**ND**	NS	0.53	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.4 (J)	0.5 (J)	0.4 (J)	0.4 (J)	0.4 (J)	0.4 (J)	0.7	5
Cloroform	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	70	80
Methylene Chloride	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.4	1.6	1.7	1.4	1.7	0.8	1.5	5	5
Methyl-t-butyl-ether	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	200	---
Tetrahydrofuran	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	---	---
Chloroethane	0.5	1	1.3		1.3	1.1	0.52	**ND**	1.1	**ND**	**ND**	2.2	8.1	12	11	11	9	11	3000	---
Dichlorodifluoromethane	1	1	1.6		0.94	0.59	0.58	**ND**	**ND**	**ND**	**ND**	0.6	1.2	1.2	1	1	0.9	0.9	1000	---
Chlorobenzene	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.1 (J)	0.2 (J)	0.2 (J)	0.2 (J)	0.3 (J)	0.3 (J)	50	100
1,2-Dichloroethane	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.2 (J)	0.2 (J)	**ND**	**ND**	**ND**	0.2 (J)	0.4	---
1,2-Dichloropropane	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.2 (J)	0.3 (J)	0.2 (J)	0.2 (J)	0.2 (J)	0.2 (J)	0.6	5
Toluene	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	1.1	**ND**	**ND**	**ND**	**ND**	**ND**	600	1000
Vinyl Chloride	**ND**	**ND**	**ND**		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	0.4 (J)	0.5	0.5(J)	0.4(J)	0.4(J)	0.5(J)	0.03	2

NOTE: All Concentrations are in ppb (ug/L)

PRIVATE WELL TESTING - WATAUGA COUNTY, NC
WELLS SHOWING NO DETECTED ORGANIC COMPOUNDS

SAMPLING LOCATION	SAMPLING DATES
Mack Brown rental residence (Well Ref. No.3) **REMOVED**	March 5, 1993*, July 3, 1994** and Feb. 19, 2001
BREMCO residence (36) **REMOVED**	September 21, 1993**
Hollar and Green Produce, 230 Cabbage Rd (Well Ref. No.6)	3/93*,9/98&5/01**, 7/03***,3/05,4/06,4/07,9/07,3/08.9/08,3/09,9/09,3/10^^
497/513 Old Hwy 421 S (Well Ref. No.8)	March 5, 1993*
Martin High Country Rentals #1 (9)	March 5, 1993* connected to public water.
Martin High Country Rentals #2 (10)	March 5, 1993* connected to public water.
190 Green Briar Rd (Well Ref. No.30)	August 3, 1993**
253 Green Briar Rd (Well Ref. No.39)	November 16, 1994** and August 7, 2001***
331 Green Briar Rd (Well Ref. No.19)	March 1993*, Oct. 1999**, Feb. 2002***
378 Green Briar Rd (Well Ref. No.18)	March 1993*, Oct. 1996**, Nov. 1999*, 3/05&3/08^^
425 Green Briar Rd (Well Ref. No.17)	3/1993*, 9/1993**, 7/1994**, 10/1999**, 3/05&3/11/08^^
662 Green Briar Rd (Well Ref. No.27)	June 23, 1993**, March 30, 2005 and March 11, 2008^^
690 Green Briar Rd (Well Ref. No.29)	June 23, 1993**, March 30, 2005 and March 11, 2008^^
699 Green Briar Rd (Well Ref. No.26)	June 23, 1993**
732 Green Briar Rd (Well Ref. No.28)	June 23, 1993**
142 Greenbriar Ln (Well Ref. No.21)	3/18/1993*, 5/22/2000**, 3/30/2005^^, 10/5/2005^^ , and 9/9/08^^
110 Greenbriar Ln (Well Ref. No.22)	March 23, 1993* and October 12, 1999**
330 Wild Rose Ln (Well Ref. No.45)	Oct. 1999**, Aug. 2001***, Feb. 2002***, and March 2005^^
378 Wild Rose Ln (Well Ref. No.46)	Feb. 2001**, Aug. 2001***, Feb. 2002***, and March 2005^^
356 Wild Rose Ln (Well Ref. No.54)	February 14, 2002*** and March 30, 2005^^
171 Chipmunk Tr (Well Ref. No.31)	August 3, 1993**
Animal Control Office, 411 Landfill Rd (Well Ref. No.32)	August 3, 1993**
Brook Hollow Trailer Park (Well Ref. No.37)	October 11, 1993**
860 Green Briar Rd (Well Ref. No.34)	October 20, 1993**
182/216 Cane Rd, Shared well #3 (Well Ref. No.35)	October 20, 1993** and March 11, 2008^^
221/219Cane Rd, Shared well #3 (Well Ref. No.57)	March 11, 2008^^
177 Cane Rd, Shared well #3 (Well Ref. No.56)	March 11, 2008^^
220 Margot Rd (Well Ref. No.55)	March 30, 2005^^
191 Sunny Knoll Ln (Well Ref. No.40)	January 12, 1995**
200 Sunny Knoll Ln (Well Ref. No.61)	March 11, 2008^^
315 Sunny Knoll Ln (Well Ref. No.60)	March 11, 2008^^
233 Chipmunk Tr (Well Ref. No.41)	January 12, 1995**
Meadowridge Condominiums (42)	February 16&17, 1998**
Meadowridge Condominiums (43)	February 16&17, 1998**
Meadowridge Condominiums (44)	August 19, 1998**
214/252 Will Cook Rd (Well Ref. No.47)	May 24, 2001**
5259 Bamboo Rd (Well Ref. No.59)	March 2005^^
5233 Bamboo Rd (Well Ref. No.51)	August 7, 2001***
5229 Bamboo Rd (Well Ref. No.52)	August 7, 2001***
5195 Bamboo Rd (Well Ref. No.48)	August 7, 2001***
5177 Bamboo Rd (Well Ref. No.53)	August 7, 2001***
5147 and 5145 Bamboo Rd (Well Ref. No.50)	August 7, 2001***
5111 Bamboo Rd (Well Ref. No. 49)	August 7, 2001***

TABLE NOTES:

The sampled well reference number as presented on the Vicinity Map (Figure 1) is denoted in parentheses following the sampling locations name.
* Laboratory analysis performed by Central Virginia Laboratories and Consultants (CVLC) utilizing EPA Methods 502.2 (Volatiles) and 525.1 (Semi-Volatiles).
** Laboratory Analysis performed by NCDENR Division of Laboratory Services utilizing EPA Method 502.2 (Volatiles).
*** Laboratory Analysis performed by Severn Trent Services utilizing EPA Method 524.2 (Volatiles).
**** Laboratory Analysis performed by Toxikon utilizing EPA Method 524.2 (Volatiles)
^^ Laboratory Analysis performed by Lancaster Lanoratories utilizing EPA Method 524.2 (Volatiles)
NSC - North Carolina Water Quality Standard (DEHNR-15A NCAC 2L.0202) - as last updated 2/5/2010
MCL - EPA Primary Drinking Water Standard Maximum Contaminant Level
ND denotes no compounds detected for entire analytical scan.
NDT denotes compound detected in trip blank at same concentration as well sample.
NS denotes not sampled on that date.
NA denotes compound not analyzed on that date.
(J) denotes estimated result.
(T) denotes found in Trip Blank.
# denotes compound co-elutes.
trace = < 0.5 ppb (ug/l)

Note that chloroform was detected in the residential wells 17, 18, 19, 22, 26, 30, 40, 45 and 46.
Chloroform has not been detected in any of the landfill assessment monitoring wells to date, and is likely a transformation product resulting from the chlorination of the well systems.
Martin High Country Rentals (9 and 10) was connected to public water in 2000.

PRIVATE WELL TESTING
WATAUGA COUNTY, NC
RESULTS OF ANALYSIS

CONSTITUENT	3/93*	4/94**	10/95**	4/96**	10/96**	6/97**	2/98**	2/99**	5/00**	8/01***	2/02***	8/02****	1/03****	7/03****	4/07^^	9/07^^	3/11/08^^	9/9/08^^	3/12/09^^	9/2/09^^	3/18/10^^	NCS	MCL
2347 Hwy 421 S (Well Ref. No. 2) Connected to public water in 20																							
tert-Butylbenzene	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	---
Isopropylbenzene	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	---
Trichloroethene	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2(J)	ND	ND	0.2(J)	ND	0.2(J)	ND	3	5
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1(J)	ND	0.7	5
1,3,5-Trimethylbenzene	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	400	---
1,1-Dichloroethane	ND	trace	<1.0	trace	<1.0	trace	ND	<1.0	0.6	ND	0.7	0.99	0.53	0.77	3.3	3.7	4.5	4.8	4.2	6.4	1.0	6	---
1,1-Dichloroethene	ND	trace	trace	ND	trace	ND	ND	ND	trace	ND	ND	ND	ND	ND	0.3(J)	0.3(J)	0.2(J)	0.3(J)	ND	0.3(J)	ND	7	7
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	trace	ND	ND	ND	ND	ND	0.5	0.2(J)	0.6	0.8	0.1J	0.9	ND	70	70
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3(J)	0.3(J)	0.3(J)	0. 4(J)	0.3(J)	0.3(J)	ND	1000	---
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3(J)	0.5(J)	0.5	0.7	0.5(J)	0.9	ND	3000	---
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1(J)	ND	ND	0.03	2
Methyl Ethyl Ketone	ND	trace	35.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4000	---
Tetrahydrofuran	ND	ND	42.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---
Benezene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0. 4(J)	ND	1	5
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3(J)	ND	ND	1.0	ND	ND	600	1000
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5(J)	ND	ND	ND	ND	ND	5	5

CONSTITUENT	5/93**	6/23/93**	3/94**	8/94**	12/94**	4/95**	10/95**	5/96**	10/96**	2/98**	8/98**	6/99**	9/00**	5/01**	2/02***	8/02****	1/03****	7/03****	3/04****	9/04****	NCS	MCL
648 Green Briar Rd (Well Ref. No. 24) Declined connection to public water in 2000; unoccuppied in 2005, connected in 2008.																						
Methylene Chloride	3.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5
1,1,1-Trichloroethane	<1.0	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	200
Trichloroethene	trace	trace	<1.0	ND	trace	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	5
Tetrachloroethene	ND	trace	<1.0	ND	trace	trace	<1.0	<1.0	trace	ND	trace	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7	5
Carbon Tetrachloride	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3	5
1,1-Dichloroethane	ND	ND	<1.0	ND	<1.0	<1.0	trace	<1.0	ND	ND	trace	trace	ND	trace	ND	ND	ND	ND	ND	ND	6	---
Chloroform	ND	ND	trace	ND	ND	trace	trace	ND	ND	ND	trace	ND	ND	ND	37	38	ND	ND	ND	ND	70	80
Bromodichloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.8	8.0	ND	ND	ND	ND	0.6	80
Dibromochloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.81	1.6	ND	ND	ND	ND	0.4	80
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	ND	trace	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	0.05

CONSTITUENT	3/93*	4/94**	12/94**	2/01**	8/01***	2/02***	8/02****	1/03****	7/03****	3/04****	9/04****	3/05^^	10/05^^	4/06^^	9/06^^	4/07^^	9/07^^	3/11/08^^	9/9/08^^	3/12/09^^	9/2/09^^	3/18/10^^	NCS	MCL
2711 Hwy 421 S (Well Ref. No. 15) Declined connection to public water in 2002, connected in 2006.																								
Benzene	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	5
Toluene	ND	6.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	600	1000
Tetrachloroethene	ND	trace	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1(J)	0.2(J)	02(J)	0.7	5
Ethylbenzene	ND	trace	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	600	700
p and m - Xylene	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	10,000
Styrene	ND	trace	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	100
cis-1,2-Dichloroethene	ND	trace	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3(J)	ND	ND	ND	ND	ND	ND	70	70

	3/93*	2/96**	2/02***	8/02****	1/03****	3/04****	10/05^^	4/06^^	4/07^^	9/07^^	3/08^^	9/08^^	3/09^^	9/09^^	3/09^^	9/09^^	3/10^^	NCS	MCL
2239 Hwy 421 S (Well Ref. No. 1)																			
Total Xylenes	ND	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	10000

CONSTITUENT	3/93*	6/93**	3/94**	10/96**	NCS	MCL
513 Green Briar Rd (Well Ref. No. 11) Connected to public water in 2000.						
Dichlorodifluoromethane	2.5	ND	ND	ND	1000	---
Naphthalene	0.7	ND	ND	ND	6	---
Chloromethane	<9	ND	ND	ND	3	---
Methylene Chloride	<0.6	ND	ND	ND	5	5
Chloroform		ND	<1.0	NDT	70	80

NOTE: All Concentrations are in ppb (ug/L)

PRIVATE WELL TESTING
WATAUGA COUNTY, NC
RESULTS OF ANALYSIS

CONSTITUENT	3/23/93**	2/19/01**	8/7/01***	11/02***	3/14/02****	1/22/03****	7/15/03****	3/16/04****	9/29/04****	3/30/05^^	10/05/05^^	4/05/05^^	9/27/06^^	4/3/07^^	9/18/07^^	3/11/08^^	9/9/08^^	3/12/09^^	9/2/09^^	3/18/10^^	NCS	MCL
2737 Hwy 421 S (Well Ref. No.16) Connected to public water in 2004.																						
Methyl-t-butyl-ether	ND	<1.0	ND	ND	1.2	1.2	ND	1.5	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	---
cis-1,2-Dichloroethene	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	ND	0,5(J)	0.3 (J)	70	70
Tetrachloroethene	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1(J)	0.2(J)	0.1(J)	0.7	5

CONSTITUENT	3/18/93*	5/11/93**	9/21/93**	11/2/99**	9/6/00**	3/30/05^^	3/11/08^^	NCS	MCL
139,152,163,166 Margot Rd; 151,180 Greenbriar Ln; 306, 344 Greenbriar Rd. Shared Well #1 (8 Houses) (Well Ref. No.13)									
sec-Butylbenzene	0.2	ND	ND	ND	ND	ND	ND	70	---
Carbon Tetrachloride	0.1	ND	ND	ND	ND	ND	ND	0.3	5
Methylene Chloride	1.5	ND	ND	ND	ND	ND	ND	5	5
alpha-Chlordane	0.4	ND	ND	ND	ND	ND	ND	-	2
gamma-Chlordane	0.3	ND	ND	ND	ND	ND	ND	-	2
1,4-Dichlorobenzene	ND	ND	ND	trace	ND	ND	ND	6	75
2-Butanone	ND	ND	ND	ND	2.3J	ND	ND	4000	---
Chloroform	ND	ND	ND	trace	ND	ND	ND	70	80

CONSTITUENT	3/5/93**	4/26/95**	4/9/96**	2/10/98**	NCS	MCL
Mack Brown Chevrolet dealership, 2704/2705 Hwy 421 S (Well Ref. No.7) Public water in 2000.						
Chloroform	ND	ND	ND	39.7	70	80
Bromodichloromethane	ND	ND	ND	5	0.6	80
Methyl-t-butyl-ether	ND	24.4	2.5	ND	20	---

CONSTITUENT	3/18/93*	3/30/94**	11/12/95**	10/24/95*	4/9/96**	10/9/96**	6/12/97**	2/10/98**	6/9/99**	NCS	MCL
118, 132, 138, 191 Grapevine Circle, Shared Well #2 (4 Houses) (Well Ref. No.14) Connected to public water in 2000.											
1,4-Dichlorobenzene	0.5	ND	ND	ND	ND	ND	ND	ND	ND	6	75
1,1-Dichloroethane	ND	ND	ND	<1.0	<1.0	<1.0	ND	ND	ND	6	---
1,1-Dichloroethene	ND	<1.0	<1.0	ND	ND	ND	ND	ND	ND	7	7
Tetrachloroethene	ND	ND	ND	trace	ND	trace	ND	ND	ND	0.7	5
1,1,1-Trichoroethane	ND	<1.0	ND	trace	ND	ND	ND	ND	ND	200	200
Chloroform	ND	trace	ND	9.0	ND	ND	ND	ND	ND	70	80
Bromodichloromethane	ND	ND	ND	1.4	ND	ND	ND	ND	ND	0.6	80
Dibromochloromethane	ND	ND	ND	<1.0	ND	ND	ND	ND	ND	0.4	80
2-Chlorotoluene	ND	ND	ND	1.2	ND	ND	ND	ND	ND	100	---
4-Chlorotoluene	ND	ND	ND	1.0	ND	ND	ND	ND	ND	---	---
Methyl Ethyl Ketone	ND	ND	ND	24.6	ND	ND	ND	ND	ND	4000	---
Tetrahydrofuran	ND	ND	ND	13.4	ND	ND	ND	ND	ND	---	---

CONSTITUENT	3/23/93**	5/20/96**	10/9/96**	6/12/97**	6/9/99**	NCS	MCL
601 Green Briar Rd (Well Ref. No.20) Connected to public water in 2000.							
1,1,1-Trichloroethane	trace	trace	trace	trace	ND	200	200
Methyl-t-butyl-ether	ND	ND	ND	ND	<1.0	20	---
Chloroform	<1.0	<1.0	NDT	ND	<1.0	70	80

CONSTITUENT	10/20/93**	2/21/96**	8/19/98**	2/18/99**	9/6/00**	NCS	MCL
Meadowridge condominiums, Complex 9 (Well Ref. No.38)							
Chloroform	<1.0	ND	ND	ND	ND	70	80
trans-1,2-Dichloroethene	<1.0	ND	ND	ND	ND	100	100
1,1,1-Trichloroethane	trace	ND	ND	ND	ND	200	200
Trichloroethene	trace	ND	ND	ND	ND	3	5

CONSTITUENT	5/11/93**	5/20/96**	6/12/97**	2/10/98**	11/2/99**	5/22/00**	2/14/02***	3/11/08^^	NCS	MCL
604 Green Briar Rd (Well Ref. No.23)										
Chloroform	trace	<1.0	<1.0	ND	trace	trace	ND	ND	70	80
Methyl-t-butyl-ether	ND	ND	ND	ND	ND	trace	ND	ND	20	---
Toluene	ND	ND	ND	ND	trace	ND	ND	ND	600	1000
Ethyl Benzene	ND	ND	ND	ND	trace	ND	ND	ND	600	700
Xylenes	ND	ND	ND	ND	trace	ND	ND	ND	500	10000
1,4-Dichlorobenzene	ND	ND	ND	ND	trace	ND	ND	ND	6	75

CONSTITUENT	5/11/93**	11/2/99**	2/11/02***	3/11/08^^	NCS	MCL
313 Green Briar Rd (Well Ref. No.25)						
Tetrahydrofuran	ND	1.2 J	ND	ND	---	---

CONSTITUENT	8/9/93**	10/20/93**	9/21/94**	NCS	MCL
535 Green Briar Rd (Well Ref. No.33) Connected to public water in 2000.					
1,2-Dichloroethane	<1.0	<1.0	ND	0.4	5
Chloroform	<1.0	ND	<1.0	70	80

NOTE: All Concentrations are in ppb (ug/L)

PRIVATE WELL TESTING - WATAUGA COUNTY, NC
RESULTS OF VOLATILE AND SEMIVOLATILE ANALYSIS

CONSTITUENT	MARCH 5, 1993*	MARCH 18, 1993*	MARCH 24, 1993*	JUNE 23, 1993**	JULY 13, 1994**	NCS	MCL
Carroll residence, 491 Green Briar Rd (Well Ref. No. 12) WELL ABANDONED IN 1995							
Benzene	2.1	1.7		1.9		1	5
Chloroethane	173.4	74.5		**ND**		3000	---
Chloromethane	**ND**	14.8		**ND**		3	---
Dichlorodifluoromethane	30.6	**ND**		**ND**		1000	---
1,1-Dichloroethane	20.9	17.4		**ND**		6	---
1,1-Dichloroethene	4.1	1.5		**ND**		7	7
cis-1,2-Dichloroethene#	1.2	0.9		<1.0		70	70
2,2-Dichloropropane#	1.2	0.9		**ND**		---	---
4-Isopropyltoluene	**ND**	0.2	NS	**ND**	NS	---	---
Isopropylbenzene	0.6	**ND**		**ND**		70	---
Methylene Chloride	**ND**	43.0 (T)		138.2		5	5
Styrene	2.8	0.5		**ND**		70	100
Tert-Butyl Methyl Ether	**ND**	**ND**		2.4		20	---
Tetrachloroethene	5.4	4.7		4.2		0.7	5
Toluene	**ND**	0.6 (T)		**ND**		600	1000
1,1,1-Trichloroethane	19.7	15.7		29.4		200	200
Trichloroethene	7	5.5		7.0		3	5
Trichlorofluoromethane	37.1	20.2		**ND**		2000	---
Vinyl Chloride	1.7 (T)	**ND**		**ND**		0.03	2
p and m-Xylene	**ND**	**ND**		<1.0		500	10,000
o-Xylene	**ND**	3.4		2.9		500	10,000
Nissan-Mazda Dealership, 2464 Hwy 421 S (Well Ref. No. 4) WELL ABANDONED IN 1995							
Carbon Tetrachloride	0.2		**ND**		**ND**	0.3	5
Chloroethane	19.1		**ND**		**ND**	3000	---
Dichlorodifluoromethane	8.2		8.7		**ND**	1000	---
1,1-Dichloroethane	98.5		63.1		104.3	6	---
1,2-Dichloroethane	**ND**		0.5		**ND**	0.4	---
1,1-Dichloroethene	5.4		3.7		4.7	7	7
cis-1,2-Dichloroethene#	22.2		13.0		23.7	70	70
1,2-Dichloropropane	0.5		0.3		**ND**	0.6	5
2,2-Dichloropropane#	22.2	NS	13.0	NS	**ND**	---	---
Tetrachloroethene	21.8		28.1		30.9	0.7	5
Toluene	**ND**		0.8(T)		**ND**	600	1000
1,1,1-Trichloroethane	14.7		19.3		22.9	200	200
Trichloroethene	11.2		9.1		12.6	3	5
Trichlorofluoromethane	0.4		**ND**		**ND**	2000	---
o-Xylene	0.4		0.5(T)		**ND**	500	10,000

NOTE: All Concentrations are in ppb (ug/L).

Table 4. Summary of Private Well Sampling Results - September 2013
Watauga County Landfill, Facility ID No. 95-02

Analyte	Result (µg/l)	QL/CRQL (µg/l)	MCL(µg/l)	NC 2L(µg/l)
Well Reference No. 1 - Residential 2239 Hwy. 421 S.				
No Sample, No Electricity at Site to Operate Well Pump				
Well Reference No. 2 - Residential 2347 Hwy. 421 S. (Bolick Rental)				
Benzene	0.1 J	0.5	5	1
Chloroethane	1.6	0.5	n/a	3,000
1,4-Dichlorobenzene	0.4 J	0.5	n/a	6
Dichlorodifluoromethane	0.3 J	0.2	n/a	1,000
1,1-Dichloroethane	8.8	0.5	n/a	6
1,1-Dichloroethene	0.2 J	0.5	7	7
cis-1,2-Dichloroethene	1.5	0.5	70	70
Methylene Chloride	0.4 J	0.5	n/a	5
Trichloroethene	0.2 J	0.5	5	3
Well Reference BREMCO - Commercial 2491 Hwy 421 S.				
Benzene	0.4 J	0.5	5	1
sec-Butylbenzene[a]	0.2 J	0.5	n/a	70
Chlorobenzene	0.5 J	0.5	100	50
Chloroethane	11	0.5	n/a	3,000
1,4-Dichlorobenzene	3.1	0.5	n/a	6
Dichlorodifluoromethane	0.7	0.2	n/a	1,000
1,1-Dichloroethane	31	0.5	n/a	6
1,1-Dichloroethene	1	0.5	7	7
cis-1,2-Dichloroethene	5	0.5	70	70
trans-1,2-Dichloroethene	0.2 J	0.5	100	100
1,2-Dichloropropane	0.2 J	0.5	5	0.6
Methylene Chloride	1.4	0.5	n/a	5
Tetrachloroethene	0.2 J	0.5	5	0.7
Trichloroethene	0.5	0.5	5	3
Vinyl Chloride	0.3 J	0.5	2	0.3
Well Reference No. 15 - Residential 2711 Hwy. 421 S. (Greer Residence)				
Chloromethane	0.3 J	0.5	5	3
Well Reference No. 16 - Residential 2737 Hwy 421 S. (Williamson Residence)				
No Detections September 2013				
Well Reference H+G Produce - Commercial 230 Cabbage Row				
Tetrachloroethene	0.2 J	0.5	5	0.7

Definitions:

QL - Laboratory quantitation limit.
CRQL - Laboratory contract required quantitation limit.
J - Analyte is estimated; analyte detected between the laboratory detection limit and QL/CRQL.
NC 2L - North Carolina 15A NCAC 02.0202 Groundwater Standards effective April 1, 2013.

Notes:

1. All samples were analyzed by EPA Method 524.2 at Eurofins Lancaster Laboratories of Lancaster, PA.
2. Eurofins Lancaster Laboratories NC Certification Number 42705.
3. Target analytes not listed above were not detected at or above the laboratory detection limit; see laboratory analytical data package for full analyte reporting list.
4. For method reference CLP SOW - use CRQL.

a - Non-target organic COC.

Table 4. Summary of Private Well Sampling Results - March 2011
Watauga County Landfill, Facility ID No. 95-02

Analyte	Result (µg/l)	QL/CRQL (µg/l)	MCL(µg/l)	NC 2L(µg/l)
Well Reference No. 2 - Residential 2347 Hwy. 421 S. (Bolick Rental)				
Chloroethane	0.8	0.5	n/a	3,000
1,4-Dichlorobenzene	0.2 J	0.5	n/a	6
Dichlorodifluoromethane	0.3 J	0.5	n/a	1,000
1,1-Dichloroethane	6.6	0.5	n/a	6
1,1-Dichloroethene	0.2 J	0.5	7	7
cis-1,2-Dichloroethene	1	0.5	70	70
Trichloroethene	0.2 J	0.5	5	3
Well Reference No. 5 (BREMCO) - Commercial 2491 Hwy 421 S.				
Benzene	0.3 J	0.5	5	1
Chlorobenzene	0.2 J	0.5	100	50
Chloroethane	6.3	0.5	n/a	3,000
1,4-Dichlorobenzene	1.8	0.5	n/a	6
Dichlorodifluoromethane	0.7	0.5	n/a	1,000
1,1-Dichloroethane	22	2.5*	n/a	6
1,2-Dichloroethane	0.2 J	0.5	5	0.4
1,1-Dichloroethene	1.1	0.5	7	7
cis-1,2-Dichloroethene	4.4	0.5	70	70
trans-1,2-Dichloroethene	0.2 J	0.5	100	100
1,2-Dichloropropane	0.2 J	0.5	5	0.6
Methylene Chloride	0.9	0.5	5	5
Tetrachloroethene	0.3 J	0.5	5	0.7
Trichloroethene	0.7	0.5	5	3
Vinyl Chloride	0.2 J	0.5	2	0.3
Well Reference No. 15 - Residential 2711 Hwy. 421 S. (Greer Residence)				
Chloromethane	0.2 J	0.5	n/a	3
Well Reference No. 16 - Residential 2737 Hwy 421 S. (Williamson Residence)				
cis-1,2-Dichloroethene	0.2 J	0.5	70	70
Tetrachloroethene	0.2 J	0.5	5	0.7
Well Reference H+G Produce - Commercial 230 Cabbage Row				
Tetrachloroethene	0.1 J	0.5	5	0.7

Definitions:

QL - Laboratory quantitation limit.

CRQL - Laboratory contract required quantitation limit.

J - Analyte is estimated; analyte detected between the laboratory detection limit and QL/CRQL.

Notes:

1. All samples were analyzed by EPA Method 524.2 at Lancaster Laboratories of Lancaster, PA.
2. Lancaster Laboratories NC Certification Number 42705.
3. Target analytes not listed above were not detected at or above the laboratory detection limit; see laboratory analytical data package for full analyte reporting list.
4. For method reference CLP SOW - use CRQL.

* Sample dillution - 5X.

Table 4. Summary of Private Well Sampling Results - March 2012
Watauga County Landfill, Facility ID No. 95-02

Analyte	Result (µg/l)	QL/CRQL (µg/l)	MCL(µg/l)	NC 2L(µg/l)
Well Reference No. 1 - Residential 2239 Hwy. 421 S.				
No Detections				
Well Reference No. 2 - Residential 2347 Hwy. 421 S. (Bolick Rental)				
Chloroethane	0.4 J	0.5	n/a	3,000
1,4-Dichlorobenzene	0.1 J	0.5	n/a	6
Dichlorodifluoromethane	0.2 J	0.5	n/a	1,000
1,1-Dichloroethane	6.7	0.5	n/a	6
1,1-Dichloroethene	0.2 J	0.5	7	7
cis-1,2-Dichloroethene	0.6	0.5	70	70
Trichloroethene	0.1 J	0.5	5	3
Well Reference BREMCO - Commercial 2491 Hwy 421 S.				
Benzene	0.5 J	0.5	5	1
sec-Butylbenzene	0.1 J	0.5		70
Chlorobenzene	0.3 J	0.5	100	50
Chloroethane	11	0.5	n/a	3,000
1,4-Dichlorobenzene	2.7	0.5	n/a	6
Dichlorodifluoromethane	0.8	0.5	n/a	1,000
1,1-Dichloroethane	34	5.0*	n/a	6
1,2-Dichloroethane	0.2 J	0.5	5	0.4
1,1-Dichloroethene	1.4	0.5	7	7
cis-1,2-Dichloroethene	6.2	0.5	70	70
trans-1,2-Dichloroethene	0.2 J	0.5	100	100
1,2-Dichloropropane	0.2 J	0.5	5	0.6
Methylene Chloride	1.4	0.5	5	5
Tetrachloroethene	0.3 J	0.5	5	0.7
Trichloroethene	0.8	0.5	5	3
Vinyl Chloride	0.3 J	0.5	2	0.3
Well Reference No. 15 - Residential 2711 Hwy. 421 S. (Greer Residence)				
cis-1,2-Dichloroethene	0.1 J	0.5	70	70
Tetrachloroethene	0.2 J	0.5	5	0.7
Well Reference No. 16 - Residential 2737 Hwy 421 S. (Williamson Residence)				
cis-1,2-Dichloroethene	0.1 J	0.5	70	70
Tetrachloroethene	0.1 J	0.5	5	0.7
Well Reference H+G Produce - Commercial 230 Cabbage Row				
1,1-Dichloroethane	0.1 J	0.5	n/a	6
Tetrachloroethene	0.1 J	0.5	5	0.7

Definitions:

QL - Laboratory quantitation limit.

CRQL - Laboratory contract required quantitation limit.

J - Analyte is estimated; analyte detected between the laboratory detection limit and QL/CRQL.

NC 2L - North Carolina 15A NCAC 02.0202 Groundwater Standards effective January 1, 2010.

Notes:

1. All samples were analyzed by EPA Method 524.2 at Lancaster Laboratories of Lancaster, PA.
2. Lancaster Laboratories NC Certification Number 42705.
3. Target analytes not listed above were not detected at or above the laboratory detection limit; see laboratory analytical data package for full analyte reporting list.
4. For method reference CLP SOW - use CRQL.

* Sample dillution - 10X.

Table 4. Summary of Private Well Sampling Results - March 2013
Watauga County Landfill, Facility ID No. 95-02

Analyte	Result (µg/l)	QL/CRQL (µg/l)	MCL(µg/l)	NC 2L(µg/l)
Well Reference No. 1 - Residential 2239 Hwy. 421 S.				
No Detections March 2013				
Well Reference No. 2 - Residential 2347 Hwy. 421 S. (Bolick Rental)				
Chloroethane	0.6	0.5	n/a	3,000
1,4-Dichlorobenzene	0.3 J	0.5	n/a	6
1,1-Dichloroethane	7.8	0.5	n/a	6
cis-1,2-Dichloroethene	0.9	0.5	70	70
Trichloroethene	0.2 J	0.5	5	3
Well Reference BREMCO - Commercial 2491 Hwy 421 S.				
Benzene	0.3 J	0.5	5	1
sec-Butylbenzene[a]	0.1 J	0.5	n/a	70
Chlorobenzene	0.3 J	0.5	100	50
Chloroethane	6.3	0.5	n/a	3,000
1,4-Dichlorobenzene	1.9	0.5	n/a	6
1,1-Dichloroethane	18	0.5	n/a	6
1,1-Dichloroethene	0.8	0.5	7	7
cis-1,2-Dichloroethene	3.2	0.5	70	70
trans-1,2-Dichloroethene	0.2 J	0.5	100	100
1,2-Dichloropropane	0.2 J	0.5	5	0.6
Methylene Chloride	0.9	0.5	n/a	5
Tetrachloroethene	0.2 J	0.5	5	0.7
Trichloroethene	0.5 J	0.5	5	3
Vinyl Chloride	0.2 J	0.5	2	0.3
Well Reference No. 15 - Residential 2711 Hwy. 421 S. (Greer Residence)				
Chloromethane	0.2 J	0.5	5	3
Tetrachloroethene	0.1 J	0.5	5	0.7
Well Reference No. 16 - Residential 2737 Hwy 421 S. (Williamson Residence)				
No Detections March 2013				
Well Reference H+G Produce - Commercial 230 Cabbage Row				
Chloroform	0.1 J	0.5	n/a	70
1,1-Dichloroethane	0.1 J	0.5	n/a	6
Tetrachloroethene	0.2 J	0.5	5	0.7

Definitions:

QL - Laboratory quantitation limit.
CRQL - Laboratory contract required quantitation limit.
J - Analyte is estimated; analyte detected between the laboratory detection limit and QL/CRQL.
NC 2L - North Carolina 15A NCAC 02.0202 Groundwater Standards effective April 1, 2013.

Notes:

1. All samples were analyzed by EPA Method 524.2 at Eurofins Lancaster Laboratories of Lancaster, PA.
2. Eurofins Lancaster Laboratories NC Certification Number 42705.
3. Target analytes not listed above were not detected at or above the laboratory detection limit; see laboratory analytical data package for full analyte reporting list.
4. For method reference CLP SOW - use CRQL.

a - Non-target organic COC.

Table 4. Summary of Private Well Sampling Results - September 2011
Watauga County Landfill, Facility ID No. 95-02

Analyte	Result (µg/l)	QL/CRQL (µg/l)	MCL(µg/l)	NC 2L(µg/l)
Well Reference No. 2 - Residential 2347 Hwy. 421 S. (Bolick Rental)				
Chloroethane	0.6	0.5	n/a	3,000
1,4-Dichlorobenzene	0.2 J	0.5	n/a	6
Dichlorodifluoromethane	0.3 J	0.5	n/a	1,000
1,1-Dichloroethane	9.3	0.5	n/a	6
1,1-Dichloroethene	0.2 J	0.5	7	7
cis-1,2-Dichloroethene	1.1	0.5	70	70
Trichloroethene	0.2 J	0.5	5	3
Well Reference No. 5 (BREMCO) - Commercial 2491 Hwy 421 S.				
Benzene	0.4 J	0.5	5	1
sec-Butylbenzene	0.1 J	0.5		70
Chlorobenzene	0.3 J	0.5	100	50
Chloroethane	7.3	0.5	n/a	3,000
1,4-Dichlorobenzene	1.8	0.5	n/a	6
1,1-Dichloroethane	27	5.0*	n/a	6
1,2-Dichloroethane	0.1 J	0.5	5	0.4
1,1-Dichloroethene	1	0.5	7	7
cis-1,2-Dichloroethene	4.6	0.5	70	70
trans-1,2-Dichloroethene	0.2 J	0.5	100	100
1,2-Dichloropropane	0.2 J	0.5	5	0.6
Methylene Chloride	1.1	0.5	5	5
Tetrachloroethene	0.2 J	0.5	5	0.7
Trichloroethene	0.7	0.5	5	3
Vinyl Chloride	0.3 J	0.5	2	0.3
Well Reference No. 15 - Residential 2711 Hwy. 421 S. (Greer Residence)				
cis-1,2-Dichloroethene	0.1 J	0.5	70	70
Tetrachloroethene	0.3 J	0.5	5	0.7
Well Reference No. 16 - Residential 2737 Hwy 421 S. (Williamson Residence)				
cis-1,2-Dichloroethene	0.2 J	0.5	70	70
Tetrachloroethene	0.2 J	0.5	5	0.7
Well Reference H+G Produce - Commercial 230 Cabbage Row				
Tetrachloroethene	0.1 J	0.5	5	0.7

Definitions:

QL - Laboratory quantitation limit.

CRQL - Laboratory contract required quantitation limit.

J - Analyte is estimated; analyte detected between the laboratory detection limit and QL/CRQL.

Notes:

1. All samples were analyzed by EPA Method 524.2 at Lancaster Laboratories of Lancaster, PA.
2. Lancaster Laboratories NC Certification Number 42705.
3. Target analytes not listed above were not detected at or above the laboratory detection limit; see laboratory analytical data package for full analyte reporting list.
4. For method reference CLP SOW - use CRQL.

* Sample dillution - 10X.

Table 4. Summary of Private Well Sampling Results - September 2012
Watauga County Landfill, Facility ID No. 95-02

Analyte	Result (µg/l)	QL/CRQL (µg/l)	MCL(µg/l)	NC 2L(µg/l)
Well Reference No. 1 - Residential 2239 Hwy. 421 S.				
Toluene[a]	0.1 J	0.5	1,000	600
Well Reference No. 2 - Residential 2347 Hwy. 421 S. (Bolick Rental)				
Chloroethane	0.2 J	0.5	n/a	3,000
1,4-Dichlorobenzene	0.3 J	0.5	n/a	6
Dichlorodifluoromethane	0.4 J	0.5	n/a	1,000
1,1-Dichloroethane	8.2	0.5	n/a	6
cis-1,2-Dichloroethene	0.6	0.5	70	70
Trichloroethene	0.2 J	0.5	5	3
Well Reference BREMCO - Commercial 2491 Hwy 421 S.				
Benzene	0.4 J	0.5	5	1
sec-Butylbenzene[a]	0.2 J	0.5	n/a	70
Chlorobenzene	0.4 J	0.5	100	50
Chloroethane	9.5	0.5	n/a	3,000
1,2-Dichlorobenzene[a]	0.1 J	0.5	60	20
1,4-Dichlorobenzene	2.6	0.5	n/a	6
Dichlorodifluoromethane	1.1	0.5	n/a	1,000
1,1-Dichloroethane	30	2.5*	n/a	6
1,1-Dichloroethene	1.1	0.5	7	7
cis-1,2-Dichloroethene	5.1	0.5	70	70
trans-1,2-Dichloroethene	0.2 J	0.5	100	100
1,2-Dichloropropane	0.2 J	0.5	5	0.6
Methylene Chloride	1.2	0.5	5	5
Tetrachloroethene	0.2 J	0.5	5	0.7
Trichloroethene	0.7	0.5	5	3
Vinyl Chloride	0.3 J	0.5	2	0.3
Well Reference No. 15 - Residential 2711 Hwy. 421 S. (Greer Residence)				
Tetrachloroethene	0.2 J	0.5	5	0.7
Well Reference No. 16 - Residential 2737 Hwy 421 S. (Williamson Residence)				
No Detections September 2012				
Well Reference H+G Produce - Commercial 230 Cabbage Row				
Tetrachloroethene	0.2 J	0.5	5	0.7

Definitions:

QL - Laboratory quantitation limit.
CRQL - Laboratory contract required quantitation limit.
J - Analyte is estimated; analyte detected between the laboratory detection limit and QL/CRQL.
NC 2L - North Carolina 15A NCAC 02.0202 Groundwater Standards effective January 1, 2010.

Notes:

1. All samples were analyzed by EPA Method 524.2 at Lancaster Laboratories of Lancaster, PA.
2. Lancaster Laboratories NC Certification Number 42705.
3. Target analytes not listed above were not detected at or above the laboratory detection limit; see laboratory analytical data package for full analyte reporting list.
4. For method reference CLP SOW - use CRQL.

* Sample dillution - 5X.
a - Non-target organic COC.

APPENDIX E

Laboratory Data and Data Validation Summaries

(Presented in PDF only)

This report is presented in an electronic version and as a bound hard copy version.

Electronic Version: Depending upon the file size (limited to 50 MB per file), this Attachment/Appendix may be presented in a separate Portable Document Format (PDF) file associated with this report.

Hardcopy Version: This Attachment/Appendix is only provided in PDF on the enclosed compact disc (CD-ROM).

CompuChem

A Division Of

Liberty Analytical Corp.

3/27/2014

JANET FRAZIER

DRAPER

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

WorkOrder: 1403006

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER **Work:** 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39 **Sdg:** 1403006

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1403006-01	MW-3	Water	03/03/2014 13:00	03/06/2014 09:43
1403006-02	MW-2	Water	03/04/2014 10:35	03/06/2014 09:43
1403006-03	MW-8	Water	03/04/2014 08:15	03/06/2014 09:43
1403006-04	MW-9	Water	03/03/2014 11:10	03/06/2014 09:43
1403006-05	MW-12	Water	03/03/2014 15:55	03/06/2014 09:43
1403006-06	MW-17	Water	03/03/2014 12:20	03/06/2014 09:43
1403006-07	TRIP BLANK	Water	03/03/2014 00:00	03/06/2014 09:43

ANALYSES DATA PACKAGE COVER PAGE

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Laboratory: COMPUCHEM

SDG: 1403006

Client Sample Id:	Analysis:	Lab Sample Id:
MW-3	SW 8260B	1403006-01
MW-2	SW 8260B	1403006-02
MW-8	SW 8260B	1403006-03
MW-9	SW 8260B	1403006-04
MW-12	SW 8260B	1403006-05
MW-17	SW 8260B	1403006-06
TRIP BLANK	SW 8260B	1403006-07

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Patricia A Murphy

Name: Pat Murphy

Date: 03/18/2014

Title: Senior Chemist

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

I. SAMPLE DATA PACKAGE

GC/MS by SW-846

The Sample Data Package shall contain data for all samples in one Work Order/Sample Delivery Group (SDG), as follows:

A. SDG Narrative

B. Chain of Custody Records

C. Sample Preparation and Analysis Holding Time Data
(HOLDING TIME SUMMARY)

D. Surrogate Recovery Results
(SURROGATE STANDARD RECOVERY)

E. Laboratory Control Sample Results
(LCS/LCS DUPLICATE RECOVERY)

F. Matrix Spike Results
(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

G. Batch Summary
(PREPARATION BATCH SUMMARY)

H. Analysis Sequence Summary
(ANALYSIS SEQUENCE SUMMARY)

I. Instrument Performance Check
(MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK)

J. Internal Standard Results
(INTERNAL STANDARD AREA AND RT SUMMARY)

K. Target Compound Results – Forms and Raw Data
(ANALYSIS DATA SHEET)

L. Initial Calibration Data – Forms and Raw Data
(INITIAL CALIBRATION DATA)

M. Continuing Calibration Data – Forms and Raw Data
(CONTINUING CALIBRATION CHECK)

N. BFB / DFTPP or FC43 - Raw Data

O. Blank Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

P. Laboratory Control Sample Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

Q. Matrix Spike Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

R. GPC Data (if applicable)

S. Run Logs / Prep Sheets / Internal CoC Documents / Standard Info / Manual Integration Summary

A. SDG Narrative

CompuChem
A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1403006
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: MW-3 MW-2 MW-8 MW-9 MW-12 MW-17 TRIP BLANK

The 7 aqueous samples listed above were received intact, refrigerated at 0.3°C with proper documentation, in sealed shipping containers, March 6, 2014. The samples listed above were scheduled for the requested analysis of the volatile fraction only. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the sample, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices are included in the sample data sections.

VOLATILES

Analysis holding time requirements were met for all of the samples.
The pH values of samples were equal to 1.
There were volatile Project/Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in five of these samples.
Sample MW-2 was analyzed at a dilution.
All of the system monitoring compounds met recovery criteria in the analyses of the samples.
All of the internal standards met response and retention time criteria in the analyses of the samples.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG.
All QC criteria were met for all initial, continuing calibration standards and Second-source ICV associated to this SDG.
Manual integrations were performed on one or more of the process files associated with this SDG. Please see the detailed Manual Integration Summary report that is located in section S. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.
The associated method blanks met all quality control criteria.
The associated Laboratory Control Sample (LCS) met all quality control criteria.
MW-3 was used as the original to prepare the duplicate matrix spikes as requested. The associated duplicate matrix spikes met most of the advisory accuracy criteria.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Patricia A Murphy
Patricia A. Murphy
Senior Scientist
March 18, 2014

	GC and GC/MS Column and Trap Specifications Table								
				COLUMNS					
Columns Utilized	**Brand Name**		**Coating Material**		**ID (mm)**	**Film Thickness (um)**			**Length (m)**
	GC Laboratory								
DRO/ORO	**Restek**		**RTX-5**		**0.53**	**1.0**			**30**
	Restek		**RTX-SMS**		**0.53**	**1.0**			**30**
√	**Restek**		**clpest**		**0.32**	**0.5**			**30**
√	**Restek**		**clpest2**		**0.32**	**0.42**			**30**
	J&W		**DB-210**		**0.53**	**1.0**			**30**
RSK	**J&W**		**GS-GASPRO**		**0.32**	**N/A**			**30**
	GC Volatiles Laboratory								
GRO	**Restek**		**RTX-Volatiles**		**0.53**	**2.0**			**30**
	GC/MS Volatiles Laboratory								
	Restek		**RTX-VMS**		**0.18**	**1.0**			**20**
√	**Supelco**		**SPB-624**		**0.32**	**1.8**			**60**
	Supelco		**SPB-624**		**0.53**	**3.0**			**75**
	Phenomonex		**ZB-624**		**0.32**	**1.8**			**60**
	GC/MS Semivolatiles Laboratory								
√	**Restek**		**RTX-5Sil MS**		**0.32**	**0.25**			**30**
	HPLC Laboratory								
PAH	**Supelco**		**Supelcosil LC-PAH**		**4.6**	**5.0**			**15 cm**
PAH	**Supelco**		**Discovery RP Amide C16**		**4.6**	**5.0**			**25 cm**
EXP	**Restek**		**Pinnacle Cyano**		**4.6**	**5.0**			**25 cm**
EXP	**Restek**		**Allure C18**		**4.6**	**5.0**			**25 cm**
				TRAPS					
	GC and GC/MS Volatiles Laboratory								
	Supelco J (BETXTRAP™)			*** 7.7 cm Carbopack C**					
				*** 1.2 cm Carbopack B**					
√	**Supelco K (Vocarb3000)**			*** 10 cm of Carbopack B (Graphitized Carbons)**					
				*** 6 cm of Carboxen 1000 (Carbon molecular sieves)**					
				*** 1 cm of Carboxen 1001 (Carbon molecular sieves)**					
									Rev. 30

This table contains the GC columns (and volatile organic trap) used for the analysis of volatiles, semivolatiles, pesticides, and Aroclors by the requested analytical methods. Please see the SDG Narrative(s) for the specific fraction(s) relative to this SDG.
Note: This table also contains HPLC columns.

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CompuChem's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is CompuChem's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.). This policy is also applicable to non-CLP data packages.

Revision 7 (01/12/2011)

CompuChem

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Notification Regarding Manual Editing/Integration Flags

In some instances, manual adjustments to the software output are necessary to provide accurate data. These manual integrations are performed by the data reviewers, GC/MS operators, or GC/HPLC chemists. An Extracted Ion Current Profile (EICP) or a GC/HPLC chromatographic peak has been provided for the manual integration performed on each compound to demonstrate the accuracy of that process. The manual integrations are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis, and in the "Flags" column for GC/HPLC analysis. The manual editing/integration flags are:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed in order to provide the most accurate area count possible for the peak. The most common reasons for performing manual integrations/editing are: the compound was not found by the automatic integration routine, the compound was incorrectly integrated by the automatic integration routine, and the co-eluting compounds were incorrectly integrated by the automatic integration routine.

H - Denotes that the data reviewer, GC/MS operator, or GC/HPLC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed. The manual integration was performed in order to provide the most accurate area count possible for the peak.

L - Denotes that a data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

ML - Denotes that an alternate GC/MS library search has been selected and a manual integration has also been performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

These codes will appear in the GC/MS and GC/HPLC raw data.

Revision 8 (01/29/2011)

ORGANIC DATA REPORTING QUALIFIERS

On the appropriate reporting form, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on the appropriate reporting form for each compound. The qualifiers used are:

U : This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL), or reporting limit, will be adjusted to reflect any dilution and, for soils, the percent moisture.

J : This flag indicates an estimated value. The flag is used as detailed below:

1. When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1:1 is assumed for the TIC analyte,

2. When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero, and

3. When the retention time data indicate the presence of a compound that meets the pesticide and/or Aroclor or other GC or HPLC identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero. For example, if the CRQL (or Reporting Limit) is 10 μg/L, but a concentration of 3 μg/L is calculated, it is reported as 3J.

N : This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search and must be used with the J flag. For generic characterization of a TIC such as "chlorinated hydrocarbon" (or for an "unknown," with no matches ≥ 85%), the N flag is not used.

P : In the EPA's Contract Laboratory Program (CLP), this flag is used for a pesticide/Aroclor target analyte, when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the Form I and flagged with a P.
For SW-846 GC and HPLC analyses, when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences, then the lower of the two values is reported and flagged with a P on the reporting form. When the RPD is equal to or less than 40%, our policy is to also report the lower of the two values, although the choice could be a project specific issue. These SW-846 policies are consistent with Method 8000C. If Method 8000B is required, the higher of the two values is reported. For certain HPLC analyses, if one of the HPLC columns displays co-elution of target analytes, all results are reported from a primary column displaying no co-elution. Results are still flagged with a P if the RPD between columns is greater than 40%.

C : This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, this flag is not applied; a laboratory-defined flag is used instead (see the X/Y/Z qualifier.)

DATA REPORTING QUALIFIERS (continued)

B : This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

E : This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a concentration greater than the upper level of the calibration range, the sample or extract will be diluted and reanalyzed. All such compounds with a concentration greater than the upper level of the calibration range will have the result flagged with an E on the appropriate reporting form for the original analysis.

D : If a sample or extract is reanalyzed at a higher dilution factor, for example when the concentration of an analyte exceeds the upper calibration range, the DL suffix is appended to the sample number on the appropriate reporting form for the more diluted sample, and **all** reported concentrations on that form are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

NOTE 1: The D flag is not applied to compounds which are not detected in the sample analysis i.e. compounds reported with the CRQL (or Reporting Limit) and the U flag.

NOTE 2: Separate reporting forms are used for reporting the original analysis (Client Sample No. XXXXX) and the more diluted sample analysis (Client Sample No. XXXXXDL) i.e. the results from both analyses <u>are not combined</u> on a single reporting form.

A: This flag indicates that a TIC is a suspected aldol-condensation product.

S: In the SOM01.2 SOW document, this flag is used to indicate an estimated value for Aroclor target compounds where a valid 5-point initial calibration was not performed prior to the analytes detection in a sample. If an “S” flag is used for a specific Aroclor, then a reanalysis of the sample is required after a valid 5-point calibration is performed for the detected Aroclor. The “S” flag is not utilized for non CLP analyses.

* This flag is applied to a target analyte when any QC acceptance criterion has not been met for that analyte. The flag appears on the reporting form of the associated QC analysis.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

B. Chain of Custody Records

The laboratory shall include a copy of the Chain-of-Custody (CoC) documentation for all of the samples in the Work Order/SDG.

CHAIN OF CUSTODY RECORD

Laboratory: CompuChem Environmental Corp., Liberty Analytical 501 Madison Ave. Cary, NC 27513 (800) 833 5097 Fax (919) 379-4050 Attn: Cathy Dover

2-17-14 30 70

Client:	Watauga County, NC	**Consultant:**	Draper Aden Associates	**Sample Site:**	Watauga County Landfill
Attn:	Mr. J.V. Potter	**Attn:**	Janet C. Frazier	**Location:**	Watauga County, NC
Address:	842 West King Street?/Courthouse, Suite 1 Boone, NC 28607	**Address:**	2206 South Main Street Blacksburg, Virginia 24060	**Event:**	2014 - 1st Semiannual Assess. Monitoring Event
Phone:	(828) 264-5305	**Phone:**	(540) 552-0444	**DAA JN:**	6520-39
Fax:	0	**Fax:**	(540) 552-0291	**Lab JN:**	
Fax:	0				

Project Specific (PS) or Batch (B) QC:
~~Sample Collection for Project Complete?~~ *YES*

Carrier: UPS
Tracking Number: 1Z2373912210026359

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice
Copy to Consultant: *YES*
Bill: *CLIENT* *OTHER* _____
Preserved and shipped on ice: *YES*

GENERAL NOTES:
1. Level 4 w/ EDD & PDF.
2. Report all calibrated target analytes, same as previous events. (8260)
3. Note that project required quantitation and detection limits are same as previous events.

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	8260C - 25 mL purge	METALS 6010 / 6020	metals pH						
Box 4 - Sample Type					G	G							
Box 3 - Filtered/Unfiltered					U	U							
Required pH of Sample					<2	<2							
Box 2 - Preservative					A	B							
Box 5 - Sample Container Type					3-40ml V	1-500ml P							
MW-2	3/4	1035	GW	4	X	X	<2			1403006	-02		Analyze and report all diluted and undiluted results.
MW-3	3/3	1300	GW	4	X	X	<2				-01		
MW-3ms	3/3	1300	GW	4	X	X	<2				-01		
MW-3msd	3/3	1300	GW	4	X	X	<2				-01		
MW-8	3/4	0815	GW	4	X	X	<2				-03		
MW-9	3/3	1110	GW	4	X	X	<2				-04		
MW-12	3/3	1555	GW	4	X	X	<2				-05		
MW-15			~~GW~~	~~3~~	~~X~~								No Samples Collected
MW-17	3/3	1220	GW	4	X	X	<2			1403006	-06		
Trip Blank	3/3		T	3	X						-07		

Clients Special Instructions:

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.3°C Received on Ice ✓ Yes ____ No
Describe problems, if any: IR CON'S-N0015

Sampler Name (Print): Dale Slaughter	Date: 3/3/14	#1 Relinquished by (Signature): Dale Slaughter	Date: 3/5/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Dale Slaughter	Time: 0730	Company Name: DAA	Time: 0900	Company Name:	Time:	
Sampler Name (Print): Tyler Emery	Date: 3/3/14	#1 Received by (Signature): [illegible]	Date: 3/6/14	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler: Tyler Emery	0730	Company: CompuChem	Time: 0943	Company:		

JVC 2/21/2014 Dale W 2/17/14 2-17-14

4/4

ANALYTICAL METHOD: 8260C/5030B – 25mL Purge
TYPE METHOD: GCMS
CLASS: VOLATILE

This 1st Applies to MWs + Trip Blank. JR

No.	ANALYTE	CAS RN
1.	Acetone	67-64-1
2.	Acetonitrile (methyl cyanide)	75-05-8
3.	Acrolein	107-02-8
4.	Acrylonitrile	107-13-1
5.	Allyl chloride	107-05-1
6.	Benzene	71-43-2
7.	Bromochloromethane	74-97-5
8.	Bromodichloromethane	75-27-4
9.	Bromoform (tribromomethane)	75-25-2
10.	Bromomethane; (Methyl bromide)	74-83-9
11.	2-butanone (methyl ethyl ketone - MEK)	78-93-3
12.	Carbon disulfide	75-15-0
13.	Carbon tetrachloride	56-23-5
14.	Chlorobenzene	108-90-7
15.	Chloroethane (ethyl chloride)	75-00-3
16.	Chloroform (trichloromethane)	67-66-3
17.	chloromethane ; (Methyl chloride)	74-87-3
18.	Chloroprene	126-99-8
19.	Dibromochloromethane	124-48-1
20.	dibromomethane, (Methylene bromide)	74-95-3
21.	1,2-dichlorobenzene; (o-dichlorobenzene)	95-50-1
22.	1,3-dichlorobenzene, (m-dichlorobenzene)	541-73-1
23.	1,4-dichlorobenzene; (p-dichlorobenzene)	106-46-7
24.	trans-1,4-dichloro-2-butene	110-57-6
25.	Dichlorodifluoromethane	75-71-8
26.	1,1-dichloroethane	75-34-3
27.	1,2-dichloroethane	107-06-2
28.	1,1-dichloroethene (vinylidene chloride)	75-35-4
29.	cis-1,2-dichloroethene	156-59-2
30.	trans-1,2-dichloroethene	156-60-5
31.	1,2-dichloropropane	78-87-5
32.	1,3-dichloropropane	142-28-9
33.	2,2-dichloropropane	594-20-7
34.	1,1-dichloropropene	563-58-6
35.	cis-1,3-dichloropropene	10061-01-5
36.	trans-1,3-dichloropropene	10061-02-6
37.	Ethylbenzene	100-41-4
38.	Ethyl methacrylate	97-63-2
39.	Hexachlorobutadiene	87-68-3
40.	2-hexanone (methyl butyl ketone - MBK)	591-78-6
41.	iodomethane; (Methyl iodide)	74-88-4
42.	Isobutyl alcohol	78-83-1
43.	Methacrylonitrile	126-98-7
44.	Methyl methacrylate	80-62-6
45.	4-methyl-2-pentanone (methyl isobutyl ketone)	108-10-1
46.	Naphthalene	91-20-3
47.	Propionitrile	107-12-0
48.	Styrene (phenylethene)	100-42-5
49.	1,1,1,2-tetrachloroethane	630-20-6
50.	1,1,2,2-tetrachloroethane	79-34-5
51.	Tetrachloroethene	127-18-4
52.	Toluene (methyl benzene)	108-88-3

53. 1,2,4-trichlorobenzene	120-82-1
54. 1,1,1-trichloroethane (methyl chloroform)	71-55-6
55. 1,1,2-trichloroethane	79-00-5
56. Trichloroethene	79-01-6
57. Trichlorofluoromethane (CFC-11)	75-69-4
58. 1,2,3-trichloropropane	96-18-4
59. Vinyl acetate	108-05-4
60. Xylenes (total)	1330-20-7
61 methylene chloride	75-09-2
62 Vinyl chloride	75-01-4

ANALYTICAL METHOD: See below
TYPE METHOD: See below
CLASS: TOTAL METALS

No.	PARAMETER	METHOD	CAS RN
1	Barium	6010	7440-39-3
2	Iron	6010	7439-89-6
3	Chromium	6010	7440-47-3
4	Cobalt	6020	7440-48-4
5	Nickel	6010	7440-02-0
6	Vanadium	6010	7440-62-2

Use and report most current update of method.
DVR
2/21/2014

Cathy Dover

From: Janet Frazier [jfrazier@daa.com]
Sent: Friday, February 21, 2014 3:07 PM
To: Cathy Dover
Cc: Karen Weber; Ken Coddington; Kathy Olsen; Tiffany Jebson
Subject: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Cathy- we will switch to SW-846.

Groundwater Inorganics. Samples should be analyzed by 6010C for iron, total and by 6020A for Ba, Cr, Co, Ni, V, total .

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Friday, February 21, 2014 11:49 AM
To: Janet Frazier
Cc: Karen Weber; Ken Coddington; Kathy Olsen
Subject: RE: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Thanks! We can analyze the cobalt by ILM05.4 MS if needed.

Cathy Dover
Supervisor of Project Management
CompuChem
501 Madison Ave.
Cary, NC 27513
919-379-4089 office
919-379-4050 fax

From: Janet Frazier [mailto:jfrazier@daa.com]
Sent: Friday, February 21, 2014 11:33 AM
To: Cathy Dover
Cc: Karen Weber; Ken Coddington; Kathy Olsen
Subject: RE: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Cathy- I need to check with Karen on this... I think we are not using SW-846, but keeping the CLP, and requesting that cobalt be analyzed via ICP-MS instead of ICP. I will get back to you.

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Friday, February 21, 2014 10:27 AM
To: Ken Coddington
Cc: Karen Weber; Janet Frazier
Subject: RE: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Hi Ken,

We will ship the containers/coolers so they arrive before Thursday, Feb. 27th.

I have a question concerning the metals methods. We have done the CLP method ILM05.4 for the metals in the past—is it changing to 6010C/6020A for 2014?

Thanks,

Cathy

Cathy Dover
Supervisor of Project Management
CompuChem
501 Madison Ave.
Cary, NC 27513
919-379-4089 office
919-379-4050 fax

From: Ken Coddington [mailto:kcoddington@daa.com]
Sent: Friday, February 21, 2014 9:50 AM
To: Cathy Dover
Cc: Karen Weber; Janet Frazier
Subject: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Good Morning Cathy,

Attached is the order for the upcoming 2014 - 1st Semiannual Watauga Co. LF ground water event. Would you please have this order delivered to our Blacksburg address NLT Thursday, February 27th, 2014?

Please contact me with any questions!

As always, I would also appreciate an e-mail acknowledging the receipt of this order.

Thanks,
Ken

Ken Coddington
Senior Environmental Field Coordinator

Draper Aden Associates
Engineering • Surveying • Environmental Services
Lasting Positive Impact

direct 540-552-0444 / fax 540-552-0291 / mobile 540-250-2229
www.daa.com

All the Stormwater News That's Fit to Print - The Inlet

Please consider the environment before printing this email

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WORK ORDER

Printed: 3/7/2014 9:05:08AM

1403006

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA COUNTY LANDFILL 2014+/6520-39**	**Project Number:**	**WATAUGA COUNTY LANDFILL 2014+/6520-39**
SDG:	**1403006** **CASE:**	**Status:**	**Batched**

Report To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540)552-0444
Fax: -

Invoice To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone :(540)552-0444
Fax: -

Date Due:	03/26/2014 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	03/06/2014 09:43
Logged In By:	Cathy Dover	Date Logged In:	03/06/2014 13:40

J & B Flags?: **YES**	TICS?: **NO**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**
Metals ND to? **MDL**	Spike Level: **FULL Spike**		

USE 1403006-01 FOR QC*VOA 8260B 25ML=PPS897O.SUB*6010C MTL=Fe ONLY*6020A MTL=Ba,Cr,Co,Ni & V

Analysis	Due	TAT	Expires	Received	Comments
1403006-01 MW-3 [Water] Sampled 03/03/2014 13:00 Eastern					**USE FOR QC**
6010C METALS	03/26/2014 16:00	20	08/30/2014 13:00	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/30/2014 13:00	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 13:00	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-02 MW-2 [Water] Sampled 03/04/2014 10:35 Eastern					
6010C METALS	03/26/2014 16:00	20	08/31/2014 10:35	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/31/2014 10:35	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/18/2014 10:35	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-03 MW-8 [Water] Sampled 03/04/2014 08:15 Eastern					
6010C METALS	03/26/2014 16:00	20	08/31/2014 08:15	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/31/2014 08:15	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/18/2014 08:15	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-04 MW-9 [Water] Sampled 03/03/2014 11:10 Eastern					
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/30/2014 11:10	03/06/2014 09:43	
6010C METALS	03/26/2014 16:00	20	08/30/2014 11:10	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 11:10	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)

WORK ORDER

Printed: 3/7/2014 9:05:08AM

1403006

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA COUNTY LANDFILL 2014+/6520-39**	**Project Number:**	**WATAUGA COUNTY LANDFILL 2014+/6520-39**
SDG:	**1403006** **CASE:**	**Status:**	**Batched**

Analysis	Due	TAT	Expires	Comments	
1403006-05 MW-12 [Water] Sampled 03/03/2014 15:55 Eastern					
6010C METALS	03/26/2014 16:00	20	08/30/2014 15:55	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/30/2014 15:55	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 15:55	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-06 MW-17 [Water] Sampled 03/03/2014 12:20 Eastern					
6010C METALS	03/26/2014 16:00	20	08/30/2014 12:20	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/30/2014 12:20	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 12:20	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-07 TRIP BLANK [Water] Sampled 03/03/2014 00:00 Eastern					
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 00:00	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)

C. Sample Preparation and Analysis Holding Time Data

(HOLDING TIME SUMMARY)

Sample collection, receipt, preparation and analysis dates with method holding time requirements.

HOLDING TIME SUMMARY

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MW-3	03/03/14	03/06/14	03/13/14	N/A	14	03/14/14	10.5	14	
MW-2	03/04/14	03/06/14	03/13/14	N/A	14	03/14/14	9.6	14	
MW-8	03/04/14	03/06/14	03/13/14	N/A	14	03/13/14	9.6	14	
MW-9	03/03/14	03/06/14	03/13/14	N/A	14	03/13/14	10.5	14	
MW-12	03/03/14	03/06/14	03/13/14	N/A	14	03/13/14	10.3	14	
MW-17	03/03/14	03/06/14	03/13/14	N/A	14	03/14/14	10.5	14	
TRIP BLANK	03/03/14	03/06/14	03/13/14	N/A	14	03/13/14	10.9	14	

Environmental Testing Laboratories

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D. Surrogate Recovery Results

(SURROGATE STANDARD RECOVERY)

SURROGATE STANDARD RECOVERY

SW 8260B

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG: 1403006 Instrument: 5975hpms91

Sequence: 4C13004 Calibration: 4031303

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	Q
Blank (4031319-BLK1) ug/L				
Lab File ID: 4031319-BLK1R91.d	Analyzed: 03/13/14 20:19			
Dibromofluoromethane	5.000	104	65 - 150	
1,2-Dichloroethane-d4	5.000	107	59 - 150	
Toluene-d8	5.000	100	61 - 145	
Bromofluorobenzene	5.000	99	63 - 143	
TRIP BLANK (1403006-07) ug/L				
Lab File ID: 1403006-0791.d	Analyzed: 03/13/14 20:48			
Dibromofluoromethane	5.000	101	65 - 150	
1,2-Dichloroethane-d4	5.000	105	59 - 150	
Toluene-d8	5.000	99	61 - 145	
Bromofluorobenzene	5.000	95	63 - 143	
MW-8 (1403006-03) ug/L				
Lab File ID: 1403006-0391.d	Analyzed: 03/13/14 22:53			
Dibromofluoromethane	5.000	106	65 - 150	
1,2-Dichloroethane-d4	5.000	108	59 - 150	
Toluene-d8	5.000	106	61 - 145	
Bromofluorobenzene	5.000	98	63 - 143	
MW-9 (1403006-04) ug/L				
Lab File ID: 1403006-0491.d	Analyzed: 03/13/14 23:22			
Dibromofluoromethane	5.000	103	65 - 150	
1,2-Dichloroethane-d4	5.000	107	59 - 150	
Toluene-d8	5.000	101	61 - 145	
Bromofluorobenzene	5.000	97	63 - 143	

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SURROGATE STANDARD RECOVERY

SW 8260B

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG: 1403006 Instrument: 5975hpms91

Sequence: 4C13004 Calibration: 4031303

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	Q
MW-12 (1403006-05) ug/L				
Lab File ID: 1403006-0591.d	Analyzed: 03/13/14 23:51			
Dibromofluoromethane	5.000	103	65 - 150	
1,2-Dichloroethane-d4	5.000	106	59 - 150	
Toluene-d8	5.000	101	61 - 145	
Bromofluorobenzene	5.000	97	63 - 143	
MW-17 (1403006-06) ug/L				
Lab File ID: 1403006-0691.d	Analyzed: 03/14/14 00:20			
Dibromofluoromethane	5.000	104	65 - 150	
1,2-Dichloroethane-d4	5.000	108	59 - 150	
Toluene-d8	5.000	105	61 - 145	
Bromofluorobenzene	5.000	99	63 - 143	
MW-2 (1403006-02) ug/L				
Lab File ID: 1403006-02D291.d	Analyzed: 03/14/14 00:49			
Dibromofluoromethane	5.000	105	65 - 150	
1,2-Dichloroethane-d4	5.000	109	59 - 150	
Toluene-d8	5.000	102	61 - 145	
Bromofluorobenzene	5.000	101	63 - 143	
MW-3 (1403006-01) ug/L				
Lab File ID: 1403006-0191.d	Analyzed: 03/14/14 01:18			
Dibromofluoromethane	5.000	104	65 - 150	
1,2-Dichloroethane-d4	5.000	108	59 - 150	
Toluene-d8	5.000	103	61 - 145	
Bromofluorobenzene	5.000	98	63 - 143	

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

SURROGATE STANDARD RECOVERY

SW 8260B

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG: 1403006 Instrument: 5975hpms91

Sequence: 4C13004 Calibration: 4031303

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	Q
LCS (4031319-BS1) ug/L				
Lab File ID: 4031319-BS1R91.d	Analyzed: 03/14/14 01:47			
Dibromofluoromethane	5.000	107	65 - 150	
1,2-Dichloroethane-d4	5.000	113	59 - 150	
Toluene-d8	5.000	106	61 - 145	
Bromofluorobenzene	5.000	99	63 - 143	
Matrix Spike (4031319-MS1) ug/L				
Lab File ID: 4031319-MS191.d	Analyzed: 03/14/14 02:16			
Dibromofluoromethane	5.000	96	65 - 150	
1,2-Dichloroethane-d4	5.000	97	59 - 150	
Toluene-d8	5.000	99	61 - 145	
Bromofluorobenzene	5.000	94	63 - 143	
Matrix Spike Dup (4031319-MSD1) ug/L				
Lab File ID: 4031319-MSD191.d	Analyzed: 03/14/14 02:45			
Dibromofluoromethane	5.000	102	65 - 150	
1,2-Dichloroethane-d4	5.000	106	59 - 150	
Toluene-d8	5.000	103	61 - 145	
Bromofluorobenzene	5.000	101	63 - 143	

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

E. Laboratory Control Sample Results

(LCS/LCS DUPLICATE RECOVERY)

LCS recovery or LCS/LCSD recovery with relative percent difference, and quality control acceptance criteria.

LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4031319-BS1 Matrix: Water Client ID: VLCSUB Batch: 4031319

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	Q	QC LIMITS REC.
Dichlorodifluoromethane	5.000	4.063	81		50 - 150
Chloromethane	5.000	4.133	83		50 - 150
Vinyl chloride	5.000	4.037	81		61 - 150
Bromomethane	5.000	4.276	86		50 - 150
Chloroethane	5.000	4.084	82		54 - 150
Trichlorofluoromethane	5.000	4.450	89		56 - 150
Acrolein	50.00	29.30	59		50 - 150
1,1-Dichloroethene	5.000	4.052	81		74 - 143
Acetone	25.00	26.85	107		50 - 150
Iodomethane	5.000	4.294	86		50 - 150
Carbon disulfide	5.000	4.487	90		50 - 150
3-Chloropropene	5.000	4.783	96		50 - 150
Acetonitrile	5.000	4.958	99		50 - 150
Methylene chloride	5.000	4.617 B	92		50 - 139
Acrylonitrile	50.00	47.79	96		50 - 150
trans-1,2-Dichloroethene	5.000	4.572	91		50 - 137
1,1-Dichloroethane	5.000	4.901	98		59 - 138
Chloroprene	5.000	4.532	91		50 - 150
Vinyl acetate	5.000	4.680	94		50 - 150
cis-1,2-Dichloroethene	5.000	4.825	96		69 - 140
2,2-Dichloropropane	5.000	4.147	83		50 - 150
Propionitrile	250.0	253.1	101		50 - 150
2-Butanone	25.00	30.31	121		65 - 134
Methacrylonitrile	50.00	57.06	114		50 - 150
Bromochloromethane	5.000	5.113	102		50 - 150

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LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4031319-BS1 Matrix: Water Client ID: VLCSUB Batch: 4031319

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	Q	QC LIMITS REC.
Chloroform	5.000	5.022	100		67 - 147
1,1,1-Trichloroethane	5.000	4.629	93		71 - 137
1,1-Dichloropropene	5.000	4.547	91		50 - 150
Carbon tetrachloride	5.000	4.224	84		68 - 145
1,2-Dichloroethane	5.000	5.290	106		61 - 150
Isobutyl alcohol	250.0	268.4	107		50 - 150
Benzene	5.000	4.900	98		68 - 138
Trichloroethene	5.000	4.356	87		55 - 150
1,2-Dichloropropane	5.000	5.257	105		67 - 137
Dibromomethane	5.000	4.749	95		50 - 150
Methyl Methacrylate	50.00	60.19	120		50 - 150
Bromodichloromethane	5.000	4.848	97		73 - 142
cis-1,3-Dichloropropene	5.000	4.737	95		74 - 134
4-Methyl-2-pentanone	25.00	30.90	124		66 - 127
Toluene	5.000	4.716	94		60 - 142
trans-1,3-Dichloropropene	5.000	5.051	101		66 - 130
1,1,2-Trichloroethane	5.000	5.076	102		68 - 130
Ethyl Methacrylate	50.00	33.80	68		50 - 150
1,3-Dichloropropane	5.000	5.417	108		50 - 150
Tetrachloroethene	5.000	3.929	79		65 - 137
2-Hexanone	25.00	30.09	120		53 - 140
Dibromochloromethane	5.000	4.647	93		68 - 137
Chlorobenzene	5.000	4.729	95		68 - 129
1,1,1,2-Tetrachloroethane	5.000	4.612	92		50 - 150
Ethylbenzene	5.000	4.547	91		67 - 127

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LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4031319-BS1 Matrix: Water Client ID: VLCSUB Batch: 4031319

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	Q	QC LIMITS REC.
m,p-Xylene	10.00	9.200	92		60 - 140
o-Xylene	5.000	4.781	96		60 - 140
Styrene	5.000	4.819	96		66 - 139
Bromoform	5.000	4.200	84		62 - 138
1,1,2,2-Tetrachloroethane	5.000	5.132	103		63 - 122
1,2,3-Trichloropropane	5.000	5.224	104		50 - 150
trans-1,4-Dichloro-2-butene	20.00	20.25	101		50 - 150
1,3-Dichlorobenzene	5.000	4.313	86		64 - 136
1,4-Dichlorobenzene	5.000	4.434	89		69 - 125
1,2-Dichlorobenzene	5.000	4.568	91		71 - 127
1,2,4-Trichlorobenzene	5.000	4.130	83		52 - 147
Hexachlorobutadiene	5.000	3.093	62		50 - 150
Naphthalene	5.000	4.734	95		50 - 150

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F. Matrix Spike Results

(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

MS/MSD recovery, relative percent difference and quality control acceptance criteria

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

MW-3MS

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4031319-MS1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Dichlorodifluoromethane	5.000	0.50 U	4.186	84		50 - 150
Chloromethane	5.000	0.50 U	4.851	97		50 - 150
Vinyl chloride	5.000	0.50 U	4.241	85		61 - 150
Bromomethane	5.000	0.50 U	4.303	86		50 - 150
Chloroethane	5.000	0.4790 J	4.553	81		54 - 150
Trichlorofluoromethane	5.000	0.50 U	4.512	90		56 - 150
Acrolein	50.00	5.0 U	78.99	158	*	50 - 150
1,1-Dichloroethene	5.000	0.50 U	4.020	80		74 - 143
Acetone	25.00	2.5 U	24.09	96		50 - 150
Iodomethane	5.000	0.50 U	4.444	89		50 - 150
Carbon disulfide	5.000	0.50 U	4.474	89		50 - 150
3-Chloropropene	5.000	0.50 U	4.750	95		50 - 150
Acetonitrile	5.000	0.50 U	4.768	95		50 - 150
Methylene chloride	5.000	0.034 JB	4.387 B	87		50 - 139
Acrylonitrile	50.00	5.0 U	63.28	127		50 - 150
trans-1,2-Dichloroethene	5.000	0.09003 J	4.559	89		50 - 137
1,1-Dichloroethane	5.000	2.7	7.548	96		59 - 138
Chloroprene	5.000	0.50 U	4.545	91		50 - 150
Vinyl acetate	5.000	0.50 U	5.582	112		50 - 150
cis-1,2-Dichloroethene	5.000	4.3	8.870	91		69 - 140
2,2-Dichloropropane	5.000	0.50 U	4.045	81		50 - 150
Propionitrile	250.0	25 U	299.1	120		50 - 150
2-Butanone	25.00	2.5 U	26.55	106		65 - 134
Methacrylonitrile	50.00	5.0 U	57.23	114		50 - 150
Bromochloromethane	5.000	0.50 U	4.633	93		50 - 150
Chloroform	5.000	0.50 U	4.844	97		67 - 147
1,1,1-Trichloroethane	5.000	0.50 U	4.552	91		71 - 137
1,1-Dichloropropene	5.000	0.50 U	4.566	91		50 - 150

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

MW-3MS

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4031319-MS1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Carbon tetrachloride	5.000	0.50 U	4.150	83		68 - 145
1,2-Dichloroethane	5.000	0.50 U	5.021	100		61 - 150
Isobutyl alcohol	250.0	25 U	258.3	103		50 - 150
Benzene	5.000	0.50 U	4.881	98		68 - 138
Trichloroethene	5.000	0.4141 J	4.759	87		55 - 150
1,2-Dichloropropane	5.000	0.50 U	5.140	103		67 - 137
Dibromomethane	5.000	0.50 U	4.374	87		50 - 150
Methyl Methacrylate	50.00	5.0 U	48.27	97		50 - 150
Bromodichloromethane	5.000	0.50 U	4.705	94		73 - 142
cis-1,3-Dichloropropene	5.000	0.50 U	4.492	90		74 - 134
4-Methyl-2-pentanone	25.00	2.5 U	27.59	110		66 - 127
Toluene	5.000	0.03104 J	4.840	96		60 - 142
trans-1,3-Dichloropropene	5.000	0.50 U	4.830	97		66 - 130
1,1,2-Trichloroethane	5.000	0.50 U	4.983	100		68 - 130
Ethyl Methacrylate	50.00	5.0 U	74.16	148		50 - 150
1,3-Dichloropropane	5.000	0.50 U	5.232	105		50 - 150
Tetrachloroethene	5.000	0.50 U	4.190	84		65 - 137
2-Hexanone	25.00	2.5 U	27.72	111		53 - 140
Dibromochloromethane	5.000	0.50 U	4.451	89		68 - 137
Chlorobenzene	5.000	0.50 U	4.844	97		68 - 129
1,1,1,2-Tetrachloroethane	5.000	0.50 U	4.656	93		50 - 150
Ethylbenzene	5.000	0.50 U	4.779	96		67 - 127
m,p-Xylene	10.00	1.0 U	9.651	97		60 - 140
o-Xylene	5.000	0.50 U	4.916	98		60 - 140
Styrene	5.000	0.50 U	4.855	97		66 - 139
Bromoform	5.000	0.50 U	4.165	83		62 - 139
1,1,2,2-Tetrachloroethane	5.000	0.50 U	4.905	98		63 - 122
1,2,3-Trichloropropane	5.000	0.50 U	4.692	94		50 - 150

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

MW-3MS

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4031319-MS1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
trans-1,4-Dichloro-2-butene	20.00	2.0 U	18.90	94		50 - 150
1,3-Dichlorobenzene	5.000	0.50 U	4.443	89		64 - 136
1,4-Dichlorobenzene	5.000	0.50 U	4.445	89		69 - 125
1,2-Dichlorobenzene	5.000	0.50 U	4.582	92		71 - 127
1,2,4-Trichlorobenzene	5.000	0.50 U	4.037	81		52 - 147
Hexachlorobutadiene	5.000	0.50 U	3.196	64		50 - 150
Naphthalene	5.000	0.50 U	4.546	91		50 - 150
Xylenes (total)		0.50 U	14.57	0		60 - 140

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

MW-3MSD

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4031319-MSD1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Dichlorodifluoromethane	5.000	4.086	82	2		25	50 - 150
Chloromethane	5.000	4.525	90	7		25	50 - 150
Vinyl chloride	5.000	4.188	84	1		25	61 - 150
Bromomethane	5.000	4.143	83	4		25	50 - 150
Chloroethane	5.000	4.514	81	0.8		25	54 - 150
Trichlorofluoromethane	5.000	4.321	86	4		25	56 - 150
Acrolein	50.00	78.81	158	0.2	*	25	50 - 150
1,1-Dichloroethene	5.000	4.058	81	0.9		14	74 - 143
Acetone	25.00	25.10	100	4		25	50 - 150
Iodomethane	5.000	4.446	89	0.06		25	50 - 150
Carbon disulfide	5.000	4.383	88	2		25	50 - 150
3-Chloropropene	5.000	4.726	95	0.5		25	50 - 150
Acetonitrile	5.000	4.879	98	2		25	50 - 150
Methylene chloride	5.000	4.368 B	87	0.4		25	50 - 139
Acrylonitrile	50.00	64.68	129	2		25	50 - 150
trans-1,2-Dichloroethene	5.000	4.507	88	1		25	50 - 137
1,1-Dichloroethane	5.000	7.581	97	0.4		25	59 - 138
Chloroprene	5.000	4.520	90	0.6		25	50 - 150
Vinyl acetate	5.000	5.829	117	4		25	50 - 150
cis-1,2-Dichloroethene	5.000	9.001	93	1		25	69 - 140
2,2-Dichloropropane	5.000	3.830	77	5		25	50 - 150
Propionitrile	250.0	318.5	127	6		25	50 - 150
2-Butanone	25.00	27.83	111	5		25	65 - 134
Methacrylonitrile	50.00	58.79	118	3		25	50 - 150
Bromochloromethane	5.000	4.774	95	3		25	50 - 150
Chloroform	5.000	4.888	98	0.9		25	67 - 147
1,1,1-Trichloroethane	5.000	4.497	90	1		25	71 - 137
1,1-Dichloropropene	5.000	4.399	88	4		25	50 - 150
Carbon tetrachloride	5.000	4.209	84	1		25	68 - 145

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

MW-3MSD

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4031319-MSD1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
1,2-Dichloroethane	5.000	5.148	103	3		25	61 - 150
Isobutyl alcohol	250.0	259.0	104	0.3		25	50 - 150
Benzene	5.000	4.780	96	2		11	68 - 138
Trichloroethene	5.000	4.679	85	2		14	55 - 150
1,2-Dichloropropane	5.000	5.218	104	1		25	67 - 137
Dibromomethane	5.000	4.461	89	2		25	50 - 150
Methyl Methacrylate	50.00	49.74	99	3		25	50 - 150
Bromodichloromethane	5.000	4.729	95	0.5		25	73 - 142
cis-1,3-Dichloropropene	5.000	4.572	91	2		25	74 - 134
4-Methyl-2-pentanone	25.00	27.78	111	0.7		25	66 - 127
Toluene	5.000	4.639	92	4		13	60 - 142
trans-1,3-Dichloropropene	5.000	4.736	95	2		25	66 - 130
1,1,2-Trichloroethane	5.000	4.817	96	3		25	68 - 130
Ethyl Methacrylate	50.00	73.90	148	0.4		25	50 - 150
1,3-Dichloropropane	5.000	5.121	102	2		25	50 - 150
Tetrachloroethene	5.000	3.869	77	8		25	65 - 137
2-Hexanone	25.00	27.55	110	0.6		25	53 - 140
Dibromochloromethane	5.000	4.372	87	2		25	68 - 137
Chlorobenzene	5.000	4.693	94	3		13	68 - 129
1,1,1,2-Tetrachloroethane	5.000	4.491	90	4		25	50 - 150
Ethylbenzene	5.000	4.594	92	4		25	67 - 127
m,p-Xylene	10.00	9.093	91	6		25	60 - 140
o-Xylene	5.000	4.680	94	5		25	60 - 140
Styrene	5.000	4.724	94	3		25	66 - 139
Bromoform	5.000	4.225	84	1		25	62 - 139
1,1,2,2-Tetrachloroethane	5.000	5.020	100	2		25	63 - 122
1,2,3-Trichloropropane	5.000	4.836	97	3		25	50 - 150
trans-1,4-Dichloro-2-butene	20.00	18.85	94	0.2		25	50 - 150
1,3-Dichlorobenzene	5.000	4.402	88	0.9		25	64 - 136

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

MW-3MSD

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4031319-MSD1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	5.000	4.434	89	0.3		25	69 - 125
1,2-Dichlorobenzene	5.000	4.473	89	2		25	71 - 127
1,2,4-Trichlorobenzene	5.000	4.051	81	0.3		25	52 - 147
Hexachlorobutadiene	5.000	3.153	63	1		25	50 - 150
Naphthalene	5.000	4.547	91	0.03		25	50 - 150
Xylenes (total)		13.77	0	6		25	60 - 140

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G. Batch Summary

(PREPARATION BATCH SUMMARY)

Client Sample IDs, cross-referenced with Lab Sample IDs, with sample preparation details.

PREPARATION BATCH SUMMARY

SW 8260B

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Batch: 4031319 Matrix: Water Preparation: EPA 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (mL)	FINAL VOL/WT (mL)
MW-3	1403006-01	03/13/14 20:19	25.0	25.0
MW-2	1403006-02	03/13/14 20:19	25.0	25.0
MW-8	1403006-03	03/13/14 20:19	25.0	25.0
MW-9	1403006-04	03/13/14 20:19	25.0	25.0
MW-12	1403006-05	03/13/14 20:19	25.0	25.0
MW-17	1403006-06	03/13/14 20:19	25.0	25.0
TRIP BLANK	1403006-07	03/13/14 20:19	25.0	25.0
VBLKUB	4031319-BLK1	03/13/14 20:19	25.0	25.0
VLCSUB	4031319-BS1	03/13/14 20:19	25.0	25.0
MW-3MS	4031319-MS1	03/13/14 20:19	25.0	25.0
MW-3MSD	4031319-MSD1	03/13/14 20:19	25.0	25.0

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H. Analysis Sequence Summary

(ANALYSIS SEQUENCE SUMMARY)

ANALYSIS SEQUENCE SUMMARY

SW 8260B

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C13004 Calibration: 4031303 Instrument: 5975hpms91

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
BFBUA	4C13004-TUN1	4C13004-TUN191.d	03/13/14 15:23:00
VSTD001UA	4C13004-CAL2	4C13004-CAL291.d	03/13/14 15:49:00
VSTD0.5UA	4C13004-CAL1	4C13004-CAL191.d	03/13/14 16:18:00
VSTD040UA	4C13004-CAL6	4C13004-CAL691.d	03/13/14 16:47:00
VSTD020UA	4C13004-CAL5	4C13004-CAL591.d	03/13/14 17:16:00
VSTD010UA	4C13004-CAL4	4C13004-CAL491.d	03/13/14 17:45:00
VSTD005UA	4C13004-CAL3	4C13004-CAL391.d	03/13/14 18:14:00
VSTD005UB	4C13004-SCV1	4C13004-SCV191.d	03/13/14 19:13:00
VBLKUB	4031319-BLK1	4031319-BLK1R91.d	03/13/14 20:19:00
TRIP BLANK	1403006-07	1403006-0791.d	03/13/14 20:48:00
MW-8	1403006-03	1403006-0391.d	03/13/14 22:53:00
MW-9	1403006-04	1403006-0491.d	03/13/14 23:22:00
MW-12	1403006-05	1403006-0591.d	03/13/14 23:51:00
MW-17	1403006-06	1403006-0691.d	03/14/14 00:20:00
MW-2	1403006-02	1403006-02D291.d	03/14/14 00:49:00
MW-3	1403006-01	1403006-0191.d	03/14/14 01:18:00
VLCSUB	4031319-BS1	4031319-BS1R91.d	03/14/14 01:47:00
MW-3MS	4031319-MS1	4031319-MS191.d	03/14/14 02:16:00
MW-3MSD	4031319-MSD1	4031319-MSD191.d	03/14/14 02:45:00

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I. Instrument Performance Check

(MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK)

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW 8260B

Laboratory:	COMPUCHEM	SDG:	1403006
Client:	DRAPER	Project:	WATAUGA COUNTY LANDFILL 2014+/6520-39
Lab File ID:	4C13004-TUN191.d	Injection Date:	03/13/14
Instrument ID:	5975hpms91	Injection Time:	15:23
Sequence:	4C13004	Lab Sample ID:	4C13004-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	17.5	PASS
75	30 - 60% of 95	49.5	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.4	PASS
173	Less than 2% of 174	0	PASS
174	(Greater than 50% of 95)	70.3	PASS
175	5 - 9% of 174	8.08	PASS
176	(Greater than 95% but less then 101%)	95.2	PASS
177	5 - 9% of 176	6.75	PASS

Environmental Testing Laboratories

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J. Internal Standard Results

(INTERNAL STANDARD AREA AND RT SUMMARY)

INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	COMPUCHEM	SDG:	1403006
Client:	DRAPER	Project:	WATAUGA COUNTY LANDFILL 2014+/6520-39
Sequence:	4C13004	Instrument:	5975hpms91
		Calibration:	4031303

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (4C13004-SCV1)			Lab File ID: 4C13004-SCV191.d			Analyzed: 03/13/14 19:13			
Fluorobenzene	726758	12.428	745348	12.428	98	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	550046	14.86	575955	14.866	96	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	252263	16.695	261183	16.695	97	50 - 200	0.0000	+/-0.06	
Blank (4031319-BLK1)			Lab File ID: 4031319-BLK1R91.d			Analyzed: 03/13/14 20:19			
Fluorobenzene	714573	12.428	745348	12.428	96	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	557432	14.86	575955	14.866	97	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	256116	16.695	261183	16.695	98	50 - 200	0.0000	+/-0.06	
TRIP BLANK (1403006-07)			Lab File ID: 1403006-0791.d			Analyzed: 03/13/14 20:48			
Fluorobenzene	714015	12.428	745348	12.428	96	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	530351	14.86	575955	14.866	92	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	245766	16.695	261183	16.695	94	50 - 200	0.0000	+/-0.06	
MW-8 (1403006-03)			Lab File ID: 1403006-0391.d			Analyzed: 03/13/14 22:53			
Fluorobenzene	703973	12.428	745348	12.428	94	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	512030	14.86	575955	14.866	89	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	243546	16.695	261183	16.695	93	50 - 200	0.0000	+/-0.06	
MW-9 (1403006-04)			Lab File ID: 1403006-0491.d			Analyzed: 03/13/14 23:22			
Fluorobenzene	703113	12.428	745348	12.428	94	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	510981	14.86	575955	14.866	89	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	243490	16.695	261183	16.695	93	50 - 200	0.0000	+/-0.06	
MW-12 (1403006-05)			Lab File ID: 1403006-0591.d			Analyzed: 03/13/14 23:51			
Fluorobenzene	693029	12.428	745348	12.428	93	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	508573	14.86	575955	14.866	88	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	237612	16.695	261183	16.695	91	50 - 200	0.0000	+/-0.06	
MW-17 (1403006-06)			Lab File ID: 1403006-0691.d			Analyzed: 03/14/14 00:20			
Fluorobenzene	686116	12.428	745348	12.428	92	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	490939	14.86	575955	14.866	85	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	230327	16.695	261183	16.695	88	50 - 200	0.0000	+/-0.06	

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INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	COMPUCHEM	SDG:	1403006
Client:	DRAPER	Project:	WATAUGA COUNTY LANDFILL 2014+/6520-39
Sequence:	4C13004	Instrument:	5975hpms91
		Calibration:	4031303

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-2 (1403006-02)			Lab File ID: 1403006-02D291.d			Analyzed: 03/14/14 00:49			
Fluorobenzene	687600	12.428	745348	12.428	92	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	509692	14.86	575955	14.866	88	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	232284	16.695	261183	16.695	89	50 - 200	0.0000	+/-0.06	
MW-3 (1403006-01)			Lab File ID: 1403006-0191.d			Analyzed: 03/14/14 01:18			
Fluorobenzene	681993	12.428	745348	12.428	91	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	495083	14.86	575955	14.866	86	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	233565	16.695	261183	16.695	89	50 - 200	0.0000	+/-0.06	
LCS (4031319-BS1)			Lab File ID: 4031319-BS1R91.d			Analyzed: 03/14/14 01:47			
Fluorobenzene	677294	12.428	745348	12.428	91	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	487675	14.86	575955	14.866	85	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	239221	16.695	261183	16.695	92	50 - 200	0.0000	+/-0.06	
Matrix Spike (4031319-MS1)			Lab File ID: 4031319-MS191.d			Analyzed: 03/14/14 02:16			
Fluorobenzene	693069	12.428	745348	12.428	93	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	484601	14.86	575955	14.866	84	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	234798	16.695	261183	16.695	90	50 - 200	0.0000	+/-0.06	
Matrix Spike Dup (4031319-MSD1)			Lab File ID: 4031319-MSD191.d			Analyzed: 03/14/14 02:45			
Fluorobenzene	702793	12.428	745348	12.428	94	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	510564	14.86	575955	14.866	89	50 - 200	-0.0060	+/-0.06	
1,4-Dichlorobenzene-d4	239166	16.695	261183	16.695	92	50 - 200	0.0000	+/-0.06	

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K. Target Compound Results

(ANALYSIS DATA SHEETS)

Analysis Data Sheets (ADS), Tentatively Identified Compounds (TICs), and Surrogate Recovery Results

Sample data shall be arranged in packets with the Analysis Data Sheet, followed by the raw data for volatile or semivolatile samples. These sample packets shall be placed in increasing Client Sample ID number order, considering both letters and numbers.

a. Target Analyte Results (ANALYSIS DATA SHEET)

Tabulated results (identification and quantitation) and Tentatively Identified Compounds (TICs) shall be included.

b. Reconstructed Ion Chromatograms (RICs)

Include for each sample or sample extract, including dilutions and reanalyses. The RIC shall contain the following header information: Client Sample ID Number, date and time of analysis, instrument ID, Lab file ID, and analyst ID.

d. Quantitation Report for target analytes and TICs.

Include a printout of the Extracted Ion Current Profile (EICP) for all manual changes to all compounds, internal standards, and surrogate compounds.

e. Copies of raw spectra and copies of background-subtracted mass spectra of target analytes plus TICs identified in the sample.

- The spectra shall include the following information: Client Sample ID number, Lab file ID, date and time of analysis, and instrument ID.
- The compound name must be clearly marked.

ANALYSIS DATA SHEET

SW 8260B

MW-12

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0591.d | Sampled: 03/03/14 15:55

Initial/Final: 25mL / 25mL | Lab ID: 1403006-05 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 23:51

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane	0.68	0.20	0.50	
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene	0.084	0.040	0.50	*J*
67-64-1	Acetone		0.44	2.5	*U*
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide		0.020	0.50	*U*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.10	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene	0.22	0.050	0.50	*J*
75-34-3	1,1-Dichloroethane	9.3	0.020	0.50	
126-99-8	Chloroprene		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
156-59-2	cis-1,2-Dichloroethene	14	0.030	0.50	
594-20-7	2,2-Dichloropropane		0.030	0.50	*U*
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
74-97-5	Bromochloromethane		0.040	0.50	*U*
67-66-3	Chloroform	0.10	0.030	0.50	*J*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
563-58-6	1,1-Dichloropropene		0.030	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene		0.030	0.50	*U*

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ANALYSIS DATA SHEET

SW 8260B

MW-12

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0591.d | Sampled: 03/03/14 15:55

Initial/Final: 25mL / 25mL | Lab ID: 1403006-05 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 23:51

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
79-01-6	Trichloroethene	1.3	0.030	0.50	
78-87-5	1,2-Dichloropropane	0.28	0.12	0.50	*J*
74-95-3	Dibromomethane		0.030	0.50	*U*
80-62-6	Methyl Methacrylate		0.56	5.0	*U*
75-27-4	Bromodichloromethane		0.030	0.50	*U*
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	*U*
108-10-1	4-Methyl-2-pentanone		0.42	2.5	*U*
108-88-3	Toluene		0.030	0.50	*U*
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	*U*
79-00-5	1,1,2-Trichloroethane		0.040	0.50	*U*
97-63-2	Ethyl Methacrylate		0.41	5.0	*U*
142-28-9	1,3-Dichloropropane		0.030	0.50	*U*
127-18-4	Tetrachloroethene	0.12	0.060	0.50	*J*
591-78-6	2-Hexanone		0.51	2.5	*U*
124-48-1	Dibromochloromethane		0.040	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	*U*
100-41-4	Ethylbenzene		0.040	0.50	*U*
179601-23-1	m,p-Xylene		0.080	1.0	*U*
95-47-6	o-Xylene		0.030	0.50	*U*
100-42-5	Styrene		0.020	0.50	*U*
75-25-2	Bromoform		0.030	0.50	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	*U*
96-18-4	1,2,3-Trichloropropane		0.090	0.50	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	*U*
541-73-1	1,3-Dichlorobenzene		0.040	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*
95-50-1	1,2-Dichlorobenzene	0.083	0.030	0.50	*J*
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	*U*
87-68-3	Hexachlorobutadiene		0.030	0.50	*U*
91-20-3	Naphthalene		0.15	0.50	*U*
1330-20-7	Xylenes (total)		0.030	0.50	*U*

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ANALYSIS DATA SHEET

SW 8260B

MW-12

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0591.d | Sampled: 03/03/14 15:55

Initial/Final: 25mL / 25mL | Lab ID: 1403006-05 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 23:51

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.133	103	65 - 150	
1,2-Dichloroethane-d4	5.000	5.313	106	59 - 150	
Toluene-d8	5.000	5.027	101	61 - 145	
Bromofluorobenzene	5.000	4.875	97	63 - 143	

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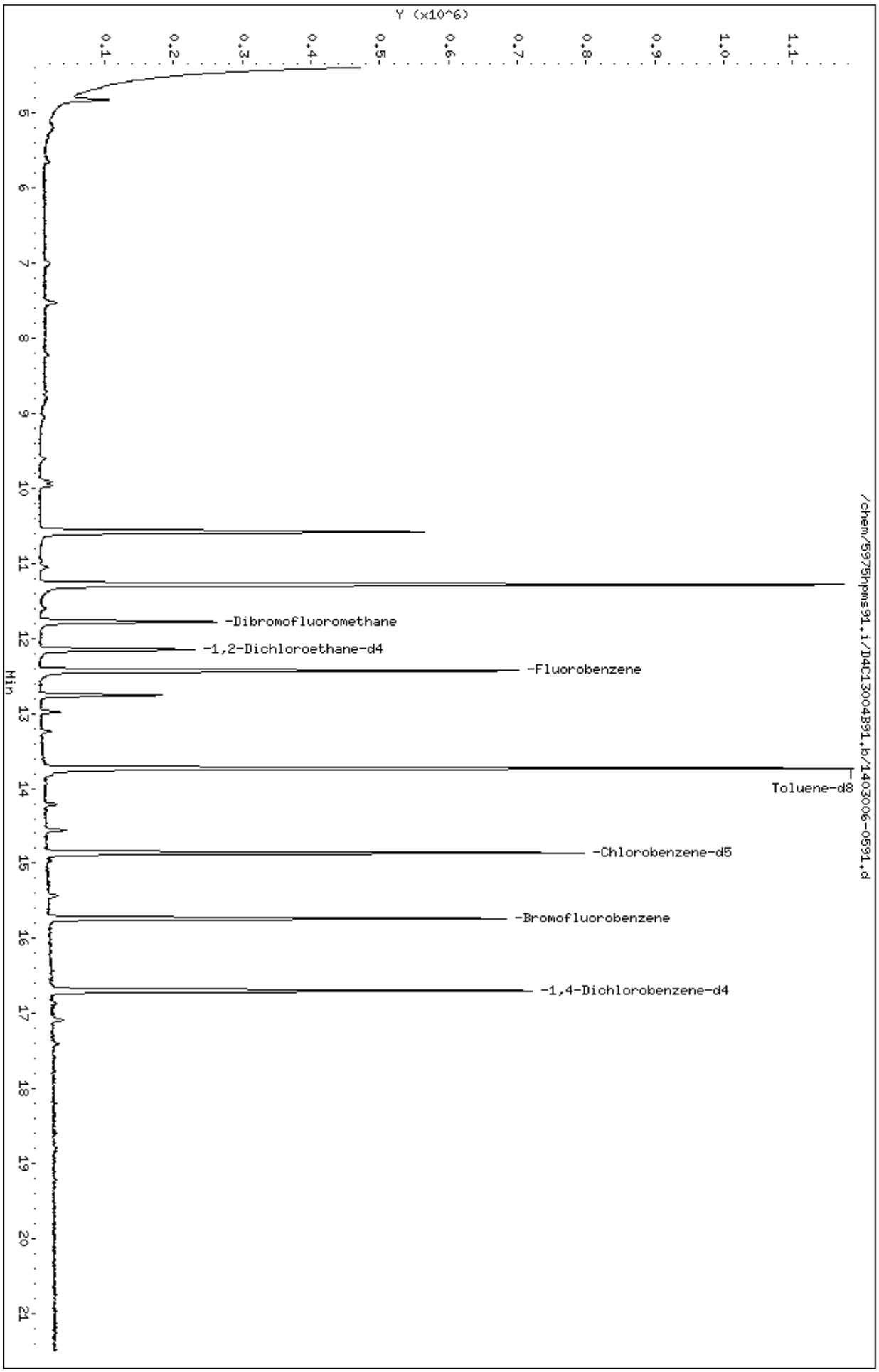
Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d
Date : 13-MAR-2014 23:51
Client ID: MW-12
Sample Info: 1403006-05:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d
Lab Smp Id: 1403006-05 Client Smp ID: MW-12
Inj Date : 13-MAR-2014 23:51
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-05:JAO
Misc Info : MW-12
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	693029	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	508573	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	237612	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	187056	128.325	5.13301
$ 5 1,2-Dichloroethane-d4	65	12.153	12.154	(0.978)	186258	132.828	5.31312
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	863163	125.665	5.02660
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	301861	121.867	4.87468
8 Dichlorodifluoromethane	85	Compound Not Detected.					
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	7.002	6.996	(0.563)	11341	16.9176	0.676703
13 Trichlorofluoromethane	101	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
17 1,1-Dichloroethene	96	8.703	8.709	(0.700)	1727	2.10079	0.0840316(aM)
18 Acetone	43	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
22 3-Chloropropene	39	Compound Not Detected.					
23 Acetonitrile	41	Compound Not Detected.					
25 Methylene Chloride	84	9.593	9.599	(0.772)	3839	2.48795	0.0995179(a)
26 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	9.965	9.965	(0.802)	9356	5.55265	0.222106(a)
31 Vinyl acetate	43	Compound Not Detected.					
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	715056	233.266	9.33064
33 Chloroprene	53	Compound Not Detected.					
34 2-butanone	43	Compound Not Detected.					
35 2,2-Dichloropropane	77	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	608152	352.264	14.0906
37 Propionitrile	54	Compound Not Detected.					
38 Methacrylonitrile	41	Compound Not Detected.					
39 Bromochloromethane	128	Compound Not Detected.					
40 Chloroform	83	11.605	11.605	(0.934)	7341	2.53853	0.101541(a)
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
44 1,1-dichloropropene	75	Compound Not Detected.					
45 Isobutyl alcohol	43	Compound Not Detected.					
46 Carbon Tetrachloride	117	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	12.757	12.757	(1.026)	62387	33.2672	1.33069
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	10762	6.90023	0.276009(a)
52 Methylmethacrylate	69	Compound Not Detected.					
54 Dibromomethane	174	Compound Not Detected.					
55 Bromodichloromethane	83	Compound Not Detected.					
57 cis-1,3-Dichloropropene	75	Compound Not Detected.					
58 4-Methyl-2-pentanone	43	Compound Not Detected.					
59 Toluene	92	Compound Not Detected.					
60 Ethylmethacrylate	69	Compound Not Detected.					
61 trans-1,3-Dichloropropene	75	Compound Not Detected.					
62 1,1,2-Trichloroethane	97	Compound Not Detected.					
63 2-hexanone	43	Compound Not Detected.					
64 1,3-Dichloropropane	76	Compound Not Detected.					
65 Tetrachloroethene	164	14.214	14.214	(0.957)	4323	2.93308	0.117323(a)
66 Dibromochloromethane	129	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
70 Ethylbenzene	106	Compound Not Detected.					
71 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
72 m,p-Xylene	106	Compound Not Detected.					
73 m,p-Xylene (part of total)	106	Compound Not Detected.					
74 o-Xylene	106	Compound Not Detected.					
75 o-Xylene (part of total)	106	Compound Not Detected.					
76 Styrene	104	Compound Not Detected.					
77 Bromoform	173	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
79 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
81 1,2,3-Trichloropropane	110	Compound Not Detected.					
80 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
92 1,3-Dichlorobenzene	146	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					
95 1,2-Dichlorobenzene	146	17.098	17.092	(1.024)	6473	2.07792	0.0831168(a)
97 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
98 Hexachlorobutadiene	225	Compound Not Detected.					
99 Naphthalene	128	Compound Not Detected.					
M 102 Xylene (total)	106	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d
Report Date: 14-Mar-2014 10:28

CompuChem

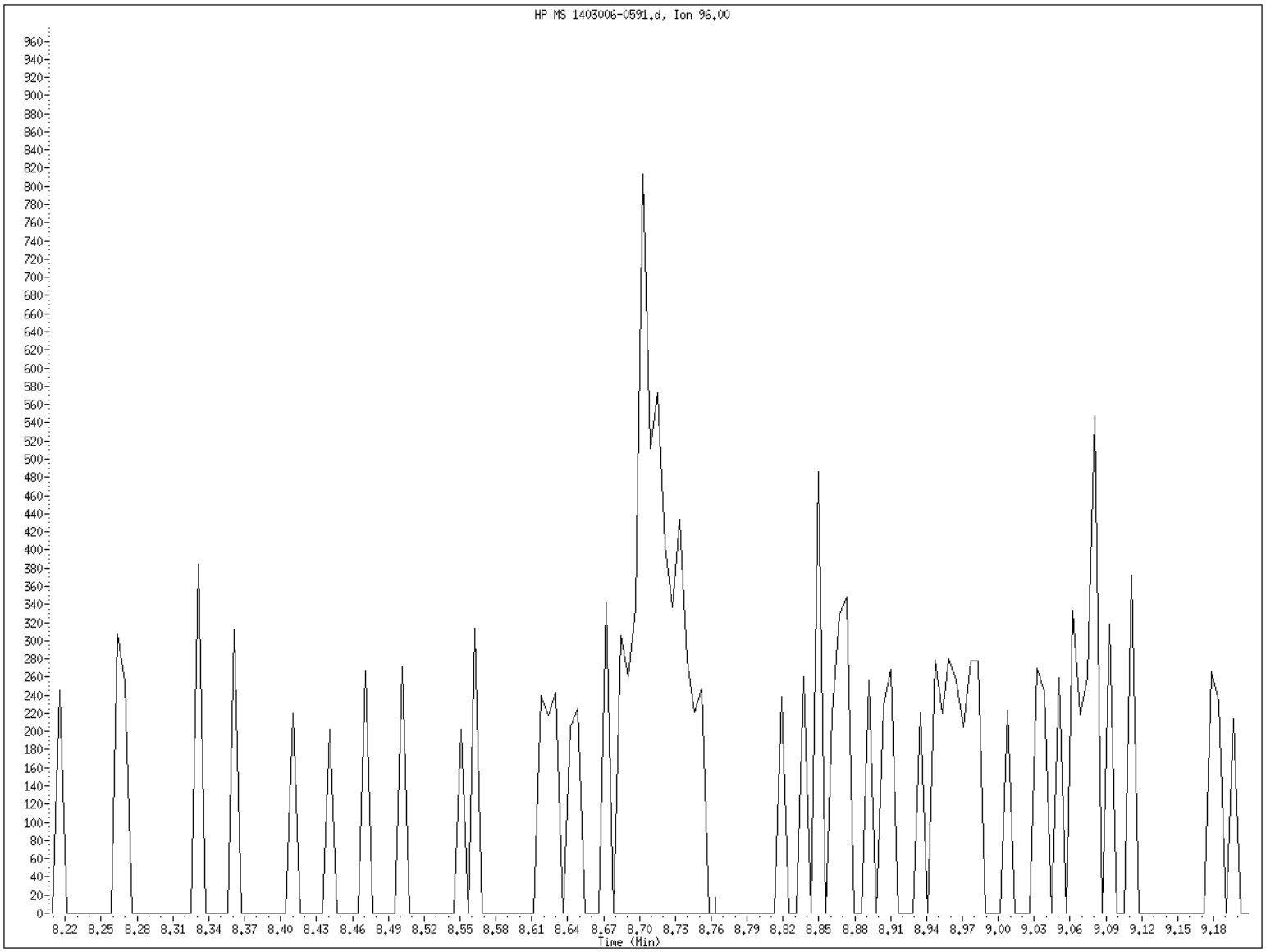
SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d
Lab Smp Id: 1403006-05 Client Smp ID: MW-12
Inj Date : 13-MAR-2014 23:51
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-05:JAO
Misc Info : MW-12
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

1,1-Dichloroethene CAS Number 75-35-4 Area = 1727 Manually integrated



File name: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d
Client ID: MW-12
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 23:51
Retention Time: 8.70
Operator ID: JAO

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

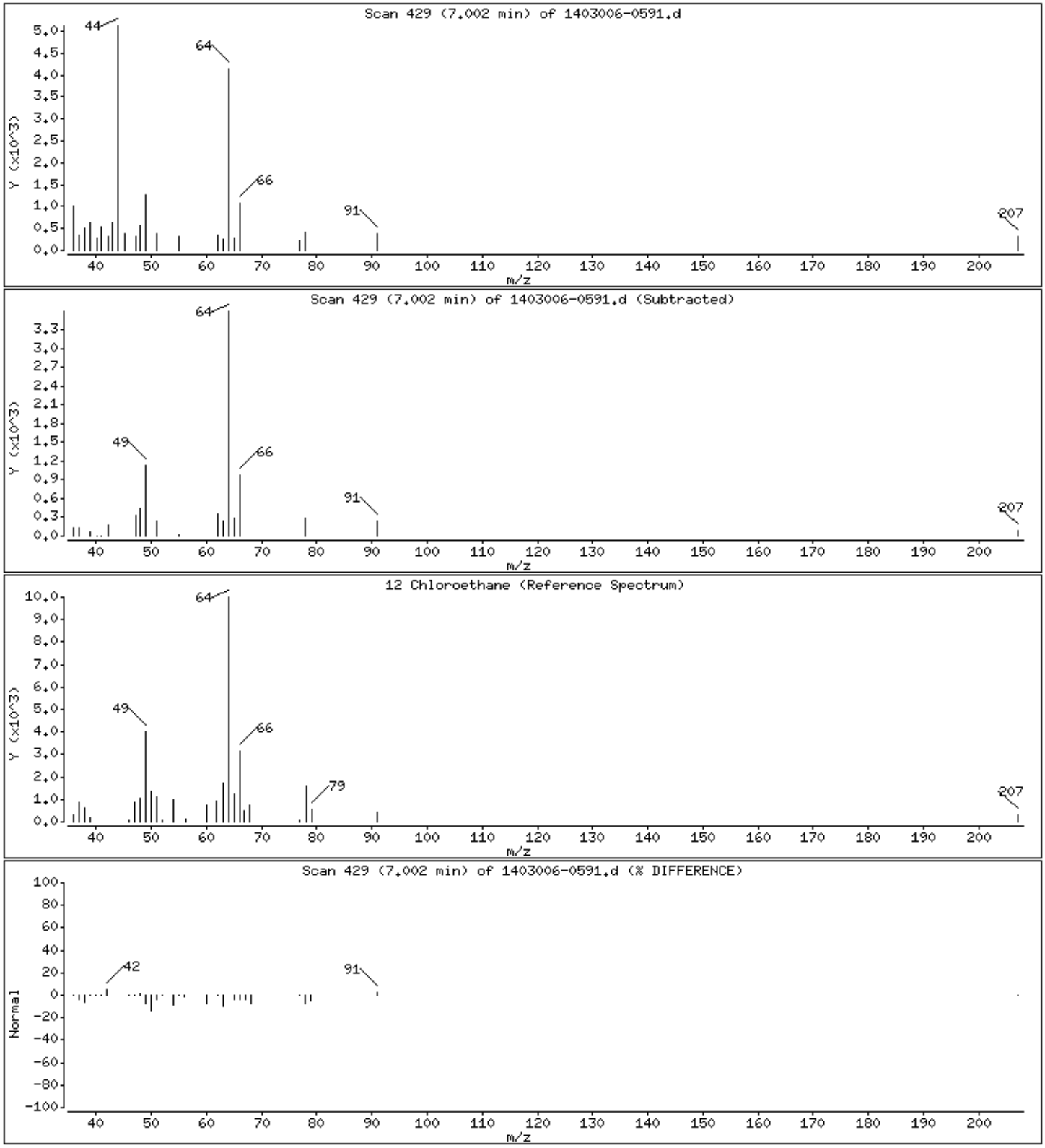
Client ID: MW-12 | Instrument: 5975hpms91.i

Sample Info: 1403006-05:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

12 Chloroethane | Concentration: 0.676703 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

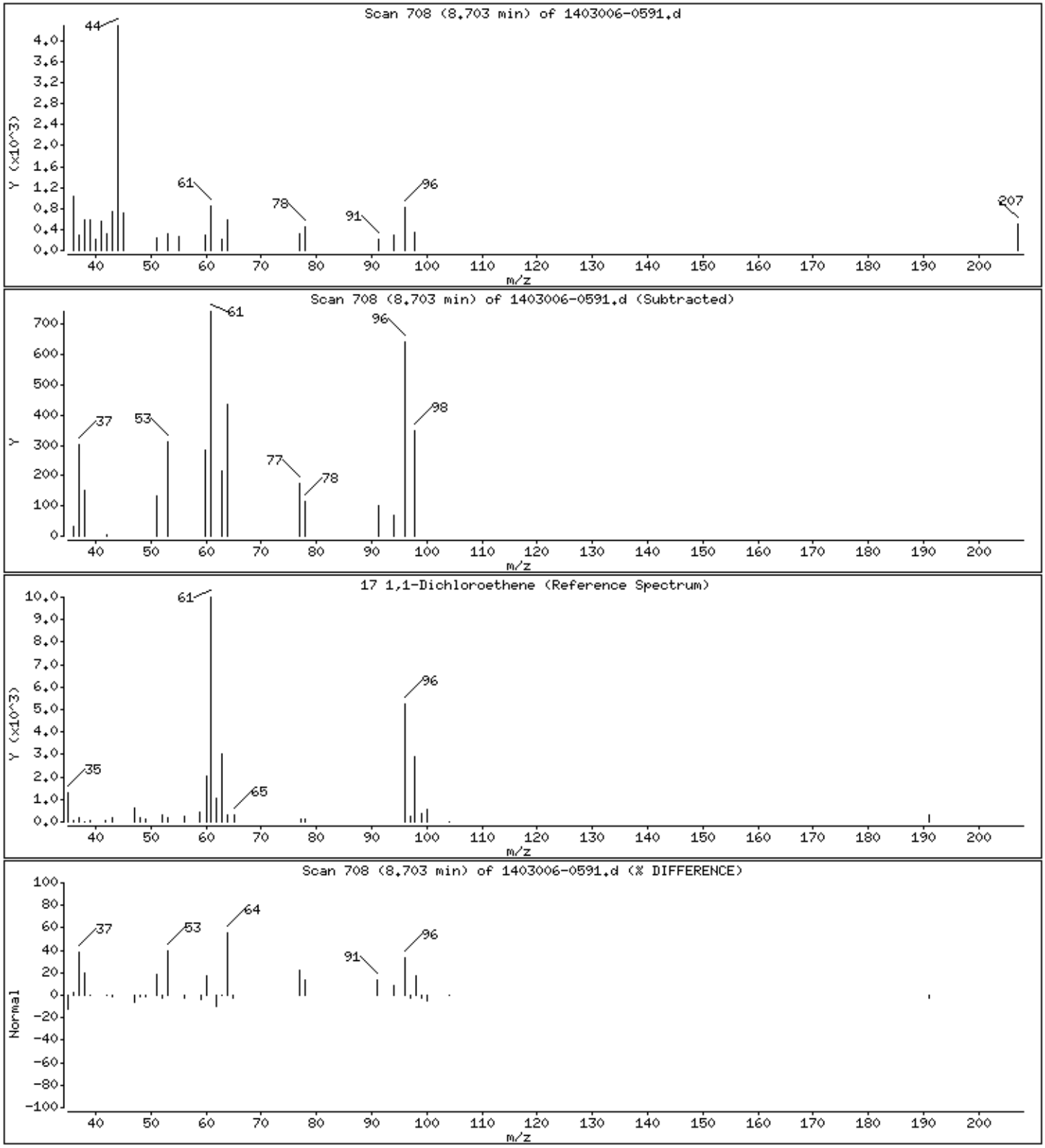
Client ID: MW-12 | Instrument: 5975hpms91.i

Sample Info: 1403006-05:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

17 1,1-Dichloroethene | Concentration: 0.0840316 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

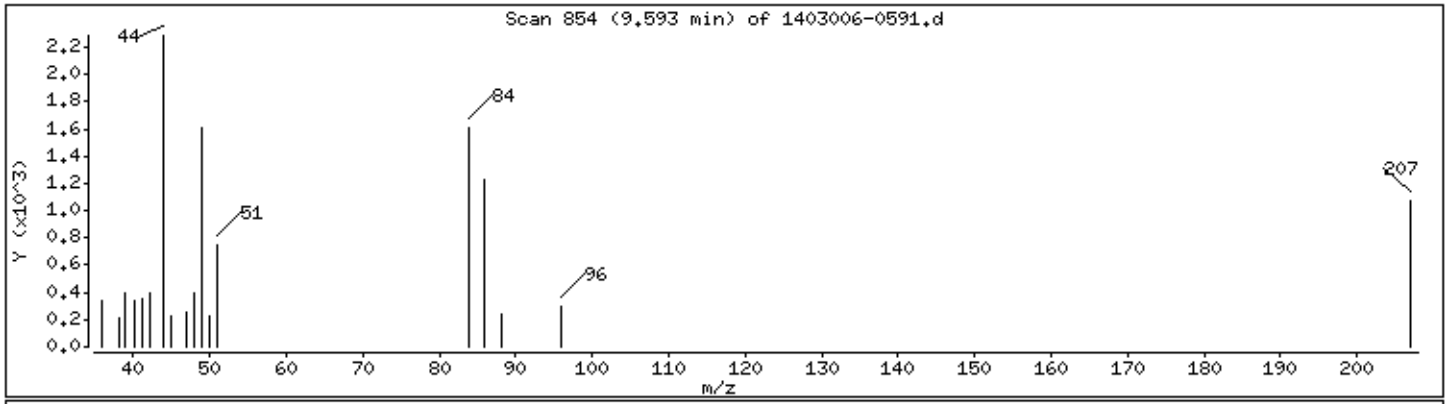
Client ID: MW-12 | Instrument: 5975hpms91.i

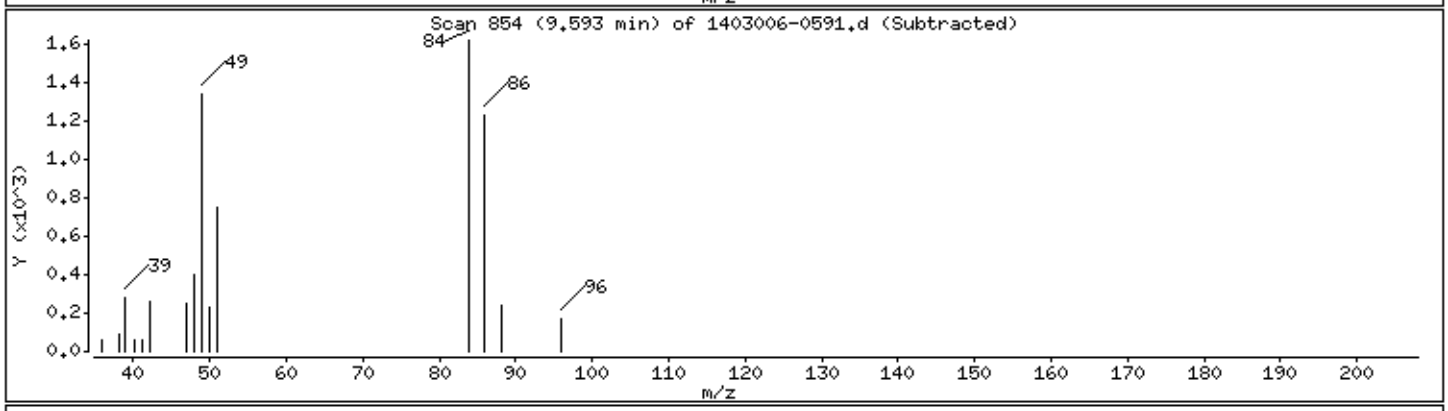
Sample Info: 1403006-05:JAO

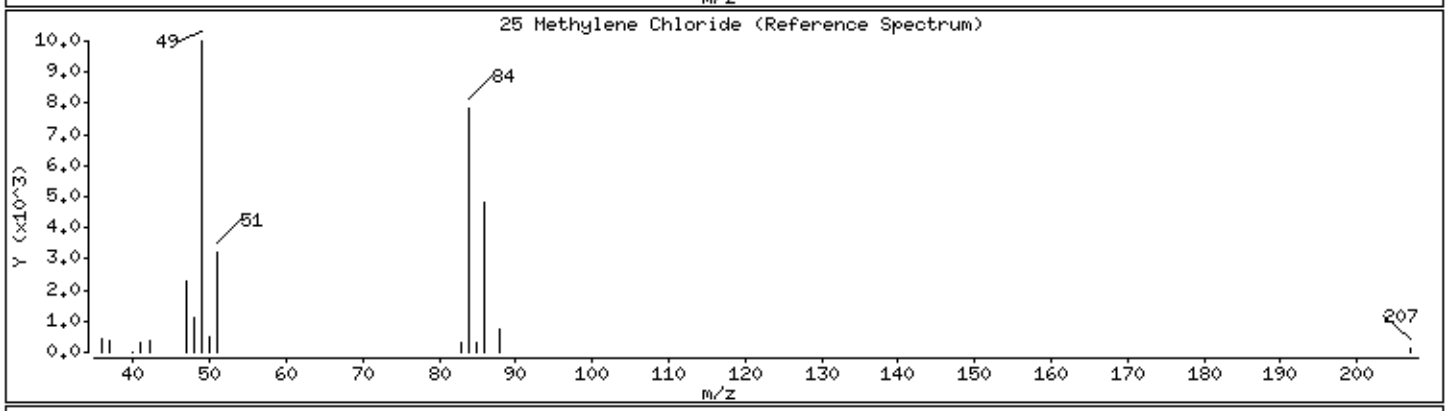
Purge Volume: 25.0 | Operator: JAO

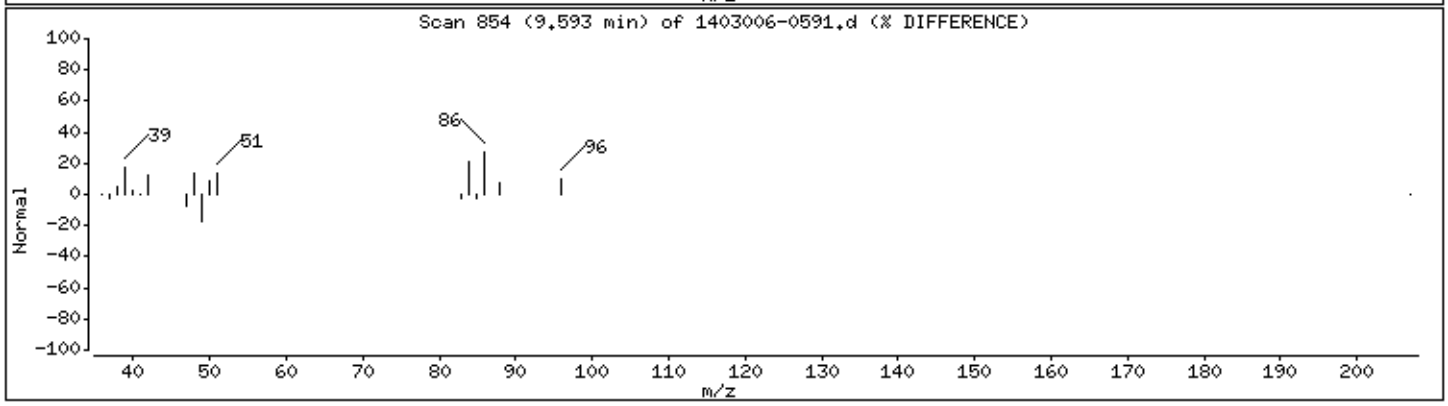
Column phase: SPB-624 | Column diameter: 0.32

25 Methylene Chloride | Concentration: 0.0995179 ug/L









3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

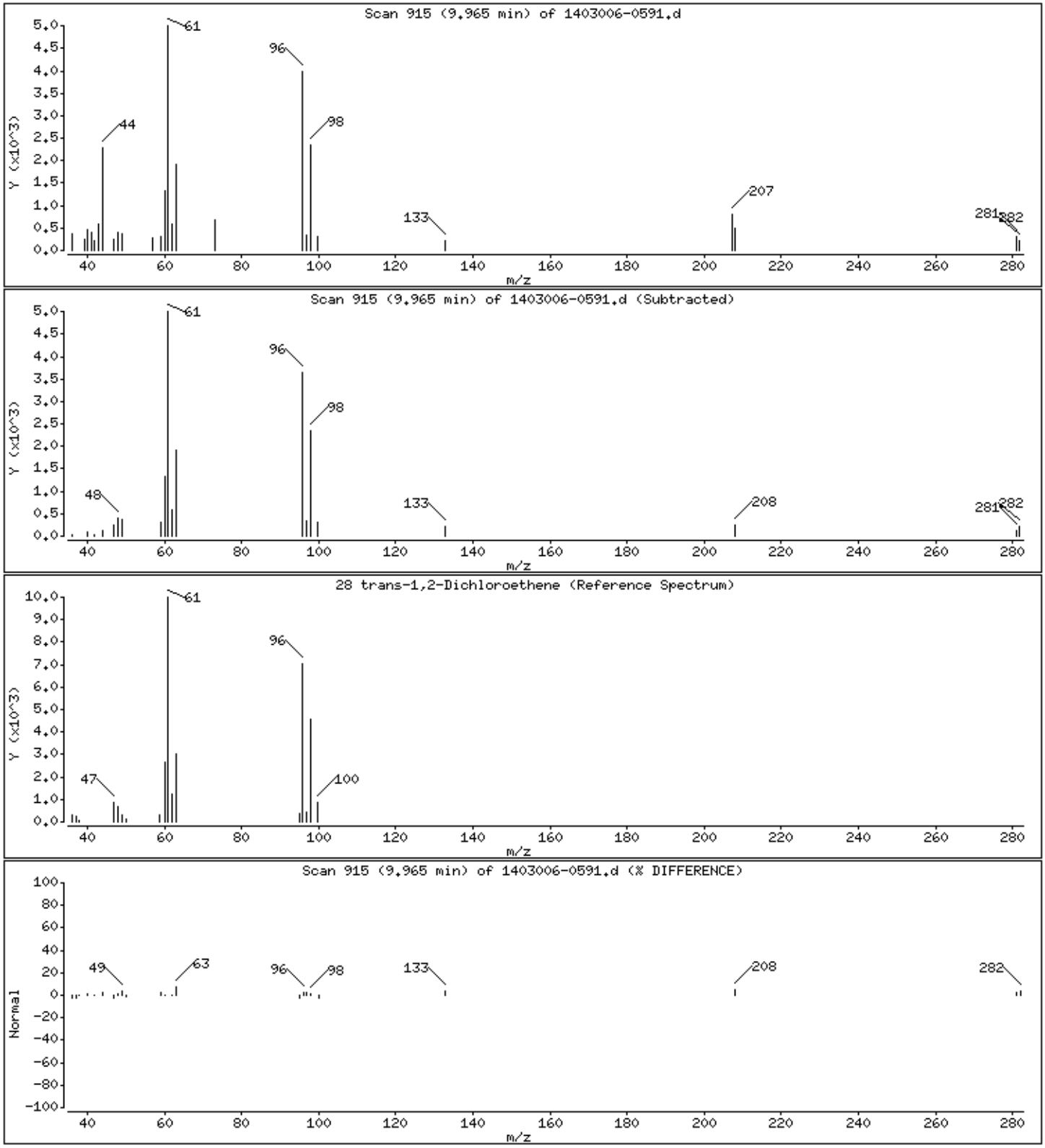
Client ID: MW-12 | Instrument: 5975hpms91.i

Sample Info: 1403006-05:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

28 trans-1,2-Dichloroethene | Concentration: 0.222106 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

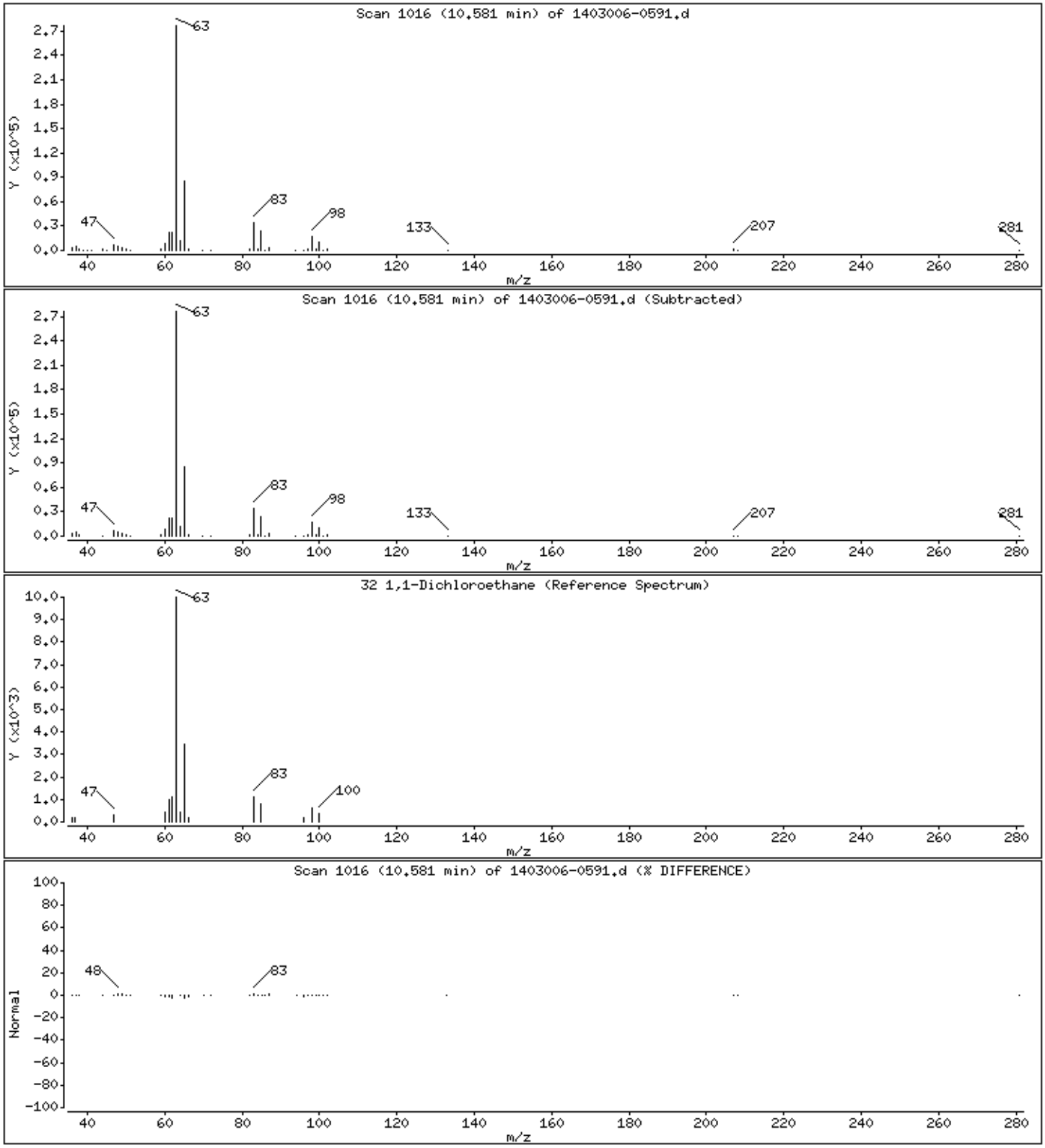
Client ID: MW-12 | Instrument: 5975hpms91.i

Sample Info: 1403006-05:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

32 1,1-Dichloroethane | Concentration: 9.33064 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

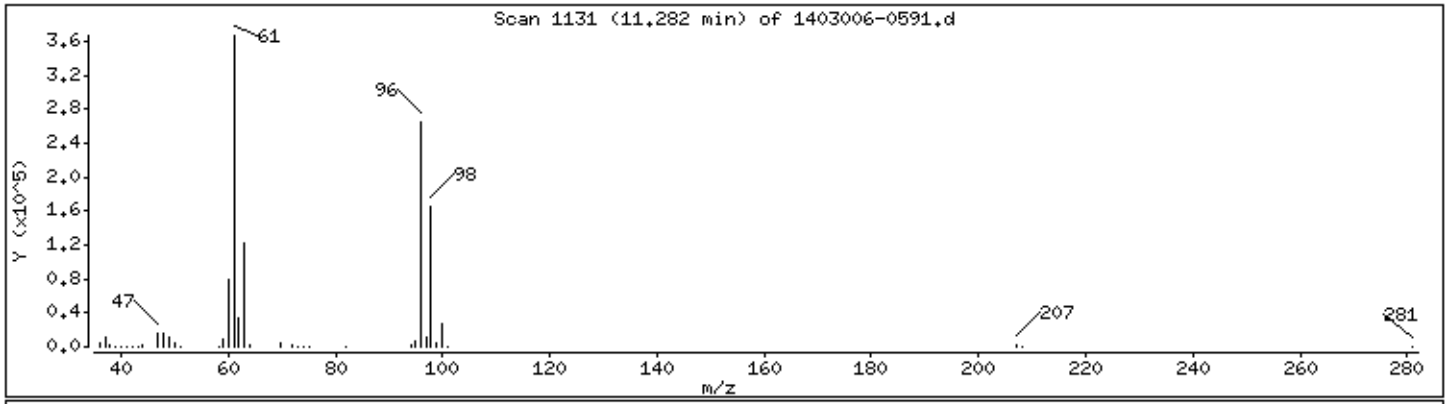
Client ID: MW-12 Instrument: 5975hpms91.i

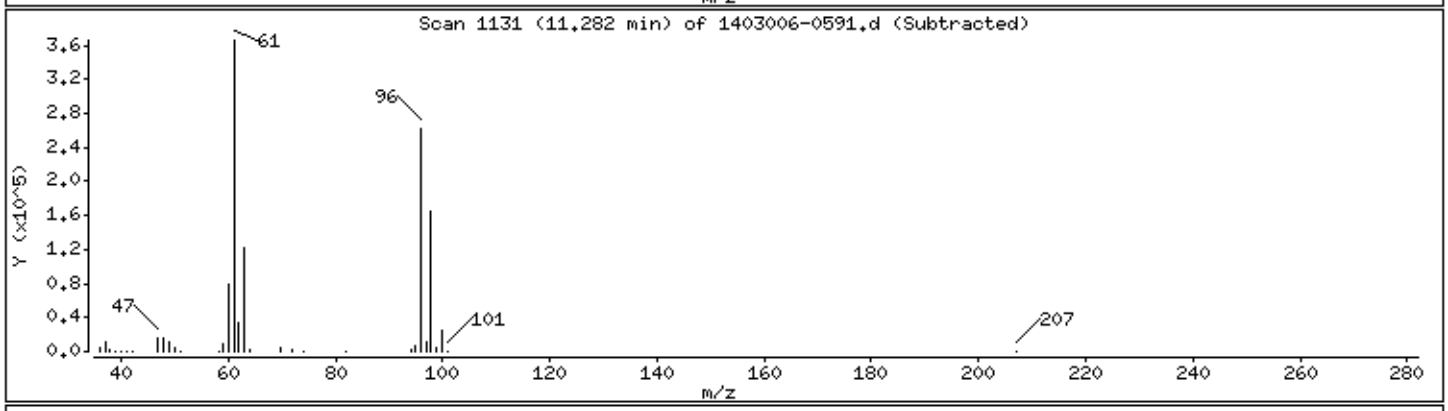
Sample Info: 1403006-05:JAO

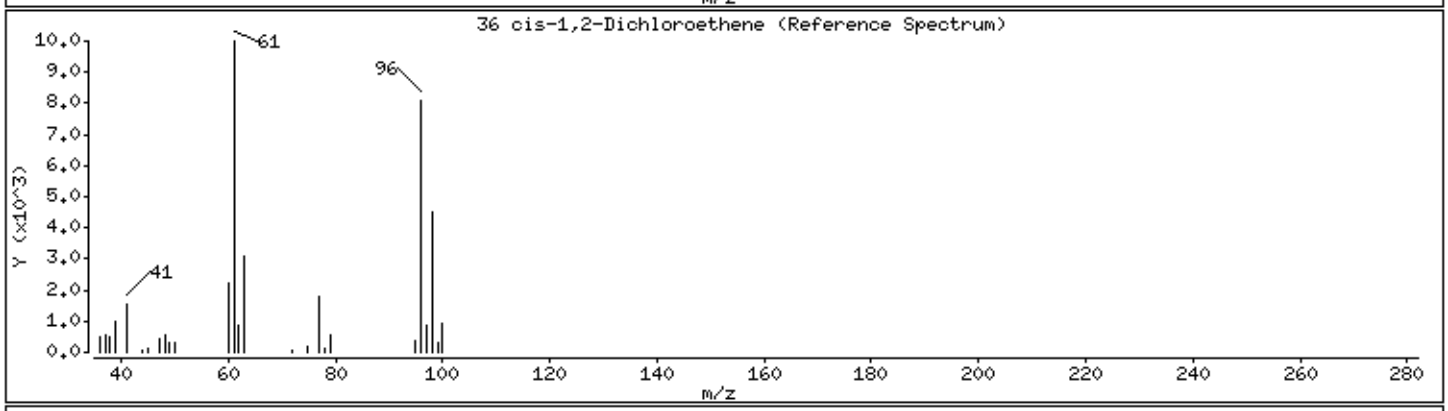
Purge Volume: 25.0 Operator: JAO

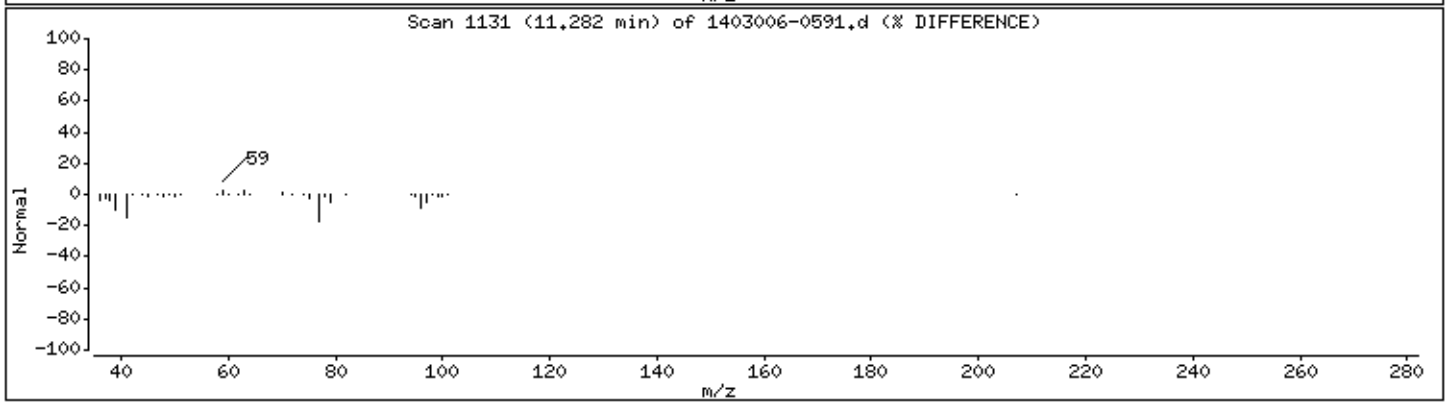
Column phase: SPB-624 Column diameter: 0.32

36 cis-1,2-Dichloroethene Concentration: 14.0906 ug/L









3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

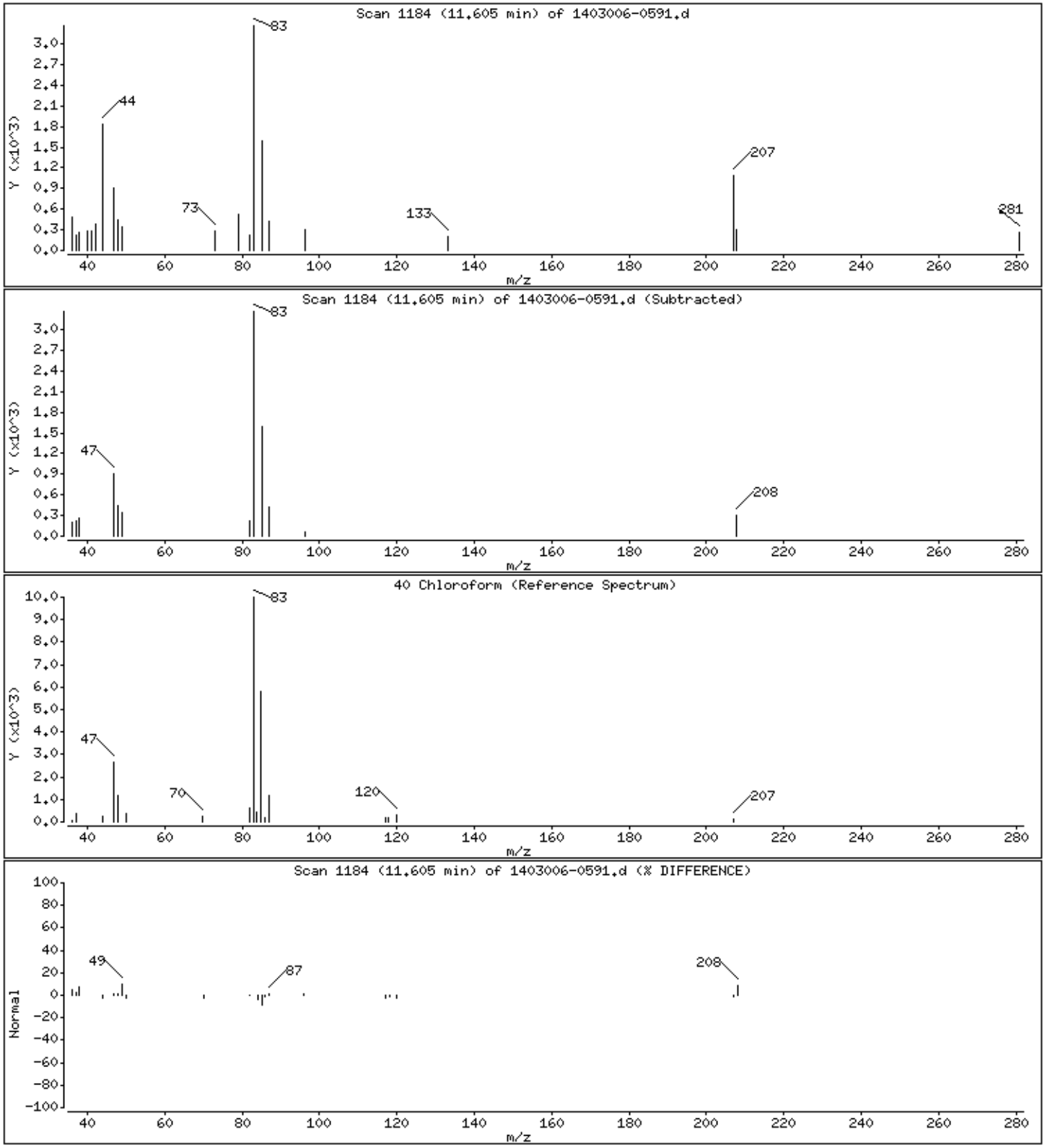
Client ID: MW-12 | Instrument: 5975hpms91.i

Sample Info: 1403006-05:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

40 Chloroform | Concentration: 0.101541 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

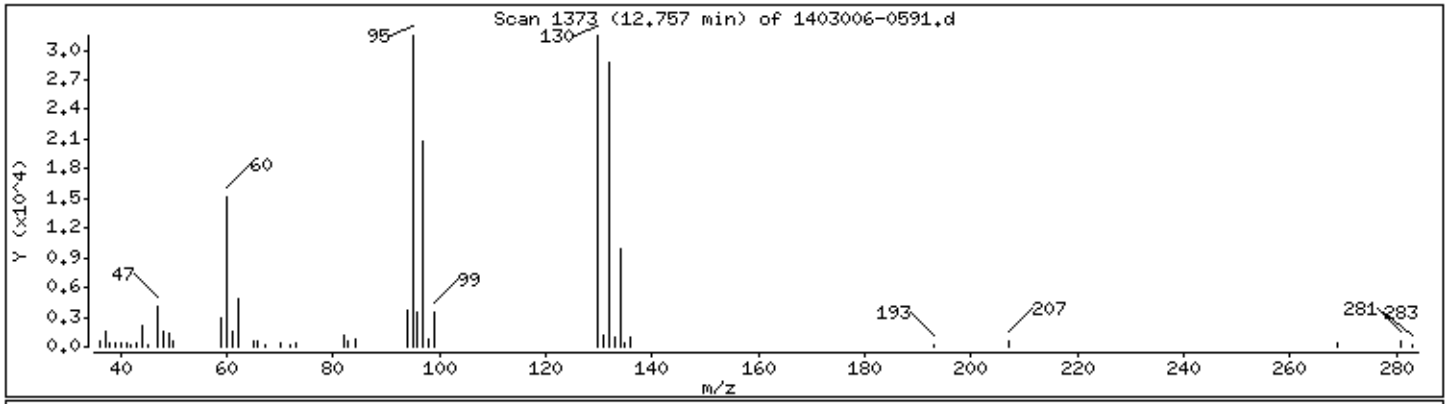
Client ID: MW-12 | Instrument: 5975hpms91.i

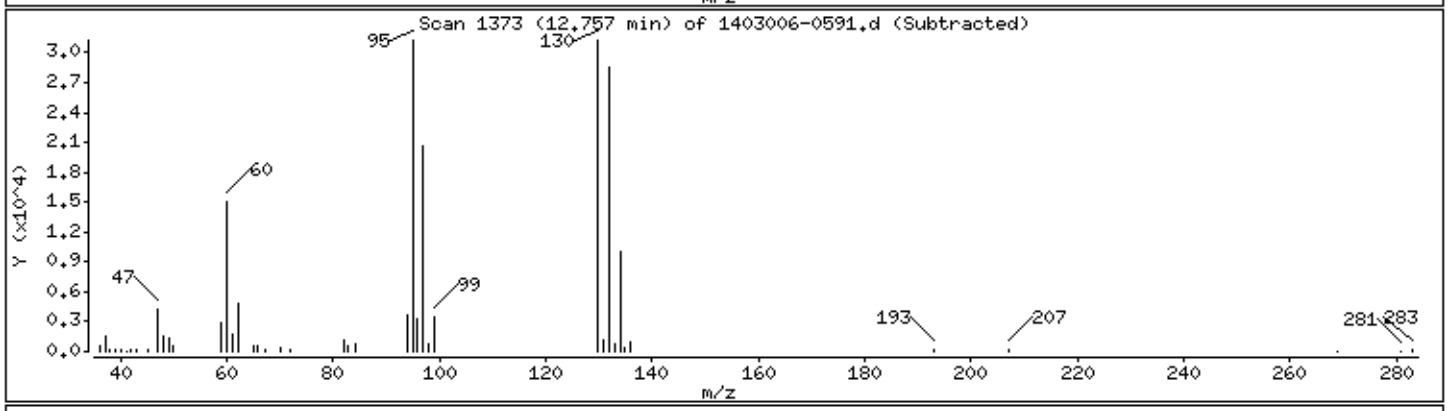
Sample Info: 1403006-05:JAO

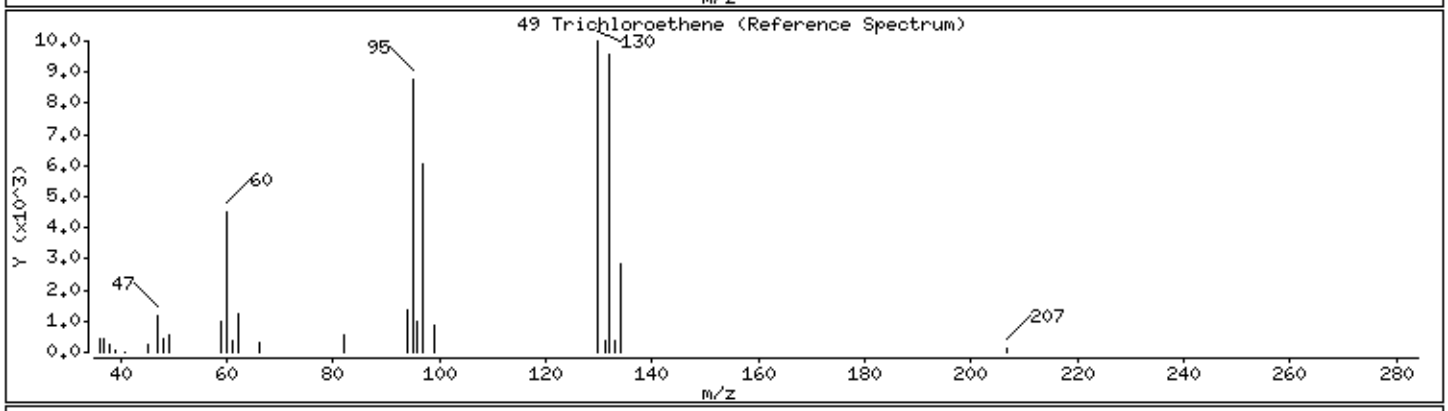
Purge Volume: 25.0 | Operator: JAO

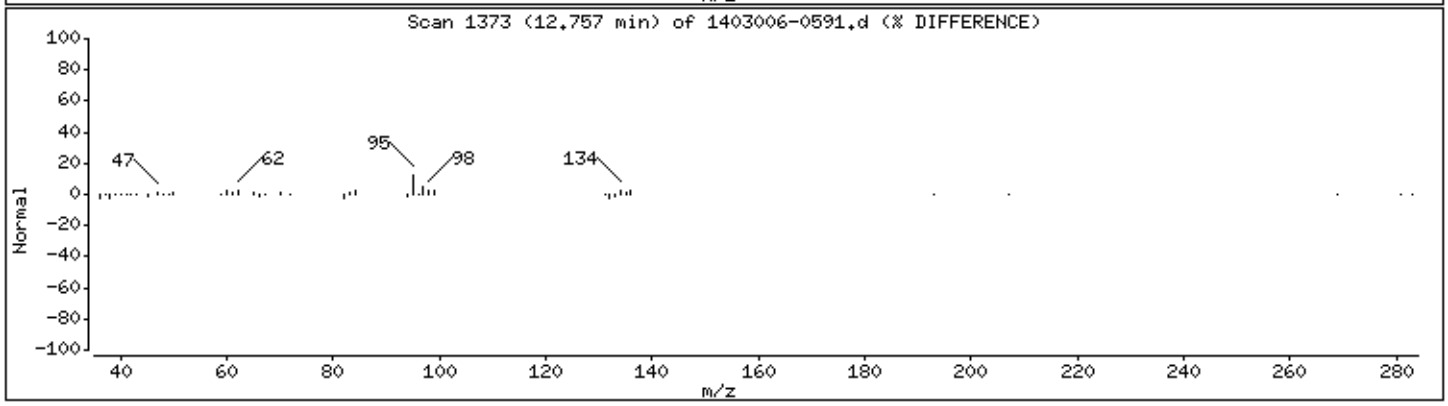
Column phase: SPB-624 | Column diameter: 0.32

49 Trichloroethene | Concentration: 1.33069 ug/L









3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

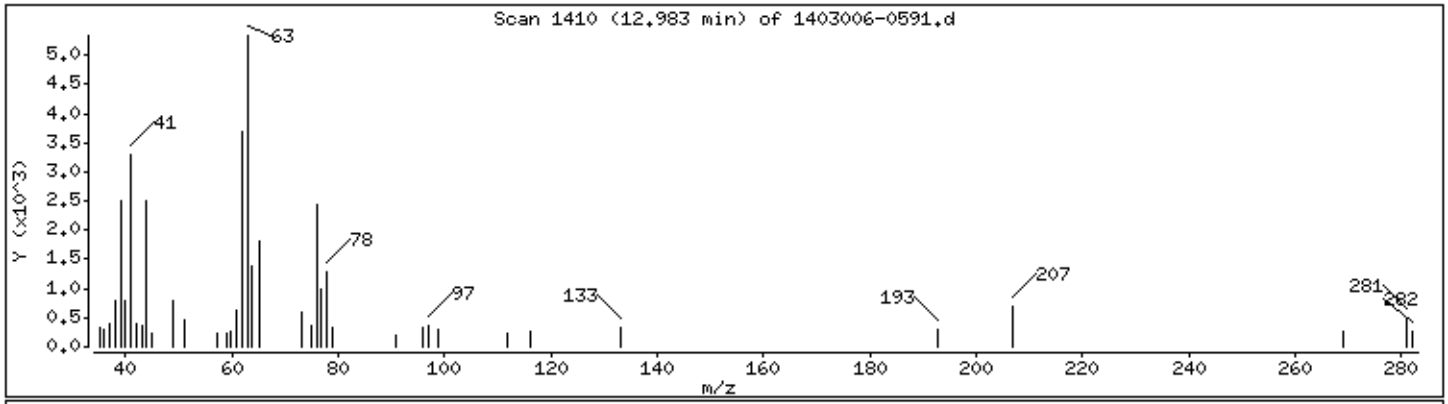
Client ID: MW-12 Instrument: 5975hpms91.i

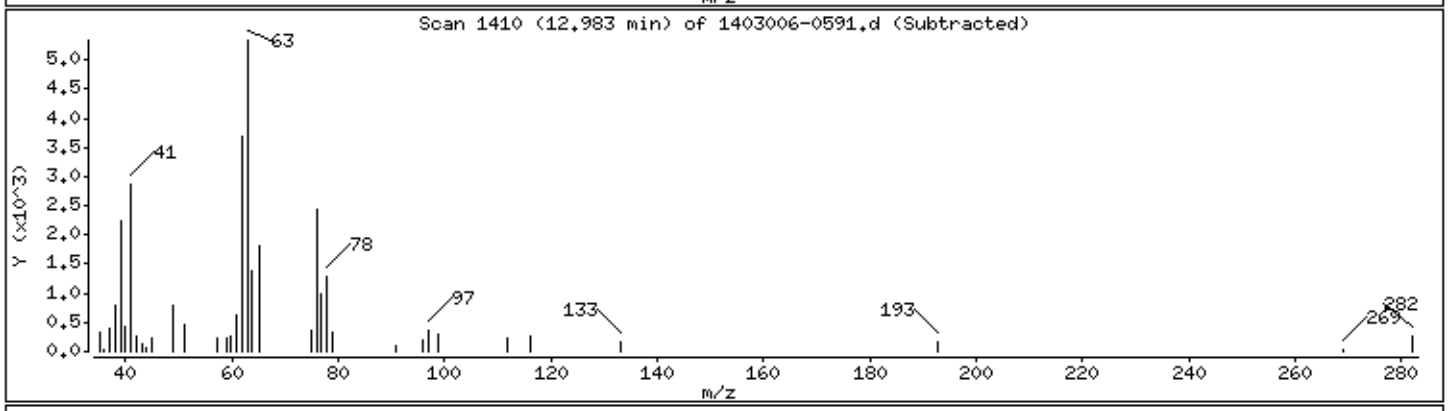
Sample Info: 1403006-05:JAO

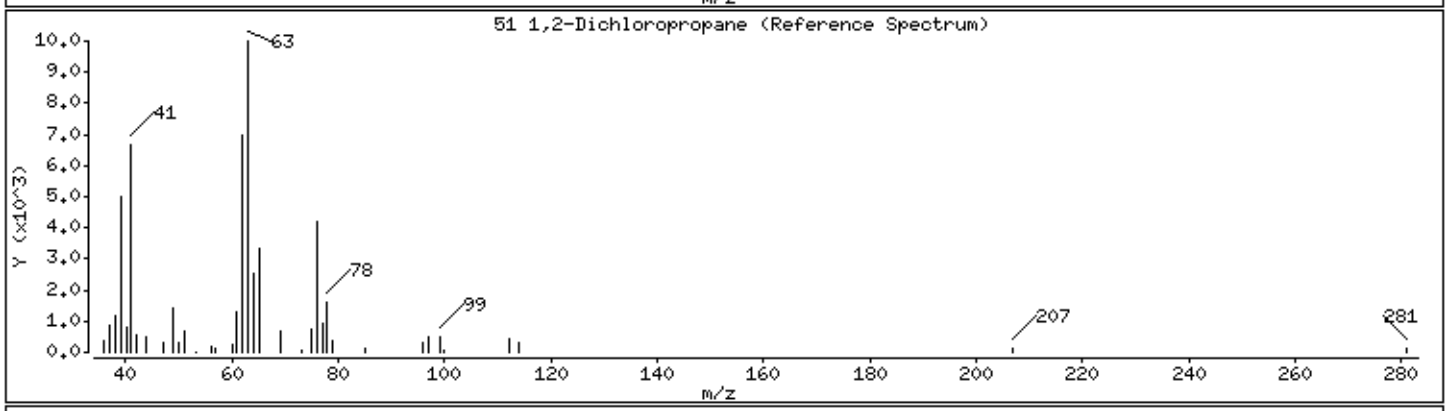
Purge Volume: 25.0 Operator: JAO

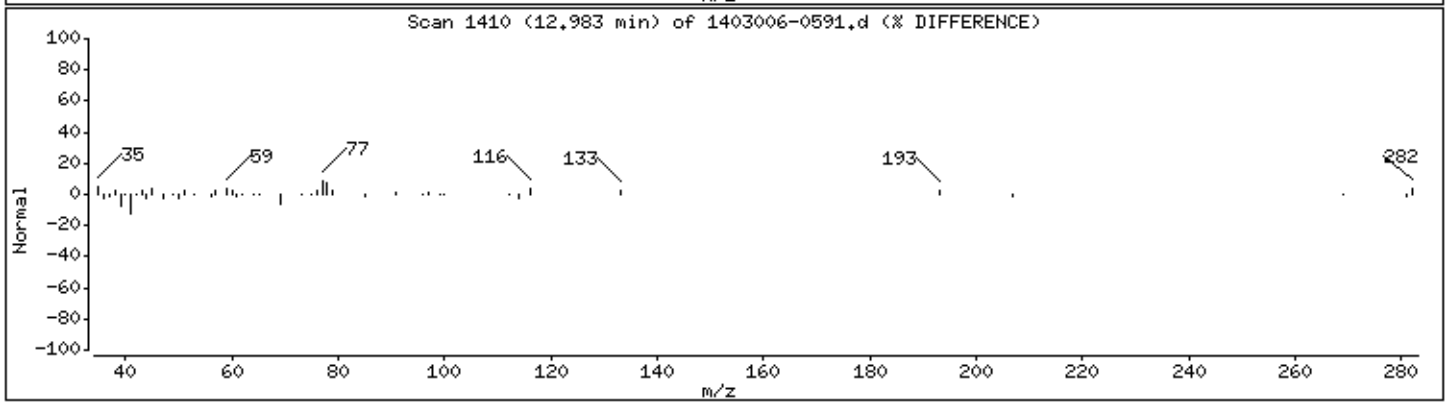
Column phase: SPB-624 Column diameter: 0.32

51 1,2-Dichloropropane Concentration: 0.276009 ug/L









Robert Hamm 3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

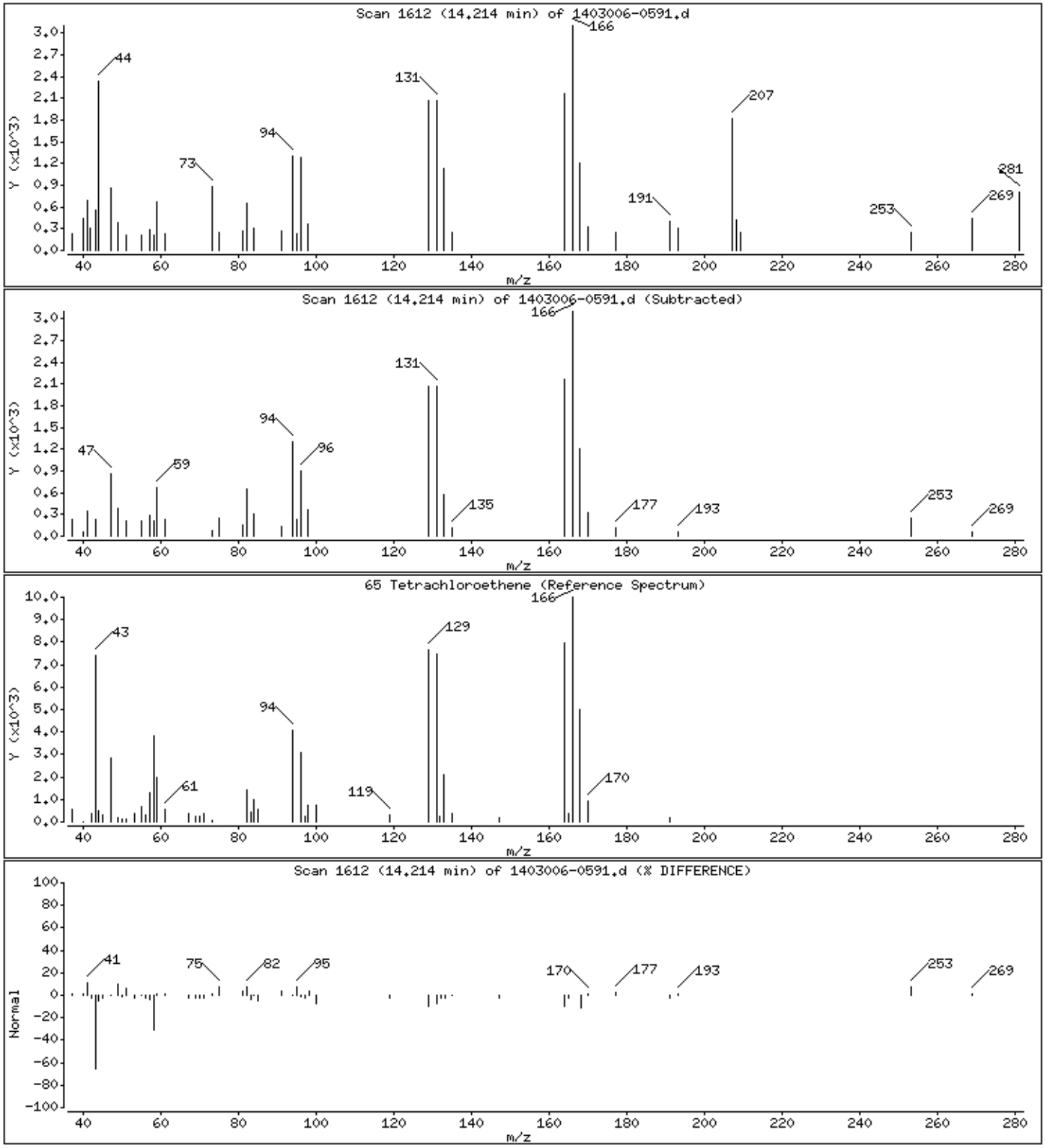
Client ID: MW-12 | Instrument: 5975hpms91.i

Sample Info: 1403006-05:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

65 Tetrachloroethene | Concentration: 0.117323 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0591.d

Date : 13-MAR-2014 23:51

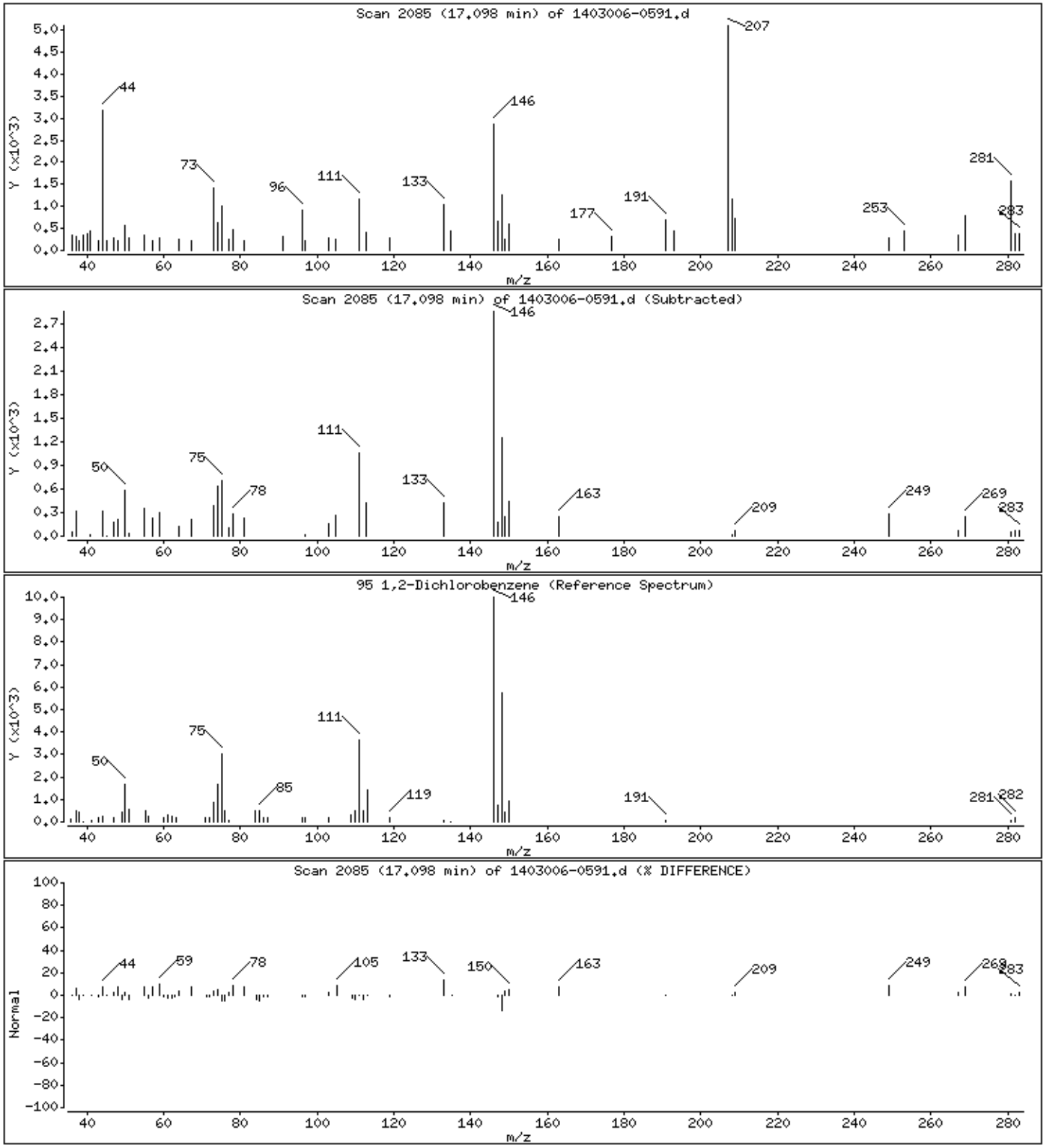
Client ID: MW-12 | Instrument: 5975hpms91.i

Sample Info: 1403006-05:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

95 1,2-Dichlorobenzene | Concentration: 0.0831168 ug/L



3/14/2014

ANALYSIS DATA SHEET

SW 8260B

MW-17

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0691.d | Sampled: 03/03/14 12:20

Initial/Final: 25mL / 25mL | Lab ID: 1403006-06 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 00:20

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
67-64-1	Acetone		0.44	2.5	*U*
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide		0.020	0.50	*U*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.026	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	*U*
75-34-3	1,1-Dichloroethane	0.74	0.020	0.50	
126-99-8	Chloroprene		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
156-59-2	cis-1,2-Dichloroethene	1.2	0.030	0.50	
594-20-7	2,2-Dichloropropane		0.030	0.50	*U*
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
74-97-5	Bromochloromethane		0.040	0.50	*U*
67-66-3	Chloroform		0.030	0.50	*U*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
563-58-6	1,1-Dichloropropene		0.030	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene		0.030	0.50	*U*

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ANALYSIS DATA SHEET

SW 8260B

MW-17

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0691.d | Sampled: 03/03/14 12:20

Initial/Final: 25mL / 25mL | Lab ID: 1403006-06 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 00:20

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
79-01-6	Trichloroethene	0.30	0.030	0.50	*J*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
74-95-3	Dibromomethane		0.030	0.50	*U*
80-62-6	Methyl Methacrylate		0.56	5.0	*U*
75-27-4	Bromodichloromethane		0.030	0.50	*U*
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	*U*
108-10-1	4-Methyl-2-pentanone		0.42	2.5	*U*
108-88-3	Toluene		0.030	0.50	*U*
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	*U*
79-00-5	1,1,2-Trichloroethane		0.040	0.50	*U*
97-63-2	Ethyl Methacrylate		0.41	5.0	*U*
142-28-9	1,3-Dichloropropane		0.030	0.50	*U*
127-18-4	Tetrachloroethene	0.52	0.060	0.50	
591-78-6	2-Hexanone		0.51	2.5	*U*
124-48-1	Dibromochloromethane		0.040	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	*U*
100-41-4	Ethylbenzene		0.040	0.50	*U*
179601-23-1	m,p-Xylene		0.080	1.0	*U*
95-47-6	o-Xylene		0.030	0.50	*U*
100-42-5	Styrene		0.020	0.50	*U*
75-25-2	Bromoform		0.030	0.50	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	*U*
96-18-4	1,2,3-Trichloropropane		0.090	0.50	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	*U*
541-73-1	1,3-Dichlorobenzene		0.040	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*
95-50-1	1,2-Dichlorobenzene		0.030	0.50	*U*
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	*U*
87-68-3	Hexachlorobutadiene		0.030	0.50	*U*
91-20-3	Naphthalene		0.15	0.50	*U*
1330-20-7	Xylenes (total)		0.030	0.50	*U*

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ANALYSIS DATA SHEET

SW 8260B

MW-17

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0691.d | Sampled: 03/03/14 12:20

Initial/Final: 25mL / 25mL | Lab ID: 1403006-06 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 00:20

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.194	104	65 - 150	
1,2-Dichloroethane-d4	5.000	5.415	108	59 - 150	
Toluene-d8	5.000	5.247	105	61 - 145	
Bromofluorobenzene	5.000	4.972	99	63 - 143	

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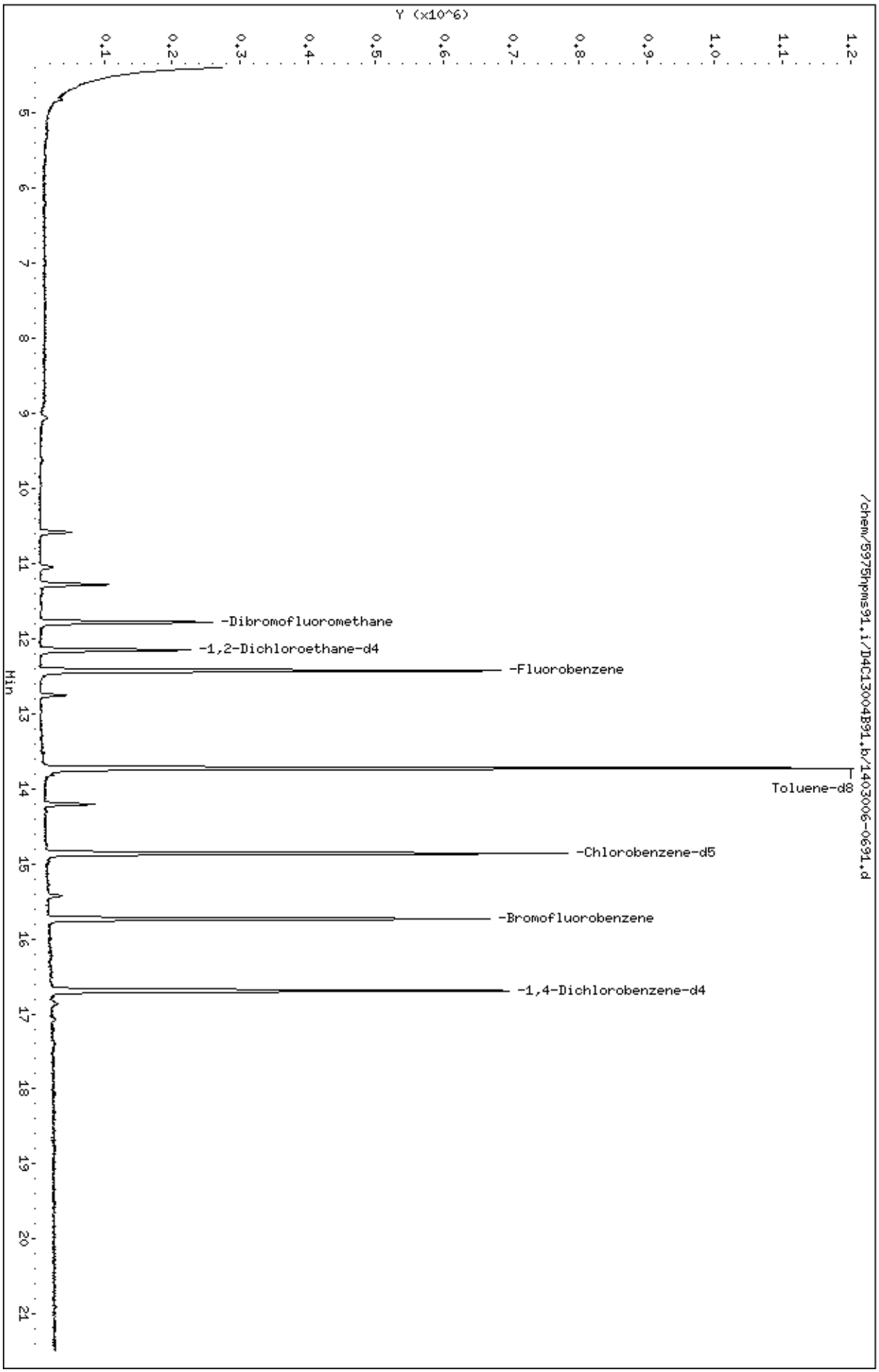
Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d
Date : 14-MAR-2014 00:20
Client ID: MW-17
Sample Info: 1403006-06:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d
Lab Smp Id: 1403006-06 Client Smp ID: MW-17
Inj Date : 14-MAR-2014 00:20
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-06:JAO
Misc Info : MW-17
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	686116	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	490939	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	230327	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	187386	129.847	5.19388
$ 5 1,2-Dichloroethane-d4	65	12.154	12.154	(0.978)	187950	135.385	5.41541
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	869808	131.181	5.24724
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	298473	124.310	4.97242
8 Dichlorodifluoromethane	85	Compound Not Detected.					
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
18 Acetone	43	Compound Not Detected.					
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
22 3-Chloropropene	39	Compound Not Detected.					
23 Acetonitrile	41	Compound Not Detected.					
25 Methylene Chloride	84	9.605	9.599	(0.773)	978	0.64020	0.0256080(a)
26 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
31 Vinyl acetate	43	Compound Not Detected.					
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	56160	18.5051	0.740206
33 Chloroprene	53	Compound Not Detected.					
34 2-butanone	43	Compound Not Detected.					
35 2,2-Dichloropropane	77	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	49284	28.8347	1.15339
37 Propionitrile	54	Compound Not Detected.					
38 Methacrylonitrile	41	Compound Not Detected.					
39 Bromochloromethane	128	Compound Not Detected.					
40 Chloroform	83	Compound Not Detected.					
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
44 1,1-dichloropropene	75	Compound Not Detected.					
45 Isobutyl alcohol	43	Compound Not Detected.					
46 Carbon Tetrachloride	117	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	12.757	12.757	(1.026)	13714	7.38652	0.295461(a)
51 1,2-Dichloropropane	63	Compound Not Detected.					
52 Methylmethacrylate	69	Compound Not Detected.					
54 Dibromomethane	174	Compound Not Detected.					
55 Bromodichloromethane	83	Compound Not Detected.					
57 cis-1,3-Dichloropropene	75	Compound Not Detected.					
58 4-Methyl-2-pentanone	43	Compound Not Detected.					
59 Toluene	92	Compound Not Detected.					
60 Ethylmethacrylate	69	Compound Not Detected.					
61 trans-1,3-Dichloropropene	75	Compound Not Detected.					
62 1,1,2-Trichloroethane	97	Compound Not Detected.					
63 2-hexanone	43	Compound Not Detected.					
64 1,3-Dichloropropane	76	Compound Not Detected.					
65 Tetrachloroethene	164	14.214	14.214	(0.957)	18645	13.1047	0.524188
66 Dibromochloromethane	129	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
70 Ethylbenzene	106	Compound Not Detected.					
71 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
72 m,p-Xylene	106	Compound Not Detected.					
73 m,p-Xylene (part of total)	106	Compound Not Detected.					
74 o-Xylene	106	Compound Not Detected.					
75 o-Xylene (part of total)	106	Compound Not Detected.					
76 Styrene	104	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
77 Bromoform	173	Compound Not Detected.					
79 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
81 1,2,3-Trichloropropane	110	Compound Not Detected.					
80 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
92 1,3-Dichlorobenzene	146	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					
95 1,2-Dichlorobenzene	146	Compound Not Detected.					
97 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
98 Hexachlorobutadiene	225	Compound Not Detected.					
99 Naphthalene	128	Compound Not Detected.					
M 102 Xylene (total)	106	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d
Lab Smp Id: 1403006-06 Client Smp ID: MW-17
Inj Date : 14-MAR-2014 00:20
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-06:JAO
Misc Info : MW-17
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d

Date : 14-MAR-2014 00:20

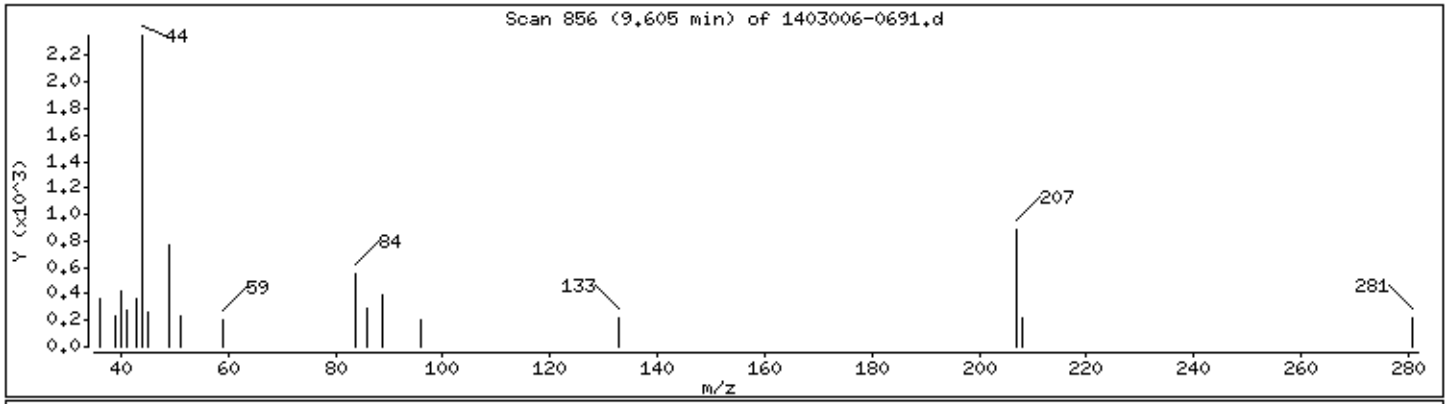
Client ID: MW-17 | Instrument: 5975hpms91.i

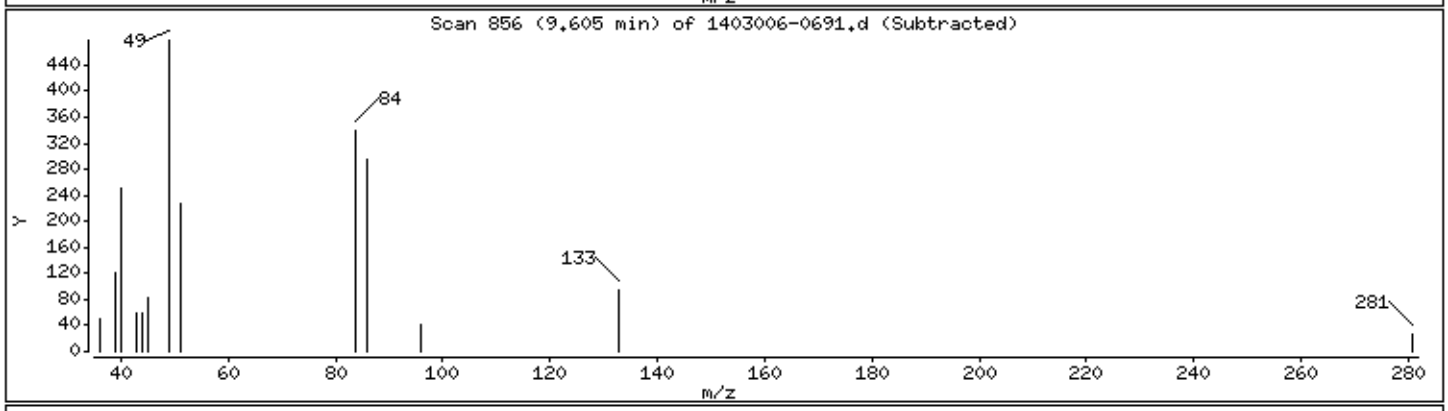
Sample Info: 1403006-06:JAO

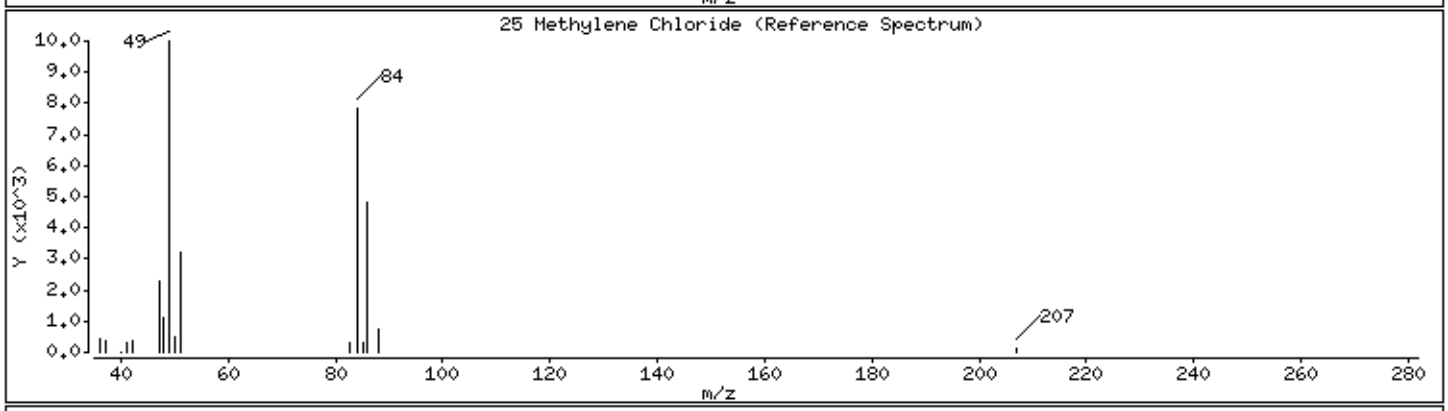
Purge Volume: 25.0 | Operator: JAO

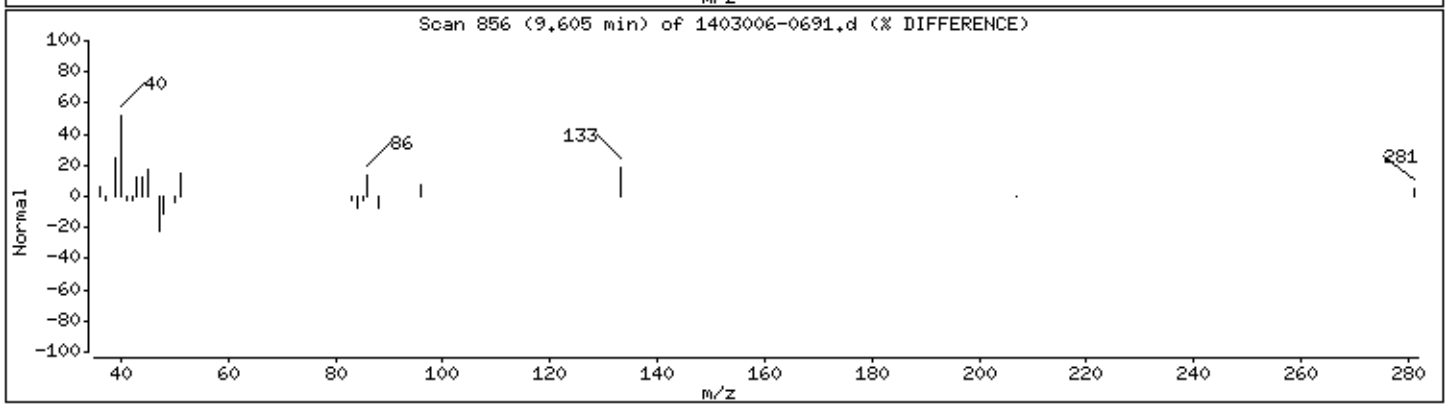
Column phase: SPB-624 | Column diameter: 0.32

25 Methylene Chloride | Concentration: 0.0256080 ug/L









3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d

Date : 14-MAR-2014 00:20

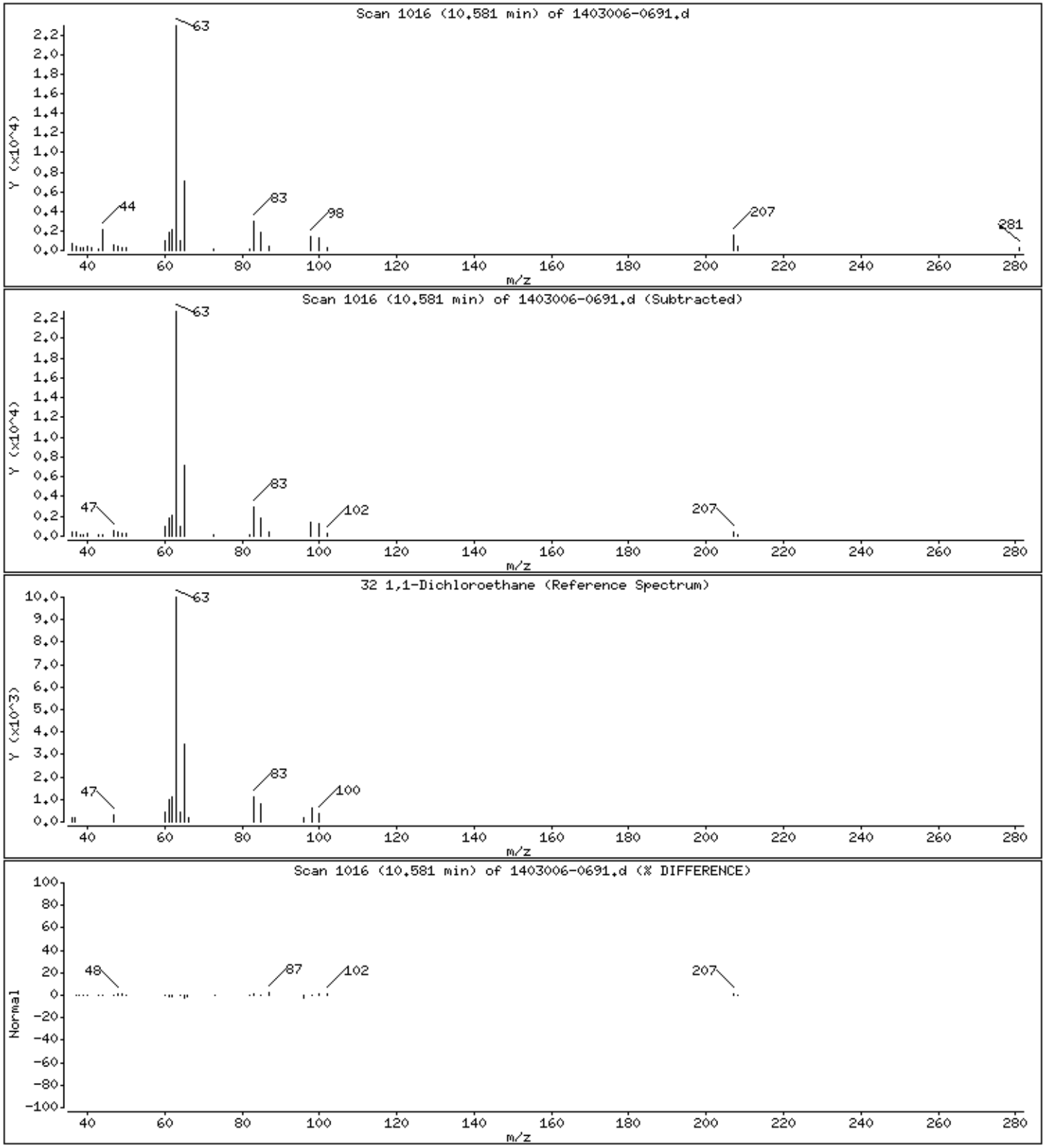
Client ID: MW-17 | Instrument: 5975hpms91.i

Sample Info: 1403006-06:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

32 1,1-Dichloroethane | Concentration: 0.740206 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d

Date : 14-MAR-2014 00:20

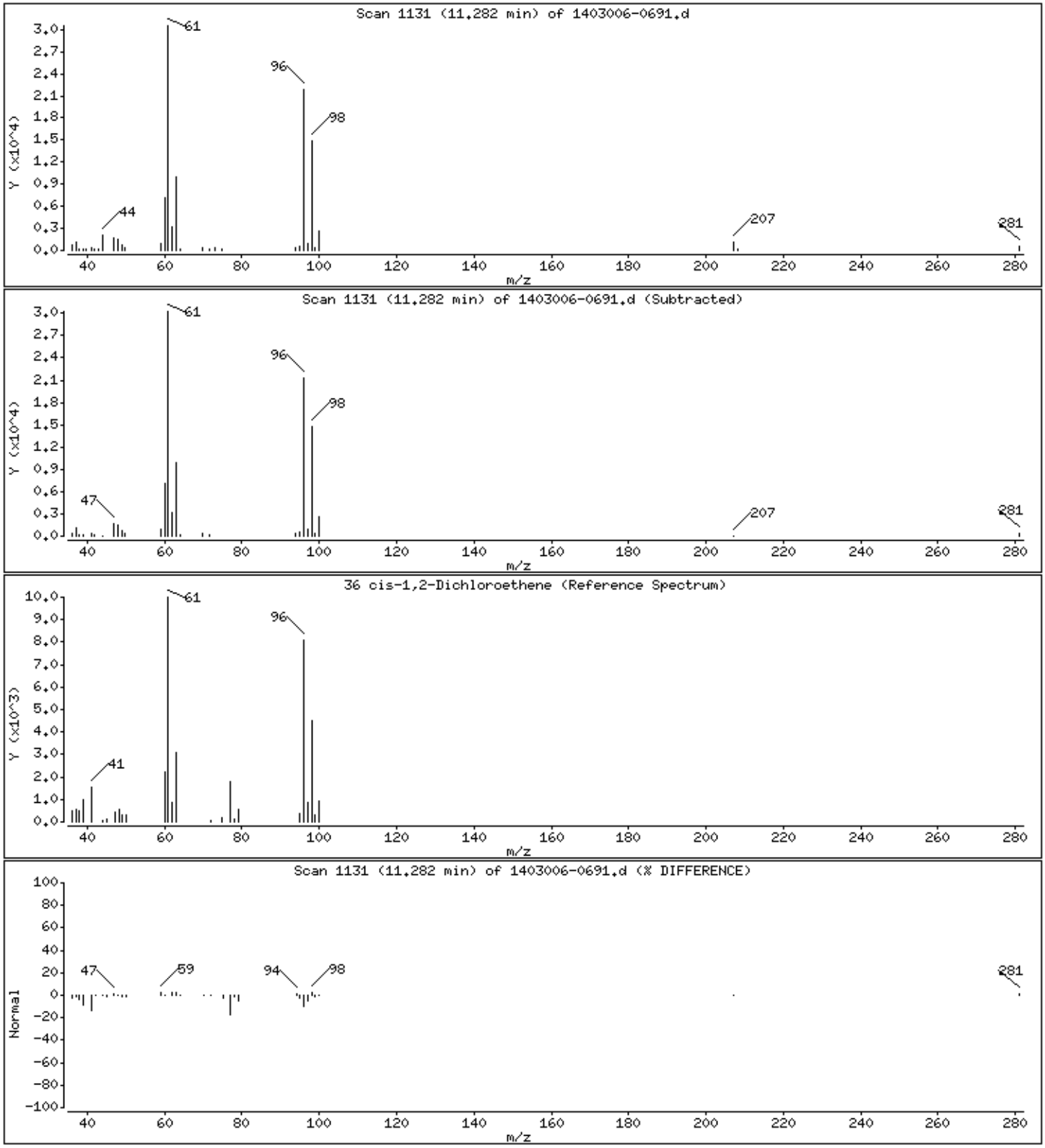
Client ID: MW-17 | Instrument: 5975hpms91.i

Sample Info: 1403006-06:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

36 cis-1,2-Dichloroethene | Concentration: 1.15339 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d

Date : 14-MAR-2014 00:20

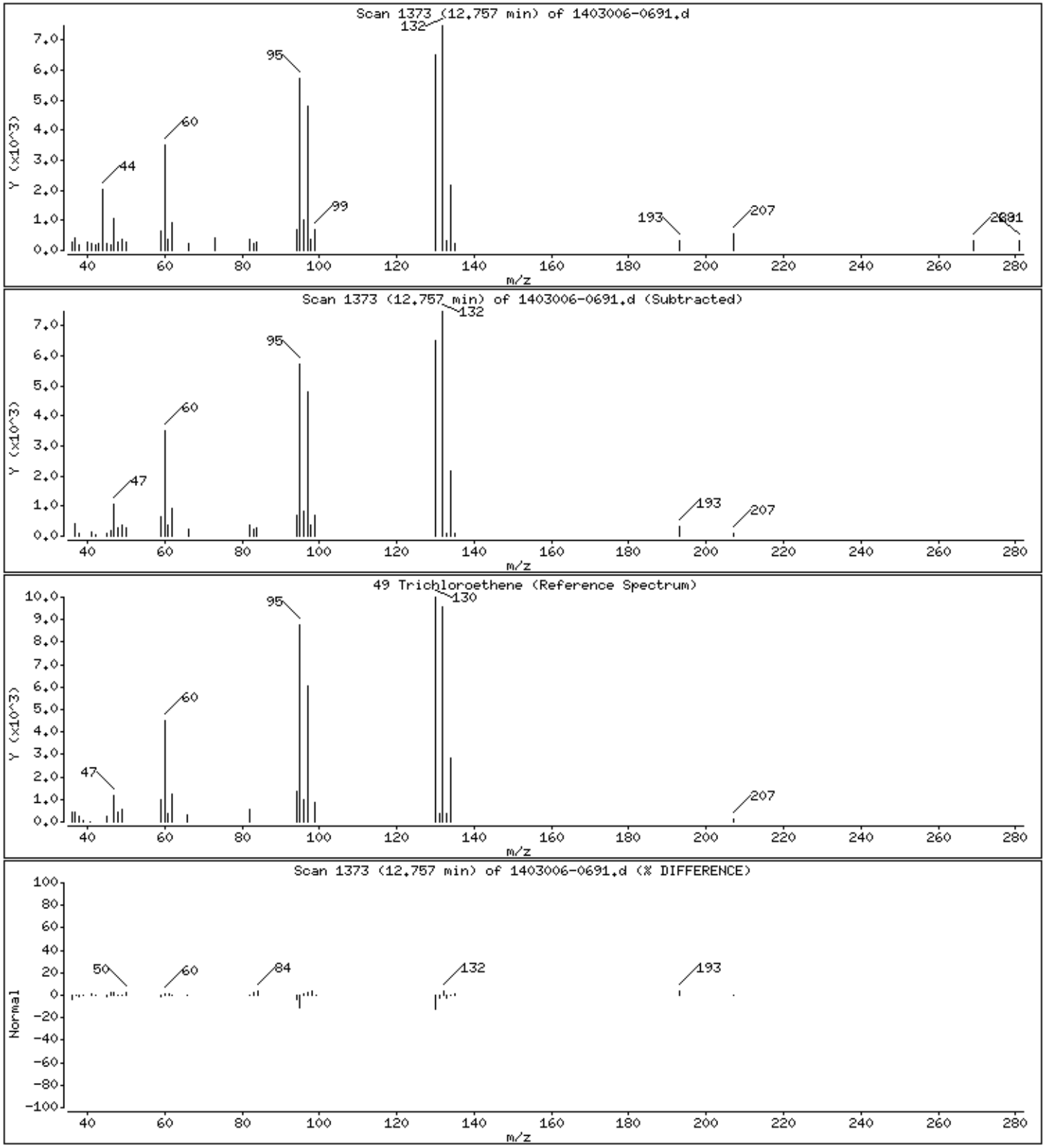
Client ID: MW-17 | Instrument: 5975hpms91.i

Sample Info: 1403006-06:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

49 Trichloroethene | Concentration: 0.295461 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0691.d

Date : 14-MAR-2014 00:20

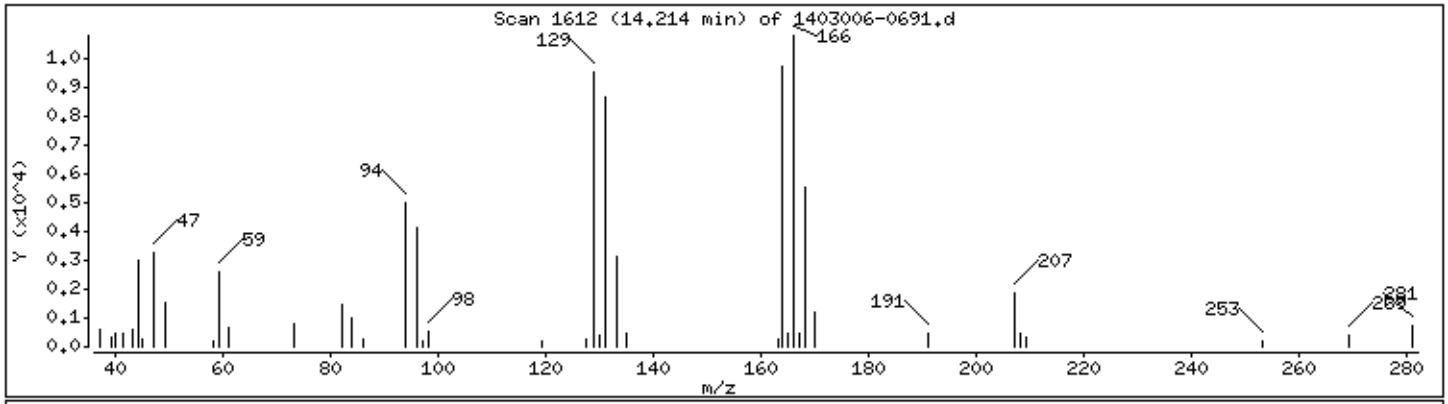
Client ID: MW-17 | Instrument: 5975hpms91.i

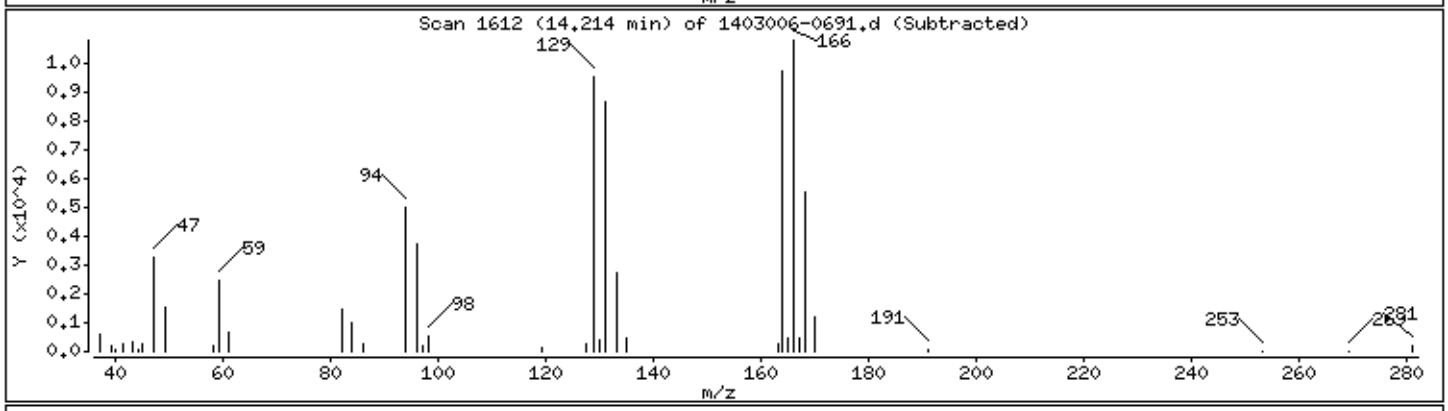
Sample Info: 1403006-06:JAO

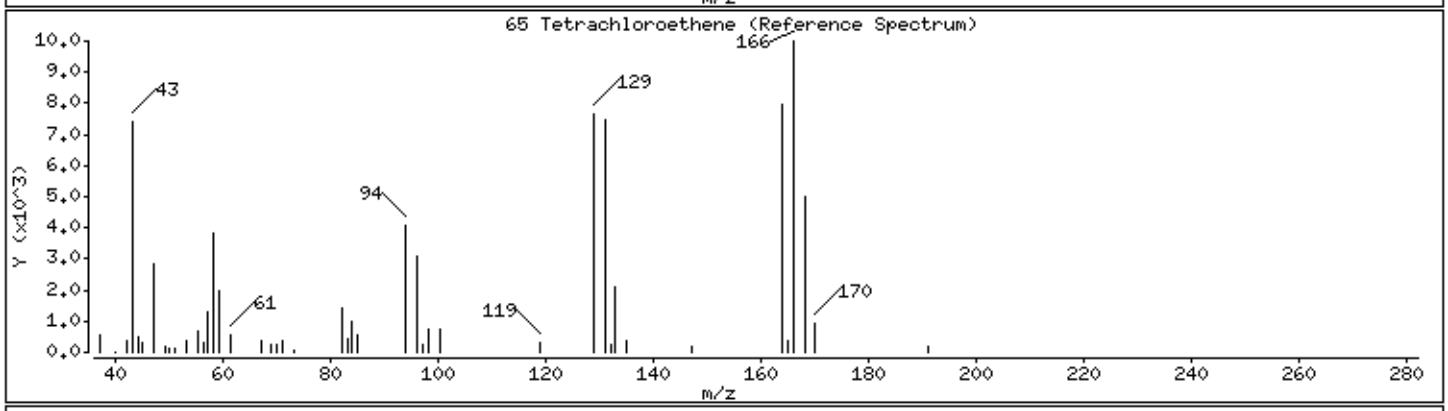
Purge Volume: 25.0 | Operator: JAO

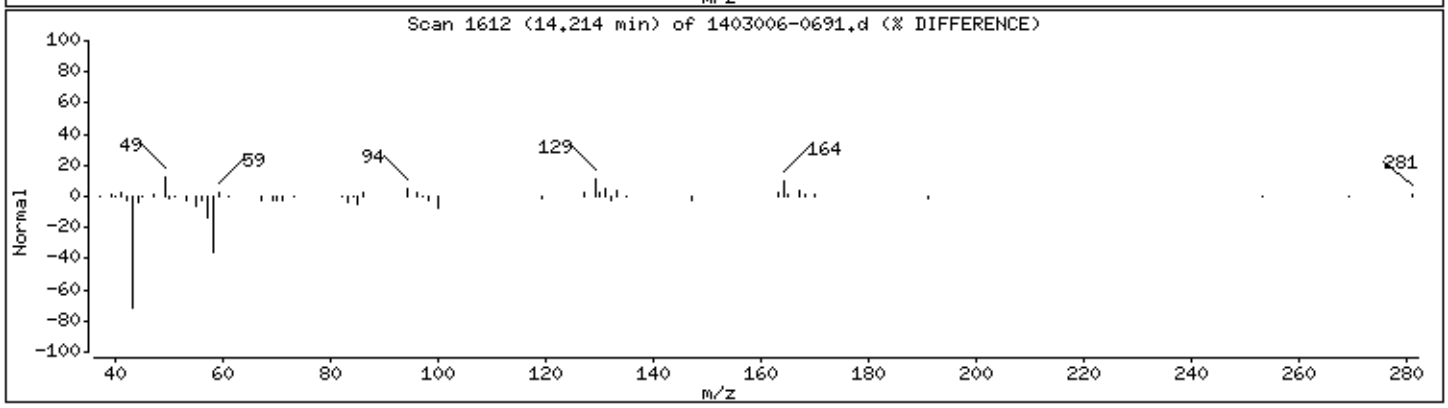
Column phase: SPB-624 | Column diameter: 0.32

65 Tetrachloroethene | Concentration: 0.524188 ug/L









3/14/2014

ANALYSIS DATA SHEET

SW 8260B

MW-2

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-02D291.d | Sampled: 03/04/14 10:35

Initial/Final: 25mL / 25mL | Lab ID: 1403006-02 | Received: 03/06/14 09:43

Dilution: 10 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 00:49

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.30	5.0	*U*
74-87-3	Chloromethane		1.1	5.0	*U*
75-01-4	Vinyl chloride		0.70	5.0	*U*
74-83-9	Bromomethane		1.1	5.0	*U*
75-00-3	Chloroethane		2.0	5.0	*U*
75-69-4	Trichlorofluoromethane		0.60	5.0	*U*
107-02-8	Acrolein		10	50	*U*
75-35-4	1,1-Dichloroethene	61	0.40	5.0	*D*
67-64-1	Acetone		4.4	25	*U*
74-88-4	Iodomethane		0.30	5.0	*U*
75-15-0	Carbon disulfide		0.20	5.0	*U*
107-05-1	3-Chloropropene		0.50	5.0	*U*
75-05-8	Acetonitrile		0.30	5.0	*U*
75-09-2	Methylene chloride	0.49	0.20	5.0	*JBD*
107-13-1	Acrylonitrile		3.6	50	*U*
156-60-5	trans-1,2-Dichloroethene		0.50	5.0	*U*
75-34-3	1,1-Dichloroethane	43	0.20	5.0	*D*
126-99-8	Chloroprene		0.20	5.0	*U*
108-05-4	Vinyl acetate		0.60	5.0	*U*
156-59-2	cis-1,2-Dichloroethene		0.30	5.0	*U*
594-20-7	2,2-Dichloropropane		0.30	5.0	*U*
107-12-0	Propionitrile		14	250	*U*
78-93-3	2-Butanone		2.8	25	*U*
126-98-7	Methacrylonitrile		3.9	50	*U*
74-97-5	Bromochloromethane		0.40	5.0	*U*
67-66-3	Chloroform		0.30	5.0	*U*
71-55-6	1,1,1-Trichloroethane	290	0.20	5.0	*D*
563-58-6	1,1-Dichloropropene		0.30	5.0	*U*
56-23-5	Carbon tetrachloride		0.30	5.0	*U*
107-06-2	1,2-Dichloroethane		0.30	5.0	*U*
78-83-1	Isobutyl alcohol		59	250	*U*
71-43-2	Benzene		0.30	5.0	*U*

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

MW-2

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-02D291.d | Sampled: 03/04/14 10:35

Initial/Final: 25mL / 25mL | Lab ID: 1403006-02 | Received: 03/06/14 09:43

Dilution: 10 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 00:49

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
79-01-6	Trichloroethene		0.30	5.0	*U*
78-87-5	1,2-Dichloropropane		1.2	5.0	*U*
74-95-3	Dibromomethane		0.30	5.0	*U*
80-62-6	Methyl Methacrylate		5.6	50	*U*
75-27-4	Bromodichloromethane		0.30	5.0	*U*
10061-01-5	cis-1,3-Dichloropropene		0.40	5.0	*U*
108-10-1	4-Methyl-2-pentanone		4.2	25	*U*
108-88-3	Toluene	0.31	0.30	5.0	*JD*
10061-02-6	trans-1,3-Dichloropropene		0.50	5.0	*U*
79-00-5	1,1,2-Trichloroethane		0.40	5.0	*U*
97-63-2	Ethyl Methacrylate		4.1	50	*U*
142-28-9	1,3-Dichloropropane		0.30	5.0	*U*
127-18-4	Tetrachloroethene	3.9	0.60	5.0	*JD*
591-78-6	2-Hexanone		5.1	25	*U*
124-48-1	Dibromochloromethane		0.40	5.0	*U*
108-90-7	Chlorobenzene		0.20	5.0	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.20	5.0	*U*
100-41-4	Ethylbenzene		0.40	5.0	*U*
179601-23-1	m,p-Xylene		0.80	10	*U*
95-47-6	o-Xylene		0.30	5.0	*U*
100-42-5	Styrene		0.20	5.0	*U*
75-25-2	Bromoform		0.30	5.0	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.50	5.0	*U*
96-18-4	1,2,3-Trichloropropane		0.90	5.0	*U*
110-57-6	trans-1,4-Dichloro-2-butene		3.3	20	*U*
541-73-1	1,3-Dichlorobenzene		0.40	5.0	*U*
106-46-7	1,4-Dichlorobenzene		0.30	5.0	*U*
95-50-1	1,2-Dichlorobenzene		0.30	5.0	*U*
120-82-1	1,2,4-Trichlorobenzene		0.60	5.0	*U*
87-68-3	Hexachlorobutadiene		0.30	5.0	*U*
91-20-3	Naphthalene		1.5	5.0	*U*
1330-20-7	Xylenes (total)		0.30	5.0	*U*

Environmental Testing Laboratories

CompuChem

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Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

MW-2

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-02D291.d | Sampled: 03/04/14 10:35

Initial/Final: 25mL / 25mL | Lab ID: 1403006-02 | Received: 03/06/14 09:43

Dilution: 10 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 00:49

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.241	105	65 - 150	
1,2-Dichloroethane-d4	5.000	5.452	109	59 - 150	
Toluene-d8	5.000	5.116	102	61 - 145	
Bromofluorobenzene	5.000	5.051	101	63 - 143	

Environmental Testing Laboratories

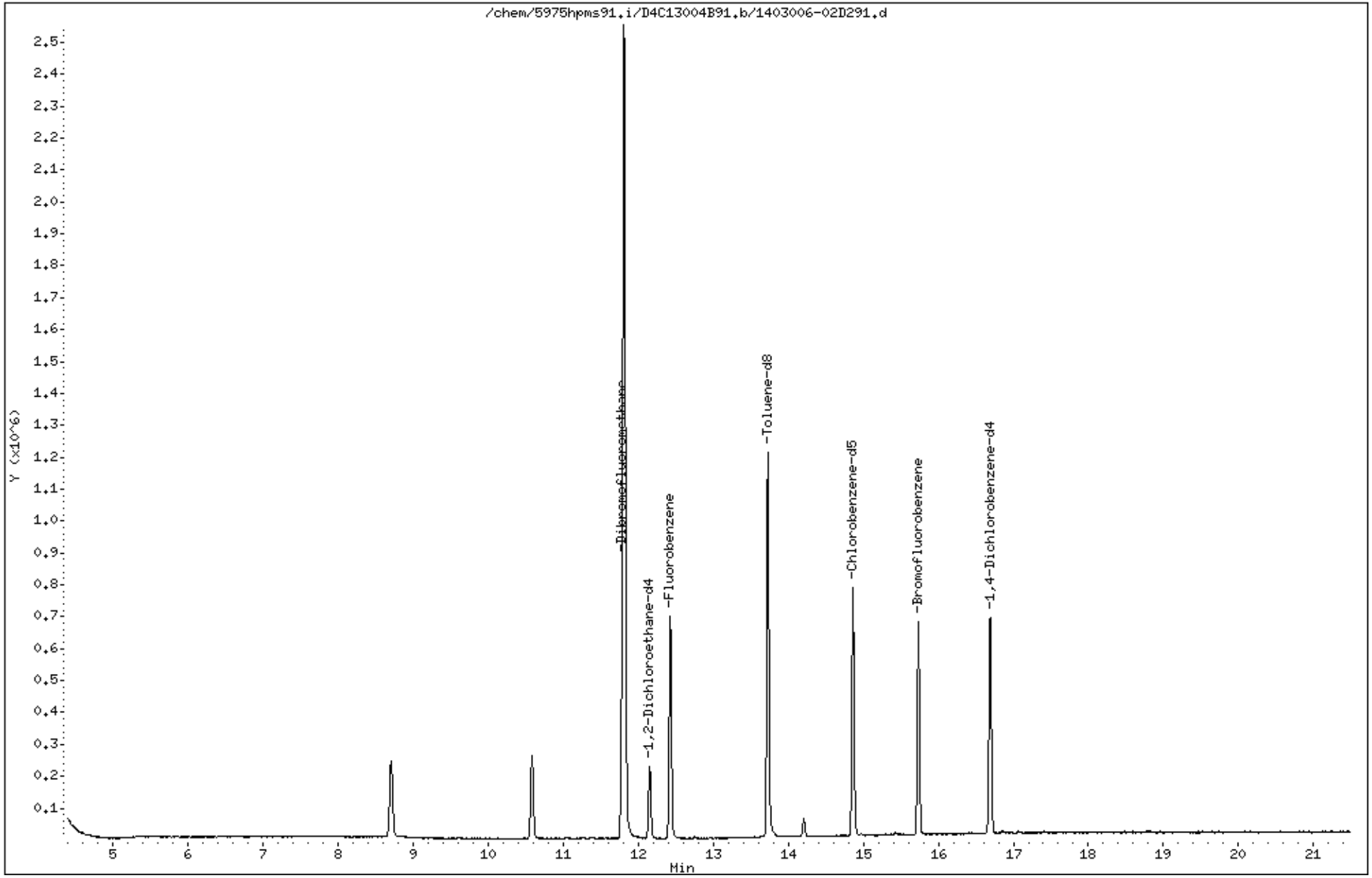
CompuChem

A Division Of

Liberty Analytical Corp.

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d
Date : 14-MAR-2014 00:49
Client ID: MW-2
Sample Info: 1403006-02:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d
Lab Smp Id: 1403006-02 Client Smp ID: MW-2
Inj Date : 14-MAR-2014 00:49
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-02:JAO
Misc Info : MW-2
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 20
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: PPS8970.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	10.00000	Dilution Factor
Vo	25.00000	volume of water
DF	10.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	687600	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	509692	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	232284	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	189490	131.021	52.4086
$ 5 1,2-Dichloroethane-d4	65	12.153	12.154	(0.978)	189623	136.296	54.5182
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	880397	127.893	51.1570
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	305741	126.265	50.5059
8 Dichlorodifluoromethane	85	Compound Not Detected.					
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
17 1,1-Dichloroethene	96	8.709	8.709	(0.701)	123803	151.788	60.7151
18 Acetone	43	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
22 3-Chloropropene	39	Compound Not Detected.					
23 Acetonitrile	41	Compound Not Detected.					
25 Methylene Chloride	84	9.599	9.599	(0.772)	1879	1.22734	0.490937(a)
26 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
31 Vinyl acetate	43	Compound Not Detected.					
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	328250	107.927	43.1710
33 Chloroprene	53	Compound Not Detected.					
34 2-butanone	43	Compound Not Detected.					
35 2,2-Dichloropropane	77	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	Compound Not Detected.					
37 Propionitrile	54	Compound Not Detected.					
38 Methacrylonitrile	41	Compound Not Detected.					
39 Bromochloromethane	128	Compound Not Detected.					
40 Chloroform	83	Compound Not Detected.					
42 1,1,1-Trichloroethane	97	11.806	11.806	(0.950)	2052466	728.571	291.429
44 1,1-dichloropropene	75	Compound Not Detected.					
45 Isobutyl alcohol	43	Compound Not Detected.					
46 Carbon Tetrachloride	117	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	Compound Not Detected.					
51 1,2-Dichloropropane	63	Compound Not Detected.					
52 Methylmethacrylate	69	Compound Not Detected.					
54 Dibromomethane	174	Compound Not Detected.					
55 Bromodichloromethane	83	Compound Not Detected.					
57 cis-1,3-Dichloropropene	75	Compound Not Detected.					
58 4-Methyl-2-pentanone	43	Compound Not Detected.					
59 Toluene	92	13.781	13.781	(0.927)	3619	0.76775	0.307101(a)
60 Ethylmethacrylate	69	Compound Not Detected.					
61 trans-1,3-Dichloropropene	75	Compound Not Detected.					
62 1,1,2-Trichloroethane	97	Compound Not Detected.					
63 2-hexanone	43	Compound Not Detected.					
64 1,3-Dichloropropane	76	Compound Not Detected.					
65 Tetrachloroethene	164	14.208	14.214	(0.956)	14330	9.70132	3.88053(a)
66 Dibromochloromethane	129	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
70 Ethylbenzene	106	Compound Not Detected.					
71 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
72 m,p-Xylene	106	Compound Not Detected.					
73 m,p-Xylene (part of total)	106	Compound Not Detected.					
74 o-Xylene	106	Compound Not Detected.					
75 o-Xylene (part of total)	106	Compound Not Detected.					
76 Styrene	104	Compound Not Detected.					
77 Bromoform	173	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
79 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
81 1,2,3-Trichloropropane	110	Compound Not Detected.					
80 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
92 1,3-Dichlorobenzene	146	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					
95 1,2-Dichlorobenzene	146	Compound Not Detected.					
97 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
98 Hexachlorobutadiene	225	Compound Not Detected.					
99 Naphthalene	128	Compound Not Detected.					
M 102 Xylene (total)	106	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d
Lab Smp Id: 1403006-02 Client Smp ID: MW-2
Inj Date : 14-MAR-2014 00:49
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-02:JAO
Misc Info : MW-2
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 20
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d

Date : 14-MAR-2014 00:49

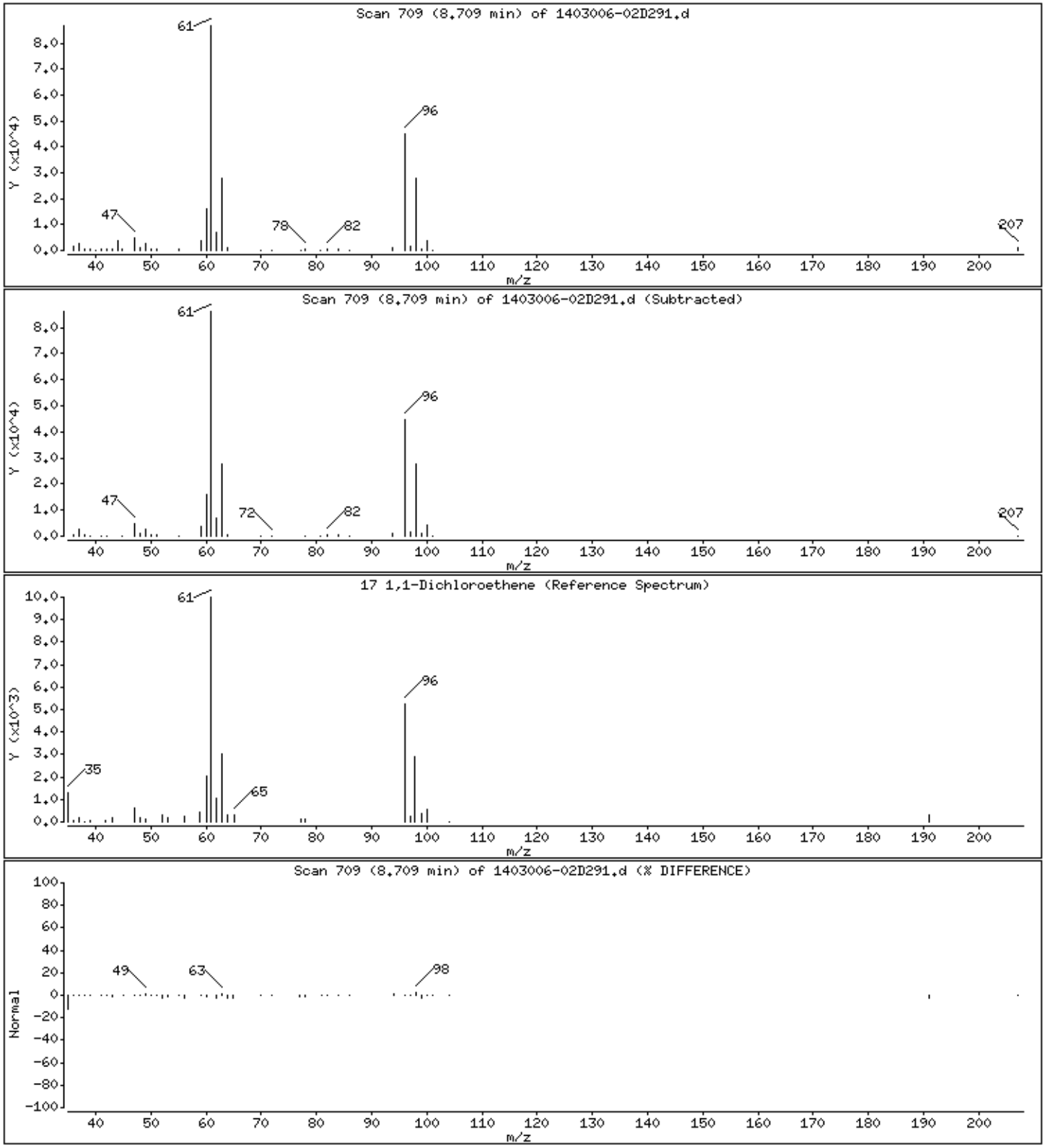
Client ID: MW-2 | Instrument: 5975hpms91.i

Sample Info: 1403006-02:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

17 1,1-Dichloroethene | Concentration: 60.7151 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d

Date : 14-MAR-2014 00:49

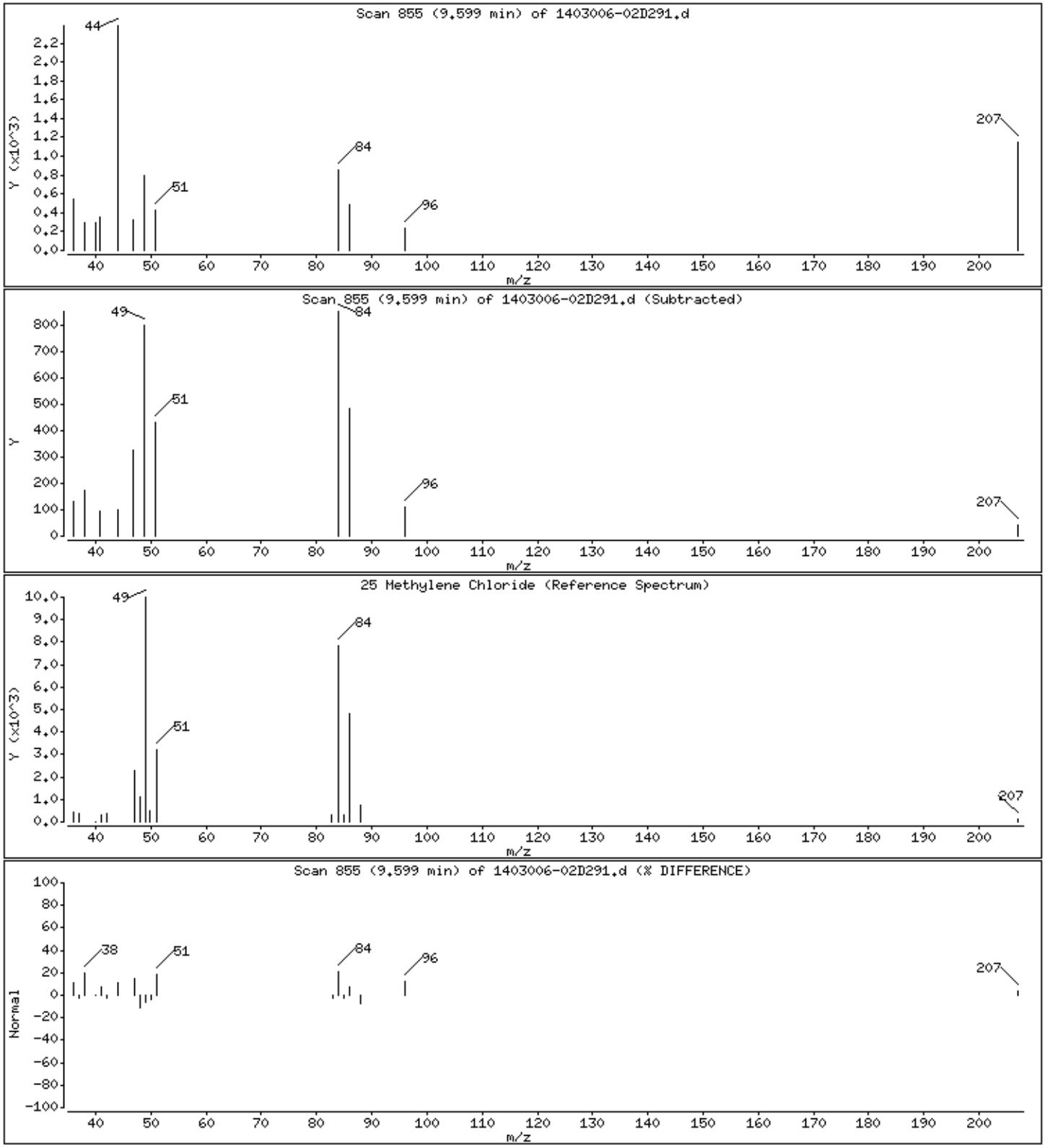
Client ID: MW-2 Instrument: 5975hpms91.i

Sample Info: 1403006-02:JAO

Purge Volume: 25.0 Operator: JAO

Column phase: SPB-624 Column diameter: 0.32

25 Methylene Chloride Concentration: 0.490937 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d

Date : 14-MAR-2014 00:49

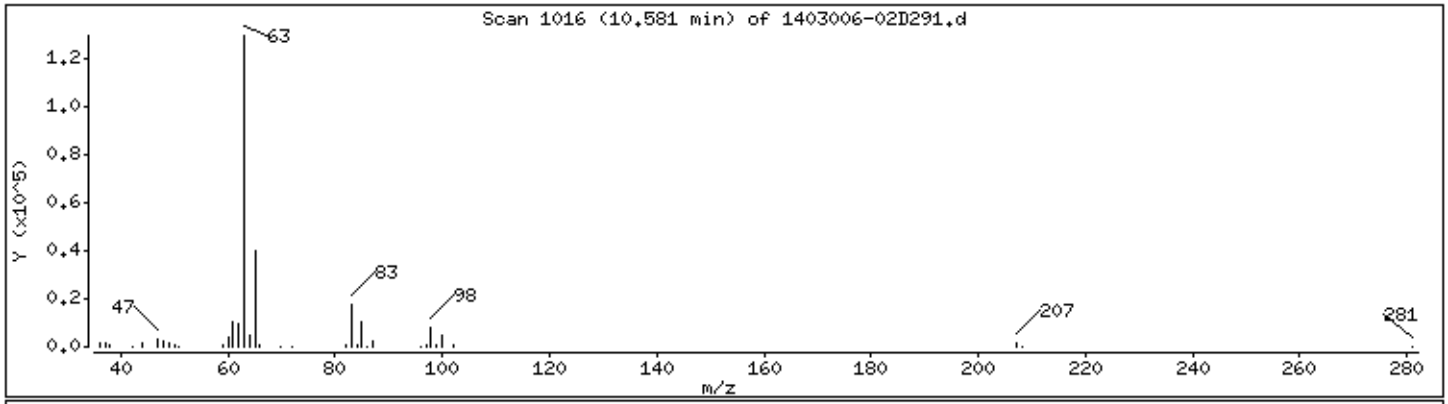
Client ID: MW-2 Instrument: 5975hpms91.i

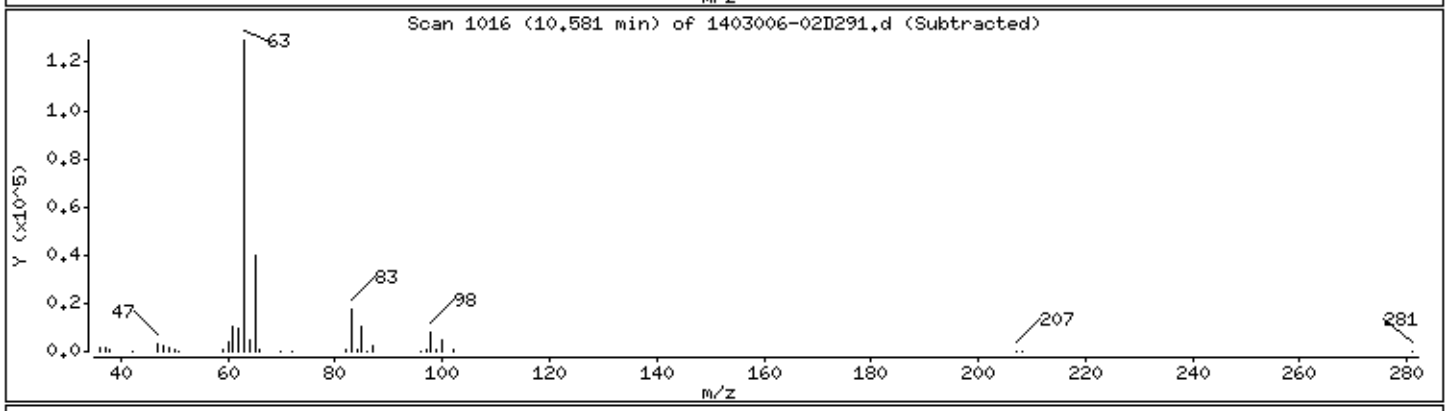
Sample Info: 1403006-02:JAO

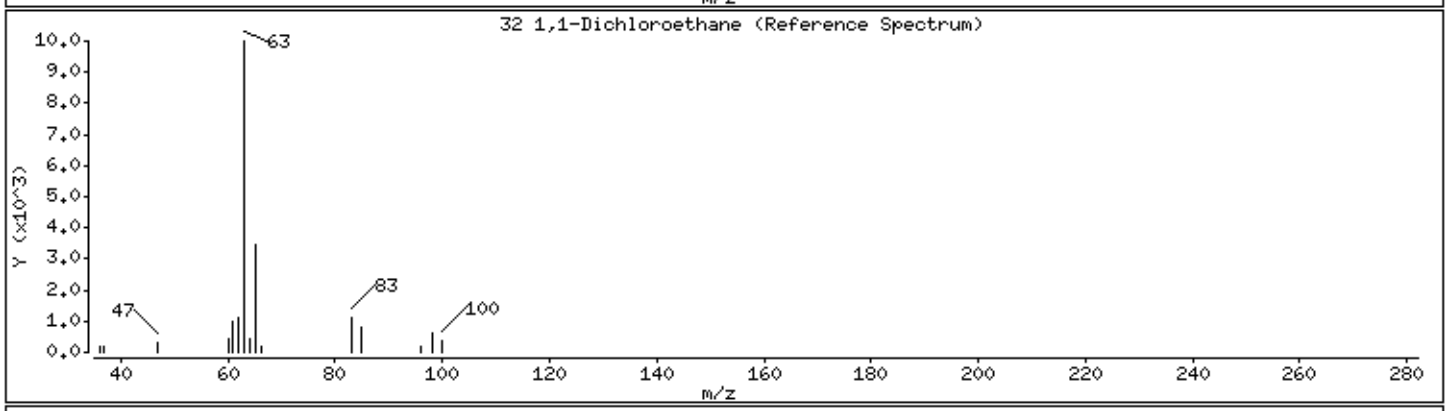
Purge Volume: 25.0 Operator: JAO

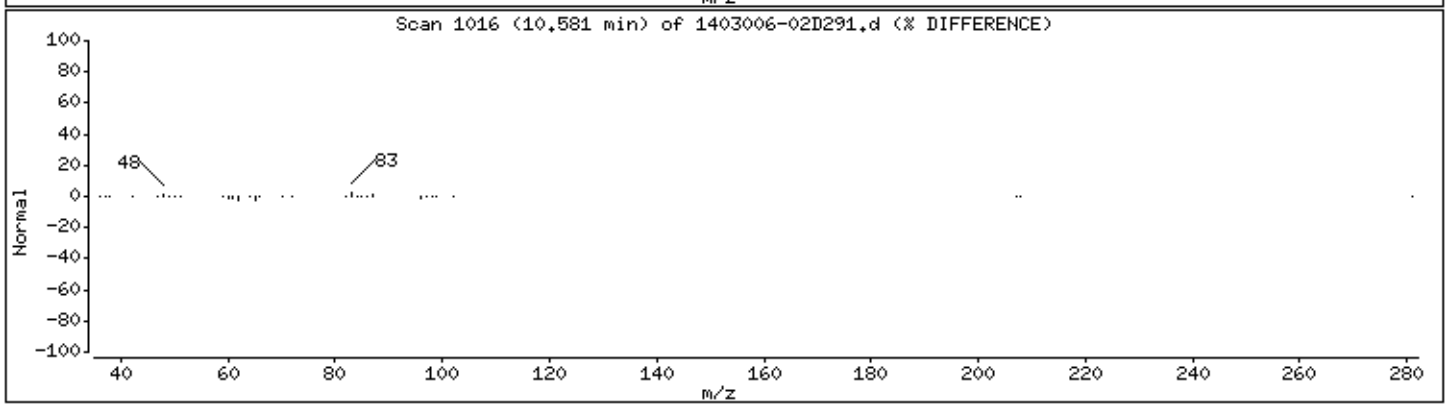
Column phase: SPB-624 Column diameter: 0.32

32 1,1-Dichloroethane Concentration: 43.1710 ug/L









3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d

Date : 14-MAR-2014 00:49

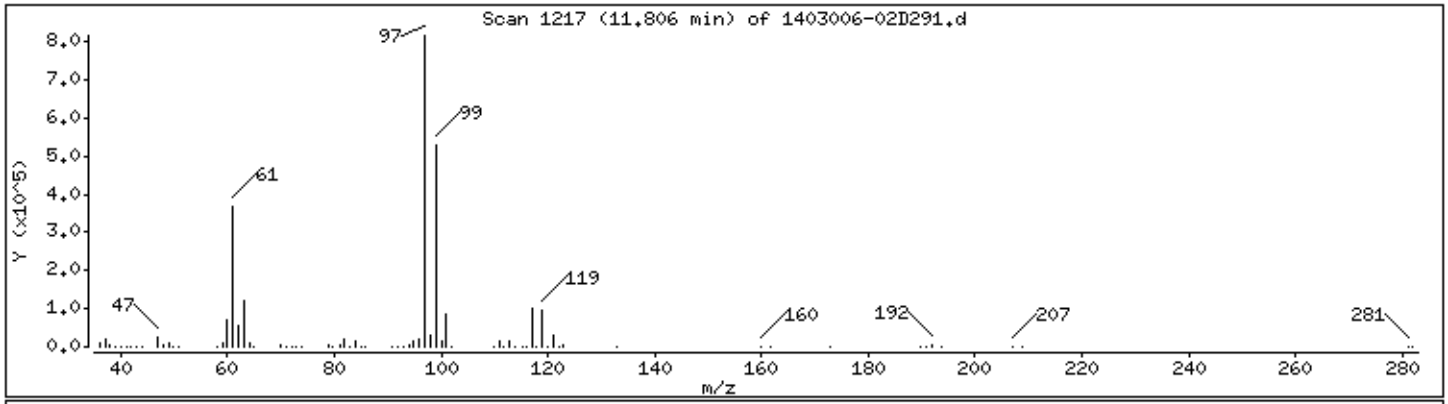
Client ID: MW-2 | Instrument: 5975hpms91.i

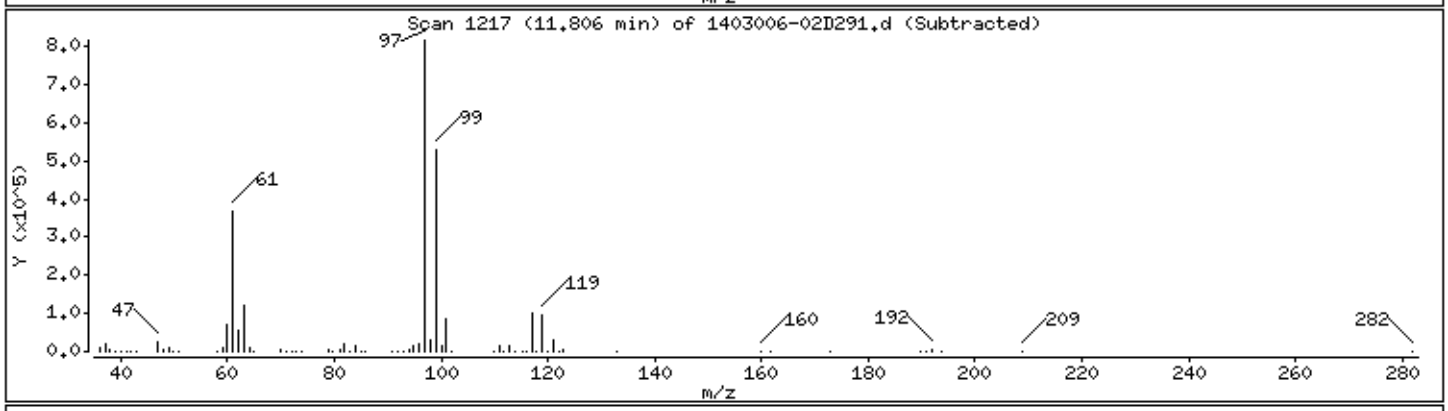
Sample Info: 1403006-02:JAO

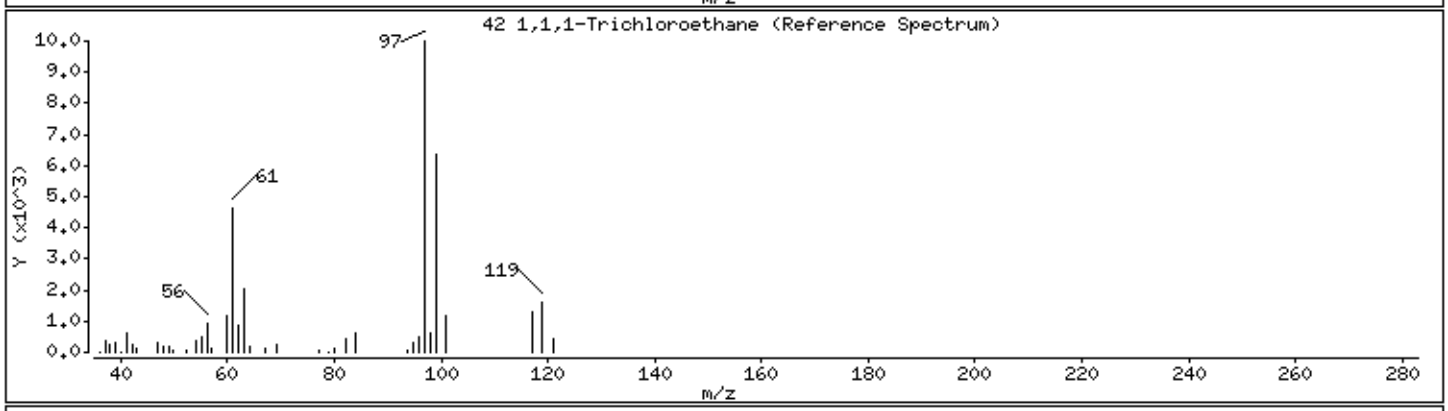
Purge Volume: 25.0 | Operator: JAO

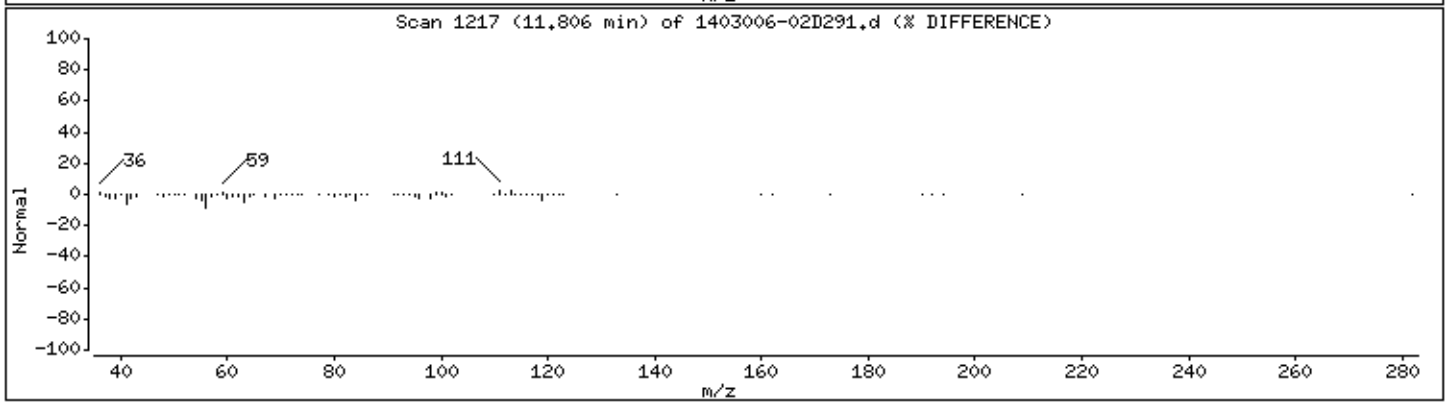
Column phase: SPB-624 | Column diameter: 0.32

42 1,1,1-Trichloroethane | Concentration: 291.429 ug/L









3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d

Date : 14-MAR-2014 00:49

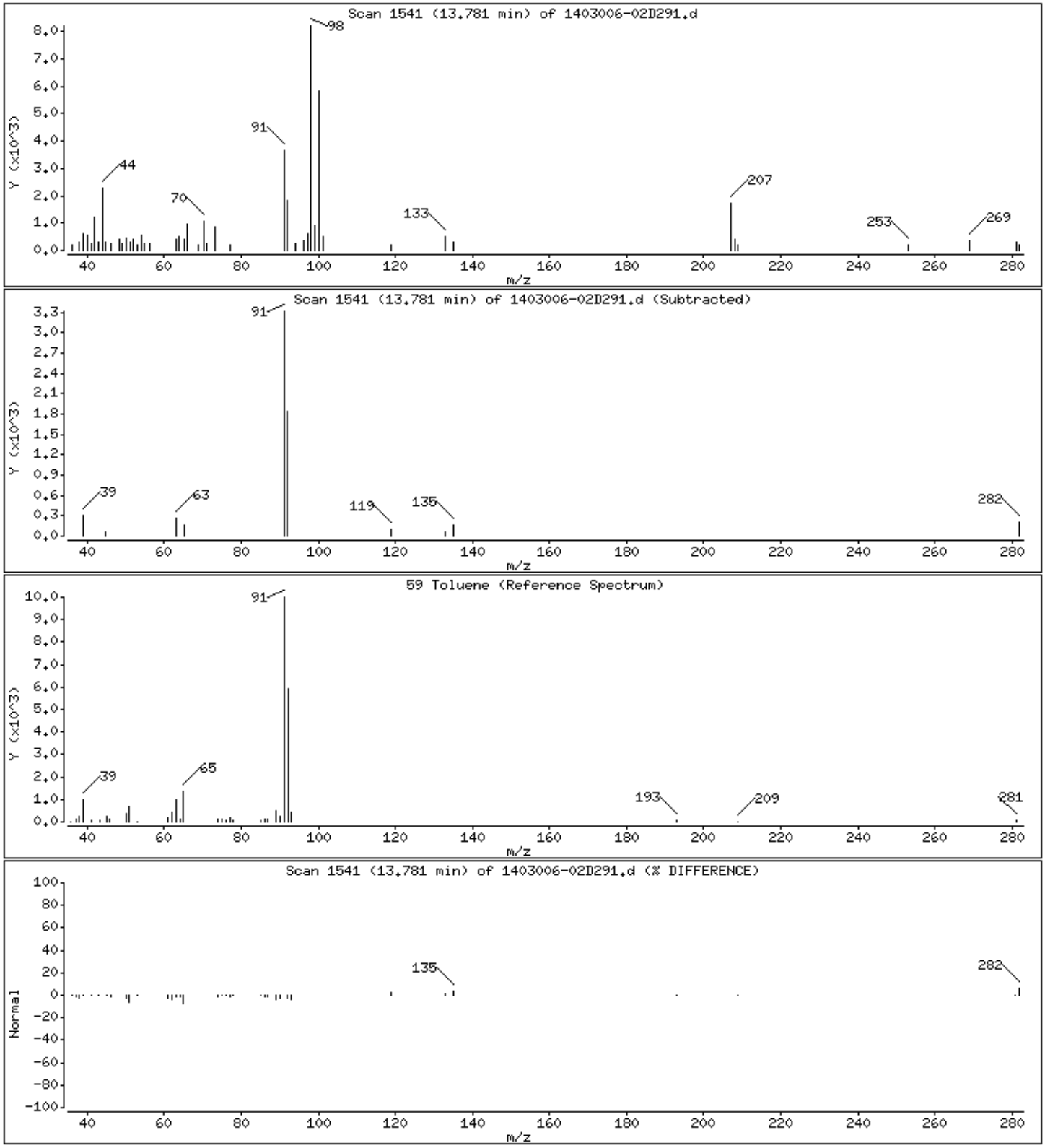
Client ID: MW-2 | Instrument: 5975hpms91.i

Sample Info: 1403006-02:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

59 Toluene | Concentration: 0.307101 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-02D291.d

Date : 14-MAR-2014 00:49

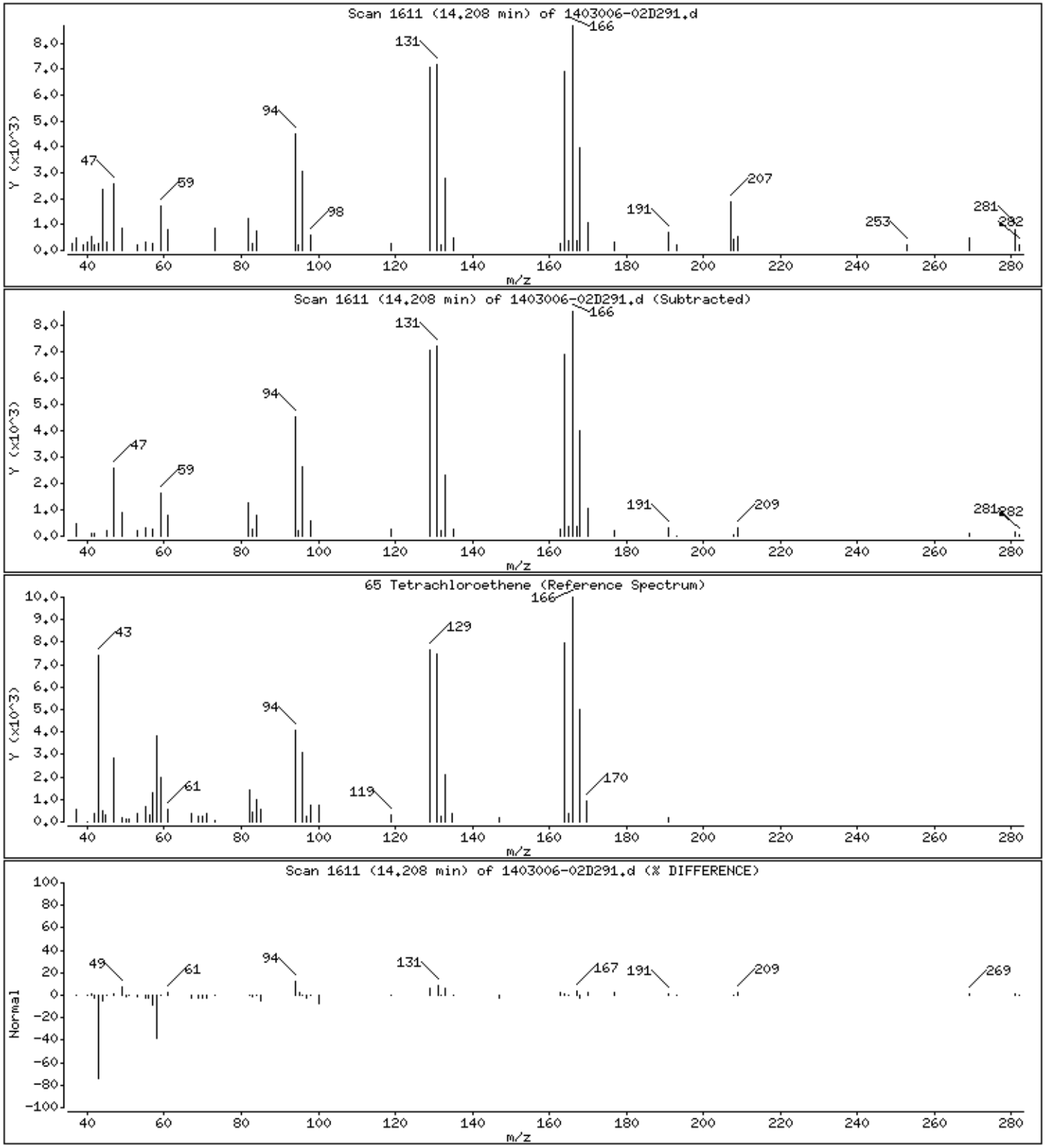
Client ID: MW-2 Instrument: 5975hpms91.i

Sample Info: 1403006-02:JAO

Purge Volume: 25.0 Operator: JAO

Column phase: SPB-624 Column diameter: 0.32

65 Tetrachloroethene Concentration: 3.88053 ug/L



3/14/2014

ANALYSIS DATA SHEET

SW 8260B

MW-3

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0191.d | Sampled: 03/03/14 13:00

Initial/Final: 25mL / 25mL | Lab ID: 1403006-01 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 01:18

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane	0.48	0.20	0.50	*J*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
67-64-1	Acetone		0.44	2.5	*U*
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide		0.020	0.50	*U*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.034	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene	0.090	0.050	0.50	*J*
75-34-3	1,1-Dichloroethane	2.7	0.020	0.50	
126-99-8	Chloroprene		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
156-59-2	cis-1,2-Dichloroethene	4.3	0.030	0.50	
594-20-7	2,2-Dichloropropane		0.030	0.50	*U*
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
74-97-5	Bromochloromethane		0.040	0.50	*U*
67-66-3	Chloroform		0.030	0.50	*U*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
563-58-6	1,1-Dichloropropene		0.030	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene		0.030	0.50	*U*

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

MW-3

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0191.d | Sampled: 03/03/14 13:00

Initial/Final: 25mL / 25mL | Lab ID: 1403006-01 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 01:18

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
79-01-6	Trichloroethene	0.41	0.030	0.50	*J*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
74-95-3	Dibromomethane		0.030	0.50	*U*
80-62-6	Methyl Methacrylate		0.56	5.0	*U*
75-27-4	Bromodichloromethane		0.030	0.50	*U*
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	*U*
108-10-1	4-Methyl-2-pentanone		0.42	2.5	*U*
108-88-3	Toluene	0.031	0.030	0.50	*J*
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	*U*
79-00-5	1,1,2-Trichloroethane		0.040	0.50	*U*
97-63-2	Ethyl Methacrylate		0.41	5.0	*U*
142-28-9	1,3-Dichloropropane		0.030	0.50	*U*
127-18-4	Tetrachloroethene		0.060	0.50	*U*
591-78-6	2-Hexanone		0.51	2.5	*U*
124-48-1	Dibromochloromethane		0.040	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	*U*
100-41-4	Ethylbenzene		0.040	0.50	*U*
179601-23-1	m,p-Xylene		0.080	1.0	*U*
95-47-6	o-Xylene		0.030	0.50	*U*
100-42-5	Styrene		0.020	0.50	*U*
75-25-2	Bromoform		0.030	0.50	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	*U*
96-18-4	1,2,3-Trichloropropane		0.090	0.50	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	*U*
541-73-1	1,3-Dichlorobenzene		0.040	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*
95-50-1	1,2-Dichlorobenzene		0.030	0.50	*U*
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	*U*
87-68-3	Hexachlorobutadiene		0.030	0.50	*U*
91-20-3	Naphthalene		0.15	0.50	*U*
1330-20-7	Xylenes (total)		0.030	0.50	*U*

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

MW-3

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0191.d | Sampled: 03/03/14 13:00

Initial/Final: 25mL / 25mL | Lab ID: 1403006-01 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 01:18

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.203	104	65 - 150	
1,2-Dichloroethane-d4	5.000	5.380	108	59 - 150	
Toluene-d8	5.000	5.161	103	61 - 145	
Bromofluorobenzene	5.000	4.882	98	63 - 143	

Environmental Testing Laboratories

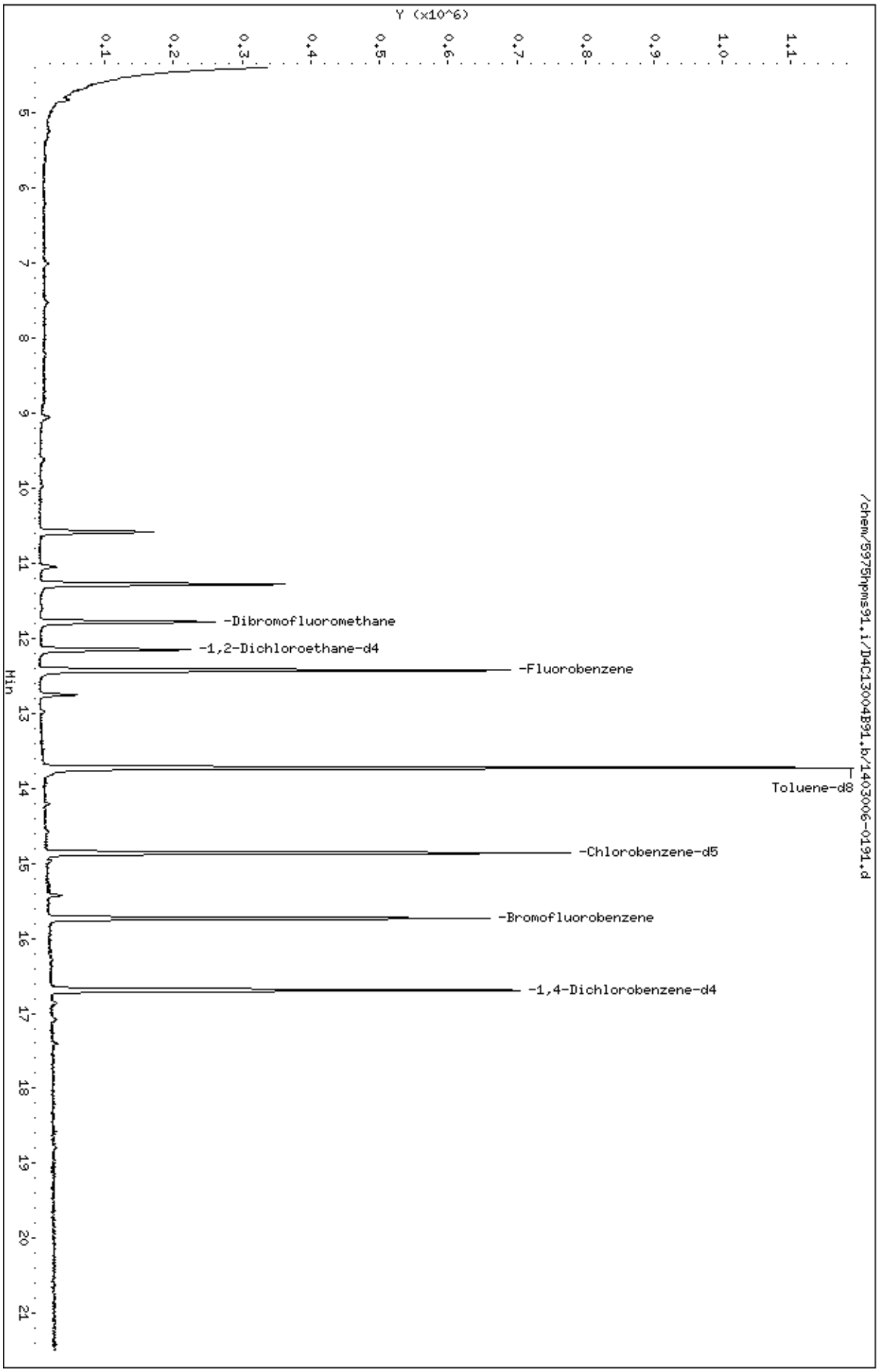
CompuChem

A Division Of

Liberty Analytical Corp.

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d
Date : 14-MAR-2014 01:18
Client ID: MW-3
Sample Info: 1403006-01:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d
Lab Smp Id: 1403006-01 Client Smp ID: MW-3
Inj Date : 14-MAR-2014 01:18
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-01:JAO
Misc Info : MW-3
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	681993	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	495083	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	233565	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	186588	130.076	5.20302
$ 5 1,2-Dichloroethane-d4	65	12.154	12.154	(0.978)	185603	134.503	5.38011
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	862765	129.030	5.16118
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	297144	122.041	4.88165
8 Dichlorodifluoromethane	85	Compound Not Detected.					
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	7.002	6.996	(0.563)	7900	11.9753	0.479011(aM)
13 Trichlorofluoromethane	101	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
18 Acetone	43	Compound Not Detected.					
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
22 3-Chloropropene	39	Compound Not Detected.					
23 Acetonitrile	41	Compound Not Detected.					
25 Methylene Chloride	84	9.593	9.599	(0.772)	1296	0.85349	0.0341397(a)
26 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	9.959	9.965	(0.801)	3732	2.25073	0.0900292(aM)
31 Vinyl acetate	43	Compound Not Detected.					
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	206287	68.3841	2.73536
33 Chloroprene	53	Compound Not Detected.					
34 2-butanone	43	Compound Not Detected.					
35 2,2-Dichloropropane	77	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	184463	108.577	4.34307
37 Propionitrile	54	Compound Not Detected.					
38 Methacrylonitrile	41	Compound Not Detected.					
39 Bromochloromethane	128	Compound Not Detected.					
40 Chloroform	83	Compound Not Detected.					
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
44 1,1-dichloropropene	75	Compound Not Detected.					
45 Isobutyl alcohol	43	Compound Not Detected.					
46 Carbon Tetrachloride	117	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	12.757	12.757	(1.026)	19106	10.3529	0.414117(a)
51 1,2-Dichloropropane	63	Compound Not Detected.					
52 Methylmethacrylate	69	Compound Not Detected.					
54 Dibromomethane	174	Compound Not Detected.					
55 Bromodichloromethane	83	Compound Not Detected.					
57 cis-1,3-Dichloropropene	75	Compound Not Detected.					
58 4-Methyl-2-pentanone	43	Compound Not Detected.					
59 Toluene	92	13.781	13.781	(0.927)	3553	0.77599	0.0310397(a)
60 Ethylmethacrylate	69	Compound Not Detected.					
61 trans-1,3-Dichloropropene	75	Compound Not Detected.					
62 1,1,2-Trichloroethane	97	Compound Not Detected.					
63 2-hexanone	43	Compound Not Detected.					
64 1,3-Dichloropropane	76	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
66 Dibromochloromethane	129	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
70 Ethylbenzene	106	Compound Not Detected.					
71 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
72 m,p-Xylene	106	Compound Not Detected.					
73 m,p-Xylene (part of total)	106	Compound Not Detected.					
74 o-Xylene	106	Compound Not Detected.					
75 o-Xylene (part of total)	106	Compound Not Detected.					
76 Styrene	104	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
77 Bromoform	173	Compound Not Detected.					
79 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
81 1,2,3-Trichloropropane	110	Compound Not Detected.					
80 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
92 1,3-Dichlorobenzene	146	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					
95 1,2-Dichlorobenzene	146	Compound Not Detected.					
97 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
98 Hexachlorobutadiene	225	Compound Not Detected.					
99 Naphthalene	128	Compound Not Detected.					
M 102 Xylene (total)	106	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d
Report Date: 14-Mar-2014 10:28

CompuChem

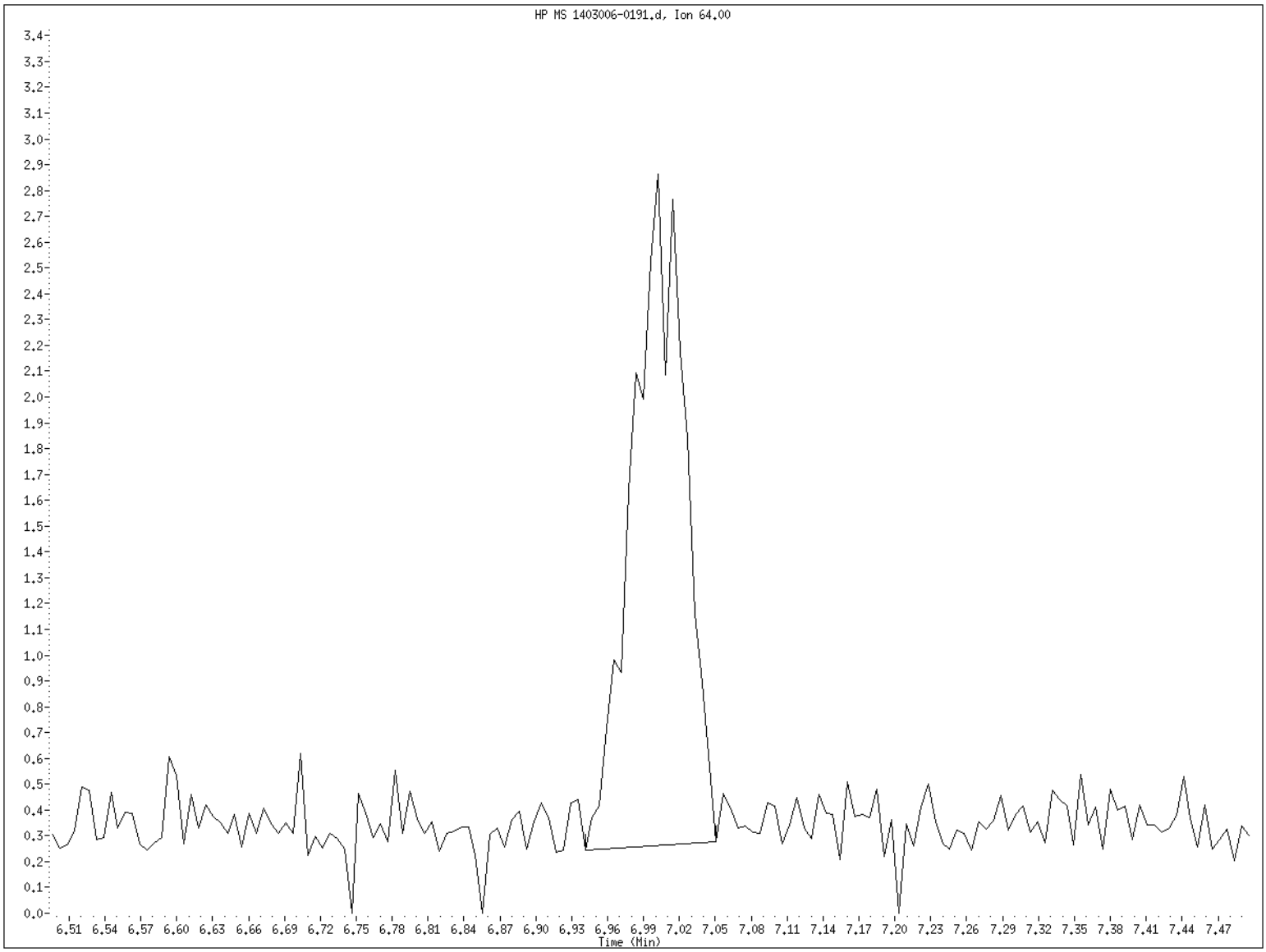
SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d
Lab Smp Id: 1403006-01 Client Smp ID: MW-3
Inj Date : 14-MAR-2014 01:18
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-01:JAO
Misc Info : MW-3
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

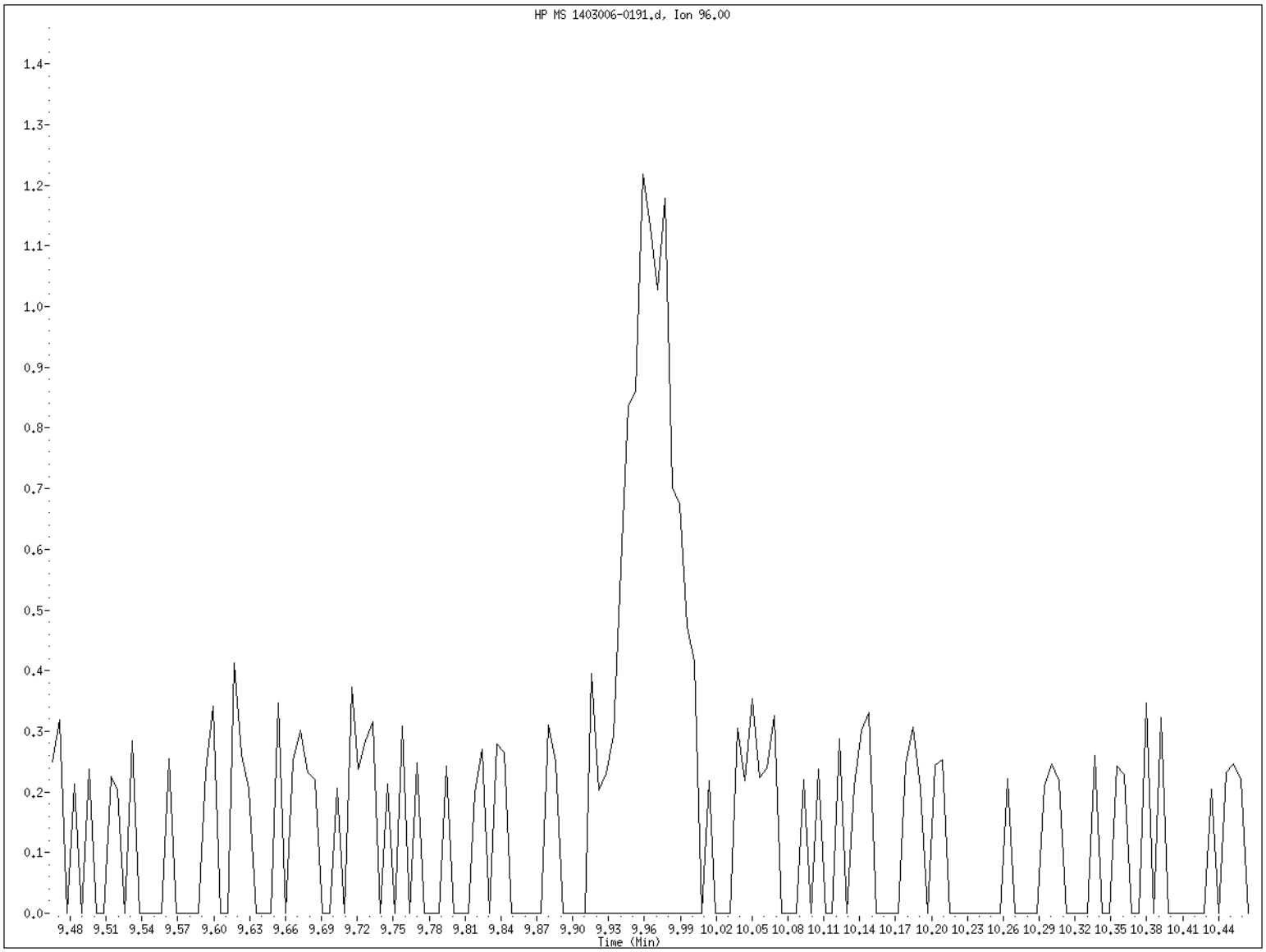
Chloroethane CAS Number 75-00-3 Area = 7900 Manually integrated



File name: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d
Client ID: MW-3
Instrument ID: 5975hpms91.i
Injection Date and Time: 14-MAR-2014 01:18
Retention Time: 7.00
Operator ID: JAO

3/14/2014

trans-1,2-Dichloroethene CAS Number 156-60-5 Area = 3732 Manually integrated



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Client ID: MW-3
Instrument ID: 5975hpms91.i
Injection Date and Time: 14-MAR-2014 01:18
Retention Time: 9.96
Operator ID: JAO

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d

Date : 14-MAR-2014 01:18

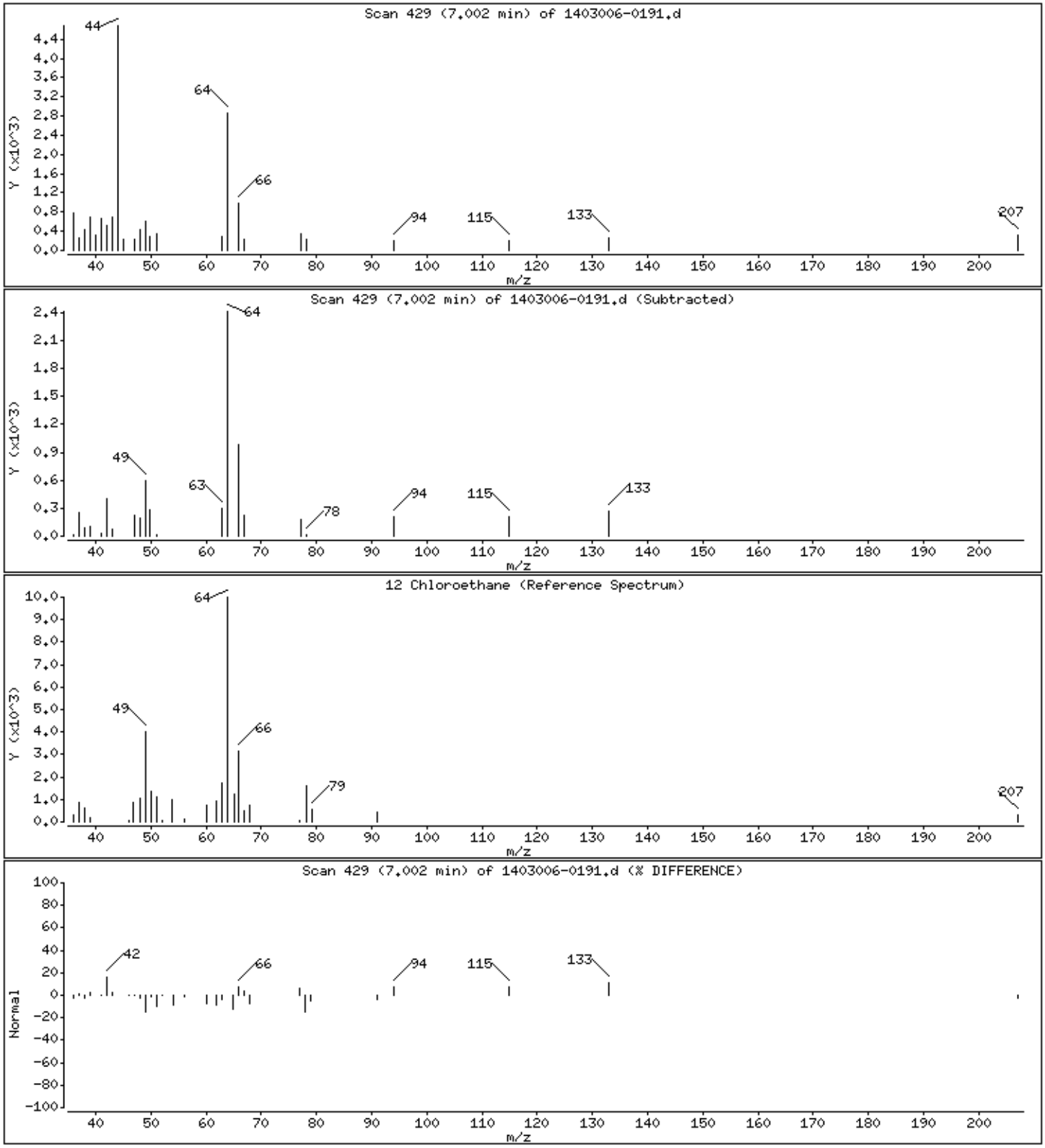
Client ID: MW-3 | Instrument: 5975hpms91.i

Sample Info: 1403006-01:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

12 Chloroethane | Concentration: 0.479011 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d

Date : 14-MAR-2014 01:18

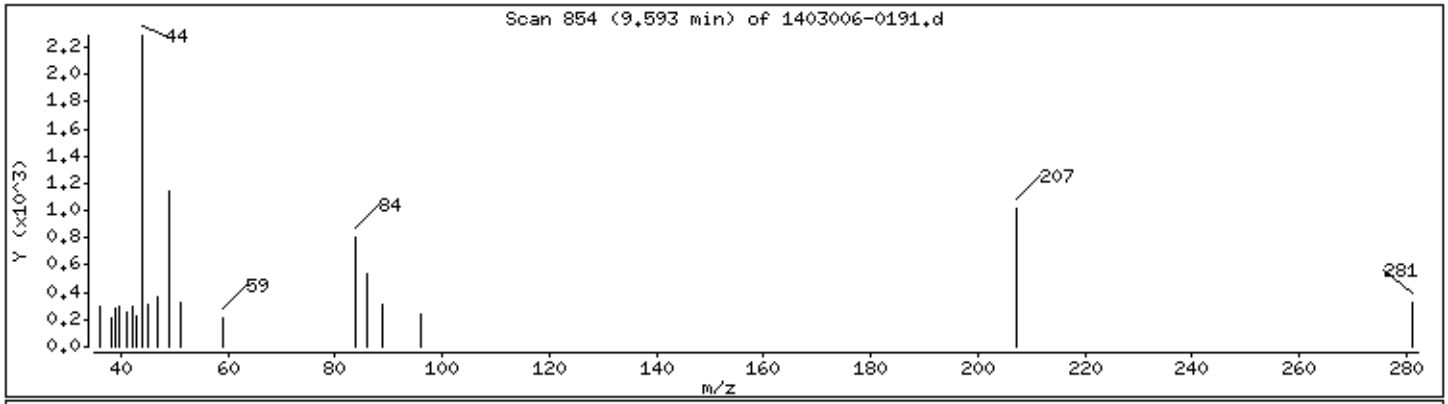
Client ID: MW-3 Instrument: 5975hpms91.i

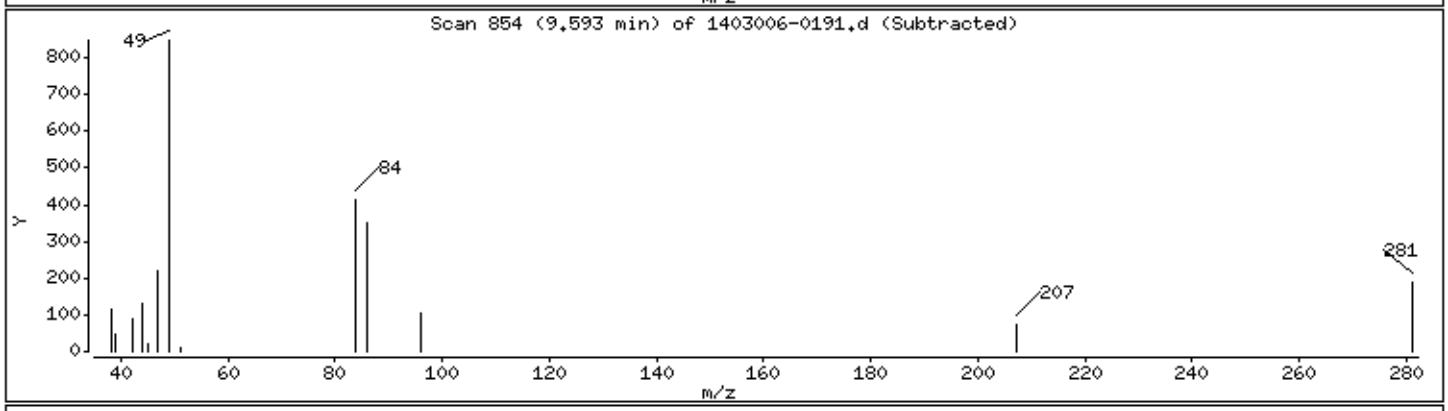
Sample Info: 1403006-01:JAO

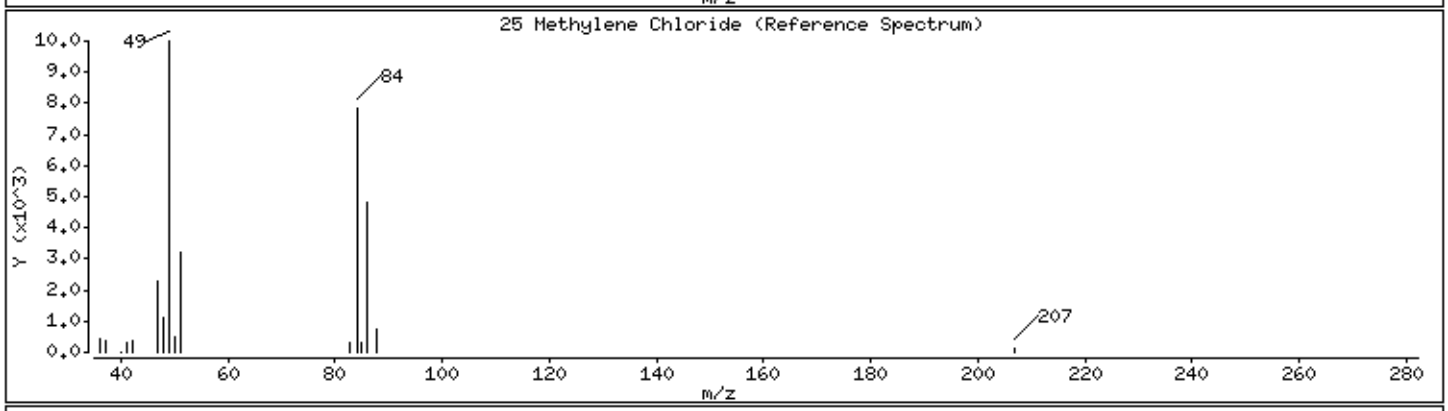
Purge Volume: 25.0 Operator: JAO

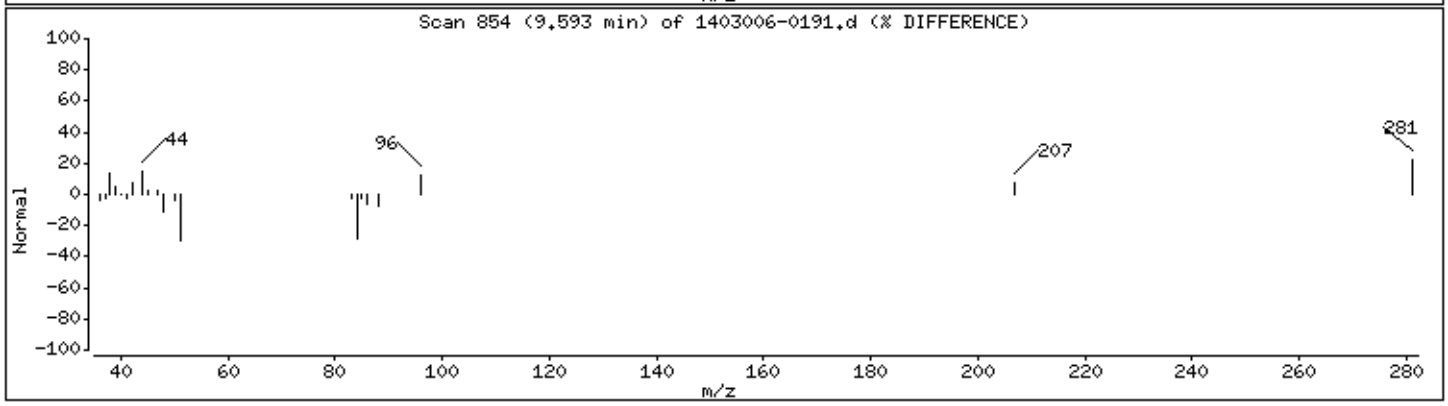
Column phase: SPB-624 Column diameter: 0.32

25 Methylene Chloride Concentration: 0.0341397 ug/L









Robert Hamm 3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d

Date : 14-MAR-2014 01:18

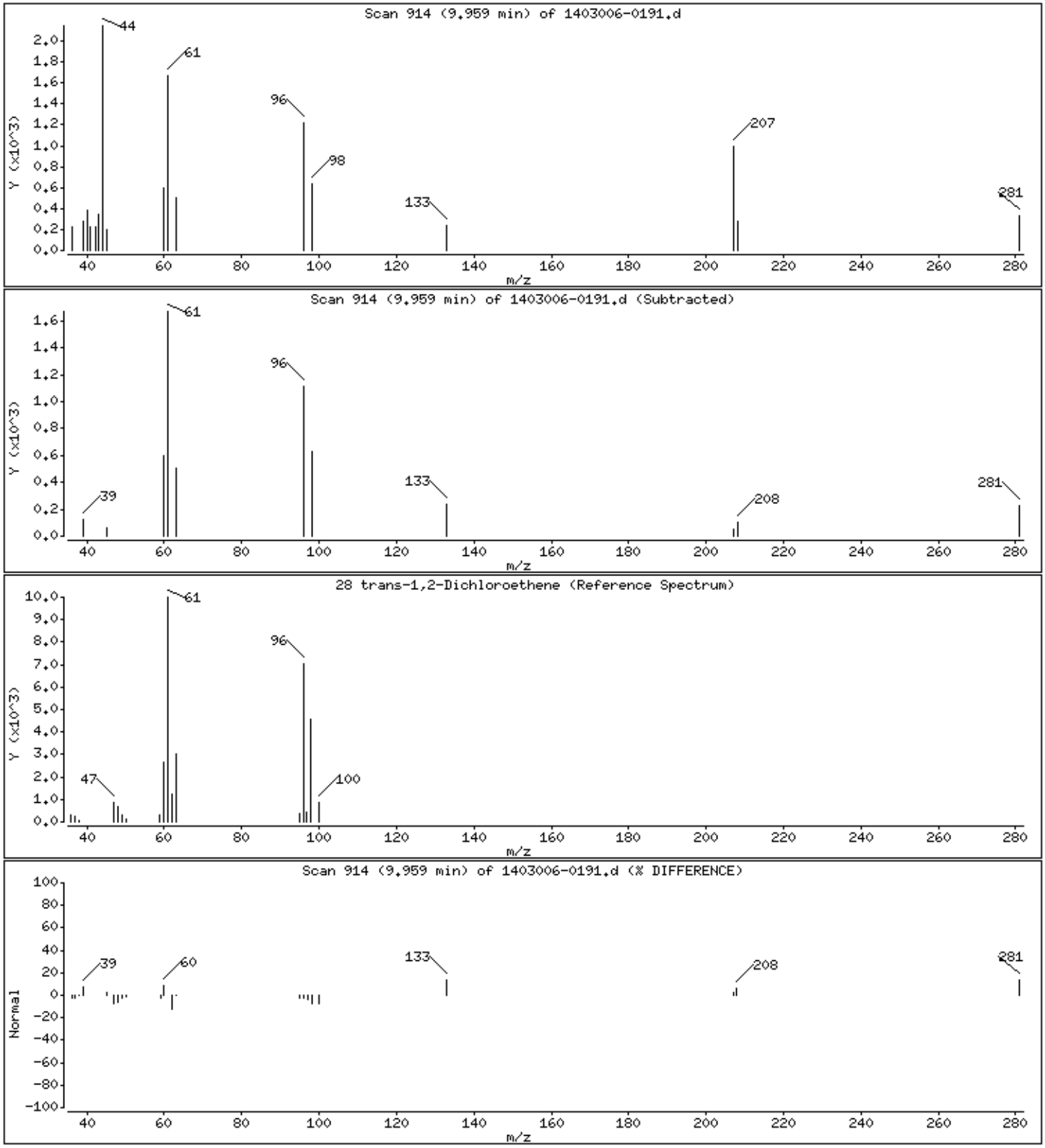
Client ID: MW-3 | Instrument: 5975hpms91.i

Sample Info: 1403006-01:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

28 trans-1,2-Dichloroethene | Concentration: 0.0900292 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d

Date : 14-MAR-2014 01:18

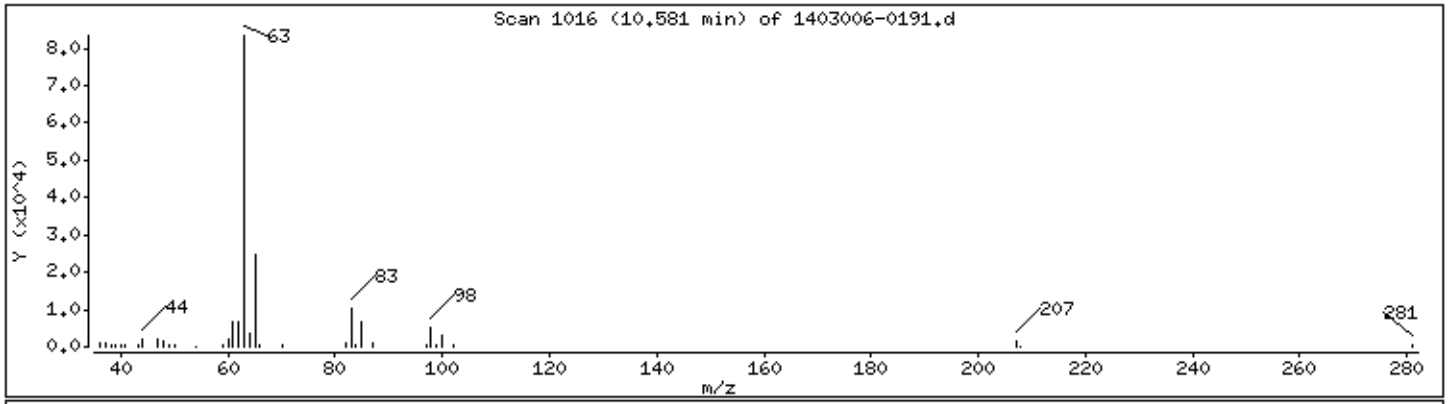
Client ID: MW-3 Instrument: 5975hpms91.i

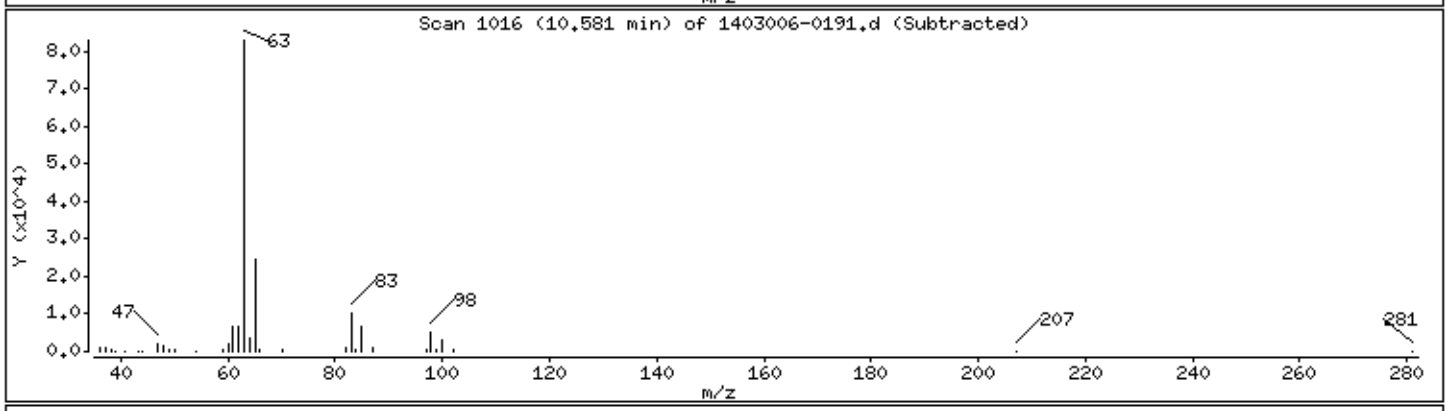
Sample Info: 1403006-01:JAO

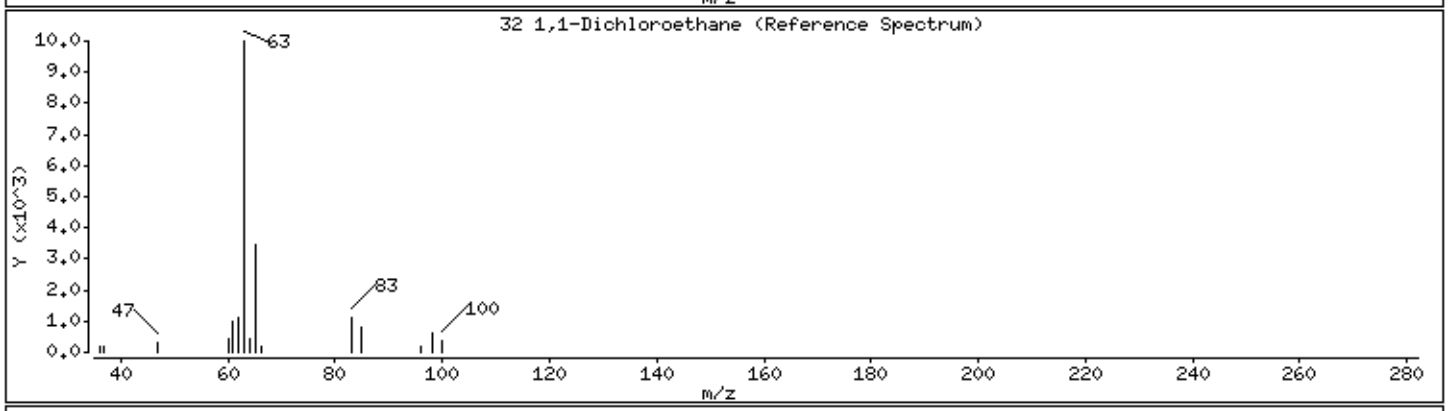
Purge Volume: 25.0 Operator: JAO

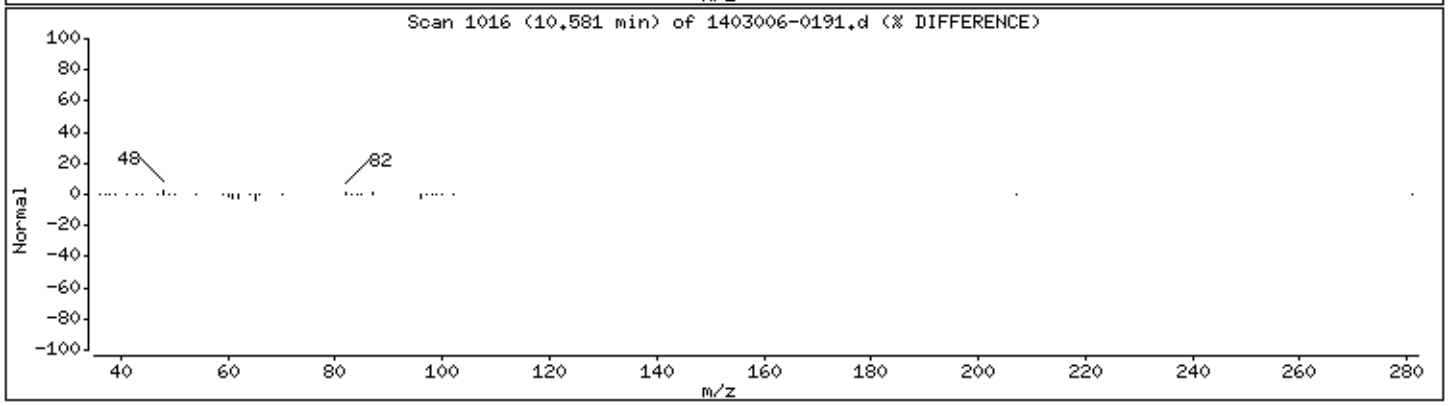
Column phase: SPB-624 Column diameter: 0.32

32 1,1-Dichloroethane Concentration: 2.73536 ug/L









3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d

Date : 14-MAR-2014 01:18

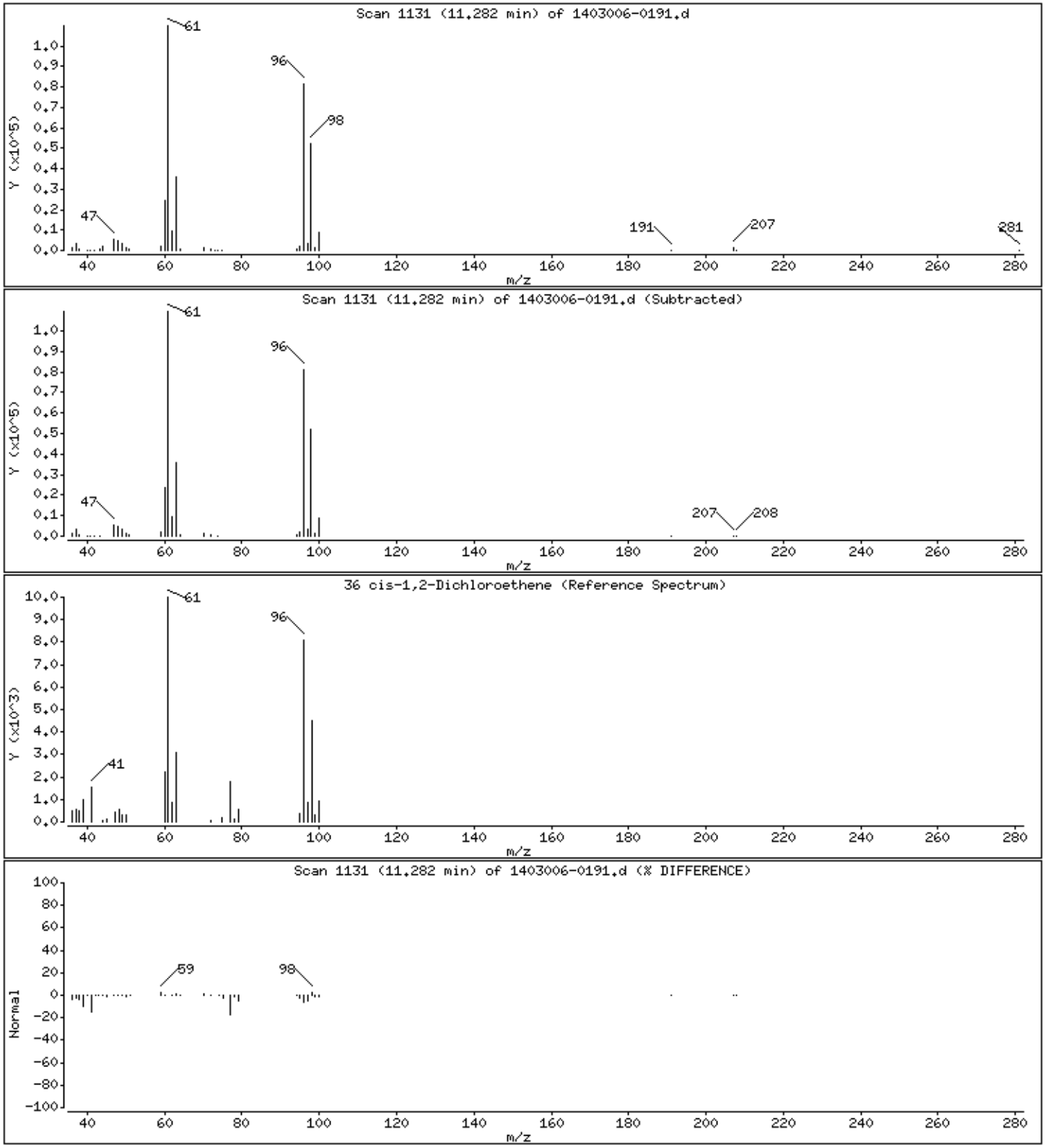
Client ID: MW-3 | Instrument: 5975hpms91.i

Sample Info: 1403006-01:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

36 cis-1,2-Dichloroethene | Concentration: 4.34307 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d

Date : 14-MAR-2014 01:18

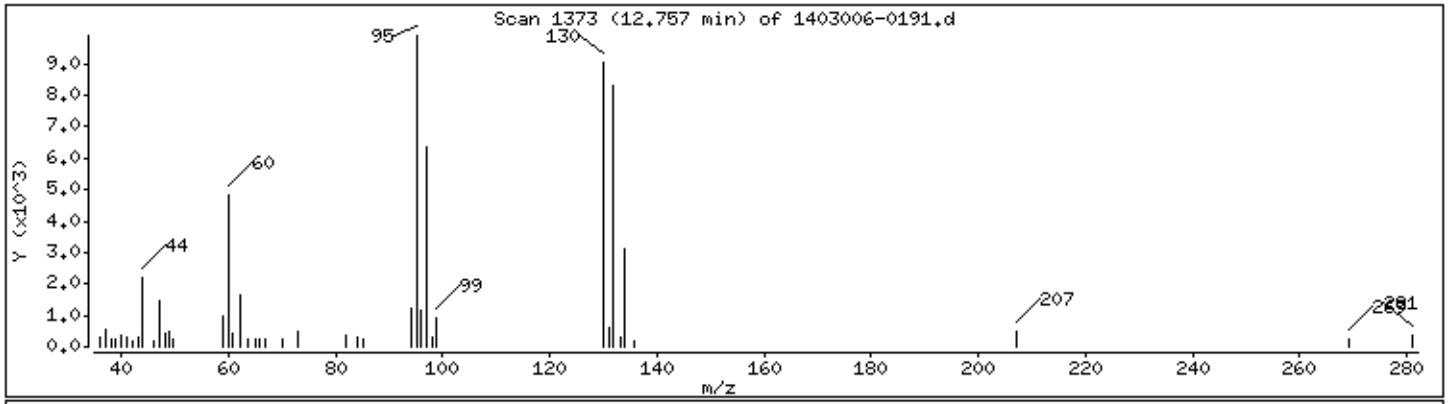
Client ID: MW-3 Instrument: 5975hpms91.i

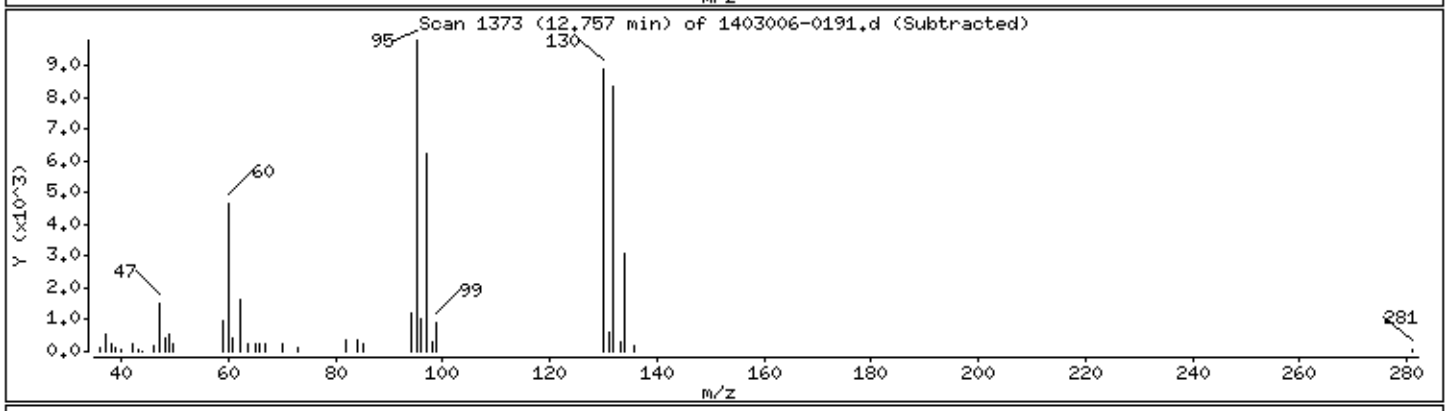
Sample Info: 1403006-01:JAO

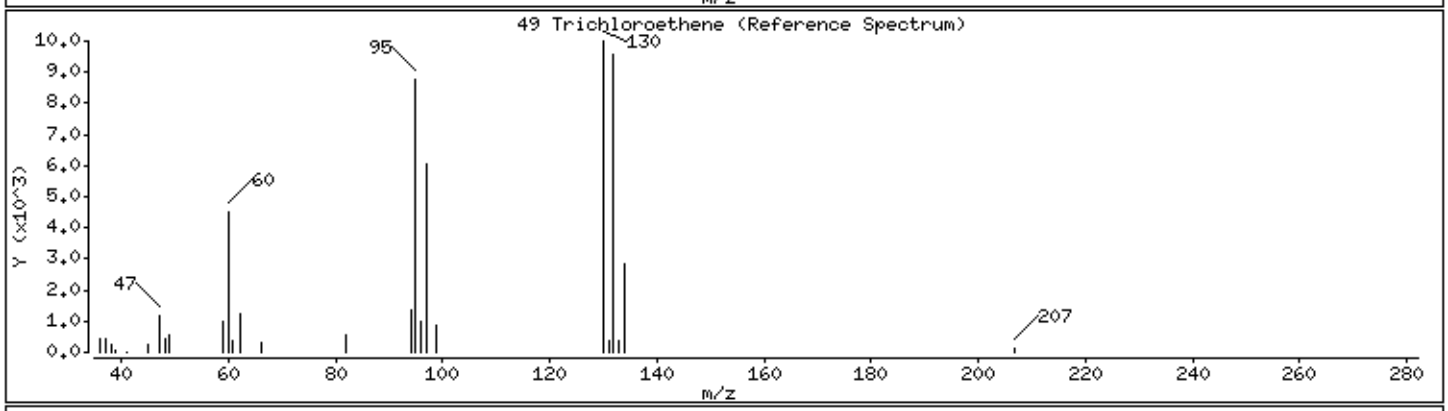
Purge Volume: 25.0 Operator: JAO

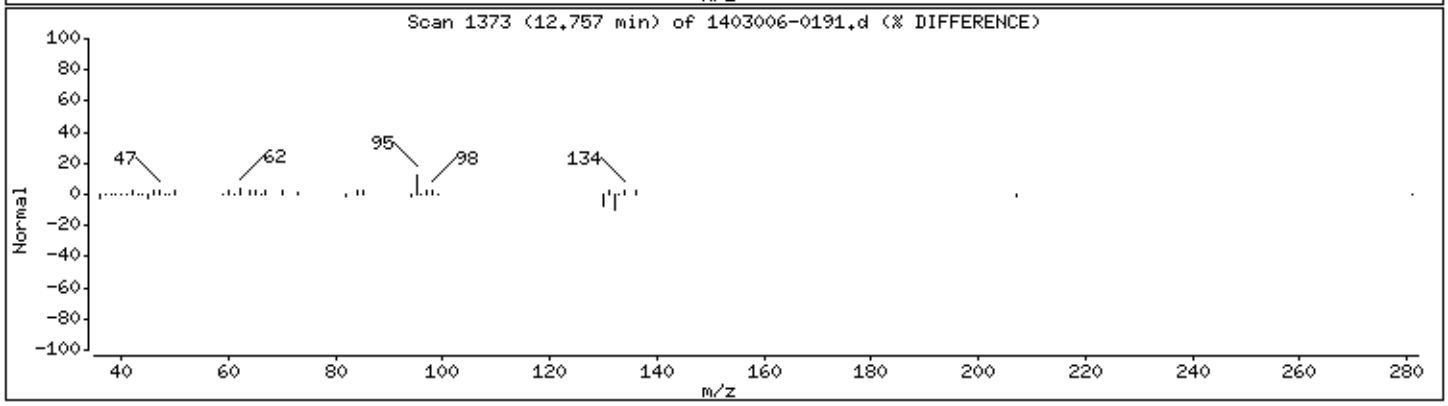
Column phase: SPB-624 Column diameter: 0.32

49 Trichloroethene Concentration: 0.414117 ug/L









3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0191.d

Date : 14-MAR-2014 01:18

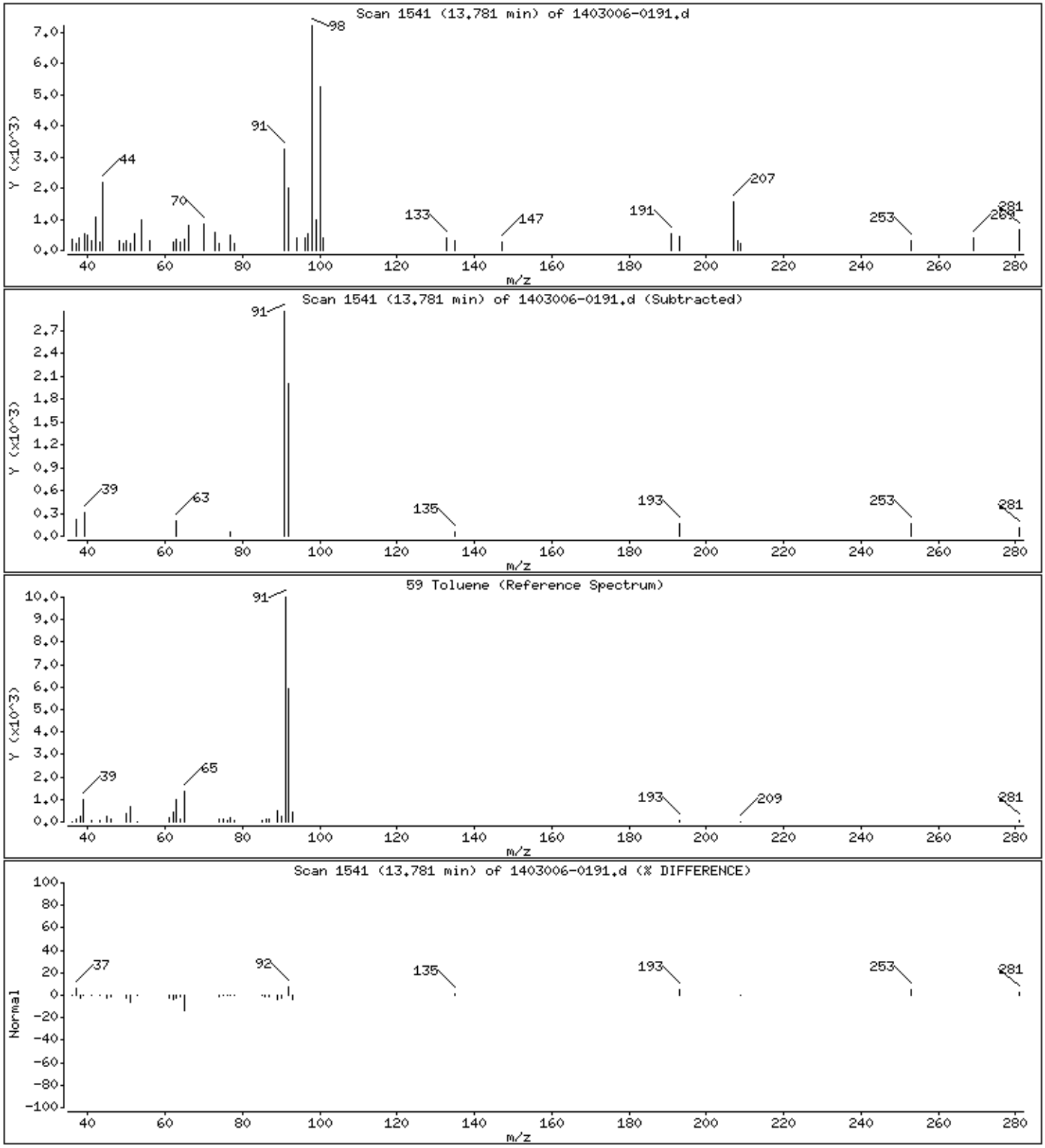
Client ID: MW-3 | Instrument: 5975hpms91.i

Sample Info: 1403006-01:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

59 Toluene | Concentration: 0.0310397 ug/L



3/14/2014

ANALYSIS DATA SHEET

SW 8260B

MW-8

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0391.d | Sampled: 03/04/14 08:15

Initial/Final: 25mL / 25mL | Lab ID: 1403006-03 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 22:53

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
67-64-1	Acetone	0.89	0.44	2.5	*J*
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide		0.020	0.50	*U*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.042	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	*U*
75-34-3	1,1-Dichloroethane		0.020	0.50	*U*
126-99-8	Chloroprene		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	*U*
594-20-7	2,2-Dichloropropane		0.030	0.50	*U*
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
74-97-5	Bromochloromethane		0.040	0.50	*U*
67-66-3	Chloroform		0.030	0.50	*U*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
563-58-6	1,1-Dichloropropene		0.030	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene		0.030	0.50	*U*

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

SW 8260B

MW-8

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0391.d | Sampled: 03/04/14 08:15

Initial/Final: 25mL / 25mL | Lab ID: 1403006-03 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 22:53

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene		0.030	0.50	U
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
142-28-9	1,3-Dichloropropane		0.030	0.50	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
179601-23-1	m,p-Xylene		0.080	1.0	U
95-47-6	o-Xylene		0.030	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
91-20-3	Naphthalene		0.15	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

SW 8260B

MW-8

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0391.d | Sampled: 03/04/14 08:15

Initial/Final: 25mL / 25mL | Lab ID: 1403006-03 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 22:53

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.304	106	65 - 150	
1,2-Dichloroethane-d4	5.000	5.378	108	59 - 150	
Toluene-d8	5.000	5.293	106	61 - 145	
Bromofluorobenzene	5.000	4.889	98	63 - 143	

Environmental Testing Laboratories

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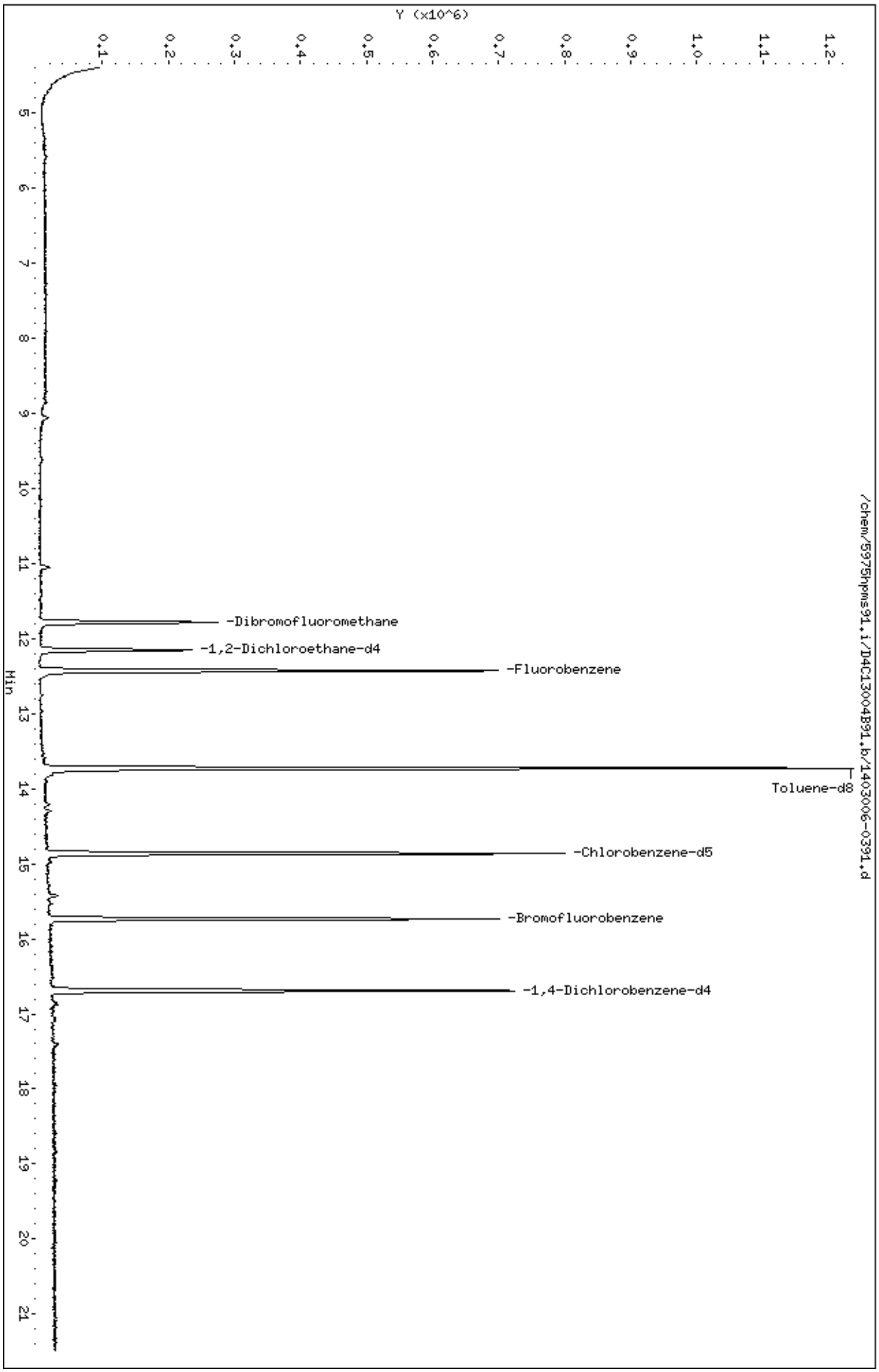
Liberty Analytical Corp.

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d
Date : 13-MAR-2014 22:53
Client ID: MW-8
Sample Info: 1403006-03:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d
Lab Smp Id: 1403006-03 Client Smp ID: MW-8
Inj Date : 13-MAR-2014 22:53
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-03:JAO
Misc Info : MW-8
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS8970.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	703973	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	512030	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	243546	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	196347	132.605	5.30420
$ 5 1,2-Dichloroethane-d4	65	12.154	12.154	(0.978)	191498	134.442	5.37768
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	915057	132.321	5.29282
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	310305	122.224	4.88894
8 Dichlorodifluoromethane	85	Compound Not Detected.					
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
18 Acetone	43	8.837	8.843	(0.711)	5755	22.3292	0.893169(a)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
22 3-Chloropropene	39	Compound Not Detected.					
23 Acetonitrile	41	Compound Not Detected.					
25 Methylene Chloride	84	9.599	9.599	(0.772)	1645	1.04950	0.0419802(aM)
26 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
31 Vinyl acetate	43	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Chloroprene	53	Compound Not Detected.					
34 2-butanone	43	Compound Not Detected.					
35 2,2-Dichloropropane	77	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	Compound Not Detected.					
37 Propionitrile	54	Compound Not Detected.					
38 Methacrylonitrile	41	Compound Not Detected.					
39 Bromochloromethane	128	Compound Not Detected.					
40 Chloroform	83	Compound Not Detected.					
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
44 1,1-dichloropropene	75	Compound Not Detected.					
45 Isobutyl alcohol	43	Compound Not Detected.					
46 Carbon Tetrachloride	117	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	Compound Not Detected.					
51 1,2-Dichloropropane	63	Compound Not Detected.					
52 Methylmethacrylate	69	Compound Not Detected.					
54 Dibromomethane	174	Compound Not Detected.					
55 Bromodichloromethane	83	Compound Not Detected.					
57 cis-1,3-Dichloropropene	75	Compound Not Detected.					
58 4-Methyl-2-pentanone	43	Compound Not Detected.					
59 Toluene	92	Compound Not Detected.					
60 Ethylmethacrylate	69	Compound Not Detected.					
61 trans-1,3-Dichloropropene	75	Compound Not Detected.					
62 1,1,2-Trichloroethane	97	Compound Not Detected.					
63 2-hexanone	43	Compound Not Detected.					
64 1,3-Dichloropropane	76	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
66 Dibromochloromethane	129	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
70 Ethylbenzene	106	Compound Not Detected.					
71 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
72 m,p-Xylene	106	Compound Not Detected.					
73 m,p-Xylene (part of total)	106	Compound Not Detected.					
74 o-Xylene	106	Compound Not Detected.					
75 o-Xylene (part of total)	106	Compound Not Detected.					
76 Styrene	104	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
77 Bromoform	173	Compound Not Detected.					
79 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
81 1,2,3-Trichloropropane	110	Compound Not Detected.					
80 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
92 1,3-Dichlorobenzene	146	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					
95 1,2-Dichlorobenzene	146	Compound Not Detected.					
97 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
98 Hexachlorobutadiene	225	Compound Not Detected.					
99 Naphthalene	128	Compound Not Detected.					
M 102 Xylene (total)	106	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d
Report Date: 14-Mar-2014 10:28

CompuChem

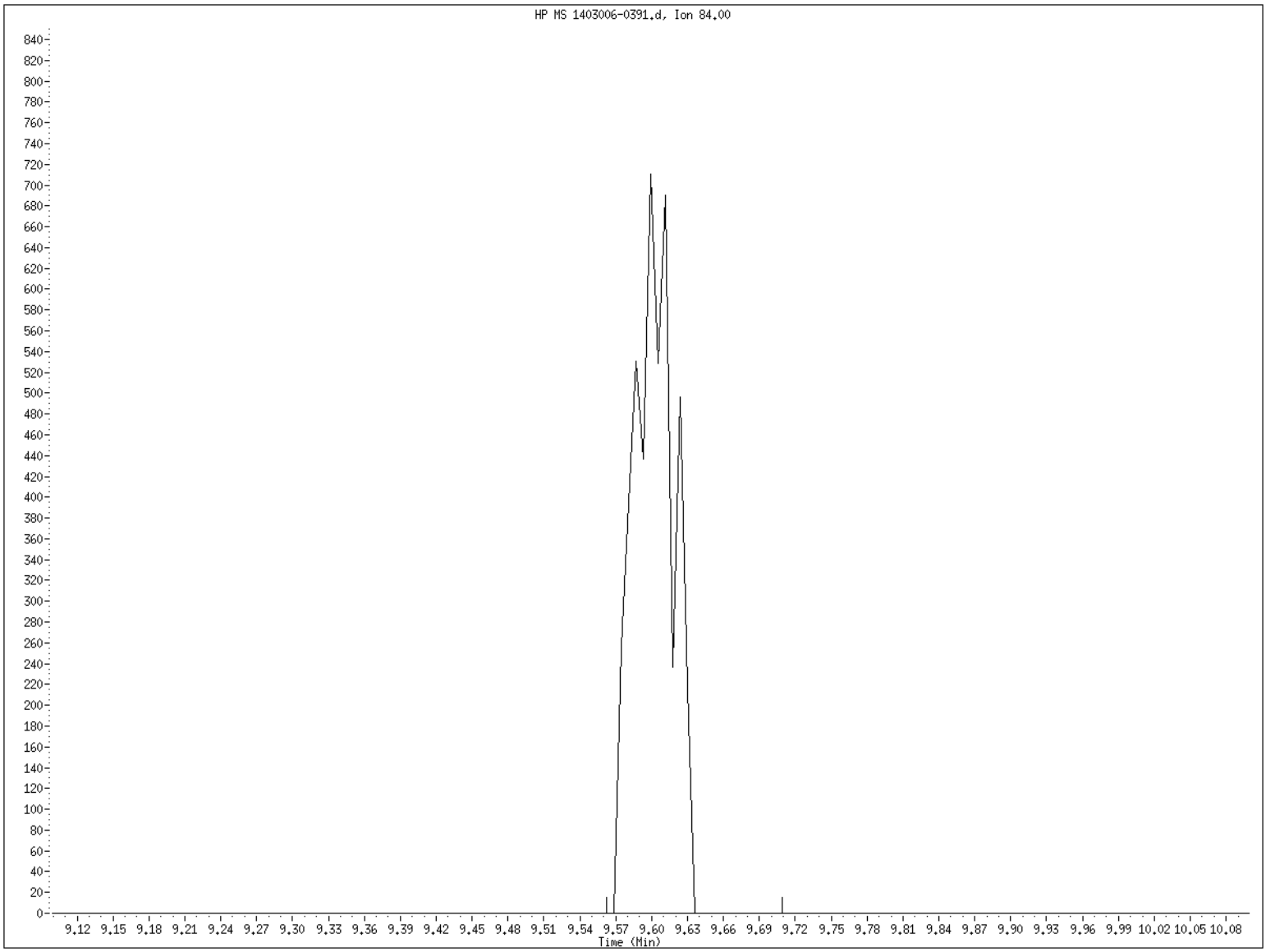
SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d
Lab Smp Id: 1403006-03 Client Smp ID: MW-8
Inj Date : 13-MAR-2014 22:53
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-03:JAO
Misc Info : MW-8
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

Methylene Chloride CAS Number 75-09-2 Area = 1645 Manually integrated



File name: /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d
Client ID: MW-8
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 22:53
Retention Time: 9.60
Operator ID: JAO

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d

Date : 13-MAR-2014 22:53

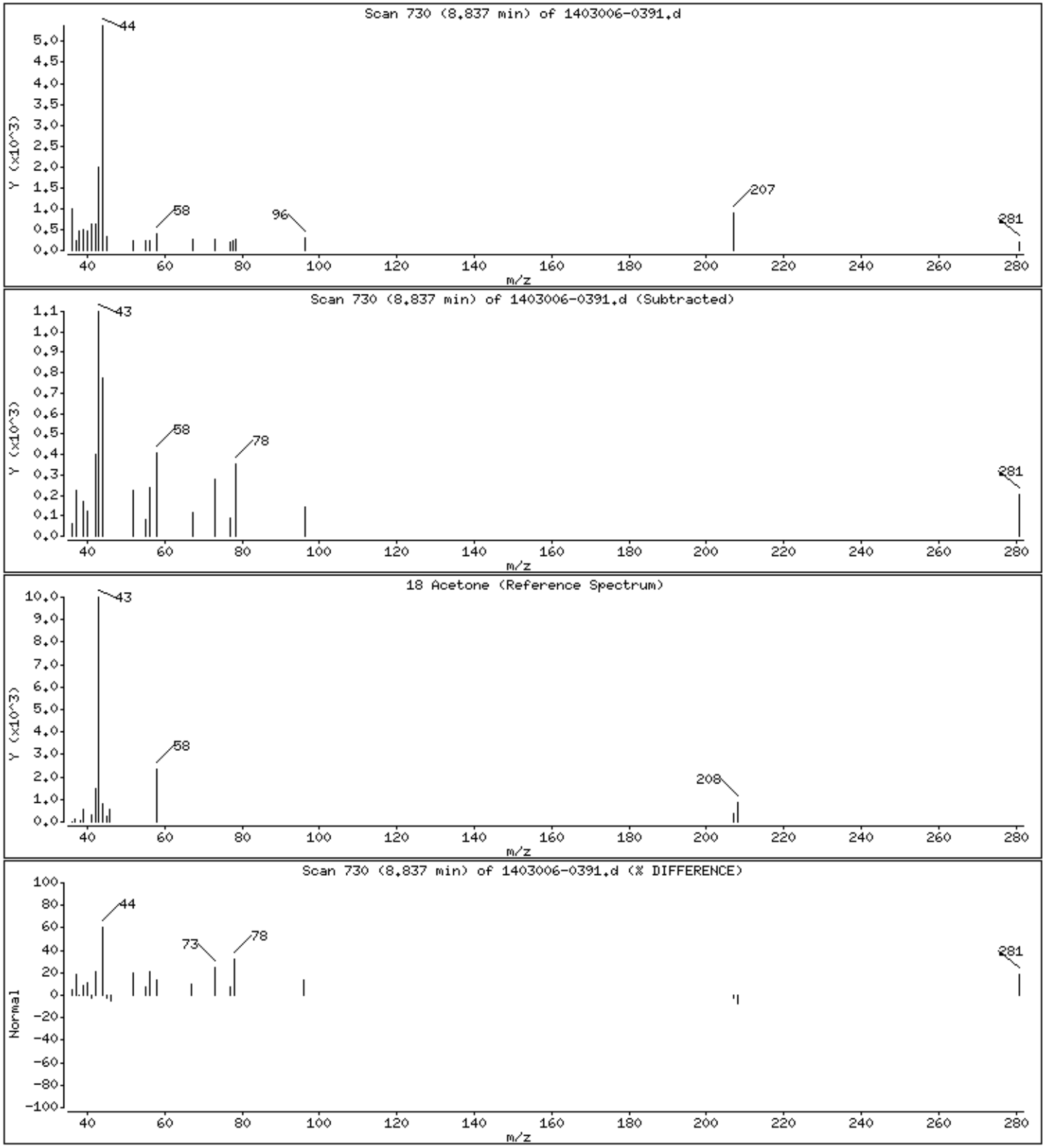
Client ID: MW-8 | Instrument: 5975hpms91.i

Sample Info: 1403006-03:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

18 Acetone | Concentration: 0.893169 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0391.d

Date : 13-MAR-2014 22:53

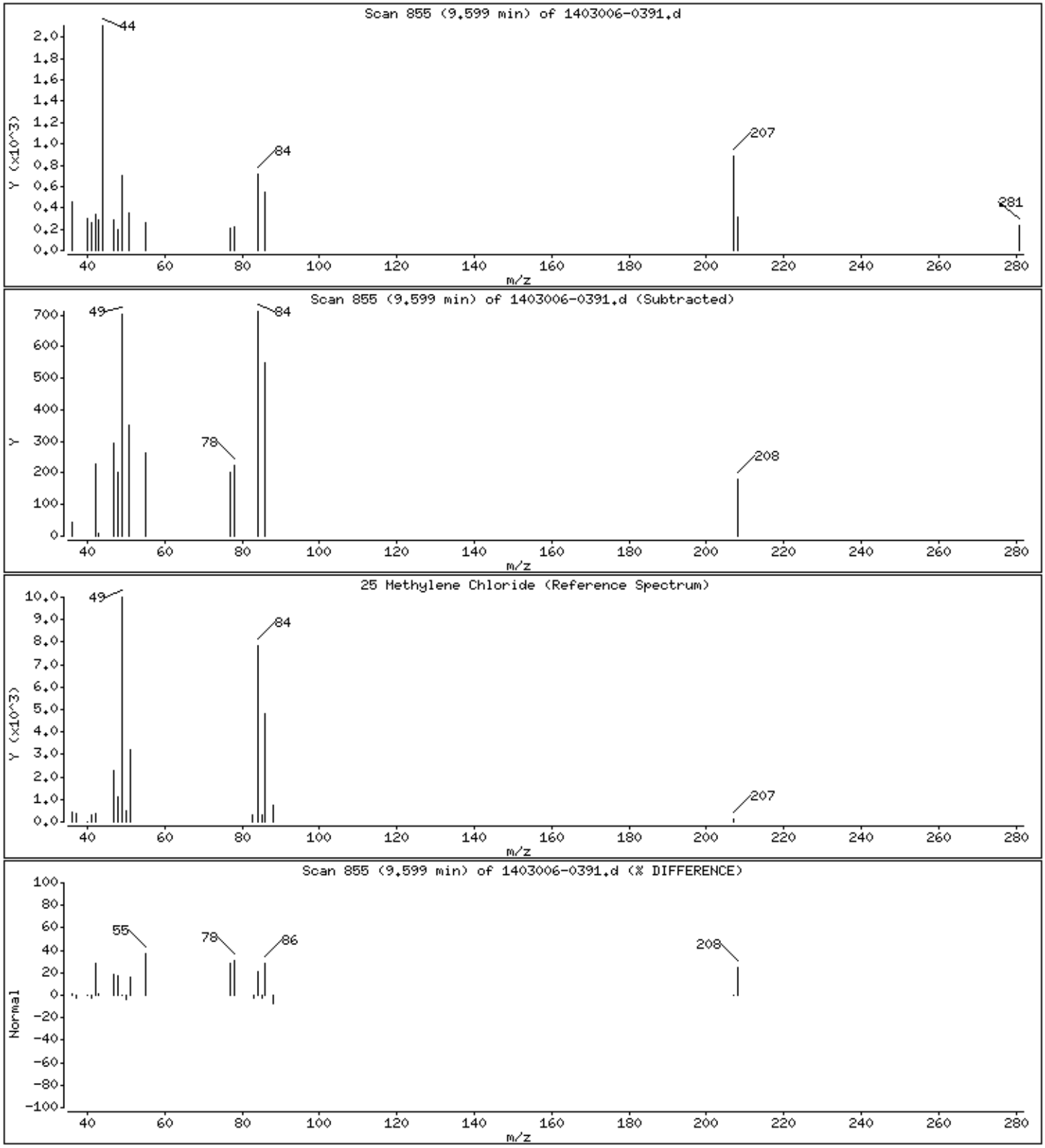
Client ID: MW-8 | Instrument: 5975hpms91.i

Sample Info: 1403006-03:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

25 Methylene Chloride | Concentration: 0.0419802 ug/L



3/14/2014

ANALYSIS DATA SHEET

SW 8260B

MW-9

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0491.d | Sampled: 03/03/14 11:10

Initial/Final: 25mL / 25mL | Lab ID: 1403006-04 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 23:22

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane	0.072	0.030	0.50	*J*
74-87-3	Chloromethane		0.11	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
74-83-9	Bromomethane		0.11	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-69-4	Trichlorofluoromethane		0.060	0.50	*U*
107-02-8	Acrolein		1.0	5.0	*U*
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
67-64-1	Acetone		0.44	2.5	*U*
74-88-4	Iodomethane		0.030	0.50	*U*
75-15-0	Carbon disulfide		0.020	0.50	*U*
107-05-1	3-Chloropropene		0.050	0.50	*U*
75-05-8	Acetonitrile		0.030	0.50	*U*
75-09-2	Methylene chloride	0.085	0.020	0.50	*JB*
107-13-1	Acrylonitrile		0.36	5.0	*U*
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	*U*
75-34-3	1,1-Dichloroethane	1.5	0.020	0.50	
126-99-8	Chloroprene		0.020	0.50	*U*
108-05-4	Vinyl acetate		0.060	0.50	*U*
156-59-2	cis-1,2-Dichloroethene	0.39	0.030	0.50	*J*
594-20-7	2,2-Dichloropropane		0.030	0.50	*U*
107-12-0	Propionitrile		1.4	25	*U*
78-93-3	2-Butanone		0.28	2.5	*U*
126-98-7	Methacrylonitrile		0.39	5.0	*U*
74-97-5	Bromochloromethane		0.040	0.50	*U*
67-66-3	Chloroform		0.030	0.50	*U*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
563-58-6	1,1-Dichloropropene		0.030	0.50	*U*
56-23-5	Carbon tetrachloride		0.030	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
78-83-1	Isobutyl alcohol		5.9	25	*U*
71-43-2	Benzene	0.12	0.030	0.50	*J*

Environmental Testing Laboratories

CompuChem

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ANALYSIS DATA SHEET

SW 8260B

MW-9

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0491.d | Sampled: 03/03/14 11:10

Initial/Final: 25mL / 25mL | Lab ID: 1403006-04 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 23:22

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
79-01-6	Trichloroethene	0.12	0.030	0.50	*J*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
74-95-3	Dibromomethane		0.030	0.50	*U*
80-62-6	Methyl Methacrylate		0.56	5.0	*U*
75-27-4	Bromodichloromethane		0.030	0.50	*U*
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	*U*
108-10-1	4-Methyl-2-pentanone		0.42	2.5	*U*
108-88-3	Toluene		0.030	0.50	*U*
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	*U*
79-00-5	1,1,2-Trichloroethane		0.040	0.50	*U*
97-63-2	Ethyl Methacrylate		0.41	5.0	*U*
142-28-9	1,3-Dichloropropane		0.030	0.50	*U*
127-18-4	Tetrachloroethene	0.28	0.060	0.50	*J*
591-78-6	2-Hexanone		0.51	2.5	*U*
124-48-1	Dibromochloromethane		0.040	0.50	*U*
108-90-7	Chlorobenzene	0.024	0.020	0.50	*J*
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	*U*
100-41-4	Ethylbenzene		0.040	0.50	*U*
179601-23-1	m,p-Xylene		0.080	1.0	*U*
95-47-6	o-Xylene		0.030	0.50	*U*
100-42-5	Styrene		0.020	0.50	*U*
75-25-2	Bromoform		0.030	0.50	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	*U*
96-18-4	1,2,3-Trichloropropane		0.090	0.50	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	*U*
541-73-1	1,3-Dichlorobenzene		0.040	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*
95-50-1	1,2-Dichlorobenzene		0.030	0.50	*U*
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	*U*
87-68-3	Hexachlorobutadiene		0.030	0.50	*U*
91-20-3	Naphthalene		0.15	0.50	*U*
1330-20-7	Xylenes (total)		0.030	0.50	*U*

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

SW 8260B

MW-9

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0491.d | Sampled: 03/03/14 11:10

Initial/Final: 25mL / 25mL | Lab ID: 1403006-04 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 23:22

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.147	103	65 - 150	
1,2-Dichloroethane-d4	5.000	5.340	107	59 - 150	
Toluene-d8	5.000	5.070	101	61 - 145	
Bromofluorobenzene	5.000	4.872	97	63 - 143	

Environmental Testing Laboratories

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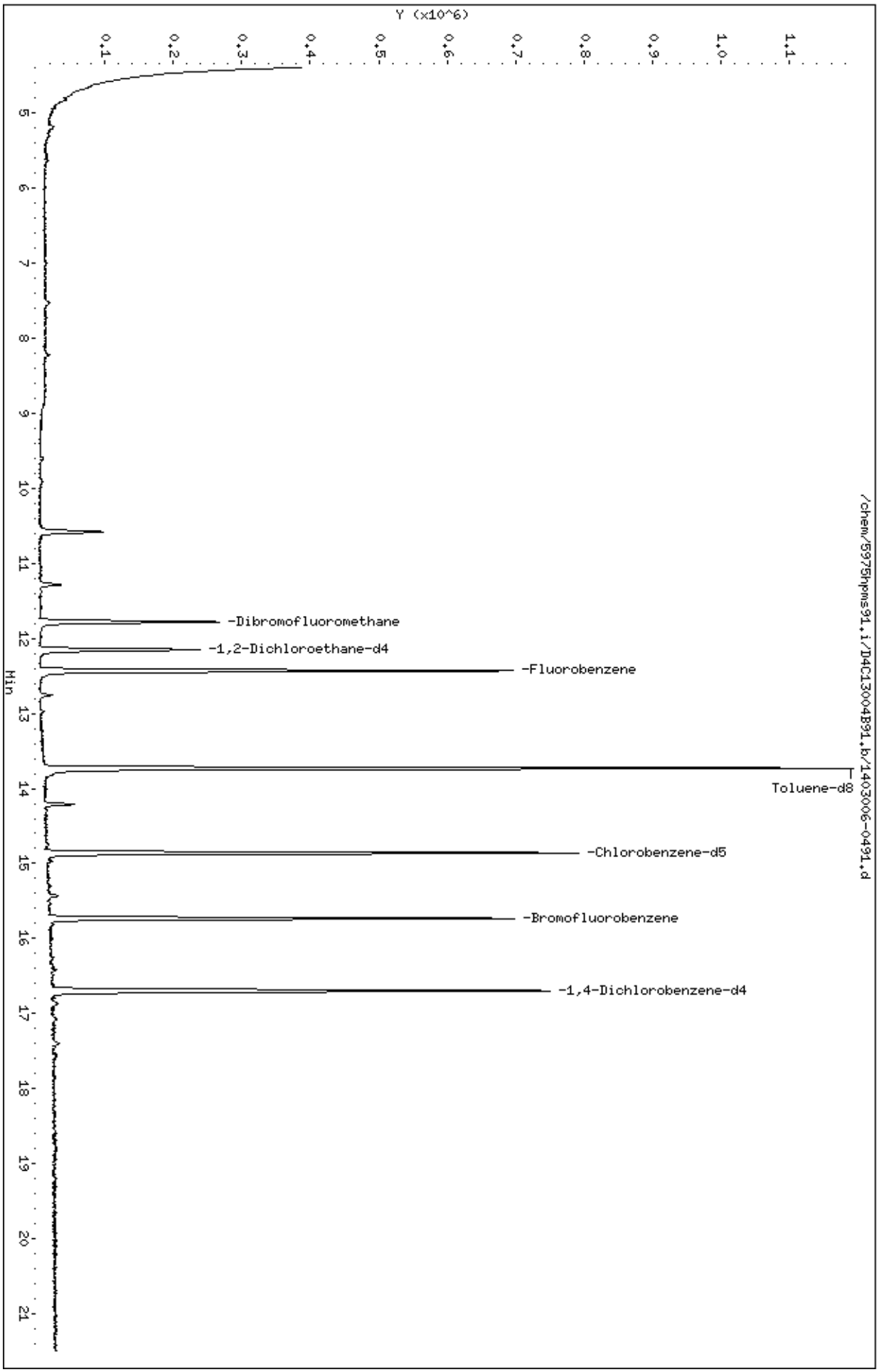
Liberty Analytical Corp.

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d
Date : 13-MAR-2014 23:22
Client ID: MW-9
Sample Info: 1403006-04:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d
Lab Smp Id: 1403006-04 Client Smp ID: MW-9
Inj Date : 13-MAR-2014 23:22
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-04:JAO
Misc Info : MW-9
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS8970.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	703113	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	510981	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	243490	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	190287	128.670	5.14678
$ 5 1,2-Dichloroethane-d4	65	12.153	12.154	(0.978)	189933	133.506	5.34025
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	874659	126.739	5.06954
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	309175	121.807	4.87226
8 Dichlorodifluoromethane	85	4.771	4.765	(0.384)	3225	1.79714	0.0718856(a)
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
18 Acetone	43	Compound Not Detected.					
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
22 3-Chloropropene	39	Compound Not Detected.					
23 Acetonitrile	41	Compound Not Detected.					
25 Methylene Chloride	84	9.605	9.599	(0.773)	3309	2.11371	0.0845486(aM)
26 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
31 Vinyl acetate	43	Compound Not Detected.					
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	116105	37.3326	1.49331
33 Chloroprene	53	Compound Not Detected.					
34 2-butanone	43	Compound Not Detected.					
35 2,2-Dichloropropane	77	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	16962	9.68410	0.387364(a)
37 Propionitrile	54	Compound Not Detected.					
38 Methacrylonitrile	41	Compound Not Detected.					
39 Bromochloromethane	128	Compound Not Detected.					
40 Chloroform	83	Compound Not Detected.					
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
44 1,1-dichloropropene	75	Compound Not Detected.					
45 Isobutyl alcohol	43	Compound Not Detected.					
46 Carbon Tetrachloride	117	Compound Not Detected.					
47 Benzene	78	12.178	12.178	(0.980)	19970	2.89659	0.115864(a)
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	12.757	12.757	(1.026)	5602	2.94436	0.117775(a)
51 1,2-Dichloropropane	63	Compound Not Detected.					
52 Methylmethacrylate	69	Compound Not Detected.					
54 Dibromomethane	174	Compound Not Detected.					
55 Bromodichloromethane	83	Compound Not Detected.					
57 cis-1,3-Dichloropropene	75	Compound Not Detected.					
58 4-Methyl-2-pentanone	43	Compound Not Detected.					
59 Toluene	92	Compound Not Detected.					
60 Ethylmethacrylate	69	Compound Not Detected.					
61 trans-1,3-Dichloropropene	75	Compound Not Detected.					
62 1,1,2-Trichloroethane	97	Compound Not Detected.					
63 2-hexanone	43	Compound Not Detected.					
64 1,3-Dichloropropane	76	Compound Not Detected.					
65 Tetrachloroethene	164	14.214	14.214	(0.957)	10240	6.91493	0.276597(a)
66 Dibromochloromethane	129	Compound Not Detected.					
69 Chlorobenzene	112	14.885	14.885	(1.002)	2842	0.59751	0.0239006(a)
70 Ethylbenzene	106	Compound Not Detected.					
71 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
72 m,p-Xylene	106	Compound Not Detected.					
73 m,p-Xylene (part of total)	106	Compound Not Detected.					
74 o-Xylene	106	Compound Not Detected.					
75 o-Xylene (part of total)	106	Compound Not Detected.					
76 Styrene	104	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
77 Bromoform	173	Compound Not Detected.					
79 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
81 1,2,3-Trichloropropane	110	Compound Not Detected.					
80 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
92 1,3-Dichlorobenzene	146	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					
95 1,2-Dichlorobenzene	146	Compound Not Detected.					
97 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
98 Hexachlorobutadiene	225	Compound Not Detected.					
99 Naphthalene	128	Compound Not Detected.					
M 102 Xylene (total)	106	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d
Report Date: 14-Mar-2014 10:28

CompuChem

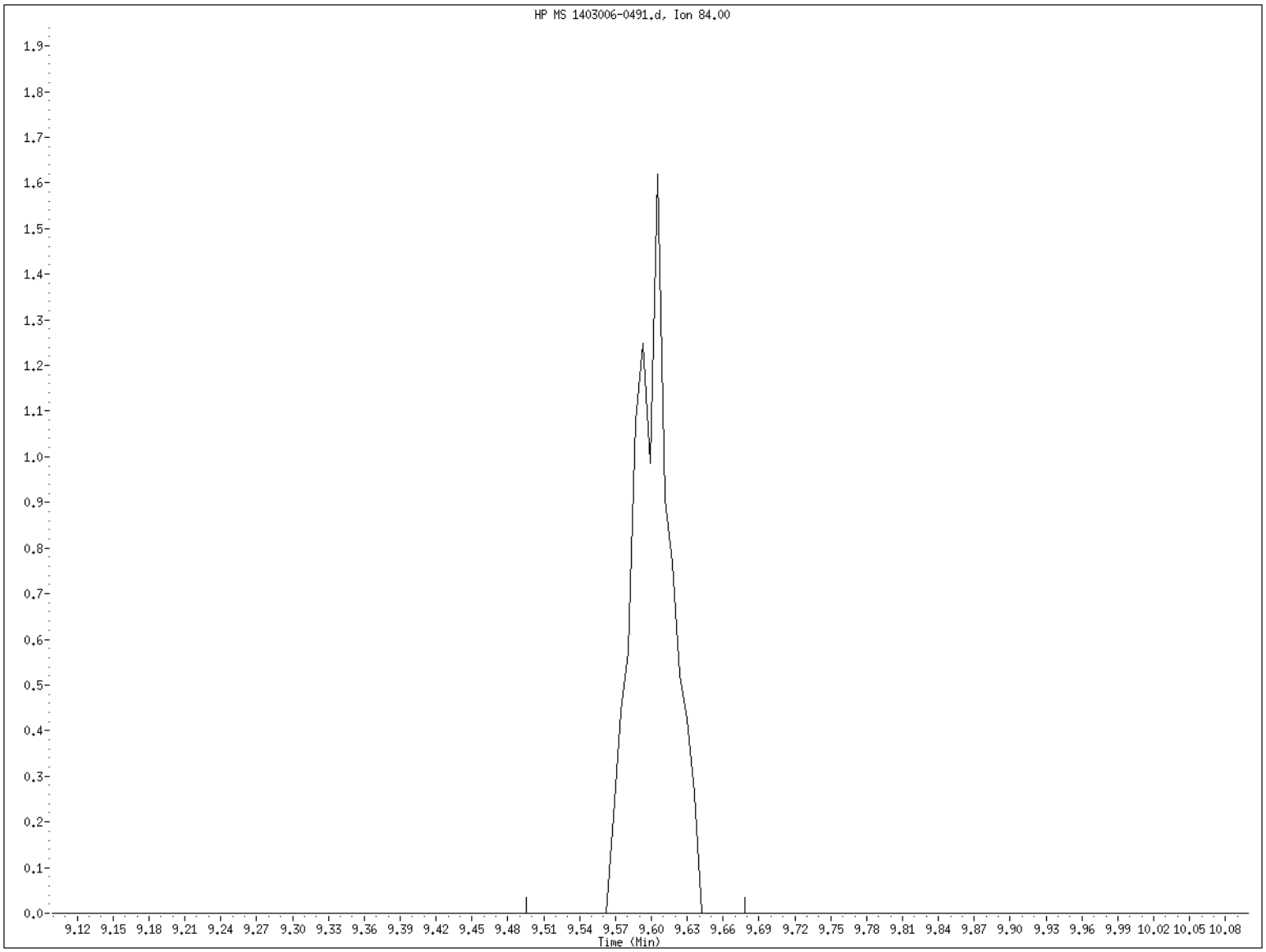
SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d
Lab Smp Id: 1403006-04 Client Smp ID: MW-9
Inj Date : 13-MAR-2014 23:22
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-04:JAO
Misc Info : MW-9
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

Methylene Chloride CAS Number 75-09-2 Area = 3309 Manually integrated



File name: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d
Client ID: MW-9
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 23:22
Retention Time: 9.61
Operator ID: JAO

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d

Date : 13-MAR-2014 23:22

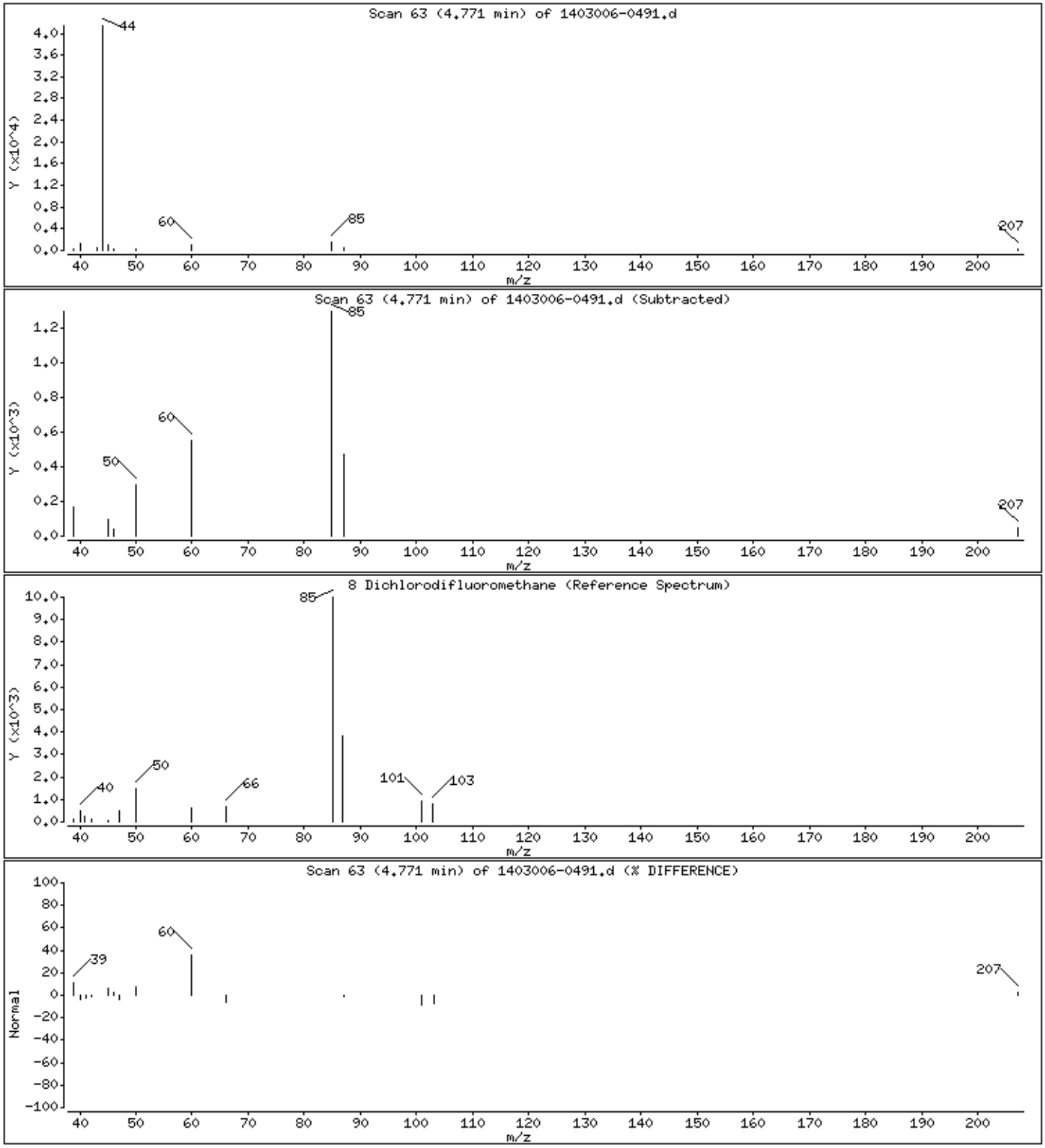
Client ID: MW-9 | Instrument: 5975hpms91.i

Sample Info: 1403006-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

8 Dichlorodifluoromethane | Concentration: 0.0718856 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d

Date : 13-MAR-2014 23:22

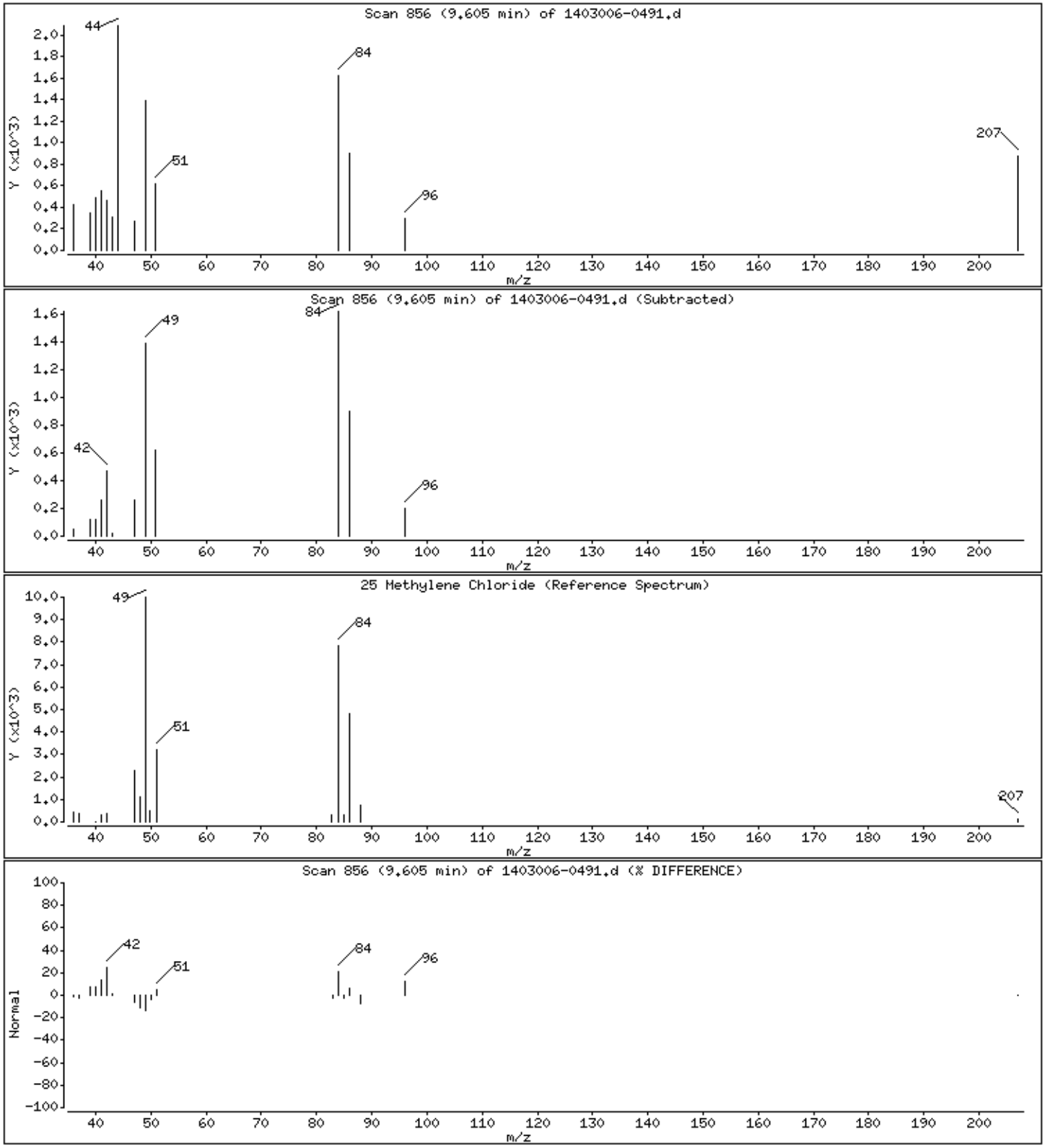
Client ID: MW-9 | Instrument: 5975hpms91.i

Sample Info: 1403006-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

25 Methylene Chloride | Concentration: 0.0845486 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d

Date : 13-MAR-2014 23:22

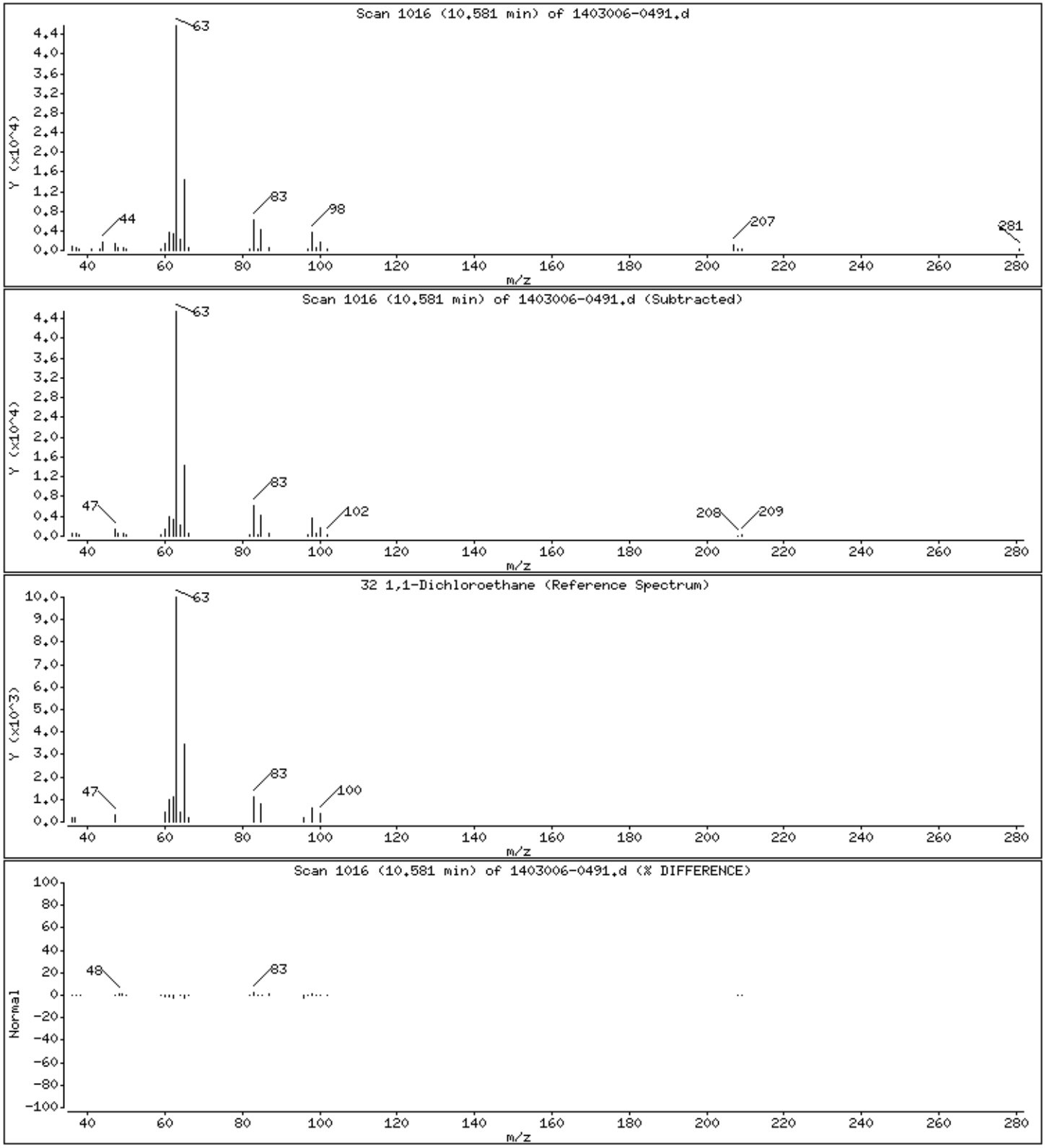
Client ID: MW-9 Instrument: 5975hpms91.i

Sample Info: 1403006-04:JAO

Purge Volume: 25.0 Operator: JAO

Column phase: SPB-624 Column diameter: 0.32

32 1,1-Dichloroethane Concentration: 1.49331 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d

Date : 13-MAR-2014 23:22

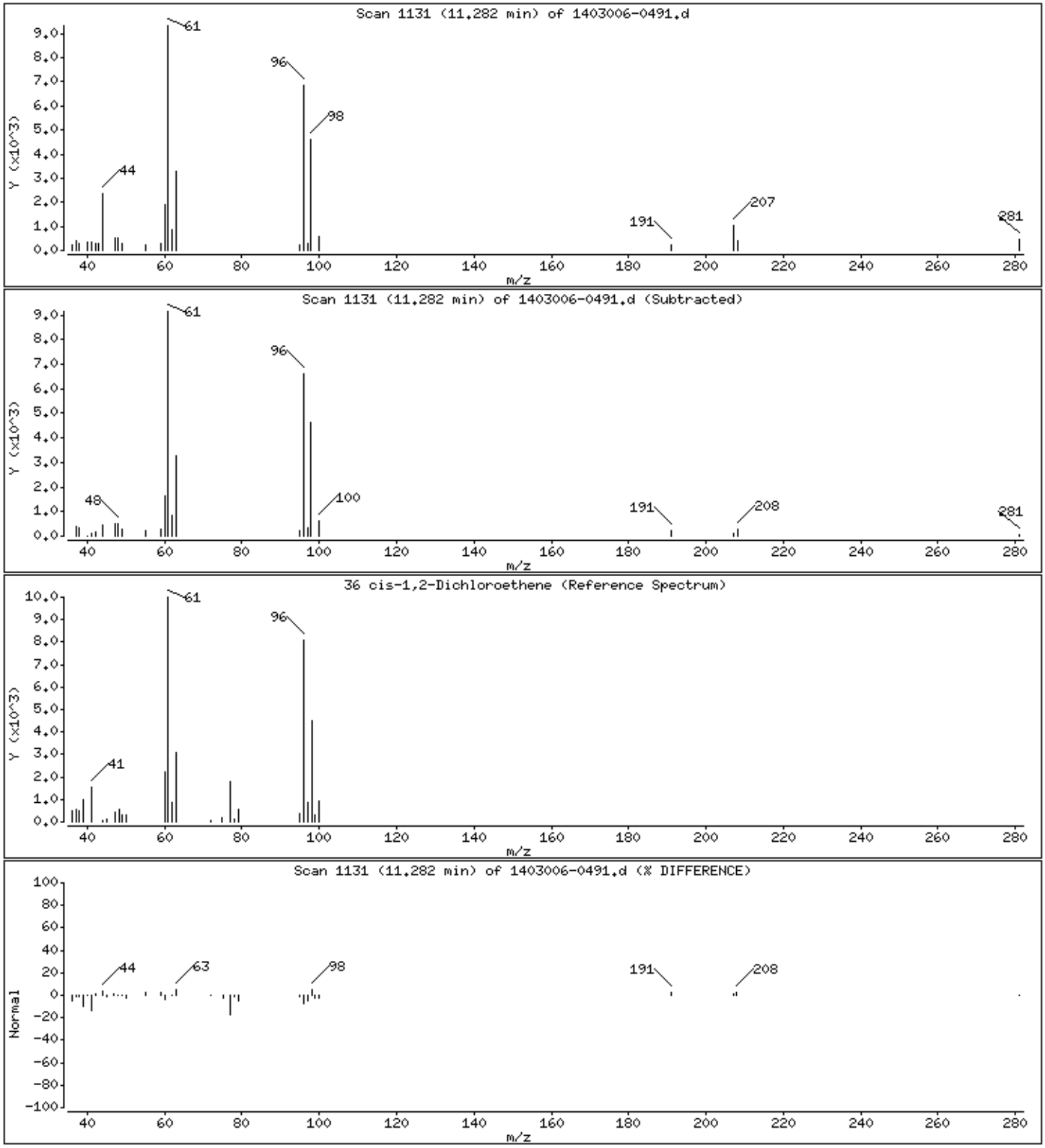
Client ID: MW-9 | Instrument: 5975hpms91.i

Sample Info: 1403006-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

36 cis-1,2-Dichloroethene | Concentration: 0.387364 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d

Date : 13-MAR-2014 23:22

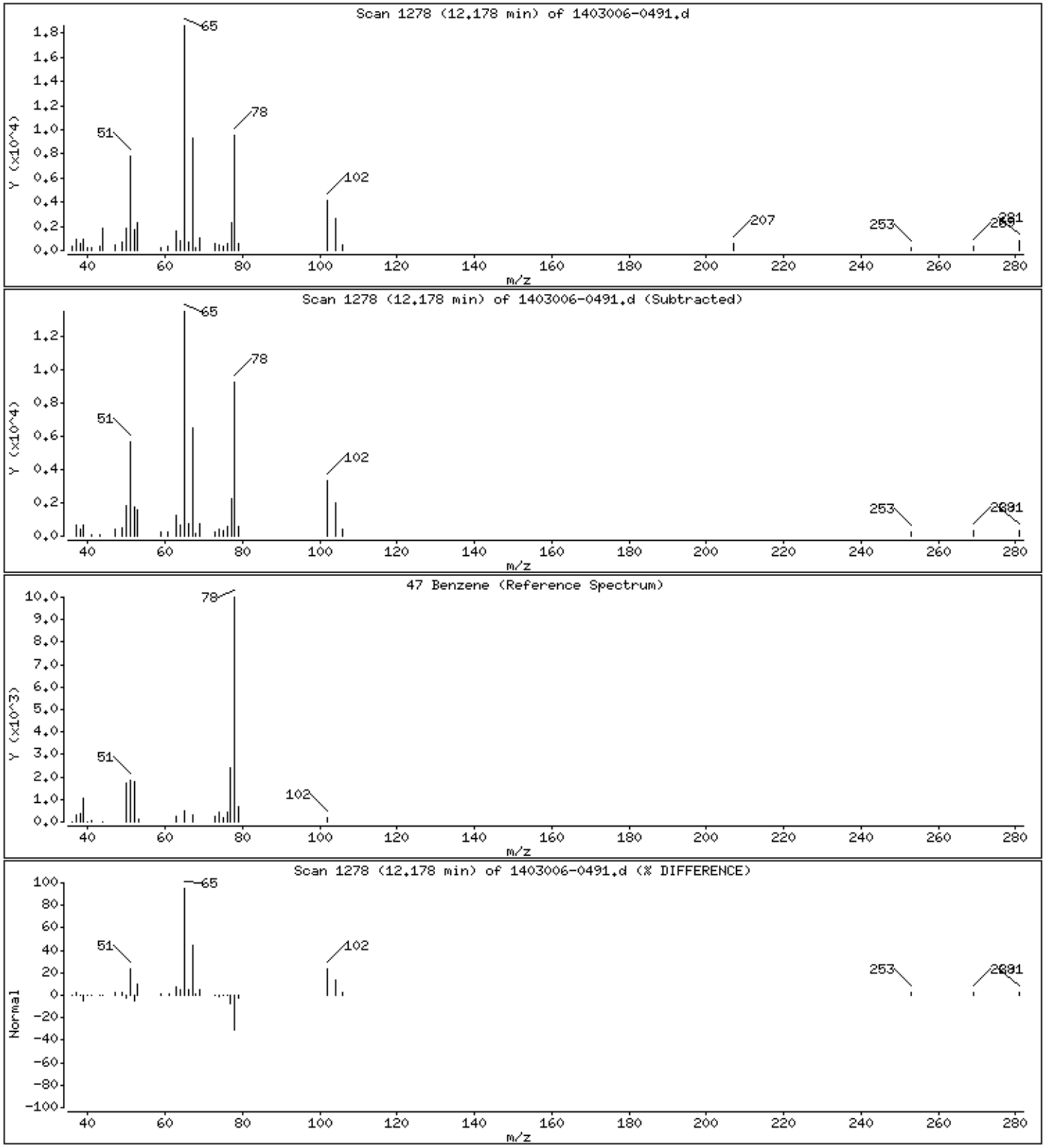
Client ID: MW-9 | Instrument: 5975hpms91.i

Sample Info: 1403006-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

47 Benzene | Concentration: 0.115864 ug/L



Robert Hamm 3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d

Date : 13-MAR-2014 23:22

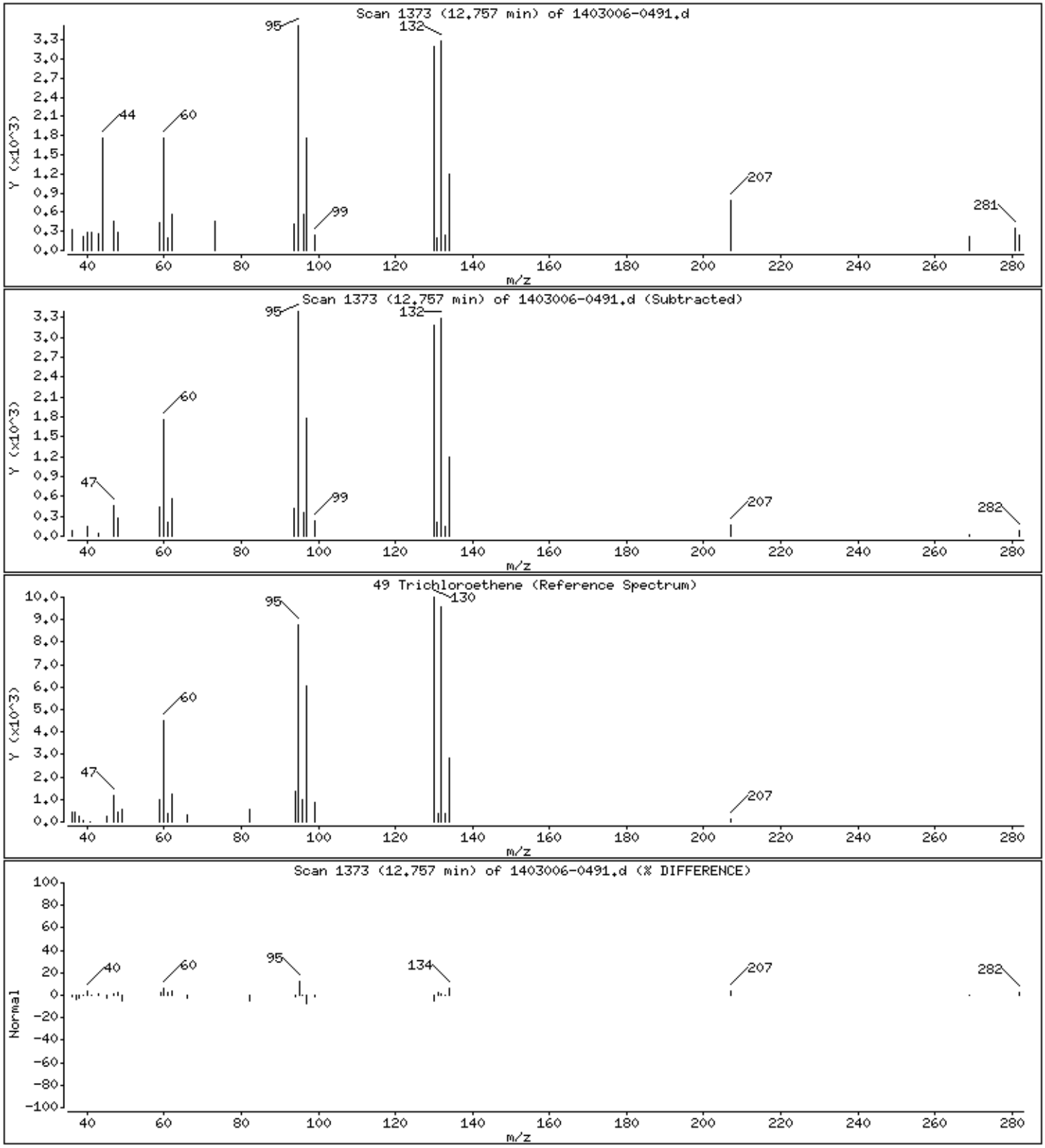
Client ID: MW-9 | Instrument: 5975hpms91.i

Sample Info: 1403006-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

49 Trichloroethene | Concentration: 0.117775 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d

Date : 13-MAR-2014 23:22

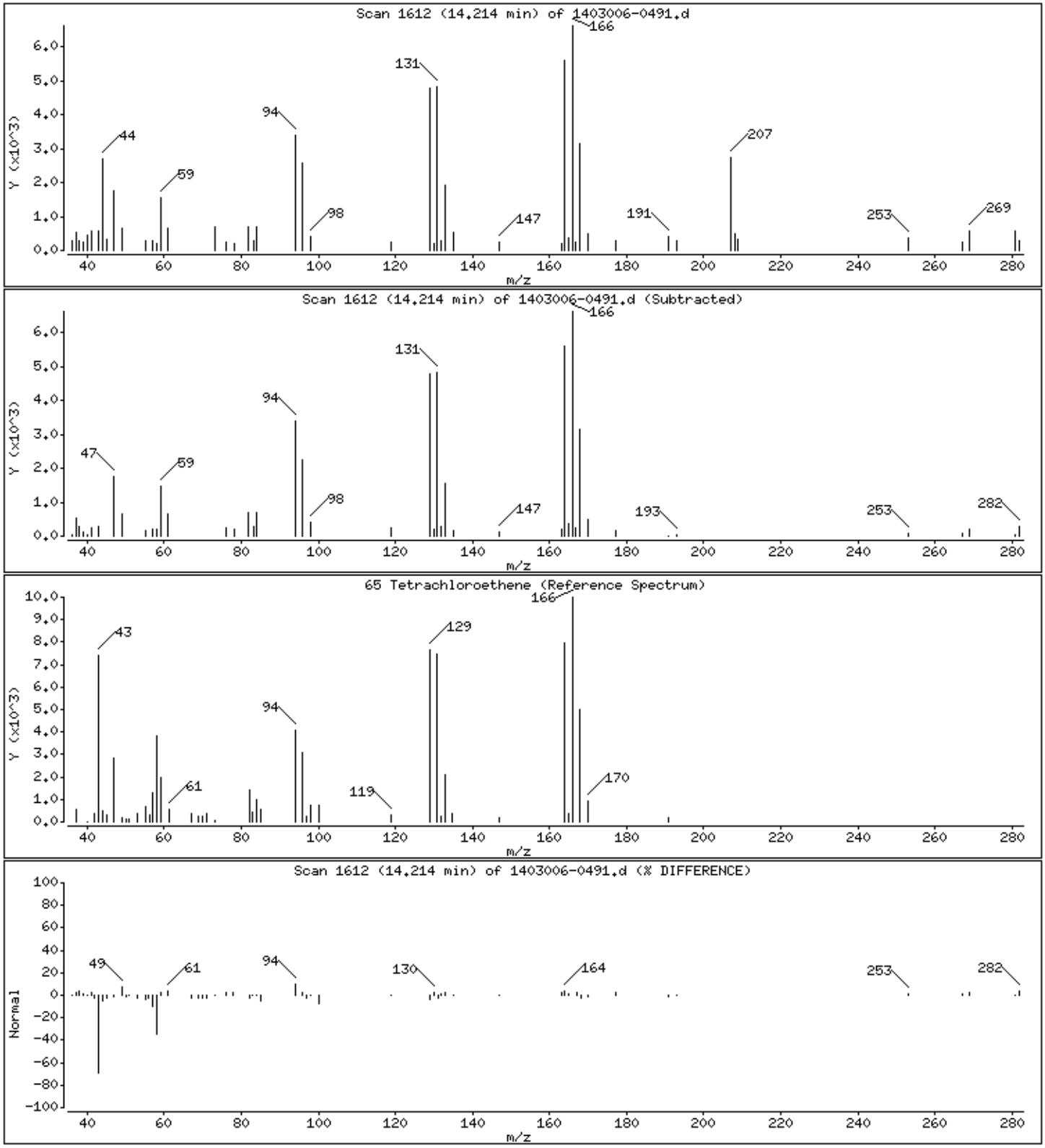
Client ID: MW-9 | Instrument: 5975hpms91.i

Sample Info: 1403006-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

65 Tetrachloroethene | Concentration: 0.276597 ug/L



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0491.d

Date : 13-MAR-2014 23:22

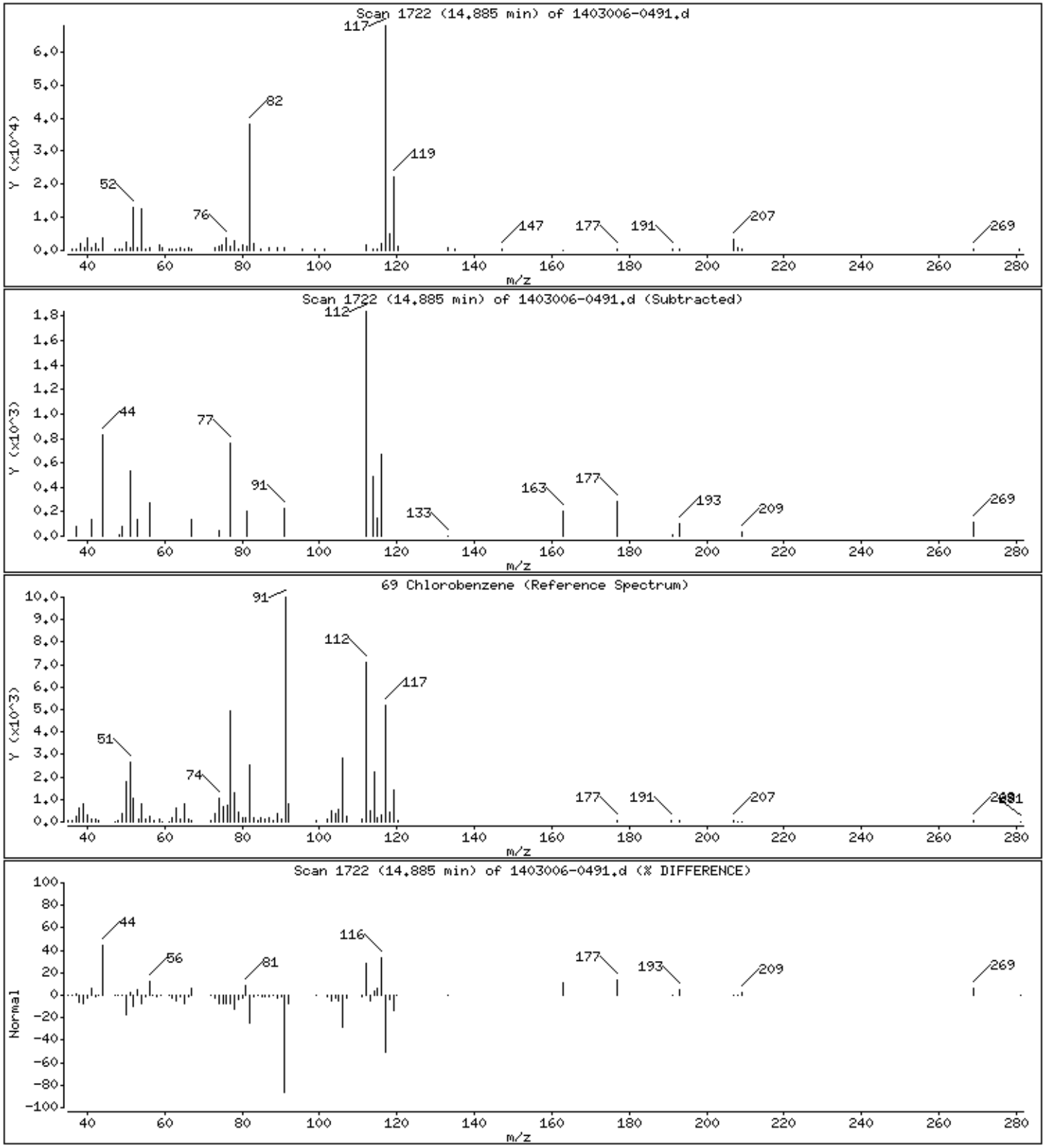
Client ID: MW-9 | Instrument: 5975hpms91.i

Sample Info: 1403006-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

69 Chlorobenzene | Concentration: 0.0239006 ug/L



3/14/2014

ANALYSIS DATA SHEET

SW 8260B

TRIP BLANK

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0791.d | Sampled: 03/03/14 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1403006-07 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 20:48

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride		0.020	0.50	U
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
126-99-8	Chloroprene		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
594-20-7	2,2-Dichloropropane		0.030	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
74-97-5	Bromochloromethane		0.040	0.50	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
563-58-6	1,1-Dichloropropene		0.030	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U
71-43-2	Benzene		0.030	0.50	U

Environmental Testing Laboratories

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Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

TRIP BLANK

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0791.d | Sampled: 03/03/14 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1403006-07 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 20:48

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene		0.030	0.50	U
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
142-28-9	1,3-Dichloropropane		0.030	0.50	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
179601-23-1	m,p-Xylene		0.080	1.0	U
95-47-6	o-Xylene		0.030	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U
91-20-3	Naphthalene		0.15	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

SW 8260B

TRIP BLANK

Client: DRAPER | SDG 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Preparation: EPA 5030B | File ID: 1403006-0791.d | Sampled: 03/03/14 00:00

Initial/Final: 25mL / 25mL | Lab ID: 1403006-07 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 20:48

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.063	101	65 - 150	
1,2-Dichloroethane-d4	5.000	5.236	105	59 - 150	
Toluene-d8	5.000	4.932	99	61 - 145	
Bromofluorobenzene	5.000	4.750	95	63 - 143	

Environmental Testing Laboratories

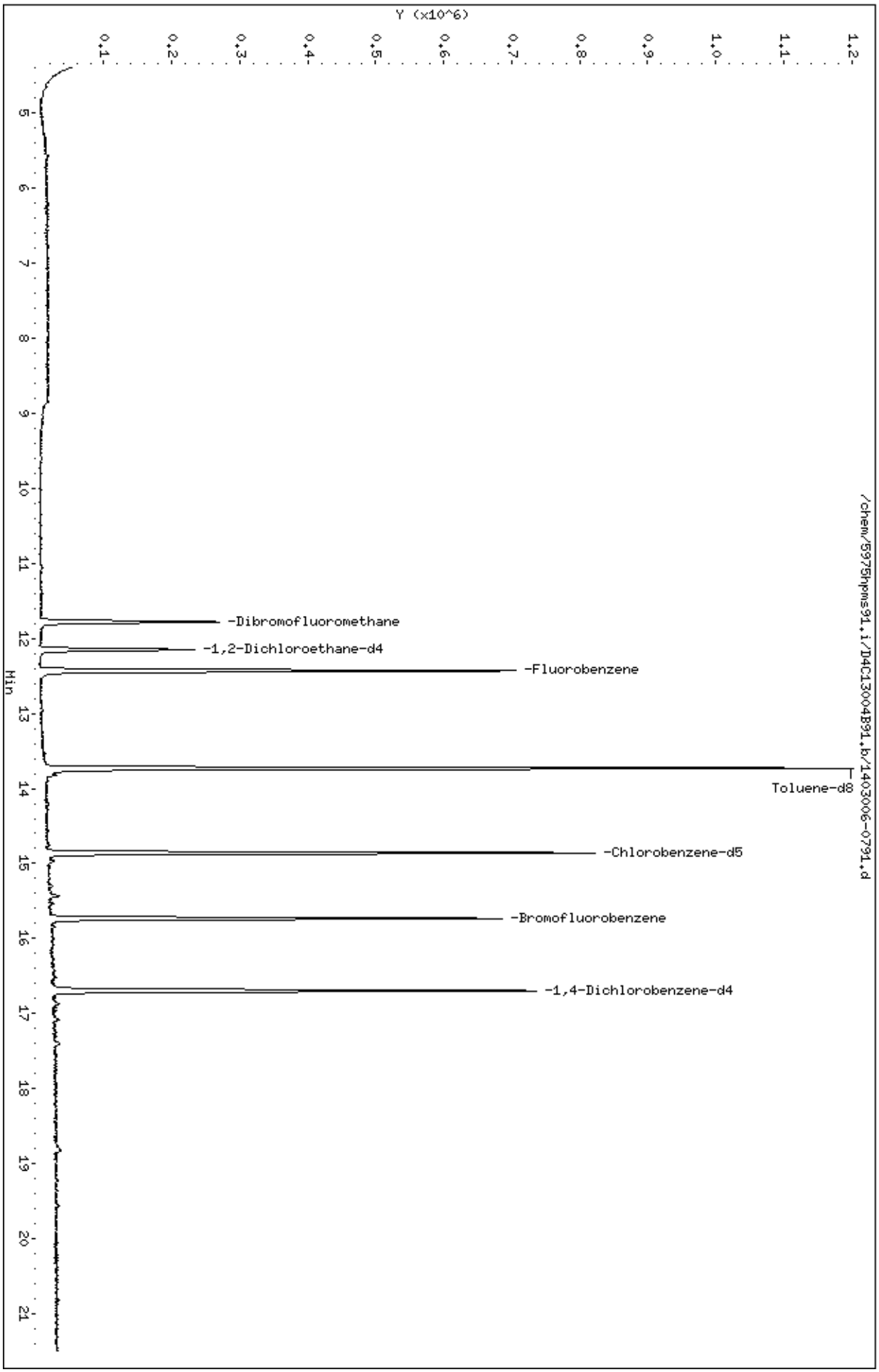
CompuChem

A Division Of

Liberty Analytical Corp.

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0791.d
Date : 13-MAR-2014 20:48
Client ID: TRIP BLANK
Sample Info: 1403006-07:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0791.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0791.d
Lab Smp Id: 1403006-07 Client Smp ID: TRIP BLANK
Inj Date : 13-MAR-2014 20:48
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-07:JAO
Misc Info : TRIP BLANK
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	714015	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	530351	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	245766	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	190074	126.563	5.06253
$ 5 1,2-Dichloroethane-d4	65	12.153	12.154	(0.978)	189128	130.911	5.23643
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	883143	123.294	4.93177
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	304221	118.745	4.74979
8 Dichlorodifluoromethane	85	Compound Not Detected.					
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0791.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
18 Acetone	43	Compound Not Detected.					
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
22 3-Chloropropene	39	Compound Not Detected.					
23 Acetonitrile	41	Compound Not Detected.					
25 Methylene Chloride	84	Compound Not Detected.					
26 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
31 Vinyl acetate	43	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Chloroprene	53	Compound Not Detected.					
34 2-butanone	43	Compound Not Detected.					
35 2,2-Dichloropropane	77	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	Compound Not Detected.					
37 Propionitrile	54	Compound Not Detected.					
38 Methacrylonitrile	41	Compound Not Detected.					
39 Bromochloromethane	128	Compound Not Detected.					
40 Chloroform	83	Compound Not Detected.					
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
44 1,1-dichloropropene	75	Compound Not Detected.					
45 Isobutyl alcohol	43	Compound Not Detected.					
46 Carbon Tetrachloride	117	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	Compound Not Detected.					
51 1,2-Dichloropropane	63	Compound Not Detected.					
52 Methylmethacrylate	69	Compound Not Detected.					
54 Dibromomethane	174	Compound Not Detected.					
55 Bromodichloromethane	83	Compound Not Detected.					
57 cis-1,3-Dichloropropene	75	Compound Not Detected.					
58 4-Methyl-2-pentanone	43	Compound Not Detected.					
59 Toluene	92	Compound Not Detected.					
60 Ethylmethacrylate	69	Compound Not Detected.					
61 trans-1,3-Dichloropropene	75	Compound Not Detected.					
62 1,1,2-Trichloroethane	97	Compound Not Detected.					
63 2-hexanone	43	Compound Not Detected.					
64 1,3-Dichloropropane	76	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
66 Dibromochloromethane	129	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
70 Ethylbenzene	106	Compound Not Detected.					
71 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
72 m,p-Xylene	106	Compound Not Detected.					
73 m,p-Xylene (part of total)	106	Compound Not Detected.					
74 o-Xylene	106	Compound Not Detected.					
75 o-Xylene (part of total)	106	Compound Not Detected.					
76 Styrene	104	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0791.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
77 Bromoform	173	Compound Not Detected.					
79 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
81 1,2,3-Trichloropropane	110	Compound Not Detected.					
80 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
92 1,3-Dichlorobenzene	146	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					
95 1,2-Dichlorobenzene	146	Compound Not Detected.					
97 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
98 Hexachlorobutadiene	225	Compound Not Detected.					
99 Naphthalene	128	Compound Not Detected.					
M 102 Xylene (total)	106	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/1403006-0791.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/1403006-0791.d
Lab Smp Id: 1403006-07 Client Smp ID: TRIP BLANK
Inj Date : 13-MAR-2014 20:48
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 1403006-07:JAO
Misc Info : TRIP BLANK
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

L. Initial Calibration Data

(INITIAL CALIBRATION DATA)

If more than one instrument is used, forms shall be arranged in order by instrument. Multiple initial calibrations from the same instrument shall be in chronological order. Within each initial calibration, the standards are in order by level, from lowest to highest.

(1) RICs and Quantitation reports for the initial calibration. Spectra not required.

(2) EICPs displaying each manual integration.

INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Calibration: 4031303 Instrument: 5975hpms91

Calibration Date: 3/13/2014 3:23:41PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Dichlorodifluoromethane	0.5	0.331415	1	0.3269242	5	0.3115954	10	0.3105382	20	0.3168379	40	0.3168756
Chloromethane	0.5	0.3207425	1	0.3129208	5	0.2724835	10	0.2565854	20	0.2461076	40	0.257374
Vinyl chloride	0.5	0.234551	1	0.2279466	5	0.2088179	10	0.2164316	20	0.2209566	40	0.2185449
Bromomethane	0.5	0.1347945	1	0.1278339	5	0.1171775	10	0.1210677	20	0.1233164	40	0.1205006
Chloroethane	0.5	0.1257037	1	0.1288924	5	0.1160934	10	0.1184819	20	0.1197307	40	0.1165737
Trichlorofluoromethane	0.5	0.3615514	1	0.3603624	5	0.337331	10	0.3352686	20	0.343546	40	0.3563327
Acrolein	2.5	1.166414E-02	5	1.102444E-02	25	2.409344E-03	50	7.938149E-03	100	9.568794E-03	200	0.0134987
1,1-Dichloroethene	0.5	0.1554697	1	0.1527489	5	0.1401573	10	0.1424362	20	0.1489166	40	0.1499225
Acetone	2.5	3.201156E-02	5	3.427659E-02	25	2.494996E-02	50	2.509354E-02	100	2.264119E-02	200	2.416547E-02
Iodomethane	0.5	0.2898937	1	0.2896492	5	0.2925144	10	0.3027129	20	0.3167211	40	0.3250957
Carbon disulfide	0.5	0.9978356	1	1.014956	5	0.9643938	10	0.9587362	20	0.9550248	40	0.9170318
3-Chloropropene	0.5	0.3563363	1	0.3651602	5	0.3591772	10	0.3629339	20	0.3645085	40	0.3531302
Acetonitrile	0.5	0.4956334	1	0.5177559	5	0.5143329	10	0.5146239	20	0.5155507	40	0.4874615
Methylene chloride	0.5	0.3508932	1	0.2909165	5	0.2685135	10	0.2607355	20	0.2530943	40	0.2457323
Acrylonitrile	5	2.643882E-02	10	3.284074E-02	50	2.396438E-02	100	3.065859E-02	200	3.023666E-02	400	3.367868E-02
trans-1,2-Dichloroethene	0.5	0.3397078	1	0.3112636	5	0.2986645	10	0.2991124	20	0.2931691	40	0.2815565
1,1-Dichloroethane	0.5	0.5722355	1	0.5685469	5	0.552503	10	0.548612	20	0.5404384	40	0.5350683
Chloroprene	0.5	0.5141997	1	0.5159315	5	0.4972818	10	0.4990233	20	0.5071025	40	0.4948703
Vinyl acetate	0.5	0.5665074	1	0.5483113	5	0.450077	10	0.4760264	20	0.4986546	40	0.5215997
cis-1,2-Dichloroethene	0.5	0.3309305	1	0.3190695	5	0.3166199	10	0.315302	20	0.3022308	40	0.2841792
2,2-Dichloropropane	0.5	0.5488388	1	0.5319195	5	0.4924532	10	0.4956133	20	0.5106724	40	0.5011867
Propionitrile	25	1.082716E-02	50	1.347068E-02	250	1.102787E-02	500	1.283894E-02	1000	1.276052E-02	2000	1.372191E-02
2-Butanone	2.5	4.672781E-02	5	5.111964E-02	25	5.397371E-02	50	5.022107E-02	100	4.791964E-02	200	4.721656E-02
Methacrylonitrile	5	6.915272E-02	10	8.193822E-02	50	7.849058E-02	100	8.382741E-02	200	7.886106E-02	400	7.835844E-02

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INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Calibration: 4031303 Instrument: 5975hpms91

Calibration Date: 3/13/2014 3:23:41PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Bromochloromethane	0.5	0.1165417	1	0.1131272	5	0.1122603	10	0.113375	20	0.1042944	40	9.391676E-02
Chloroform	0.5	0.5315549	1	0.5251441	5	0.5216422	10	0.5206635	20	0.5206982	40	0.5098582
1,1,1-Trichloroethane	0.5	0.519942	1	0.5275395	5	0.5090763	10	0.5062396	20	0.510825	40	0.4991418
1,1-Dichloropropene	0.5	0.4590138	1	0.4505174	5	0.4376707	10	0.4274857	20	0.4255987	40	0.3934246
Carbon tetrachloride	0.5	0.4310147	1	0.4472307	5	0.4260614	10	0.4310322	20	0.4363003	40	0.4300875
1,2-Dichloroethane	0.5	0.3221247	1	0.2913065	5	0.3087632	10	0.3017175	20	0.2992724	40	0.3051954
Isobutyl alcohol	25	5.379241E-03	50	4.861561E-03	250	5.892415E-03	500	5.54218E-03	1000	5.133098E-03	2000	5.292076E-03
Benzene	0.5	1.285392	1	1.280512	5	1.241087	10	1.229766	20	1.20095	40	1.116353
Trichloroethene	0.5	0.3544269	1	0.3379264	5	0.3394777	10	0.3387712	20	0.3375598	40	0.321332
1,2-Dichloropropane	0.5	0.3061374	1	0.2852692	5	0.2945121	10	0.2806982	20	0.2712388	40	0.2500165
Dibromomethane	0.5	0.115815	1	0.1027588	5	0.1090833	10	0.1097885	20	0.1073124	40	0.1081344
Methyl Methacrylate	5	0.1073654	10	0.106237	50	0.1312828	100	0.1283274	200	0.1052913	400	9.098018E-02
Bromodichloromethane	0.5	0.3782511	1	0.3769423	5	0.3833994	10	0.3819765	20	0.3810504	40	0.3815281
cis-1,3-Dichloropropene	0.5	0.4745878	1	0.4562414	5	0.4654001	10	0.4611281	20	0.4529786	40	0.4457314
4-Methyl-2-pentanone	2.5	0.1639676	5	0.1604145	25	0.184953	50	0.1923514	100	0.1750509	200	0.1805262
Toluene	0.5	1.170487	1	1.171054	5	1.135728	10	1.191109	20	1.155305	40	1.112503
trans-1,3-Dichloropropene	0.5	0.4885238	1	0.4788992	5	0.4852601	10	0.5150326	20	0.4938643	40	0.5138238
1,1,2-Trichloroethane	0.5	0.2327101	1	0.2349011	5	0.2399528	10	0.2506107	20	0.2387958	40	0.2482047
Ethyl Methacrylate	5	0.3070601	10	0.2962063	50	0.124538	100	0.2299899	200	0.2537285	400	0.2491175
1,3-Dichloropropane	0.5	0.4415521	1	0.434017	5	0.4610464	10	0.4800334	20	0.4579014	40	0.4683838
Tetrachloroethene	0.5	0.3770298	1	0.3622127	5	0.354401	10	0.36877	20	0.3635404	40	0.3475919
2-Hexanone	2.5	0.1257822	5	0.1095366	25	0.1315408	50	0.1347535	100	0.1204494	200	0.1203764
Dibromochloromethane	0.5	0.2761134	1	0.2736079	5	0.2895278	10	0.3091473	20	0.3041028	40	0.3242521
Chlorobenzene	0.5	1.180173	1	1.216404	5	1.193651	10	1.199442	20	1.144414	40	1.047153
1,1,1,2-Tetrachloroethane	0.5	0.3656327	1	0.3696286	5	0.3766631	10	0.3843031	20	0.3773552	40	0.3813482

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INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Calibration: 4031303 Instrument: 5975hpms91

Calibration Date: 3/13/2014 3:23:41PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Ethylbenzene	0.5	0.7165368	1	0.7178184	5	0.690705	10	0.712746	20	0.6792724	40	0.6202484
m,p-Xylene	1	0.8736644	2	0.882313	10	0.8684168	20	0.8782274	40	0.8338134	80	0.7524693
o-Xylene	0.5	0.8359505	1	0.8168774	5	0.8131469	10	0.8250288	20	0.7936994	40	0.736895
Styrene	0.5	1.293779	1	1.305862	5	1.295476	10	1.323641	20	1.264504	40	1.189101
Bromoform	0.5	0.2636198	1	0.2460305	5	0.270186	10	0.2638036	20	0.2573991	40	0.2558547
1,1,2,2-Tetrachloroethane	0.5	0.5323334	1	0.4812689	5	0.5379638	10	0.5135769	20	0.4928665	40	0.5062831
1,2,3-Trichloropropane	0.5	7.229635E-02	1	6.704013E-02	5	7.251782E-02	10	7.225046E-02	20	6.885168E-02	40	7.403396E-02
trans-1,4-Dichloro-2-butene	2	7.822243E-02	4	6.914356E-02	20	7.649122E-02	40	7.878768E-02	80	7.698883E-02	160	0.0836474
1,3-Dichlorobenzene	0.5	1.959007	1	1.880232	5	2.001604	10	1.991455	20	1.953373	40	1.89335
1,4-Dichlorobenzene	0.5	1.943569	1	1.856763	5	1.961793	10	1.940763	20	1.907963	40	1.84269
1,2-Dichlorobenzene	0.5	1.619413	1	1.590462	5	1.675308	10	1.671322	20	1.65681	40	1.619318
1,2,4-Trichlorobenzene	0.5	1.228567	1	1.15082	5	1.277082	10	1.289013	20	1.221593	40	1.162906
Hexachlorobutadiene	0.5	0.5909896	1	0.6039034	5	0.623379	10	0.6592437	20	0.6959658	40	0.6769937
Naphthalene	0.5	1.900077	1	1.695928	5	2.083585	10	2.103505	20	1.940206	40	1.920843
Dibromofluoromethane	0.5	0.2716694	1	0.2727699	5	0.2713779	10	0.265965	20	0.2544718	40	0.2412458
1,2-Dichloroethane-d4	0.5	0.2657133	1	0.2555077	5	0.2633441	10	0.25104	20	0.2420037	40	0.2399124
Toluene-d8	0.5	1.78152	1	1.732355	5	1.699254	10	1.741025	20	1.641662	40	1.533649
Bromofluorobenzene	0.5	1.492618	1	1.398183	5	1.324975	10	1.253301	20	1.198434	40	1.150817

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INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Calibration: 4031303 Instrument: 5975hpms91

Calibration Date: 3/13/2014 3:23:41PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
Dichlorodifluoromethane	0.3190311	2.631982	4.767	6.267128E-02			CCC (15)	
Chloromethane	0.2777023	11.36157	5.345	4.550468E-02			CCC (15)	
Vinyl chloride	0.2212081	4.078233	5.686	4.697616E-02			CCC (30)	
Bromomethane	0.1241151	5.082946	6.722	5.938376E-02			CCC (15)	
Chloroethane	0.1209126	4.31314	7	4.584731E-02			CCC (15)	
Trichlorofluoromethane	0.3490653	3.37721	7.59	6.754661E-02			CCC (15)	
Acrolein	9.350595E-03	41.58076	8.572	7.489072E-02		0.9913587	CCC (15)	
1,1-Dichloroethene	0.1482752	3.9887	8.709	3.963075E-02			CCC (30)	
Acetone	2.718972E-02	17.46264	8.842	2.249389E-02	0.9985031		CCC (15)	
Iodomethane	0.3027645	4.978953	9.027	2.138918E-02			CCC (15)	
Carbon disulfide	0.9679964	3.566666	9.136	1.494816E-02			CCC (15)	
3-Chloropropene	0.3602077	1.340629	9.359	2.613403E-02			CCC (15)	
Acetonitrile	0.5075597	2.507312	9.358	2.904275E-02			CCC (15)	
Methylene chloride	0.2783142	13.94295	9.599	3.317725E-03			CCC (15)	
Acrylonitrile	2.963631E-02	12.6621	10.009	2.702415E-02			CCC (15)	
trans-1,2-Dichloroethene	0.3039123	6.582722	9.968	3.756803E-02			CCC (15)	
1,1-Dichloroethane	0.5529007	2.695386	10.582	1.597689E-02			CCC (15)	
Chloroprene	0.5047348	1.785473	10.661	2.434012E-02			CCC (15)	
Vinyl acetate	0.5101961	8.619165	10.529	0.0281191			CCC (15)	
cis-1,2-Dichloroethene	0.3113887	5.193755	11.283	0.0234616			CCC (15)	
2,2-Dichloropropane	0.5134473	4.364228	11.25817	1.663943E-02			CCC (15)	
Propionitrile	1.244118E-02	9.88543	11.38417	1.172246E-02			CCC (15)	
2-Butanone	4.952974E-02	5.606008	11.251	1.791342E-02			CCC (15)	
Methacrylonitrile	7.843807E-02	6.442978	11.526	1.364512E-02			CCC (15)	
Bromochloromethane	0.1089192	7.717482	11.559	3.690949E-02			CCC (15)	

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INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Calibration: 4031303 Instrument: 5975hpms91

Calibration Date: 3/13/2014 3:23:41PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
Chloroform	0.5215935	1.358885	11.606	0.0117171			CCC (30)	
1,1,1-Trichloroethane	0.5121274	1.977596	11.81	2.526609E-02			CCC (15)	
1,1-Dichloropropene	0.4322851	5.329339	11.967	2.437441E-02			CCC (15)	
Carbon tetrachloride	0.4336211	1.711923	11.96383	1.885285E-02			CCC (15)	
1,2-Dichloroethane	0.3047299	3.404365	12.227	2.445834E-02			CCC (15)	
Isobutyl alcohol	5.350095E-03	6.587062	11.992	2.660234E-02			CCC (15)	
Benzene	1.225677	5.080766	12.176	2.358732E-02			CCC (15)	
Trichloroethene	0.338249	3.101479	12.759	1.253557E-02			CCC (15)	
1,2-Dichloropropane	0.281312	6.906619	12.983	1.834062E-02			CCC (30)	
Dibromomethane	0.1088154	3.886296	13.107	1.928672E-02			CCC (15)	
Methyl Methacrylate	0.1115807	13.76138	12.955	2.425314E-02			CCC (15)	
Bromodichloromethane	0.3805246	0.6400451	13.193	2.243822E-02			CCC (15)	
cis-1,3-Dichloropropene	0.4593446	2.193673	13.53717	1.834524E-02			CCC (15)	
4-Methyl-2-pentanone	0.1762106	6.979725	13.592	1.153716E-02			CCC (15)	
Toluene	1.156031	2.438254	13.781	1.788703E-02			CCC (30)	
trans-1,3-Dichloropropene	0.4959006	3.055693	13.952	1.664112E-03			CCC (15)	
1,1,2-Trichloroethane	0.2408625	2.970946	14.1115	8.38809E-03			CCC (15)	
Ethyl Methacrylate	0.24344	26.80374	13.897	4.038374E-03	0.9953738		CCC (15)	
1,3-Dichloropropane	0.4571557	3.717401	14.252	2.569784E-02			CCC (15)	
Tetrachloroethene	0.3622576	2.866376	14.213	2.446918E-02			CCC (15)	
2-Hexanone	0.1237398	7.319847	14.208	1.793178E-02			CCC (15)	
Dibromochloromethane	0.2961252	6.712187	14.436	2.345177E-02			CCC (15)	
Chlorobenzene	1.163539	5.322846	14.885	5.738732E-03			CCC (15)	
1,1,1,2-Tetrachloroethane	0.3758218	1.872859	14.92817	6.603209E-04			CCC (15)	
Ethylbenzene	0.6895545	5.416512	14.897	1.718191E-02			CCC (30)	

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INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Calibration: 4031303 Instrument: 5975hpms91

Calibration Date: 3/13/2014 3:23:41PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
m,p-Xylene	0.8481507	5.893717	14.972	1.530837E-02			CCC (15)	
o-Xylene	0.8035997	4.424429	15.292	1.170605E-02			CCC (15)	
Styrene	1.278727	3.749791	15.299	1.928822E-02			CCC (15)	
Bromoform	0.2594823	3.218871	15.536	1.624001E-02			CCC (15)	
1,1,2,2-Tetrachloroethane	0.5107154	4.310622	15.794	1.359129E-02			CCC (15)	
1,2,3-Trichloropropane	7.116507E-02	3.7117	15.874	1.997398E-02			CCC (15)	
trans-1,4-Dichloro-2-butene	7.721352E-02	6.090798	15.826	1.918773E-02			CCC (15)	
1,3-Dichlorobenzene	1.946504	2.566373	16.64583	2.006723E-02			CCC (15)	
1,4-Dichlorobenzene	1.908923	2.578936	16.721	1.665602E-02			CCC (15)	
1,2-Dichlorobenzene	1.638772	2.079496	17.092	2.259736E-02			CCC (15)	
1,2,4-Trichlorobenzene	1.221664	4.64865	18.829	1.727139E-02			CCC (15)	
Hexachlorobutadiene	0.6417459	6.549836	18.905	2.019628E-02			CCC (15)	
Naphthalene	1.940691	7.603817	19.219	1.698337E-02			CCC (15)	
Dibromofluoromethane	0.2629166	4.797612	11.782	2.450818E-02			CCC (15)	
1,2-Dichloroethane-d4	0.2529202	4.224928	12.15383	1.532992E-02			CCC (15)	
Toluene-d8	1.688244	5.272929	13.72717	2.552668E-02			CCC (15)	
Bromofluorobenzene	1.303055	9.83153	15.733	1.602556E-02			CCC (15)	

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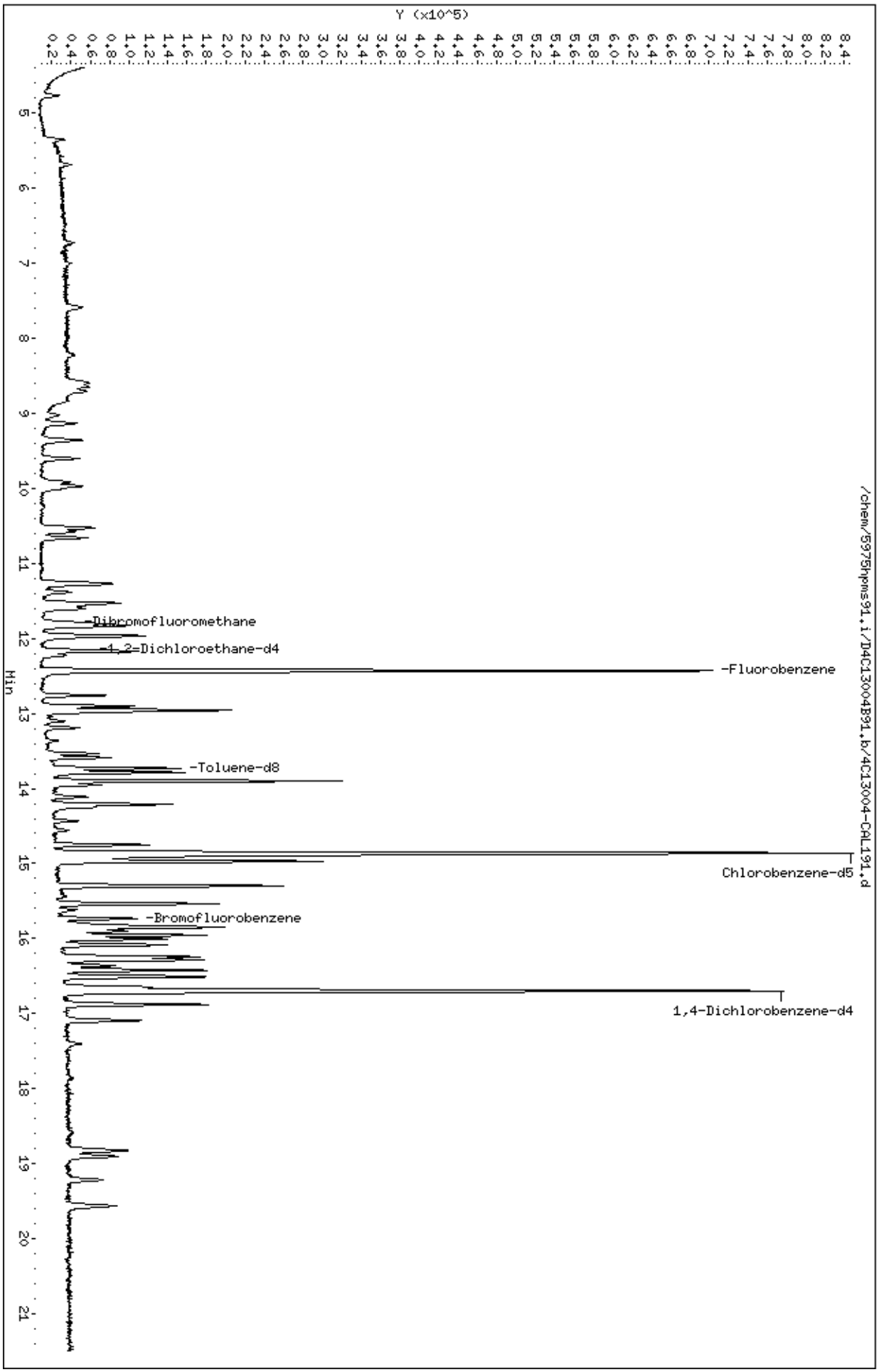
Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL191.d
Date : 13-MAR-2014 16:18
Client ID: WSTD0.5UA
Sample Info: 4C13004-CAL1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL191.d
Report Date: 13-Mar-2014 19:41

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL191.d
Lab Smp Id: 4C13004-CAL1 Client Smp ID: VSTD0.5UA
Inj Date : 13-MAR-2014 16:18
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4C13004-CAL1:JAO
Misc Info : VSTD0.5UA
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 13-Mar-2014 19:41 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:18 Cal File: 4C13004-CAL191.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	701809	125.000	
* 2 Chlorobenzene-d5	117	14.866	14.866	(1.000)	549267	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	255216	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	19066	12.5000	12.5000
$ 5 1,2-Dichloroethane-d4	65	12.153	12.153	(0.978)	18648	12.5000	12.5000
$ 6 Toluene-d8	98	13.726	13.726	(0.923)	97853	12.5000	12.5000
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	38094	12.5000	12.5000
8 Dichlorodifluoromethane	85	4.765	4.765	(0.383)	23259	12.5000	12.5000
9 Chloromethane	50	5.350	5.350	(0.430)	22510	12.5000	12.5000
10 Vinyl Chloride	62	5.691	5.691	(0.458)	16461	12.5000	12.5000
11 Bromomethane	94	6.728	6.728	(0.541)	9460	12.5000	12.5000
12 Chloroethane	64	7.002	7.002	(0.563)	8822	12.5000	12.5000
13 Trichlorofluoromethane	101	7.599	7.599	(0.611)	25374	12.5000	12.5000
14 Acrolein	56	8.581	8.581	(0.690)	4093	125.000	125.000
15 1,1,1-trichloro-2,2,2-trifluo	117	8.599	8.599	(0.692)	6659	12.5000	12.5000(MH)

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Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL191.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	8.630	8.630	(0.694)	8003	12.5000	12.5000
17 1,1-Dichloroethene	96	8.715	8.715	(0.701)	10911	12.5000	12.5000(M)
18 Acetone	43	8.843	8.843	(0.712)	11233	62.5000	62.5000(M)
19 Iodomethane	142	9.026	9.026	(0.726)	20345	12.5000	12.5000
20 Carbon disulfide	76	9.136	9.136	(0.735)	70029	12.5000	12.5000
22 3-Chloropropene	39	9.361	9.361	(0.753)	25008	12.5000	12.5000
23 Acetonitrile	41	9.361	9.361	(0.753)	34784	12.5000	12.5000
24 Methyl acetate	43	9.361	9.361	(0.753)	8074	12.5000	12.5000
25 Methylene Chloride	84	9.599	9.599	(0.772)	24626	12.5000	12.5000
26 Acrylonitrile	53	10.014	10.014	(0.806)	18555	125.000	125.000
28 trans-1,2-Dichloroethene	96	9.971	9.971	(0.802)	23841	12.5000	12.5000
27 Methyl-tert-butyl ether	73	9.916	9.916	(0.798)	43993	12.5000	12.5000
30 Isopropyl ether	45	10.526	10.526	(0.847)	58338	12.5000	12.5000
31 Vinyl acetate	43	10.526	10.526	(0.847)	39758	12.5000	12.5000
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	40160	12.5000	12.5000
33 Chloroprene	53	10.660	10.660	(0.858)	36087	12.5000	12.5000
34 2-butanone	43	11.251	11.251	(0.905)	16397	62.5000	62.5000
35 2,2-Dichloropropane	77	11.263	11.263	(0.906)	38518	12.5000	12.5000
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	23225	12.5000	12.5000
37 Propionitrile	54	11.385	11.385	(0.916)	37993	625.000	625.000
38 Methacrylonitrile	41	11.526	11.526	(0.927)	48532	125.000	125.000
39 Bromochloromethane	128	11.562	11.562	(0.930)	8179	12.5000	12.5000
40 Chloroform	83	11.611	11.611	(0.934)	37305	12.5000	12.5000
42 1,1,1-Trichloroethane	97	11.812	11.812	(0.950)	36490	12.5000	12.5000
43 Cyclohexane	84	11.843	11.843	(0.953)	35890	12.5000	12.5000
44 1,1-dichloropropene	75	11.971	11.971	(0.963)	32214	12.5000	12.5000
45 Isobutyl alcohol	43	11.989	11.989	(0.965)	18876	625.000	625.000
46 Carbon Tetrachloride	117	11.958	11.958	(0.962)	30249	12.5000	12.5000
47 Benzene	78	12.178	12.178	(0.980)	90210	12.5000	12.5000
48 1,2-Dichloroethane	62	12.227	12.227	(0.984)	22607	12.5000	12.5000
49 Trichloroethene	130	12.763	12.763	(1.027)	24874	12.5000	12.5000
50 Methylcyclohexane	83	12.903	12.903	(1.038)	42611	12.5000	12.5000
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	21485	12.5000	12.5000
52 Methylmethacrylate	69	12.958	12.958	(1.043)	75350	125.000	125.000
53 1,4-dioxane	88	13.056	13.056	(1.051)	3995	625.000	625.000
54 Dibromomethane	174	13.111	13.111	(1.055)	8128	12.5000	12.5000
55 Bromodichloromethane	83	13.196	13.196	(1.062)	26546	12.5000	12.5000
56 2-chloroethyl vinyl ether	63	13.367	13.367	(1.076)	4961	25.0000	25.0000
57 cis-1,3-Dichloropropene	75	13.537	13.537	(1.089)	33307	12.5000	12.5000
58 4-Methyl-2-pentanone	43	13.592	13.592	(0.914)	45031	62.5000	62.5000
59 Toluene	92	13.781	13.781	(0.927)	64291	12.5000	12.5000
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	168658	125.000	125.000
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.938)	26833	12.5000	12.5000
62 1,1,2-Trichloroethane	97	14.110	14.110	(0.949)	12782	12.5000	12.5000
63 2-hexanone	43	14.208	14.208	(0.956)	34544	62.5000	62.5000
64 1,3-Dichloropropane	76	14.257	14.257	(0.959)	24253	12.5000	12.5000
65 Tetrachloroethene	164	14.208	14.208	(0.956)	20709	12.5000	12.5000

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Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL191.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	14.440	14.440	(0.971)	15166	12.5000	12.5000
67 1,2-Dibromoethane	107	14.555	14.555	(0.979)	13001	12.5000	12.5000
68 1-Chlorohexane	55	14.757	14.757	(0.993)	26107	12.5000	12.5000
69 Chlorobenzene	112	14.885	14.885	(1.001)	64823	12.5000	12.5000
70 Ethylbenzene	106	14.897	14.897	(1.002)	39357	12.5000	12.5000
71 1,1,1,2-Tetrachloroethane	131	14.933	14.933	(1.004)	20083	12.5000	12.5000
72 m,p-Xylene	106	14.976	14.976	(1.007)	95975	25.0000	25.0000
73 m,p-Xylene (part of total)	106	14.976	14.976	(1.007)	95975	25.0000	25.0000
74 o-Xylene	106	15.293	15.293	(1.029)	45916	12.5000	12.5000
75 o-Xylene (part of total)	106	15.293	15.293	(1.029)	45916	12.5000	12.5000
76 Styrene	104	15.299	15.299	(1.029)	71063	12.5000	12.5000
77 Bromoform	173	15.537	15.537	(0.931)	6728	12.5000	12.5000
78 Isopropyl Benzene	105	15.537	15.537	(1.045)	124642	12.5000	12.5000
79 1,1,2,2-Tetrachloroethane	83	15.793	15.793	(0.946)	13586	12.5000	12.5000
81 1,2,3-Trichloropropane	110	15.878	15.878	(1.068)	3971	12.5000	12.5000
80 trans-1,4-dichloro-2-butene	53	15.830	15.830	(1.065)	17186	50.0000	50.0000
82 n-Propyl Benzene	91	15.848	15.848	(0.949)	149347	12.5000	12.5000
83 Bromobenzene	156	15.909	15.909	(1.070)	22971	12.5000	12.5000
84 1,3,5-Trimethyl Benzene	105	15.958	15.958	(0.956)	103144	12.5000	12.5000
85 2-Chlorotoluene	126	16.006	16.006	(0.959)	27197	12.5000	12.5000
86 4-Chlorotoluene	126	16.086	16.086	(0.963)	29090	12.5000	12.5000
87 tert-Butyl Benzene	119	16.250	16.250	(0.973)	102290	12.5000	12.5000
88 1,2,4-Trimethyl Benzene	105	16.287	16.287	(0.976)	105514	12.5000	12.5000
89 Pentachloroethane	167	16.366	16.366	(0.980)	12235	12.5000	12.5000
90 sec-Butyl Benzene	105	16.427	16.427	(0.984)	133743	12.5000	12.5000
91 p-Isopropyl Toluene	119	16.506	16.506	(0.989)	113510	12.5000	12.5000
92 1,3-Dichlorobenzene	146	16.640	16.640	(0.997)	49997	12.5000	12.5000
93 1,4-Dichlorobenzene	146	16.720	16.720	(1.001)	49603	12.5000	12.5000
94 n-Butyl Benzene	91	16.878	16.878	(1.011)	107545	12.5000	12.5000
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	41330	12.5000	12.5000
96 1,2-Dibromo-3-Chloropropane	75	17.860	17.860	(1.070)	2485	12.5000	12.5000
97 1,2,4-Trichlorobenzene	180	18.829	18.829	(1.128)	31355	12.5000	12.5000
98 Hexachlorobutadiene	225	18.902	18.902	(1.132)	15083	12.5000	12.5000
99 Naphthalene	128	19.219	19.219	(1.151)	48493	12.5000	12.5000
171 Diethyl ether	45	8.215	8.215	(0.661)	5755	12.5000	12.5000(M)
100 1,2,3-Trichlorobenzene	180	19.567	19.567	(1.172)	24825	12.5000	12.5000
M 101 1,2-Dichloroethene (total)	96				47066	25.0000	25.0000
M 102 Xylene (total)	106				141891	12.5000	38.6279

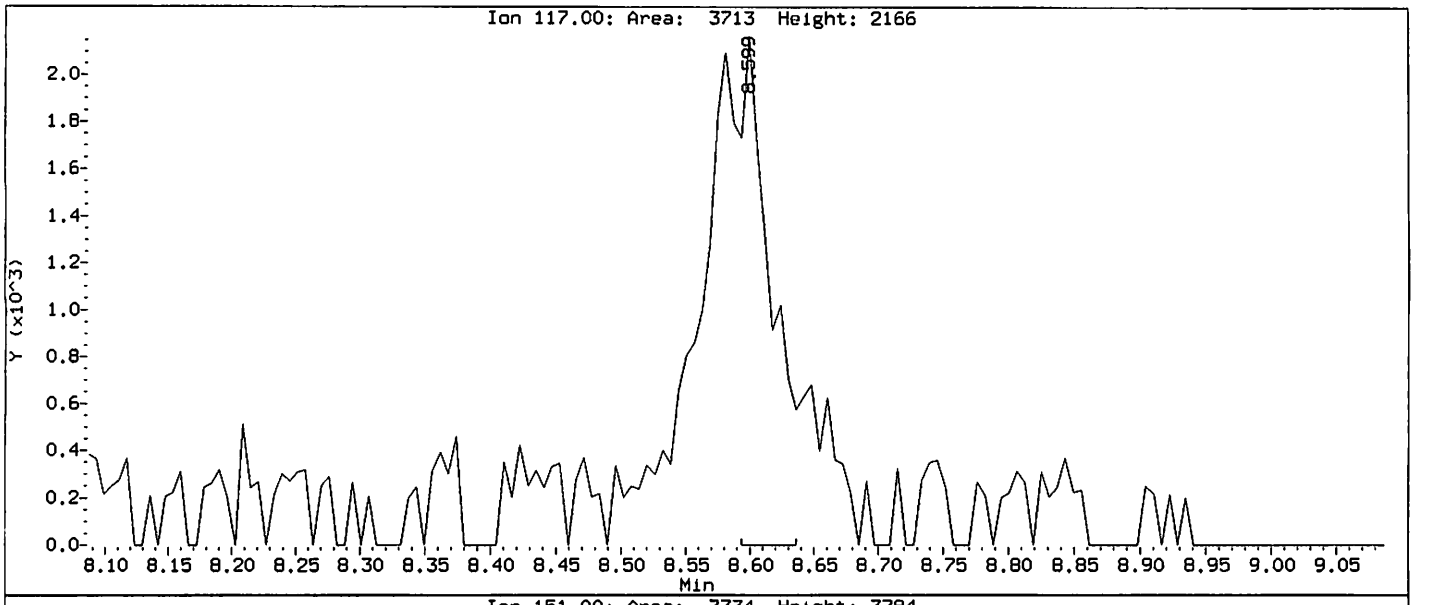
QC Flag Legend

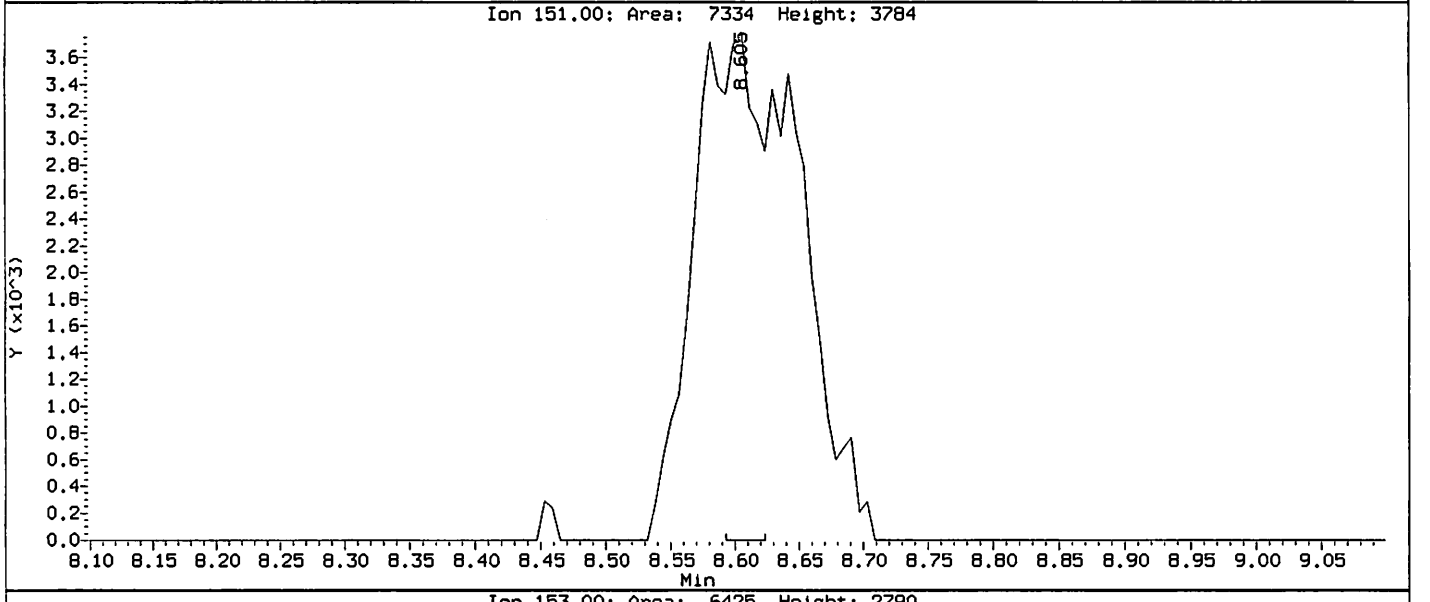
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

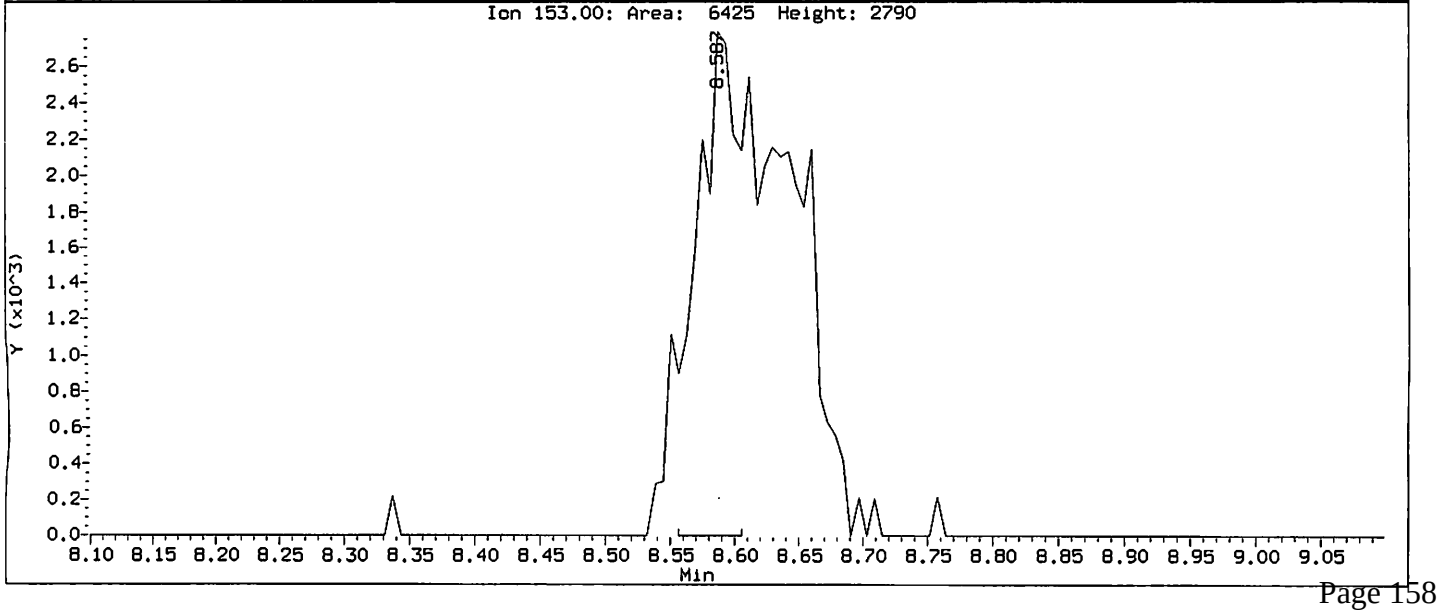
3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL191.d
Injection Date: 13-MAR-2014 16:18
Instrument: 5975hpms91.i
Client Sample ID: VSTD0.5UA

Compound: 1,1,1-trichloro-2,2,2-trifluo
CAS Number: 354-58-5







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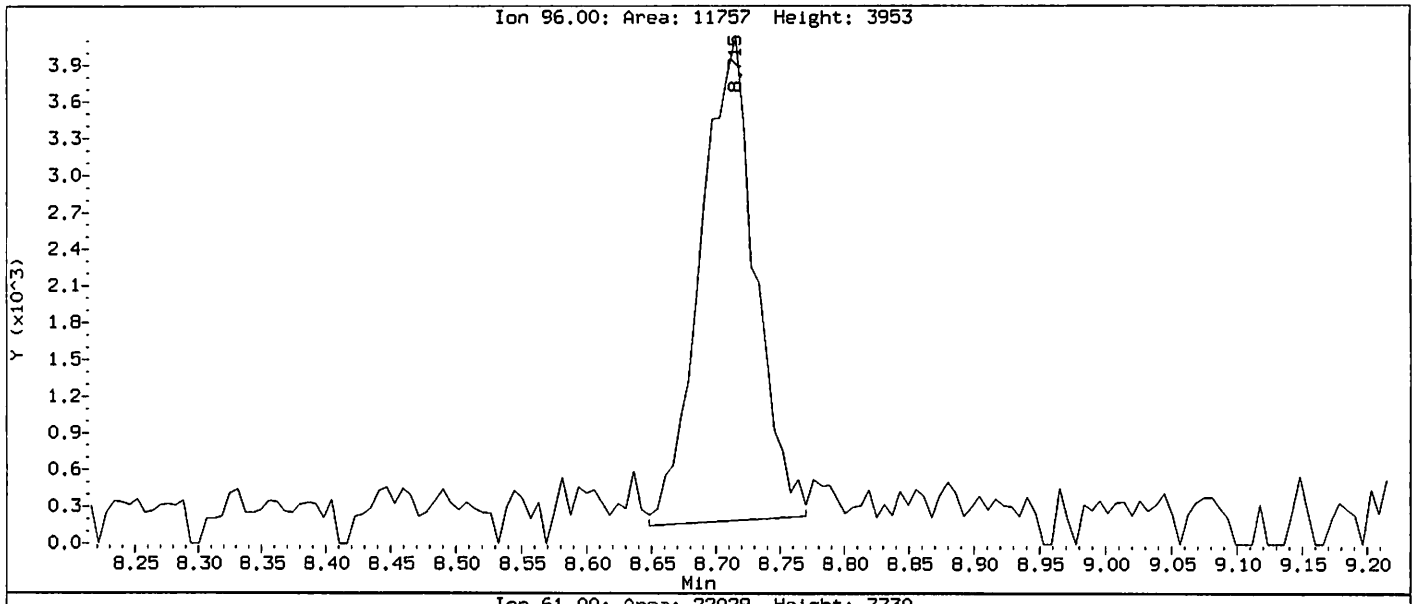
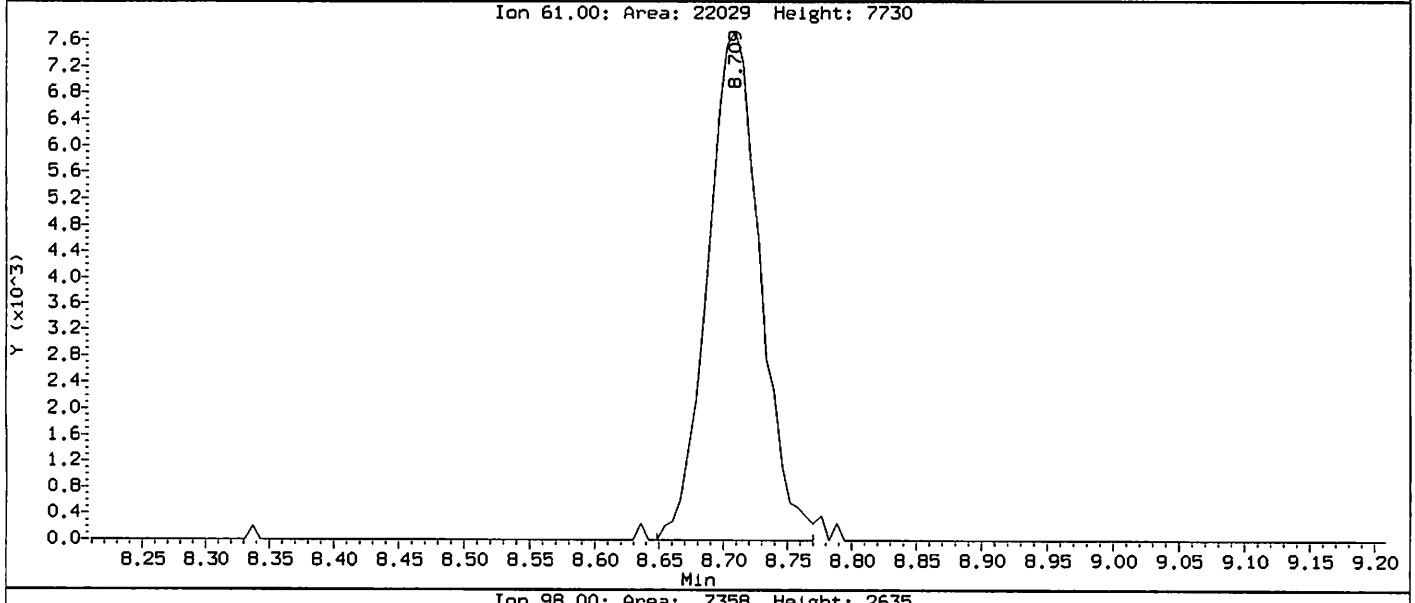
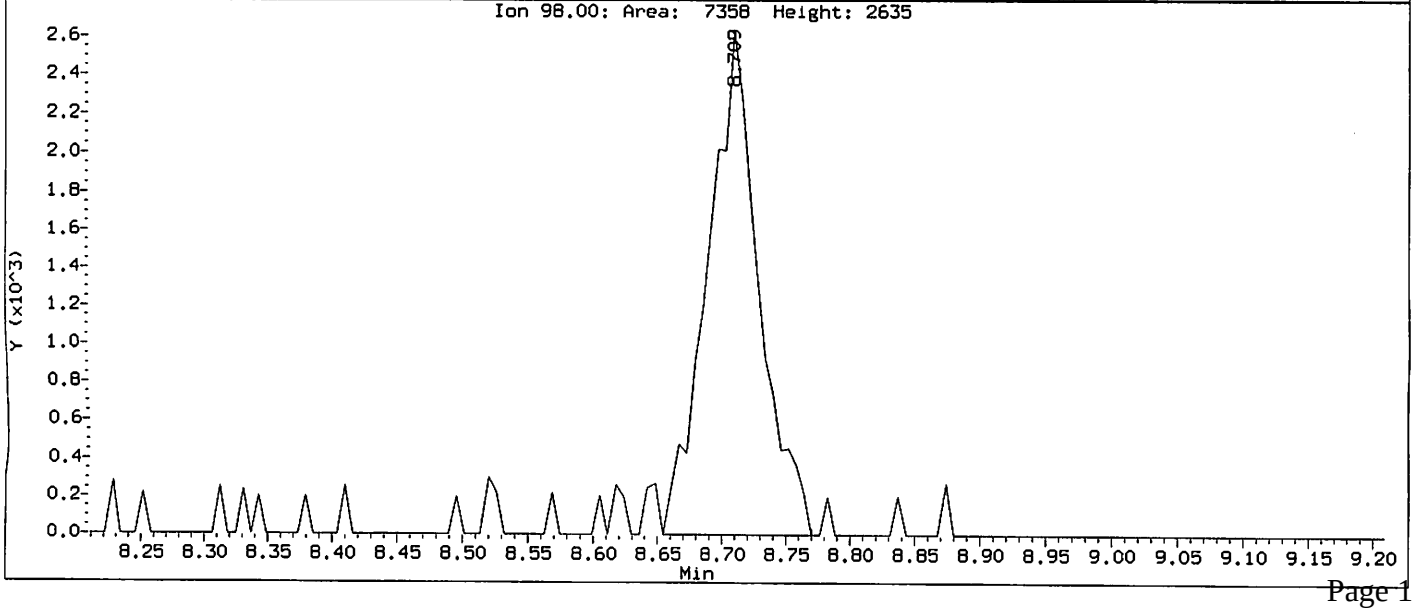
Injection Date: 13-MAR-2014 16:18
Instrument: 5975hpms91.i
Client Sample ID: VSTD0.5UA

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4







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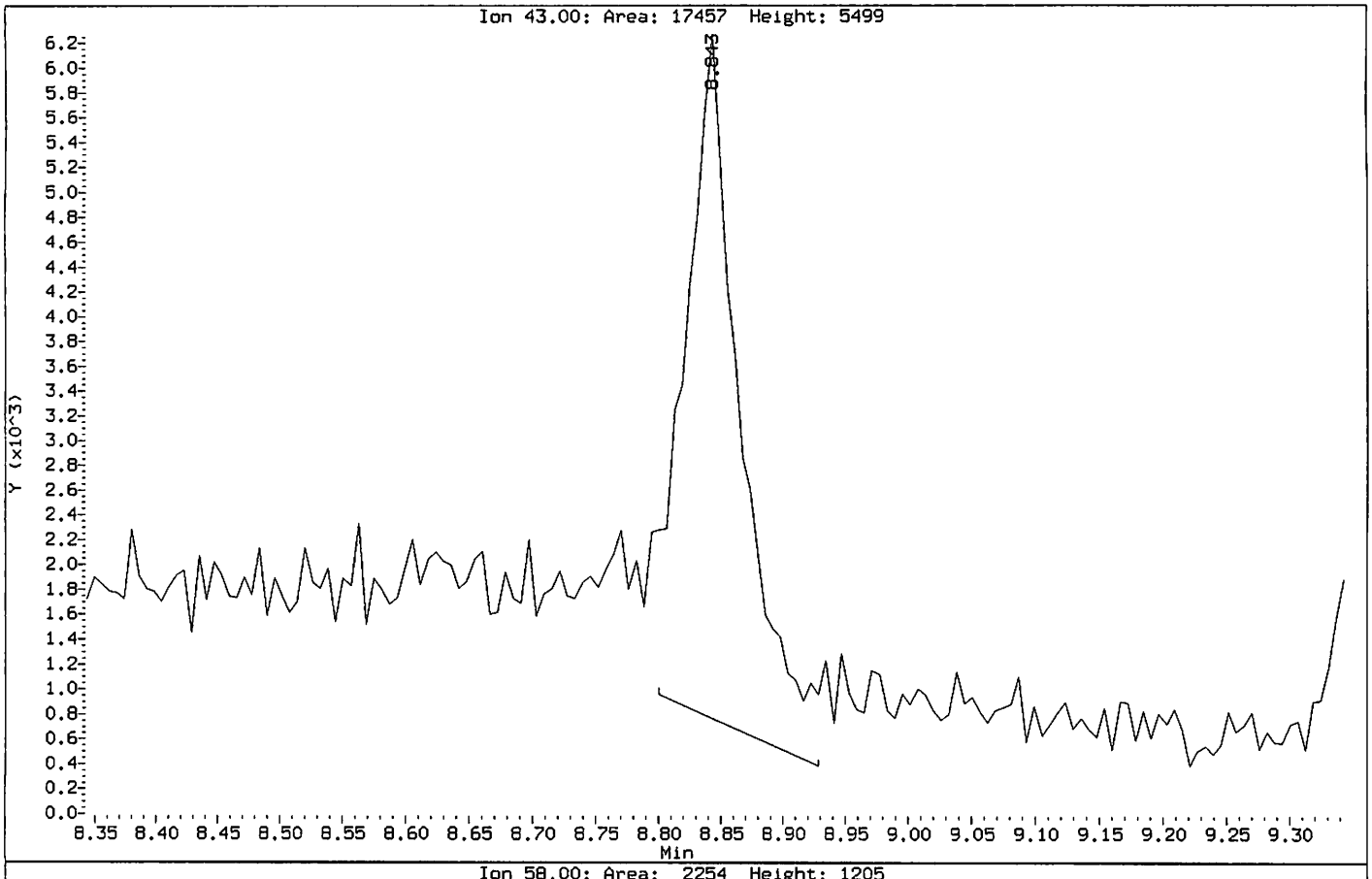
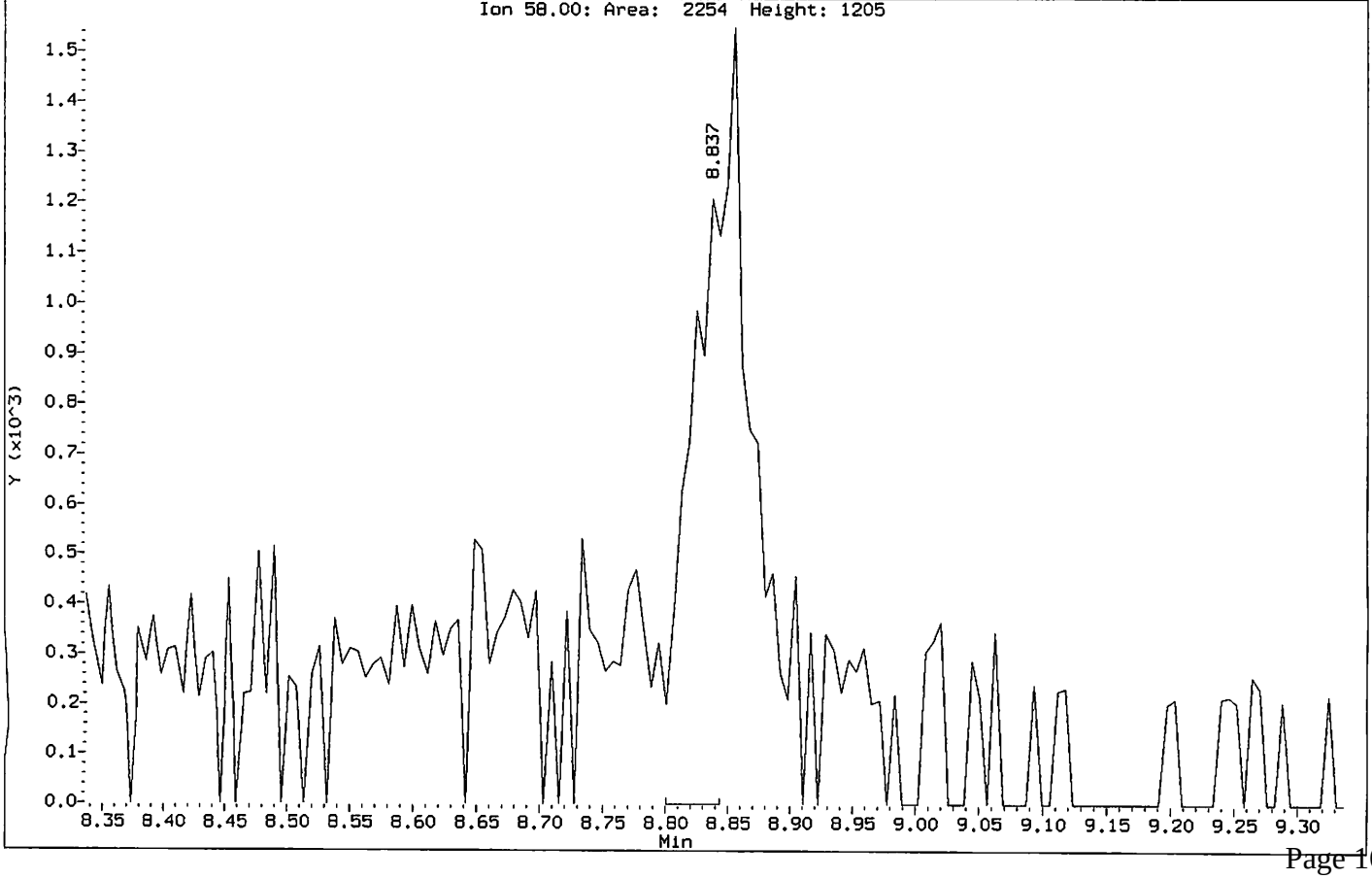
Injection Date: 13-MAR-2014 16:18
Instrument: 5975hpms91.i
Client Sample ID: VSTD0.5UA

Compound: Acetone
CAS Number: 67-64-1





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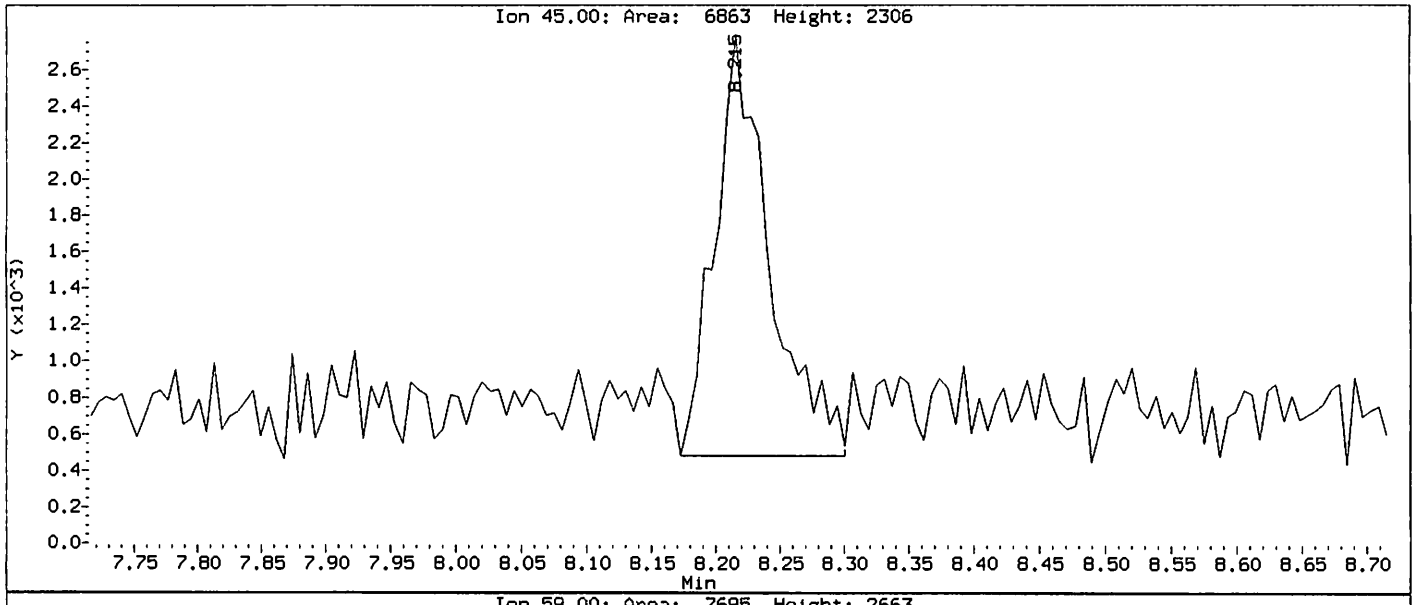
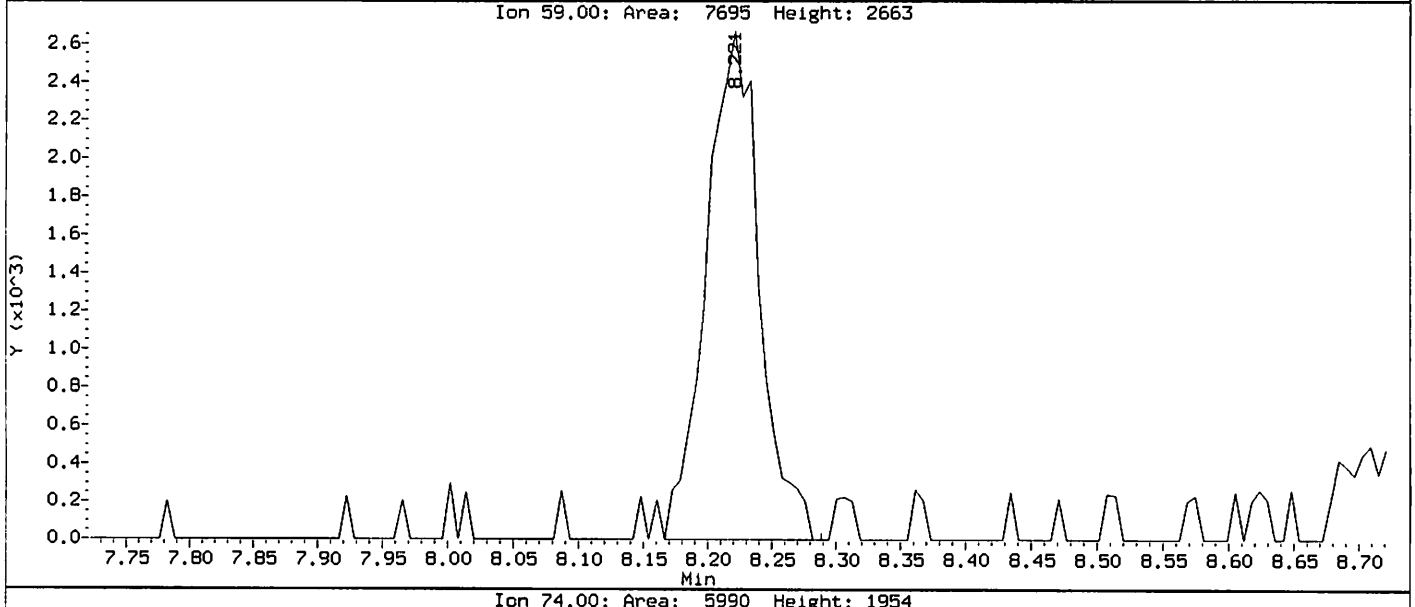
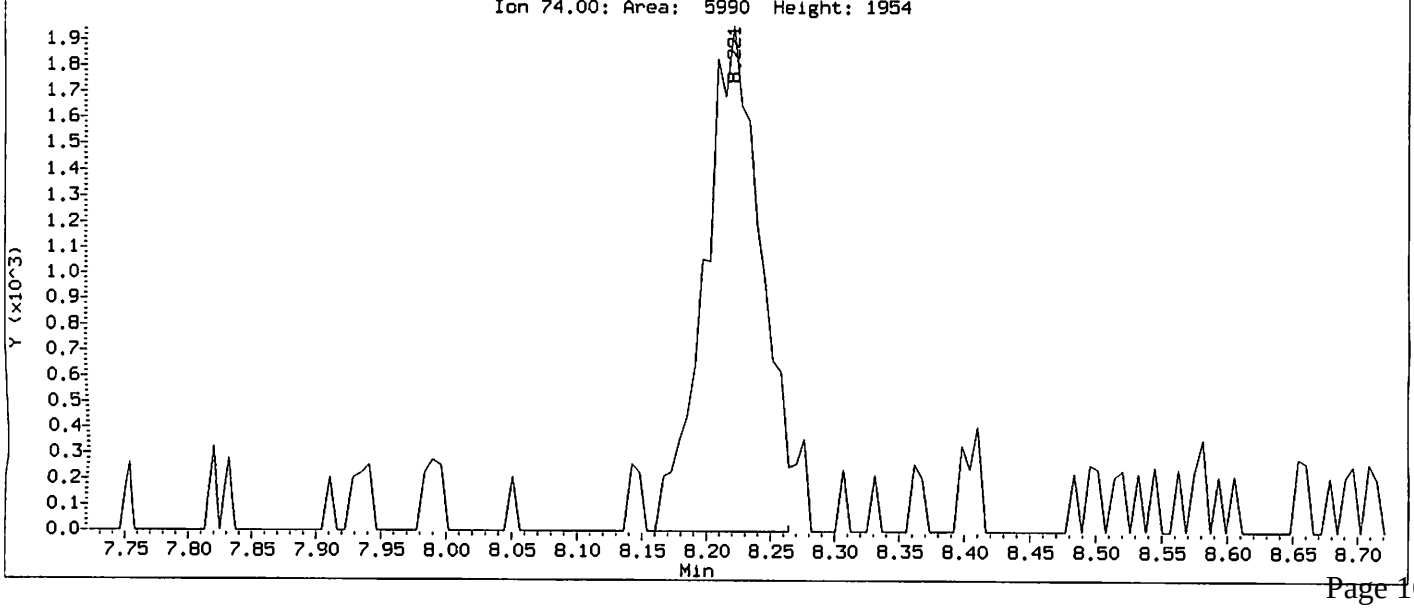
Injection Date: 13-MAR-2014 16:18
Instrument: 5975hpms91.i
Client Sample ID: VSTD0.5UA

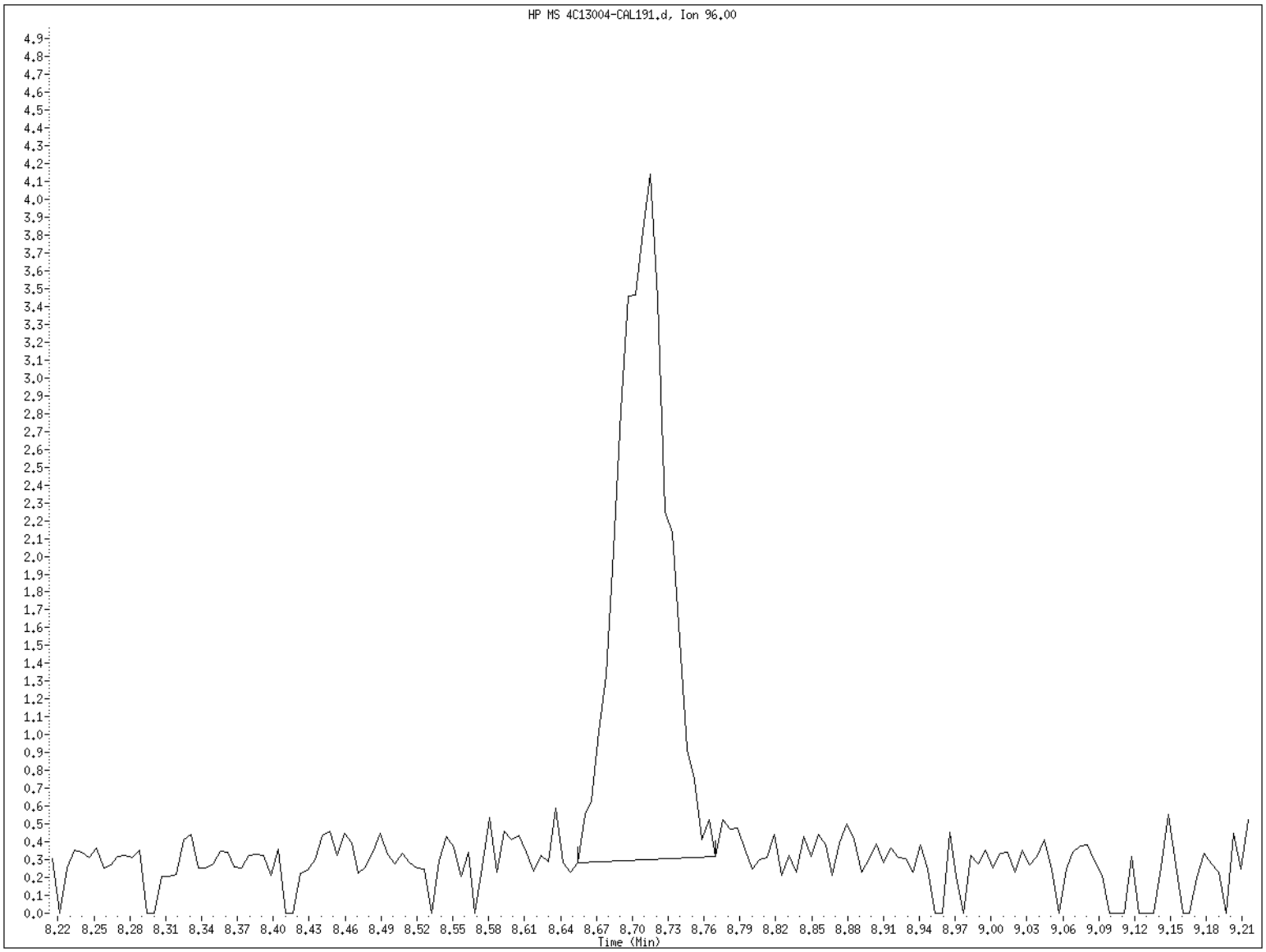
Compound: Diethyl ether
CAS Number: 60-29-7







1,1-Dichloroethene CAS Number 75-35-4 Area = 10911 Manually integrated



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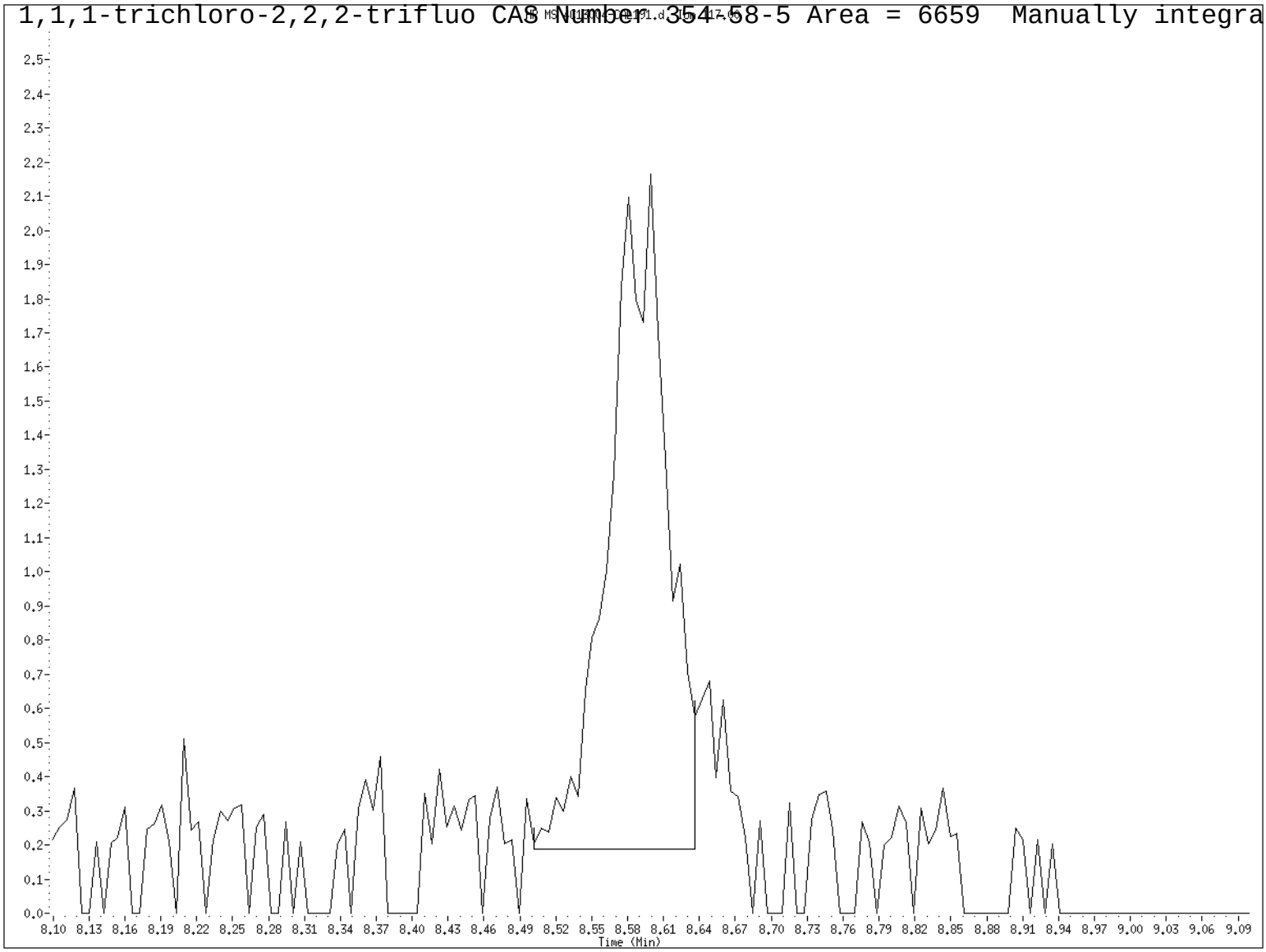
Client ID: VSTD0.5UA
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 16:18
Retention Time: 8.72
Operator ID: JAO

3/13/2014

1,1,1-trichloro-2,2,2-trifluo CAS Number 354-58-5 Area = 6659 User selected hit

1,1,1-trichloro-2,2,2-trifluo CAS Number 354-58-5 Area = 6659 Manually integrat



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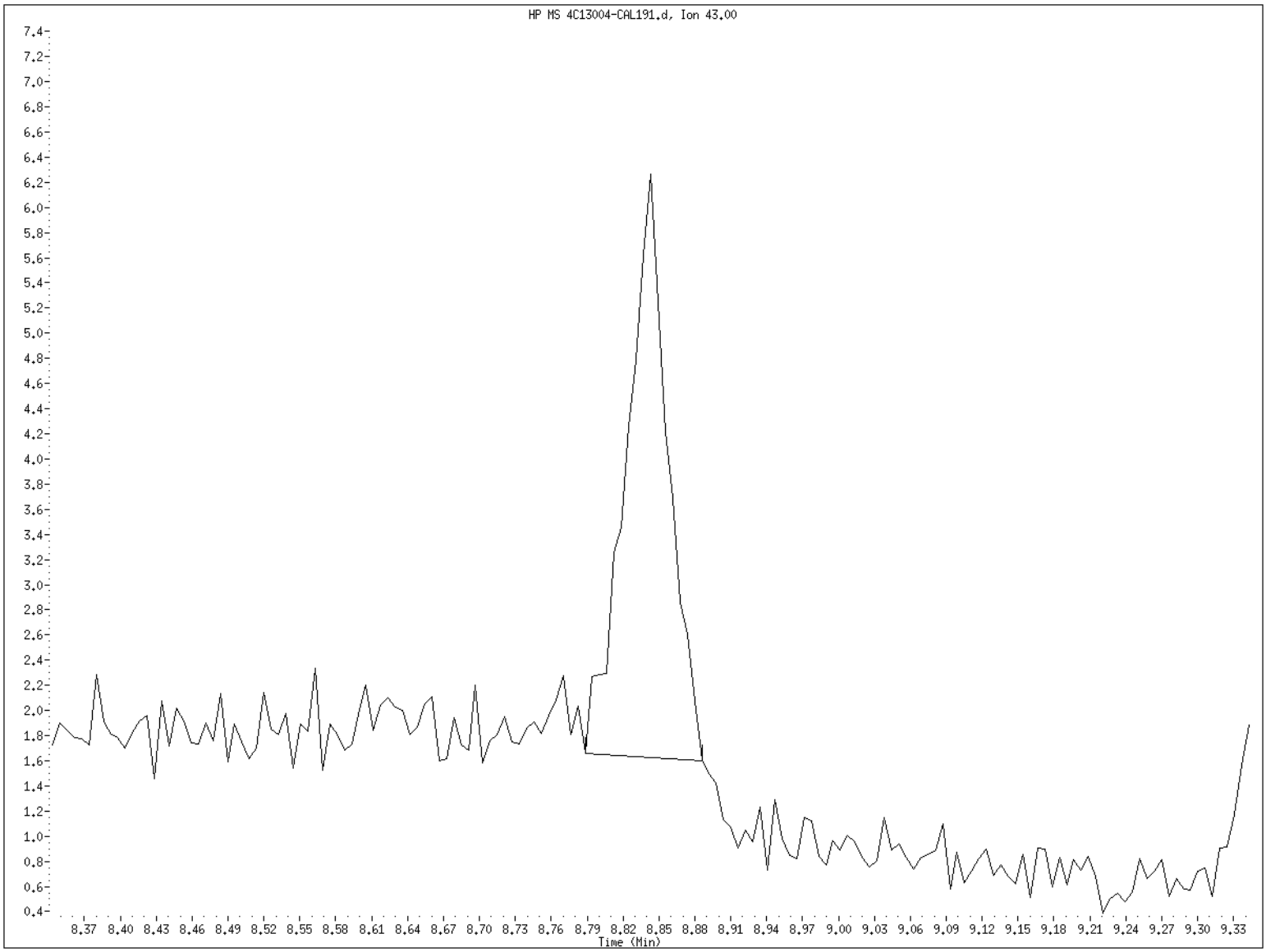
Client ID: VSTD0.5UA
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 16:18
Retention Time: 8.60
Operator ID: JAO

3/13/2014

Acetone CAS Number 67-64-1 Area = 11233 Manually integrated



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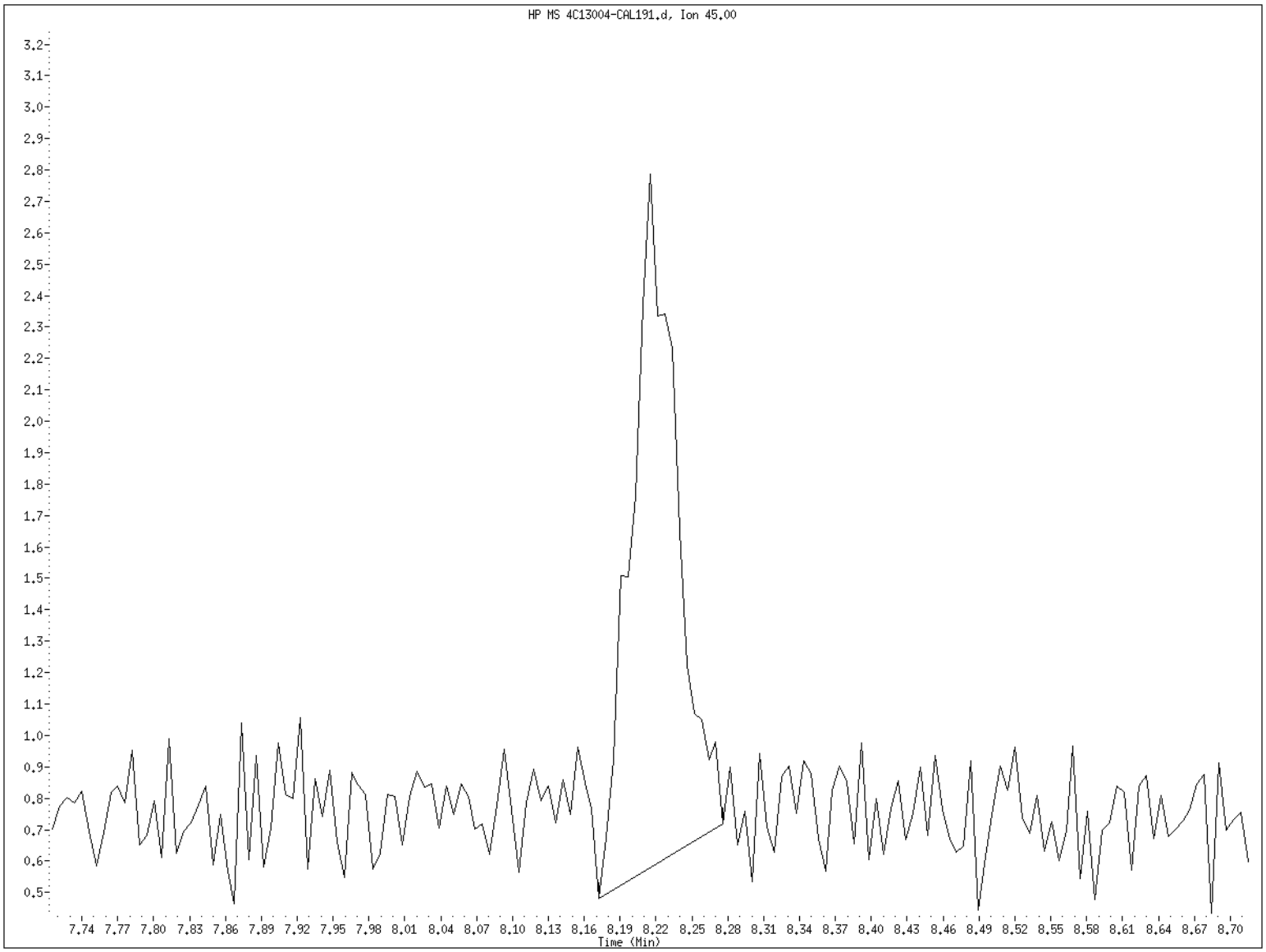
Client ID: VSTD0.5UA
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 16:18
Retention Time: 8.84
Operator ID: JAO

3/13/2014

Diethyl ether CAS Number 60-29-7 Area = 5755 Manually integrated



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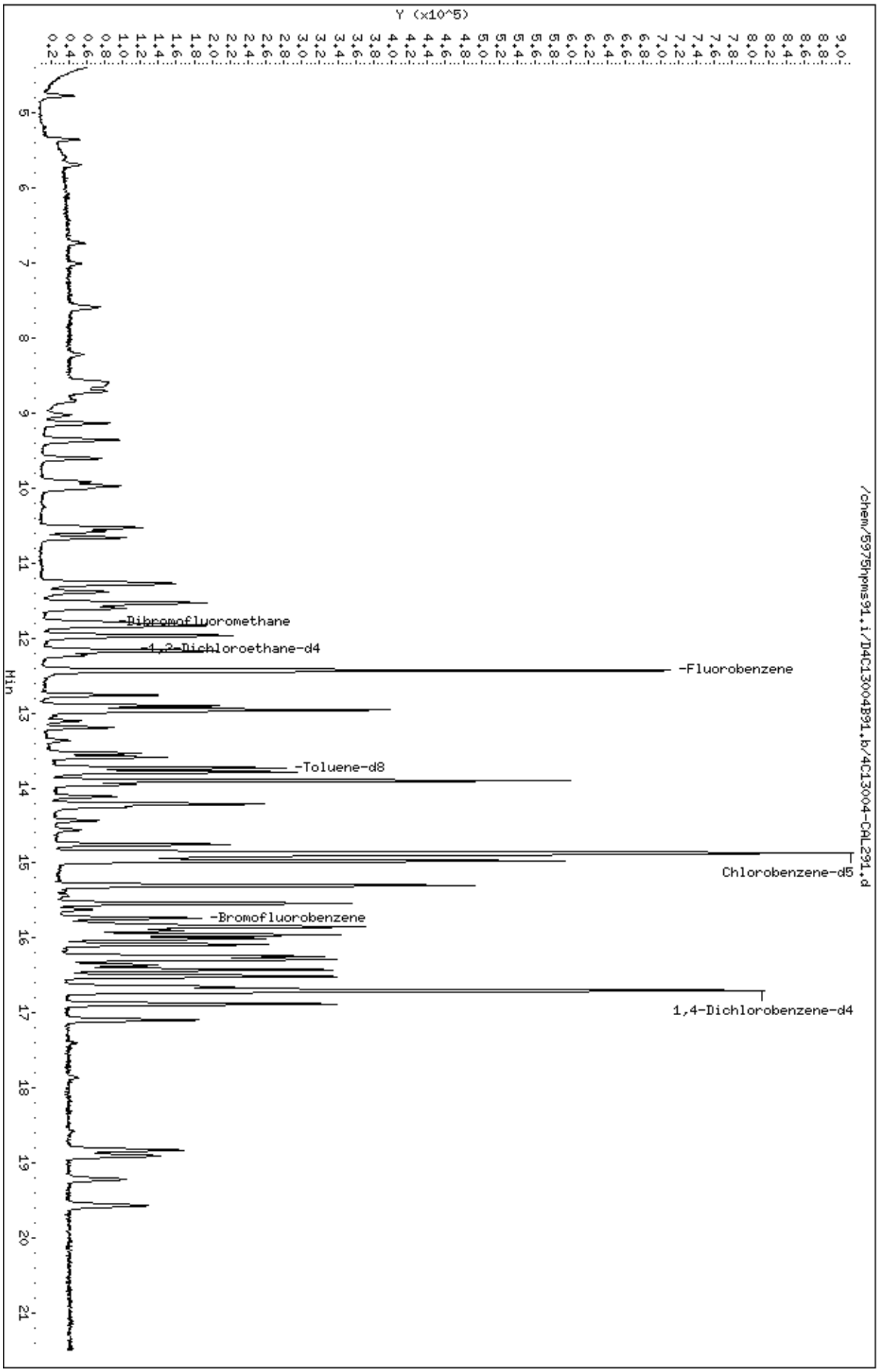
Client ID: VSTD0.5UA
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 16:18
Retention Time: 8.22
Operator ID: JAO

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL291.d
Date : 13-MAR-2014 15:49
Client ID: WSTD001UA
Sample Info: 4C13004-CAL2:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL291.d
Report Date: 13-Mar-2014 19:41

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL291.d
Lab Smp Id: 4C13004-CAL2 Client Smp ID: VSTD001UA
Inj Date : 13-MAR-2014 15:49
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4C13004-CAL2:JAO
Misc Info : VSTD001UA
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 13-Mar-2014 19:41 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 15:49 Cal File: 4C13004-CAL291.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	12.434	12.434	(1.000)	718041	125.000	
* 2 Chlorobenzene-d5	117	14.866	14.866	(1.000)	556234	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	262691	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	39172	25.0000	25.0505
$ 5 1,2-Dichloroethane-d4	65	12.154	12.154	(0.977)	36693	25.0000	24.5105
$ 6 Toluene-d8	98	13.732	13.732	(0.924)	192719	25.0000	24.6502
$ 7 Bromofluorobenzene	95	15.738	15.738	(0.943)	73458	25.0000	24.1833
8 Dichlorodifluoromethane	85	4.771	4.771	(0.384)	46949	25.0000	24.8295
9 Chloromethane	50	5.344	5.344	(0.430)	44938	25.0000	24.6914
10 Vinyl Chloride	62	5.685	5.685	(0.457)	32735	25.0000	24.6430
11 Bromomethane	94	6.722	6.722	(0.541)	18358	25.0000	24.3374
12 Chloroethane	64	7.002	7.002	(0.563)	18510	25.0000	25.3131
13 Trichlorofluoromethane	101	7.587	7.587	(0.610)	51751	25.0000	24.9588
14 Acrolein	56	8.563	8.563	(0.689)	7916	250.000	250.000(M)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.593	8.593	(0.691)	14030	25.0000	25.3652(M)

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL291.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	8.636	8.636	(0.695)	13923	25.0000	22.9759
17 1,1-Dichloroethene	96	8.703	8.703	(0.700)	21936	25.0000	24.7793
18 Acetone	43	8.837	8.837	(0.711)	24612	125.000	125.000(M)
19 Iodomethane	142	9.026	9.026	(0.726)	41596	25.0000	24.9895
20 Carbon disulfide	76	9.136	9.136	(0.735)	145756	25.0000	25.2126
22 3-Chloropropene	39	9.361	9.361	(0.753)	52440	25.0000	25.3058
23 Acetonitrile	41	9.361	9.361	(0.753)	74354	25.0000	25.5458
24 Methyl acetate	43	9.355	9.355	(0.752)	16176	25.0000	24.7358
25 Methylene Chloride	84	9.599	9.599	(0.772)	41778	25.0000	22.6638
26 Acrylonitrile	53	10.008	10.008	(0.805)	47162	250.000	276.999
28 trans-1,2-Dichloroethene	96	9.971	9.971	(0.802)	44700	25.0000	23.9076
27 Methyl-tert-butyl ether	73	9.916	9.916	(0.797)	82408	25.0000	23.8962
30 Isopropyl ether	45	10.526	10.526	(0.847)	122570	25.0000	25.3302
31 Vinyl acetate	43	10.532	10.532	(0.847)	78742	25.0000	24.5919
32 1,1-Dichloroethane	63	10.587	10.587	(0.851)	81648	25.0000	24.9192
33 Chloroprene	53	10.666	10.666	(0.858)	74092	25.0000	25.0420
34 2-butanone	43	11.251	11.251	(0.905)	36706	125.000	130.611
35 2,2-Dichloropropane	77	11.257	11.257	(0.905)	76388	25.0000	24.6086
36 cis-1,2-Dichloroethene	96	11.288	11.288	(0.908)	45821	25.0000	24.5438
37 Propionitrile	54	11.379	11.379	(0.915)	96725	1250.00	1386.00
38 Methacrylonitrile	41	11.526	11.526	(0.927)	117670	250.000	271.155
39 Bromochloromethane	128	11.562	11.562	(0.930)	16246	25.0000	24.6283
40 Chloroform	83	11.605	11.605	(0.933)	75415	25.0000	24.8483
42 1,1,1-Trichloroethane	97	11.812	11.812	(0.950)	75759	25.0000	25.1813
43 Cyclohexane	84	11.837	11.837	(0.952)	73738	25.0000	25.0506
44 1,1-dichloropropene	75	11.971	11.971	(0.963)	64698	25.0000	24.7665
45 Isobutyl alcohol	43	11.995	11.995	(0.965)	34908	1250.00	1186.81
46 Carbon Tetrachloride	117	11.965	11.965	(0.962)	64226	25.0000	25.4616
47 Benzene	78	12.178	12.178	(0.979)	183892	25.0000	24.9524
48 1,2-Dichloroethane	62	12.227	12.227	(0.983)	41834	25.0000	23.7440
49 Trichloroethene	130	12.763	12.763	(1.026)	48529	25.0000	24.4042
50 Methylcyclohexane	83	12.903	12.903	(1.038)	87980	25.0000	25.1123
51 1,2-Dichloropropane	63	12.983	12.983	(1.044)	40967	25.0000	24.1179
52 Methylmethacrylate	69	12.958	12.958	(1.042)	152565	250.000	248.679
53 1,4-dioxane	88	13.050	13.050	(1.050)	8417	1250.00	1268.25(M)
54 Dibromomethane	174	13.111	13.111	(1.054)	14757	25.0000	23.5067
55 Bromodichloromethane	83	13.196	13.196	(1.061)	54132	25.0000	24.9567
56 2-chloroethyl vinyl ether	63	13.367	13.367	(1.075)	9870	50.0000	50.0000
57 cis-1,3-Dichloropropene	75	13.537	13.537	(1.089)	65520	25.0000	24.5073
58 4-Methyl-2-pentanone	43	13.592	13.592	(0.914)	89228	125.000	123.631
59 Toluene	92	13.781	13.781	(0.927)	130276	25.0000	25.0061
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	329520	250.000	250.000
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.938)	53276	25.0000	24.7513
62 1,1,2-Trichloroethane	97	14.117	14.117	(0.950)	26132	25.0000	25.1171
63 2-hexanone	43	14.208	14.208	(0.956)	60928	125.000	116.370
64 1,3-Dichloropropane	76	14.251	14.251	(0.959)	48283	25.0000	24.7849
65 Tetrachloroethene	164	14.214	14.214	(0.956)	40295	25.0000	24.4989

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL291.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	14.440	14.440	(0.971)	30438	25.0000	24.8861
67 1,2-Dibromoethane	107	14.562	14.562	(0.979)	22659	25.0000	23.1258
68 1-Chlorohexane	55	14.757	14.757	(0.993)	53184	25.0000	25.0725
69 Chlorobenzene	112	14.885	14.885	(1.001)	135321	25.0000	25.3779
70 Ethylbenzene	106	14.897	14.897	(1.002)	79855	25.0000	25.0223
71 1,1,1,2-Tetrachloroethane	131	14.927	14.927	(1.004)	41120	25.0000	25.1359
72 m,p-Xylene	106	14.976	14.976	(1.007)	196309	50.0000	50.2463
73 m,p-Xylene (part of total)	106	14.976	14.976	(1.007)	196309	50.0000	50.2463
74 o-Xylene	106	15.293	15.293	(1.029)	90875	25.0000	24.7115
75 o-Xylene (part of total)	106	15.293	15.293	(1.029)	90875	25.0000	24.7115
76 Styrene	104	15.299	15.299	(1.029)	145273	25.0000	25.1162
77 Bromoform	173	15.531	15.531	(0.930)	12926	25.0000	24.1372
78 Isopropyl Benzene	105	15.537	15.537	(1.045)	245309	25.0000	24.6415
79 1,1,2,2-Tetrachloroethane	83	15.799	15.799	(0.946)	25285	25.0000	23.7405
81 1,2,3-Trichloropropane	110	15.878	15.878	(1.068)	7458	25.0000	24.0569
80 trans-1,4-dichloro-2-butene	53	15.830	15.830	(1.065)	30768	100.000	93.8392
82 n-Propyl Benzene	91	15.848	15.848	(0.949)	303720	25.0000	24.8477
83 Bromobenzene	156	15.903	15.903	(1.070)	44555	25.0000	24.4593
84 1,3,5-Trimethyl Benzene	105	15.958	15.958	(0.956)	212904	25.0000	25.0337
85 2-Chlorotoluene	126	16.006	16.006	(0.959)	56028	25.0000	25.0091
86 4-Chlorotoluene	126	16.092	16.092	(0.964)	57108	25.0000	24.4068
87 tert-Butyl Benzene	119	16.250	16.250	(0.973)	207658	25.0000	24.8258
88 1,2,4-Trimethyl Benzene	105	16.287	16.287	(0.976)	214700	25.0000	24.8548
89 Pentachloroethane	167	16.360	16.360	(0.980)	23989	25.0000	24.3911
90 sec-Butyl Benzene	105	16.427	16.427	(0.984)	269887	25.0000	24.7509
91 p-Isopropyl Toluene	119	16.512	16.512	(0.989)	235256	25.0000	25.0846
92 1,3-Dichlorobenzene	146	16.647	16.647	(0.997)	98784	25.0000	24.4870
93 1,4-Dichlorobenzene	146	16.726	16.726	(1.002)	97551	25.0000	24.4290
94 n-Butyl Benzene	91	16.878	16.878	(1.011)	223156	25.0000	25.0993
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	83560	25.0000	24.7745
96 1,2-Dibromo-3-Chloropropane	75	17.872	17.872	(1.070)	4936	25.0000	24.5534
97 1,2,4-Trichlorobenzene	180	18.829	18.829	(1.128)	60462	25.0000	24.1831
98 Hexachlorobutadiene	225	18.902	18.902	(1.132)	31728	25.0000	25.2702
99 Naphthalene	128	19.219	19.219	(1.151)	89101	25.0000	23.5807
171 Diethyl ether	45	8.221	8.221	(0.661)	10606	25.0000	23.6929(M)
100 1,2,3-Trichlorobenzene	180	19.561	19.561	(1.172)	47775	25.0000	24.1583
M 101 1,2-Dichloroethene (total)	96				90521	50.0000	48.4510
M 102 Xylene (total)	106				287184	25.0000	78.0935

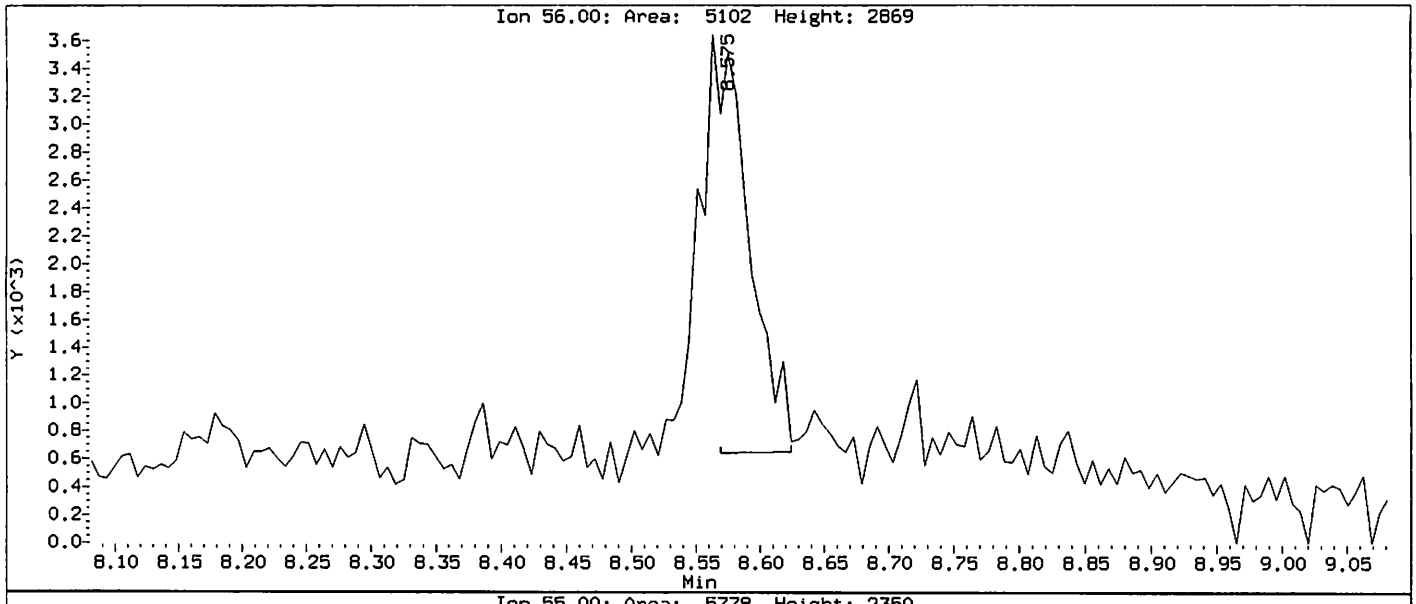
QC Flag Legend

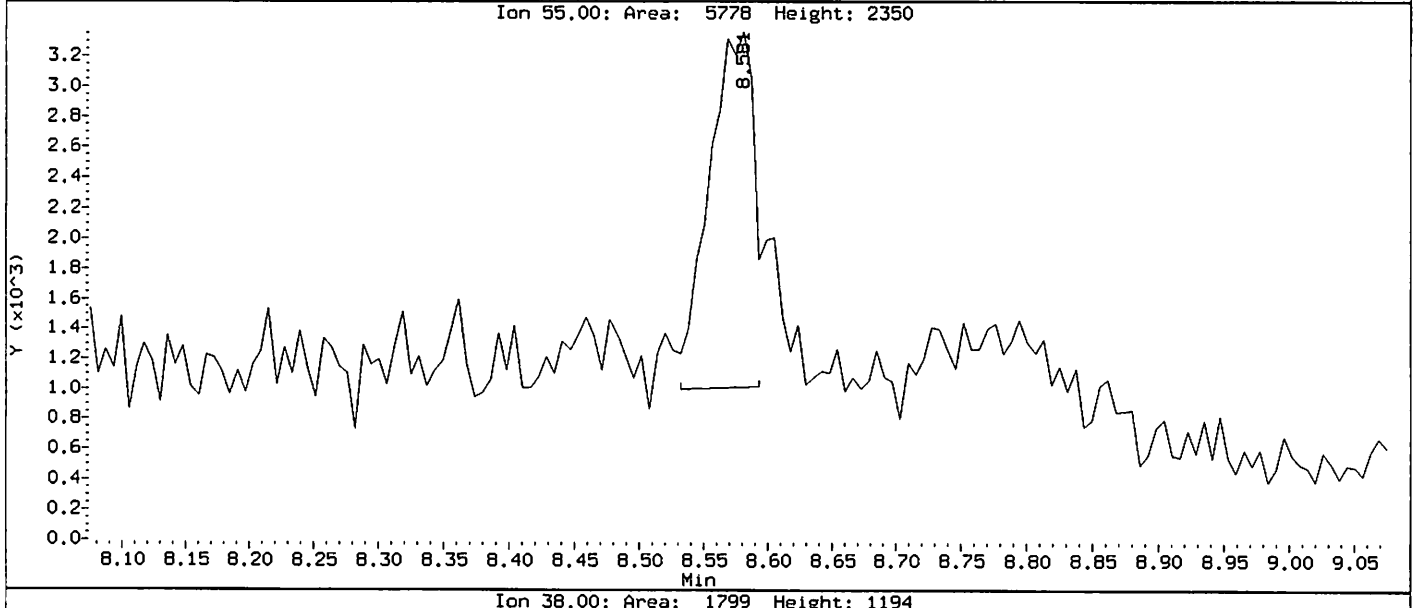
M - Compound response manually integrated.

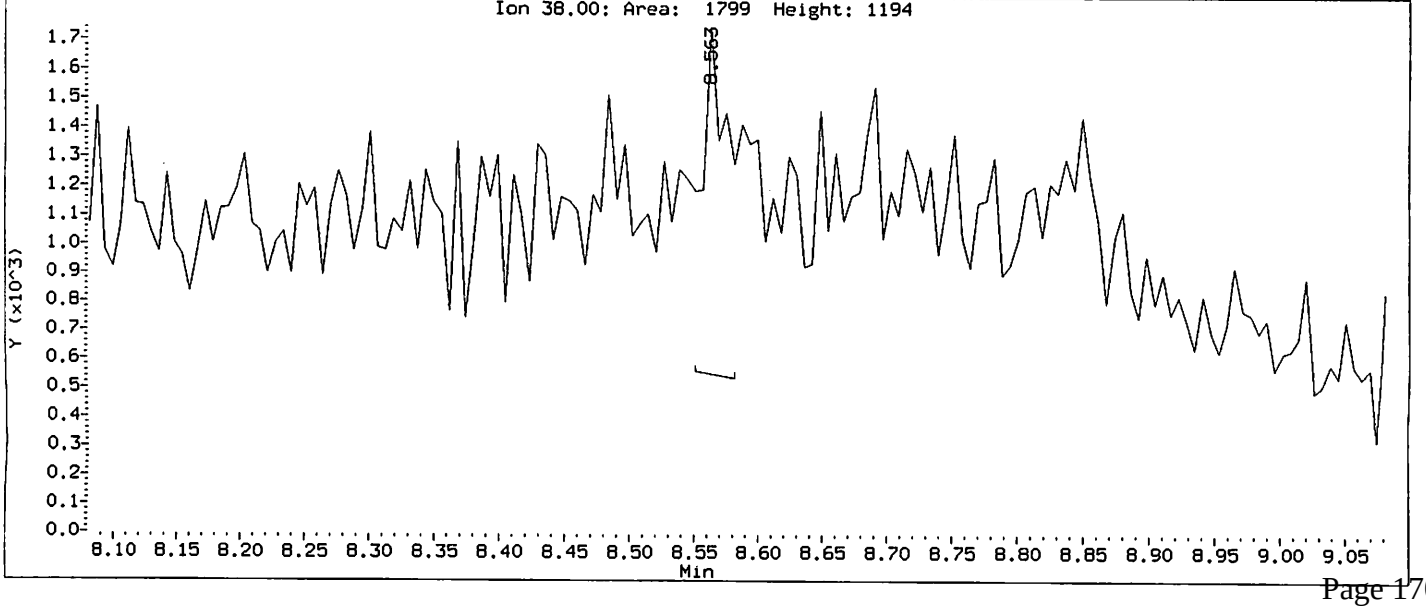
3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL291.d
Injection Date: 13-MAR-2014 15:49
Instrument: 5975hpms91.i
Client Sample ID: VSTD001UA

Compound: Acrolein
CAS Number: 107-02-8







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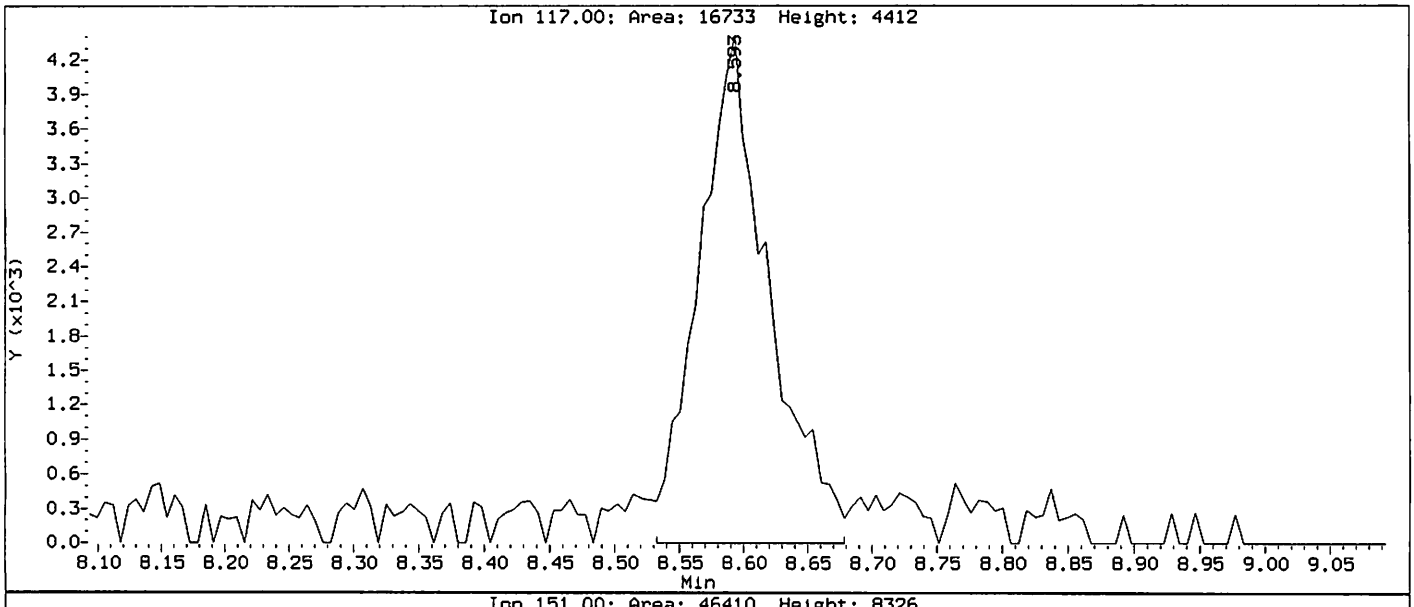
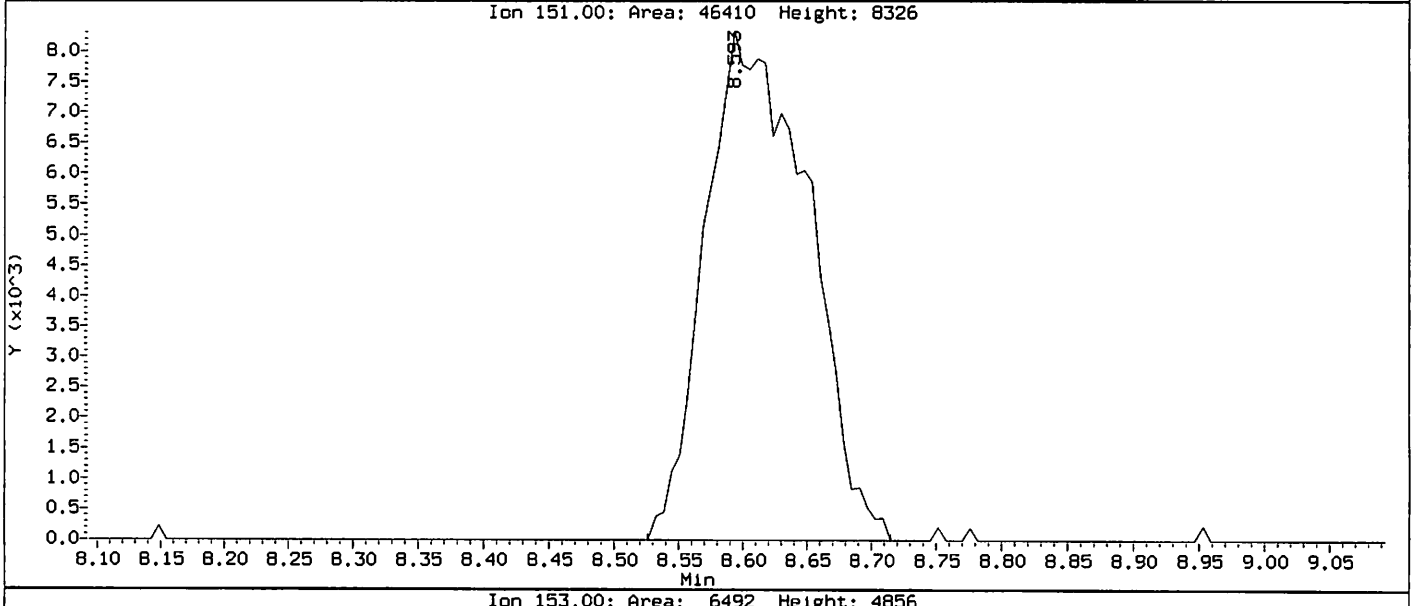
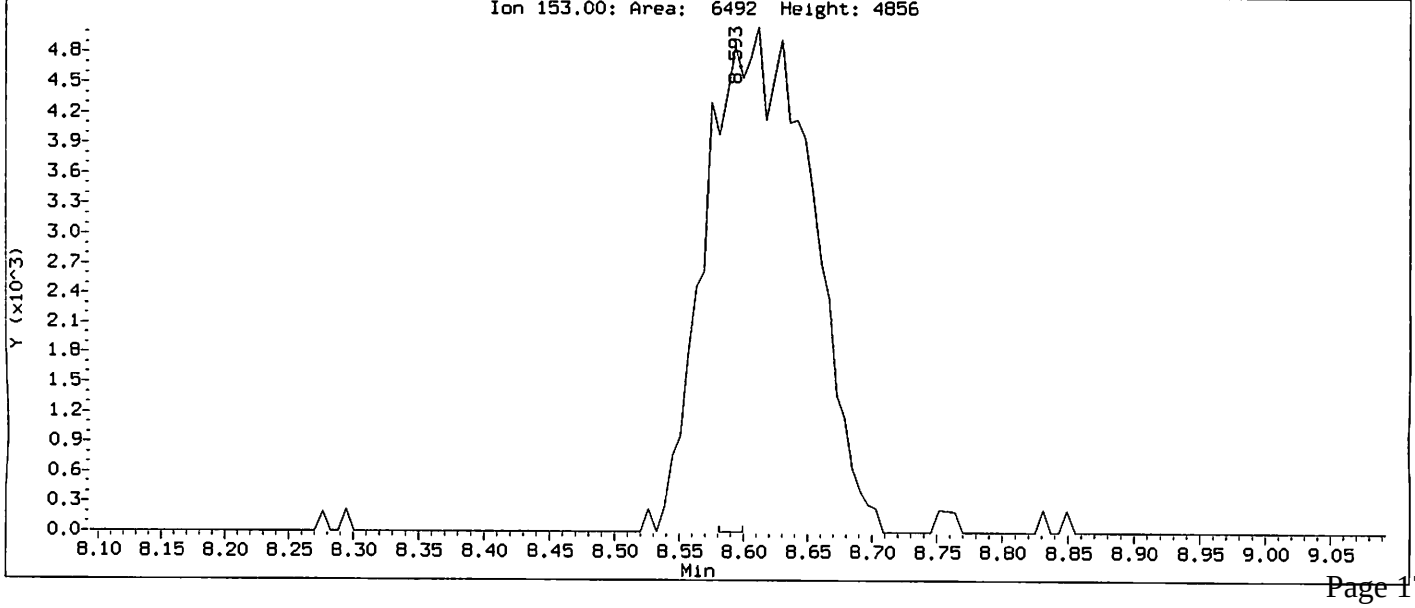
Injection Date: 13-MAR-2014 15:49
Instrument: 5975hpms91.i
Client Sample ID: VSTD001UA

Compound: 1,1,1-trichloro-2,2,2-trifluo
CAS Number: 354-58-5







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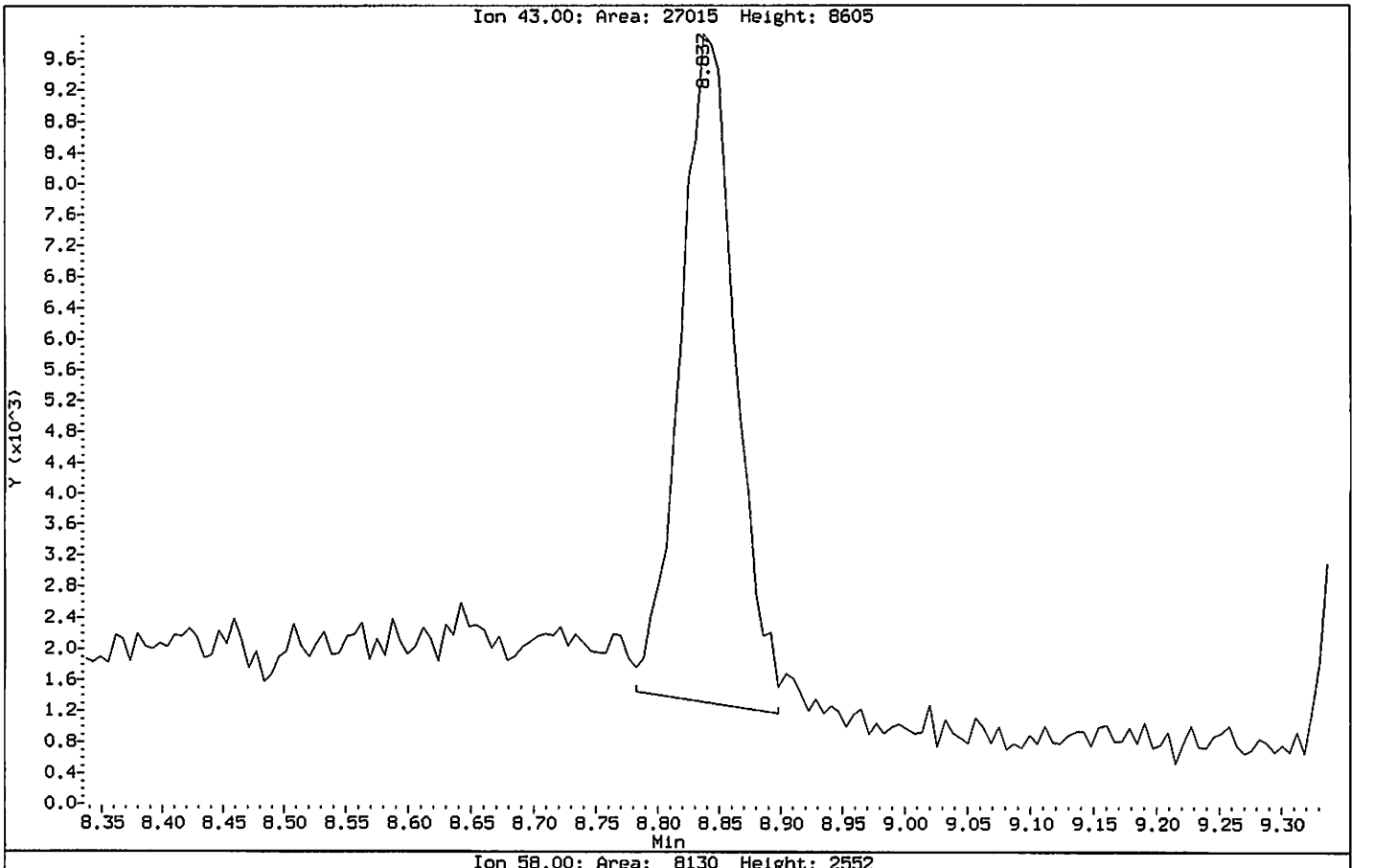
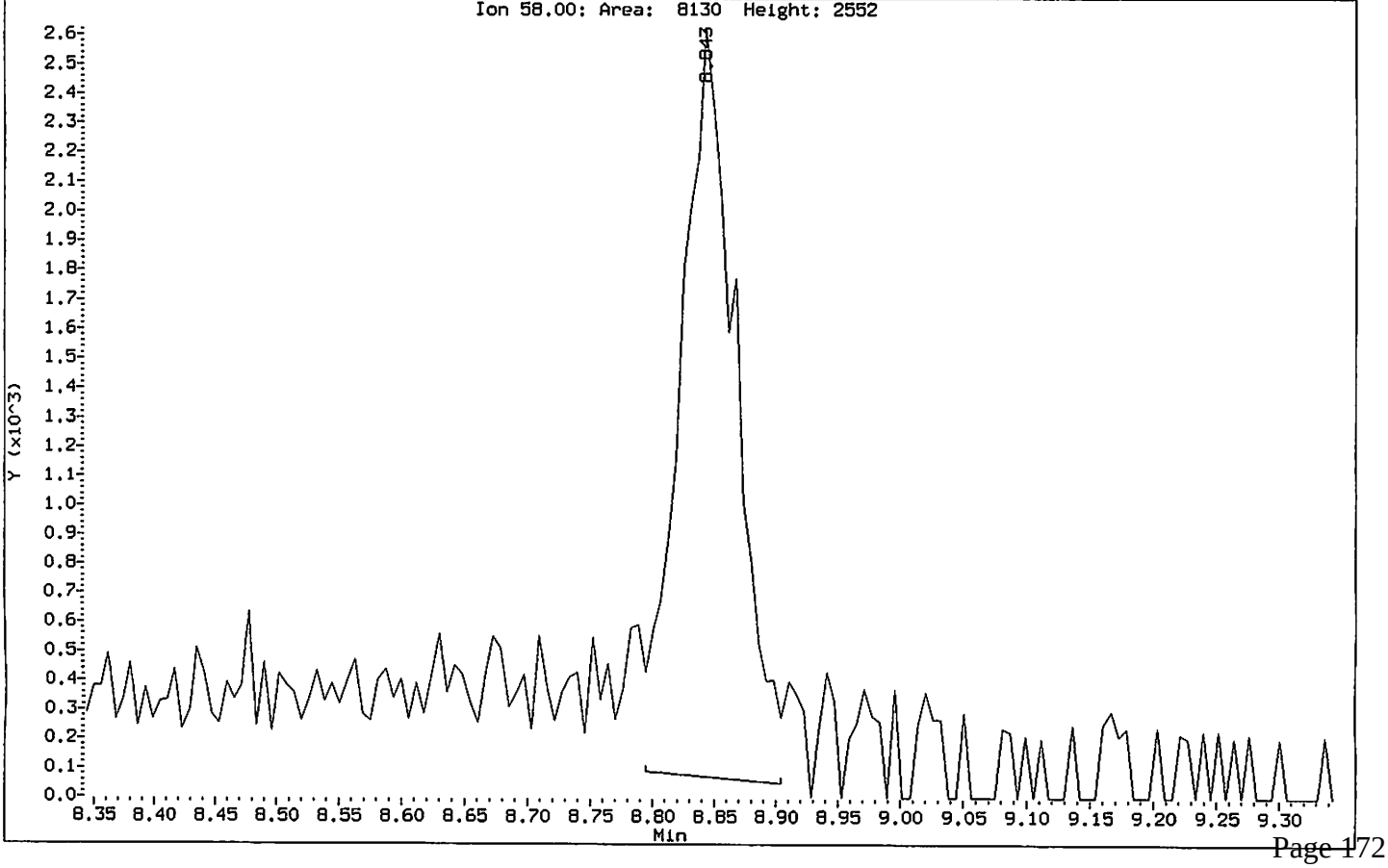
Injection Date: 13-MAR-2014 15:49
Instrument: 5975hpms91.i
Client Sample ID: VSTD001UA

Compound: Acetone
CAS Number: 67-64-1





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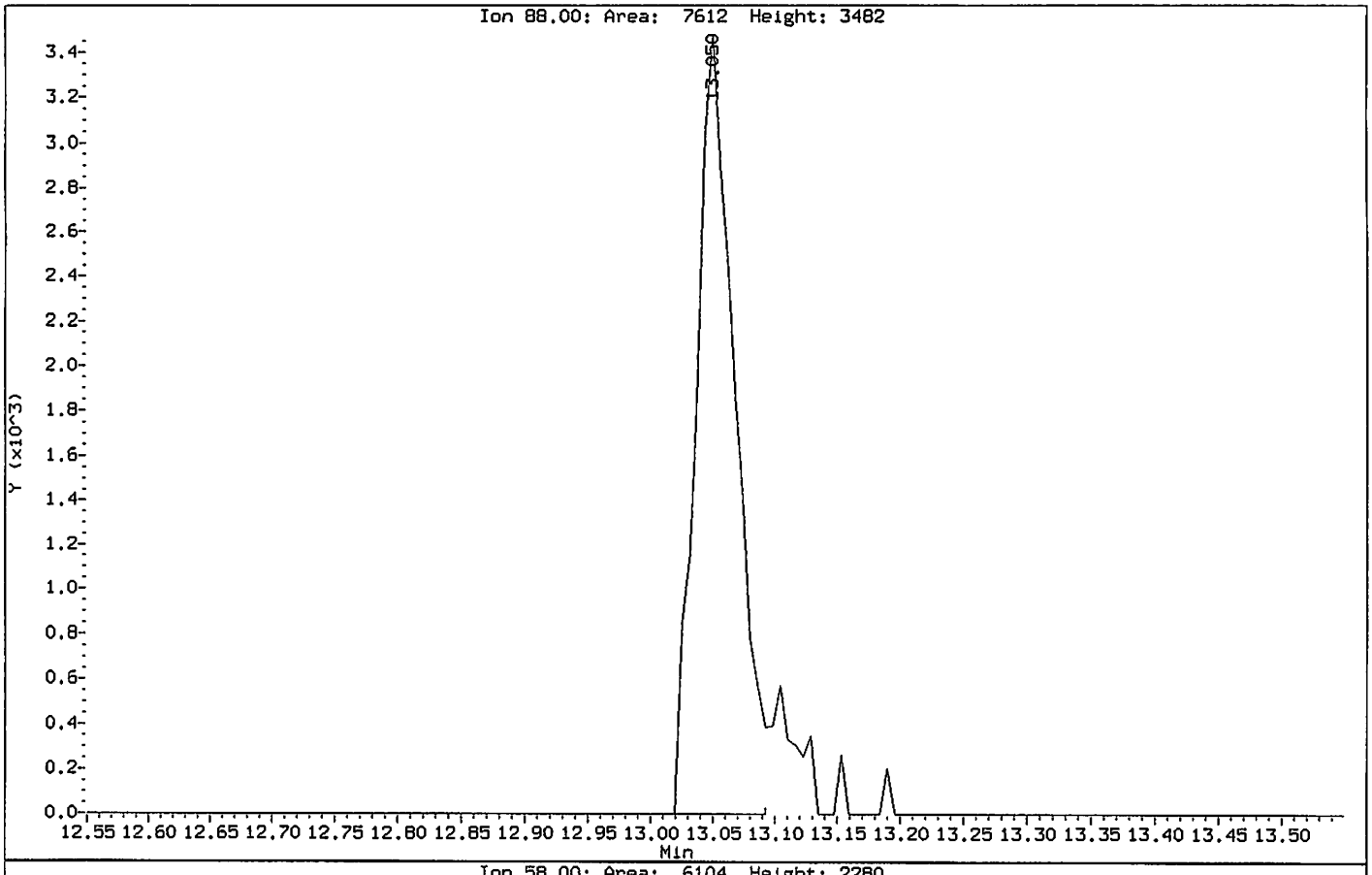
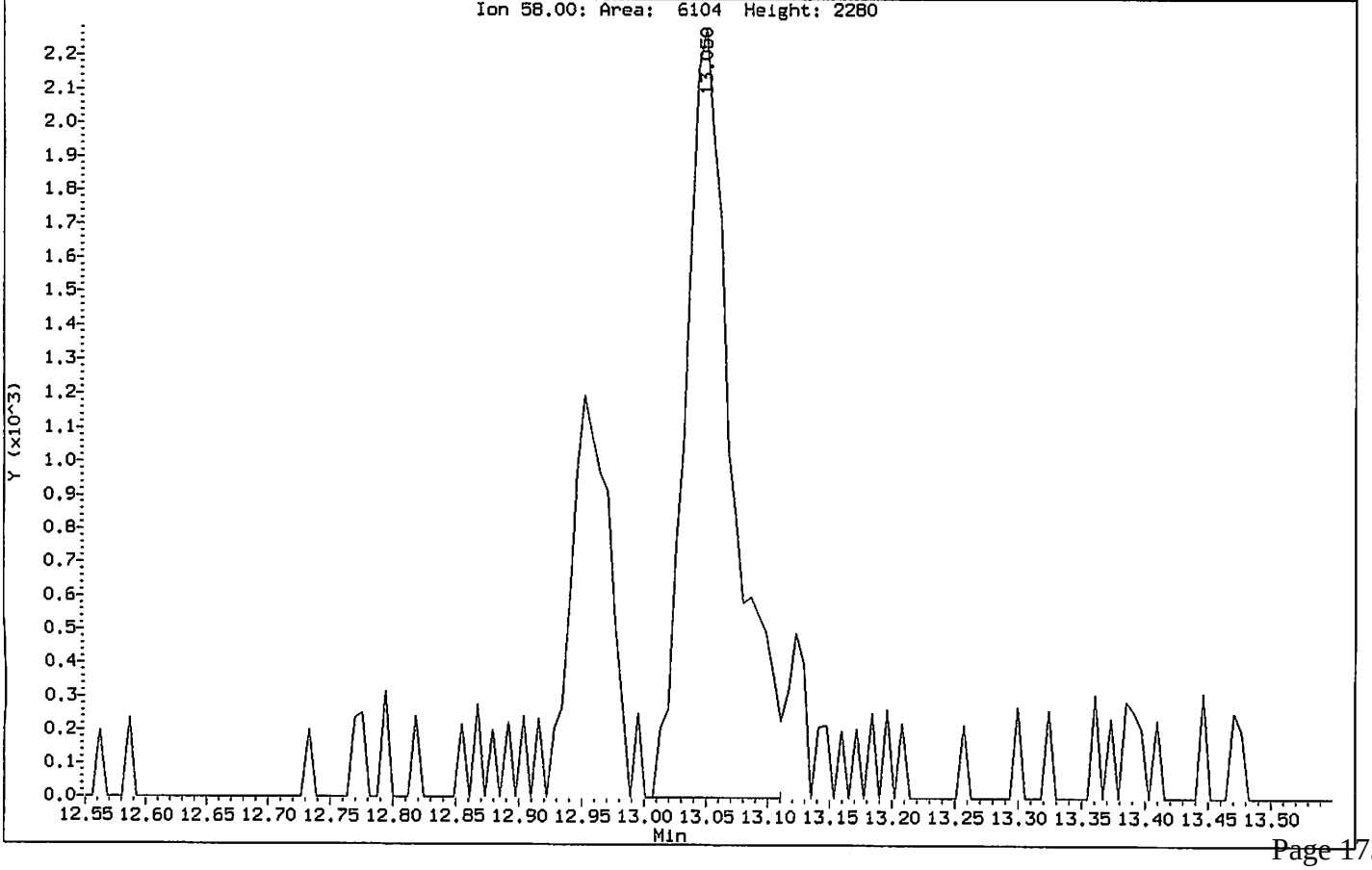
Injection Date: 13-MAR-2014 15:49
Instrument: 5975hpms91.i
Client Sample ID: VSTD001UA

Compound: 1,4-dioxane
CAS Number: 123-91-1





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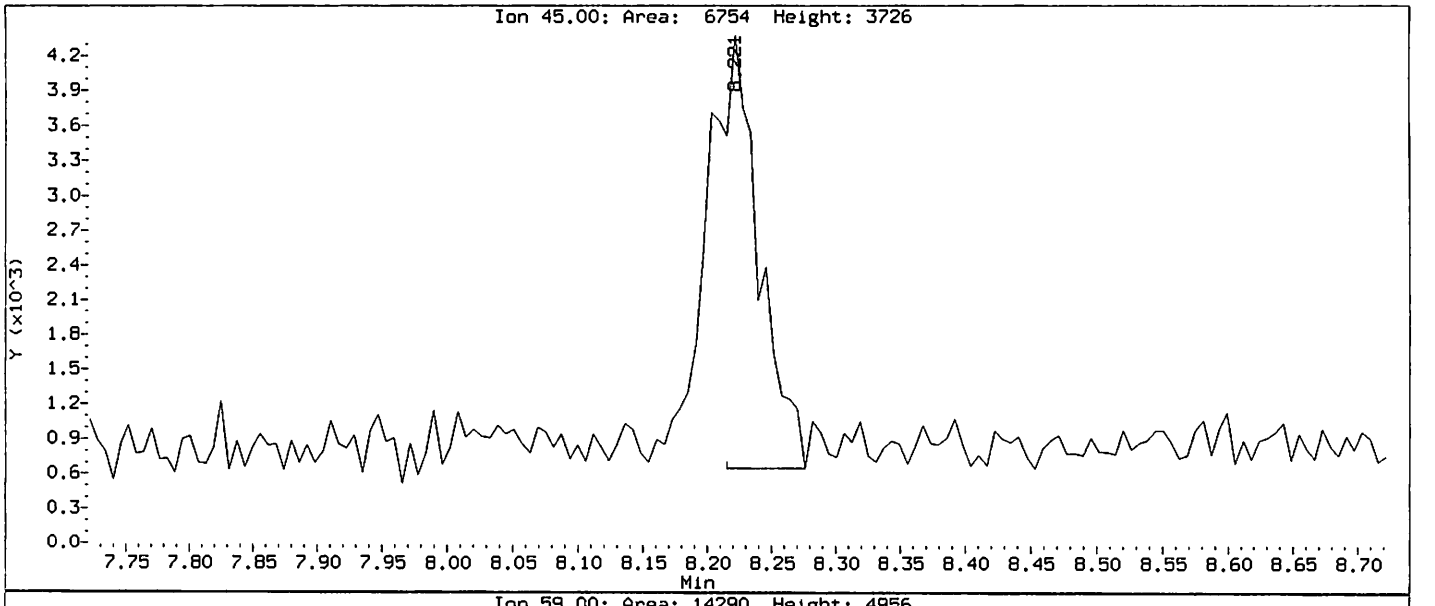
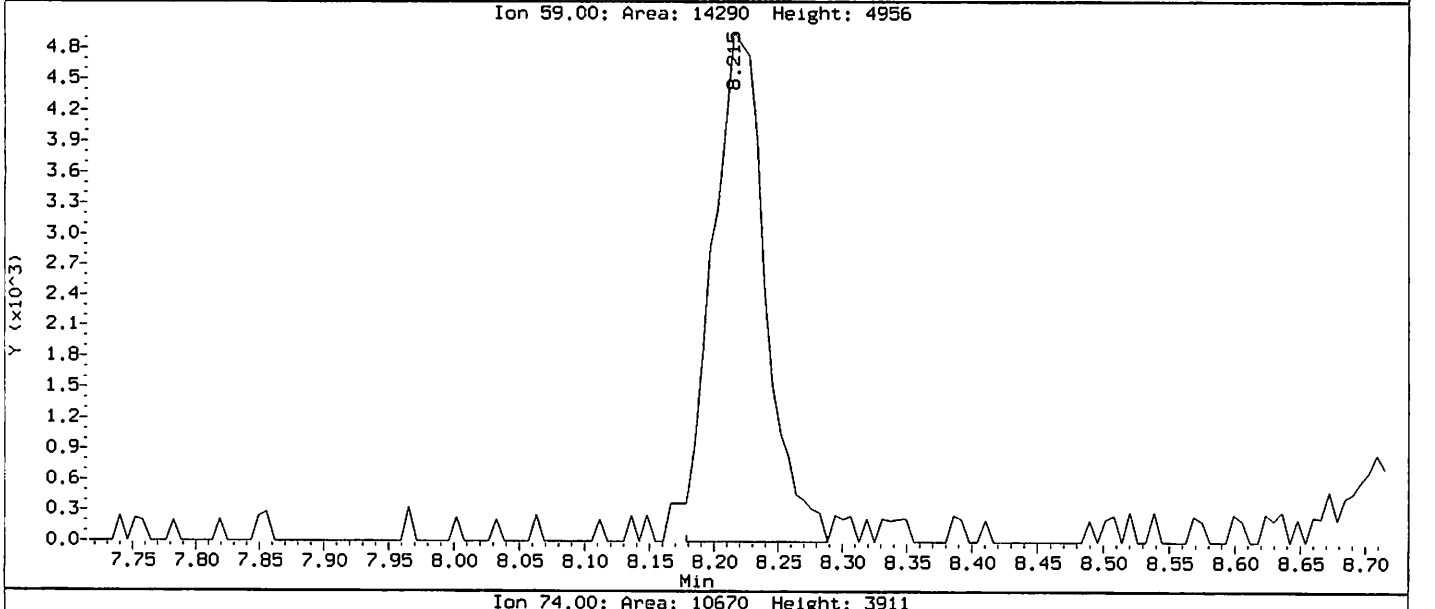
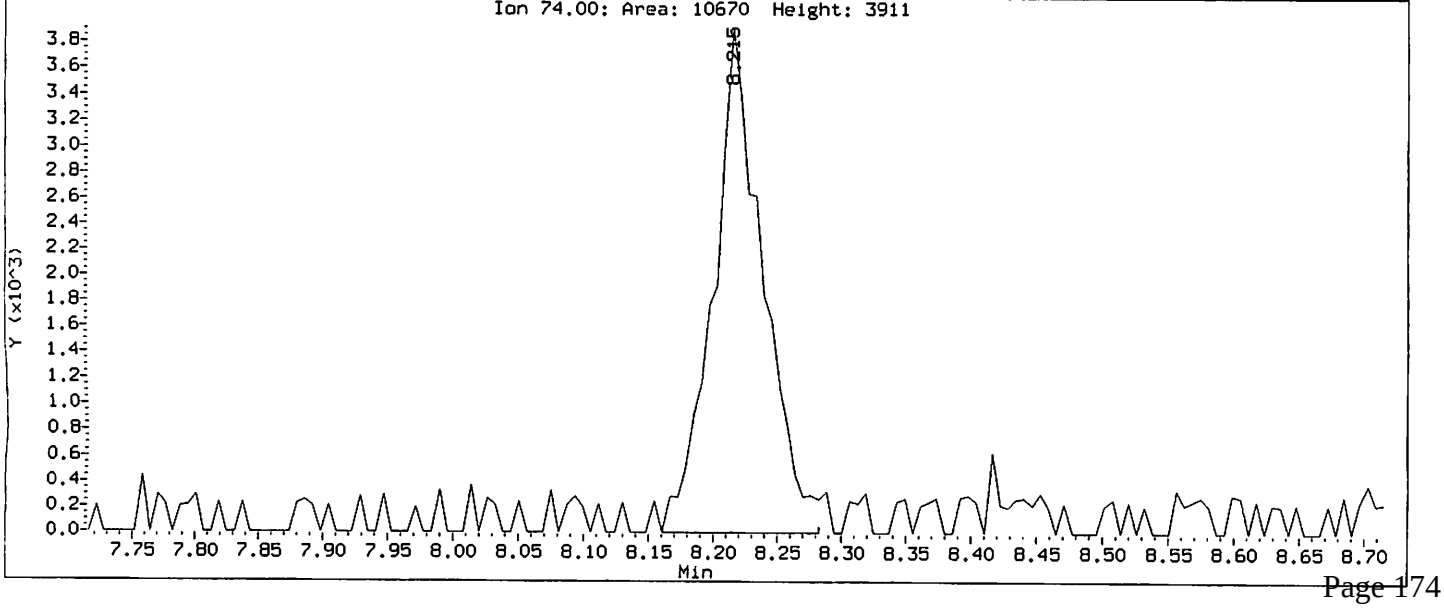
Injection Date: 13-MAR-2014 15:49
Instrument: 5975hpms91.i
Client Sample ID: VSTD001UA

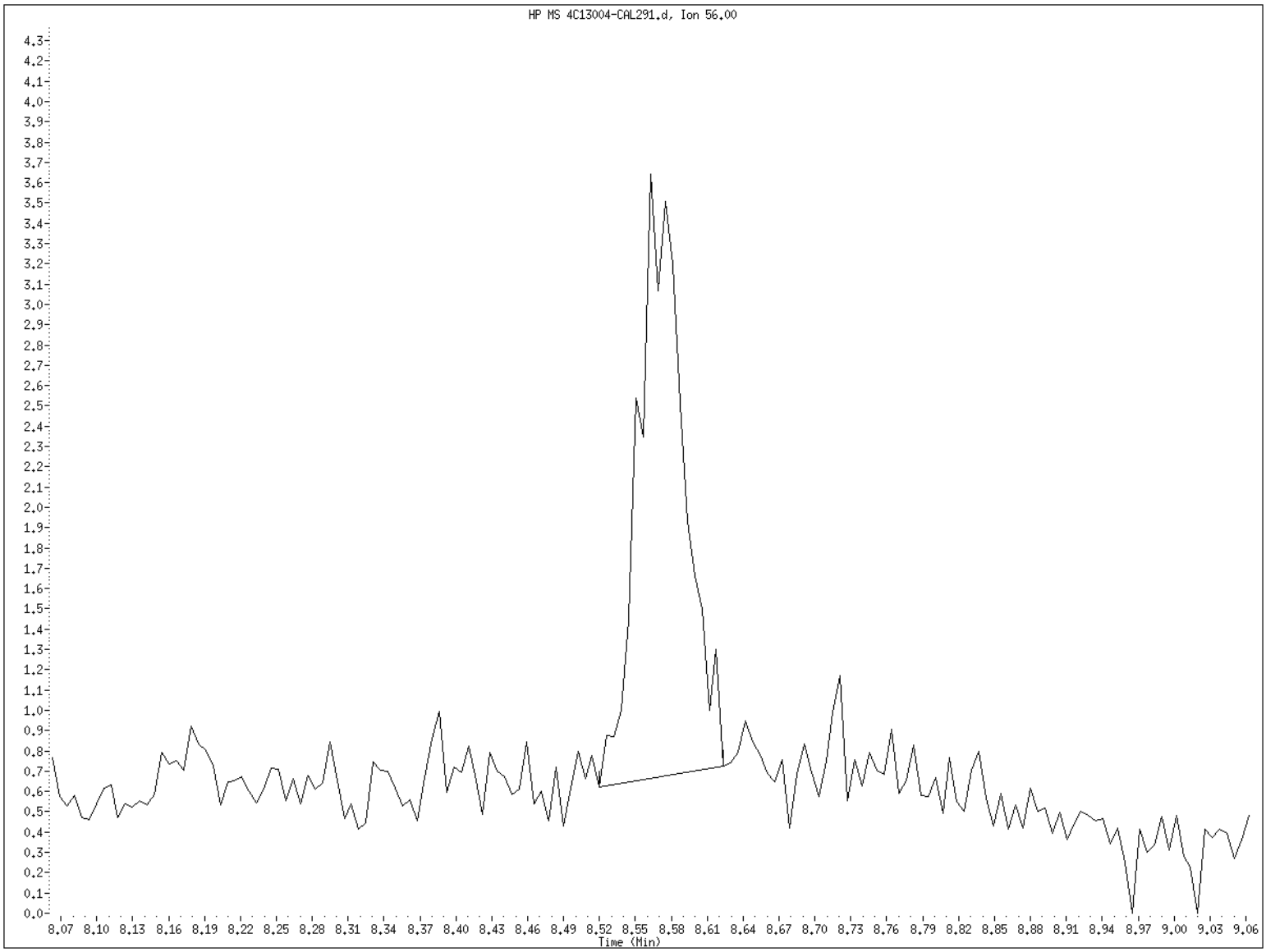
Compound: Diethyl ether
CAS Number: 60-29-7







Acrolein CAS Number 107-02-8 Area = 7916 Manually integrated



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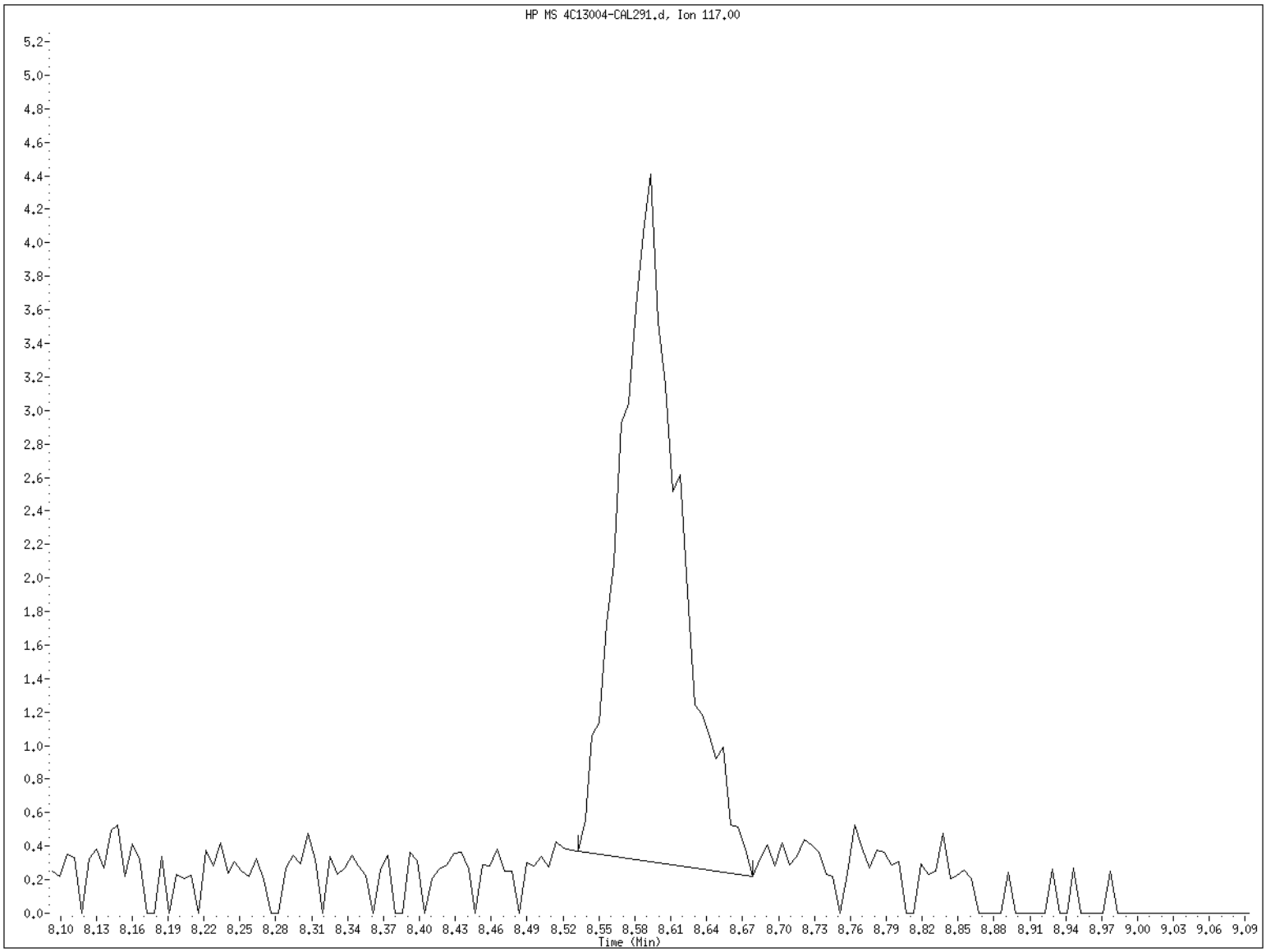
Client ID: VSTD001UA
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 15:49
Retention Time: 8.56
Operator ID: JAO

3/13/2014

1,1,1-trichloro-2,2,2-trifluo CAS Number 354-58-5 Area = 14030 Manually integra



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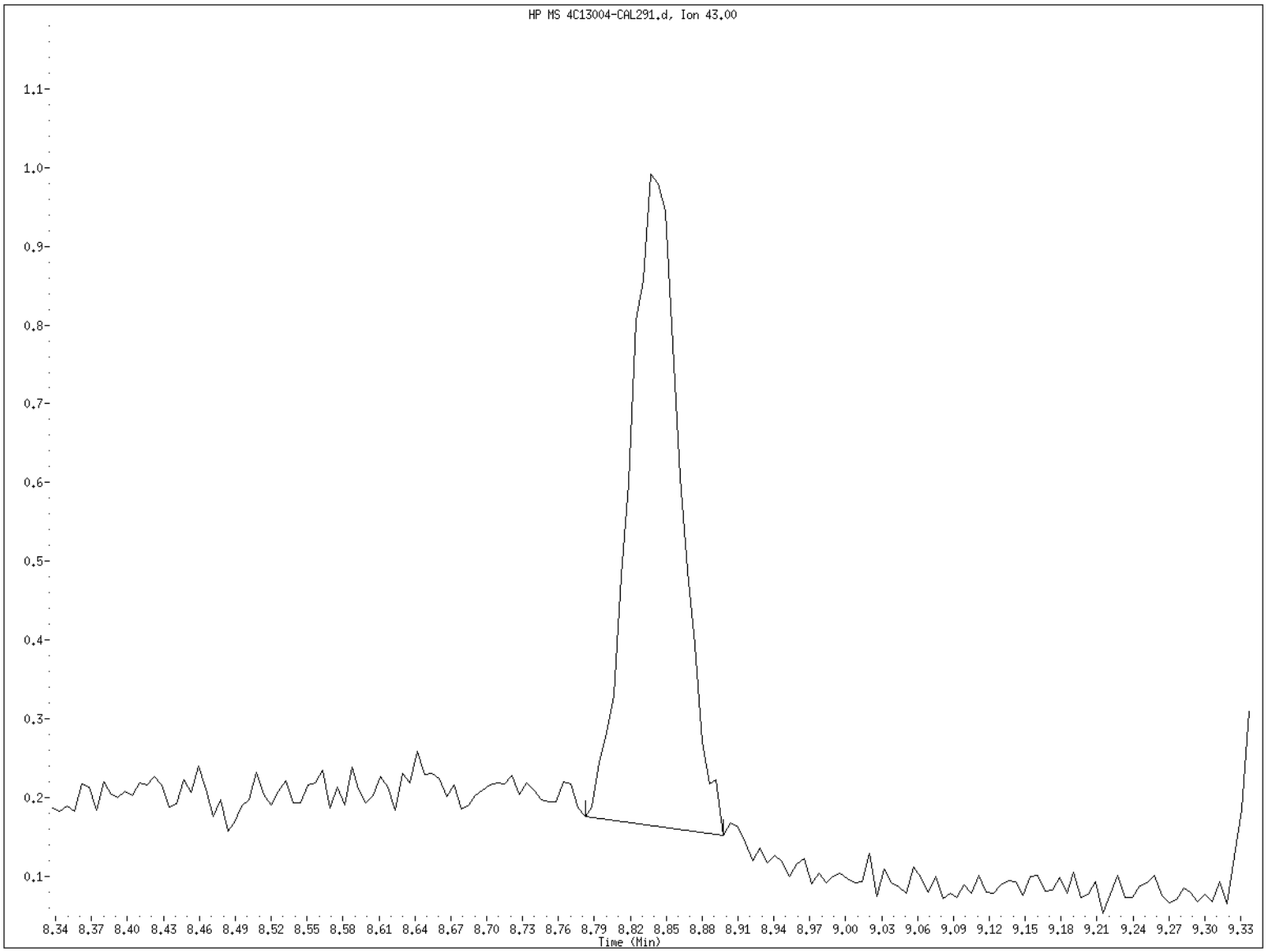
Client ID: VSTD001UA
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 15:49
Retention Time: 8.59
Operator ID: JAO

3/13/2014

Acetone CAS Number 67-64-1 Area = 24612 Manually integrated



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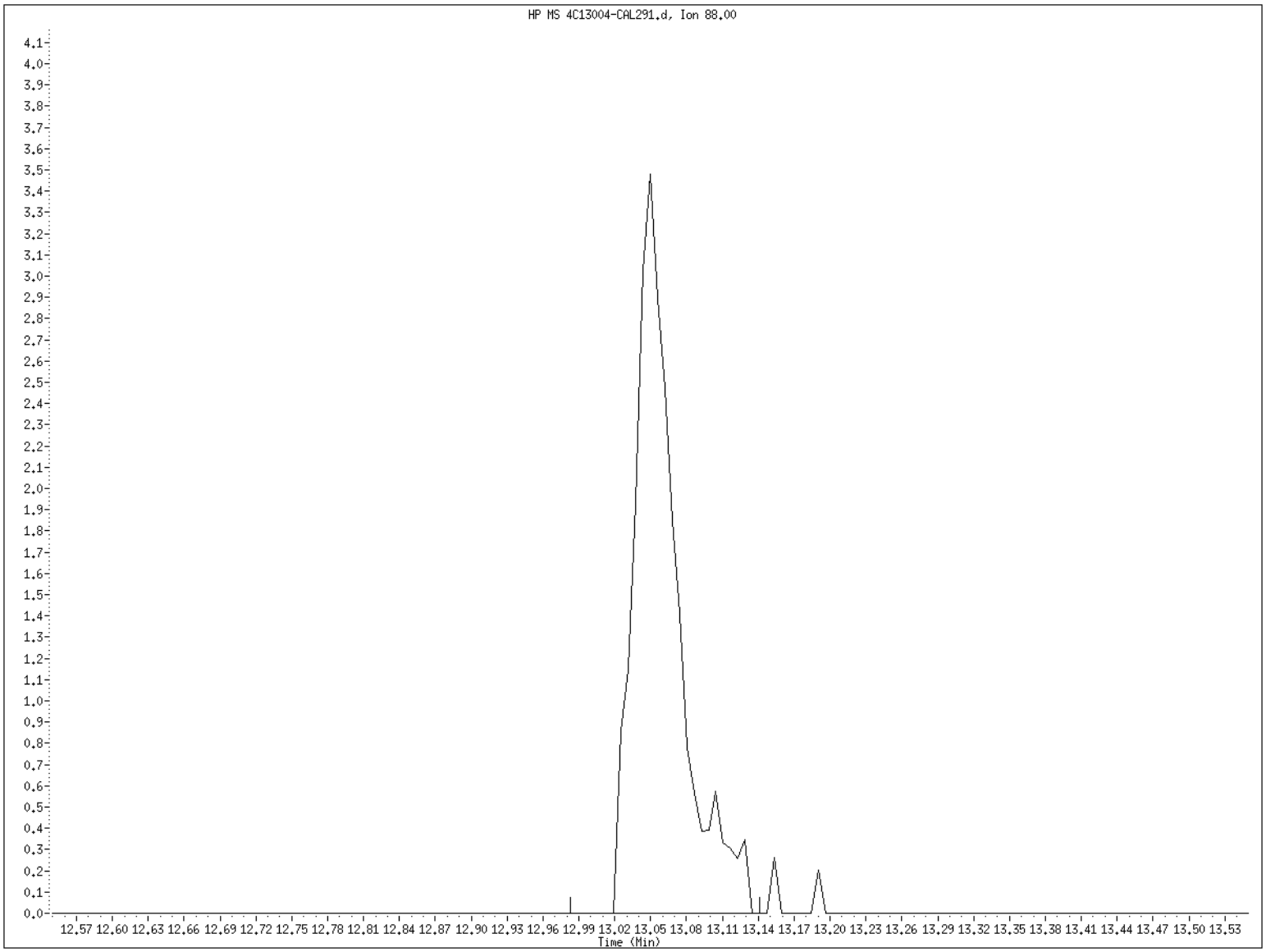
Client ID: VSTD001UA
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 15:49
Retention Time: 8.84
Operator ID: JAO

3/13/2014

1,4-dioxane CAS Number 123-91-1 Area = 8417 Manually integrated



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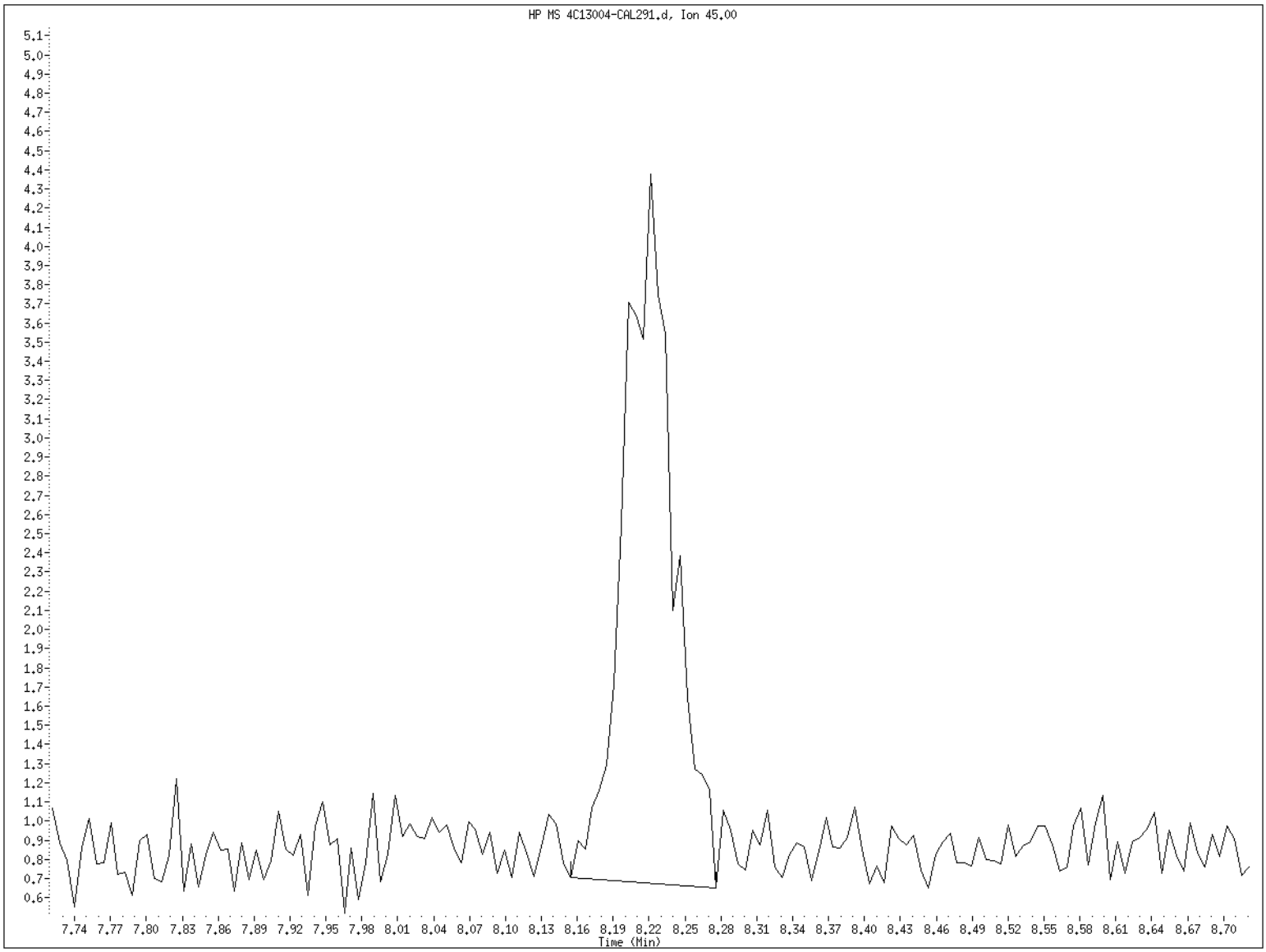
Client ID: VSTD001UA
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 15:49
Retention Time: 13.05
Operator ID: JAO

3/13/2014

Diethyl ether CAS Number 60-29-7 Area = 10606 Manually integrated



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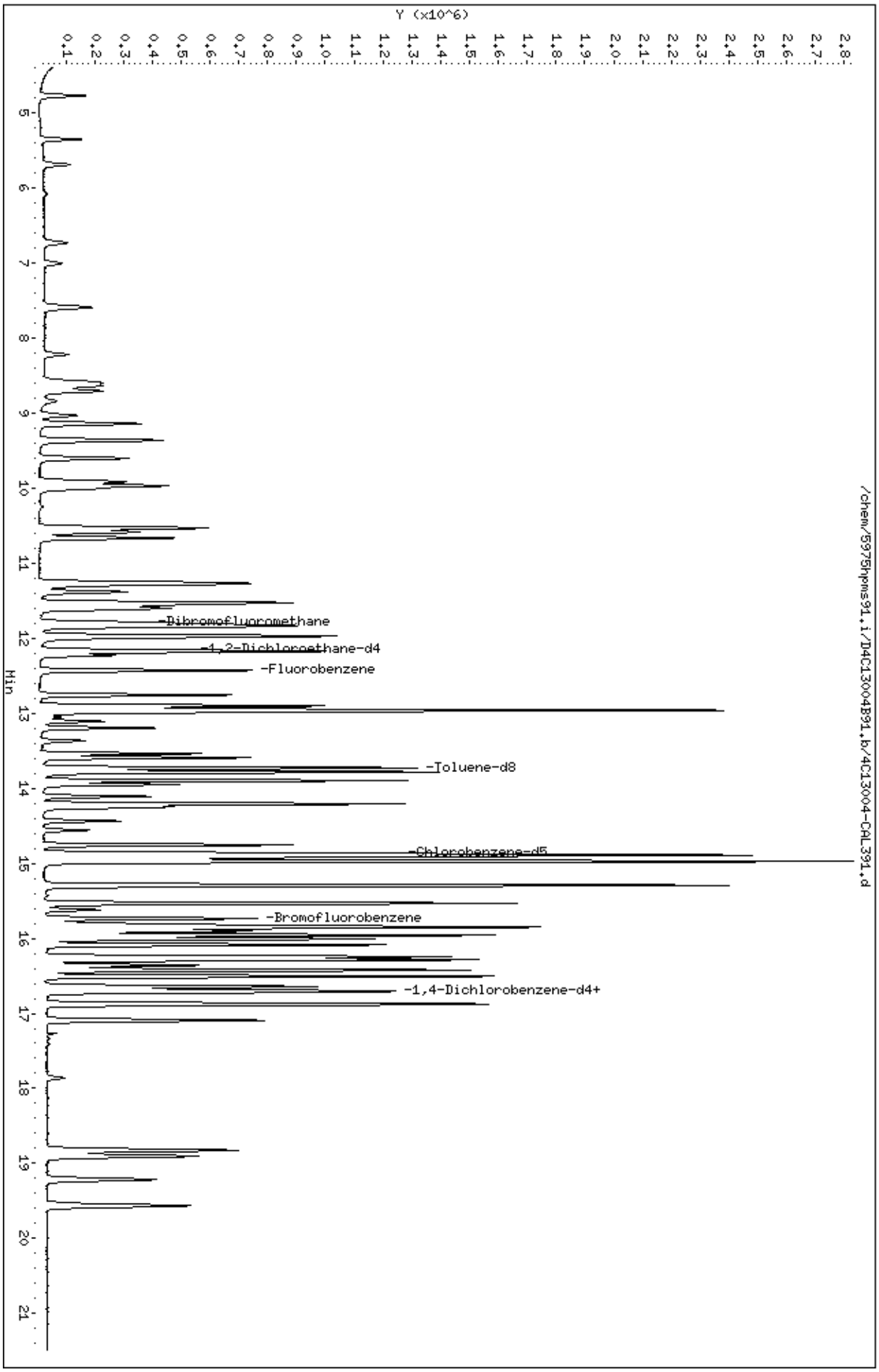
Client ID: VSTD001UA
Instrument ID: 5975hpms91.i
Injection Date and Time: 13-MAR-2014 15:49
Retention Time: 8.22
Operator ID: JAO

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL391.d
Date : 13-MAR-2014 18:14
Client ID: WSTD005UA
Sample Info: 4C13004-CAL3:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL391.d
Report Date: 13-Mar-2014 19:41

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL391.d
Lab Smp Id: 4C13004-CAL3 Client Smp ID: VSTD005UA
Inj Date : 13-MAR-2014 18:14
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4C13004-CAL3:JAO
Misc Info : VSTD005UA
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 13-Mar-2014 19:41 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 18:14 Cal File: 4C13004-CAL391.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	745348	125.000	
* 2 Chlorobenzene-d5	117	14.866	14.866	(1.000)	575955	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	261183	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	202271	125.000	124.742
$ 5 1,2-Dichloroethane-d4	65	12.154	12.154	(0.978)	196283	125.000	125.871
$ 6 Toluene-d8	98	13.726	13.726	(0.923)	978694	125.000	122.234
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	346061	125.000	117.859
8 Dichlorodifluoromethane	85	4.765	4.765	(0.383)	232247	125.000	120.470
9 Chloromethane	50	5.344	5.344	(0.430)	203095	125.000	112.765
10 Vinyl Chloride	62	5.685	5.685	(0.457)	155642	125.000	116.647
11 Bromomethane	94	6.722	6.722	(0.541)	87338	125.000	115.695
12 Chloroethane	64	7.002	7.002	(0.563)	86530	125.000	117.443
13 Trichlorofluoromethane	101	7.587	7.587	(0.611)	251429	125.000	119.424
14 Acrolein	56	8.575	8.575	(0.690)	8979	1250.00	1250.00
15 1,1,1-trichloro-2,2,2-trifluo	117	8.587	8.587	(0.691)	69629	125.000	122.490

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL391.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	8.636	8.636	(0.695)	72581	125.000	118.422
17 1,1-Dichloroethene	96	8.709	8.709	(0.701)	104466	125.000	117.221
18 Acetone	43	8.843	8.843	(0.712)	92982	625.000	621.874
19 Iodomethane	142	9.032	9.032	(0.727)	218025	125.000	125.786
20 Carbon disulfide	76	9.136	9.136	(0.735)	718809	125.000	121.473
22 3-Chloropropene	39	9.361	9.361	(0.753)	267712	125.000	124.637
23 Acetonitrile	41	9.361	9.361	(0.753)	383357	125.000	126.250
24 Methyl acetate	43	9.361	9.361	(0.753)	83939	125.000	124.100
25 Methylene Chloride	84	9.599	9.599	(0.772)	200136	125.000	110.612
26 Acrylonitrile	53	10.008	10.008	(0.805)	178618	1250.00	1079.56
28 trans-1,2-Dichloroethene	96	9.971	9.971	(0.802)	222609	125.000	117.939
27 Methyl-tert-butyl ether	73	9.916	9.916	(0.798)	447087	125.000	124.929
30 Isopropyl ether	45	10.526	10.526	(0.847)	659984	125.000	129.192
31 Vinyl acetate	43	10.526	10.526	(0.847)	335464	125.000	107.853
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	411807	125.000	122.359
33 Chloroprene	53	10.660	10.660	(0.858)	370648	125.000	122.089
34 2-butanone	43	11.251	11.251	(0.905)	201146	625.000	666.578
35 2,2-Dichloropropane	77	11.257	11.257	(0.906)	367049	125.000	117.384
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	235992	125.000	122.833
37 Propionitrile	54	11.385	11.385	(0.916)	410980	6250.00	5853.32
38 Methacrylonitrile	41	11.526	11.526	(0.927)	585028	1250.00	1282.07
39 Bromochloromethane	128	11.556	11.556	(0.930)	83673	125.000	123.118
40 Chloroform	83	11.605	11.605	(0.934)	388805	125.000	123.938
42 1,1,1-Trichloroethane	97	11.812	11.812	(0.950)	379439	125.000	122.645
43 Cyclohexane	84	11.837	11.837	(0.952)	378821	125.000	124.318
44 1,1-dichloropropene	75	11.965	11.965	(0.963)	326217	125.000	121.828
45 Isobutyl alcohol	43	11.995	11.995	(0.965)	219595	6250.00	6848.16
46 Carbon Tetrachloride	117	11.965	11.965	(0.963)	317564	125.000	122.496
47 Benzene	78	12.178	12.178	(0.980)	925042	125.000	122.251
48 1,2-Dichloroethane	62	12.227	12.227	(0.984)	230136	125.000	125.555
49 Trichloroethene	130	12.757	12.757	(1.026)	253029	125.000	123.377
50 Methylcyclohexane	83	12.903	12.903	(1.038)	452144	125.000	124.551
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	219514	125.000	124.664
52 Methylmethacrylate	69	12.958	12.958	(1.043)	978514	1250.00	1427.46
53 1,4-dioxane	88	13.050	13.050	(1.050)	49573	6250.00	6850.28
54 Dibromomethane	174	13.105	13.105	(1.054)	81305	125.000	124.845
55 Bromodichloromethane	83	13.196	13.196	(1.062)	285766	125.000	126.274
56 2-chloroethyl vinyl ether	63	13.361	13.361	(1.075)	67797	250.000	250.305
57 cis-1,3-Dichloropropene	75	13.537	13.537	(1.089)	346885	125.000	124.997
58 4-Methyl-2-pentanone	43	13.592	13.592	(0.914)	532623	625.000	680.862
59 Toluene	92	13.781	13.781	(0.927)	654128	125.000	122.481
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	717283	1250.00	1208.12
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.938)	279488	125.000	125.267
62 1,1,2-Trichloroethane	97	14.111	14.111	(0.949)	138202	125.000	127.172
63 2-hexanone	43	14.208	14.208	(0.956)	378808	625.000	672.298
64 1,3-Dichloropropane	76	14.251	14.251	(0.959)	265542	125.000	129.351
65 Tetrachloroethene	164	14.214	14.214	(0.956)	204119	125.000	121.521

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Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL391.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	14.434	14.434	(0.971)	166755	125.000	129.369
67 1,2-Dibromoethane	107	14.556	14.556	(0.979)	126324	125.000	124.674
68 1-Chlorohexane	55	14.757	14.757	(0.993)	234857	125.000	112.342
69 Chlorobenzene	112	14.885	14.885	(1.001)	687489	125.000	124.677
70 Ethylbenzene	106	14.897	14.897	(1.002)	397815	125.000	121.886
71 1,1,1,2-Tetrachloroethane	131	14.927	14.927	(1.004)	216941	125.000	127.031
72 m,p-Xylene	106	14.970	14.970	(1.007)	1000338	250.000	248.176
73 m,p-Xylene (part of total)	106	14.970	14.970	(1.007)	1000338	250.000	248.176
74 o-Xylene	106	15.293	15.293	(1.029)	468336	125.000	123.655
75 o-Xylene (part of total)	106	15.293	15.293	(1.029)	468336	125.000	123.655
76 Styrene	104	15.299	15.299	(1.029)	746136	125.000	124.721
77 Bromoform	173	15.537	15.537	(0.931)	70568	125.000	129.924
78 Isopropyl Benzene	105	15.537	15.537	(1.045)	1261667	125.000	123.252
79 1,1,2,2-Tetrachloroethane	83	15.793	15.793	(0.946)	140507	125.000	130.021
81 1,2,3-Trichloropropane	110	15.872	15.872	(1.068)	41767	125.000	128.363
80 trans-1,4-dichloro-2-butene	53	15.824	15.824	(1.064)	176222	500.000	512.545
82 n-Propyl Benzene	91	15.848	15.848	(0.949)	1549009	125.000	126.628
83 Bromobenzene	156	15.903	15.903	(1.070)	234928	125.000	124.701
84 1,3,5-Trimethyl Benzene	105	15.958	15.958	(0.956)	1087316	125.000	127.369
85 2-Chlorotoluene	126	16.007	16.007	(0.959)	280392	125.000	125.586
86 4-Chlorotoluene	126	16.086	16.086	(0.963)	298860	125.000	127.288
87 tert-Butyl Benzene	119	16.244	16.244	(0.973)	1028707	125.000	124.126
88 1,2,4-Trimethyl Benzene	105	16.287	16.287	(0.976)	1085008	125.000	125.884
89 Pentachloroethane	167	16.366	16.366	(0.980)	126344	125.000	127.771
90 sec-Butyl Benzene	105	16.427	16.427	(0.984)	1373164	125.000	126.100
91 p-Isopropyl Toluene	119	16.506	16.506	(0.989)	1190080	125.000	126.739
92 1,3-Dichlorobenzene	146	16.647	16.647	(0.997)	522785	125.000	128.509
93 1,4-Dichlorobenzene	146	16.720	16.720	(1.001)	512387	125.000	127.674
94 n-Butyl Benzene	91	16.878	16.878	(1.011)	1152934	125.000	128.565
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	437562	125.000	128.601
96 1,2-Dibromo-3-Chloropropane	75	17.866	17.866	(1.070)	27249	125.000	132.331
97 1,2,4-Trichlorobenzene	180	18.829	18.829	(1.128)	333552	125.000	130.975
98 Hexachlorobutadiene	225	18.902	18.902	(1.132)	162816	125.000	128.566
99 Naphthalene	128	19.219	19.219	(1.151)	544197	125.000	137.571
171 Diethyl ether	45	8.221	8.221	(0.662)	51231	125.000	114.766
100 1,2,3-Trichlorobenzene	180	19.561	19.561	(1.172)	268078	125.000	132.339
M 101 1,2-Dichloroethene (total)	96				458601	250.000	240.815
M 102 Xylene (total)	106				1468674	125.000	387.775

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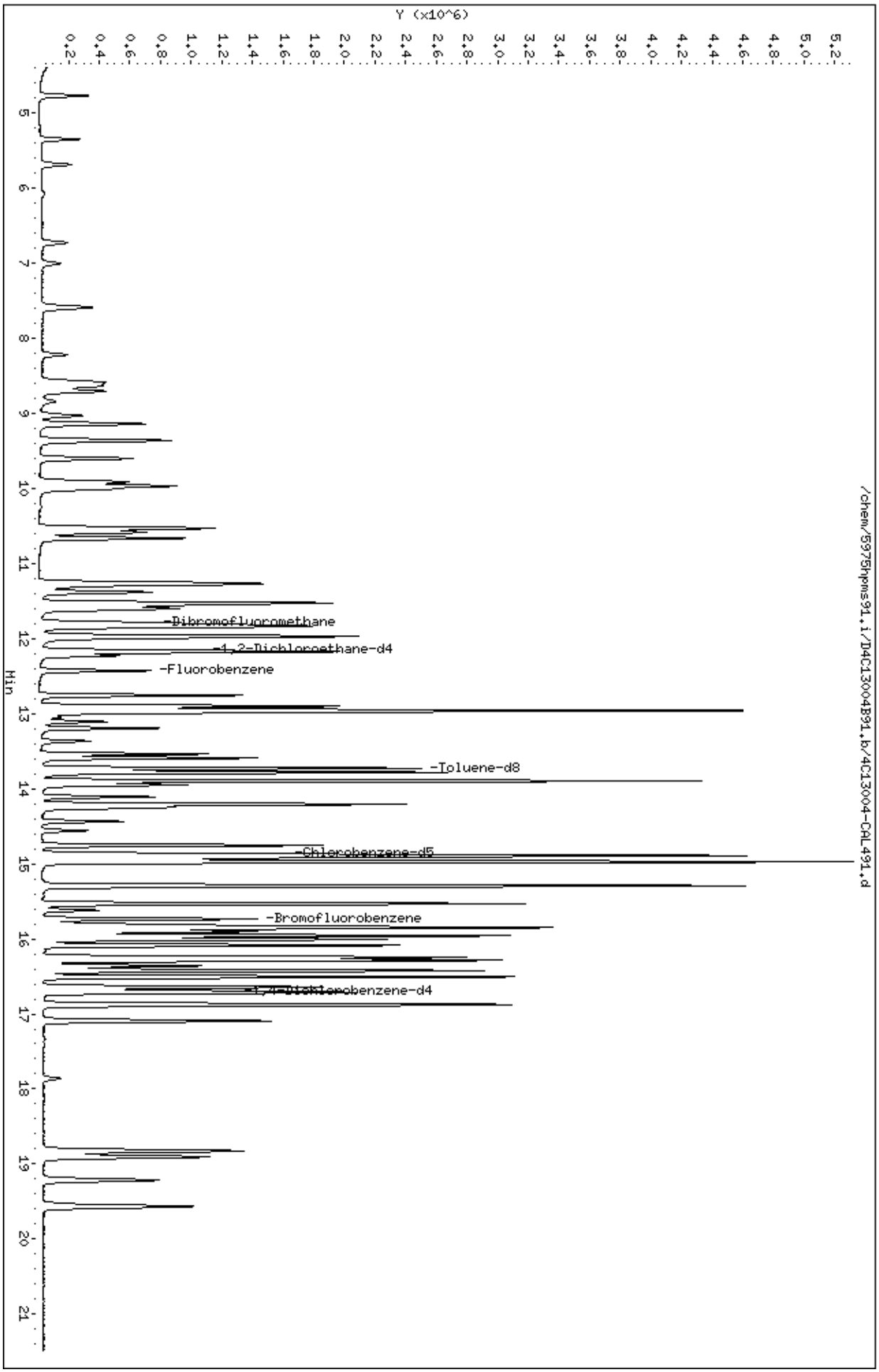
Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL491.d
Date : 13-MAR-2014 17:45
Client ID: WSTD010UA
Sample Info: 4C13004-CAL4:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



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Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL491.d
Report Date: 13-Mar-2014 19:41

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL491.d
Lab Smp Id: 4C13004-CAL4 Client Smp ID: VSTD010UA
Inj Date : 13-MAR-2014 17:45
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4C13004-CAL4:JAO
Misc Info : VSTD010UA
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 13-Mar-2014 19:41 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 17:45 Cal File: 4C13004-CAL491.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	750452	125.000	
* 2 Chlorobenzene-d5	117	14.866	14.866	(1.000)	539526	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	259263	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	399188	250.000	245.858
$ 5 1,2-Dichloroethane-d4	65	12.154	12.154	(0.978)	376787	250.000	242.409
$ 6 Toluene-d8	98	13.726	13.726	(0.923)	1878656	250.000	250.357
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	649869	250.000	229.161
8 Dichlorodifluoromethane	85	4.765	4.765	(0.383)	466088	250.000	242.518
9 Chloromethane	50	5.344	5.344	(0.430)	385110	250.000	220.675
10 Vinyl Chloride	62	5.685	5.685	(0.457)	324843	250.000	243.799
11 Bromomethane	94	6.722	6.722	(0.541)	181711	250.000	241.713
12 Chloroethane	64	6.996	6.996	(0.563)	177830	250.000	242.209
13 Trichlorofluoromethane	101	7.593	7.593	(0.611)	503206	250.000	240.420
14 Acrolein	56	8.575	8.575	(0.690)	59572	2500.00	2500.51
15 1,1,1-trichloro-2,2,2-trifluo	117	8.581	8.581	(0.690)	137461	250.000	242.557

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Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	8.636	8.636	(0.695)	143244	250.000	236.350
17 1,1-Dichloroethene	96	8.709	8.709	(0.701)	213783	250.000	241.085
18 Acetone	43	8.843	8.843	(0.712)	188315	1250.00	1255.72
19 Iodomethane	142	9.026	9.026	(0.726)	454343	250.000	257.678
20 Carbon disulfide	76	9.136	9.136	(0.735)	1438971	250.000	243.586
22 3-Chloropropene	39	9.361	9.361	(0.753)	544729	250.000	251.408
23 Acetonitrile	41	9.355	9.355	(0.753)	772401	250.000	251.977
24 Methyl acetate	43	9.361	9.361	(0.753)	180453	250.000	261.067
25 Methylene Chloride	84	9.599	9.599	(0.772)	391339	250.000	222.649
26 Acrylonitrile	53	10.008	10.008	(0.805)	460156	2500.00	2691.65
28 trans-1,2-Dichloroethene	96	9.965	9.965	(0.802)	448939	250.000	239.530
27 Methyl-tert-butyl ether	73	9.910	9.910	(0.797)	878135	250.000	245.251
30 Isopropyl ether	45	10.526	10.526	(0.847)	1323477	250.000	255.441
31 Vinyl acetate	43	10.526	10.526	(0.847)	714470	250.000	233.241
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	823414	250.000	244.709
33 Chloroprene	53	10.660	10.660	(0.858)	748986	250.000	246.257
34 2-butanone	43	11.251	11.251	(0.905)	376885	1250.00	1242.84
35 2,2-Dichloropropane	77	11.257	11.257	(0.906)	743868	250.000	239.563
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	473238	250.000	245.960
37 Propionitrile	54	11.385	11.385	(0.916)	963501	12500.0	13328.2
38 Methacrylonitrile	41	11.526	11.526	(0.927)	1258169	2500.00	2674.70
39 Bromochloromethane	128	11.556	11.556	(0.930)	170165	250.000	249.009
40 Chloroform	83	11.605	11.605	(0.934)	781466	250.000	248.053
42 1,1,1-Trichloroethane	97	11.806	11.806	(0.950)	759817	250.000	245.414
43 Cyclohexane	84	11.837	11.837	(0.952)	752355	250.000	246.399
44 1,1-dichloropropene	75	11.965	11.965	(0.963)	641615	250.000	240.879
45 Isobutyl alcohol	43	11.989	11.989	(0.965)	415914	12500.0	12784.5
46 Carbon Tetrachloride	117	11.965	11.965	(0.963)	646938	250.000	248.385
47 Benzene	78	12.172	12.172	(0.979)	1845760	250.000	244.158
48 1,2-Dichloroethane	62	12.227	12.227	(0.984)	452849	250.000	246.519
49 Trichloroethene	130	12.757	12.757	(1.026)	508463	250.000	247.170
50 Methylcyclohexane	83	12.903	12.903	(1.038)	918976	250.000	251.069
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	421301	250.000	240.609
52 Methylmethacrylate	69	12.952	12.952	(1.042)	1926071	2500.00	2711.83
53 1,4-dioxane	88	13.050	13.050	(1.050)	87669	12500.0	12145.8
54 Dibromomethane	174	13.105	13.105	(1.054)	164782	250.000	250.976
55 Bromodichloromethane	83	13.190	13.190	(1.061)	573310	250.000	251.206
56 2-chloroethyl vinyl ether	63	13.361	13.361	(1.075)	147817	500.000	504.245
57 cis-1,3-Dichloropropene	75	13.537	13.537	(1.089)	692109	250.000	248.271
58 4-Methyl-2-pentanone	43	13.592	13.592	(0.914)	1037786	1250.00	1370.64
59 Toluene	92	13.781	13.781	(0.927)	1285269	250.000	255.144
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	2481711	2500.00	2586.10
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.938)	555747	250.000	261.741
62 1,1,2-Trichloroethane	97	14.110	14.110	(0.949)	270422	250.000	261.550
63 2-hexanone	43	14.208	14.208	(0.956)	727030	1250.00	1343.20
64 1,3-Dichloropropane	76	14.251	14.251	(0.959)	517981	250.000	264.241
65 Tetrachloroethene	164	14.214	14.214	(0.956)	397922	250.000	252.165

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Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	14.434	14.434	(0.971)	333586	250.000	269.199
67 1,2-Dibromoethane	107	14.556	14.556	(0.979)	252684	250.000	261.972
68 1-Chlorohexane	55	14.751	14.751	(0.992)	502715	250.000	254.996
69 Chlorobenzene	112	14.885	14.885	(1.001)	1294260	250.000	250.423
70 Ethylbenzene	106	14.897	14.897	(1.002)	769090	250.000	251.161
71 1,1,1,2-Tetrachloroethane	131	14.927	14.927	(1.004)	414683	250.000	256.848
72 m,p-Xylene	106	14.970	14.970	(1.007)	1895306	500.000	501.469
73 m,p-Xylene (part of total)	106	14.970	14.970	(1.007)	1895306	500.000	501.469
74 o-Xylene	106	15.293	15.293	(1.029)	890249	250.000	250.692
75 o-Xylene (part of total)	106	15.293	15.293	(1.029)	890249	250.000	250.692
76 Styrene	104	15.299	15.299	(1.029)	1428277	250.000	253.631
77 Bromoform	173	15.537	15.537	(0.931)	136789	250.000	252.773
78 Isopropyl Benzene	105	15.537	15.537	(1.045)	2412615	250.000	251.199
79 1,1,2,2-Tetrachloroethane	83	15.793	15.793	(0.946)	266303	250.000	248.688
81 1,2,3-Trichloropropane	110	15.872	15.872	(1.068)	77962	250.000	254.309
80 trans-1,4-dichloro-2-butene	53	15.824	15.824	(1.064)	340064	1000.00	1041.32
82 n-Propyl Benzene	91	15.848	15.848	(0.949)	3000890	250.000	247.843
83 Bromobenzene	156	15.903	15.903	(1.070)	454206	250.000	255.490
84 1,3,5-Trimethyl Benzene	105	15.958	15.958	(0.956)	2150258	250.000	252.800
85 2-Chlorotoluene	126	16.006	16.006	(0.959)	543395	250.000	246.372
86 4-Chlorotoluene	126	16.086	16.086	(0.963)	581164	250.000	249.518
87 tert-Butyl Benzene	119	16.244	16.244	(0.973)	2043934	250.000	248.837
88 1,2,4-Trimethyl Benzene	105	16.287	16.287	(0.976)	2166701	250.000	252.427
89 Pentachloroethane	167	16.360	16.360	(0.980)	251109	250.000	254.344
90 sec-Butyl Benzene	105	16.427	16.427	(0.984)	2707988	250.000	250.391
91 p-Isopropyl Toluene	119	16.506	16.506	(0.989)	2383665	250.000	254.274
92 1,3-Dichlorobenzene	146	16.647	16.647	(0.997)	1032621	250.000	254.262
93 1,4-Dichlorobenzene	146	16.720	16.720	(1.001)	1006336	250.000	251.953
94 n-Butyl Benzene	91	16.878	16.878	(1.011)	2318100	250.000	257.725
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	866624	250.000	254.911
96 1,2-Dibromo-3-Chloropropane	75	17.866	17.866	(1.070)	47203	250.000	235.421
97 1,2,4-Trichlorobenzene	180	18.829	18.829	(1.128)	668387	250.000	260.645
98 Hexachlorobutadiene	225	18.908	18.908	(1.133)	341835	250.000	266.091
99 Naphthalene	128	19.219	19.219	(1.151)	1090722	250.000	270.266
171 Diethyl ether	45	8.221	8.221	(0.662)	101867	250.000	232.067
100 1,2,3-Trichlorobenzene	180	19.567	19.567	(1.172)	542116	250.000	264.419
M 101 1,2-Dichloroethene (total)	96				922177	500.000	485.574
M 102 Xylene (total)	106				2785555	250.000	784.406(A)

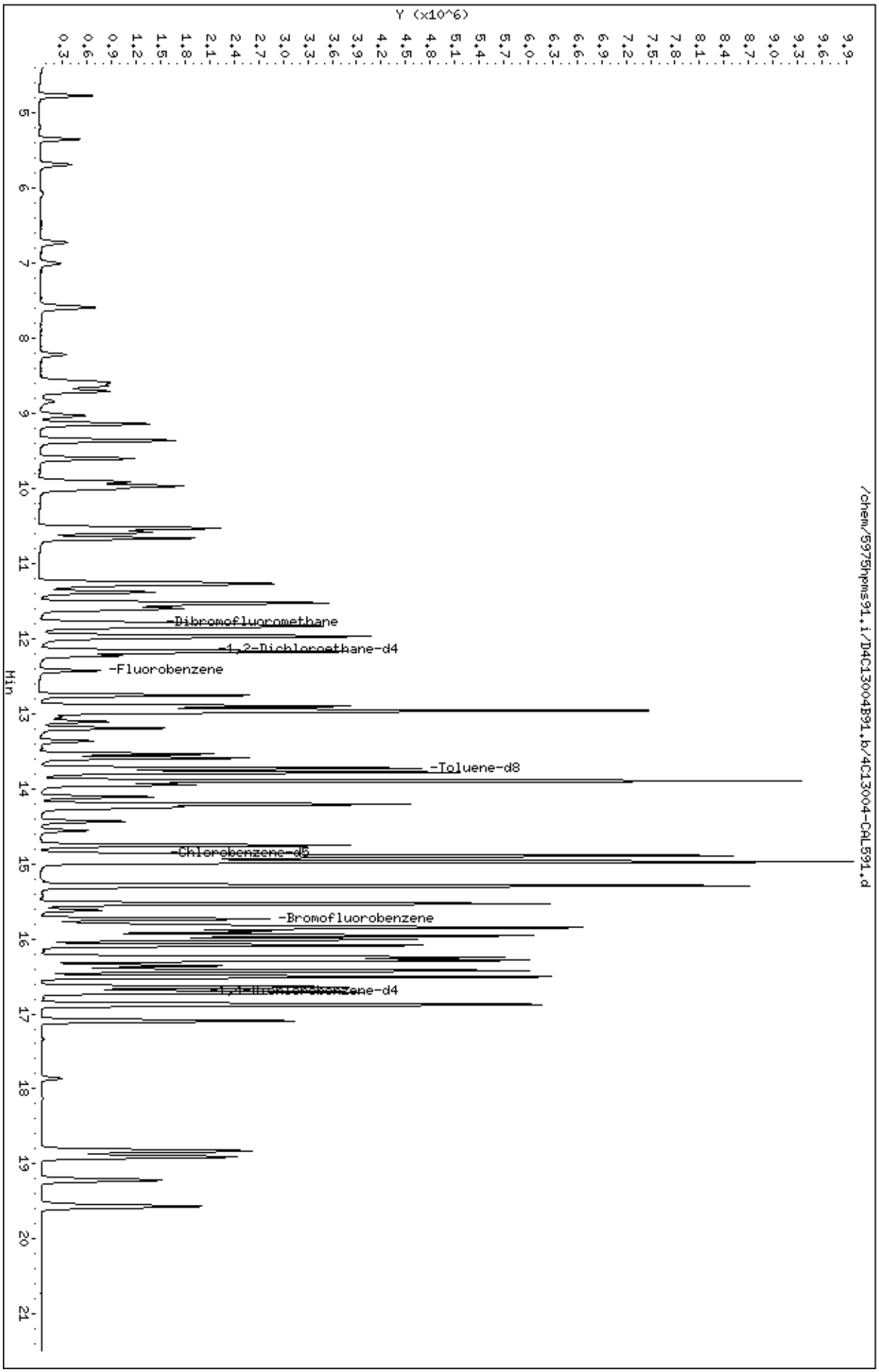
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL591.d
Date : 13-MAR-2014 17:16
Client ID: WSTD020UA
Sample Info: 4C13004-CAL5;JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



Robert Hamilton 3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL591.d
Report Date: 13-Mar-2014 19:41

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL591.d
Lab Smp Id: 4C13004-CAL5 Client Smp ID: VSTD020UA
Inj Date : 13-MAR-2014 17:16
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4C13004-CAL5:JAO
Misc Info : VSTD020UA
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 13-Mar-2014 19:41 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 17:16 Cal File: 4C13004-CAL591.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	747346	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	548142	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	272027	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	760714	500.000	476.092
$ 5 1,2-Dichloroethane-d4	65	12.154	12.154	(0.978)	723442	500.000	473.548
$ 6 Toluene-d8	98	13.726	13.726	(0.924)	3599456	500.000	477.460
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	1304026	500.000	449.356
8 Dichlorodifluoromethane	85	4.771	4.771	(0.384)	947150	500.000	495.893
9 Chloromethane	50	5.344	5.344	(0.430)	735710	500.000	436.720
10 Vinyl Chloride	62	5.685	5.685	(0.457)	660524	500.000	498.232
11 Bromomethane	94	6.722	6.722	(0.541)	368640	500.000	493.906
12 Chloroethane	64	7.002	7.002	(0.563)	357921	500.000	491.584
13 Trichlorofluoromethane	101	7.587	7.587	(0.611)	1026991	500.000	494.152
14 Acrolein	56	8.569	8.569	(0.689)	143024	5000.00	4992.48
15 1,1,1-trichloro-2,2,2-trifluo	117	8.587	8.587	(0.691)	289893	500.000	510.866

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL591.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	8.636	8.636	(0.695)	301447	500.000	499.558
17 1,1-Dichloroethene	96	8.709	8.709	(0.701)	445169	500.000	503.281
18 Acetone	43	8.843	8.843	(0.712)	338416	2500.00	2455.51
19 Iodomethane	142	9.026	9.026	(0.726)	946801	500.000	530.880
20 Carbon disulfide	76	9.136	9.136	(0.735)	2854936	500.000	488.160
22 3-Chloropropene	39	9.355	9.355	(0.753)	1089656	500.000	503.989
23 Acetonitrile	41	9.355	9.355	(0.753)	1541179	500.000	503.881
24 Methyl acetate	43	9.361	9.361	(0.753)	326471	500.000	479.209
25 Methylene Chloride	84	9.599	9.599	(0.772)	756596	500.000	444.289
26 Acrylonitrile	53	10.008	10.008	(0.805)	903890	5000.00	5244.35
28 trans-1,2-Dichloroethene	96	9.965	9.965	(0.802)	876395	500.000	475.332
27 Methyl-tert-butyl ether	73	9.916	9.916	(0.798)	1668455	500.000	473.997
30 Isopropyl ether	45	10.526	10.526	(0.847)	2546946	500.000	494.886
31 Vinyl acetate	43	10.532	10.532	(0.847)	1490670	500.000	490.884
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	1615578	500.000	485.598
33 Chloroprene	53	10.660	10.660	(0.858)	1515924	500.000	500.389
34 2-butanone	43	11.251	11.251	(0.905)	716251	2500.00	2396.35
35 2,2-Dichloropropane	77	11.257	11.257	(0.906)	1526596	500.000	494.934
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	903484	500.000	476.960
37 Propionitrile	54	11.385	11.385	(0.916)	1907304	25000.0	26180.7
38 Methacrylonitrile	41	11.526	11.526	(0.927)	2357460	5000.00	5025.94
39 Bromochloromethane	128	11.556	11.556	(0.930)	311776	500.000	465.934
40 Chloroform	83	11.605	11.605	(0.934)	1556567	500.000	496.906
42 1,1,1-Trichloroethane	97	11.812	11.812	(0.950)	1527052	500.000	496.212
43 Cyclohexane	84	11.837	11.837	(0.952)	1482463	500.000	489.974
44 1,1-dichloropropene	75	11.965	11.965	(0.963)	1272278	500.000	483.572
45 Isobutyl alcohol	43	11.989	11.989	(0.965)	767240	25000.0	23934.1
46 Carbon Tetrachloride	117	11.965	11.965	(0.963)	1304269	500.000	502.271
47 Benzene	78	12.172	12.172	(0.979)	3590101	500.000	481.327
48 1,2-Dichloroethane	62	12.227	12.227	(0.984)	894640	500.000	491.195
49 Trichloroethene	130	12.757	12.757	(1.026)	1009096	500.000	494.040
50 Methylcyclohexane	83	12.903	12.903	(1.038)	1814356	500.000	498.199
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	810837	500.000	471.603
52 Methylmethacrylate	69	12.952	12.952	(1.042)	3147560	5000.00	4550.15
53 1,4-dioxane	88	13.050	13.050	(1.050)	182955	25000.0	25360.5
54 Dibromomethane	174	13.105	13.105	(1.054)	320798	500.000	492.478
55 Bromodichloromethane	83	13.190	13.190	(1.061)	1139106	500.000	500.955
56 2-chloroethyl vinyl ether	63	13.361	13.361	(1.075)	301643	1000.00	1003.17
57 cis-1,3-Dichloropropene	75	13.537	13.537	(1.089)	1354127	500.000	490.165
58 4-Methyl-2-pentanone	43	13.592	13.592	(0.915)	1919055	2500.00	2495.77
59 Toluene	92	13.781	13.781	(0.927)	2533084	500.000	495.951
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	5563169	5000.00	5074.70(A)
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.939)	1082831	500.000	501.572
62 1,1,2-Trichloroethane	97	14.110	14.110	(0.950)	523576	500.000	498.750
63 2-hexanone	43	14.208	14.208	(0.956)	1320468	2500.00	2420.36
64 1,3-Dichloropropane	76	14.251	14.251	(0.959)	1003980	500.000	503.288
65 Tetrachloroethene	164	14.214	14.214	(0.957)	797087	500.000	497.740

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL591.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	14.434	14.434	(0.971)	666766	500.000	523.413
67 1,2-Dibromoethane	107	14.555	14.555	(0.979)	491542	500.000	501.279
68 1-Chlorohexane	55	14.751	14.751	(0.993)	1078266	500.000	530.208
69 Chlorobenzene	112	14.885	14.885	(1.002)	2509205	500.000	482.136
70 Ethylbenzene	106	14.897	14.897	(1.002)	1489351	500.000	482.839
71 1,1,1,2-Tetrachloroethane	131	14.927	14.927	(1.004)	827377	500.000	503.521
72 m,p-Xylene	106	14.970	14.970	(1.007)	3656385	1000.00	961.404
73 m,p-Xylene (part of total)	106	14.970	14.970	(1.007)	3656385	1000.00	961.404
74 o-Xylene	106	15.293	15.293	(1.029)	1740240	500.000	485.775
75 o-Xylene (part of total)	106	15.293	15.293	(1.029)	1740240	500.000	485.775
76 Styrene	104	15.299	15.299	(1.030)	2772511	500.000	487.603
77 Bromoform	173	15.537	15.537	(0.931)	280078	500.000	494.603
78 Isopropyl Benzene	105	15.537	15.537	(1.046)	4904761	500.000	502.120
79 1,1,2,2-Tetrachloroethane	83	15.793	15.793	(0.946)	536292	500.000	481.689
81 1,2,3-Trichloropropane	110	15.872	15.872	(1.068)	150962	500.000	487.678
80 trans-1,4-dichloro-2-butene	53	15.824	15.824	(1.065)	675213	2000.00	2027.98
82 n-Propyl Benzene	91	15.848	15.848	(0.949)	6068071	500.000	481.956
83 Bromobenzene	156	15.903	15.903	(1.070)	923481	500.000	508.993
84 1,3,5-Trimethyl Benzene	105	15.958	15.958	(0.956)	4305309	500.000	485.832
85 2-Chlorotoluene	126	16.006	16.006	(0.959)	1117469	500.000	486.209
86 4-Chlorotoluene	126	16.086	16.086	(0.963)	1174235	500.000	484.272
87 tert-Butyl Benzene	119	16.244	16.244	(0.973)	4191737	500.000	489.040
88 1,2,4-Trimethyl Benzene	105	16.287	16.287	(0.976)	4340050	500.000	485.417
89 Pentachloroethane	167	16.360	16.360	(0.980)	546325	500.000	521.682(A)
90 sec-Butyl Benzene	105	16.427	16.427	(0.984)	5647481	500.000	498.146
91 p-Isopropyl Toluene	119	16.506	16.506	(0.989)	4862075	500.000	495.445
92 1,3-Dichlorobenzene	146	16.647	16.647	(0.997)	2125481	500.000	499.039
93 1,4-Dichlorobenzene	146	16.720	16.720	(1.001)	2076070	500.000	496.304
94 n-Butyl Benzene	91	16.878	16.878	(1.011)	4738066	500.000	501.645
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	1802788	500.000	504.306
96 1,2-Dibromo-3-Chloropropane	75	17.866	17.866	(1.070)	107762	500.000	509.741
97 1,2,4-Trichlorobenzene	180	18.829	18.829	(1.128)	1329225	500.000	495.208
98 Hexachlorobutadiene	225	18.908	18.908	(1.133)	757286	500.000	548.267
99 Naphthalene	128	19.219	19.219	(1.151)	2111154	500.000	498.855
171 Diethyl ether	45	8.215	8.215	(0.661)	200534	500.000	466.440
100 1,2,3-Trichlorobenzene	180	19.567	19.567	(1.172)	1072407	500.000	498.820
M 101 1,2-Dichloroethene (total)	96				1779879	1000.00	952.314
M 102 Xylene (total)	106				5396625	500.000	1506.43(A)

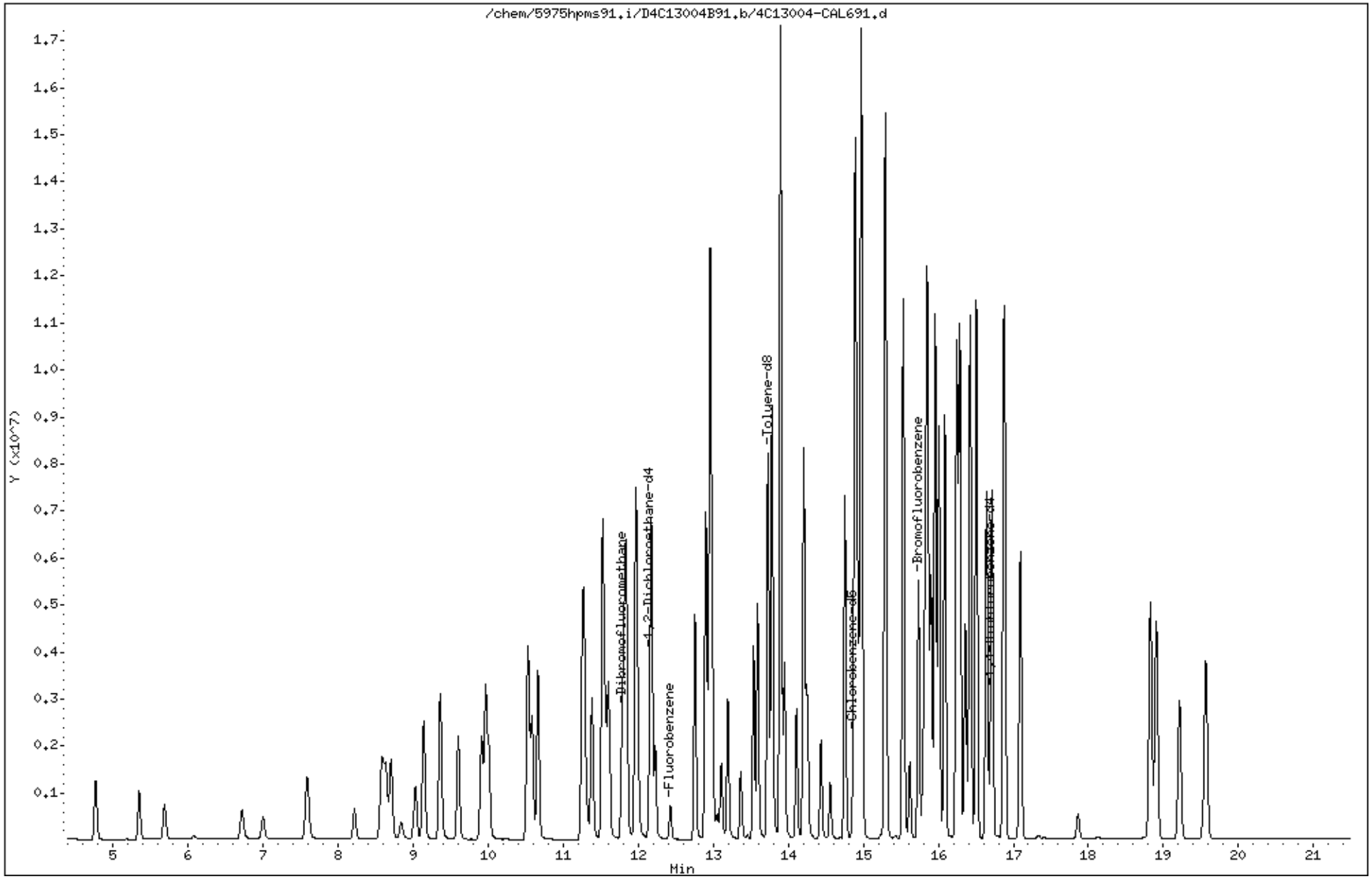
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL691.d
Date : 13-MAR-2014 16:47
Client ID: VSTD040UA
Sample Info: 4C13004-CAL6:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL691.d
Report Date: 13-Mar-2014 19:41

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL691.d
Lab Smp Id: 4C13004-CAL6 Client Smp ID: VSTD040UA
Inj Date : 13-MAR-2014 16:47
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4C13004-CAL6:JAO
Misc Info : VSTD040UA
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 13-Mar-2014 19:41 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	728407	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	519829	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	276637	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	1405801	1000.00	917.575
$ 5 1,2-Dichloroethane-d4	65	12.154	12.154	(0.978)	1398031	1000.00	948.570
$ 6 Toluene-d8	98	13.727	13.727	(0.924)	6377881	1000.00	908.428
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	2546869	1000.00	883.169
8 Dichlorodifluoromethane	85	4.765	4.765	(0.383)	1846515	1000.00	993.244
9 Chloromethane	50	5.344	5.344	(0.430)	1499784	1000.00	926.798
10 Vinyl Chloride	62	5.685	5.685	(0.457)	1273517	1000.00	987.961
11 Bromomethane	94	6.716	6.716	(0.540)	702188	1000.00	970.878
12 Chloroethane	64	6.996	6.996	(0.563)	679305	1000.00	964.115
13 Trichlorofluoromethane	101	7.587	7.587	(0.611)	2076442	1000.00	1020.82(A)
14 Acrolein	56	8.569	8.569	(0.689)	393302	10000.0	9994.95
15 1,1,1-trichloro-2,2,2-trifluo	117	8.587	8.587	(0.691)	568205	1000.00	1022.70(A)

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL691.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	8.636	8.636	(0.695)	603732	1000.00	1022.00(A)
17 1,1-Dichloroethene	96	8.709	8.709	(0.701)	873637	1000.00	1011.11(A)
18 Acetone	43	8.843	8.843	(0.712)	704092	5000.00	5052.90(A)
19 Iodomethane	142	9.026	9.026	(0.726)	1894416	1000.00	1073.76(A)
20 Carbon disulfide	76	9.136	9.136	(0.735)	5343779	1000.00	947.350
22 3-Chloropropene	39	9.355	9.355	(0.753)	2057780	1000.00	980.352
23 Acetonitrile	41	9.355	9.355	(0.753)	2840563	1000.00	960.402
24 Methyl acetate	43	9.362	9.362	(0.753)	645926	1000.00	977.205(A)
25 Methylene Chloride	84	9.599	9.599	(0.772)	1431945	1000.00	882.931
26 Acrylonitrile	53	10.008	10.008	(0.805)	1962543	10000.0	11364.0(A)
28 trans-1,2-Dichloroethene	96	9.965	9.965	(0.802)	1640702	1000.00	926.440
27 Methyl-tert-butyl ether	73	9.916	9.916	(0.798)	3286071	1000.00	964.604
30 Isopropyl ether	45	10.526	10.526	(0.847)	4689687	1000.00	945.176
31 Vinyl acetate	43	10.532	10.532	(0.847)	3039495	1000.00	1022.35
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	3117980	1000.00	967.748
33 Chloroprene	53	10.660	10.660	(0.858)	2883736	1000.00	980.456
34 2-butanone	43	11.251	11.251	(0.905)	1375715	5000.00	4766.49
35 2,2-Dichloropropane	77	11.258	11.258	(0.906)	2920543	1000.00	976.121
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	1655985	1000.00	912.619
37 Propionitrile	54	11.386	11.386	(0.916)	3998053	50000.0	55147.1(A)
38 Methacrylonitrile	41	11.526	11.526	(0.927)	4566147	10000.0	9989.85
39 Bromochloromethane	128	11.562	11.562	(0.930)	547277	1000.00	862.261
40 Chloroform	83	11.605	11.605	(0.934)	2971074	1000.00	977.501
42 1,1,1-Trichloroethane	97	11.806	11.806	(0.950)	2908627	1000.00	974.644
43 Cyclohexane	84	11.837	11.837	(0.952)	2697984	1000.00	928.067
44 1,1-dichloropropene	75	11.965	11.965	(0.963)	2292586	1000.00	910.104
45 Isobutyl alcohol	43	11.995	11.995	(0.965)	1541914	50000.0	49457.8
46 Carbon Tetrachloride	117	11.965	11.965	(0.963)	2506230	1000.00	991.851
47 Benzene	78	12.178	12.178	(0.980)	6505275	1000.00	910.805
48 1,2-Dichloroethane	62	12.227	12.227	(0.984)	1778452	1000.00	1001.53(A)
49 Trichloroethene	130	12.757	12.757	(1.026)	1872484	1000.00	949.987
50 Methylcyclohexane	83	12.904	12.904	(1.038)	3303410	1000.00	941.540(A)
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	1456910	1000.00	888.751
52 Methylmethacrylate	69	12.952	12.952	(1.042)	5301648	10000.0	8153.76(A)
53 1,4-dioxane	88	13.050	13.050	(1.050)	391072	50000.0	54595.9(A)
54 Dibromomethane	174	13.105	13.105	(1.054)	630127	1000.00	993.742
55 Bromodichloromethane	83	13.190	13.190	(1.061)	2223262	1000.00	1002.64(A)
56 2-chloroethyl vinyl ether	63	13.361	13.361	(1.075)	642924	2000.00	2027.85(A)
57 cis-1,3-Dichloropropene	75	13.538	13.538	(1.089)	2597391	1000.00	970.364
58 4-Methyl-2-pentanone	43	13.592	13.592	(0.915)	3753711	5000.00	5122.46(A)
59 Toluene	92	13.781	13.781	(0.927)	4626492	1000.00	962.347
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	10359879	10000.0	9955.30(A)
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.939)	2136804	1000.00	1036.14(A)
62 1,1,2-Trichloroethane	97	14.111	14.111	(0.950)	1032192	1000.00	1030.48(A)
63 2-hexanone	43	14.208	14.208	(0.956)	2503006	5000.00	4864.09
64 1,3-Dichloropropane	76	14.251	14.251	(0.959)	1947836	1000.00	1024.56(A)
65 Tetrachloroethene	164	14.214	14.214	(0.957)	1445507	1000.00	959.516

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-CAL691.d
Report Date: 13-Mar-2014 19:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	14.434	14.434	(0.971)	1348445	1000.00	1094.98(A)
67 1,2-Dibromoethane	107	14.556	14.556	(0.979)	989003	1000.00	1052.39(A)
68 1-Chlorohexane	55	14.751	14.751	(0.993)	2085091	1000.00	1066.71(A)
69 Chlorobenzene	112	14.885	14.885	(1.002)	4354723	1000.00	899.972
70 Ethylbenzene	106	14.897	14.897	(1.002)	2579385	1000.00	899.492
71 1,1,1,2-Tetrachloroethane	131	14.928	14.928	(1.004)	1585887	1000.00	1014.70(A)
72 m,p-Xylene	106	14.970	14.970	(1.007)	6258486	2000.00	1774.38
73 m,p-Xylene (part of total)	106	14.970	14.970	(1.007)	6258486	2000.00	1774.38
74 o-Xylene	106	15.287	15.287	(1.029)	3064475	1000.00	916.993(A)
75 o-Xylene (part of total)	106	15.287	15.287	(1.029)	3064475	1000.00	916.993(A)
76 Styrene	104	15.299	15.299	(1.030)	4945034	1000.00	929.910
77 Bromoform	173	15.537	15.537	(0.931)	566231	1000.00	986.020
78 Isopropyl Benzene	105	15.537	15.537	(1.046)	9124528	1000.00	987.461
79 1,1,2,2-Tetrachloroethane	83	15.793	15.793	(0.946)	1120453	1000.00	991.321
81 1,2,3-Trichloropropane	110	15.872	15.872	(1.068)	307880	1000.00	1040.31(A)
80 trans-1,4-dichloro-2-butene	53	15.824	15.824	(1.065)	1391435	4000.00	4333.30(A)
82 n-Propyl Benzene	91	15.848	15.848	(0.949)	11196866	1000.00	893.174
83 Bromobenzene	156	15.903	15.903	(1.070)	1848502	1000.00	1061.18(A)
84 1,3,5-Trimethyl Benzene	105	15.958	15.958	(0.956)	8090361	1000.00	913.307
85 2-Chlorotoluene	126	16.007	16.007	(0.959)	2149927	1000.00	932.297
86 4-Chlorotoluene	126	16.086	16.086	(0.963)	2244479	1000.00	924.056
87 tert-Butyl Benzene	119	16.244	16.244	(0.973)	7898482	1000.00	920.541
88 1,2,4-Trimethyl Benzene	105	16.287	16.287	(0.976)	8107725	1000.00	908.094
89 Pentachloroethane	167	16.360	16.360	(0.980)	1147849	1000.00	1064.01(A)
90 sec-Butyl Benzene	105	16.427	16.427	(0.984)	10708694	1000.00	939.987
91 p-Isopropyl Toluene	119	16.506	16.506	(0.989)	9132462	1000.00	928.225
92 1,3-Dichlorobenzene	146	16.647	16.647	(0.997)	4190166	1000.00	972.693
93 1,4-Dichlorobenzene	146	16.720	16.720	(1.001)	4078049	1000.00	965.303
94 n-Butyl Benzene	91	16.878	16.878	(1.011)	8920829	1000.00	939.919
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	3583707	1000.00	988.129
96 1,2-Dibromo-3-Chloropropane	75	17.866	17.866	(1.070)	226583	1000.00	1044.54(A)
97 1,2,4-Trichlorobenzene	180	18.829	18.829	(1.128)	2573622	1000.00	951.904
98 Hexachlorobutadiene	225	18.908	18.908	(1.133)	1498252	1000.00	1054.92(A)
99 Naphthalene	128	19.219	19.219	(1.151)	4251009	1000.00	989.773
171 Diethyl ether	45	8.215	8.215	(0.661)	397477	1000.00	956.767
100 1,2,3-Trichlorobenzene	180	19.567	19.567	(1.172)	2105864	1000.00	969.144
M 101 1,2-Dichloroethene (total)	96				3296687	2000.00	1838.89
M 102 Xylene (total)	106				9322961	1000.00	2789.74(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

3/13/2014

Second Source Calibration Verification

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Instrument: 5975hpms91 Calibration: 4031303

Lab File ID: 4C13004-SCV191.d Standard ID: 4A07006

Sequence: 4C13004 Injection Date: 03/13/14

Lab Sample ID: 4C13004-SCV1 InjectionTime: 19:13

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Dichlorodifluoromethane	5.000	5.298	6.0	20.00
Chloromethane	5.000	5.030	0.6	20.00
Vinyl chloride	5.000	4.982	-0.4	20.00
Bromomethane	5.000	4.928	-1.4	20.00
Chloroethane	5.000	5.011	0.2	20.00
Trichlorofluoromethane	5.000	4.961	-0.8	20.00
Acrolein	50.00	56.80	13.6	20.00
1,1-Dichloroethene	5.000	4.903	-1.9	20.00
Acetone	25.00	18.54	-25.9 *	20.00
Iodomethane	5.000	5.063	1.3	20.00
Carbon disulfide	5.000	5.015	0.3	20.00
3-Chloropropene	5.000	4.493	-10.1	20.00
Acetonitrile	5.000	4.621	-7.6	20.00
Methylene chloride	5.000	4.525	-9.5	20.00
Acrylonitrile	50.00	52.42	4.8	20.00
trans-1,2-Dichloroethene	5.000	4.978	-0.4	20.00
1,1-Dichloroethane	5.000	4.890	-2.2	20.00
Chloroprene	5.000	5.139	2.8	20.00
Vinyl acetate	5.000	5.279	5.6	20.00

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Instrument: 5975hpms91 Calibration: 4031303

Lab File ID: 4C13004-SCV191.d Standard ID: 4A07006

Sequence: 4C13004 Injection Date: 03/13/14

Lab Sample ID: 4C13004-SCV1 InjectionTime: 19:13

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
cis-1,2-Dichloroethene	5.000	5.267	5.3	20.00
2,2-Dichloropropane	5.000	5.075	1.5	20.00
Propionitrile	250.0	251.5	0.6	20.00
2-Butanone	25.00	22.21	-11.2	20.00
Methacrylonitrile	50.00	49.11	-1.8	20.00
Bromochloromethane	5.000	4.925	-1.5	20.00
Chloroform	5.000	5.076	1.5	20.00
1,1,1-Trichloroethane	5.000	5.040	0.8	20.00
1,1-Dichloropropene	5.000	5.396	7.9	20.00
Carbon tetrachloride	5.000	4.909	-1.8	20.00
1,2-Dichloroethane	5.000	4.858	-2.8	20.00
Isobutyl alcohol	250.0	219.0	-12.4	20.00
Benzene	5.000	5.063	1.3	20.00
Trichloroethene	5.000	5.018	0.4	20.00
1,2-Dichloropropane	5.000	5.152	3.0	20.00
Dibromomethane	5.000	4.830	-3.4	20.00
Methyl Methacrylate	50.00	46.58	-6.8	20.00
Bromodichloromethane	5.000	4.464	-10.7	20.00
cis-1,3-Dichloropropene	5.000	5.028	0.6	20.00

Environmental Testing Laboratories

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A Division Of

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SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Instrument: 5975hpms91 Calibration: 4031303

Lab File ID: 4C13004-SCV191.d Standard ID: 4A07006

Sequence: 4C13004 Injection Date: 03/13/14

Lab Sample ID: 4C13004-SCV1 InjectionTime: 19:13

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
4-Methyl-2-pentanone	25.00	23.57	-5.7	20.00
Toluene	5.000	4.992	-0.2	20.00
trans-1,3-Dichloropropene	5.000	4.985	-0.3	20.00
1,1,2-Trichloroethane	5.000	4.773	-4.5	20.00
Ethyl Methacrylate	50.00	67.12	34.2 *	20.00
1,3-Dichloropropane	5.000	4.774	-4.5	20.00
Tetrachloroethene	5.000	5.059	1.2	20.00
2-Hexanone	25.00	23.21	-7.1	20.00
Dibromochloromethane	5.000	4.615	-7.7	20.00
Chlorobenzene	5.000	5.114	2.3	20.00
1,1,1,2-Tetrachloroethane	5.000	4.970	-0.6	20.00
Ethylbenzene	5.000	5.154	3.1	20.00
m,p-Xylene	10.00	10.46	4.6	20.00
o-Xylene	5.000	5.137	2.7	20.00
Styrene	5.000	4.809	-3.8	20.00
Bromoform	5.000	4.670	-6.6	20.00
1,1,2,2-Tetrachloroethane	5.000	4.922	-1.6	20.00
1,2,3-Trichloropropane	5.000	4.698	-6.0	20.00
trans-1,4-Dichloro-2-butene	20.00	18.75	-6.2	20.00

Environmental Testing Laboratories

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SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER

SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Instrument: 5975hpms91

Calibration: 4031303

Lab File ID: 4C13004-SCV191.d

Standard ID: 4A07006

Sequence: 4C13004

Injection Date: 03/13/14

Lab Sample ID: 4C13004-SCV1

InjectionTime: 19:13

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
1,3-Dichlorobenzene	5.000	5.069	1.4	20.00
1,4-Dichlorobenzene	5.000	4.970	-0.6	20.00
1,2-Dichlorobenzene	5.000	4.949	-1.0	20.00
1,2,4-Trichlorobenzene	5.000	4.973	-0.5	20.00
Hexachlorobutadiene	5.000	5.333	6.7	20.00
Naphthalene	5.000	4.693	-6.1	20.00
Dibromofluoromethane	5.000	5.048	1.0	20.00
1,2-Dichloroethane-d4	5.000	4.910	-1.8	20.00
Toluene-d8	5.000	5.028	0.6	20.00
Bromofluorobenzene	5.000	5.018	0.4	20.00

* Values outside of QC limits

Environmental Testing Laboratories

CompuChem

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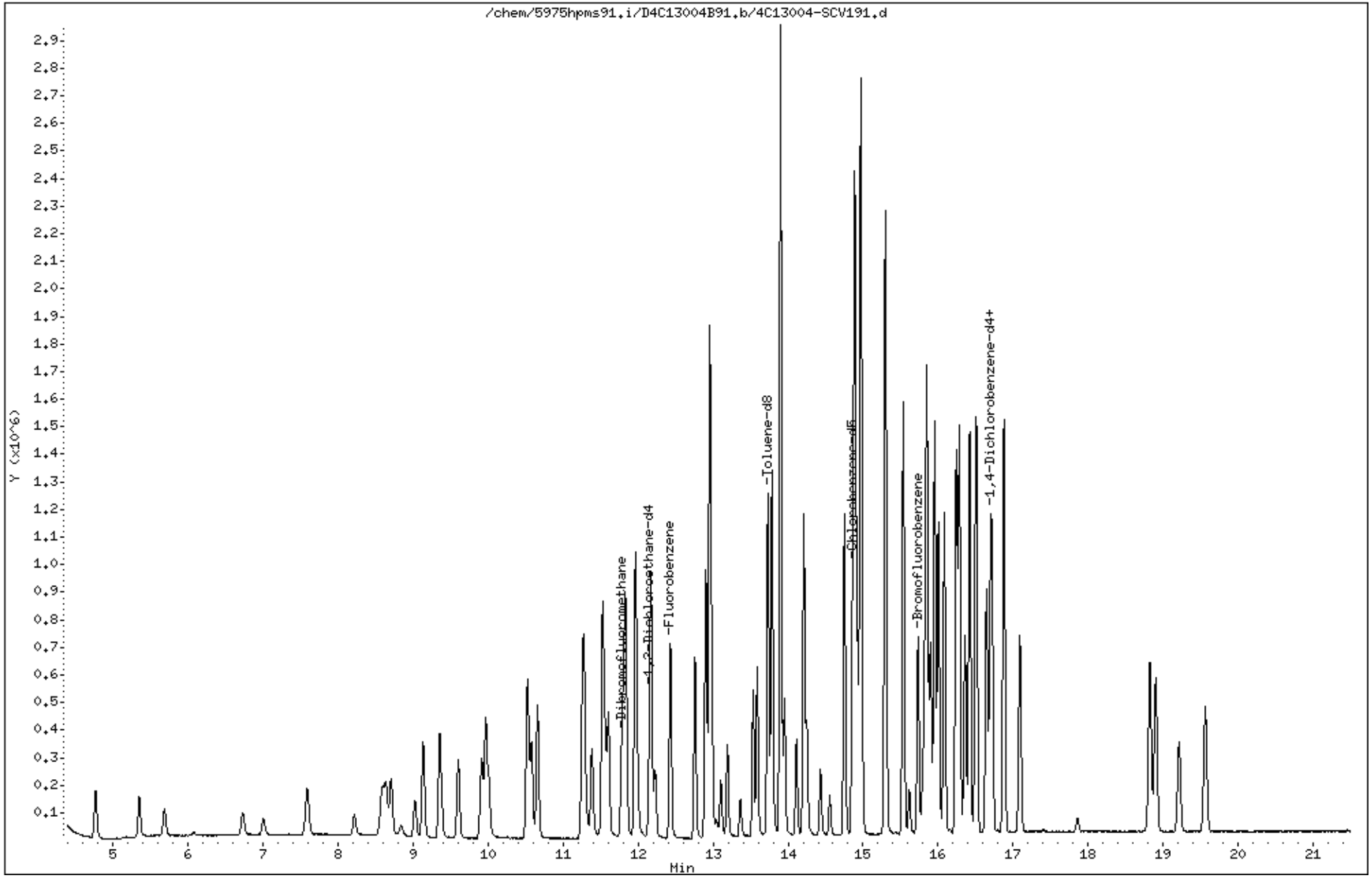
Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-SCV191.d
Date : 13-MAR-2014 19:13
Client ID: VSTD005UB
Sample Info: 4C13004-SCV1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-SCV191.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4C13004-SCV191.d
Lab Smp Id: 4C13004-SCV1 Client Smp ID: VSTD005UB
Inj Date : 13-MAR-2014 19:13
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4C13004-SCV1:JAO
Misc Info : VSTD005UB
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:29 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 9 QC Sample: QCCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SCV.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	726758	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	550046	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	252263	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	192914	126.202	5.04808
$ 5 1,2-Dichloroethane-d4	65	12.153	12.154	(0.978)	180511	122.755	4.91021
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	933839	125.704	5.02814
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	329921	125.460	5.01838
8 Dichlorodifluoromethane	85	4.771	4.765	(0.384)	245687	132.455	5.29821
9 Chloromethane	50	5.344	5.344	(0.430)	203017	125.740	5.02960
10 Vinyl Chloride	62	5.685	5.685	(0.457)	160181	124.546	4.98184
11 Bromomethane	94	6.728	6.716	(0.541)	88910	123.210	4.92840
12 Chloroethane	64	7.002	6.996	(0.563)	88076	125.287	5.01148
13 Trichlorofluoromethane	101	7.587	7.587	(0.611)	251720	124.031	4.96125
14 Acrolein	56	8.569	8.569	(0.689)	29798	1419.98	56.7992
15 1,1,1-trichloro-2,2,2-trifluo	117	8.587	8.587	(0.691)	56700	102.284	4.09137

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-SCV191.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
16 1,1,2-trichloro-1,2,2-trifluo	85	8.630	8.636	(0.694)	68850	116.814	4.67257
17 1,1-Dichloroethene	96	8.703	8.709	(0.700)	105663	122.567	4.90269
18 Acetone	43	8.843	8.843	(0.712)	67015	463.407	18.5363(R)
19 Iodomethane	142	9.026	9.026	(0.726)	222800	126.570	5.06280
20 Carbon disulfide	76	9.136	9.136	(0.735)	705622	125.377	5.01509
22 3-Chloropropene	39	9.361	9.355	(0.753)	235246	112.328	4.49313
23 Acetonitrile	41	9.355	9.355	(0.753)	340899	115.520	4.62082
24 Methyl acetate	43	9.355	9.362	(0.753)	87509	132.691	5.30762
25 Methylene Chloride	84	9.599	9.599	(0.772)	183071	113.137	4.52548
26 Acrylonitrile	53	10.008	10.008	(0.805)	225829	1310.62	52.4247
28 trans-1,2-Dichloroethene	96	9.965	9.965	(0.802)	219885	124.442	4.97769
27 Methyl-tert-butyl ether	73	9.916	9.916	(0.798)	429238	126.286	5.05143
30 Isopropyl ether	45	10.526	10.526	(0.847)	649435	131.186	5.24746
31 Vinyl acetate	43	10.526	10.532	(0.847)	391464	131.970	5.27880
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	392990	122.252	4.89006
33 Chloroprene	53	10.660	10.660	(0.858)	377029	128.479	5.13915
34 2-butanone	43	11.251	11.251	(0.905)	159887	555.223	22.2089
35 2,2-Dichloropropane	77	11.257	11.258	(0.906)	378777	126.884	5.07537
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	238408	131.686	5.26742
37 Propionitrile	54	11.385	11.386	(0.916)	454782	6287.27	251.491
38 Methacrylonitrile	41	11.526	11.526	(0.927)	559938	1227.82	49.1126
39 Bromochloromethane	128	11.556	11.562	(0.930)	77970	123.124	4.92496
40 Chloroform	83	11.605	11.605	(0.934)	384811	126.892	5.07569
42 1,1,1-Trichloroethane	97	11.812	11.806	(0.950)	375152	125.994	5.03976
43 Cyclohexane	84	11.836	11.837	(0.952)	367481	126.695	5.06780
44 1,1-dichloropropene	75	11.964	11.965	(0.963)	339057	134.903	5.39613
45 Isobutyl alcohol	43	11.989	11.995	(0.965)	170298	5474.80	218.992
46 Carbon Tetrachloride	117	11.964	11.965	(0.963)	309422	122.733	4.90932
47 Benzene	78	12.178	12.178	(0.980)	902043	126.582	5.06327
48 1,2-Dichloroethane	62	12.227	12.227	(0.984)	215166	121.445	4.85779
49 Trichloroethene	130	12.757	12.757	(1.026)	246724	125.457	5.01828
50 Methylcyclohexane	83	12.903	12.904	(1.038)	451033	128.845	5.15382
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	210653	128.795	5.15181
52 Methylmethacrylate	69	12.958	12.952	(1.043)	755520	1164.60	46.5840
53 1,4-dioxane	88	13.050	13.050	(1.050)	37843	5295.09	211.804
54 Dibromomethane	174	13.104	13.105	(1.054)	76397	120.755	4.83021
55 Bromodichloromethane	83	13.196	13.190	(1.062)	246917	111.606	4.46425
56 2-chloroethyl vinyl ether	63	13.361	13.361	(1.075)	60163	224.881	8.99526
57 cis-1,3-Dichloropropene	75	13.537	13.538	(1.089)	335676	125.690	5.02761
58 4-Methyl-2-pentanone	43	13.592	13.592	(0.915)	456936	589.297	23.5719
59 Toluene	92	13.781	13.781	(0.927)	634846	124.799	4.99195
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	1683791	1678.11	67.1243(R)
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.939)	271965	124.632	4.98528
62 1,1,2-Trichloroethane	97	14.110	14.111	(0.950)	126466	119.321	4.77282
63 2-hexanone	43	14.208	14.208	(0.956)	315985	580.321	23.2128
64 1,3-Dichloropropane	76	14.251	14.251	(0.959)	240114	119.362	4.77446
65 Tetrachloroethene	164	14.214	14.214	(0.957)	201598	126.468	5.05871

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-SCV191.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
66 Dibromochloromethane	129	14.434	14.434	(0.971)	150345	115.378	4.61514
67 1,2-Dibromoethane	107	14.555	14.556	(0.979)	117660	118.323	4.73291
68 1-Chlorohexane	55	14.751	14.751	(0.993)	324607	156.942	6.27768(R)
69 Chlorobenzene	112	14.885	14.885	(1.002)	654605	127.853	5.11410
70 Ethylbenzene	106	14.897	14.897	(1.002)	390999	128.860	5.15440
71 1,1,1,2-Tetrachloroethane	131	14.927	14.928	(1.004)	205487	124.255	4.97019
72 m,p-Xylene	106	14.970	14.970	(1.007)	976057	261.525	10.4610
73 m,p-Xylene (part of total)	106	14.970	14.970	(1.007)	976057	261.525	10.4610
74 o-Xylene	106	15.293	15.287	(1.029)	454106	128.419	5.13675
75 o-Xylene (part of total)	106	15.293	15.287	(1.029)	454106	128.419	5.13675
76 Styrene	104	15.299	15.299	(1.030)	676427	120.214	4.80855
77 Bromoform	173	15.537	15.537	(0.931)	61134	116.743	4.66973
78 Isopropyl Benzene	105	15.537	15.537	(1.046)	1217871	124.558	4.98233
79 1,1,2,2-Tetrachloroethane	83	15.793	15.793	(0.946)	126830	123.055	4.92220
81 1,2,3-Trichloropropane	110	15.872	15.872	(1.068)	36782	117.457	4.69829
80 trans-1,4-dichloro-2-butene	53	15.823	15.824	(1.065)	159282	468.796	18.7519
82 n-Propyl Benzene	91	15.848	15.848	(0.949)	1516825	132.688	5.30752
83 Bromobenzene	156	15.903	15.903	(1.070)	218758	118.685	4.74739
84 1,3,5-Trimethyl Benzene	105	15.958	15.958	(0.956)	1053323	130.397	5.21587
85 2-Chlorotoluene	126	16.006	16.007	(0.959)	276331	131.407	5.25626
86 4-Chlorotoluene	126	16.086	16.086	(0.963)	292847	132.215	5.28859
87 tert-Butyl Benzene	119	16.244	16.244	(0.973)	1013346	129.513	5.18053
88 1,2,4-Trimethyl Benzene	105	16.287	16.287	(0.976)	1070902	131.534	5.26136
89 Pentachloroethane	167	16.360	16.360	(0.980)	170480	173.297	6.93188(R)
90 sec-Butyl Benzene	105	16.427	16.427	(0.984)	1356739	130.599	5.22394
91 p-Isopropyl Toluene	119	16.506	16.506	(0.989)	1164250	129.768	5.19073
92 1,3-Dichlorobenzene	146	16.646	16.647	(0.997)	497854	126.737	5.06948
93 1,4-Dichlorobenzene	146	16.720	16.720	(1.001)	478659	124.249	4.96997
94 n-Butyl Benzene	91	16.878	16.878	(1.011)	1126027	130.104	5.20416
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	409210	123.733	4.94930
96 1,2-Dibromo-3-Chloropropane	75	17.866	17.866	(1.070)	20209	102.165	4.08659
97 1,2,4-Trichlorobenzene	180	18.829	18.829	(1.128)	306499	124.318	4.97272
98 Hexachlorobutadiene	225	18.902	18.908	(1.132)	172662	133.318	5.33274
99 Naphthalene	128	19.213	19.219	(1.151)	459458	117.313	4.69252
171 Diethyl ether	45	8.215	8.215	(0.661)	47077	113.576	4.54305
100 1,2,3-Trichlorobenzene	180	19.561	19.567	(1.172)	241036	121.646	4.86583
M 101 1,2-Dichloroethene (total)	96				458293	256.216	10.2486
M 102 Xylene (total)	106				1430163	404.443	16.1777

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-SCV191.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4C13004-SCV191.d
Lab Smp Id: 4C13004-SCV1 Client Smp ID: VSTD005UB
Inj Date : 13-MAR-2014 19:13
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4C13004-SCV1:JAO
Misc Info : VSTD005UB
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:29 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 9 QC Sample: QCCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SCV.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

N. BFB / DFTPP or FC-43 Data

For each 12-hour period, per instrument utilized, include:

Bar Graph Spectrum and Tabulated Relative Abundances

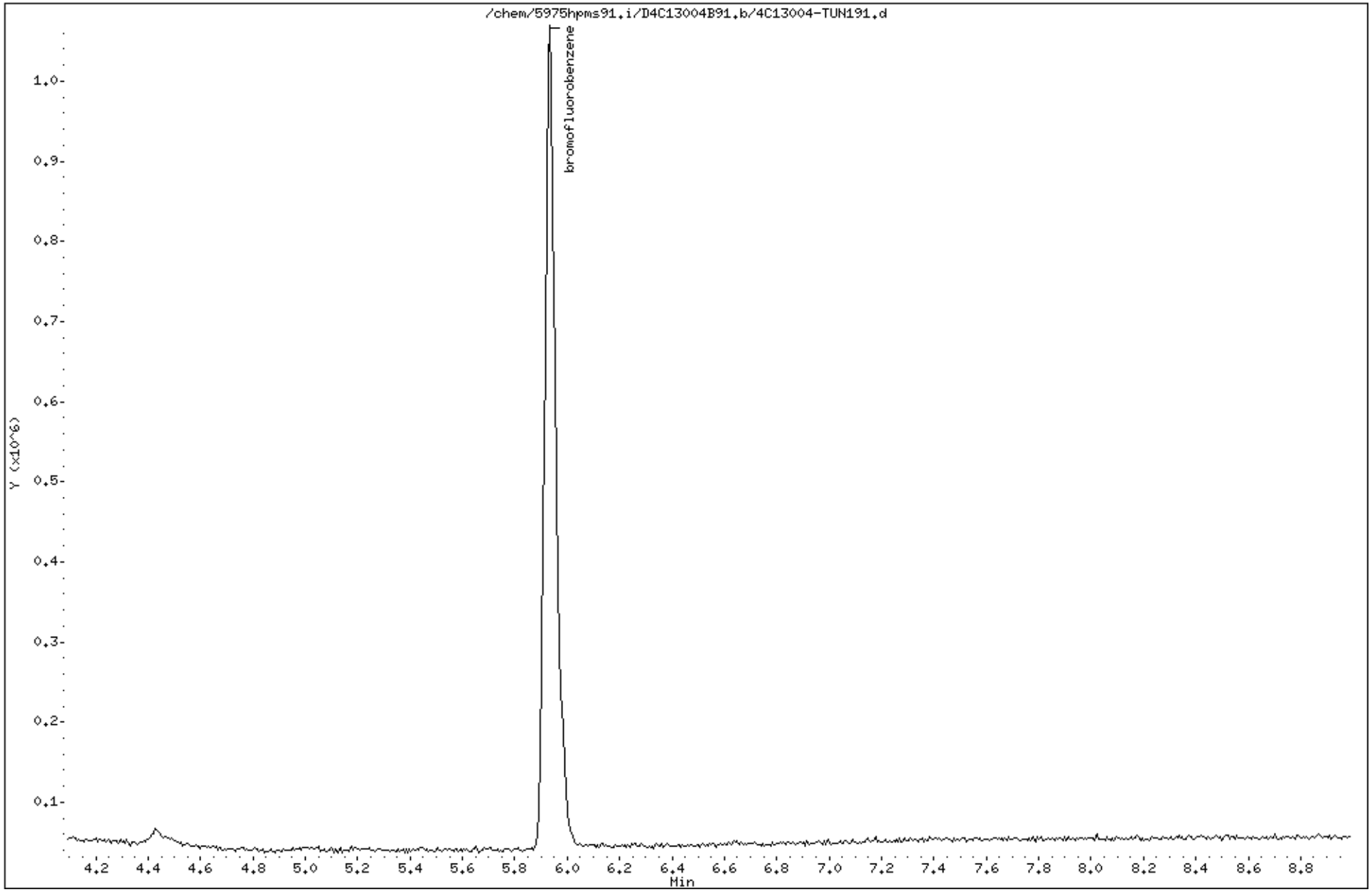
Mass Listing

RIC

PFTBA (Perfluoro-tri-n-butylamine) scan, showing the relative abundance of the key ions and the Instrument Operating Conditions

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-TUN191.d
Date : 13-MAR-2014 15:23
Client ID: BFBUA
Sample Info: 4C13004-TUN1:JAO
Volume Injected (uL): 2.0
Column phase: SPB-624

Instrument: 5975hpms91.
Operator: JAO
Column diameter: 0.32



Robert Hai 3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-TUN191.d

Date : 13-MAR-2014 15:23

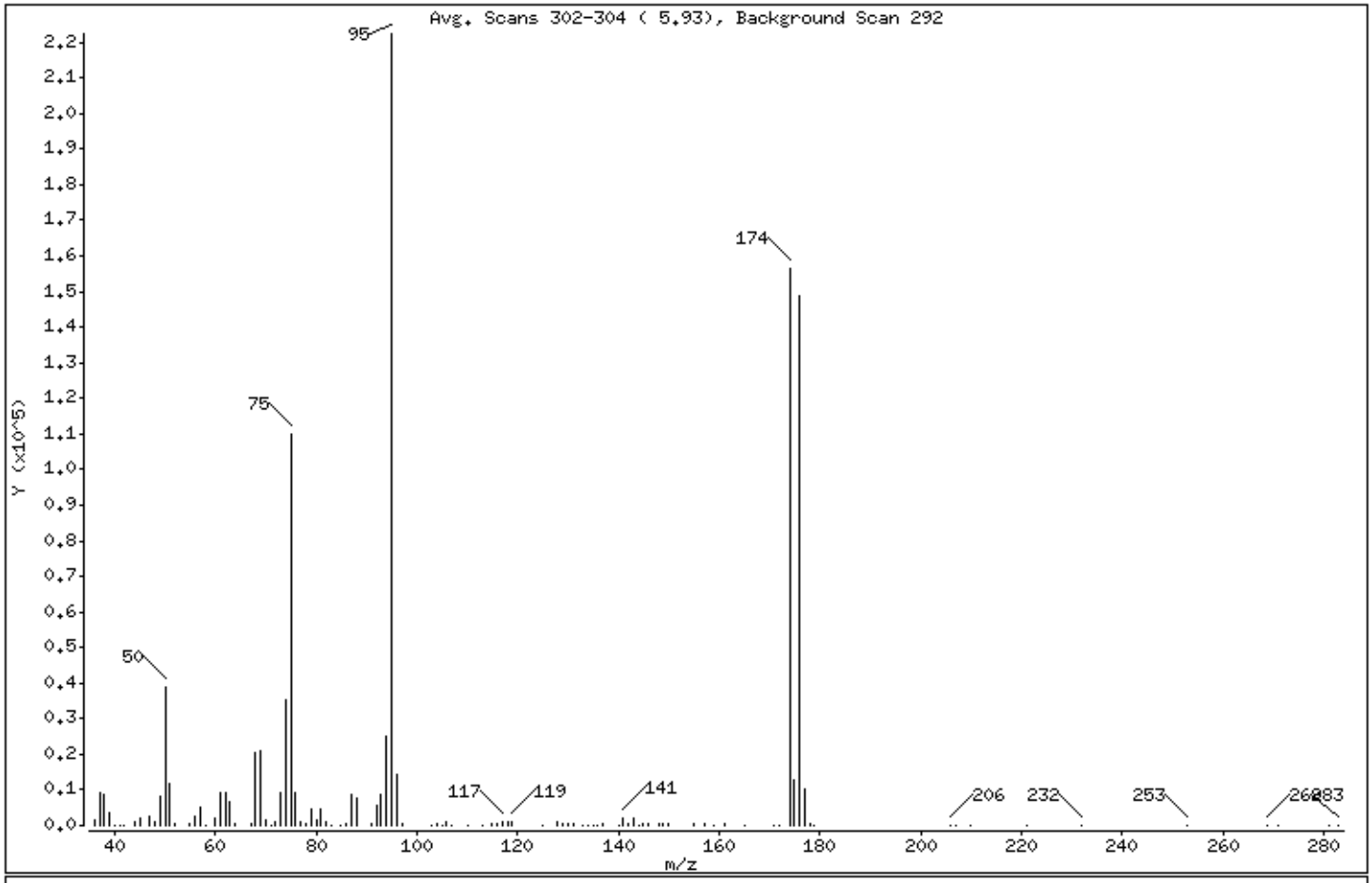
Client ID: BFBUA | Instrument: 5975hpms91.

Sample Info: 4C13004-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

1 bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.55
75	30.00 - 60.00% of mass 95	49.51
96	5.00 - 9.00% of mass 95	6.40
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	70.29
175	5.00 - 9.00% of mass 174	5.68 (8.08)
176	95.00 - 101.00% of mass 174	66.92 (95.20)
177	5.00 - 9.00% of mass 176	4.52 (6.75)

3/13/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4C13004-TUN191.d

Date : 13-MAR-2014 15:23

Client ID: BFBUA | Instrument: 5975hpms91.

Sample Info: 4C13004-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

Data File: 4C13004-TUN191.d
Spectrum: Avg. Scans 302-304 (5.93), Background Scan 292
Location of Maximum: 95.00
Number of points: 107

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1608	70.00	1682	105.00	243	148.00	623
37.00	9453	71.00	118	106.00	815	149.00	368
38.00	8679	72.00	1263	107.00	251	150.00	296
39.00	3454	73.00	9118	110.00	111	155.00	492
40.00	77	74.00	35456	113.00	200	157.00	473
41.00	91	75.00	110120	115.00	590	159.00	220
42.00	29	76.00	9441	116.00	699	161.00	487
44.00	970	77.00	1251	117.00	1227	165.00	236
45.00	1809	78.00	626	118.00	802	171.00	107
47.00	2429	79.00	4525	119.00	1043	172.00	160
48.00	1253	80.00	1430	125.00	131	174.00	156288
49.00	8280	81.00	4529	128.00	801	175.00	12636
50.00	39024	82.00	926	129.00	405	176.00	148800
51.00	11945	83.00	228	130.00	749	177.00	10045
52.00	690	85.00	88	131.00	410	178.00	385
55.00	284	86.00	257	133.00	193	179.00	95
56.00	2713	87.00	8689	134.00	82	206.00	97
57.00	5201	88.00	7603	135.00	246	207.00	84
58.00	108	91.00	750	136.00	91	210.00	94
60.00	2081	92.00	5478	137.00	536	221.00	84
61.00	9151	93.00	8494	140.00	94	232.00	158
62.00	9196	94.00	24808	141.00	2155	253.00	216
63.00	6657	95.00	222400	142.00	283	269.00	182
64.00	671	96.00	14229	143.00	2000	271.00	102
67.00	460	97.00	402	144.00	88	281.00	26
68.00	20464	103.00	226	145.00	280	283.00	69
69.00	21080	104.00	477	146.00	290		

3/13/2014

O. Blank Data

Arranged by type of blank (method or instrument where applicable) in chronological order, by instrument.

Tabulated Results and TICs shall be included.
(ANALYSIS DATA SHEET)

RIC and Quantitation reports.

Target compound spectra with lab-generated standard Spectra and GC/MS library search spectra for TICs.

ANALYSIS DATA SHEET

SW 8260B

VBLKUB

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-BLK1R91.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4031319-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 20:19

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
74-87-3	Chloromethane		0.11	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
74-83-9	Bromomethane		0.11	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-69-4	Trichlorofluoromethane		0.060	0.50	U
107-02-8	Acrolein		1.0	5.0	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
67-64-1	Acetone		0.44	2.5	U
74-88-4	Iodomethane		0.030	0.50	U
75-15-0	Carbon disulfide		0.020	0.50	U
107-05-1	3-Chloropropene		0.050	0.50	U
75-05-8	Acetonitrile		0.030	0.50	U
75-09-2	Methylene chloride	0.057	0.020	0.50	J
107-13-1	Acrylonitrile		0.36	5.0	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
126-99-8	Chloroprene		0.020	0.50	U
108-05-4	Vinyl acetate		0.060	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
594-20-7	2,2-Dichloropropane		0.030	0.50	U
107-12-0	Propionitrile		1.4	25	U
78-93-3	2-Butanone		0.28	2.5	U
126-98-7	Methacrylonitrile		0.39	5.0	U
74-97-5	Bromochloromethane		0.040	0.50	U
67-66-3	Chloroform		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
563-58-6	1,1-Dichloropropene		0.030	0.50	U
56-23-5	Carbon tetrachloride		0.030	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
78-83-1	Isobutyl alcohol		5.9	25	U

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

SW 8260B

VBLKUB

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-BLK1R91.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4031319-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 20:19

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
74-95-3	Dibromomethane		0.030	0.50	U
80-62-6	Methyl Methacrylate		0.56	5.0	U
75-27-4	Bromodichloromethane		0.030	0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.040	0.50	U
108-10-1	4-Methyl-2-pentanone		0.42	2.5	U
108-88-3	Toluene		0.030	0.50	U
10061-02-6	trans-1,3-Dichloropropene		0.050	0.50	U
79-00-5	1,1,2-Trichloroethane		0.040	0.50	U
97-63-2	Ethyl Methacrylate		0.41	5.0	U
142-28-9	1,3-Dichloropropane		0.030	0.50	U
127-18-4	Tetrachloroethene		0.060	0.50	U
591-78-6	2-Hexanone		0.51	2.5	U
124-48-1	Dibromochloromethane		0.040	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane		0.020	0.50	U
100-41-4	Ethylbenzene		0.040	0.50	U
179601-23-1	m,p-Xylene		0.080	1.0	U
95-47-6	o-Xylene		0.030	0.50	U
100-42-5	Styrene		0.020	0.50	U
75-25-2	Bromoform		0.030	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.050	0.50	U
96-18-4	1,2,3-Trichloropropane		0.090	0.50	U
110-57-6	trans-1,4-Dichloro-2-butene		0.33	2.0	U
541-73-1	1,3-Dichlorobenzene		0.040	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U
95-50-1	1,2-Dichlorobenzene		0.030	0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.060	0.50	U
87-68-3	Hexachlorobutadiene		0.030	0.50	U

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

SW 8260B

VBLKUB

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-BLK1R91.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4031319-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/13/14 20:19

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
91-20-3	Naphthalene		0.15	0.50	U
1330-20-7	Xylenes (total)		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.218	104	65 - 150	
1,2-Dichloroethane-d4	5.000	5.350	107	59 - 150	
Toluene-d8	5.000	4.996	100	61 - 145	
Bromofluorobenzene	5.000	4.950	99	63 - 143	

Environmental Testing Laboratories

CompuChem

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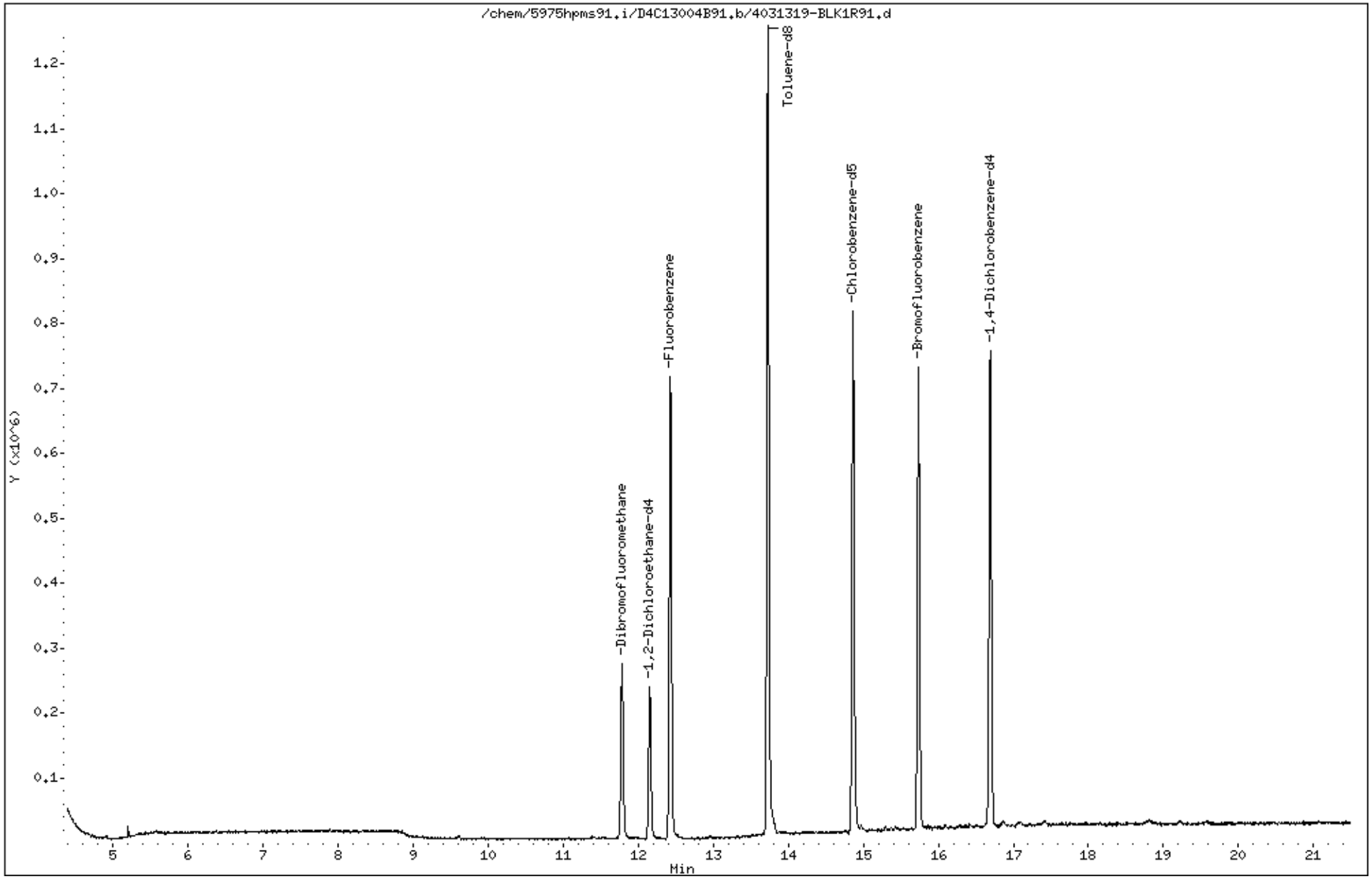
Liberty Analytical Corp.

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BLK1R91.d
Date : 13-MAR-2014 20:19
Client ID: VBLKUB
Sample Info: 4031319-BLK1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BLK1R91.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4031319-BLK1R91.d
Lab Smp Id: 4031319-BLK1 Client Smp ID: VBLKUB
Inj Date : 13-MAR-2014 20:19
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4031319-BLK1:JAO
Misc Info : VBLKUB
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	714573	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	557432	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	256116	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	196062	130.448	5.21794
$ 5 1,2-Dichloroethane-d4	65	12.154	12.154	(0.978)	193373	133.744	5.34978
$ 6 Toluene-d8	98	13.727	13.727	(0.924)	940338	124.901	4.99605
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	330427	123.762	4.95047
8 Dichlorodifluoromethane	85	Compound Not Detected.					
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BLK1R91.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
18 Acetone	43	Compound Not Detected.					
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
22 3-Chloropropene	39	Compound Not Detected.					
23 Acetonitrile	41	Compound Not Detected.					
25 Methylene Chloride	84	9.599	9.599	(0.772)	2248	1.41294	0.0565177(a)
26 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
31 Vinyl acetate	43	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Chloroprene	53	Compound Not Detected.					
34 2-butanone	43	Compound Not Detected.					
35 2,2-Dichloropropane	77	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	Compound Not Detected.					
37 Propionitrile	54	Compound Not Detected.					
38 Methacrylonitrile	41	Compound Not Detected.					
39 Bromochloromethane	128	Compound Not Detected.					
40 Chloroform	83	Compound Not Detected.					
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
44 1,1-dichloropropene	75	Compound Not Detected.					
45 Isobutyl alcohol	43	Compound Not Detected.					
46 Carbon Tetrachloride	117	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	Compound Not Detected.					
51 1,2-Dichloropropane	63	Compound Not Detected.					
52 Methylmethacrylate	69	Compound Not Detected.					
54 Dibromomethane	174	Compound Not Detected.					
55 Bromodichloromethane	83	Compound Not Detected.					
57 cis-1,3-Dichloropropene	75	Compound Not Detected.					
58 4-Methyl-2-pentanone	43	Compound Not Detected.					
59 Toluene	92	Compound Not Detected.					
60 Ethylmethacrylate	69	Compound Not Detected.					
61 trans-1,3-Dichloropropene	75	Compound Not Detected.					
62 1,1,2-Trichloroethane	97	Compound Not Detected.					
63 2-hexanone	43	Compound Not Detected.					
64 1,3-Dichloropropane	76	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
66 Dibromochloromethane	129	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
70 Ethylbenzene	106	Compound Not Detected.					
71 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
72 m,p-Xylene	106	Compound Not Detected.					
73 m,p-Xylene (part of total)	106	Compound Not Detected.					
74 o-Xylene	106	Compound Not Detected.					
75 o-Xylene (part of total)	106	Compound Not Detected.					
76 Styrene	104	Compound Not Detected.					

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BLK1R91.d
Report Date: 14-Mar-2014 10:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
77 Bromoform	173	Compound Not Detected.					
79 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
81 1,2,3-Trichloropropane	110	Compound Not Detected.					
80 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
92 1,3-Dichlorobenzene	146	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					
95 1,2-Dichlorobenzene	146	Compound Not Detected.					
97 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
98 Hexachlorobutadiene	225	Compound Not Detected.					
99 Naphthalene	128	Compound Not Detected.					
M 102 Xylene (total)	106	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BLK1R91.d
Report Date: 14-Mar-2014 10:28

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4031319-BLK1R91.d
Lab Smp Id: 4031319-BLK1 Client Smp ID: VBLKUB
Inj Date : 13-MAR-2014 20:19
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4031319-BLK1:JAO
Misc Info : VBLKUB
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:28 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BLK1R91.d

Date : 13-MAR-2014 20:19

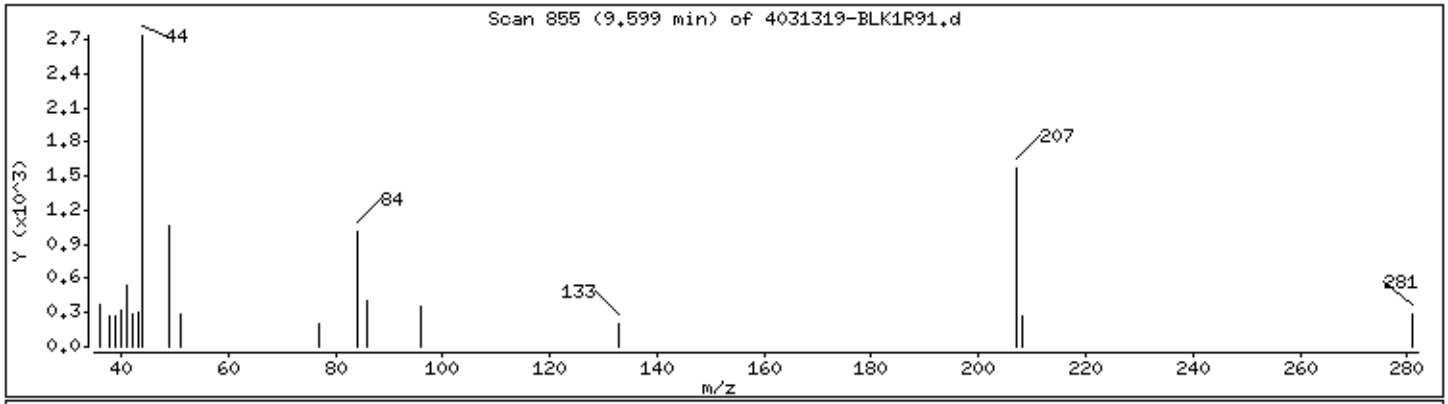
Client ID: VBLKUB | Instrument: 5975hpms91.i

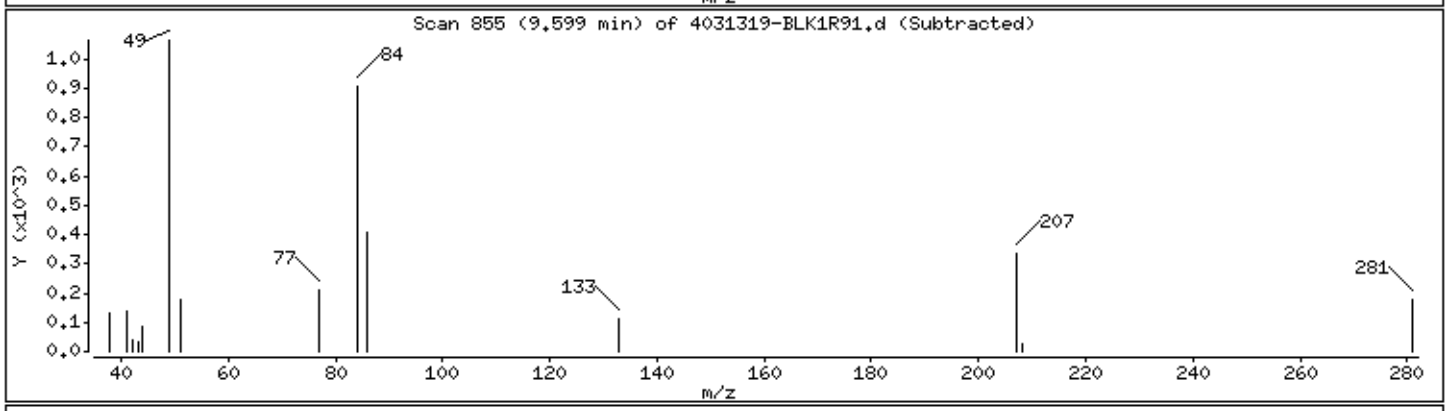
Sample Info: 4031319-BLK1:JAO

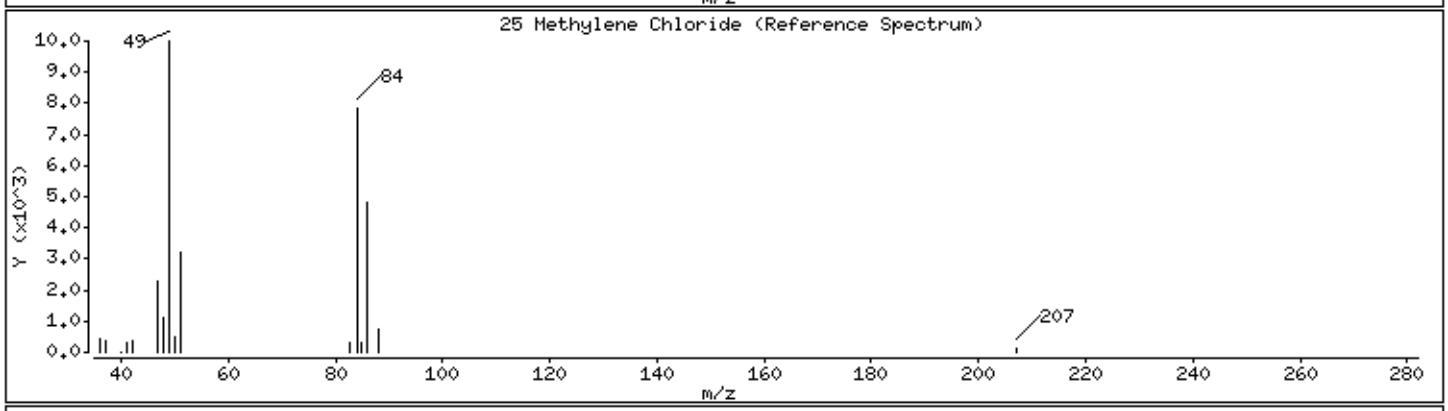
Purge Volume: 25.0 | Operator: JAO

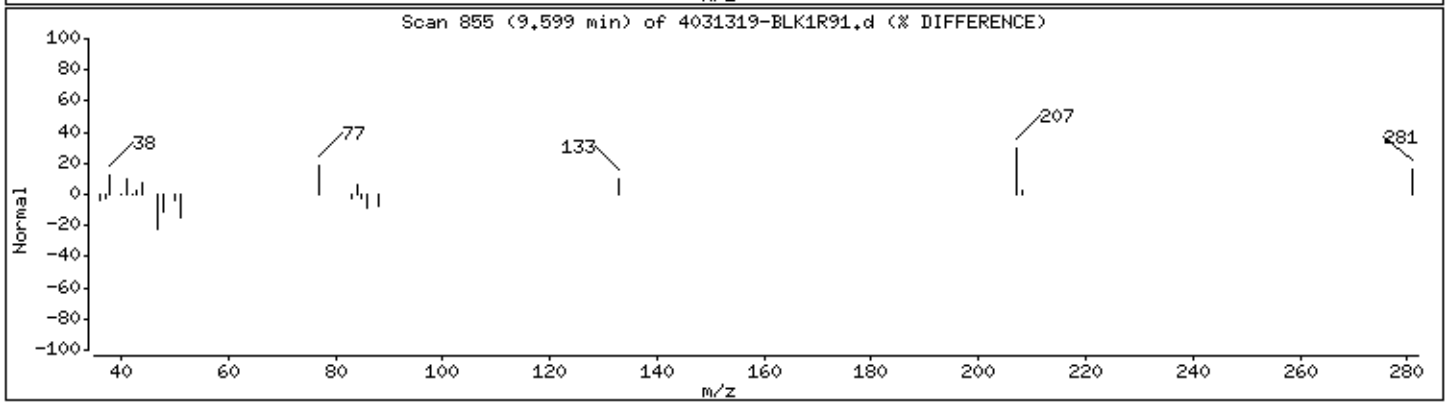
Column phase: SPB-624 | Column diameter: 0.32

25 Methylene Chloride | Concentration: 0.0565177 ug/L









Robert Hamm 3/14/2014

P. Laboratory Control Sample Data

Tabulated Results (ANALYSIS DATA SHEET)

RIC and Quantitation report

ANALYSIS DATA SHEET

SW 8260B

VLCSUB

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-BS1R91.d | QC Type: LCS

Initial/Final: 25mL / 25mL | Lab ID: 4031319-BS1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 01:47

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane	4.063	0.030	0.50	
74-87-3	Chloromethane	4.133	0.11	0.50	
75-01-4	Vinyl chloride	4.037	0.070	0.50	
74-83-9	Bromomethane	4.276	0.11	0.50	
75-00-3	Chloroethane	4.084	0.20	0.50	
75-69-4	Trichlorofluoromethane	4.450	0.060	0.50	
107-02-8	Acrolein	29.30	1.0	5.0	
75-35-4	1,1-Dichloroethene	4.052	0.040	0.50	
67-64-1	Acetone	26.85	0.44	2.5	
74-88-4	Iodomethane	4.294	0.030	0.50	
75-15-0	Carbon disulfide	4.487	0.020	0.50	
107-05-1	3-Chloropropene	4.783	0.050	0.50	
75-05-8	Acetonitrile	4.958	0.030	0.50	
75-09-2	Methylene chloride	4.617	0.020	0.50	B
107-13-1	Acrylonitrile	47.79	0.36	5.0	
156-60-5	trans-1,2-Dichloroethene	4.572	0.050	0.50	
75-34-3	1,1-Dichloroethane	4.901	0.020	0.50	
126-99-8	Chloroprene	4.532	0.020	0.50	
108-05-4	Vinyl acetate	4.680	0.060	0.50	
156-59-2	cis-1,2-Dichloroethene	4.825	0.030	0.50	
594-20-7	2,2-Dichloropropane	4.147	0.030	0.50	
107-12-0	Propionitrile	253.1	1.4	25	
78-93-3	2-Butanone	30.31	0.28	2.5	
126-98-7	Methacrylonitrile	57.06	0.39	5.0	
74-97-5	Bromochloromethane	5.113	0.040	0.50	
67-66-3	Chloroform	5.022	0.030	0.50	
71-55-6	1,1,1-Trichloroethane	4.629	0.020	0.50	
563-58-6	1,1-Dichloropropene	4.547	0.030	0.50	
56-23-5	Carbon tetrachloride	4.224	0.030	0.50	
107-06-2	1,2-Dichloroethane	5.290	0.030	0.50	
78-83-1	Isobutyl alcohol	268.4	5.9	25	

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

SW 8260B

VLCSUB

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-BS1R91.d | QC Type: LCS

Initial/Final: 25mL / 25mL | Lab ID: 4031319-BS1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 01:47

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
71-43-2	Benzene	4.900	0.030	0.50	
79-01-6	Trichloroethene	4.356	0.030	0.50	
78-87-5	1,2-Dichloropropane	5.257	0.12	0.50	
74-95-3	Dibromomethane	4.749	0.030	0.50	
80-62-6	Methyl Methacrylate	60.19	0.56	5.0	
75-27-4	Bromodichloromethane	4.848	0.030	0.50	
10061-01-5	cis-1,3-Dichloropropene	4.737	0.040	0.50	
108-10-1	4-Methyl-2-pentanone	30.90	0.42	2.5	
108-88-3	Toluene	4.716	0.030	0.50	
10061-02-6	trans-1,3-Dichloropropene	5.051	0.050	0.50	
79-00-5	1,1,2-Trichloroethane	5.076	0.040	0.50	
97-63-2	Ethyl Methacrylate	33.80	0.41	5.0	
142-28-9	1,3-Dichloropropane	5.417	0.030	0.50	
127-18-4	Tetrachloroethene	3.929	0.060	0.50	
591-78-6	2-Hexanone	30.09	0.51	2.5	
124-48-1	Dibromochloromethane	4.647	0.040	0.50	
108-90-7	Chlorobenzene	4.729	0.020	0.50	
630-20-6	1,1,1,2-Tetrachloroethane	4.612	0.020	0.50	
100-41-4	Ethylbenzene	4.547	0.040	0.50	
179601-23-1	m,p-Xylene	9.200	0.080	1.0	
95-47-6	o-Xylene	4.781	0.030	0.50	
100-42-5	Styrene	4.819	0.020	0.50	
75-25-2	Bromoform	4.200	0.030	0.50	
79-34-5	1,1,2,2-Tetrachloroethane	5.132	0.050	0.50	
96-18-4	1,2,3-Trichloropropane	5.224	0.090	0.50	
110-57-6	trans-1,4-Dichloro-2-butene	20.25	0.33	2.0	
541-73-1	1,3-Dichlorobenzene	4.313	0.040	0.50	
106-46-7	1,4-Dichlorobenzene	4.434	0.030	0.50	
95-50-1	1,2-Dichlorobenzene	4.568	0.030	0.50	
120-82-1	1,2,4-Trichlorobenzene	4.130	0.060	0.50	
87-68-3	Hexachlorobutadiene	3.093	0.030	0.50	

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

SW 8260B

VLCSUB

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-BS1R91.d | QC Type: LCS

Initial/Final: 25mL / 25mL | Lab ID: 4031319-BS1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 01:47

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
91-20-3	Naphthalene	4.734	0.15	0.50	
1330-20-7	Xylenes (total)	13.98	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.352	107	65 - 150	
1,2-Dichloroethane-d4	5.000	5.627	113	59 - 150	
Toluene-d8	5.000	5.308	106	61 - 145	
Bromofluorobenzene	5.000	4.943	99	63 - 143	

Environmental Testing Laboratories

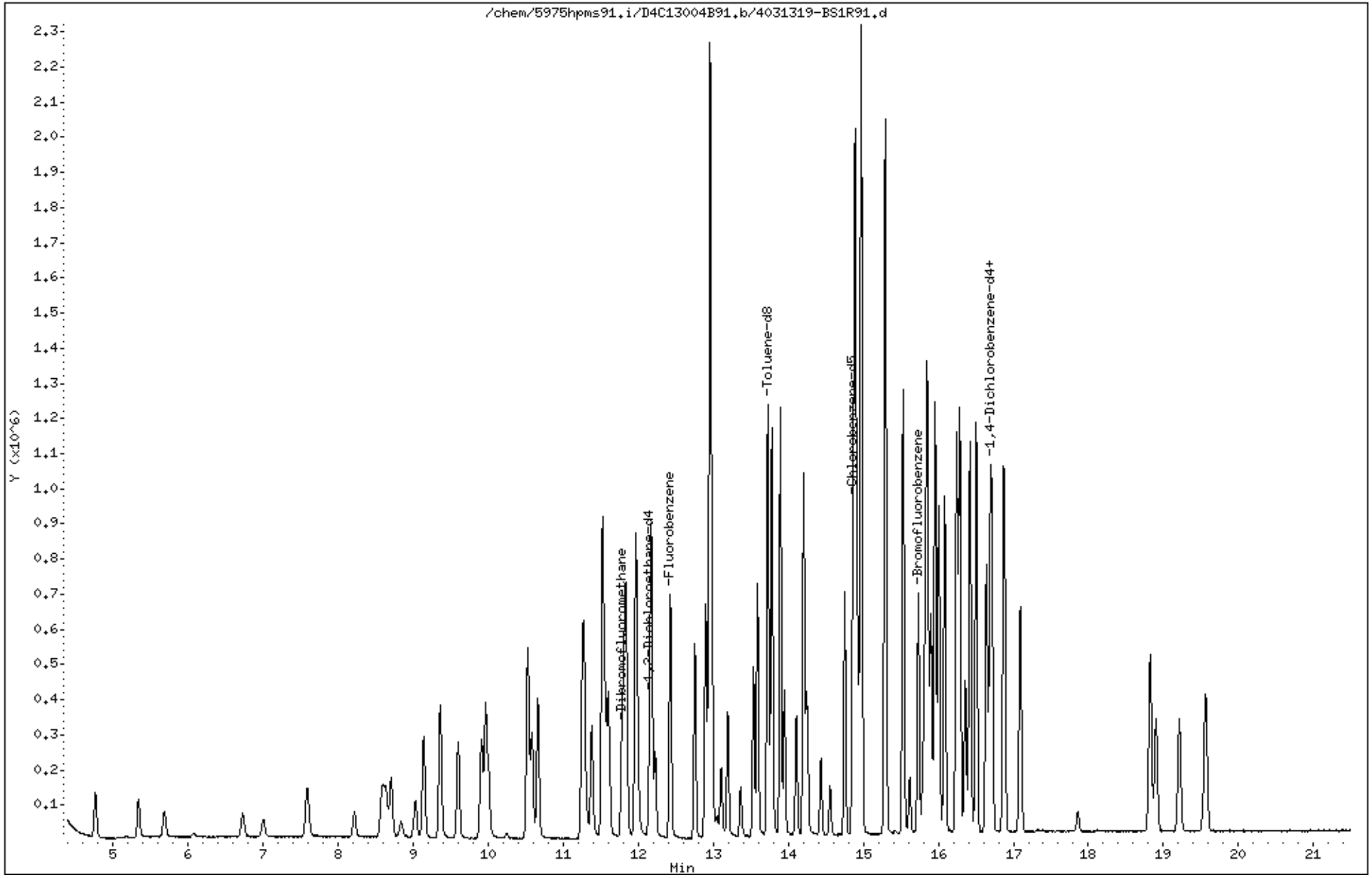
CompuChem

A Division Of

Liberty Analytical Corp.

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BS1R91.d
Date : 14-MAR-2014 01:47
Client ID: VLCSUB
Sample Info: 4031319-BS1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BS1R91.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4031319-BS1R91.d
Lab Smp Id: 4031319-BS1 Client Smp ID: VLCSUB
Inj Date : 14-MAR-2014 01:47
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4031319-BS1:JAO
Misc Info : VLCSUB
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:29 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	677294	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	487675	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	239221	125.000	
$ 4 Dibromofluoromethane	113	11.776	11.782	(0.947)	190607	133.799	5.35197
$ 5 1,2-Dichloroethane-d4	65	12.147	12.154	(0.977)	192777	140.671	5.62684
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	873955	132.689	5.30754
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	308184	123.583	4.94331
8 Dichlorodifluoromethane	85	4.765	4.765	(0.383)	175602	101.585	4.06340
9 Chloromethane	50	5.332	5.344	(0.429)	155473	103.326	4.13303
10 Vinyl Chloride	62	5.685	5.685	(0.457)	120958	100.917	4.03670
11 Bromomethane	94	6.722	6.716	(0.541)	71893	106.904	4.27617
12 Chloroethane	64	7.002	6.996	(0.563)	66884	102.090	4.08360
13 Trichlorofluoromethane	101	7.587	7.587	(0.611)	210408	111.247	4.44988
14 Acrolein	56	8.563	8.569	(0.689)	10939	732.538	29.3015
15 1,1,1-trichloro-2,2,2-trifluo	117	8.581	8.587	(0.690)	49935	96.6592	3.86637

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BS1R91.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
16 1,1,2-trichloro-1,2,2-trifluo	85	8.636	8.636	(0.695)	52870	96.2529	3.85012
17 1,1-Dichloroethene	96	8.709	8.709	(0.701)	81384	101.299	4.05194
18 Acetone	43	8.837	8.843	(0.711)	89259	671.133	26.8453
19 Iodomethane	142	9.026	9.026	(0.726)	176108	107.351	4.29405
20 Carbon disulfide	76	9.136	9.136	(0.735)	588344	112.174	4.48694
22 3-Chloropropene	39	9.355	9.355	(0.753)	233359	119.565	4.78260
23 Acetonitrile	41	9.355	9.355	(0.753)	340876	123.949	4.95795
24 Methyl acetate	43	9.355	9.362	(0.753)	80488	130.958	5.23831
25 Methylene Chloride	84	9.599	9.599	(0.772)	174061	115.425	4.61699
26 Acrylonitrile	53	10.008	10.008	(0.805)	191837	1194.65	47.7860
28 trans-1,2-Dichloroethene	96	9.965	9.965	(0.802)	188201	114.290	4.57158
27 Methyl-tert-butyl ether	73	9.916	9.916	(0.798)	409221	129.189	5.16758
30 Isopropyl ether	45	10.526	10.526	(0.847)	614470	133.188	5.32754
31 Vinyl acetate	43	10.526	10.532	(0.847)	323428	116.997	4.67986
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	367096	122.536	4.90146
33 Chloroprene	53	10.660	10.660	(0.858)	309827	113.289	4.53157
34 2-butanone	43	11.245	11.251	(0.905)	203385	757.854	30.3142
35 2,2-Dichloropropane	77	11.257	11.258	(0.906)	288438	103.679	4.14715
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	203512	120.620	4.82481
37 Propionitrile	54	11.379	11.386	(0.916)	426574	6327.99	253.120
38 Methacrylonitrile	41	11.526	11.526	(0.927)	606278	1426.52	57.0608
39 Bromochloromethane	128	11.556	11.562	(0.930)	75432	127.816	5.11262
40 Chloroform	83	11.605	11.605	(0.934)	354829	125.551	5.02203
42 1,1,1-Trichloroethane	97	11.806	11.806	(0.950)	321093	115.714	4.62856
43 Cyclohexane	84	11.837	11.837	(0.952)	291928	107.997	4.31989
44 1,1-dichloropropene	75	11.965	11.965	(0.963)	266254	113.673	4.54693
45 Isobutyl alcohol	43	11.989	11.995	(0.965)	194506	6709.72	268.389
46 Carbon Tetrachloride	117	11.965	11.965	(0.963)	248132	105.610	4.22440
47 Benzene	78	12.172	12.178	(0.979)	813582	122.506	4.90025
48 1,2-Dichloroethane	62	12.227	12.227	(0.984)	218379	132.260	5.29040
49 Trichloroethene	130	12.757	12.757	(1.026)	199568	108.890	4.35559
50 Methylcyclohexane	83	12.903	12.904	(1.038)	301391	92.3854	3.69542
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	200327	131.427	5.25707
52 Methylmethacrylate	69	12.952	12.952	(1.042)	909684	1504.65	60.1858
53 1,4-dioxane	88	13.050	13.050	(1.050)	43237	6491.66	259.667
54 Dibromomethane	174	13.105	13.105	(1.054)	69999	118.723	4.74891
55 Bromodichloromethane	83	13.190	13.190	(1.061)	249903	121.205	4.84821
56 2-chloroethyl vinyl ether	63	13.361	13.361	(1.075)	61350	242.460	9.69839
57 cis-1,3-Dichloropropene	75	13.537	13.538	(1.089)	294769	118.434	4.73736
58 4-Methyl-2-pentanone	43	13.586	13.592	(0.914)	531150	772.618	30.9047
59 Toluene	92	13.781	13.781	(0.927)	531792	117.910	4.71641
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	664905	845.018	33.8007
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.939)	244303	126.274	5.05096
62 1,1,2-Trichloroethane	97	14.111	14.111	(0.950)	119252	126.904	5.07617
63 2-hexanone	43	14.208	14.208	(0.956)	363104	752.144	30.0858
64 1,3-Dichloropropane	76	14.251	14.251	(0.959)	241530	135.421	5.41685
65 Tetrachloroethene	164	14.208	14.214	(0.956)	138824	98.2260	3.92904

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BS1R91.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
66 Dibromochloromethane	129	14.434	14.434	(0.971)	134229	116.185	4.64740
67 1,2-Dibromoethane	107	14.556	14.556	(0.979)	111070	125.981	5.03923
68 1-Chlorohexane	55	14.751	14.751	(0.993)	183918	100.294	4.01175
69 Chlorobenzene	112	14.885	14.885	(1.002)	536690	118.228	4.72914
70 Ethylbenzene	106	14.897	14.897	(1.002)	305845	113.687	4.54750
71 1,1,1,2-Tetrachloroethane	131	14.927	14.928	(1.004)	169068	115.308	4.61231
72 m,p-Xylene	106	14.970	14.970	(1.007)	761104	230.012	9.20048
73 m,p-Xylene (part of total)	106	14.970	14.970	(1.007)	761104	230.012	9.20048
74 o-Xylene	106	15.293	15.287	(1.029)	374707	119.518	4.78070
75 o-Xylene (part of total)	106	15.293	15.287	(1.029)	374707	119.518	4.78070
76 Styrene	104	15.299	15.299	(1.030)	601084	120.486	4.81944
77 Bromoform	173	15.531	15.537	(0.930)	52138	104.992	4.19969
78 Isopropyl Benzene	105	15.537	15.537	(1.046)	953494	109.991	4.39964
79 1,1,2,2-Tetrachloroethane	83	15.793	15.793	(0.946)	125389	128.290	5.13158
81 1,2,3-Trichloropropane	110	15.872	15.872	(1.068)	36260	130.599	5.22397
80 trans-1,4-dichloro-2-butene	53	15.824	15.824	(1.065)	152490	506.206	20.2483
82 n-Propyl Benzene	91	15.848	15.848	(0.949)	1181949	109.031	4.36123
83 Bromobenzene	156	15.903	15.903	(1.070)	186700	114.247	4.56987
84 1,3,5-Trimethyl Benzene	105	15.958	15.958	(0.956)	848161	110.723	4.42892
85 2-Chlorotoluene	126	16.006	16.007	(0.959)	219078	109.860	4.39441
86 4-Chlorotoluene	126	16.086	16.086	(0.963)	227035	108.090	4.32361
87 tert-Butyl Benzene	119	16.244	16.244	(0.973)	798990	107.684	4.30737
88 1,2,4-Trimethyl Benzene	105	16.287	16.287	(0.976)	873676	113.160	4.52640
89 Pentachloroethane	167	16.360	16.360	(0.980)	94258	101.039	4.04157
90 sec-Butyl Benzene	105	16.421	16.427	(0.984)	1009095	102.430	4.09721
91 p-Isopropyl Toluene	119	16.506	16.506	(0.989)	872050	102.499	4.09994
92 1,3-Dichlorobenzene	146	16.647	16.647	(0.997)	401665	107.825	4.31300
93 1,4-Dichlorobenzene	146	16.720	16.720	(1.001)	404953	110.848	4.43391
94 n-Butyl Benzene	91	16.872	16.878	(1.011)	792311	96.5365	3.86146
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	358172	114.205	4.56819
96 1,2-Dibromo-3-Chloropropane	75	17.860	17.866	(1.070)	21660	115.470	4.61880
97 1,2,4-Trichlorobenzene	180	18.823	18.829	(1.127)	241380	103.243	4.12972
98 Hexachlorobutadiene	225	18.902	18.908	(1.132)	94961	77.3202	3.09281
99 Naphthalene	128	19.213	19.219	(1.151)	439519	118.340	4.73361
171 Diethyl ether	45	8.215	8.215	(0.661)	44440	115.044	4.60177
100 1,2,3-Trichlorobenzene	180	19.561	19.567	(1.172)	204721	108.951	4.35804
M 101 1,2-Dichloroethene (total)	96				391713	234.987	9.39947
M 102 Xylene (total)	106				1135811	362.281	14.4912

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-BS1R91.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4031319-BS1R91.d
Lab Smp Id: 4031319-BS1 Client Smp ID: VLCSUB
Inj Date : 14-MAR-2014 01:47
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4031319-BS1:JAO
Misc Info : VLCSUB
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:29 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

Q. Matrix Spike Data

Tabulated Results (ANALYSIS DATA SHEET)

RIC and Quantitation report

ANALYSIS DATA SHEET

SW 8260B

MW-3MS

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-MS191.d | QC Type: Matrix Spike

Initial/Final: 25mL / 25mL | Lab ID: 4031319-MS1 | Column ID: SPB-624

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 02:16

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane	4.186	0.030	0.50	
74-87-3	Chloromethane	4.851	0.11	0.50	
75-01-4	Vinyl chloride	4.241	0.070	0.50	
74-83-9	Bromomethane	4.303	0.11	0.50	
75-00-3	Chloroethane	4.553	0.20	0.50	
75-69-4	Trichlorofluoromethane	4.512	0.060	0.50	
107-02-8	Acrolein	78.99	1.0	5.0	
75-35-4	1,1-Dichloroethene	4.020	0.040	0.50	
67-64-1	Acetone	24.09	0.44	2.5	
74-88-4	Iodomethane	4.444	0.030	0.50	
75-15-0	Carbon disulfide	4.474	0.020	0.50	
107-05-1	3-Chloropropene	4.750	0.050	0.50	
75-05-8	Acetonitrile	4.768	0.030	0.50	
75-09-2	Methylene chloride	4.387	0.020	0.50	B
107-13-1	Acrylonitrile	63.28	0.36	5.0	
156-60-5	trans-1,2-Dichloroethene	4.559	0.050	0.50	
75-34-3	1,1-Dichloroethane	7.548	0.020	0.50	
126-99-8	Chloroprene	4.545	0.020	0.50	
108-05-4	Vinyl acetate	5.582	0.060	0.50	
156-59-2	cis-1,2-Dichloroethene	8.870	0.030	0.50	
594-20-7	2,2-Dichloropropane	4.045	0.030	0.50	
107-12-0	Propionitrile	299.1	1.4	25	
78-93-3	2-Butanone	26.55	0.28	2.5	
126-98-7	Methacrylonitrile	57.23	0.39	5.0	
74-97-5	Bromochloromethane	4.633	0.040	0.50	
67-66-3	Chloroform	4.844	0.030	0.50	
71-55-6	1,1,1-Trichloroethane	4.552	0.020	0.50	
563-58-6	1,1-Dichloropropene	4.566	0.030	0.50	
56-23-5	Carbon tetrachloride	4.150	0.030	0.50	
107-06-2	1,2-Dichloroethane	5.021	0.030	0.50	
78-83-1	Isobutyl alcohol	258.3	5.9	25	

Environmental Testing Laboratories

CompuChem

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ANALYSIS DATA SHEET

SW 8260B

MW-3MS

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-MS191.d | QC Type: Matrix Spike

Initial/Final: 25mL / 25mL | Lab ID: 4031319-MS1 | Column ID: SPB-624

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 02:16

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
71-43-2	Benzene	4.881	0.030	0.50	
79-01-6	Trichloroethene	4.759	0.030	0.50	
78-87-5	1,2-Dichloropropane	5.140	0.12	0.50	
74-95-3	Dibromomethane	4.374	0.030	0.50	
80-62-6	Methyl Methacrylate	48.27	0.56	5.0	
75-27-4	Bromodichloromethane	4.705	0.030	0.50	
10061-01-5	cis-1,3-Dichloropropene	4.492	0.040	0.50	
108-10-1	4-Methyl-2-pentanone	27.59	0.42	2.5	
108-88-3	Toluene	4.840	0.030	0.50	
10061-02-6	trans-1,3-Dichloropropene	4.830	0.050	0.50	
79-00-5	1,1,2-Trichloroethane	4.983	0.040	0.50	
97-63-2	Ethyl Methacrylate	74.16	0.41	5.0	
142-28-9	1,3-Dichloropropane	5.232	0.030	0.50	
127-18-4	Tetrachloroethene	4.190	0.060	0.50	
591-78-6	2-Hexanone	27.72	0.51	2.5	
124-48-1	Dibromochloromethane	4.451	0.040	0.50	
108-90-7	Chlorobenzene	4.844	0.020	0.50	
630-20-6	1,1,1,2-Tetrachloroethane	4.656	0.020	0.50	
100-41-4	Ethylbenzene	4.779	0.040	0.50	
179601-23-1	m,p-Xylene	9.651	0.080	1.0	
95-47-6	o-Xylene	4.916	0.030	0.50	
100-42-5	Styrene	4.855	0.020	0.50	
75-25-2	Bromoform	4.165	0.030	0.50	
79-34-5	1,1,2,2-Tetrachloroethane	4.905	0.050	0.50	
96-18-4	1,2,3-Trichloropropane	4.692	0.090	0.50	
110-57-6	trans-1,4-Dichloro-2-butene	18.90	0.33	2.0	
541-73-1	1,3-Dichlorobenzene	4.443	0.040	0.50	
106-46-7	1,4-Dichlorobenzene	4.445	0.030	0.50	
95-50-1	1,2-Dichlorobenzene	4.582	0.030	0.50	
120-82-1	1,2,4-Trichlorobenzene	4.037	0.060	0.50	
87-68-3	Hexachlorobutadiene	3.196	0.030	0.50	

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

SW 8260B

MW-3MS

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-MS191.d | QC Type: Matrix Spike

Initial/Final: 25mL / 25mL | Lab ID: 4031319-MS1 | Column ID: SPB-624

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 02:16

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
91-20-3	Naphthalene	4.546	0.15	0.50	
1330-20-7	Xylenes (total)	14.57	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	4.787	96	65 - 150	
1,2-Dichloroethane-d4	5.000	4.874	97	59 - 150	
Toluene-d8	5.000	4.953	99	61 - 145	
Bromofluorobenzene	5.000	4.715	94	63 - 143	

Environmental Testing Laboratories

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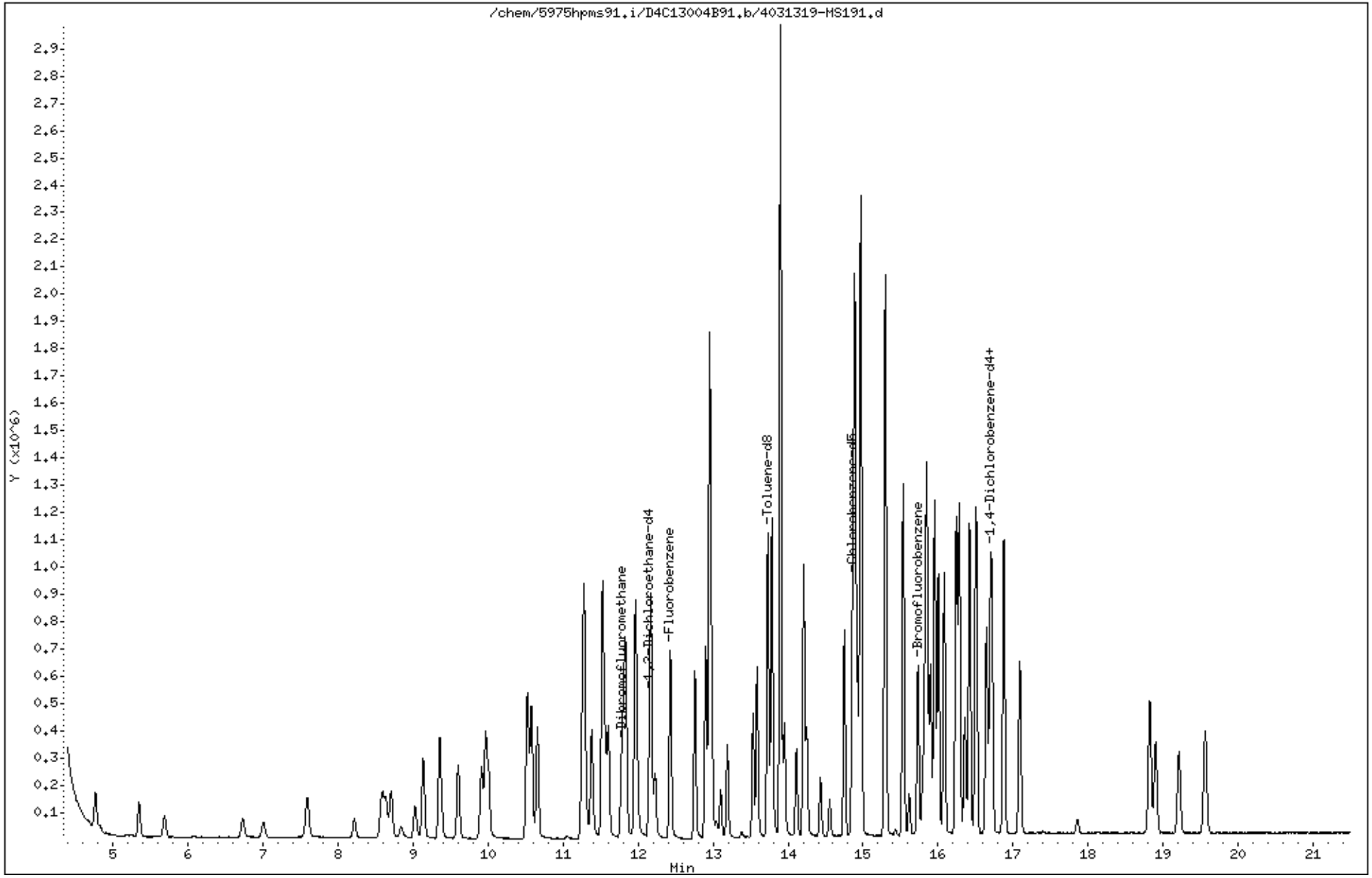
Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MS191.d
Date : 14-MAR-2014 02:16
Client ID: MW-3MS
Sample Info: 4031319-MS1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MS191.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4031319-MS191.d
Lab Smp Id: 4031319-MS1 Client Smp ID: MW-3MS
Inj Date : 14-MAR-2014 02:16
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4031319-MS1:JAO
Misc Info : MW-3MS
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:29 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 23 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	693069	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	484601	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	234798	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	174468	119.683	4.78731
$ 5 1,2-Dichloroethane-d4	65	12.153	12.154	(0.978)	170880	121.854	4.87418
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	810485	123.833	4.95331
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	288520	117.877	4.71508
8 Dichlorodifluoromethane	85	4.765	4.765	(0.383)	185119	104.653	4.18612
9 Chloromethane	50	5.344	5.344	(0.430)	186722	121.269	4.85076
10 Vinyl Chloride	62	5.685	5.685	(0.457)	130047	106.031	4.24124
11 Bromomethane	94	6.728	6.716	(0.541)	74027	107.572	4.30288
12 Chloroethane	64	7.002	6.996	(0.563)	76305	113.819	4.55276
13 Trichlorofluoromethane	101	7.593	7.587	(0.611)	218333	112.810	4.51239
14 Acrolein	56	8.569	8.569	(0.689)	42790	1974.77	78.9907(R)
17 1,1-Dichloroethene	96	8.709	8.709	(0.701)	82627	100.505	4.02019

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MS191.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
18 Acetone	43	8.843	8.843	(0.712)	82254	602.339	24.0936
19 Iodomethane	142	9.026	9.026	(0.726)	186491	111.093	4.44372
20 Carbon disulfide	76	9.136	9.136	(0.735)	600288	111.846	4.47383
22 3-Chloropropene	39	9.361	9.355	(0.753)	237151	118.742	4.74969
23 Acetonitrile	41	9.361	9.355	(0.753)	335449	119.199	4.76796
25 Methylene Chloride	84	9.599	9.599	(0.772)	169247	109.678	4.38712
26 Acrylonitrile	53	10.008	10.008	(0.805)	259959	1582.03	63.2811
28 trans-1,2-Dichloroethene	96	9.965	9.965	(0.802)	192059	113.978	4.55911
31 Vinyl acetate	43	10.526	10.532	(0.847)	394783	139.558	5.58232
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	578509	188.711	7.54843(R)
33 Chloroprene	53	10.660	10.660	(0.858)	317983	113.625	4.54500
34 2-butanone	43	11.251	11.251	(0.905)	182280	663.753	26.5501
35 2,2-Dichloropropane	77	11.257	11.258	(0.906)	287907	101.132	4.04529
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	382852	221.749	8.86996(R)
37 Propionitrile	54	11.379	11.386	(0.916)	515848	7478.14	299.126
38 Methacrylonitrile	41	11.526	11.526	(0.927)	622188	1430.63	57.2253
39 Bromochloromethane	128	11.556	11.562	(0.930)	69949	115.827	4.63309
40 Chloroform	83	11.605	11.605	(0.934)	350202	121.093	4.84373
42 1,1,1-Trichloroethane	97	11.812	11.806	(0.950)	323122	113.795	4.55179
44 1,1-dichloropropene	75	11.965	11.965	(0.963)	273580	114.143	4.56570
45 Isobutyl alcohol	43	11.989	11.995	(0.965)	191562	6457.75	258.310
46 Carbon Tetrachloride	117	11.965	11.965	(0.963)	249418	103.741	4.14964
47 Benzene	78	12.172	12.178	(0.979)	829232	122.021	4.88083
48 1,2-Dichloroethane	62	12.227	12.227	(0.984)	212088	125.526	5.02105
49 Trichloroethene	130	12.757	12.757	(1.026)	223136	118.978	4.75912
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	200440	128.508	5.14031
52 Methylmethacrylate	69	12.952	12.952	(1.042)	746591	1206.78	48.2711
54 Dibromomethane	174	13.105	13.105	(1.054)	65975	109.351	4.37404
55 Bromodichloromethane	83	13.190	13.190	(1.061)	248191	117.635	4.70540
57 cis-1,3-Dichloropropene	75	13.537	13.538	(1.089)	286042	112.312	4.49247
58 4-Methyl-2-pentanone	43	13.586	13.592	(0.914)	471217	689.786	27.5915
59 Toluene	92	13.781	13.781	(0.927)	542252	120.992	4.83969
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	1657257	1854.10	74.1639
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.939)	232121	120.738	4.82954
62 1,1,2-Trichloroethane	97	14.110	14.111	(0.950)	116328	124.578	4.98311
63 2-hexanone	43	14.208	14.208	(0.956)	332385	692.879	27.7152
64 1,3-Dichloropropane	76	14.251	14.251	(0.959)	231831	130.808	5.23231
65 Tetrachloroethene	164	14.208	14.214	(0.956)	147094	104.738	4.18951
66 Dibromochloromethane	129	14.434	14.434	(0.971)	127752	111.280	4.45121
69 Chlorobenzene	112	14.885	14.885	(1.002)	546299	121.109	4.84435
70 Ethylbenzene	106	14.897	14.897	(1.002)	319404	119.481	4.77922
71 1,1,1,2-Tetrachloroethane	131	14.927	14.928	(1.004)	169608	116.410	4.65640
72 m,p-Xylene	106	14.970	14.970	(1.007)	793330	241.272	9.65087
73 m,p-Xylene (part of total)	106	14.970	14.970	(1.007)	793330	241.272	9.65087
74 o-Xylene	106	15.293	15.287	(1.029)	382897	122.905	4.91618
75 o-Xylene (part of total)	106	15.293	15.287	(1.029)	382897	122.905	4.91618
76 Styrene	104	15.299	15.299	(1.030)	601673	121.369	4.85477

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MS191.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
77 Bromoform	173	15.531	15.537	(0.930)	50753	104.129	4.16514
79 1,1,2,2-Tetrachloroethane	83	15.793	15.793	(0.946)	117641	122.630	4.90518
81 1,2,3-Trichloropropane	110	15.866	15.872	(1.068)	32359	117.288	4.69152
80 trans-1,4-dichloro-2-butene	53	15.824	15.824	(1.065)	141409	472.399	18.8960
92 1,3-Dichlorobenzene	146	16.647	16.647	(0.997)	406113	111.073	4.44291
93 1,4-Dichlorobenzene	146	16.714	16.720	(1.001)	398494	111.134	4.44538
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	352651	114.562	4.58250
97 1,2,4-Trichlorobenzene	180	18.829	18.829	(1.128)	231605	100.928	4.03712
98 Hexachlorobutadiene	225	18.908	18.908	(1.133)	96325	79.9082	3.19633
99 Naphthalene	128	19.213	19.219	(1.151)	414256	113.639	4.54557
M 102 Xylene (total)	106				1176227	377.552	15.1021

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MS191.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4031319-MS191.d
Lab Smp Id: 4031319-MS1 Client Smp ID: MW-3MS
Inj Date : 14-MAR-2014 02:16
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4031319-MS1:JAO
Misc Info : MW-3MS
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:29 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 23 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

ANALYSIS DATA SHEET

SW 8260B

MW-3MSD

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-MSD191.d | QC Type: Matrix Spike Dup

Initial/Final: 25mL / 25mL | Lab ID: 4031319-MSD1 | Column ID: SPB-624

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 02:45

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane	4.086	0.030	0.50	
74-87-3	Chloromethane	4.525	0.11	0.50	
75-01-4	Vinyl chloride	4.188	0.070	0.50	
74-83-9	Bromomethane	4.143	0.11	0.50	
75-00-3	Chloroethane	4.514	0.20	0.50	
75-69-4	Trichlorofluoromethane	4.321	0.060	0.50	
107-02-8	Acrolein	78.81	1.0	5.0	
75-35-4	1,1-Dichloroethene	4.058	0.040	0.50	
67-64-1	Acetone	25.10	0.44	2.5	
74-88-4	Iodomethane	4.446	0.030	0.50	
75-15-0	Carbon disulfide	4.383	0.020	0.50	
107-05-1	3-Chloropropene	4.726	0.050	0.50	
75-05-8	Acetonitrile	4.879	0.030	0.50	
75-09-2	Methylene chloride	4.368	0.020	0.50	B
107-13-1	Acrylonitrile	64.68	0.36	5.0	
156-60-5	trans-1,2-Dichloroethene	4.507	0.050	0.50	
75-34-3	1,1-Dichloroethane	7.581	0.020	0.50	
126-99-8	Chloroprene	4.520	0.020	0.50	
108-05-4	Vinyl acetate	5.829	0.060	0.50	
156-59-2	cis-1,2-Dichloroethene	9.001	0.030	0.50	
594-20-7	2,2-Dichloropropane	3.830	0.030	0.50	
107-12-0	Propionitrile	318.5	1.4	25	
78-93-3	2-Butanone	27.83	0.28	2.5	
126-98-7	Methacrylonitrile	58.79	0.39	5.0	
74-97-5	Bromochloromethane	4.774	0.040	0.50	
67-66-3	Chloroform	4.888	0.030	0.50	
71-55-6	1,1,1-Trichloroethane	4.497	0.020	0.50	
563-58-6	1,1-Dichloropropene	4.399	0.030	0.50	
56-23-5	Carbon tetrachloride	4.209	0.030	0.50	
107-06-2	1,2-Dichloroethane	5.148	0.030	0.50	
78-83-1	Isobutyl alcohol	259.0	5.9	25	

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

MW-3MSD

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-MSD191.d | QC Type: Matrix Spike Dup

Initial/Final: 25mL / 25mL | Lab ID: 4031319-MSD1 | Column ID: SPB-624

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 02:45

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
71-43-2	Benzene	4.780	0.030	0.50	
79-01-6	Trichloroethene	4.679	0.030	0.50	
78-87-5	1,2-Dichloropropane	5.218	0.12	0.50	
74-95-3	Dibromomethane	4.461	0.030	0.50	
80-62-6	Methyl Methacrylate	49.74	0.56	5.0	
75-27-4	Bromodichloromethane	4.729	0.030	0.50	
10061-01-5	cis-1,3-Dichloropropene	4.572	0.040	0.50	
108-10-1	4-Methyl-2-pentanone	27.78	0.42	2.5	
108-88-3	Toluene	4.639	0.030	0.50	
10061-02-6	trans-1,3-Dichloropropene	4.736	0.050	0.50	
79-00-5	1,1,2-Trichloroethane	4.817	0.040	0.50	
97-63-2	Ethyl Methacrylate	73.90	0.41	5.0	
142-28-9	1,3-Dichloropropane	5.121	0.030	0.50	
127-18-4	Tetrachloroethene	3.869	0.060	0.50	
591-78-6	2-Hexanone	27.55	0.51	2.5	
124-48-1	Dibromochloromethane	4.372	0.040	0.50	
108-90-7	Chlorobenzene	4.693	0.020	0.50	
630-20-6	1,1,1,2-Tetrachloroethane	4.491	0.020	0.50	
100-41-4	Ethylbenzene	4.594	0.040	0.50	
179601-23-1	m,p-Xylene	9.093	0.080	1.0	
95-47-6	o-Xylene	4.680	0.030	0.50	
100-42-5	Styrene	4.724	0.020	0.50	
75-25-2	Bromoform	4.225	0.030	0.50	
79-34-5	1,1,2,2-Tetrachloroethane	5.020	0.050	0.50	
96-18-4	1,2,3-Trichloropropane	4.836	0.090	0.50	
110-57-6	trans-1,4-Dichloro-2-butene	18.85	0.33	2.0	
541-73-1	1,3-Dichlorobenzene	4.402	0.040	0.50	
106-46-7	1,4-Dichlorobenzene	4.434	0.030	0.50	
95-50-1	1,2-Dichlorobenzene	4.473	0.030	0.50	
120-82-1	1,2,4-Trichlorobenzene	4.051	0.060	0.50	
87-68-3	Hexachlorobutadiene	3.153	0.030	0.50	

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

ANALYSIS DATA SHEET

SW 8260B

MW-3MSD

Client: DRAPER | SDG: 1403006 | Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water | Extraction: EPA 5030B | File ID: 4031319-MSD191.d | QC Type: Matrix Spike Dup

Initial/Final: 25mL / 25mL | Lab ID: 4031319-MSD1 | Column ID: SPB-624

Dilution: 1 | pH: 1 | Prepared: 03/13/14 20:19

% Moisture: NA | Analyzed: 03/14/14 02:45

Batch: 4031319 | Sequence: 4C13004 | Calibration: 4031303 | Instrument: 5975hpms91

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
91-20-3	Naphthalene	4.547	0.15	0.50	
1330-20-7	Xylenes (total)	13.77	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.090	102	65 - 150	
1,2-Dichloroethane-d4	5.000	5.282	106	59 - 150	
Toluene-d8	5.000	5.155	103	61 - 145	
Bromofluorobenzene	5.000	5.048	101	63 - 143	

Environmental Testing Laboratories

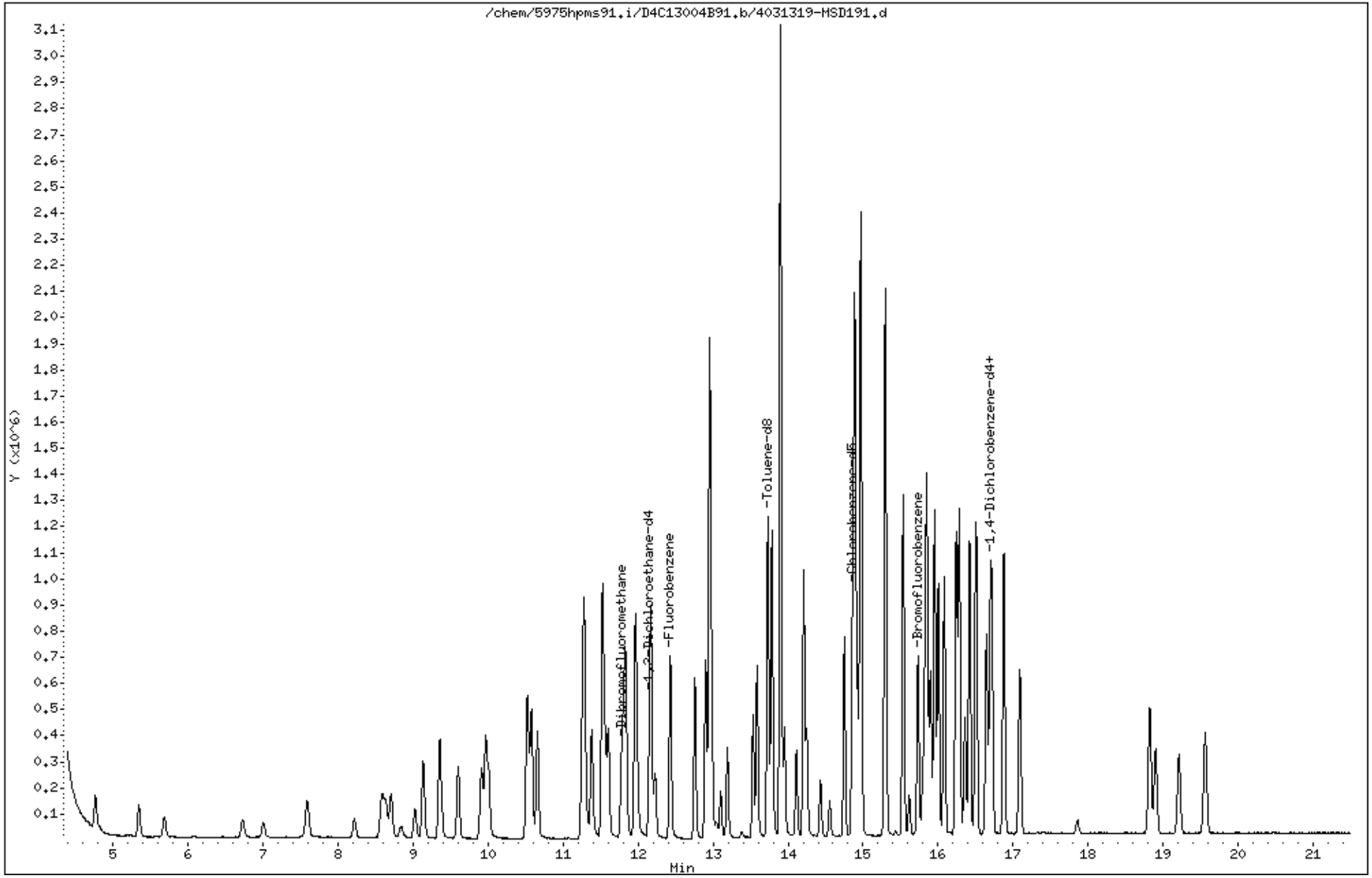
CompuChem

A Division Of

Liberty Analytical Corp.

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MSD191.d
Date : 14-MAR-2014 02:45
Client ID: MW-3MSD
Sample Info: 4031319-MSD1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5975hpms91.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MSD191.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4031319-MSD191.d
Lab Smp Id: 4031319-MSD1 Client Smp ID: MW-3MSD
Inj Date : 14-MAR-2014 02:45
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4031319-MSD1:JAO
Misc Info : MW-3MSD
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:29 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 24 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.428	(1.000)	702793	125.000	
* 2 Chlorobenzene-d5	117	14.860	14.860	(1.000)	510564	125.000	
* 3 1,4-Dichlorobenzene-d4	152	16.695	16.695	(1.000)	239166	125.000	
$ 4 Dibromofluoromethane	113	11.782	11.782	(0.948)	188106	127.253	5.09011
$ 5 1,2-Dichloroethane-d4	65	12.153	12.154	(0.978)	187792	132.061	5.28246
$ 6 Toluene-d8	98	13.726	13.727	(0.924)	888614	128.866	5.15463
$ 7 Bromofluorobenzene	95	15.732	15.732	(0.942)	314623	126.194	5.04776
8 Dichlorodifluoromethane	85	4.765	4.765	(0.383)	183215	102.143	4.08574
9 Chloromethane	50	5.338	5.344	(0.429)	176624	113.124	4.52494
10 Vinyl Chloride	62	5.685	5.685	(0.457)	130217	104.701	4.18803
11 Bromomethane	94	6.722	6.716	(0.541)	72277	103.576	4.14303
12 Chloroethane	64	7.002	6.996	(0.563)	76725	112.862	4.51448
13 Trichlorofluoromethane	101	7.587	7.587	(0.611)	212019	108.032	4.32126
14 Acrolein	56	8.569	8.569	(0.689)	43268	1970.18	78.8073(R)
17 1,1-Dichloroethene	96	8.709	8.709	(0.701)	84576	101.452	4.05809

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MSD191.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
18 Acetone	43	8.843	8.843	(0.712)	86778	627.507	25.1003
19 Iodomethane	142	9.026	9.026	(0.726)	189217	111.157	4.44629
20 Carbon disulfide	76	9.136	9.136	(0.735)	596391	109.582	4.38329
22 3-Chloropropene	39	9.361	9.355	(0.753)	239283	118.152	4.72608
23 Acetonitrile	41	9.361	9.355	(0.753)	348048	121.965	4.87859
25 Methylene Chloride	84	9.599	9.599	(0.772)	170880	109.204	4.36816
26 Acrylonitrile	53	10.008	10.008	(0.805)	269421	1616.92	64.6770
28 trans-1,2-Dichloroethene	96	9.965	9.965	(0.802)	192525	112.673	4.50694
31 Vinyl acetate	43	10.526	10.532	(0.847)	418019	145.727	5.82910
32 1,1-Dichloroethane	63	10.581	10.581	(0.851)	589136	189.518	7.58073(R)
33 Chloroprene	53	10.660	10.660	(0.858)	320651	112.993	4.51972
34 2-butanone	43	11.251	11.251	(0.905)	193733	695.697	27.8279
35 2,2-Dichloropropane	77	11.257	11.258	(0.906)	276431	95.7576	3.83031
36 cis-1,2-Dichloroethene	96	11.282	11.282	(0.908)	393979	225.036	9.00146(R)
37 Propionitrile	54	11.379	11.386	(0.916)	556974	7962.62	318.505
38 Methacrylonitrile	41	11.526	11.526	(0.927)	648129	1469.66	58.7864
39 Bromochloromethane	128	11.556	11.562	(0.930)	73095	119.362	4.77448
40 Chloroform	83	11.605	11.605	(0.934)	358395	122.212	4.88846
42 1,1,1-Trichloroethane	97	11.812	11.806	(0.950)	323727	112.430	4.49721
44 1,1-dichloropropene	75	11.965	11.965	(0.963)	267267	109.966	4.39863
45 Isobutyl alcohol	43	11.989	11.995	(0.965)	194804	6476.18	259.047
46 Carbon Tetrachloride	117	11.965	11.965	(0.963)	256512	105.216	4.20862
47 Benzene	78	12.172	12.178	(0.979)	823577	119.512	4.78047
48 1,2-Dichloroethane	62	12.227	12.227	(0.984)	220513	128.707	5.14827
49 Trichloroethene	130	12.757	12.757	(1.026)	222459	116.976	4.67903
51 1,2-Dichloropropane	63	12.983	12.983	(1.045)	206319	130.447	5.21787
52 Methylmethacrylate	69	12.952	12.952	(1.042)	780129	1243.54	49.7416
54 Dibromomethane	174	13.105	13.105	(1.054)	68238	111.537	4.46148
55 Bromodichloromethane	83	13.190	13.190	(1.061)	252932	118.223	4.72894
57 cis-1,3-Dichloropropene	75	13.537	13.538	(1.089)	295205	114.306	4.57223
58 4-Methyl-2-pentanone	43	13.586	13.592	(0.914)	499939	694.616	27.7846
59 Toluene	92	13.781	13.781	(0.927)	547605	115.973	4.63893
60 Ethylmethacrylate	69	13.897	13.897	(0.935)	1739204	1847.52	73.9009
61 trans-1,3-Dichloropropene	75	13.952	13.952	(0.939)	239815	118.397	4.73589
62 1,1,2-Trichloroethane	97	14.110	14.111	(0.950)	118466	120.416	4.81664
63 2-hexanone	43	14.202	14.208	(0.956)	348136	688.810	27.5524
64 1,3-Dichloropropane	76	14.251	14.251	(0.959)	239063	128.029	5.12116
65 Tetrachloroethene	164	14.208	14.214	(0.956)	143121	96.7265	3.86906
66 Dibromochloromethane	129	14.434	14.434	(0.971)	132207	109.305	4.37219
69 Chlorobenzene	112	14.885	14.885	(1.002)	557545	117.316	4.69266
70 Ethylbenzene	106	14.897	14.897	(1.002)	323448	114.841	4.59363
71 1,1,1,2-Tetrachloroethane	131	14.927	14.928	(1.004)	172349	112.276	4.49104
72 m,p-Xylene	106	14.970	14.970	(1.007)	787542	227.332	9.09328
73 m,p-Xylene (part of total)	106	14.970	14.970	(1.007)	787542	227.332	9.09328
74 o-Xylene	106	15.293	15.287	(1.029)	384071	117.012	4.68049
75 o-Xylene (part of total)	106	15.293	15.287	(1.029)	384071	117.012	4.68049
76 Styrene	104	15.299	15.299	(1.030)	616853	118.104	4.72415

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MSD191.d
Report Date: 14-Mar-2014 10:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
77 Bromoform	173	15.537	15.537	(0.931)	52438	105.621	4.22483
79 1,1,2,2-Tetrachloroethane	83	15.793	15.793	(0.946)	122636	125.502	5.02007
81 1,2,3-Trichloropropane	110	15.872	15.872	(1.068)	35145	120.908	4.83634
80 trans-1,4-dichloro-2-butene	53	15.824	15.824	(1.065)	148654	471.350	18.8540
92 1,3-Dichlorobenzene	146	16.640	16.647	(0.997)	409836	110.044	4.40175
93 1,4-Dichlorobenzene	146	16.720	16.720	(1.001)	404887	110.855	4.43421
95 1,2-Dichlorobenzene	146	17.092	17.092	(1.024)	350608	111.819	4.47274
97 1,2,4-Trichlorobenzene	180	18.823	18.829	(1.127)	236703	101.266	4.05063
98 Hexachlorobutadiene	225	18.908	18.908	(1.133)	96799	78.8349	3.15339
99 Naphthalene	128	19.213	19.219	(1.151)	422087	113.673	4.54691
M 102 Xylene (total)	106				1171613	356.947	14.2779

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

3/14/2014

Data File: /chem/5975hpms91.i/D4C13004B91.b/4031319-MSD191.d
Report Date: 14-Mar-2014 10:29

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5975hpms91.i/D4C13004B91.b/4031319-MSD191.d
Lab Smp Id: 4031319-MSD1 Client Smp ID: MW-3MSD
Inj Date : 14-MAR-2014 02:45
Operator : JAO Inst ID: 5975hpms91.i
Smp Info : 4031319-MSD1:JAO
Misc Info : MW-3MSD
Comment :
Method : /chem/5975hpms91.i/D4C13004B91.b/8260B_25ppbv21.m
Meth Date : 14-Mar-2014 10:29 ron Quant Type: ISTD
Cal Date : 13-MAR-2014 16:47 Cal File: 4C13004-CAL691.d
Als bottle: 24 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PPS897O.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/14/2014

S. Run Logs / Prep Sheets / Internal CoC Documents / Standard Preparation Information / Manual Integration Summary

Run Logs

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS VOLATILE RUN LOG 23 BB 14(5975hpms91)

DATE 3/13/14 SHIFT/S (A) ____ (B) ✓ (C) ____
METHOD: (8260B) SOM01.2 (Circle one) or other: 25mL
Initial Time of Tune: 1523 Time Tune Expires: 0323

ROUTINE MAINTENANCE Source Ad

	REJECTED	FILE NAME	REPORTED	pH	Vial	DATE	TIME	Client ID	SDG#	INJ. VOL.*	DF+	CHEMIST	COMMENTS (ETC.)/ DISPOSITION
1		4C13004-TUNI		—	—	3/13/14	1523	BFBUA	—	2uL	—	JKO	LCD=SCD
2		-CAL2		—	—	/ /	1549	VSTD001UA	—	25mL	—		
3		-CAL1		—	—	/ /	1618	VSTD0.5UA	—		—		
4		-CAL6		—	—	/ /	1647	VSTD040UA	—		—		
5		-CAL5		—	—	/ /	1716	VSTD020UA	—		—		
6		-CAL4		—	—	/ /	1745	VSTD010UA	—		—		
7		-CAL3		—	—	/ /	1814	VSTD005UA	—		—		
8		-CAL2R	RU	—	—	/ /	1844	VSTD001UA	—		—		
9		-SCV1		—	—	/ /	1913	VSTD005UB	—		—		
10		4031319-BLK1	CS	—	—	/ /	1950	VBLKUB	1403006		—		
11		-BLK1R		—	—	/ /	2019	VBLKUB			—		
12		1403006-07			A	/ /	2048	TRIP BLANK			—		
13		4031319-BS1		—	—	/ /	2117	VLCSUB			—		
14		4C13004-IBL1		—	—	/ /	2155	VIBLKUB	—	25mL	—		
15		1403006-02	DK	1	A	/ /	2224	MW-2	1403006	1.5mL	16.67		
16		-03		1	A	/ 2253	~~2048~~ JAO 3-13-14	MW-8		25mL	—		
17		-04		1	A	/ /	2322	MW-9			—		
18		-05		1	A	/ /	2351	MW-12			—		
19		-06		1	A	3/14/14	0020	MW-17			—		
20		-02D2		1	B	/ /	0049	MW-2		2.5mL	10		
21		~~4C13004-IBL2~~		1 JAO 3-13-14	A	/ /	0118	~~VIBLKUC~~ MW-3	—	25mL	—		
22		~~1403006-01~~ ~~4031319-BS1R~~		—	—	/ /	0147	VLCSUB	1403006	25mL	—		
23		4031319-MS1		1	B	/ /	0216	MW-3 MS			—		
24		-MSD1		1	C	/ /	0245	MW-3 MSD			—		

AO 13-14
AO 13-14

*On-column sample aliquot +Not applicable to soil matrix

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Tune (ID #7008) Lot No.: 4B21015
Internal Standard Lot No.: 4B20001
Surrogate Lot No.: 4A07007
Calibration Group Code / Lot No.: 4C03015
Second Source Group Code/ Lot No. : 4A07006
REVIEWED BY: [signature]
Date: 3/14/14

04/19/12:jcf

VOA Internal Chain of Custody Sheet

Dept: PM

Matrix Water **Batch**: 4030604 **Status:** Batched **Analysis**: VOA-8260B 25ML

Lab Id	Client Id	Received	Container	Preparation
1403006-01 A	MW-3	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403006-02 A	MW-2	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403006-03 A	MW-8	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403006-04 A	MW-9	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403006-05 A	MW-12	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403006-06 A	MW-17	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403006-07 A	TRIP BLANK	03/06/14	01b_40mL VOA, cool, H	EPA 5030B

Relinquished By	Date/Time	Received By	Date/Time
#2B	3-12-14	JAO	3-12-14
JAO	3-12-14	#2B	3-12-14
#2B	3-13-14	JAO	3-13-14
JAO	3-13-14	#2B	3-13-14

Manual Integration Report

Manual Integration Summary

Client: DRAPER
Work Order: 1403006
Sdg: 1403006
Project: WATAUGA COUNTY LANDFILL 2014+/6520-39
Case:

Analysis: VOA-8260B 25ML **Sample Type:** Field Sample
Lab Id: 1403006-01 **Client Id:** MW-3 **Instrument:** 5975hpms91

Analyte	Type	M Flag
Chloroethane	TARGET	M
trans-1,2-Dichloroethene	TARGET	M

Sample Total: 2

Analysis: VOA-8260B 25ML **Sample Type:** Field Sample
Lab Id: 1403006-03 **Client Id:** MW-8 **Instrument:** 5975hpms91

Analyte	Type	M Flag
Methylene chloride	TARGET	M

Sample Total: 1

Analysis: VOA-8260B 25ML **Sample Type:** Field Sample
Lab Id: 1403006-04 **Client Id:** MW-9 **Instrument:** 5975hpms91

Analyte	Type	M Flag
Methylene chloride	TARGET	M

Sample Total: 1

Analysis: VOA-8260B 25ML **Sample Type:** Field Sample
Lab Id: 1403006-05 **Client Id:** MW-12 **Instrument:** 5975hpms91

Analyte	Type	M Flag
1,1-Dichloroethene	TARGET	M

Sample Total: 1

Analysis: VOA-8260B 25ML **Sample Type:** Cal Standard
Lab Id: 4C13004-CAL1 **Client Id:** VSTD0.5UA **Instrument:** 5975hpms91

Analyte	Type	M Flag
1,1-Dichloroethene	TARGET	M
Acetone	TARGET	M

Client:	DRAPER	**Project:**	WATAUGA COUNTY LANDFILL 2014+/6520-39
Work Order:	1403006	**Case:**	
Sdg:	1403006		

Sample Total: 2

Analysis: VOA-8260B 25ML **Sample Type:** Cal Standard

Lab Id: 4C13004-CAL2 **Client Id:** VSTD001UA **Instrument:** 5975hpms91

Analyte	Type	M Flag
Acetone	TARGET	M
Acrolein	TARGET	M

Sample Total: 2

Total Manual Integrations: 9

CompuChem

A Division Of

Liberty Analytical Corp.

3/23/2014

JANET FRAZIER

DRAPER

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

WorkOrder: 1403007

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER **Work:** 1403007

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML **Sdg:** 1403007

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1403007-01	S-1	Water	03/04/2014 11:15	03/06/2014 09:43
1403007-02	S-2	Water	03/04/2014 11:35	03/06/2014 09:43
1403007-03	S-3	Water	03/04/2014 10:50	03/06/2014 09:43
1403007-04	S-4	Water	03/04/2014 12:15	03/06/2014 09:43
1403007-05	S-5	Water	03/04/2014 11:55	03/06/2014 09:43

ANALYSES DATA PACKAGE COVER PAGE

Client: DRAPER

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Laboratory: COMPUCHEM

SDG: 1403007

Client Sample Id:	Analysis:	Lab Sample Id:
S-1	SW 8260B	1403007-01
S-2	SW 8260B	1403007-02
S-3	SW 8260B	1403007-03
S-4	SW 8260B	1403007-04
S-5	SW 8260B	1403007-05

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Patricia A Murphy

Name: Pat Murphy

Date: 03/19/2014

Title: Senior Chemist

Environmental Testing Laboratories

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I. SAMPLE DATA PACKAGE

GC/MS by SW-846

The Sample Data Package shall contain data for all samples in one Work Order/Sample Delivery Group (SDG), as follows:

A. SDG Narrative

B. Chain of Custody Records

C. Sample Preparation and Analysis Holding Time Data
(HOLDING TIME SUMMARY)

D. Surrogate Recovery Results
(SURROGATE STANDARD RECOVERY)

E. Laboratory Control Sample Results
(LCS/LCS DUPLICATE RECOVERY)

F. Matrix Spike Results
(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

G. Batch Summary
(PREPARATION BATCH SUMMARY)

H. Analysis Sequence Summary
(ANALYSIS SEQUENCE SUMMARY)

I. Instrument Performance Check
(MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK)

J. Internal Standard Results
(INTERNAL STANDARD AREA AND RT SUMMARY)

K. Target Compound Results – Forms and Raw Data
(ANALYSIS DATA SHEET)

L. Initial Calibration Data – Forms and Raw Data
(INITIAL CALIBRATION DATA)

M. Continuing Calibration Data – Forms and Raw Data
(CONTINUING CALIBRATION CHECK)

N. BFB / DFTPP or FC43 - Raw Data

O. Blank Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

P. Laboratory Control Sample Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

Q. Matrix Spike Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

R. GPC Data (if applicable)

S. Run Logs / Prep Sheets / Internal CoC Documents / Standard Info / Manual Integration Summary

A. SDG Narrative

CompuChem
A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1403007
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: S-1 S-2 S-3 S-4 S-5

The 5 aqueous samples listed above were received intact, refrigerated at 0.3°C with proper documentation, in sealed shipping containers, March 6, 2014. The samples listed above were scheduled for the requested analysis of the volatile fraction only. SW-846, 3rd Edition, Update 3, 8260C was used to prepare and analyze the sample, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices are included in the sample data sections.

VOLATILES

Analysis holding time requirements were met for all of the samples.
The pH values of samples were equal to 1.
There were volatile Project/Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in three of these samples.
All of the system monitoring compounds met recovery criteria in the analyses of the samples.
All of the internal standards met response and retention time criteria in the analyses of the samples.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG.
All QC criteria were met for all initial, continuing calibration standards and Second-source ICV associated to this SDG.
Manual integrations were performed on one or more of the process files associated with this SDG. Please see the detailed Manual Integration Summary report that is located in section S. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.
The associated method blanks met all quality control criteria.
The associated Laboratory Control Sample (LCS) met all quality control criteria.
No duplicate matrix spikes were requested.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Patricia A. Murphy
Patricia A. Murphy
Senior Scientist
March 19, 2014

GC and GC/MS Column and Trap Specifications Table

COLUMNS

Columns Utilized	Brand Name	Coating Material	ID (mm)	Film Thickness (um)	Length (m)
	GC Laboratory				
DRO/ORO	Restek	RTX-5	0.53	1.0	30
	Restek	RTX-SMS	0.53	1.0	30
√	Restek	clpest	0.32	0.5	30
√	Restek	clpest2	0.32	0.42	30
	J&W	DB-210	0.53	1.0	30
RSK	J&W	GS-GASPRO	0.32	N/A	30
	GC Volatiles Laboratory				
GRO	Restek	RTX-Volatiles	0.53	2.0	30
	GC/MS Volatiles Laboratory				
	Restek	RTX-VMS	0.18	1.0	20
√	Supelco	SPB-624	0.32	1.8	60
	Supelco	SPB-624	0.53	3.0	75
	Phenomonex	ZB-624	0.32	1.8	60
	GC/MS Semivolatiles Laboratory				
√	Restek	RTX-5Sil MS	0.32	0.25	30
	HPLC Laboratory				
PAH	Supelco	Supelcosil LC-PAH	4.6	5.0	15 cm
PAH	Supelco	Discovery RP Amide C16	4.6	5.0	25 cm
EXP	Restek	Pinnacle Cyano	4.6	5.0	25 cm
EXP	Restek	Allure C18	4.6	5.0	25 cm

TRAPS

	GC and GC/MS Volatiles Laboratory	
	Supelco J (BETXTRAP™)	* 7.7 cm Carbopack C
		* 1.2 cm Carbopack B
√	Supelco K (Vocarb3000)	* 10 cm of Carbopack B (Graphitized Carbons)
		* 6 cm of Carboxen 1000 (Carbon molecular sieves)
		* 1 cm of Carboxen 1001 (Carbon molecular sieves)

Rev. 30

This table contains the GC columns (and volatile organic trap) used for the analysis of volatiles, semivolatiles, pesticides, and Aroclors by the requested analytical methods. Please see the SDG Narrative(s) for the specific fraction(s) relative to this SDG.
Note: This table also contains HPLC columns.

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CompuChem's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is CompuChem's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.). This policy is also applicable to non-CLP data packages.

Revision 7 (01/12/2011)

CompuChem

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Notification Regarding Manual Editing/Integration Flags

In some instances, manual adjustments to the software output are necessary to provide accurate data. These manual integrations are performed by the data reviewers, GC/MS operators, or GC/HPLC chemists. An Extracted Ion Current Profile (EICP) or a GC/HPLC chromatographic peak has been provided for the manual integration performed on each compound to demonstrate the accuracy of that process. The manual integrations are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis, and in the "Flags" column for GC/HPLC analysis. The manual editing/integration flags are:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed in order to provide the most accurate area count possible for the peak. The most common reasons for performing manual integrations/editing are: the compound was not found by the automatic integration routine, the compound was incorrectly integrated by the automatic integration routine, and the co-eluting compounds were incorrectly integrated by the automatic integration routine.

H - Denotes that the data reviewer, GC/MS operator, or GC/HPLC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed. The manual integration was performed in order to provide the most accurate area count possible for the peak.

L - Denotes that a data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

ML - Denotes that an alternate GC/MS library search has been selected and a manual integration has also been performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

These codes will appear in the GC/MS and GC/HPLC raw data.

Revision 8 (01/29/2011)

ORGANIC DATA REPORTING QUALIFIERS

On the appropriate reporting form, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on the appropriate reporting form for each compound. The qualifiers used are:

U : This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL), or reporting limit, will be adjusted to reflect any dilution and, for soils, the percent moisture.

J : This flag indicates an estimated value. The flag is used as detailed below:

1. When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1:1 is assumed for the TIC analyte,

2. When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero, and

3. When the retention time data indicate the presence of a compound that meets the pesticide and/or Aroclor or other GC or HPLC identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero. For example, if the CRQL (or Reporting Limit) is 10 μg/L, but a concentration of 3 μg/L is calculated, it is reported as 3J.

N : This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search and must be used with the J flag. For generic characterization of a TIC such as "chlorinated hydrocarbon" (or for an "unknown," with no matches ≥ 85%), the N flag is not used.

P : In the EPA's Contract Laboratory Program (CLP), this flag is used for a pesticide/Aroclor target analyte, when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the Form I and flagged with a P.
For SW-846 GC and HPLC analyses, when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences, then the lower of the two values is reported and flagged with a P on the reporting form. When the RPD is equal to or less than 40%, our policy is to also report the lower of the two values, although the choice could be a project specific issue. These SW-846 policies are consistent with Method 8000C. If Method 8000B is required, the higher of the two values is reported. For certain HPLC analyses, if one of the HPLC columns displays co-elution of target analytes, all results are reported from a primary column displaying no co-elution. Results are still flagged with a P if the RPD between columns is greater than 40%.

C : This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, this flag is not applied; a laboratory-defined flag is used instead (see the X/Y/Z qualifier.)

DATA REPORTING QUALIFIERS (continued)

B : This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

E : This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a concentration greater than the upper level of the calibration range, the sample or extract will be diluted and reanalyzed. All such compounds with a concentration greater than the upper level of the calibration range will have the result flagged with an E on the appropriate reporting form for the original analysis.

D : If a sample or extract is reanalyzed at a higher dilution factor, for example when the concentration of an analyte exceeds the upper calibration range, the DL suffix is appended to the sample number on the appropriate reporting form for the more diluted sample, and **all** reported concentrations on that form are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

NOTE 1: The D flag is not applied to compounds which are not detected in the sample analysis i.e. compounds reported with the CRQL (or Reporting Limit) and the U flag.

NOTE 2: Separate reporting forms are used for reporting the original analysis (Client Sample No. XXXXX) and the more diluted sample analysis (Client Sample No. XXXXXDL) i.e. the results from both analyses <u>are not combined</u> on a single reporting form.

A: This flag indicates that a TIC is a suspected aldol-condensation product.

S: In the SOM01.2 SOW document, this flag is used to indicate an estimated value for Aroclor target compounds where a valid 5-point initial calibration was not performed prior to the analytes detection in a sample. If an “S” flag is used for a specific Aroclor, then a reanalysis of the sample is required after a valid 5-point calibration is performed for the detected Aroclor. The “S” flag is not utilized for non CLP analyses.

* This flag is applied to a target analyte when any QC acceptance criterion has not been met for that analyte. The flag appears on the reporting form of the associated QC analysis.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

B. Chain of Custody Records

The laboratory shall include a copy of the Chain-of-Custody (CoC) documentation for all of the samples in the Work Order/SDG.

CHAIN OF CUSTODY RECORD

Laboratory: CompuChem Environmental Corp., Liberty Analytical 501 Madison Ave. Cary, NC 27513 (800) 833 5097 Fax (919) 379-4050 Attn: Cathy Dover

2-13-14

Client:	Watauga County, NC	**Consultant:**	Draper Aden Associates	**Sample Site:**	Watauga County Landfill
Attn:	Mr. J.V. Potter	**Attn:**	Janet C. Frazier	**Location:**	Watauga County, NC
Address:	842 West King Street?/Courthouse, Suite 1 Boone, NC 28607	**Address:**	2206 South Main Street Blacksburg, Virginia 24060	**Event:**	2014 - 1st Semiannual Assess. Monitoring Event
Phone:	(828) 264-5305	**Phone:**	(540) 552-0444	**DAA JN:**	6520-39
Fax:	0	**Fax:**	(540) 552-0291	**Lab JN:**	
Fax:	0				

Project Specific (PS) or Batch (B) QC
Sample Collection for Project Complete? *YES*

Carrier: _____
Tracking Number: _____

Box 1: Matrix
SW Surface Water — T Trip Blank
GW Groundwater — E Equipment Blank
L Leachate — P Product
S Soil — O Other

Box 2: Preservative
A HCL — E NaOH
B HNO_3 — F ZnAc
C H_2SO_4 — G Other (Specify)
D $Na_2S_2O_3$ — H None

Box 3: Filtered/Unfiltered
F Filtered
U Unfiltered

Box 4: Sample Type
G Grab
C Composite

Box 5: Sample Container Type
P Plastic — V VOA
AG Amber Glass — CG Clear Glass

Invoice
Copy to Consultant: *YES*
Bill: *CLIENT* *OTHER* _____
Preserved and shipped on ice: *YES*

Box 4 - Sample Type					G								
Box 3 - Filtered/Unfiltered					U								
Required pH of Sample					<2								
Box 2 - Preservative					A								
Box 5 - Sample Container Type					3-40ml V								
Sample ID	**Date: 2014**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**8260C - 25mL Purge**								
S-1	3/4	1115	SW	3	X		1403007-01						
S-2	3/4	1135	SW	3	X		-02						
S-3	3/4	1050	SW	3	X		-03						
S-4	3/4	1215	SW	3	X		-04						
S-5	3/4	1155	SW	3	X		-05						
~~Trip Blank~~			TB	~~3~~	~~X~~	dlb	JVR 2-21.2014						

GENERAL NOTES:

1. **Level 4 deliverables with EDD & PDF.**
2. This note confirms use of 8260C -25ml purge (updated from low level SOW-CLP). JVR 2-21.2014

Clients Special Instructions: **Level 4 deliverables w/ EDD & PDF.**

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.3°C Received on Ice ✓ Yes ____ No
Describe problems, if any:
IRGUN: SN0015

Sampler Name (Print): Dale Slaughter	Date: 3/3/14	#1 Relinquished by (Signature): Dale Slaughter	Date: 3/5/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:	
Sampler Signature: Dale Slaughter	Time: 0730	Company Name: DAA	Time: 0900	Company Name:	Time:		
Sampler Name (Print): Tyler Emery	Date: 3/3/14	#1 Received by (Signature): [illegible]	Date: 3/6/14	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG	
Sampler Signature: Tyler Emery	Time: 0730	Company Name: CompuChem	Time: 0943	Company Name:	Time:		

Dle lw 2/17/14

JVR 2/21/2014

JVR 2-13-14

2 X/Z / 6

ANALYTICAL METHODS: 8260C- 25mL Purge ✓ ok JLR 2/21/2014
TYPE METHOD: GCMS
CLASS: VOLATILE

Analyze for all Surface Water samples:

No.	PARAMETER	CAS RN
1	Benzene	71-43-2
2	Chloroethane (ethyl chloride)	75-00-3
3	Dichlorodifluromethane	75-71-8
4	1,1-dichloroethane	75-34-3
5	1,1-dichloroethylene (vinylidene chloride)	75-35-4
6	cis-1,2-dichloroethylene	156-59-2
7	trans-1,2-dichloroethylene	156-60-5
8	Tetrachloroethylene	127-18-4
9	Trichloroethylene	79-01-6
10	Methylene chloride	75-09-2
11	Vinyl chloride	75-01-4
12	1,1,1-trichloroethane	71-55-6
13	Chlorobenzene	108-90-7
14	1,4 – dichlorobenzene	106-46-7
15	1,2 – dichloroethane	107-06-2
16	1,2 – dichloropropane	78-87-5

CATW → This list for

S-1
S-2
S-3
S-4 S-5

Updated: 2/24/2009 – JCF
Updated: 8/19/2013 - KFC

KFC – 2/19/2009
\\draperaden.net\daa\teams\environmental\bbg\databases\watauga\pre-event set up\event parameter lists-core mw's surf & res..doc
11/25/98 3:04 PM

WORK ORDER

Printed: 3/7/2014 9:04:45AM

1403007

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA CO.LF 6520-39/SW 8260B 25ML**	**Project Number:**	**WATAUGA CO.LF 6520-39/SW 8260B 25ML**
SDG:	**1403007** **CASE:**	**Status:**	**Batched**

Report To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540)552-0444
Fax: -

Invoice To:
WATAUGA COUNTY, NC
MR. J.V. POLTER
842 WESTKING STREET/COURTHOUSE, SUITE 1
BOONE, NC 28607
Phone :-
Fax: -

Date Due:	03/26/2014 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	03/06/2014 09:43
Logged In By:	Cathy Dover	Date Logged In:	03/06/2014 13:54

J & B Flags?: **YES**	TICS?: **NO**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**
Metals ND to? **MDL**	Spike Level: **FULL Spike**		

LCS/LCSD FOR QC*VOC 8260B 25 ML LIST=8260WATAUGA.SUB*CLIENT REQUEST: RPT. ALL UNDILUTED AND DILUTED ANALYSES!!

Analysis	Due	TAT	Expires	Received	Comments
1403007-01 S-1 [Water] Sampled 03/04/2014 11:15 Eastern					
VOA-8260B 25ML	03/26/2014 16:00	20	03/18/2014 11:15	03/06/2014 09:43	SubList = VOA - 8260WATAUGA (09-20-13)
1403007-02 S-2 [Water] Sampled 03/04/2014 11:35 Eastern					
VOA-8260B 25ML	03/26/2014 16:00	20	03/18/2014 11:35	03/06/2014 09:43	SubList = VOA - 8260WATAUGA (09-20-13)
1403007-03 S-3 [Water] Sampled 03/04/2014 10:50 Eastern					
VOA-8260B 25ML	03/26/2014 16:00	20	03/18/2014 10:50	03/06/2014 09:43	SubList = VOA - 8260WATAUGA (09-20-13)
1403007-04 S-4 [Water] Sampled 03/04/2014 12:15 Eastern					
VOA-8260B 25ML	03/26/2014 16:00	20	03/18/2014 12:15	03/06/2014 09:43	SubList = VOA - 8260WATAUGA (09-20-13)
1403007-05 S-5 [Water] Sampled 03/04/2014 11:55 Eastern					
VOA-8260B 25ML	03/26/2014 16:00	20	03/18/2014 11:55	03/06/2014 09:43	SubList = VOA - 8260WATAUGA (09-20-13)

C. Sample Preparation and Analysis Holding Time Data

(HOLDING TIME SUMMARY)

Sample collection, receipt, preparation and analysis dates with method holding time requirements.

HOLDING TIME SUMMARY

SW 8260B

Client: DRAPER SDG: 1403007

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
S-1	03/04/14	03/06/14	03/10/14	N/A	14	03/10/14	6.4	14	
S-2	03/04/14	03/06/14	03/10/14	N/A	14	03/10/14	6.4	14	
S-3	03/04/14	03/06/14	03/10/14	N/A	14	03/10/14	6.5	14	
S-4	03/04/14	03/06/14	03/10/14	N/A	14	03/10/14	6.4	14	
S-5	03/04/14	03/06/14	03/10/14	N/A	14	03/10/14	6.5	14	

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D. Surrogate Recovery Results

(SURROGATE STANDARD RECOVERY)

SURROGATE STANDARD RECOVERY

SW 8260B

Client: DRAPER

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

SDG: 1403007 Instrument: 5973hp90

Sequence: 4C10002 Calibration: 4030602

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	Q
Blank (4031006-BLK1) ug/L				
Lab File ID: 4031006-BLK1R90.d	Analyzed: 03/10/14 18:33			
Dibromofluoromethane	5.000	114	65 - 150	
1,2-Dichloroethane-d4	5.000	124	59 - 150	
Toluene-d8	5.000	100	61 - 145	
Bromofluorobenzene	5.000	106	63 - 143	
LCS (4031006-BS1) ug/L				
Lab File ID: 4031006-BS190.d	Analyzed: 03/10/14 19:15			
Dibromofluoromethane	5.000	114	65 - 150	
1,2-Dichloroethane-d4	5.000	125	59 - 150	
Toluene-d8	5.000	94	61 - 145	
Bromofluorobenzene	5.000	97	63 - 143	
LCS Dup (4031006-BSD1) ug/L				
Lab File ID: 4031006-BSD190.d	Analyzed: 03/10/14 19:45			
Dibromofluoromethane	5.000	116	65 - 150	
1,2-Dichloroethane-d4	5.000	129	59 - 150	
Toluene-d8	5.000	97	61 - 145	
Bromofluorobenzene	5.000	99	63 - 143	
S-1 (1403007-01) ug/L				
Lab File ID: 1403007-01R90.d	Analyzed: 03/10/14 20:57			
Dibromofluoromethane	5.000	120	65 - 150	
1,2-Dichloroethane-d4	5.000	129	59 - 150	
Toluene-d8	5.000	102	61 - 145	
Bromofluorobenzene	5.000	106	63 - 143	

Environmental Testing Laboratories

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SURROGATE STANDARD RECOVERY

SW 8260B

Client: DRAPER

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

SDG: 1403007 Instrument: 5973hp90

Sequence: 4C10002 Calibration: 4030602

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	Q
S-2 (1403007-02) ug/L				
Lab File ID: 1403007-02R90.d	Analyzed: 03/10/14 21:28			
Dibromofluoromethane	5.000	123	65 - 150	
1,2-Dichloroethane-d4	5.000	134	59 - 150	
Toluene-d8	5.000	104	61 - 145	
Bromofluorobenzene	5.000	110	63 - 143	
S-3 (1403007-03) ug/L				
Lab File ID: 1403007-03R90.d	Analyzed: 03/10/14 21:58			
Dibromofluoromethane	5.000	124	65 - 150	
1,2-Dichloroethane-d4	5.000	138	59 - 150	
Toluene-d8	5.000	103	61 - 145	
Bromofluorobenzene	5.000	109	63 - 143	
S-4 (1403007-04) ug/L				
Lab File ID: 1403007-04R90.d	Analyzed: 03/10/14 22:28			
Dibromofluoromethane	5.000	128	65 - 150	
1,2-Dichloroethane-d4	5.000	146	59 - 150	
Toluene-d8	5.000	105	61 - 145	
Bromofluorobenzene	5.000	111	63 - 143	
S-5 (1403007-05) ug/L				
Lab File ID: 1403007-05R90.d	Analyzed: 03/10/14 22:59			
Dibromofluoromethane	5.000	127	65 - 150	
1,2-Dichloroethane-d4	5.000	142	59 - 150	
Toluene-d8	5.000	106	61 - 145	
Bromofluorobenzene	5.000	107	63 - 143	

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E. Laboratory Control Sample Results

(LCS/LCS DUPLICATE RECOVERY)

LCS recovery or LCS/LCSD recovery with relative percent difference, and quality control acceptance criteria.

LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER SDG: 1403007 Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Lab ID: 4031006-BS1 Matrix: Water Client ID: VLCSTC Batch: 4031006

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	Q	QC LIMITS REC.
Dichlorodifluoromethane	5.000	4.764	95		50 - 150
Vinyl chloride	5.000	5.574	111		61 - 150
Chloroethane	5.000	6.337	127		54 - 150
1,1-Dichloroethene	5.000	5.138	103		74 - 143
Methylene chloride	5.000	5.080	102		50 - 139
trans-1,2-Dichloroethene	5.000	5.128	103		50 - 137
1,1-Dichloroethane	5.000	5.317	106		59 - 138
cis-1,2-Dichloroethene	5.000	5.142	103		69 - 140
1,1,1-Trichloroethane	5.000	6.033	121		71 - 137
1,2-Dichloroethane	5.000	6.393	128		61 - 150
Benzene	5.000	5.047	101		68 - 138
Trichloroethene	5.000	5.164	103		55 - 150
1,2-Dichloropropane	5.000	5.104	102		67 - 137
Tetrachloroethene	5.000	4.800	96		65 - 137
Chlorobenzene	5.000	4.922	98		68 - 129
1,4-Dichlorobenzene	5.000	4.920	98		69 - 125

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LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER SDG: 1403007 Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Lab ID: 4031006-BSD1 Matrix: Water Client ID: VLCSDTC Batch: 4031006

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS		
					RPD	Q	REC.
Dichlorodifluoromethane	5.000	5.345	107	12	25		50 - 150
Vinyl chloride	5.000	6.222	124	11	25		61 - 150
Chloroethane	5.000	6.411	128	1	25		54 - 150
1,1-Dichloroethene	5.000	5.354	107	4	14		74 - 143
Methylene chloride	5.000	5.110	102	0.6	25		50 - 139
trans-1,2-Dichloroethene	5.000	5.303	106	3	25		50 - 137
1,1-Dichloroethane	5.000	5.435	109	2	25		59 - 138
cis-1,2-Dichloroethene	5.000	5.238	105	2	25		69 - 140
1,1,1-Trichloroethane	5.000	6.133	123	2	25		71 - 137
1,2-Dichloroethane	5.000	6.360	127	0.5	25		61 - 150
Benzene	5.000	5.153	103	2	11		68 - 138
Trichloroethene	5.000	5.176	104	0.2	14		55 - 150
1,2-Dichloropropane	5.000	5.136	103	0.6	25		67 - 137
Tetrachloroethene	5.000	4.879	98	2	25		65 - 137
Chlorobenzene	5.000	5.040	101	2	13		68 - 129
1,4-Dichlorobenzene	5.000	4.955	99	0.7	25		69 - 125

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G. Batch Summary

(PREPARATION BATCH SUMMARY)

Client Sample IDs, cross-referenced with Lab Sample IDs, with sample preparation details.

PREPARATION BATCH SUMMARY

SW 8260B

Client: DRAPER SDG: 1403007 Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Batch: 4031006 Matrix: Water Preparation: EPA 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (mL)	FINAL VOL/WT (mL)
S-1	1403007-01	03/10/14 18:33	25.0	25.0
S-2	1403007-02	03/10/14 18:33	25.0	25.0
S-3	1403007-03	03/10/14 18:33	25.0	25.0
S-4	1403007-04	03/10/14 18:33	25.0	25.0
S-5	1403007-05	03/10/14 18:33	25.0	25.0
VBLKTC	4031006-BLK1	03/10/14 18:33	25.0	25.0
VLCSTC	4031006-BS1	03/10/14 18:33	25.0	25.0
VLCSDTC	4031006-BSD1	03/10/14 18:33	25.0	25.0

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H. Analysis Sequence Summary

(ANALYSIS SEQUENCE SUMMARY)

ANALYSIS SEQUENCE SUMMARY

SW 8260B

Client: DRAPER SDG: 1403007 Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Sequence: 4C05005 Calibration: 4030602 Instrument: 5973hp90

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
BFBSY	4C05005-TUN1	4C05005-TUN190.d	03/05/14 14:00:00
VSTD001SY	4C05005-CAL2	4C05005-CAL290.d	03/05/14 14:24:00
VSTD0.5SY	4C05005-CAL1	4C05005-CAL190.d	03/05/14 14:54:00
VSTD040SY	4C05005-CAL6	4C05005-CAL690.d	03/05/14 15:24:00
VSTD020SY	4C05005-CAL5	4C05005-CAL590.d	03/05/14 15:54:00
VSTD010SY	4C05005-CAL4	4C05005-CAL490.d	03/05/14 16:24:00
VSTD005SY	4C05005-CAL3	4C05005-CAL390.d	03/05/14 16:54:00
VSTD005SZ	4C05005-SCV1	4C05005-SCV190.d	03/05/14 17:55:00

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ANALYSIS SEQUENCE SUMMARY

SW 8260B

Client: DRAPER SDG: 1403007 Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Sequence: 4C10002 Calibration: 4030602 Instrument: 5973hp90

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
BFBTC	4C10002-TUN1	4C10002-TUN190.d	03/10/14 16:43:00
VSTD005TC	4C10002-CCV1	4C10002-CCV190.d	03/10/14 17:09:00
VBLKTC	4031006-BLK1	4031006-BLK1R90.d	03/10/14 18:33:00
VLCSTC	4031006-BS1	4031006-BS190.d	03/10/14 19:15:00
VLCSDTC	4031006-BSD1	4031006-BSD190.d	03/10/14 19:45:00
S-1	1403007-01	1403007-01R90.d	03/10/14 20:57:00
S-2	1403007-02	1403007-02R90.d	03/10/14 21:28:00
S-3	1403007-03	1403007-03R90.d	03/10/14 21:58:00
S-4	1403007-04	1403007-04R90.d	03/10/14 22:28:00
S-5	1403007-05	1403007-05R90.d	03/10/14 22:59:00

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I. Instrument Performance Check

(MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK)

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW 8260B

Laboratory:	COMPUCHEM	SDG:	1403007
Client:	DRAPER	Project:	WATAUGA CO.LF 6520-39/SW 8260B 25ML
Lab File ID:	4C05005-TUN190.d	Injection Date:	03/05/14
Instrument ID:	5973hp90	Injection Time:	14:00
Sequence:	4C05005	Lab Sample ID:	4C05005-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	19.3	PASS
75	30 - 60% of 95	49.8	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.75	PASS
173	Less than 2% of 174	0.378	PASS
174	(Greater than 50% of 95)	82	PASS
175	5 - 9% of 174	7.32	PASS
176	(Greater than 95% but less then 101%)	97.8	PASS
177	5 - 9% of 176	6.72	PASS

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MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW 8260B

Laboratory:	COMPUCHEM	SDG:	1403007
Client:	DRAPER	Project:	WATAUGA CO.LF 6520-39/SW 8260B 25ML
Lab File ID:	4C10002-TUN190.d	Injection Date:	03/10/14
Instrument ID:	5973hp90	Injection Time:	16:43
Sequence:	4C10002	Lab Sample ID:	4C10002-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	19.5	PASS
75	30 - 60% of 95	51.8	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.79	PASS
173	Less than 2% of 174	0.368	PASS
174	(Greater than 50% of 95)	81.6	PASS
175	5 - 9% of 174	6.91	PASS
176	(Greater than 95% but less then 101%)	96.4	PASS
177	5 - 9% of 176	6.53	PASS

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J. Internal Standard Results

(INTERNAL STANDARD AREA AND RT SUMMARY)

INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	COMPUCHEM	SDG:	1403007
Client:	DRAPER	Project:	WATAUGA CO.LF 6520-39/SW 8260B 25ML
Sequence:	4C05005	Instrument:	5973hp90
		Calibration:	4030602

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (4C05005-SCV1)			Lab File ID: 4C05005-SCV190.d			Analyzed: 03/05/14 17:55			
Fluorobenzene	378432	11.357	410907	11.36	92	50 - 200	-0.0030	+/-0.06	
Chlorobenzene-d5	288999	13.842	318307	13.833	91	50 - 200	0.0090	+/-0.06	
1,4-Dichlorobenzene-d4	151360	15.593	167893	15.597	90	50 - 200	-0.0040	+/-0.06	

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INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	COMPUCHEM	SDG:	1403007
Client:	DRAPER	Project:	WATAUGA CO.LF 6520-39/SW 8260B 25ML
Sequence:	4C10002	Instrument:	5973hp90
		Calibration:	4030602

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (4C10002-CCV1)			Lab File ID: 4C10002-CCV190.d			Analyzed: 03/10/14 17:09			
Fluorobenzene	289123	11.357	410907	11.36	70	50 - 200	-0.0030	+/-0.06	
Chlorobenzene-d5	251464	13.842	318307	13.833	79	50 - 200	0.0090	+/-0.06	
1,4-Dichlorobenzene-d4	128064	15.593	167893	15.597	76	50 - 200	-0.0040	+/-0.06	
Blank (4031006-BLK1)			Lab File ID: 4031006-BLK1R90.d			Analyzed: 03/10/14 18:33			
Fluorobenzene	240146	11.361	289123	11.357	83	50 - 200	0.0040	+/-0.06	
Chlorobenzene-d5	193420	13.846	251464	13.842	77	50 - 200	0.0040	+/-0.06	
1,4-Dichlorobenzene-d4	94242	15.597	128064	15.593	74	50 - 200	0.0040	+/-0.06	
LCS (4031006-BS1)			Lab File ID: 4031006-BS190.d			Analyzed: 03/10/14 19:15			
Fluorobenzene	243613	11.358	289123	11.357	84	50 - 200	0.0010	+/-0.06	
Chlorobenzene-d5	211535	13.843	251464	13.842	84	50 - 200	0.0010	+/-0.06	
1,4-Dichlorobenzene-d4	115514	15.594	128064	15.593	90	50 - 200	0.0010	+/-0.06	
LCS Dup (4031006-BSD1)			Lab File ID: 4031006-BSD190.d			Analyzed: 03/10/14 19:45			
Fluorobenzene	243001	11.361	289123	11.357	84	50 - 200	0.0040	+/-0.06	
Chlorobenzene-d5	208349	13.846	251464	13.842	83	50 - 200	0.0040	+/-0.06	
1,4-Dichlorobenzene-d4	114988	15.597	128064	15.593	90	50 - 200	0.0040	+/-0.06	
S-1 (1403007-01)			Lab File ID: 1403007-01R90.d			Analyzed: 03/10/14 20:57			
Fluorobenzene	220519	11.357	289123	11.357	76	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	175759	13.842	251464	13.842	70	50 - 200	0.0000	+/-0.06	
1,4-Dichlorobenzene-d4	85138	15.594	128064	15.593	66	50 - 200	0.0010	+/-0.06	
S-2 (1403007-02)			Lab File ID: 1403007-02R90.d			Analyzed: 03/10/14 21:28			
Fluorobenzene	212806	11.357	289123	11.357	74	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	169605	13.842	251464	13.842	67	50 - 200	0.0000	+/-0.06	
1,4-Dichlorobenzene-d4	83035	15.593	128064	15.593	65	50 - 200	0.0000	+/-0.06	
S-3 (1403007-03)			Lab File ID: 1403007-03R90.d			Analyzed: 03/10/14 21:58			
Fluorobenzene	201572	11.357	289123	11.357	70	50 - 200	0.0000	+/-0.06	
Chlorobenzene-d5	162756	13.842	251464	13.842	65	50 - 200	0.0000	+/-0.06	
1,4-Dichlorobenzene-d4	79543	15.593	128064	15.593	62	50 - 200	0.0000	+/-0.06	

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INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	COMPUCHEM	SDG:	1403007
Client:	DRAPER	Project:	WATAUGA CO.LF 6520-39/SW 8260B 25ML
Sequence:	4C10002	Instrument:	5973hp90
		Calibration:	4030602

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
S-4 (1403007-04)			Lab File ID: 1403007-04R90.d			Analyzed: 03/10/14 22:28			
Fluorobenzene	199106	11.358	289123	11.357	69	50 - 200	0.0010	+/-0.06	
Chlorobenzene-d5	160589	13.843	251464	13.842	64	50 - 200	0.0010	+/-0.06	
1,4-Dichlorobenzene-d4	78681	15.594	128064	15.593	61	50 - 200	0.0010	+/-0.06	
S-5 (1403007-05)			Lab File ID: 1403007-05R90.d			Analyzed: 03/10/14 22:59			
Fluorobenzene	189615	11.358	289123	11.357	66	50 - 200	0.0010	+/-0.06	
Chlorobenzene-d5	150220	13.843	251464	13.842	60	50 - 200	0.0010	+/-0.06	
1,4-Dichlorobenzene-d4	75175	15.594	128064	15.593	59	50 - 200	0.0010	+/-0.06	

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K. Target Compound Results

(ANALYSIS DATA SHEETS)

Analysis Data Sheets (ADS), Tentatively Identified Compounds (TICs), and Surrogate Recovery Results

Sample data shall be arranged in packets with the Analysis Data Sheet, followed by the raw data for volatile or semivolatile samples. These sample packets shall be placed in increasing Client Sample ID number order, considering both letters and numbers.

a. Target Analyte Results (ANALYSIS DATA SHEET)

Tabulated results (identification and quantitation) and Tentatively Identified Compounds (TICs) shall be included.

b. Reconstructed Ion Chromatograms (RICs)

Include for each sample or sample extract, including dilutions and reanalyses. The RIC shall contain the following header information: Client Sample ID Number, date and time of analysis, instrument ID, Lab file ID, and analyst ID.

d. Quantitation Report for target analytes and TICs.

Include a printout of the Extracted Ion Current Profile (EICP) for all manual changes to all compounds, internal standards, and surrogate compounds.

e. Copies of raw spectra and copies of background-subtracted mass spectra of target analytes plus TICs identified in the sample.

- The spectra shall include the following information: Client Sample ID number, Lab file ID, date and time of analysis, and instrument ID.
- The compound name must be clearly marked.

ANALYSIS DATA SHEET

SW 8260B

S-1

Client: DRAPER | SDG 1403007 | Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Matrix: Water | Preparation: EPA 5030B | File ID: 1403007-01R90.d | Sampled: 03/04/14 11:15

Initial/Final: 25mL / 25mL | Lab ID: 1403007-01 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/10/14 18:33

% Moisture: NA | Analyzed: 03/10/14 20:57

Batch: 4031006 | Sequence: 4C10002 | Calibration: 4030602 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
75-09-2	Methylene chloride		0.020	0.50	*U*
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	*U*
75-34-3	1,1-Dichloroethane		0.020	0.50	*U*
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	*U*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
71-43-2	Benzene		0.030	0.50	*U*
79-01-6	Trichloroethene		0.030	0.50	*U*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
127-18-4	Tetrachloroethene		0.060	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.976	120	65 - 150	
1,2-Dichloroethane-d4	5.000	6.474	129	59 - 150	
Toluene-d8	5.000	5.078	102	61 - 145	
Bromofluorobenzene	5.000	5.316	106	63 - 143	

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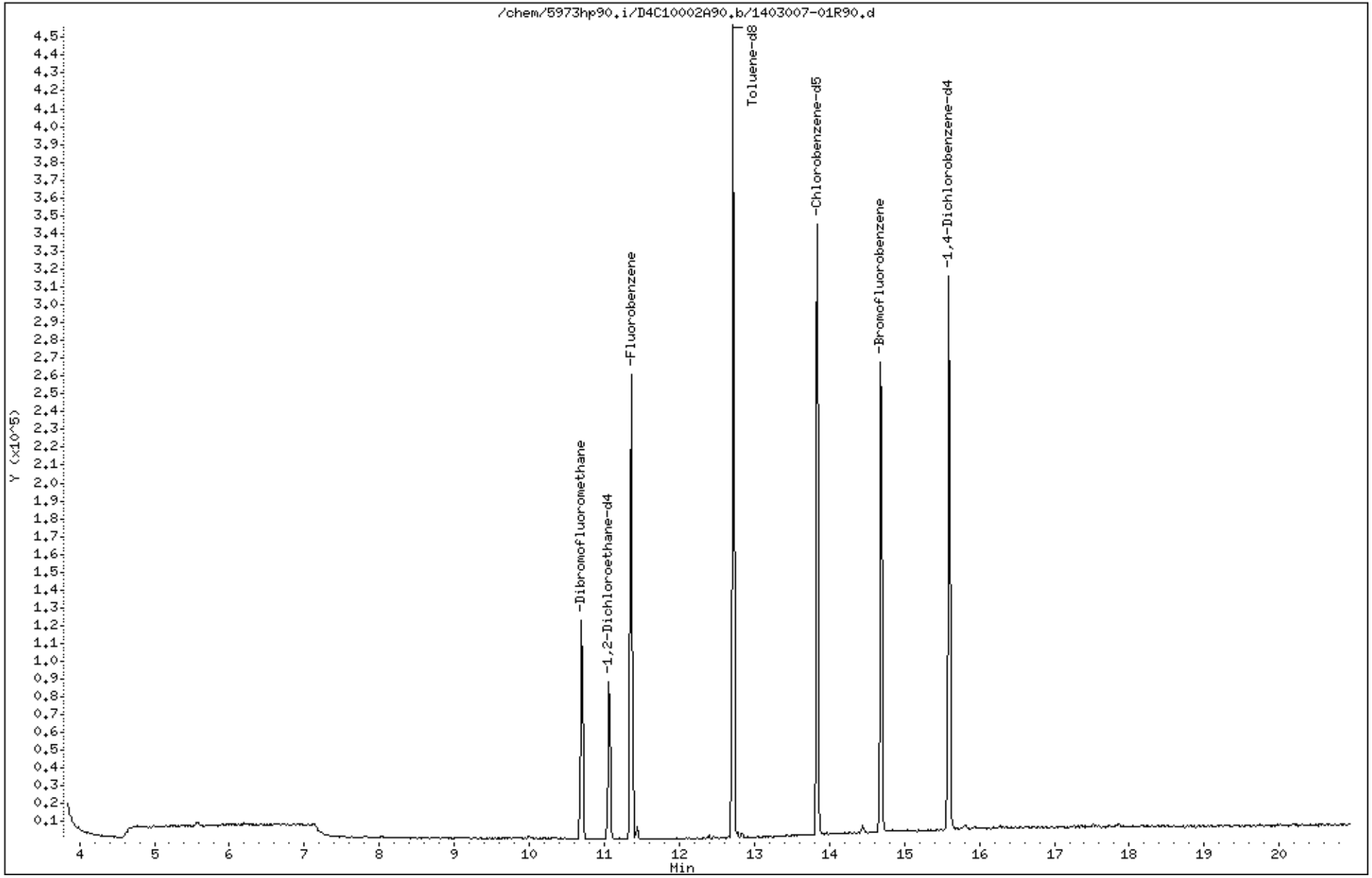
Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-01R90.d
Date : 10-MAR-2014 20:57
Client ID: S-1
Sample Info: 1403007-01:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-01R90.d
Report Date: 11-Mar-2014 09:37

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SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-01R90.d
Lab Smp Id: 1403007-01 Client Smp ID: S-1
Inj Date : 10-MAR-2014 20:57
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-01:JAO
Misc Info : S-1
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	11.357	11.360	(1.000)	220519	125.000	
* 2 Chlorobenzene-d5	117	13.842	13.833	(1.000)	175759	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.594	15.596	(1.000)	85138	125.000	
$ 4 Dibromofluoromethane	113	10.695	10.698	(0.942)	74579	149.401	5.97605
$ 5 1,2-Dichloroethane-d4	65	11.062	11.064	(0.974)	75743	161.862	6.47448
$ 6 Toluene-d8	98	12.718	12.721	(0.919)	267966	126.948	5.07792
$ 7 Bromofluorobenzene	95	14.682	14.685	(0.942)	96239	132.904	5.31616
8 Dichlorodifluoromethane	85	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
25 Methylene Chloride	84	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-01R90.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	Compound Not Detected.					
51 1,2-Dichloropropane	63	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-01R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-01R90.d
Lab Smp Id: 1403007-01 Client Smp ID: S-1
Inj Date : 10-MAR-2014 20:57
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-01:JAO
Misc Info : S-1
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/11/2014

ANALYSIS DATA SHEET

SW 8260B

S-2

Client: DRAPER | SDG 1403007 | Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Matrix: Water | Preparation: EPA 5030B | File ID: 1403007-02R90.d | Sampled: 03/04/14 11:35

Initial/Final: 25mL / 25mL | Lab ID: 1403007-02 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/10/14 18:33

% Moisture: NA | Analyzed: 03/10/14 21:28

Batch: 4031006 | Sequence: 4C10002 | Calibration: 4030602 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane	0.093	0.030	0.50	*J*
75-01-4	Vinyl chloride		0.070	0.50	*U*
75-00-3	Chloroethane	2.5	0.20	0.50	
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
75-09-2	Methylene chloride		0.020	0.50	*U*
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	*U*
75-34-3	1,1-Dichloroethane	0.40	0.020	0.50	*J*
156-59-2	cis-1,2-Dichloroethene	0.065	0.030	0.50	*J*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
71-43-2	Benzene	0.12	0.030	0.50	*J*
79-01-6	Trichloroethene		0.030	0.50	*U*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
127-18-4	Tetrachloroethene		0.060	0.50	*U*
108-90-7	Chlorobenzene	0.10	0.020	0.50	*J*
106-46-7	1,4-Dichlorobenzene	0.56	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	6.167	123	65 - 150	
1,2-Dichloroethane-d4	5.000	6.706	134	59 - 150	
Toluene-d8	5.000	5.185	104	61 - 145	
Bromofluorobenzene	5.000	5.509	110	63 - 143	

Environmental Testing Laboratories

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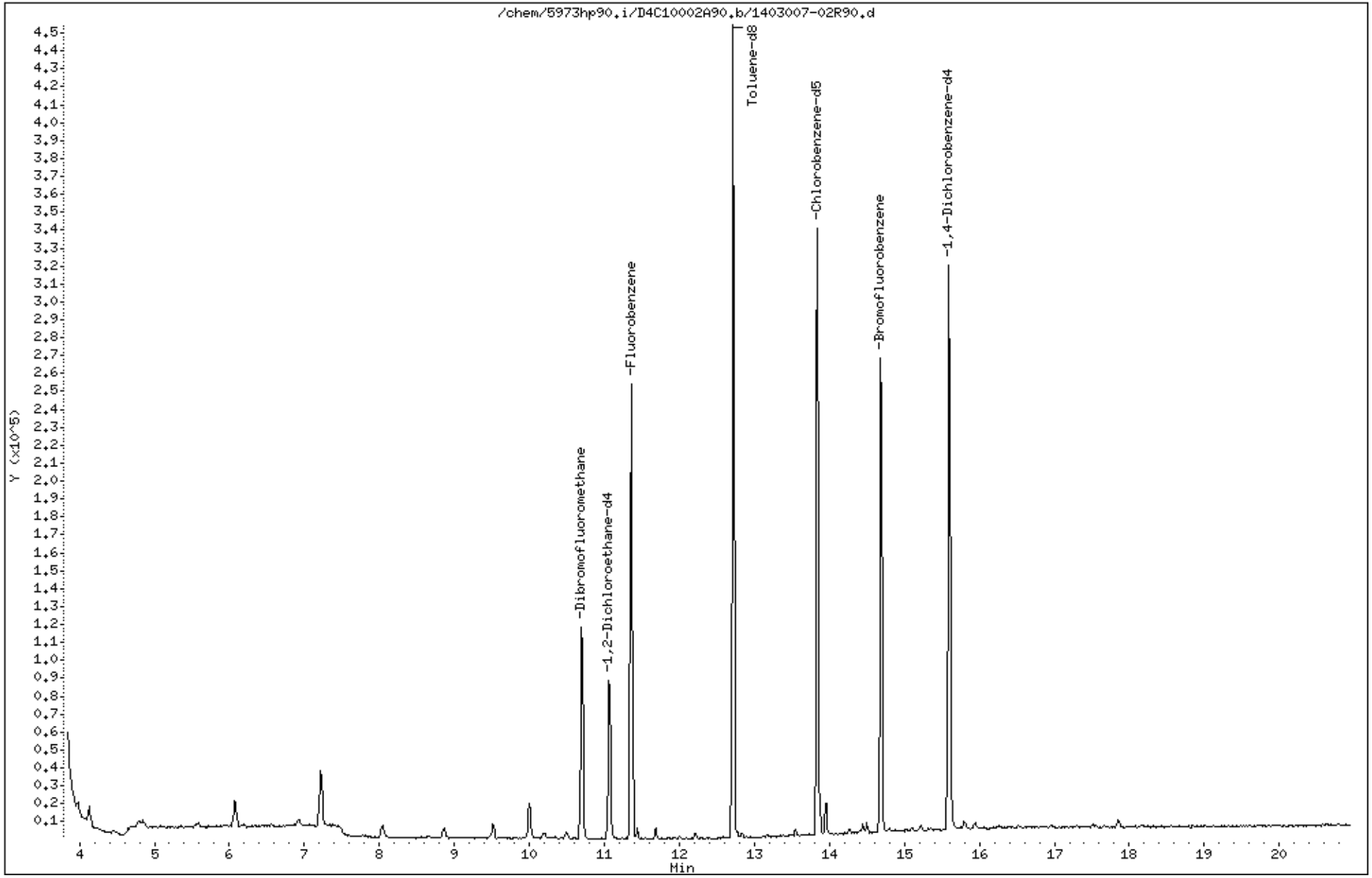
Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d
Date : 10-MAR-2014 21:28
Client ID: S-2
Instrument: 5973hp90.i
Sample Info: 1403007-02:JAO
Purge Volume: 25.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



Robert Hai 3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d
Lab Smp Id: 1403007-02 Client Smp ID: S-2
Inj Date : 10-MAR-2014 21:28
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-02:JAO
Misc Info : S-2
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	11.357	11.360	(1.000)	212806	125.000	
* 2 Chlorobenzene-d5	117	13.842	13.833	(1.000)	169605	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.593	15.596	(1.000)	83035	125.000	
$ 4 Dibromofluoromethane	113	10.695	10.698	(0.942)	74270	154.175	6.16699
$ 5 1,2-Dichloroethane-d4	65	11.061	11.064	(0.974)	75708	167.651	6.70604
$ 6 Toluene-d8	98	12.718	12.721	(0.919)	264056	129.635	5.18539
$ 7 Bromofluorobenzene	95	14.682	14.685	(0.942)	97273	137.734	5.50937
8 Dichlorodifluoromethane	85	4.080	4.071	(0.359)	1723	2.32836	0.0931346(a)
10 Vinyl Chloride	62	Compound Not Detected.					
12 Chloroethane	64	6.080	6.071	(0.535)	18587	61.7332	2.46933
17 1,1-Dichloroethene	96	Compound Not Detected.					
25 Methylene Chloride	84	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	9.511	9.514	(0.837)	9707	9.91830	0.396732(a)
36 cis-1,2-Dichloroethene	96	10.210	10.212	(0.899)	833	1.62940	0.0651758(a)
42 1,1,1-Trichloroethane	97	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
47 Benzene	78	11.085	11.088	(0.976)	6203	3.12029	0.124812(a)
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	Compound Not Detected.					
51 1,2-Dichloropropane	63	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
69 Chlorobenzene	112	13.866	13.857	(1.002)	3690	2.57144	0.102858(a)
93 1,4-Dichlorobenzene	146	15.617	15.620	(1.002)	15864	14.0085	0.560338

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d
Lab Smp Id: 1403007-02 Client Smp ID: S-2
Inj Date : 10-MAR-2014 21:28
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-02:JAO
Misc Info : S-2
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d

Date : 10-MAR-2014 21:28

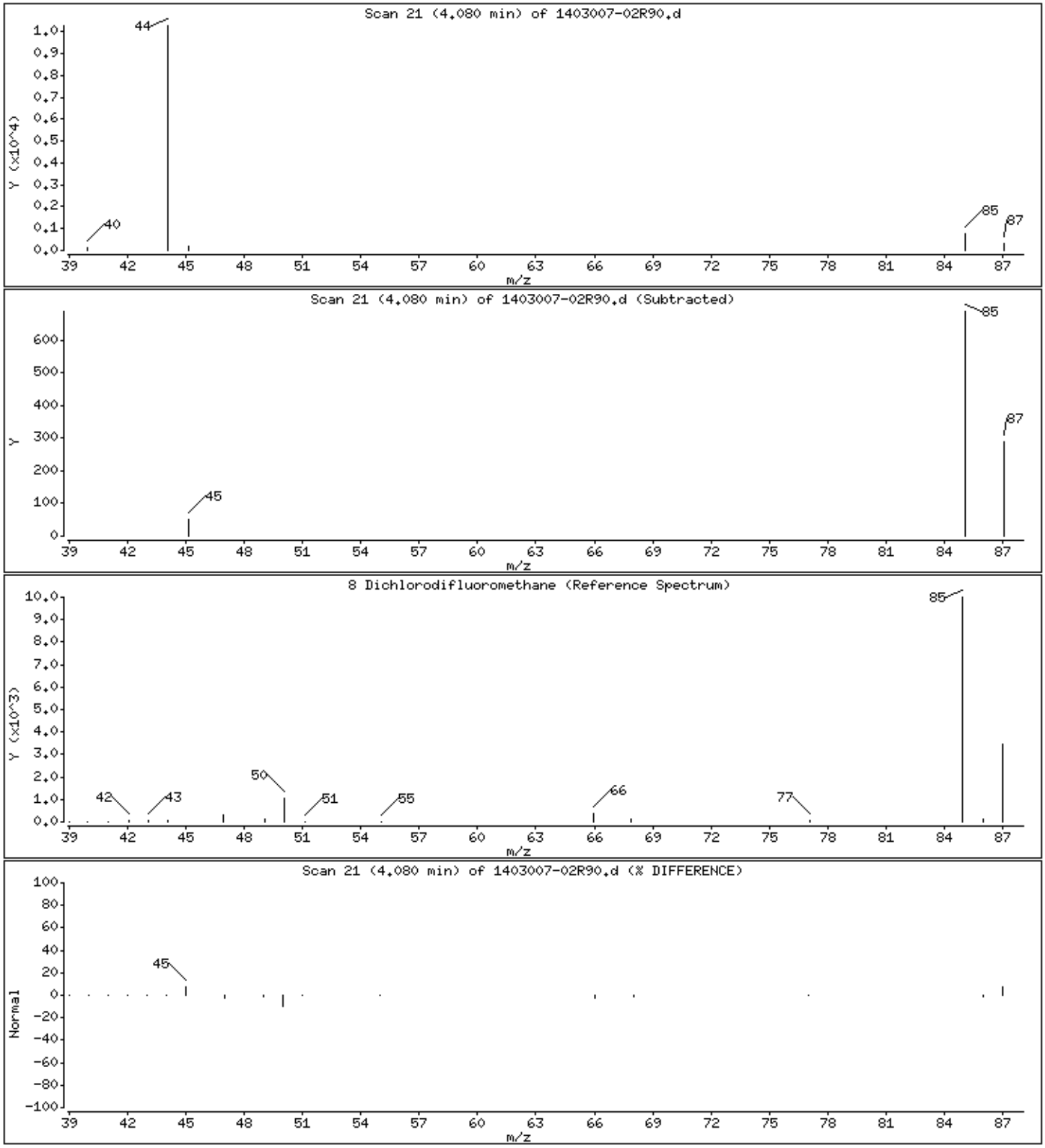
Client ID: S-2 | Instrument: 5973hp90.i

Sample Info: 1403007-02:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

8 Dichlorodifluoromethane | Concentration: 0.0931346 ug/L



3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d

Date : 10-MAR-2014 21:28

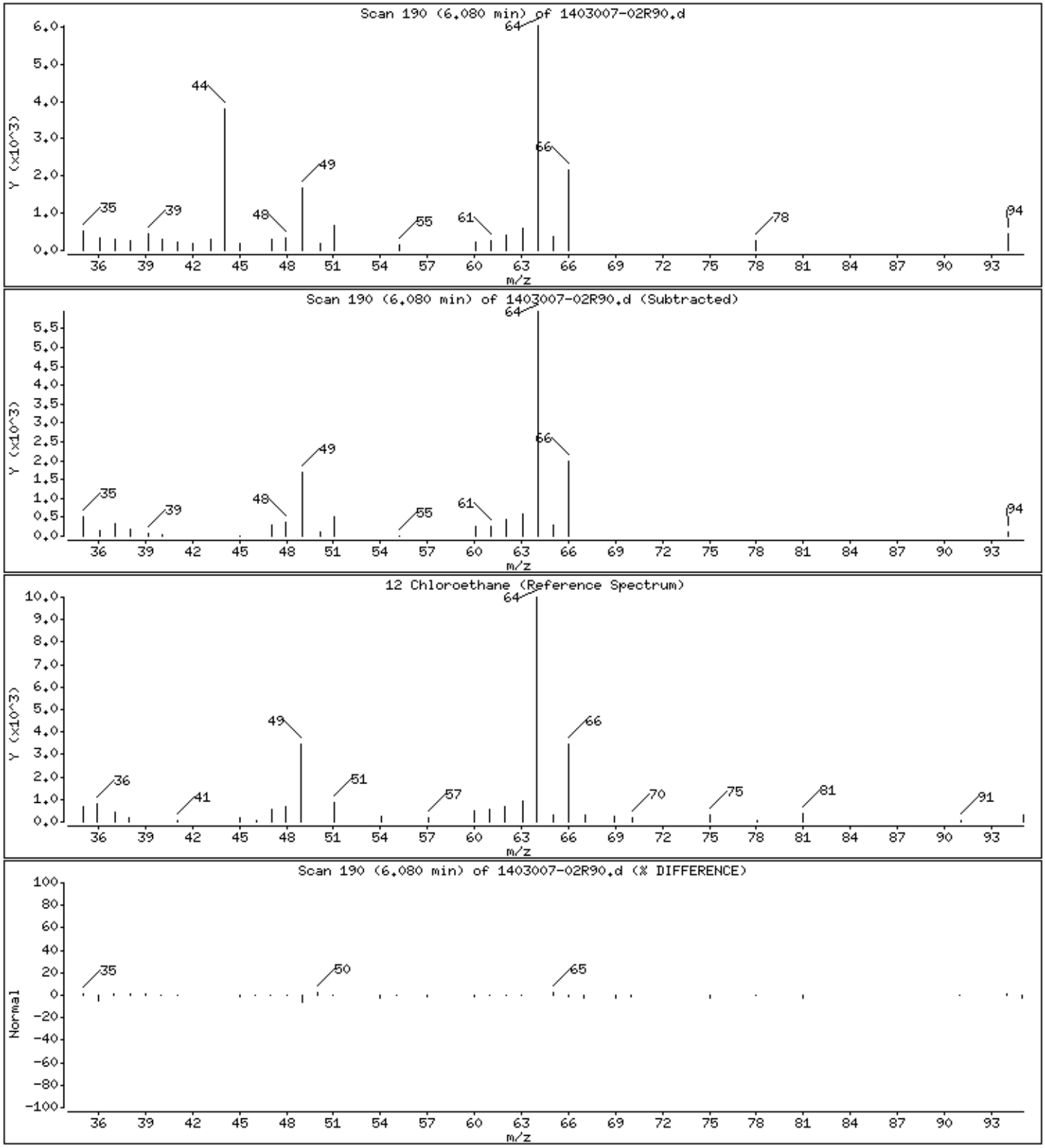
Client ID: S-2 | Instrument: 5973hp90.i

Sample Info: 1403007-02:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

12 Chloroethane | Concentration: 2.46933 ug/L



3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d

Date : 10-MAR-2014 21:28

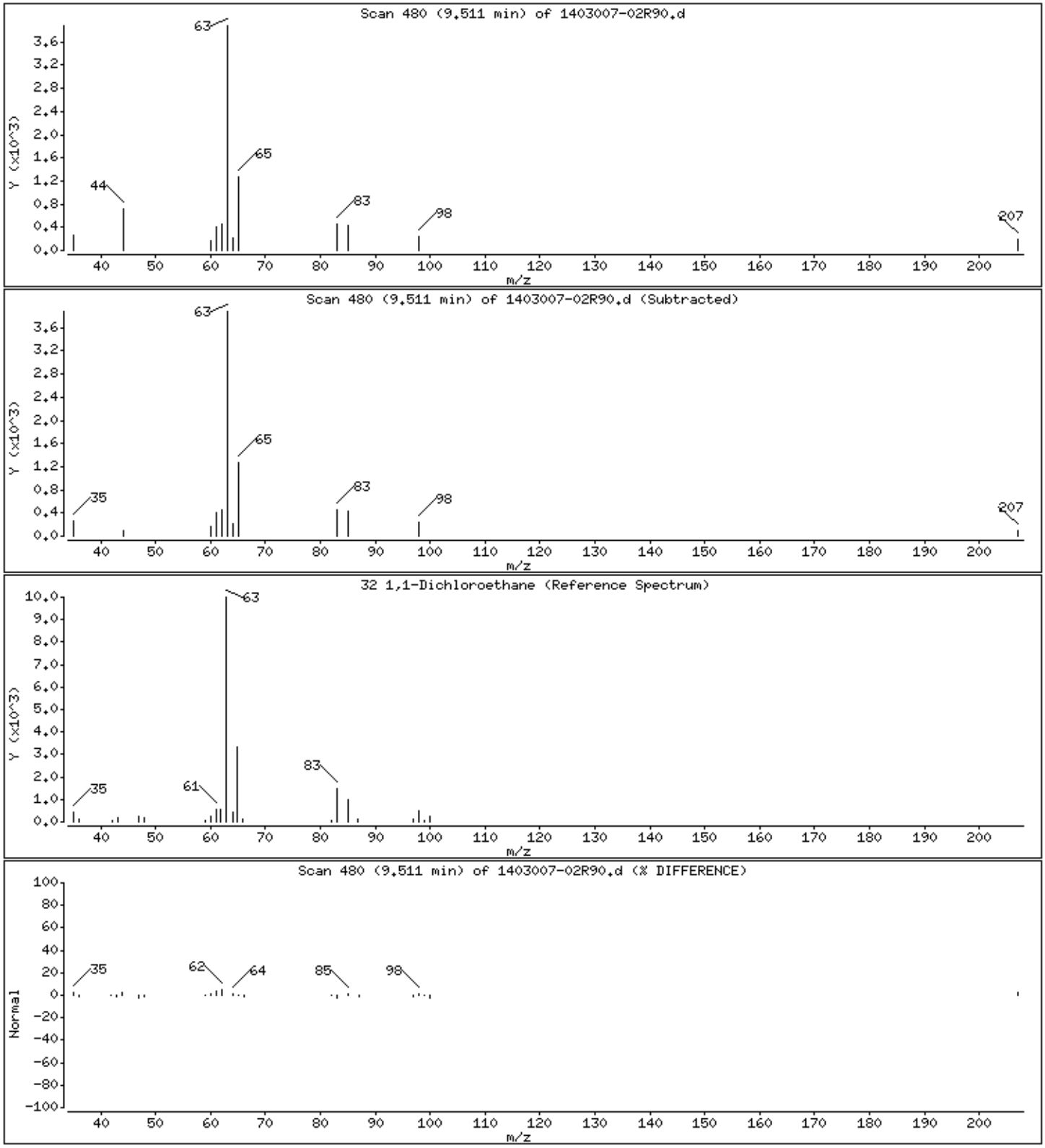
Client ID: S-2 | Instrument: 5973hp90.i

Sample Info: 1403007-02:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

32 1,1-Dichloroethane | Concentration: 0.396732 ug/L



3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d

Date : 10-MAR-2014 21:28

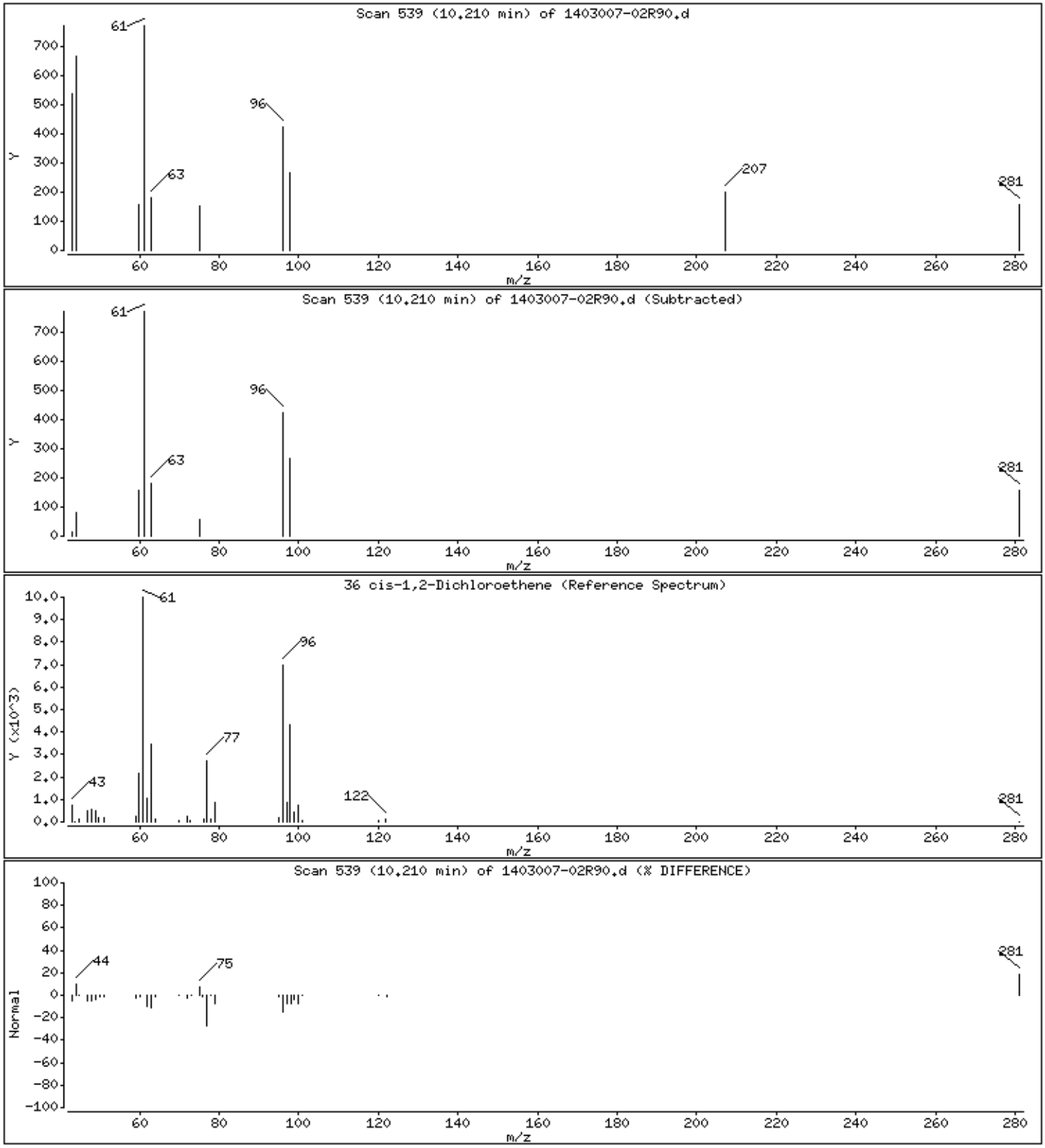
Client ID: S-2 | Instrument: 5973hp90.i

Sample Info: 1403007-02:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

36 cis-1,2-Dichloroethene | Concentration: 0.0651758 ug/L



3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d

Date : 10-MAR-2014 21:28

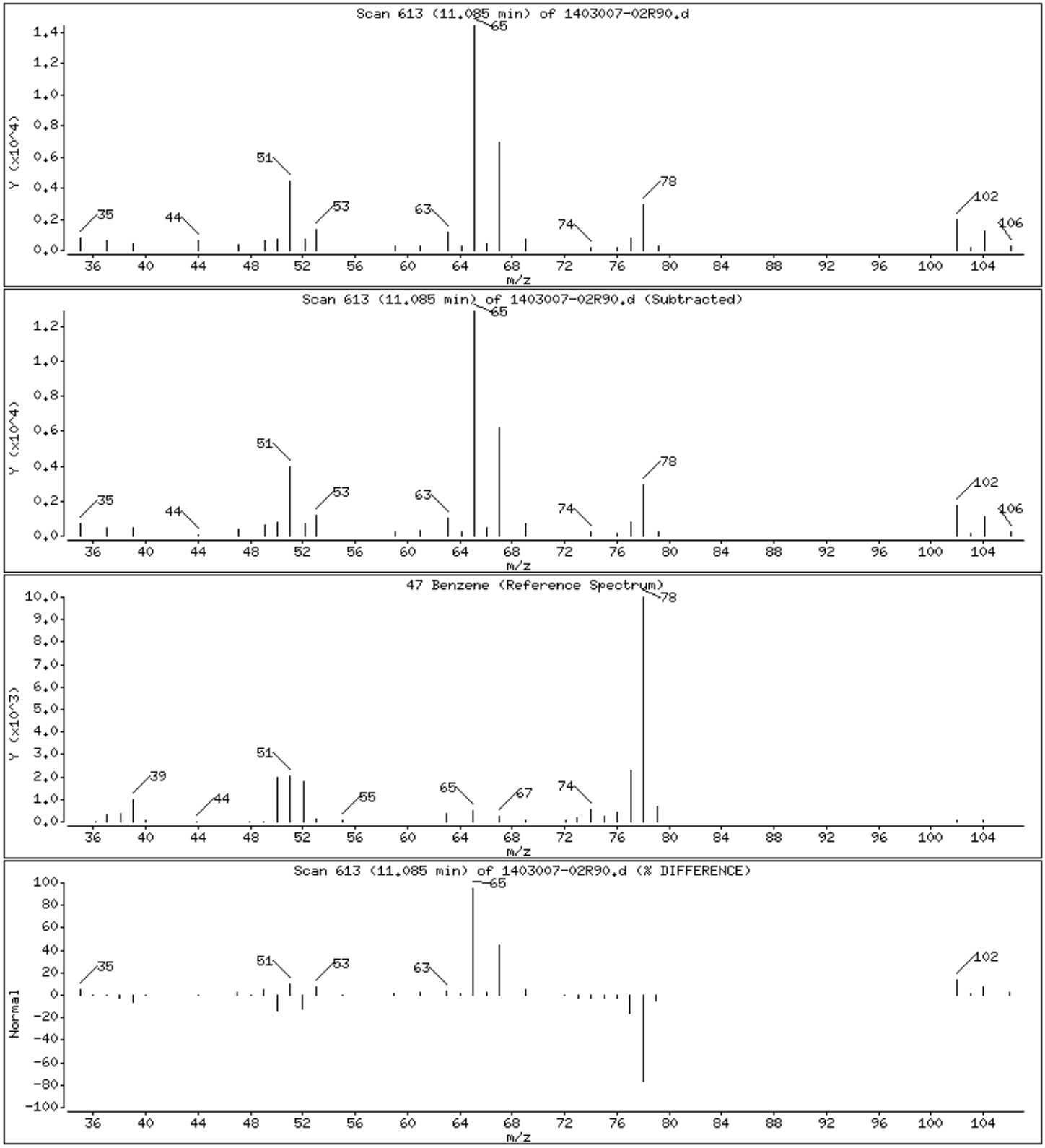
Client ID: S-2 | Instrument: 5973hp90.i

Sample Info: 1403007-02:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

47 Benzene | Concentration: 0.124812 ug/L



3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d

Date : 10-MAR-2014 21:28

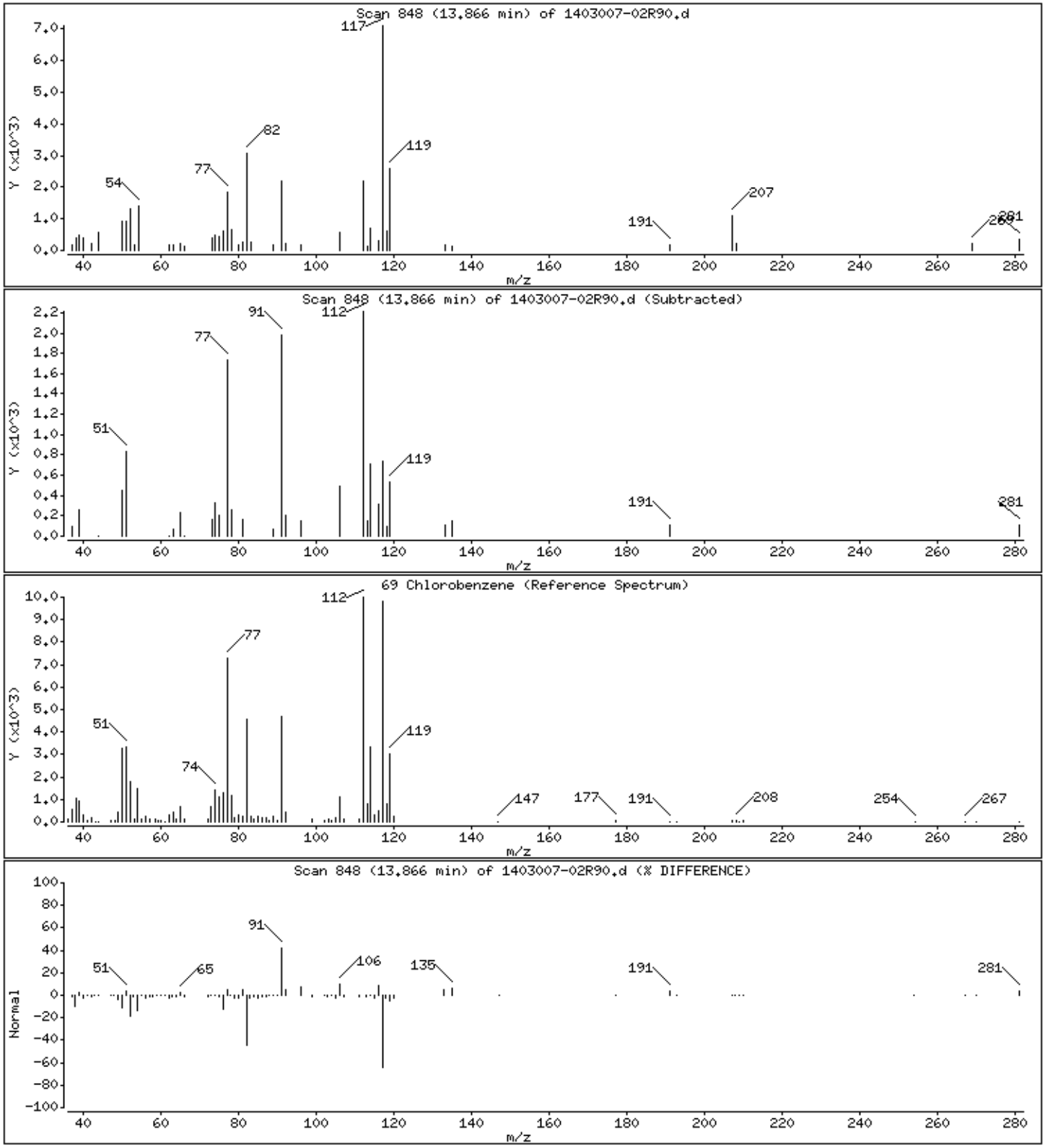
Client ID: S-2 | Instrument: 5973hp90.i

Sample Info: 1403007-02:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

69 Chlorobenzene | Concentration: 0.102858 ug/L



3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-02R90.d

Date : 10-MAR-2014 21:28

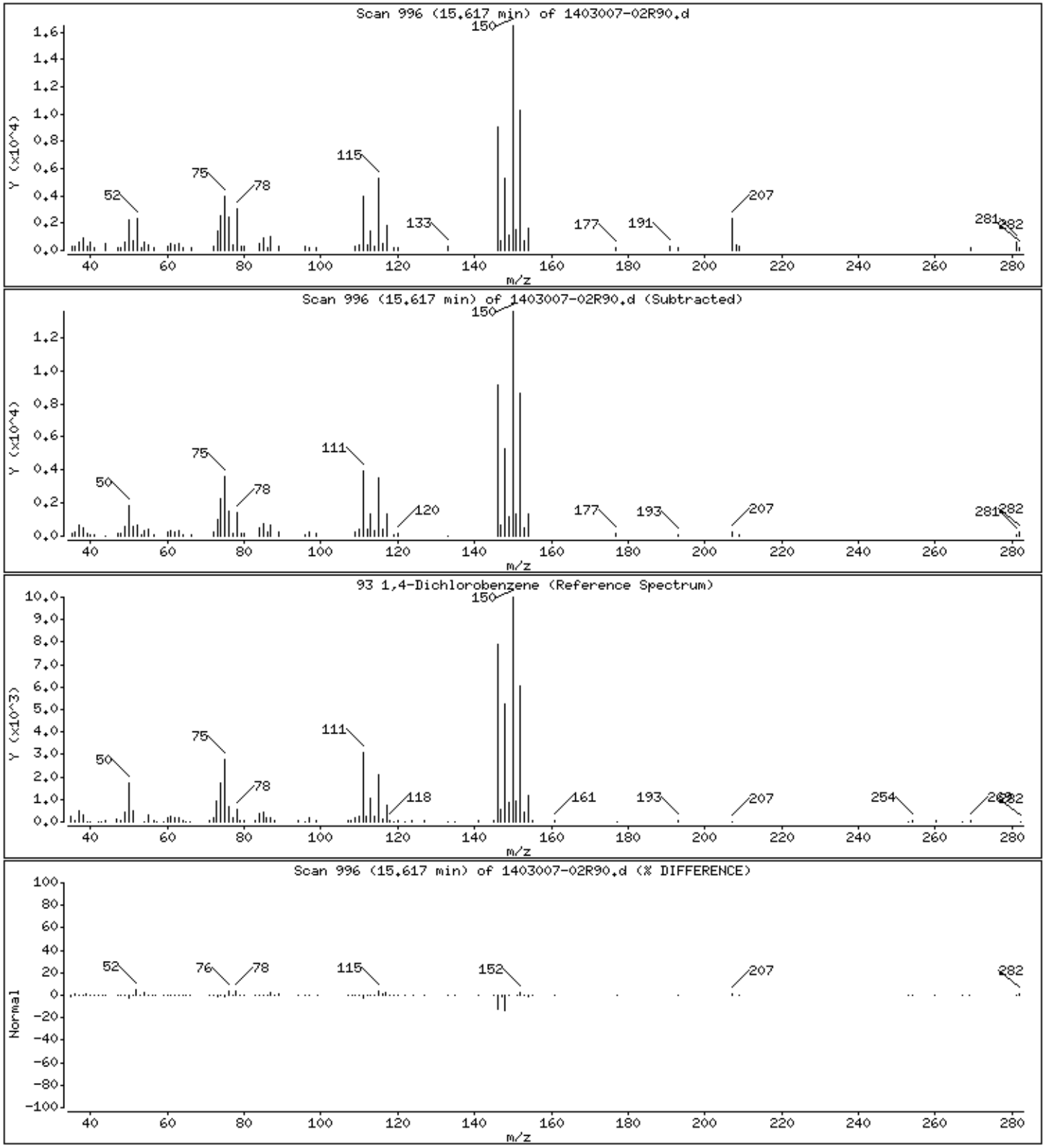
Client ID: S-2 | Instrument: 5973hp90.i

Sample Info: 1403007-02:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

93 1,4-Dichlorobenzene | Concentration: 0.560338 ug/L



3/11/2014

ANALYSIS DATA SHEET

SW 8260B

S-3

Client: DRAPER | SDG 1403007 | Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Matrix: Water | Preparation: EPA 5030B | File ID: 1403007-03R90.d | Sampled: 03/04/14 10:50

Initial/Final: 25mL / 25mL | Lab ID: 1403007-03 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/10/14 18:33

% Moisture: NA | Analyzed: 03/10/14 21:58

Batch: 4031006 | Sequence: 4C10002 | Calibration: 4030602 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
75-09-2	Methylene chloride		0.020	0.50	*U*
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	*U*
75-34-3	1,1-Dichloroethane		0.020	0.50	*U*
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	*U*
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
71-43-2	Benzene		0.030	0.50	*U*
79-01-6	Trichloroethene		0.030	0.50	*U*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
127-18-4	Tetrachloroethene		0.060	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	6.210	124	65 - 150	
1,2-Dichloroethane-d4	5.000	6.917	138	59 - 150	
Toluene-d8	5.000	5.144	103	61 - 145	
Bromofluorobenzene	5.000	5.474	109	63 - 143	

Environmental Testing Laboratories

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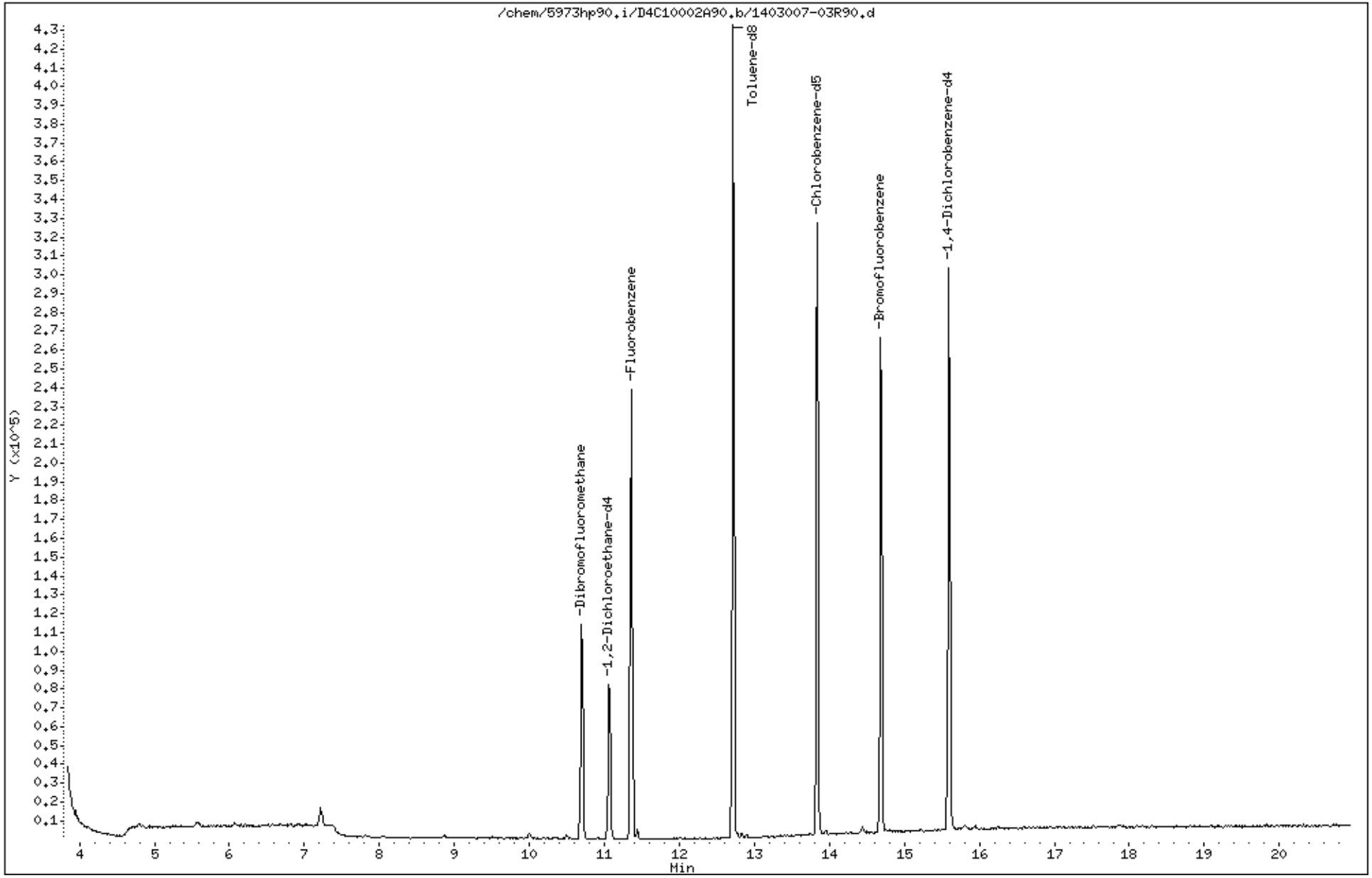
Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-03R90.d
Date : 10-MAR-2014 21:58
Client ID: S-3
Sample Info: 1403007-03:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-03R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-03R90.d
Lab Smp Id: 1403007-03 Client Smp ID: S-3
Inj Date : 10-MAR-2014 21:58
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-03:JAO
Misc Info : S-3
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	11.357	11.360	(1.000)	201572	125.000	
* 2 Chlorobenzene-d5	117	13.842	13.833	(1.000)	162756	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.593	15.596	(1.000)	79543	125.000	
$ 4 Dibromofluoromethane	113	10.694	10.698	(0.942)	70842	155.255	6.21019
$ 5 1,2-Dichloroethane-d4	65	11.061	11.064	(0.974)	73970	172.931	6.91726
$ 6 Toluene-d8	98	12.718	12.721	(0.919)	251349	128.589	5.14356
$ 7 Bromofluorobenzene	95	14.682	14.685	(0.942)	92576	136.838	5.47352
8 Dichlorodifluoromethane	85	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
25 Methylene Chloride	84	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-03R90.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	Compound Not Detected.					
51 1,2-Dichloropropane	63	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-03R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-03R90.d
Lab Smp Id: 1403007-03 Client Smp ID: S-3
Inj Date : 10-MAR-2014 21:58
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-03:JAO
Misc Info : S-3
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/11/2014

ANALYSIS DATA SHEET

SW 8260B

S-4

Client: DRAPER | SDG 1403007 | Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Matrix: Water | Preparation: EPA 5030B | File ID: 1403007-04R90.d | Sampled: 03/04/14 12:15

Initial/Final: 25mL / 25mL | Lab ID: 1403007-04 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/10/14 18:33

% Moisture: NA | Analyzed: 03/10/14 22:28

Batch: 4031006 | Sequence: 4C10002 | Calibration: 4030602 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
75-09-2	Methylene chloride		0.020	0.50	*U*
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	*U*
75-34-3	1,1-Dichloroethane	0.56	0.020	0.50	
156-59-2	cis-1,2-Dichloroethene	0.71	0.030	0.50	
71-55-6	1,1,1-Trichloroethane		0.020	0.50	*U*
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
71-43-2	Benzene		0.030	0.50	*U*
79-01-6	Trichloroethene	0.14	0.030	0.50	*J*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
127-18-4	Tetrachloroethene		0.060	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	6.386	128	65 - 150	
1,2-Dichloroethane-d4	5.000	7.284	146	59 - 150	
Toluene-d8	5.000	5.271	105	61 - 145	
Bromofluorobenzene	5.000	5.544	111	63 - 143	

Environmental Testing Laboratories

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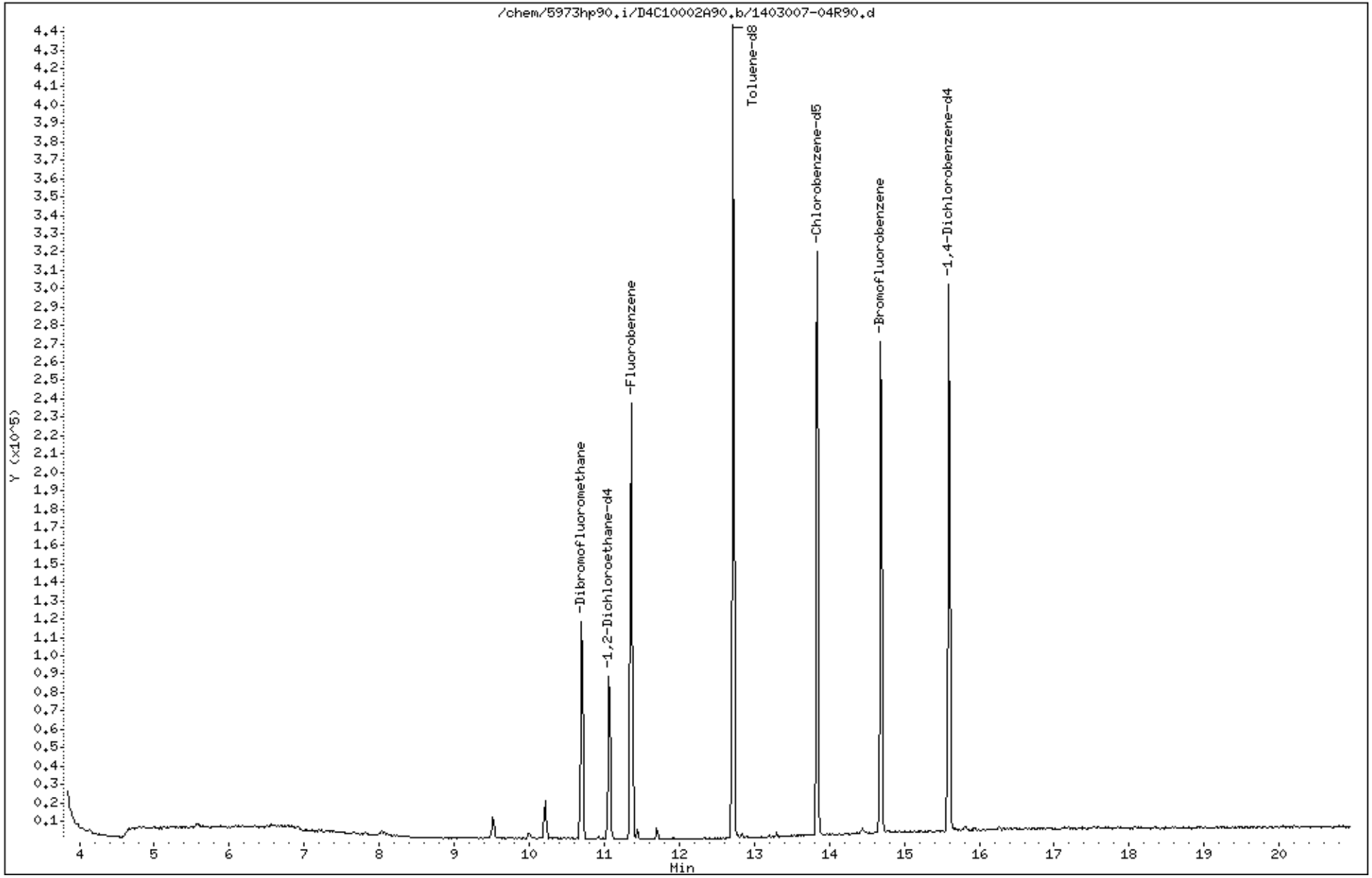
Liberty Analytical Corp.

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-04R90.d
Date : 10-MAR-2014 22:28
Client ID: S-4
Instrument: 5973hp90.i
Sample Info: 1403007-04:JAO
Purge Volume: 25.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



Robert Hai 3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-04R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-04R90.d
Lab Smp Id: 1403007-04 Client Smp ID: S-4
Inj Date : 10-MAR-2014 22:28
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-04:JAO
Misc Info : S-4
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	11.358	11.360	(1.000)	199106	125.000	
* 2 Chlorobenzene-d5	117	13.843	13.833	(1.000)	160589	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.594	15.596	(1.000)	78681	125.000	
$ 4 Dibromofluoromethane	113	10.696	10.698	(0.942)	71959	159.656	6.38623
$ 5 1,2-Dichloroethane-d4	65	11.062	11.064	(0.974)	76944	182.112	7.28448
$ 6 Toluene-d8	98	12.719	12.721	(0.919)	254145	131.774	5.27096
$ 7 Bromofluorobenzene	95	14.683	14.685	(0.942)	92749	138.596	5.54383
8 Dichlorodifluoromethane	85	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
25 Methylene Chloride	84	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	9.512	9.514	(0.837)	12880	14.0659	0.562636
36 cis-1,2-Dichloroethene	96	10.211	10.212	(0.899)	8446	17.6576	0.706305
42 1,1,1-Trichloroethane	97	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-04R90.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	11.701	11.703	(1.030)	1841	3.41464	0.136585(a)
51 1,2-Dichloropropane	63	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-04R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-04R90.d
Lab Smp Id: 1403007-04 Client Smp ID: S-4
Inj Date : 10-MAR-2014 22:28
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-04:JAO
Misc Info : S-4
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-04R90.d

Date : 10-MAR-2014 22:28

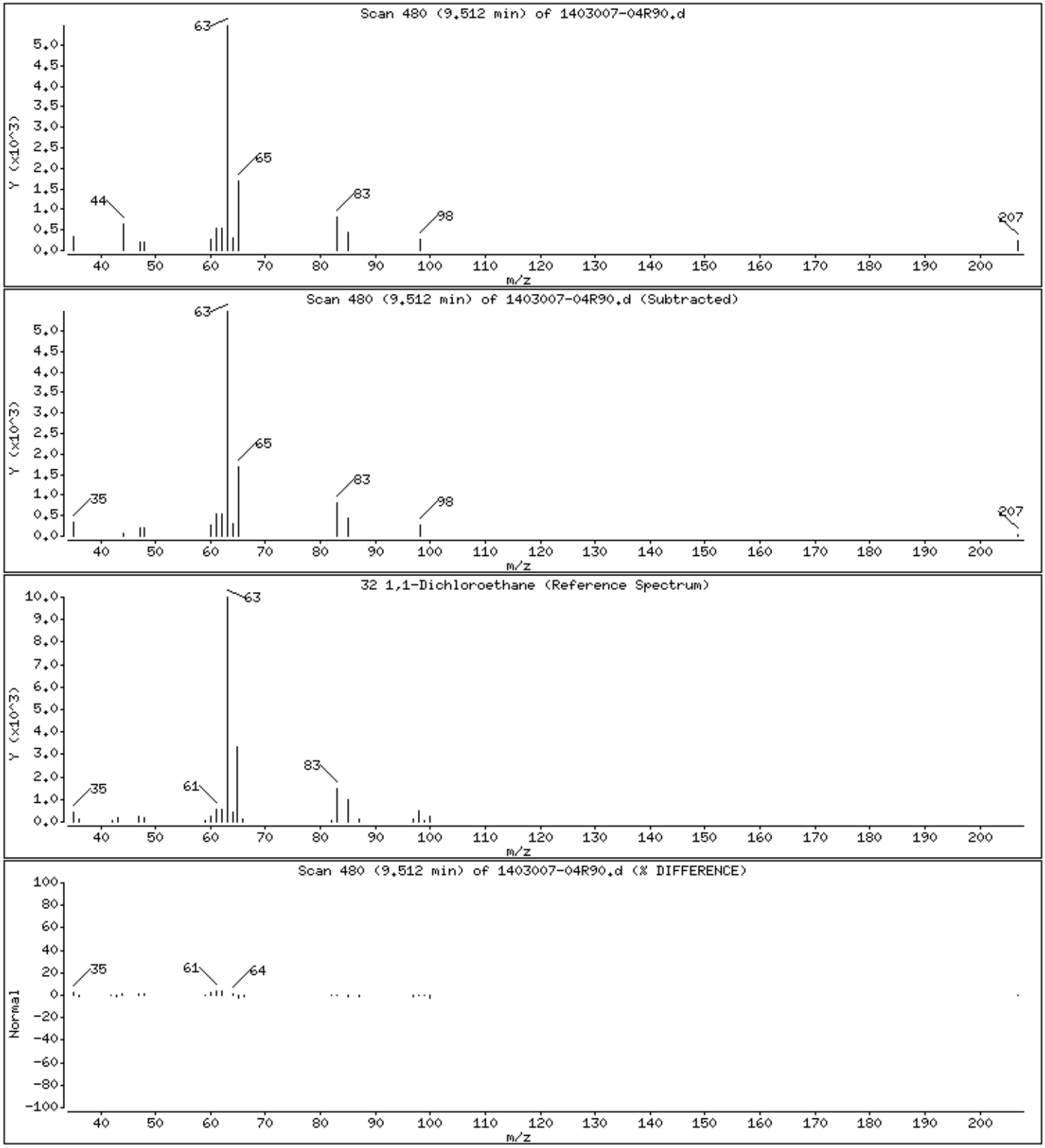
Client ID: S-4 | Instrument: 5973hp90.i

Sample Info: 1403007-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

32 1,1-Dichloroethane | Concentration: 0.562636 ug/L



3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-04R90.d

Date : 10-MAR-2014 22:28

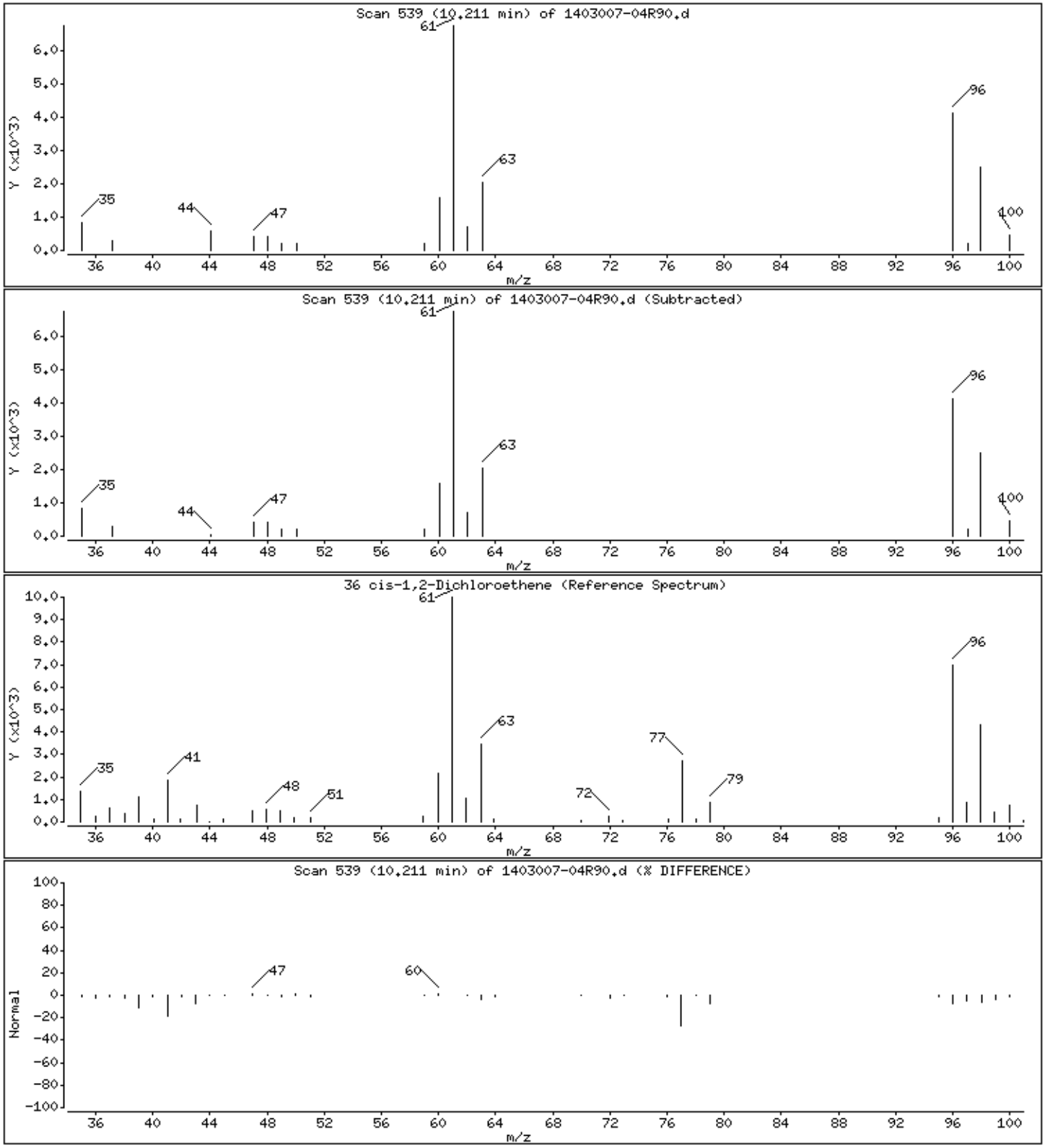
Client ID: S-4 | Instrument: 5973hp90.i

Sample Info: 1403007-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

36 cis-1,2-Dichloroethene | Concentration: 0.706305 ug/L



Robert Hamm 3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-04R90.d

Date : 10-MAR-2014 22:28

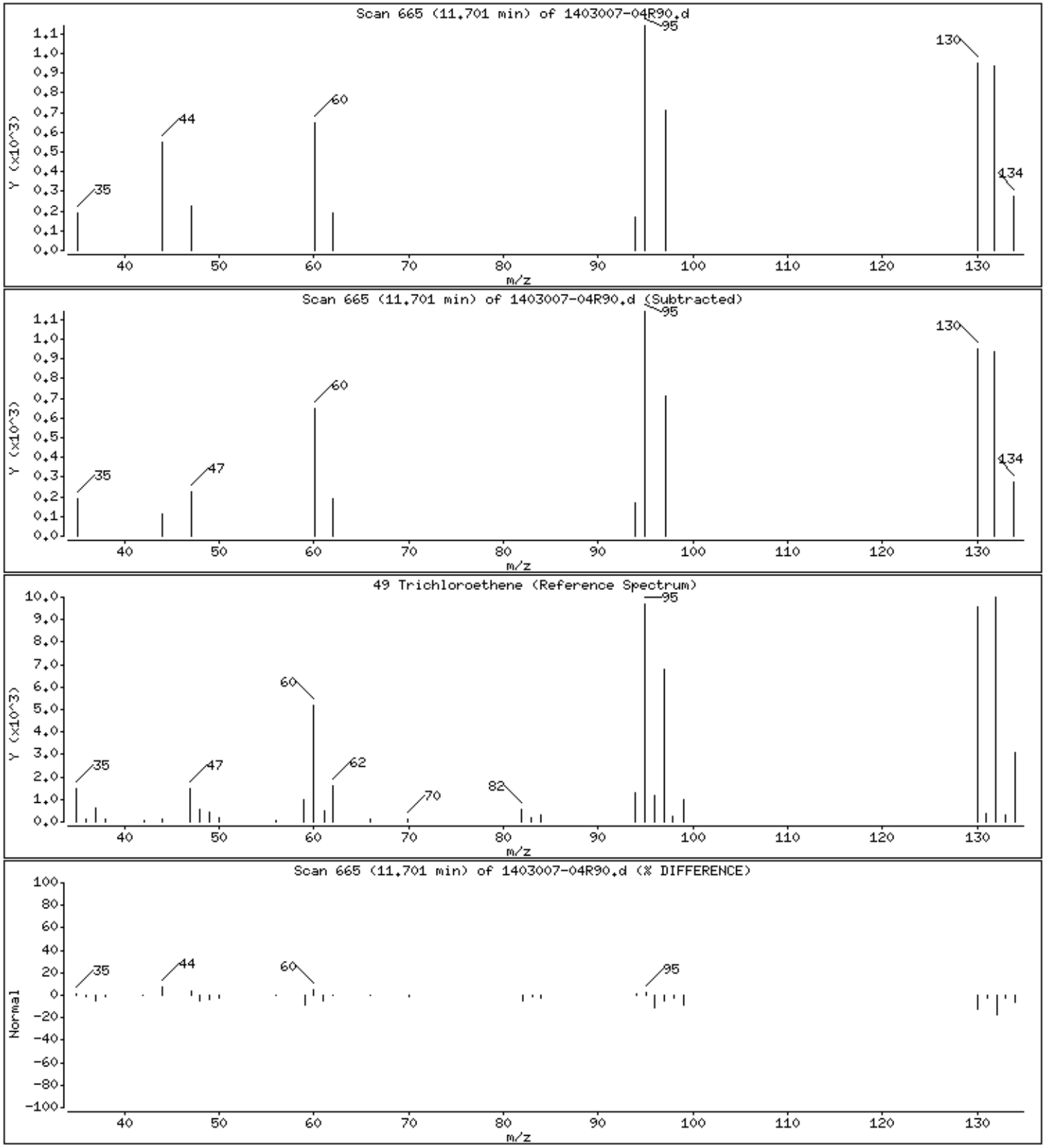
Client ID: S-4 | Instrument: 5973hp90.i

Sample Info: 1403007-04:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

49 Trichloroethene | Concentration: 0.136585 ug/L



3/11/2014

ANALYSIS DATA SHEET

SW 8260B

S-5

Client: DRAPER | SDG 1403007 | Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Matrix: Water | Preparation: EPA 5030B | File ID: 1403007-05R90.d | Sampled: 03/04/14 11:55

Initial/Final: 25mL / 25mL | Lab ID: 1403007-05 | Received: 03/06/14 09:43

Dilution: 1 | pH: 1 | Prepared: 03/10/14 18:33

% Moisture: NA | Analyzed: 03/10/14 22:59

Batch: 4031006 | Sequence: 4C10002 | Calibration: 4030602 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	*U*
75-01-4	Vinyl chloride		0.070	0.50	*U*
75-00-3	Chloroethane		0.20	0.50	*U*
75-35-4	1,1-Dichloroethene		0.040	0.50	*U*
75-09-2	Methylene chloride		0.020	0.50	*U*
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	*U*
75-34-3	1,1-Dichloroethane		0.020	0.50	*U*
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	*U*
71-55-6	1,1,1-Trichloroethane	1.0	0.020	0.50	
107-06-2	1,2-Dichloroethane		0.030	0.50	*U*
71-43-2	Benzene		0.030	0.50	*U*
79-01-6	Trichloroethene		0.030	0.50	*U*
78-87-5	1,2-Dichloropropane		0.12	0.50	*U*
127-18-4	Tetrachloroethene		0.060	0.50	*U*
108-90-7	Chlorobenzene		0.020	0.50	*U*
106-46-7	1,4-Dichlorobenzene		0.030	0.50	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	6.362	127	65 - 150	
1,2-Dichloroethane-d4	5.000	7.077	142	59 - 150	
Toluene-d8	5.000	5.287	106	61 - 145	
Bromofluorobenzene	5.000	5.354	107	63 - 143	

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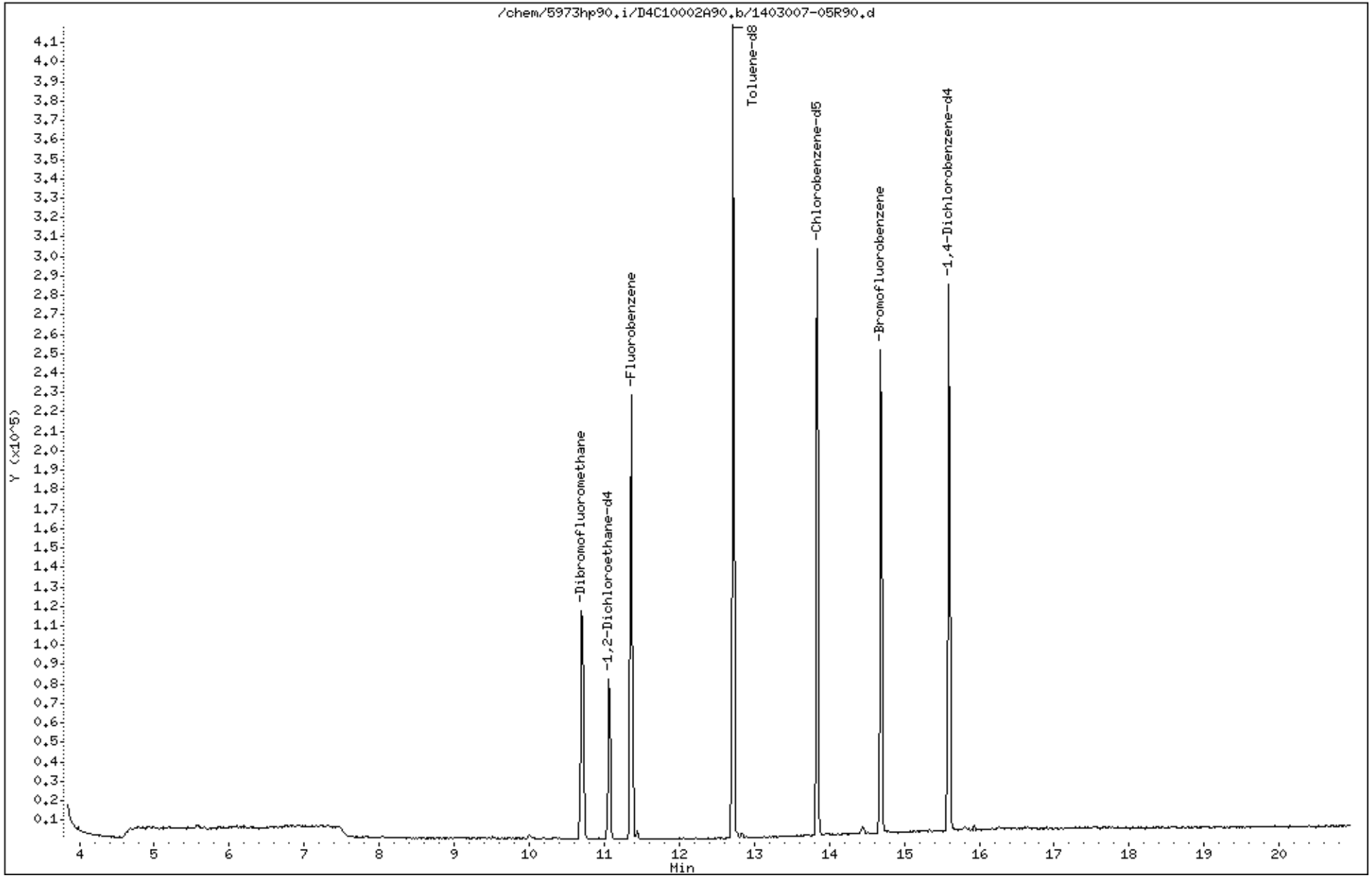
Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-05R90.d
Date : 10-MAR-2014 22:59
Client ID: S-5
Sample Info: 1403007-05:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-05R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-05R90.d
Lab Smp Id: 1403007-05 Client Smp ID: S-5
Inj Date : 10-MAR-2014 22:59
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-05:JAO
Misc Info : S-5
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	11.358	11.360	(1.000)	189615	125.000	
* 2 Chlorobenzene-d5	117	13.843	13.833	(1.000)	150220	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.594	15.596	(1.000)	75175	125.000	
$ 4 Dibromofluoromethane	113	10.696	10.698	(0.942)	68274	159.062	6.36248
$ 5 1,2-Dichloroethane-d4	65	11.062	11.064	(0.974)	71188	176.922	7.07689
$ 6 Toluene-d8	98	12.719	12.721	(0.919)	238443	132.166	5.28665
$ 7 Bromofluorobenzene	95	14.683	14.685	(0.942)	85586	133.857	5.35426
8 Dichlorodifluoromethane	85	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
25 Methylene Chloride	84	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-05R90.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
42 1,1,1-Trichloroethane	97	10.719	10.721	(0.944)	23425	24.8900	0.995600
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	Compound Not Detected.					
51 1,2-Dichloropropane	63	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-05R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/1403007-05R90.d
Lab Smp Id: 1403007-05 Client Smp ID: S-5
Inj Date : 10-MAR-2014 22:59
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 1403007-05:JAO
Misc Info : S-5
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/1403007-05R90.d

Date : 10-MAR-2014 22:59

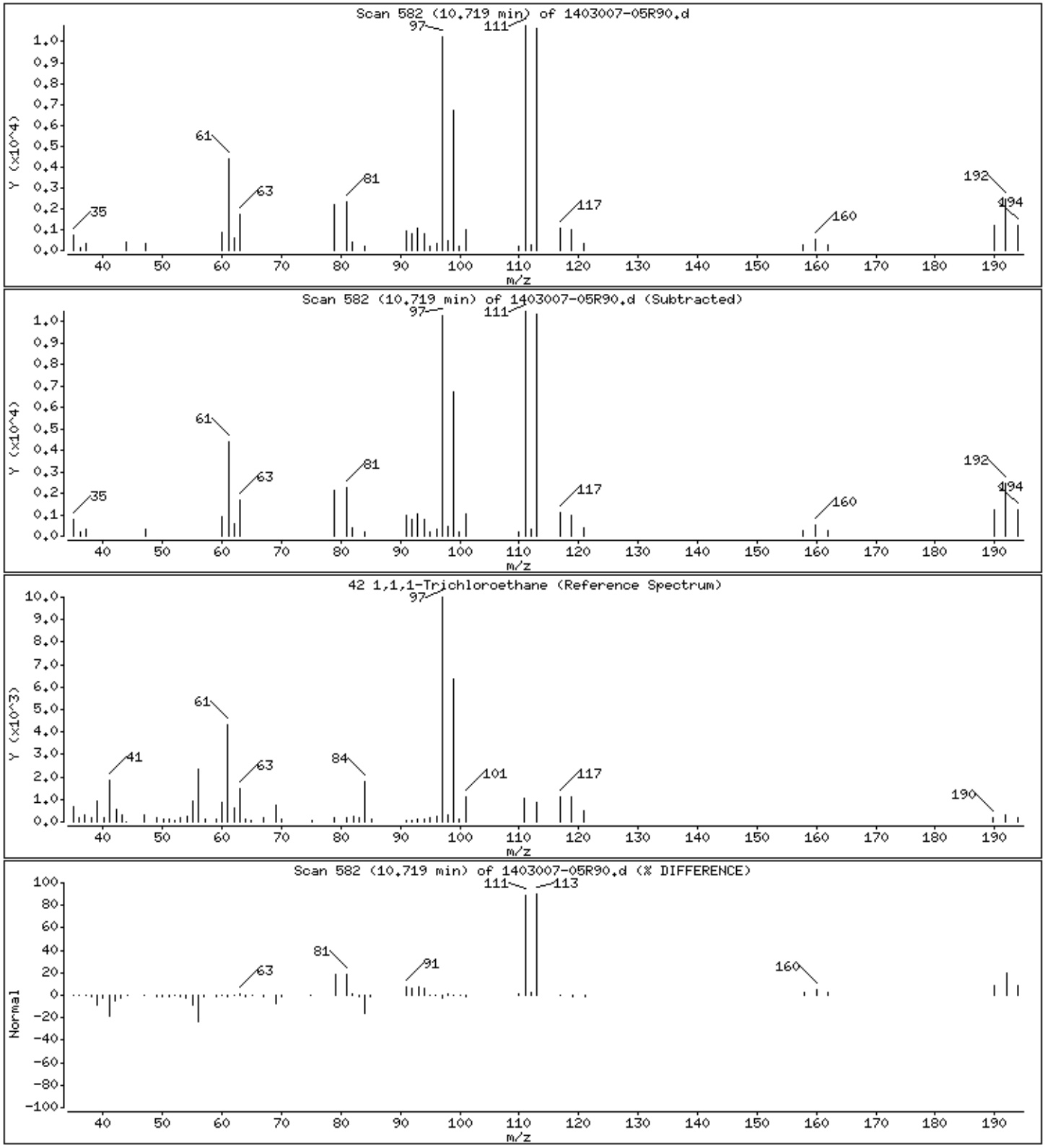
Client ID: S-5 | Instrument: 5973hp90.i

Sample Info: 1403007-05:JAO

Purge Volume: 25.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

42 1,1,1-Trichloroethane | Concentration: 0.995600 ug/L



3/11/2014

L. Initial Calibration Data

(INITIAL CALIBRATION DATA)

If more than one instrument is used, forms shall be arranged in order by instrument. Multiple initial calibrations from the same instrument shall be in chronological order. Within each initial calibration, the standards are in order by level, from lowest to highest.

(1) RICs and Quantitation reports for the initial calibration. Spectra not required.

(2) EICPs displaying each manual integration.

INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER SDG: 1403007

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Calibration: 4030602 Instrument: 5973hp90

Calibration Date: 3/5/2014 2:00:39PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Dichlorodifluoromethane	0.5	0.4678762	1	0.4299001	5	0.4350498	10	0.4327148	20	0.4244963	40	0.4179876
Vinyl chloride	0.5	0.3782339	1	0.3660785	5	0.3674116	10	0.3602545	20	0.356289	40	0.3388044
Chloroethane	0.5	0.1871966	1	0.1856766	5	0.1747914	10	0.1758447	20	0.1716445	40	0.165974
1,1-Dichloroethene	0.5	0.2797067	1	0.2970172	5	0.2737456	10	0.2749893	20	0.2734633	40	0.2586069
Methylene chloride	0.5	0.2882331	1	0.2727442	5	0.250317	10	0.2369597	20	0.2263291	40	0.218707
trans-1,2-Dichloroethene	0.5	0.312276	1	0.3151286	5	0.3060912	10	0.2998634	20	0.2959231	40	0.2839925
1,1-Dichloroethane	0.5	0.5973596	1	0.5994025	5	0.5824481	10	0.5696452	20	0.5566016	40	0.5437961
cis-1,2-Dichloroethene	0.5	0.3104068	1	0.304019	5	0.3015135	10	0.2985009	20	0.2945547	40	0.2927603
1,1,1-Trichloroethane	0.5	0.6140796	1	0.6234071	5	0.6156089	10	0.6139963	20	0.6183667	40	0.6371163
1,2-Dichloroethane	0.5	0.3060284	1	0.2938781	5	0.3246769	10	0.3028705	20	0.294521	40	0.31227
Benzene	0.5	1.169934	1	1.184206	5	1.168367	10	1.169871	20	1.153613	40	1.160231
Trichloroethene	0.5	0.3353715	1	0.3395766	5	0.3315665	10	0.3361391	20	0.3406363	40	0.3475999
1,2-Dichloropropane	0.5	0.2717692	1	0.2682864	5	0.2711684	10	0.2632779	20	0.2571195	40	0.2618461
Tetrachloroethene	0.5	0.3914007	1	0.4021902	5	0.3933058	10	0.393633	20	0.4049708	40	0.3999804
Chlorobenzene	0.5	1.038632	1	1.062713	5	1.068732	10	1.052963	20	1.062576	40	1.05997
1,4-Dichlorobenzene	0.5	1.78938	1	1.743608	5	1.688909	10	1.667479	20	1.686172	40	1.653199
Dibromofluoromethane	0.5	0.2905375	1	0.2870163	5	0.2904867	10	0.2895781	20	0.2716532	40	0.2684921
1,2-Dichloroethane-d4	0.5	0.2851861	1	0.261448	5	0.2782235	10	0.2665683	20	0.2464085	40	0.2536884
Toluene-d8	0.5	1.609554	1	1.563384	5	1.52056	10	1.537872	20	1.446034	40	1.329953
Bromofluorobenzene	0.5	1.173529	1	1.125959	5	1.066042	10	1.045431	20	1.01269	40	0.9553219

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INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER SDG: 1403007

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Calibration: 4030602 Instrument: 5973hp90

Calibration Date: 3/5/2014 2:00:39PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
Dichlorodifluoromethane	0.4346708	3.999568	4.073	0.0975699			CCC (15)	
Vinyl chloride	0.3611787	3.67123	4.889667	7.379819E-02			CCC (30)	
Chloroethane	0.1768546	4.63238	6.070833	1.145396E-02			CCC (15)	
1,1-Dichloroethene	0.2762548	4.492472	7.68	1.873513E-02			CCC (30)	
Methylene chloride	0.2488817	10.90237	8.543833	0.0161415			CCC (15)	
trans-1,2-Dichloroethene	0.3022125	3.802208	8.910667	0.0142756			CCC (15)	
1,1-Dichloroethane	0.5748755	3.883177	9.514334	1.481262E-02			CCC (15)	
cis-1,2-Dichloroethene	0.3002925	2.160946	10.21233	1.082781E-02			CCC (15)	
1,1,1-Trichloroethane	0.6204292	1.435329	10.72117	1.381879E-02			CCC (15)	
1,2-Dichloroethane	0.3057075	3.803875	11.13733	0.0351862			CCC (15)	
Benzene	1.167704	0.8874882	11.08783	1.035774E-02			CCC (15)	
Trichloroethene	0.3384817	1.628718	11.70333	6.799189E-03			CCC (15)	
1,2-Dichloropropane	0.2655779	2.180512	11.93383	4.852093E-02			CCC (30)	
Tetrachloroethene	0.3975802	1.394379	13.204	3.144264E-02			CCC (15)	
Chlorobenzene	1.057598	1.002304	13.85867	0.0302062			CCC (15)	
1,4-Dichlorobenzene	1.704791	3.02702	15.61583	3.463168E-02			CCC (15)	
Dibromofluoromethane	0.2829607	3.574419	10.6975	1.638913E-02			CCC (15)	
1,2-Dichloroethane-d4	0.2652538	5.516609	11.06433	2.059883E-02			CCC (15)	
Toluene-d8	1.501226	6.640926	12.72083	1.843197E-02			CCC (15)	
Bromofluorobenzene	1.063162	7.361155	14.685	1.085343E-02			CCC (15)	

Environmental Testing Laboratories

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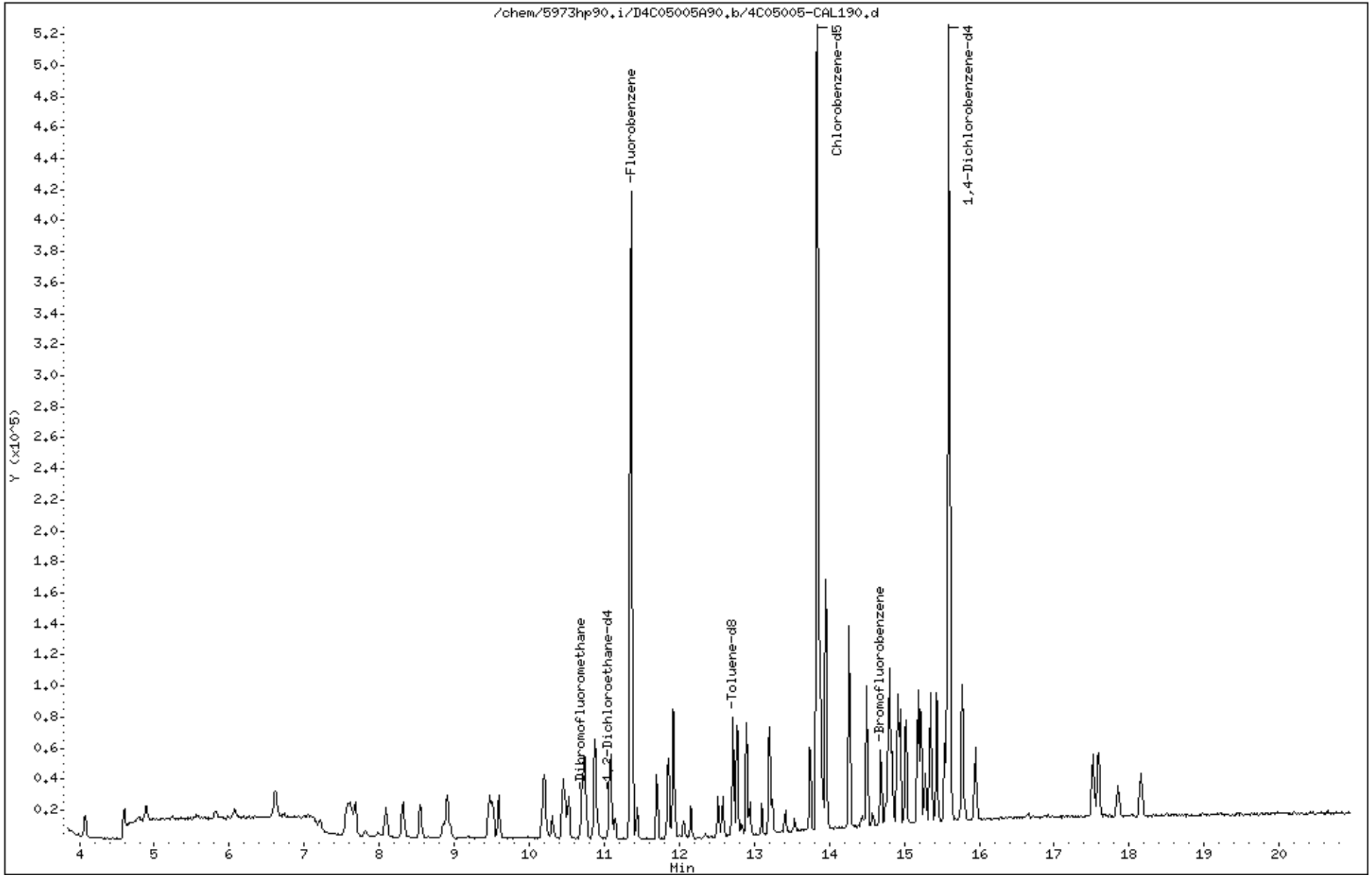
Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL190.d
Date : 05-MAR-2014 14:54
Client ID: VSTD0.5SY
Sample Info: 4C05005-CAL1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL190.d
Report Date: 06-Mar-2014 11:50

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL190.d
Lab Smp Id: 4C05005-CAL1 Client Smp ID: VSTD0.5SY
Inj Date : 05-MAR-2014 14:54
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4C05005-CAL1:JAO
Misc Info : VSTD0.5SY
Comment :
Method : /chem/5973hp90.i/D4C05005A90.b/8260B_25ppbv21.m
Meth Date : 06-Mar-2014 11:50 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 14:54 Cal File: 4C05005-CAL190.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	11.358	11.358	(1.000)	390552	125.000	
* 2 Chlorobenzene-d5	117	13.843	13.843	(1.000)	293280	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.594	15.594	(1.000)	144402	125.000	
$ 4 Dibromofluoromethane	113	10.695	10.695	(0.942)	11347	12.5000	12.5000
$ 5 1,2-Dichloroethane-d4	65	11.062	11.062	(0.974)	11138	12.5000	12.5000
$ 6 Toluene-d8	98	12.719	12.719	(0.919)	47205	12.5000	12.5000
$ 7 Bromofluorobenzene	95	14.683	14.683	(0.942)	16946	12.5000	12.5000
8 Dichlorodifluoromethane	85	4.081	4.081	(0.359)	18273	12.5000	12.5000
9 Chloromethane	50	4.601	4.601	(0.405)	19782	12.5000	12.5000
10 Vinyl Chloride	62	4.897	4.897	(0.431)	14772	12.5000	12.5000
11 Bromomethane	94	5.820	5.820	(0.512)	3860	12.5000	12.5000(M)
12 Chloroethane	64	6.069	6.069	(0.534)	7311	12.5000	12.5000
13 Trichlorofluoromethane	101	6.613	6.613	(0.582)	24359	12.5000	12.5000
14 Acrolein	56	7.559	7.559	(0.666)	1437	125.000	125.000
15 1,1,1-trichloro-2,2,2-trifluo	117	7.571	7.571	(0.667)	7177	12.5000	12.5000

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Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL190.d
Report Date: 06-Mar-2014 11:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.619	7.619	(0.671)	7125	12.5000	12.5000
17 1,1-Dichloroethene	96	7.678	7.678	(0.676)	10924	12.5000	12.5000
18 Acetone	43	7.808	7.808	(0.687)	8082	62.5000	62.5000
19 Iodomethane	142	7.985	7.985	(0.703)	4862	12.5000	12.5000(M)
20 Carbon disulfide	76	8.092	8.092	(0.712)	35894	12.5000	12.5000
22 3-Chloropropene	39	8.317	8.317	(0.732)	14996	12.5000	12.5000
23 Acetonitrile	41	8.317	8.317	(0.732)	19725	12.5000	12.5000
24 Methyl acetate	43	8.329	8.329	(0.733)	4750	12.5000	12.5000
25 Methylene Chloride	84	8.542	8.542	(0.752)	11257	12.5000	12.5000
26 Acrylonitrile	53	8.944	8.944	(0.787)	6507	125.000	125.000
28 trans-1,2-Dichloroethene	96	8.908	8.908	(0.784)	12196	12.5000	12.5000
27 Methyl-tert-butyl ether	73	8.861	8.861	(0.780)	13619	12.5000	12.5000
30 Isopropyl ether	45	9.465	9.465	(0.833)	32005	12.5000	12.5000
31 Vinyl acetate	43	9.476	9.476	(0.834)	18575	12.5000	12.5000(M)
32 1,1-Dichloroethane	63	9.512	9.512	(0.837)	23330	12.5000	12.5000
33 Chloroprene	53	9.595	9.595	(0.845)	19921	12.5000	12.5000
34 2-butanone	43	10.186	10.186	(0.897)	8029	62.5000	62.5000
35 2,2-Dichloropropane	77	10.186	10.186	(0.897)	17961	12.5000	12.5000
36 cis-1,2-Dichloroethene	96	10.210	10.210	(0.899)	12123	12.5000	12.5000
37 Propionitrile	54	10.305	10.305	(0.907)	14697	625.000	625.000
38 Methacrylonitrile	41	10.447	10.447	(0.920)	23819	125.000	125.000
39 Bromochloromethane	128	10.482	10.482	(0.923)	3810	12.5000	12.5000
40 Chloroform	83	10.530	10.530	(0.927)	22940	12.5000	12.5000
42 1,1,1-Trichloroethane	97	10.719	10.719	(0.944)	23983	12.5000	12.5000
43 Cyclohexane	84	10.742	10.742	(0.946)	17884	12.5000	12.5000
44 1,1-dichloropropene	75	10.873	10.873	(0.957)	18427	12.5000	12.5000
45 Isobutyl alcohol	43	10.908	10.908	(0.960)	6247	625.000	625.000
46 Carbon Tetrachloride	117	10.873	10.873	(0.957)	20128	12.5000	12.5000
47 Benzene	78	11.086	11.086	(0.976)	45692	12.5000	12.5000
48 1,2-Dichloroethane	62	11.145	11.145	(0.981)	11952	12.5000	12.5000
49 Trichloroethene	130	11.701	11.701	(1.030)	13098	12.5000	12.5000
50 Methylcyclohexane	83	11.855	11.855	(1.044)	21353	12.5000	12.5000
51 1,2-Dichloropropane	63	11.938	11.938	(1.051)	10614	12.5000	12.5000
52 Methylmethacrylate	69	11.914	11.914	(1.049)	27106	125.000	125.000
53 1,4-dioxane	88	12.009	12.009	(1.057)	1455	625.000	625.000
54 Dibromomethane	174	12.056	12.056	(1.061)	4091	12.5000	12.5000
55 Bromodichloromethane	83	12.151	12.151	(1.070)	13911	12.5000	12.5000
56 2-chloroethyl vinyl ether	63	12.340	12.340	(1.086)	754	25.0000	25.0000(M)
57 cis-1,3-Dichloropropene	75	12.517	12.517	(1.102)	14383	12.5000	12.5000
58 4-Methyl-2-pentanone	43	12.577	12.577	(0.909)	18753	62.5000	62.5000
59 Toluene	92	12.766	12.766	(0.922)	30985	12.5000	12.5000
60 Ethylmethacrylate	69	12.896	12.896	(0.932)	33989	125.000	125.000
61 trans-1,3-Dichloropropene	75	12.943	12.943	(0.935)	11109	12.5000	12.5000
62 1,1,2-Trichloroethane	97	13.097	13.097	(0.946)	5499	12.5000	12.5000
63 2-hexanone	43	13.204	13.204	(0.954)	13378	62.5000	62.5000
64 1,3-Dichloropropane	76	13.239	13.239	(0.956)	10677	12.5000	12.5000
65 Tetrachloroethene	164	13.204	13.204	(0.954)	11479	12.5000	12.5000

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Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL190.d
Report Date: 06-Mar-2014 11:50

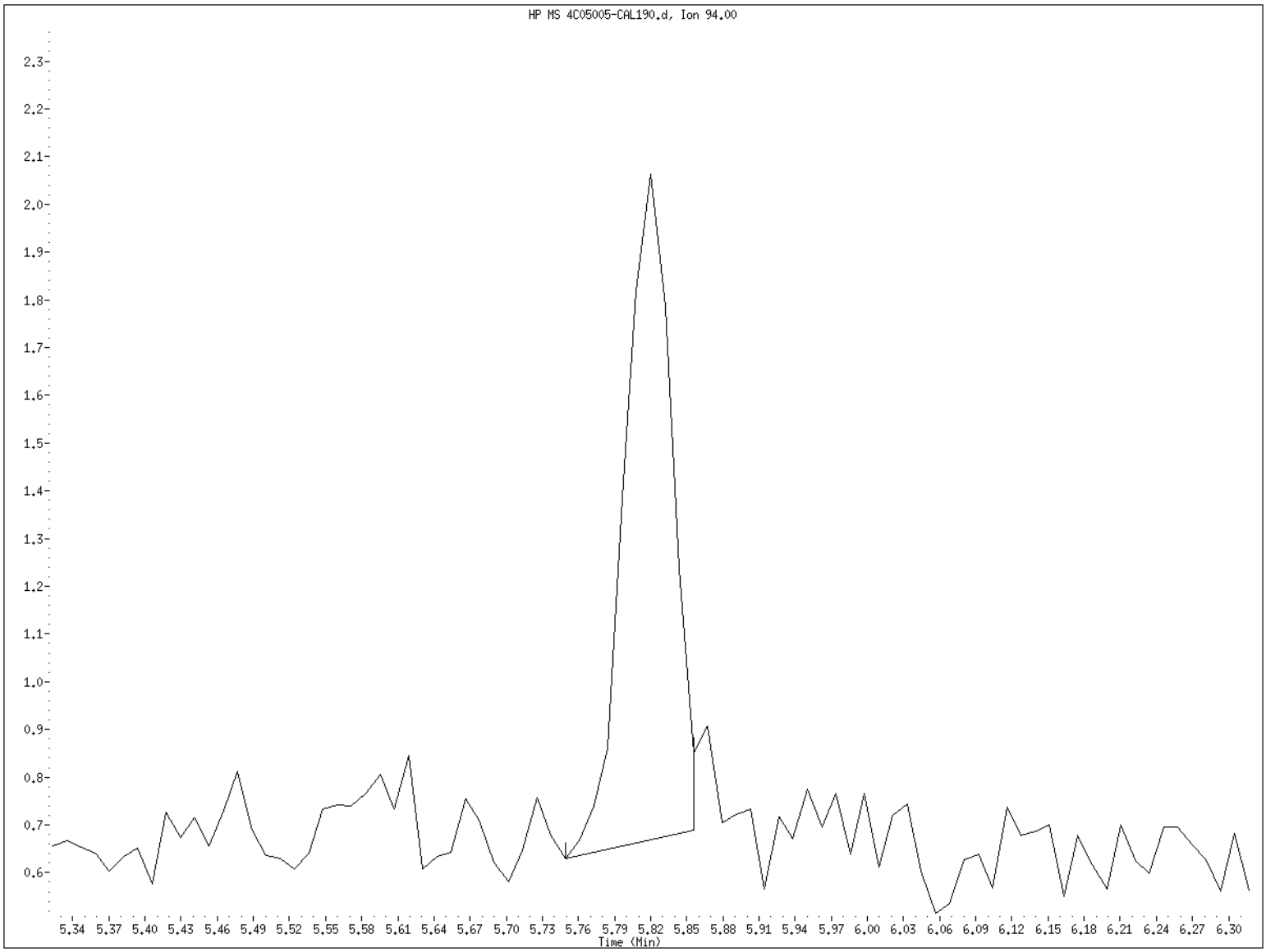
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	13.417	13.417	(0.969)	7180	12.5000	12.5000
67 1,2-Dibromoethane	107	13.535	13.535	(0.978)	5263	12.5000	12.5000
68 1-Chlorohexane	55	13.736	13.736	(0.992)	13811	12.5000	12.5000
69 Chlorobenzene	112	13.866	13.866	(1.002)	30461	12.5000	12.5000
70 Ethylbenzene	106	13.878	13.878	(1.003)	18598	12.5000	12.5000
71 1,1,1,2-Tetrachloroethane	131	13.902	13.902	(1.004)	10255	12.5000	12.5000
72 m,p-Xylene	106	13.949	13.949	(1.008)	45036	25.0000	25.0000
73 m,p-Xylene (part of total)	106	13.949	13.949	(1.008)	45036	25.0000	25.0000
74 o-Xylene	106	14.269	14.269	(1.031)	20321	12.5000	12.5000
75 o-Xylene (part of total)	106	14.269	14.269	(1.031)	20321	12.5000	12.5000
76 Styrene	104	14.269	14.269	(1.031)	30896	12.5000	12.5000
77 Bromoform	173	14.493	14.493	(0.929)	3185	12.5000	12.5000(M)
78 Isopropyl Benzene	105	14.505	14.505	(1.048)	61515	12.5000	12.5000
79 1,1,2,2-Tetrachloroethane	83	14.754	14.754	(0.946)	5773	12.5000	12.5000
81 1,2,3-Trichloropropane	110	14.813	14.813	(1.070)	1775	12.5000	12.5000
80 trans-1,4-dichloro-2-butene	53	14.777	14.777	(1.068)	6456	50.0000	50.0000
82 n-Propyl Benzene	91	14.801	14.801	(0.949)	76343	12.5000	12.5000
83 Bromobenzene	156	14.837	14.837	(1.072)	12040	12.5000	12.5000
84 1,3,5-Trimethyl Benzene	105	14.908	14.908	(0.956)	49295	12.5000	12.5000
85 2-Chlorotoluene	126	14.943	14.943	(0.958)	13808	12.5000	12.5000
86 4-Chlorotoluene	126	15.026	15.026	(0.964)	14040	12.5000	12.5000
87 tert-Butyl Benzene	119	15.180	15.180	(0.973)	51042	12.5000	12.5000
88 1,2,4-Trimethyl Benzene	105	15.227	15.227	(0.976)	48588	12.5000	12.5000
89 Pentachloroethane	167	15.286	15.286	(0.980)	6348	12.5000	12.5000
90 sec-Butyl Benzene	105	15.345	15.345	(0.984)	66398	12.5000	12.5000
91 p-Isopropyl Toluene	119	15.428	15.428	(0.989)	54780	12.5000	12.5000
92 1,3-Dichlorobenzene	146	15.547	15.547	(0.997)	25979	12.5000	12.5000
93 1,4-Dichlorobenzene	146	15.618	15.618	(1.002)	25839	12.5000	12.5000
94 n-Butyl Benzene	91	15.771	15.771	(1.011)	54630	12.5000	12.5000
95 1,2-Dichlorobenzene	146	15.949	15.949	(1.023)	20998	12.5000	12.5000
96 1,2-Dibromo-3-Chloropropane	75	16.659	16.659	(1.068)	842	12.5000	12.5000(M)
97 1,2,4-Trichlorobenzene	180	17.511	17.511	(1.123)	17576	12.5000	12.5000
98 Hexachlorobutadiene	225	17.594	17.594	(1.128)	12804	12.5000	12.5000
99 Naphthalene	128	17.854	17.854	(1.145)	22176	12.5000	12.5000
171 Diethyl ether	45	7.216	7.216	(0.635)	3933	12.5000	12.5000(M)
100 1,2,3-Trichlorobenzene	180	18.162	18.162	(1.165)	14125	12.5000	12.5000
M 101 1,2-Dichloroethene (total)	96				24319	25.0000	25.0000
M 102 Xylene (total)	106				65357	12.5000	40.2029

QC Flag Legend

M - Compound response manually integrated.

3/6/2014

Bromomethane CAS Number 74-83-9 Area = 3860 Manually integrated



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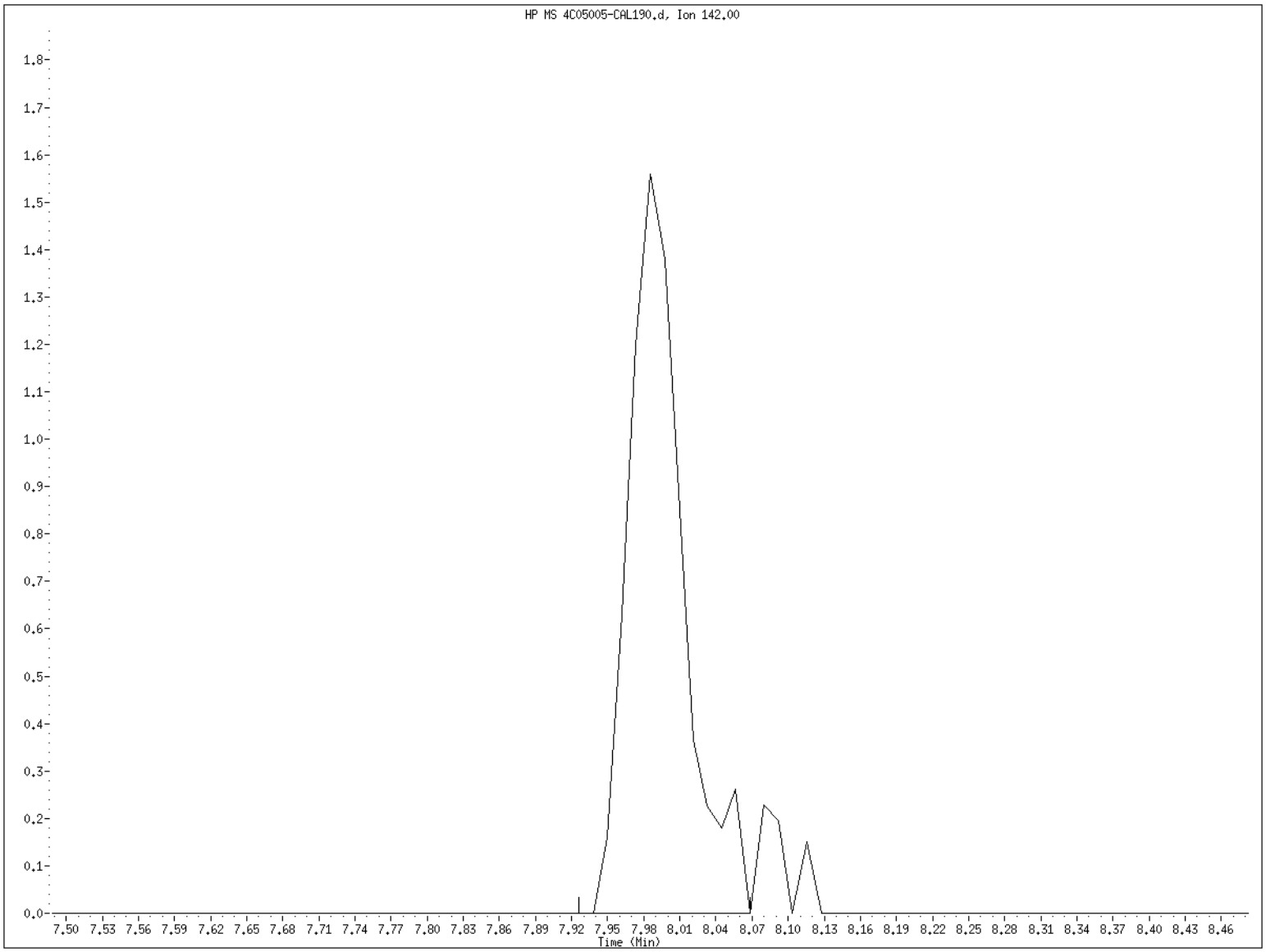
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:54
Retention Time: 5.82
Operator ID: JAO

3/6/2014

Iodomethane CAS Number 74-88-4 Area = 4862 Manually integrated



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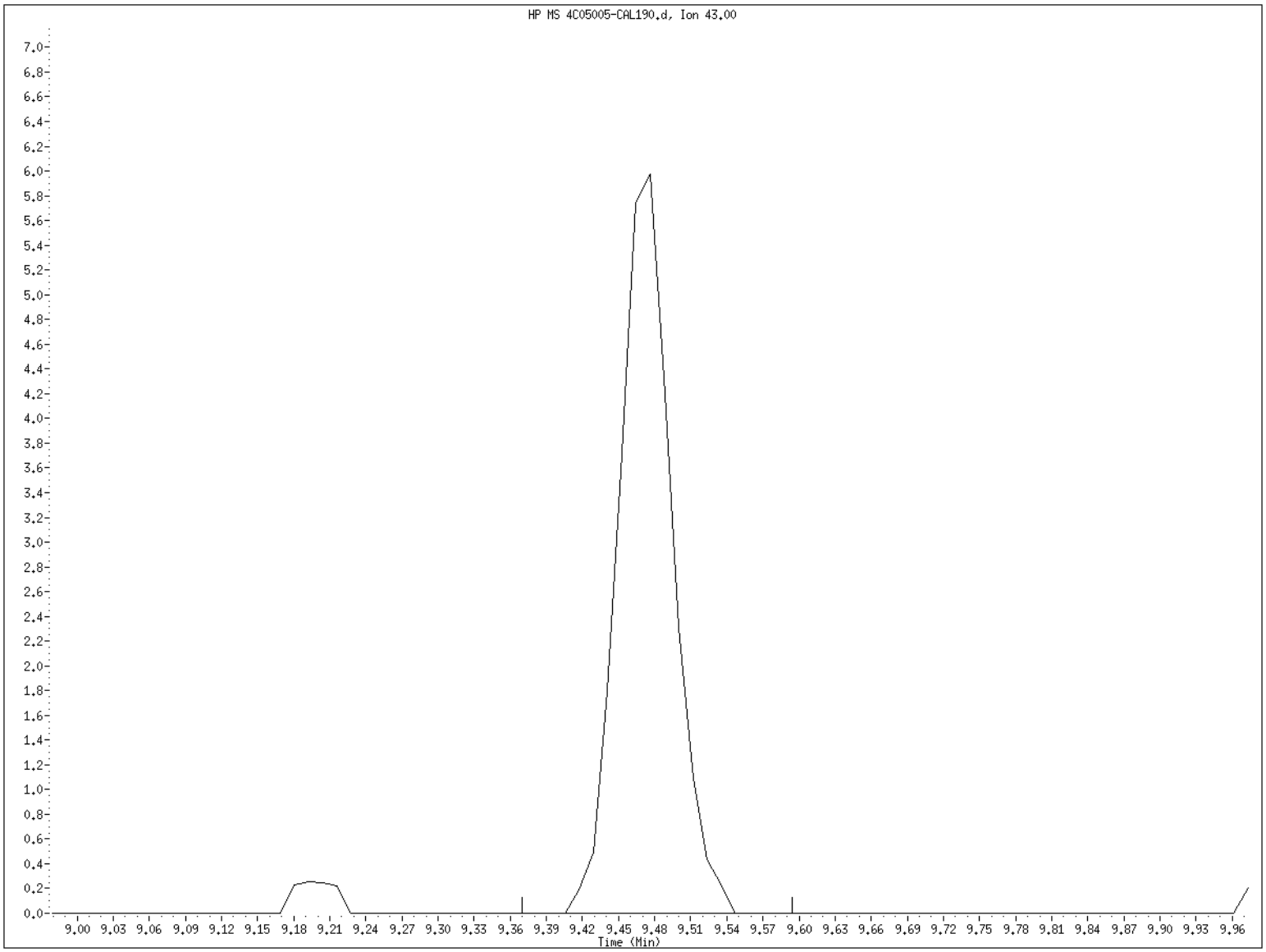
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:54
Retention Time: 7.99
Operator ID: JAO

3/6/2014

Vinyl acetate CAS Number 108-05-4 Area = 18575 Manually integrated



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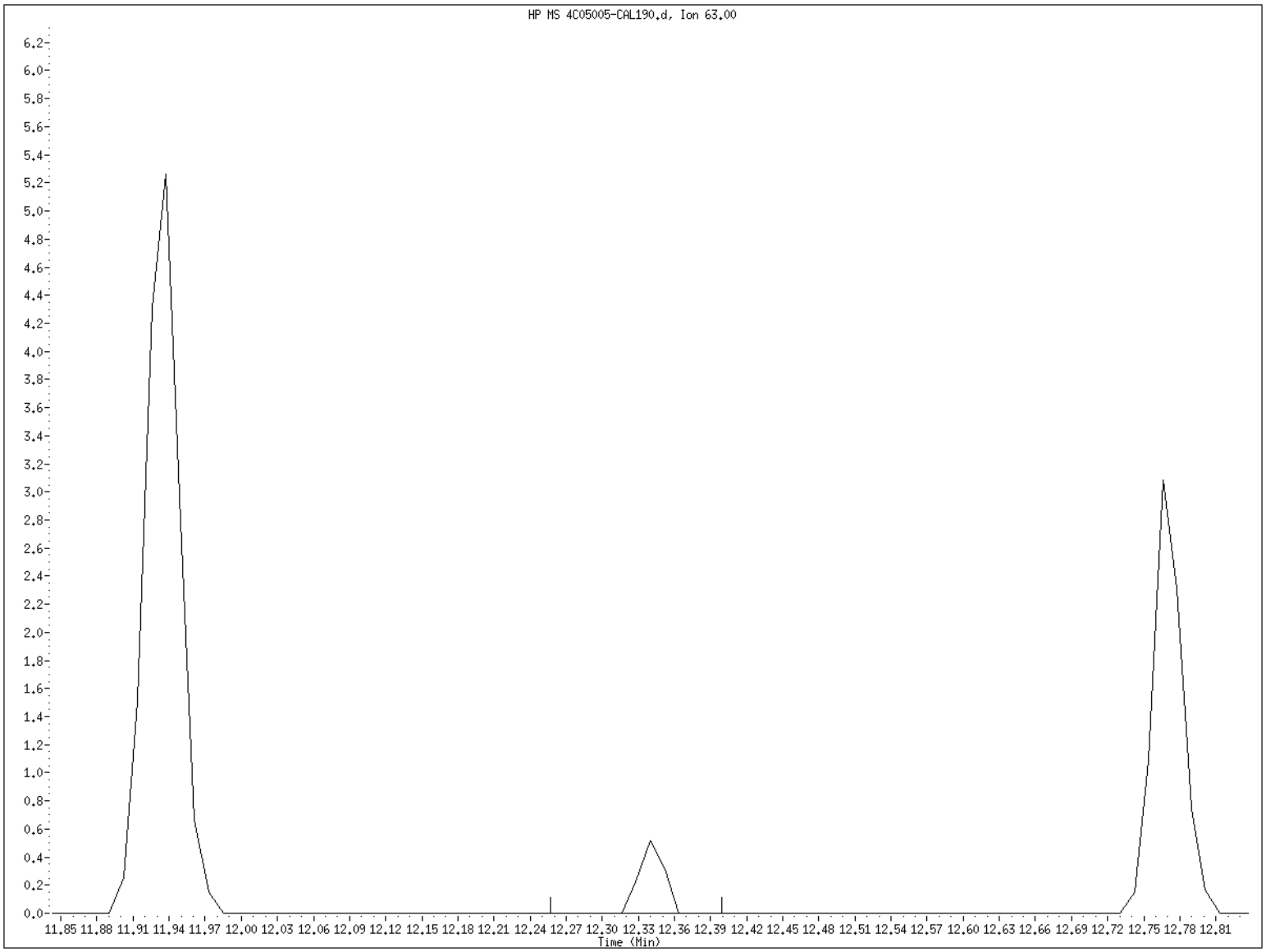
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:54
Retention Time: 9.48
Operator ID: JAO

3/6/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 754 Manually integrated



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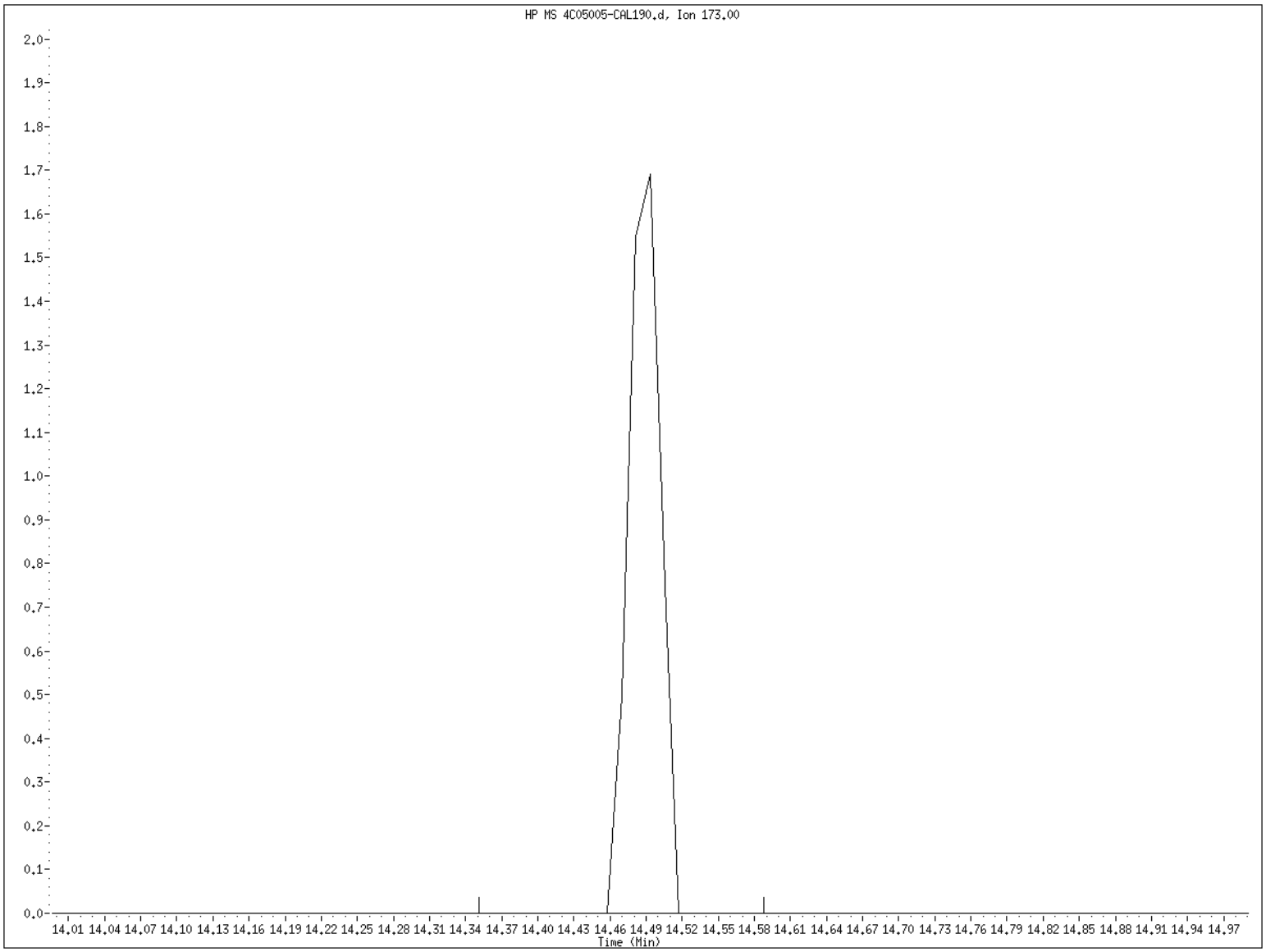
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:54
Retention Time: 12.34
Operator ID: JAO

3/6/2014

Bromoform CAS Number 75-25-2 Area = 3185 Manually integrated



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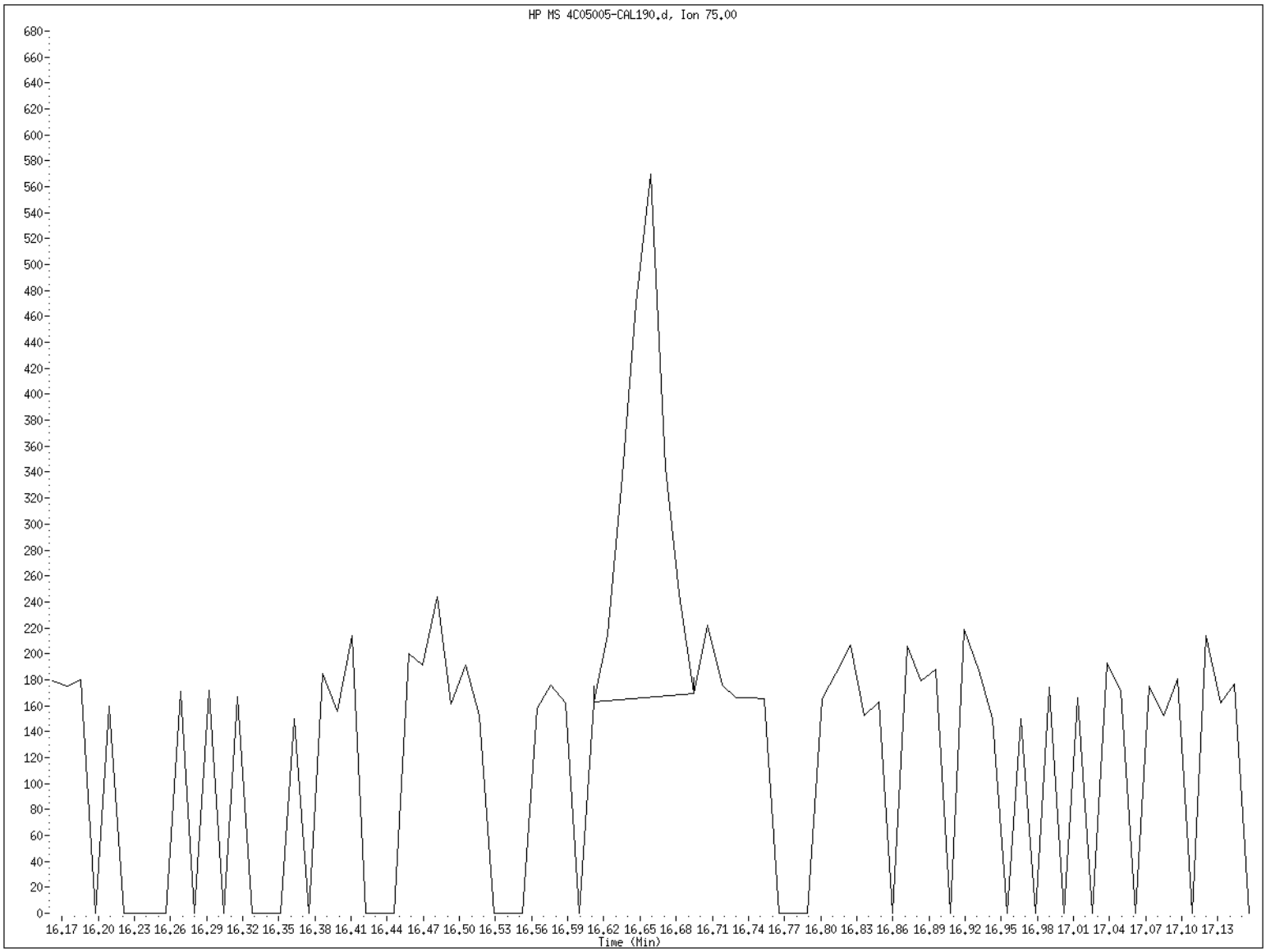
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:54
Retention Time: 14.49
Operator ID: JAO

3/6/2014

1,2-Dibromo-3-Chloropropane CAS Number 96-12-8 Area = 842 Manually integrated



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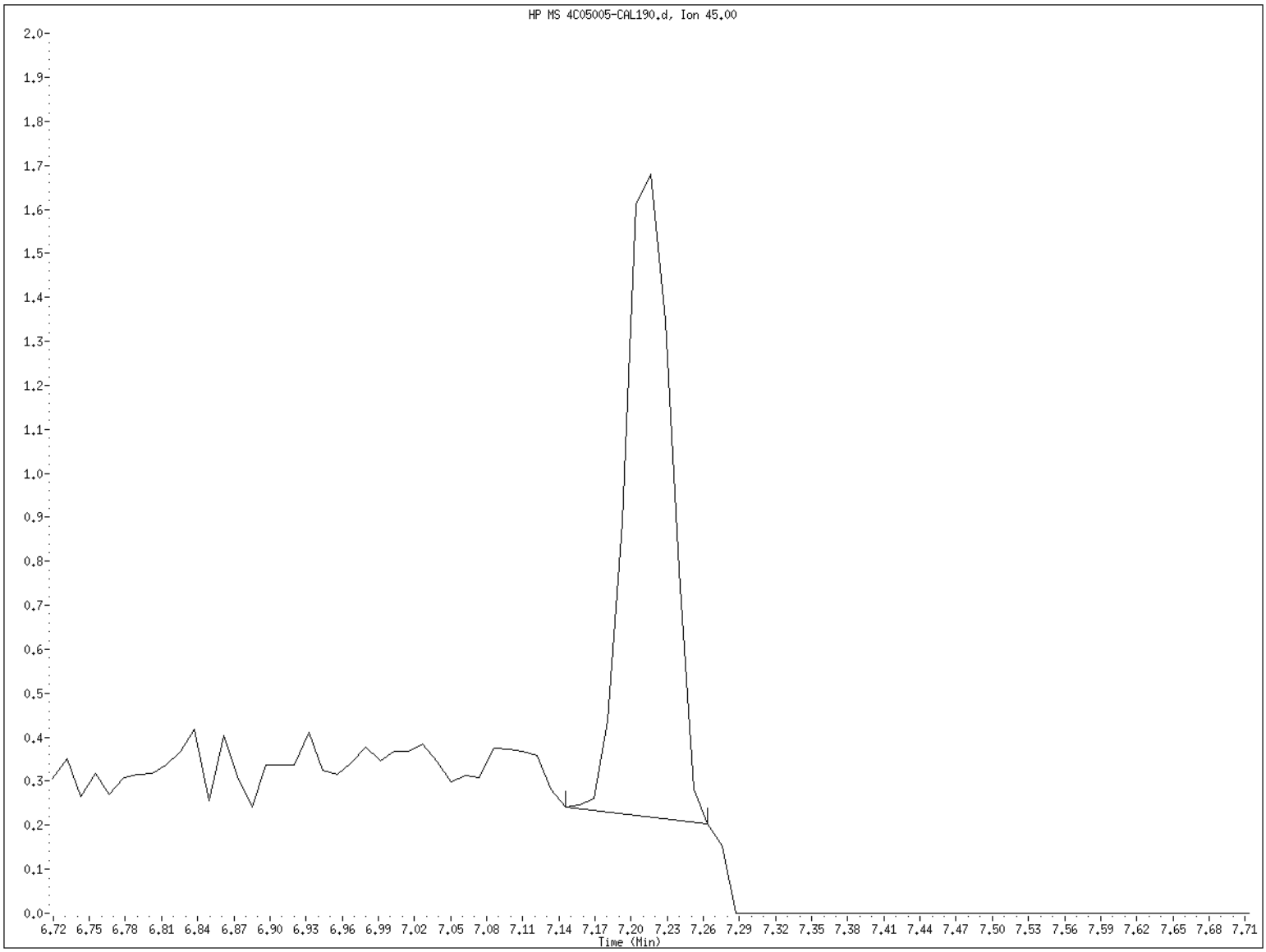
Client ID: VSTD0.5SY
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:54
Retention Time: 16.66
Operator ID: JAO

3/6/2014

Diethyl ether CAS Number 60-29-7 Area = 3933 Manually integrated



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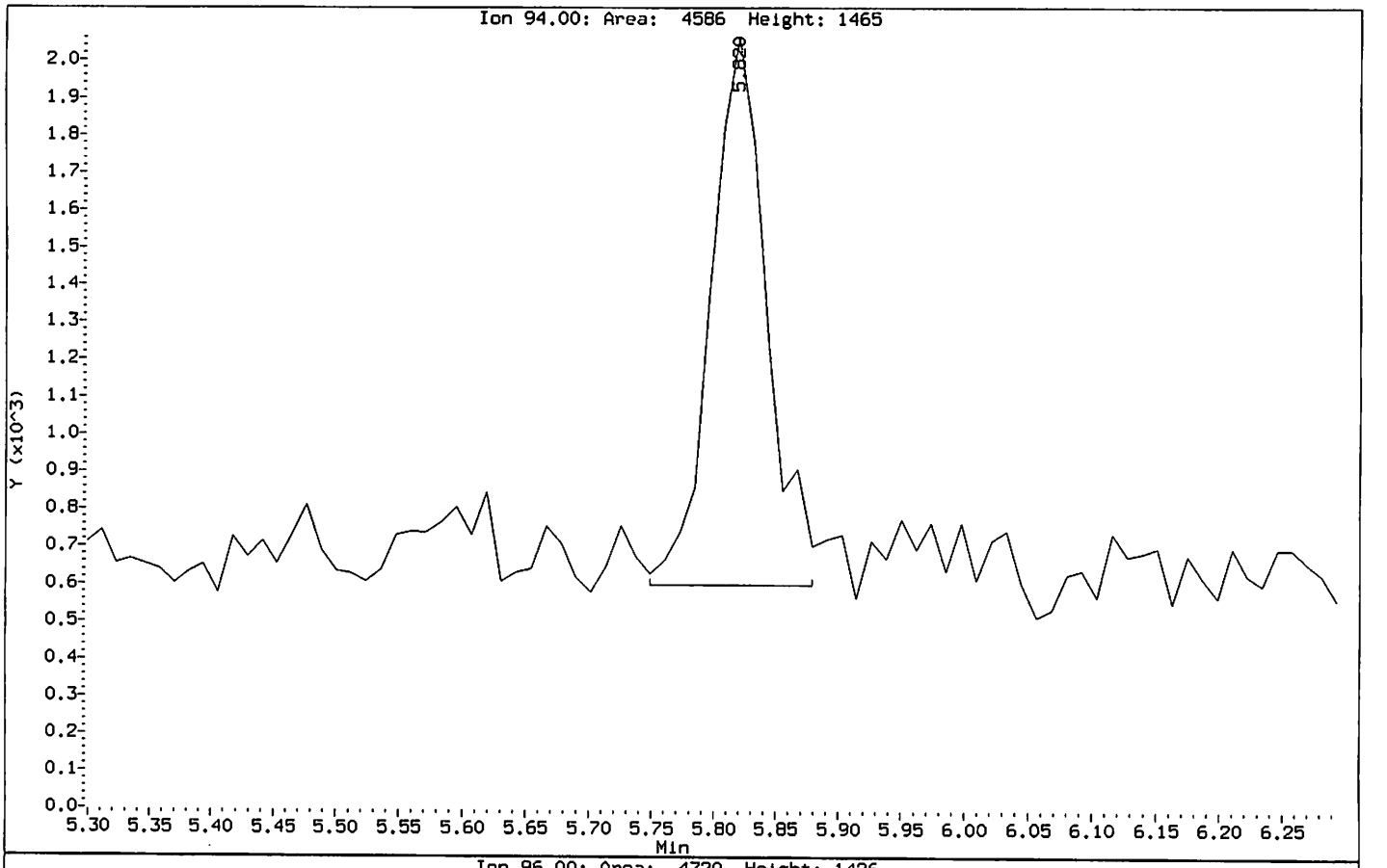
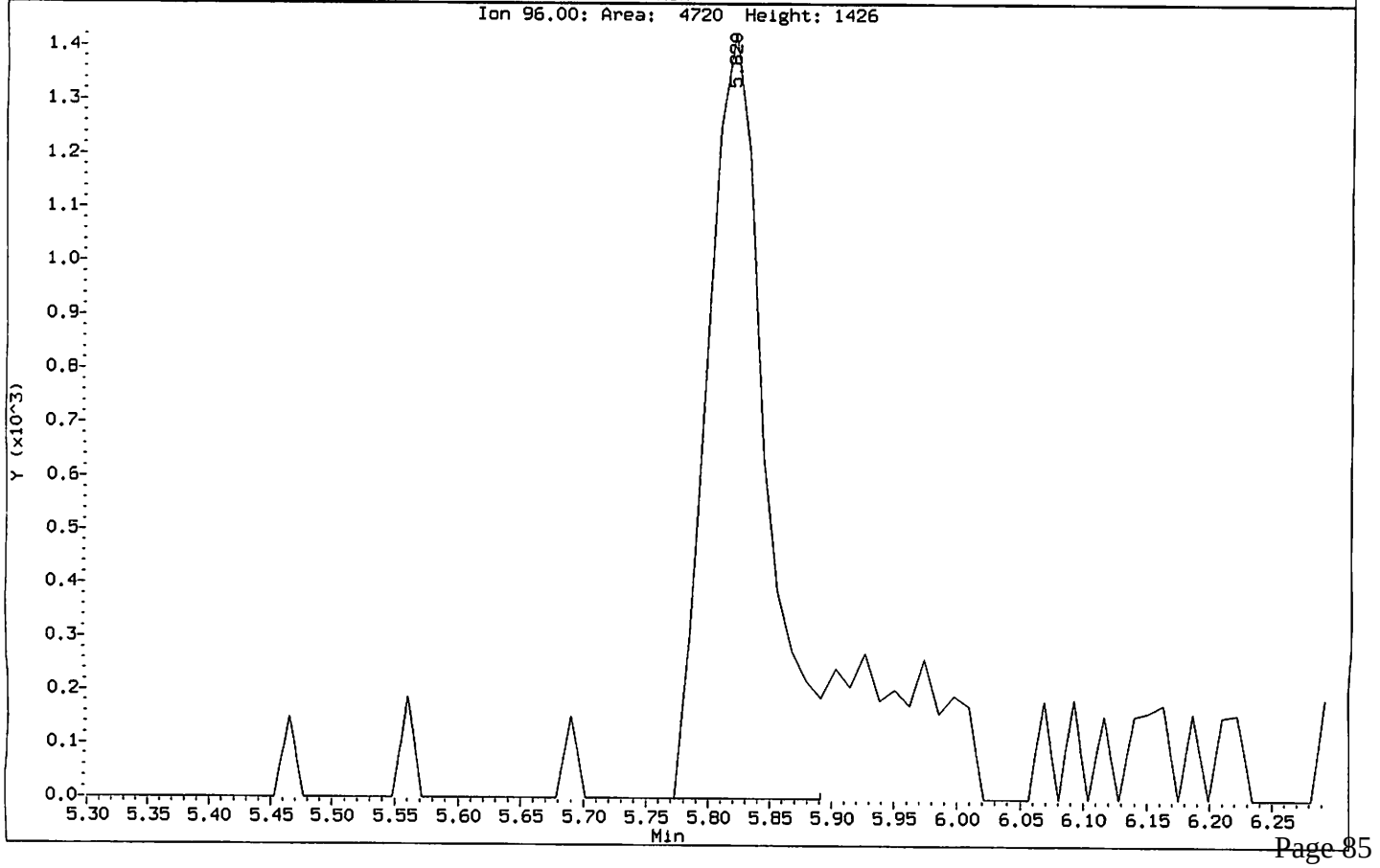
Client ID: VSTD0.5SY
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:54
Retention Time: 7.22
Operator ID: JAO

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL190.d
Injection Date: 05-MAR-2014 14:54
Instrument: 5973hp90.i
Client Sample ID: VSTD0.5SY

Compound: Bromomethane
CAS Number: 74-83-9





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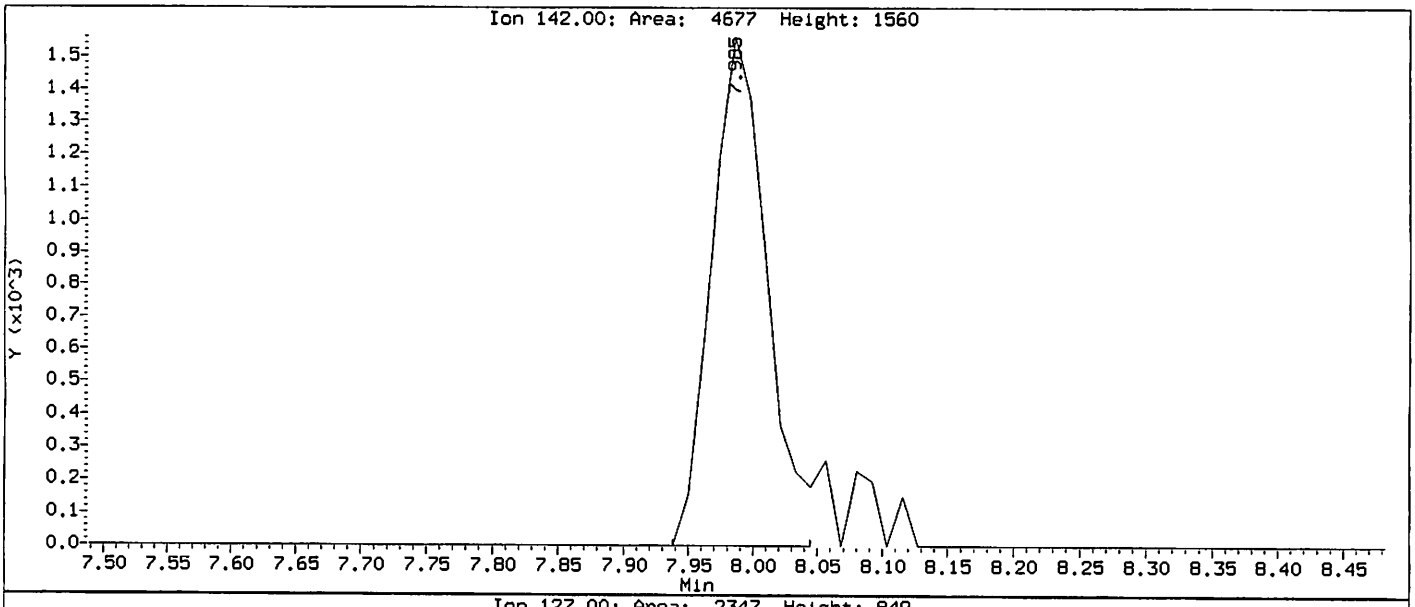
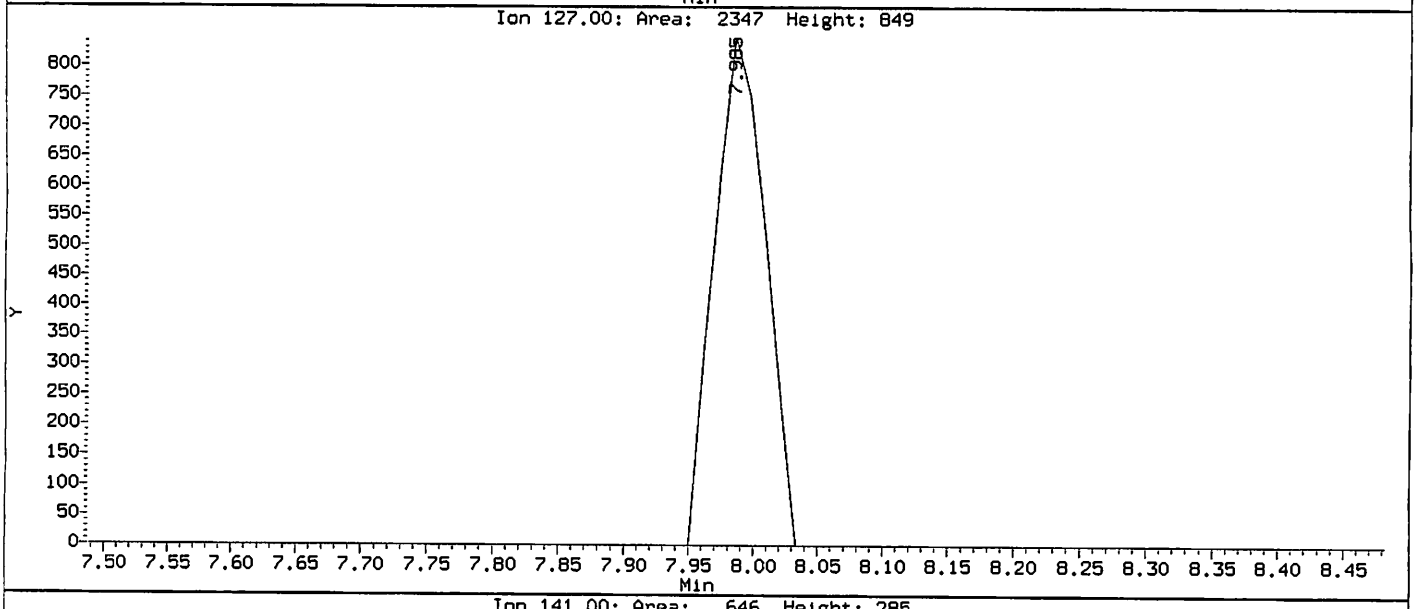
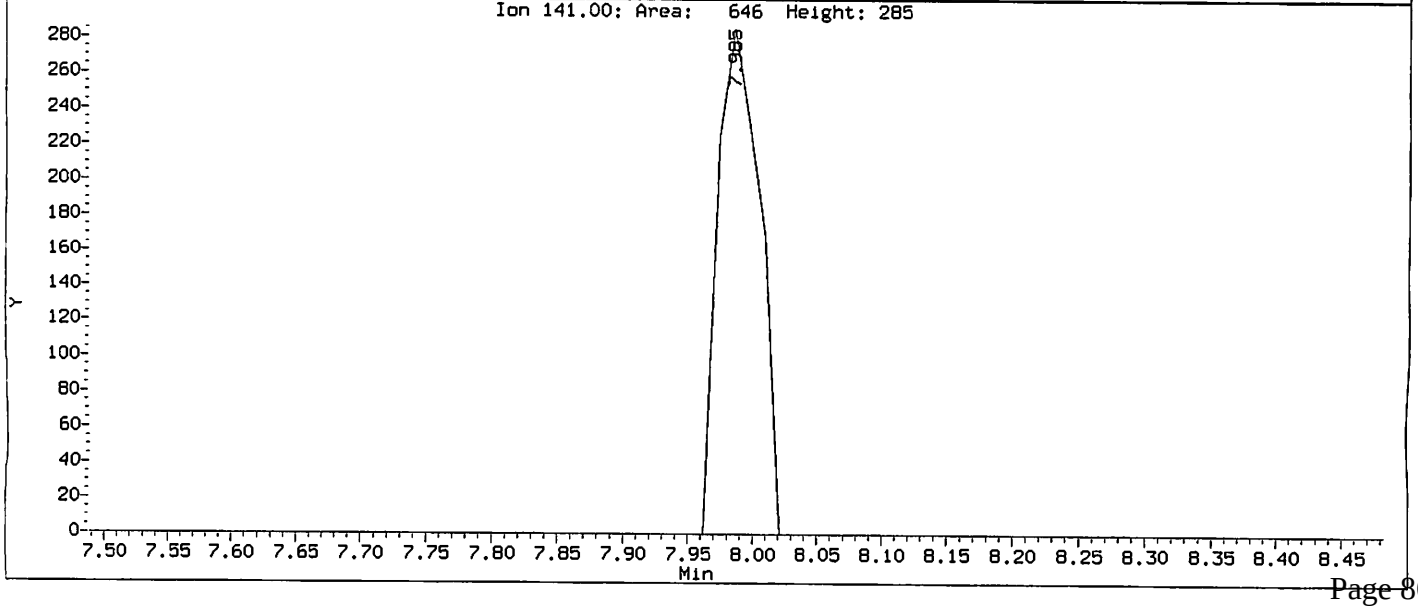
Injection Date: 05-MAR-2014 14:54
Instrument: 5973hp90.i
Client Sample ID: VSTD0.5SY

Compound: Iodomethane
CAS Number: 74-88-4







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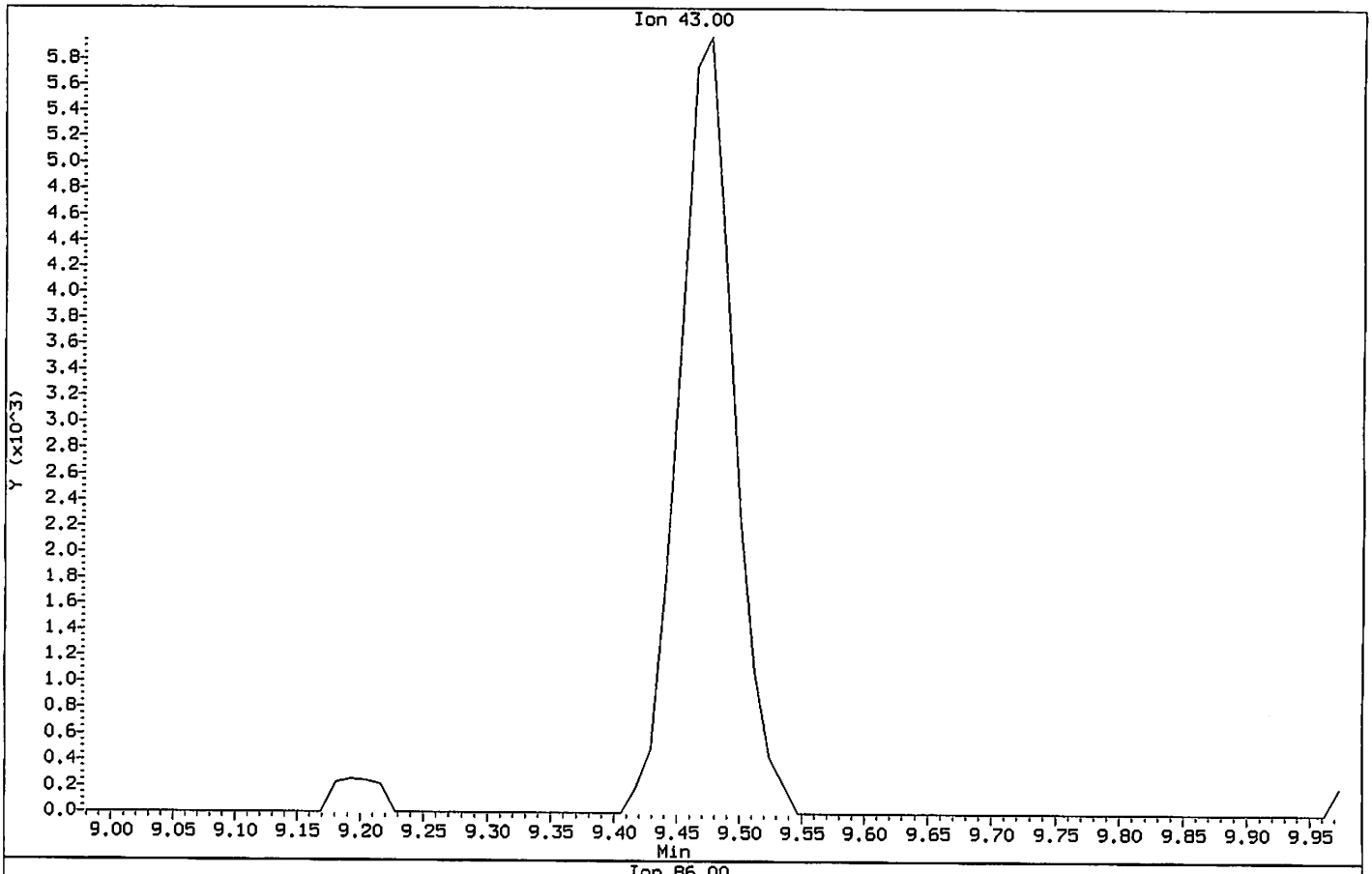
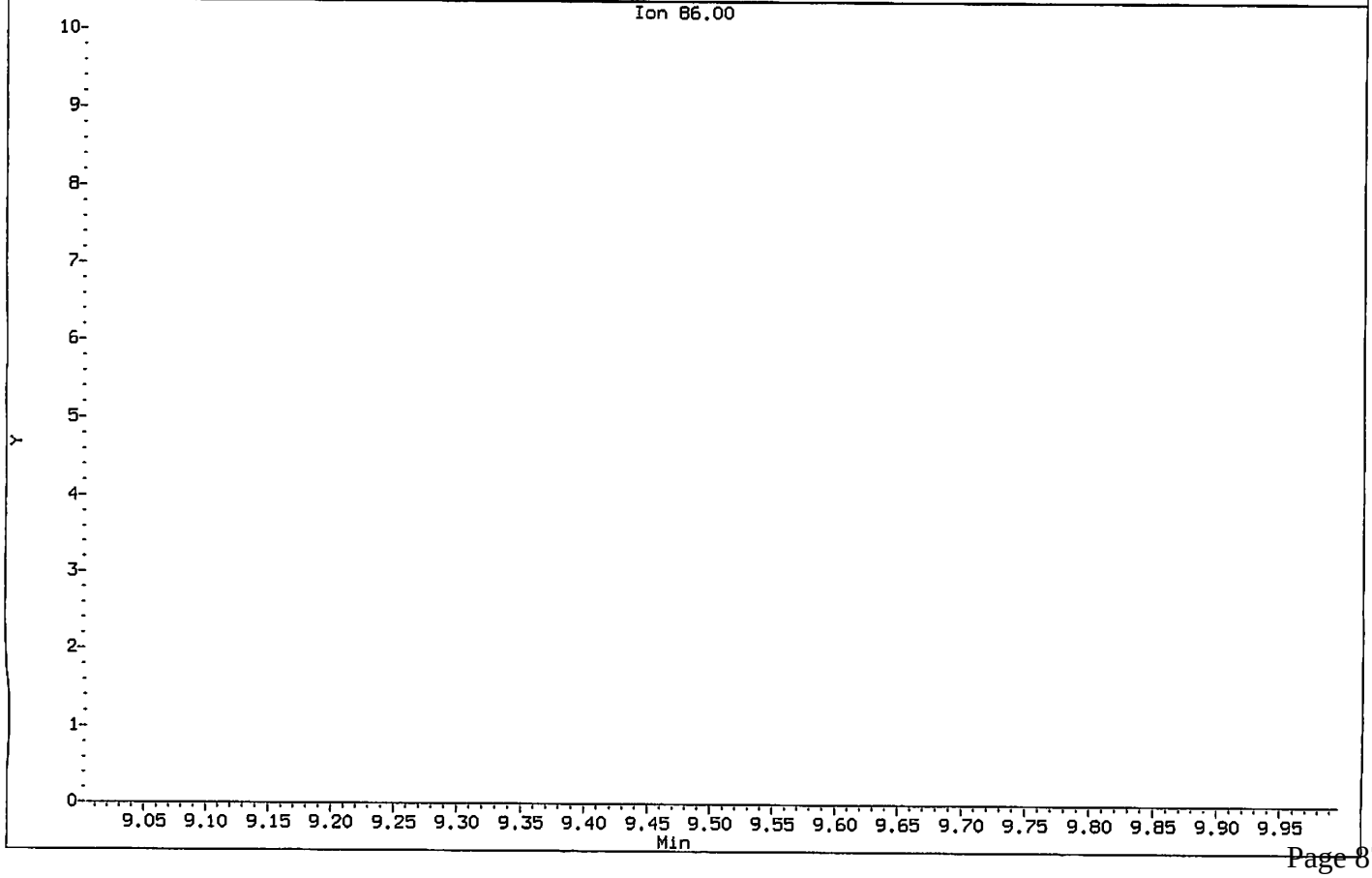
Injection Date: 05-MAR-2014 14:54
Instrument: 5973hp90.i
Client Sample ID: VSTD0.5SY

Compound: Vinyl acetate
CAS Number: 108-05-4





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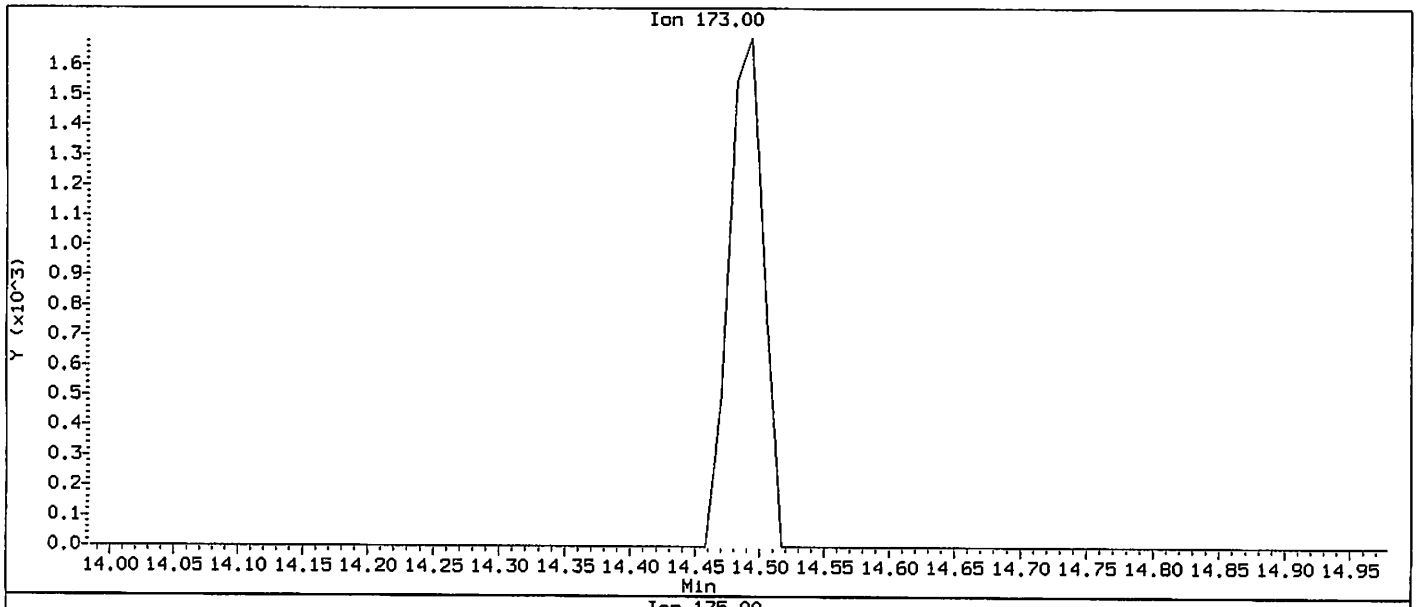
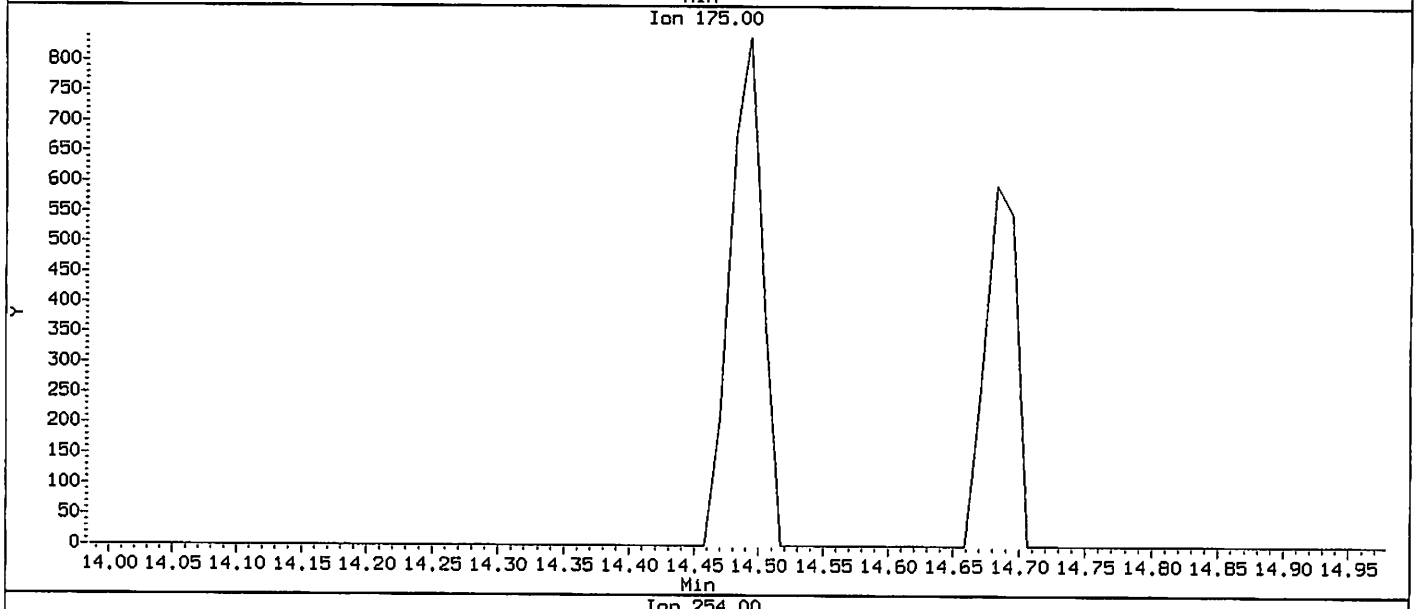
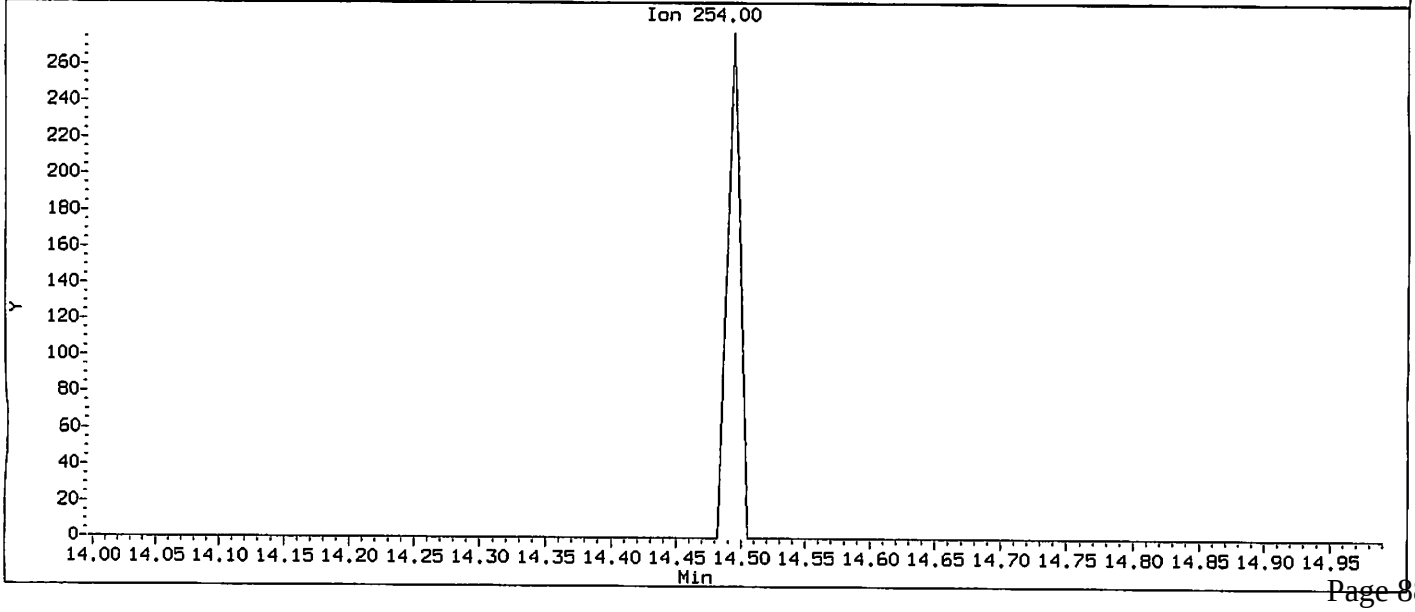
Injection Date: 05-MAR-2014 14:54
Instrument: 5973hp90.i
Client Sample ID: VSTD0.5SY

Compound: Bromoform
CAS Number: 75-25-2







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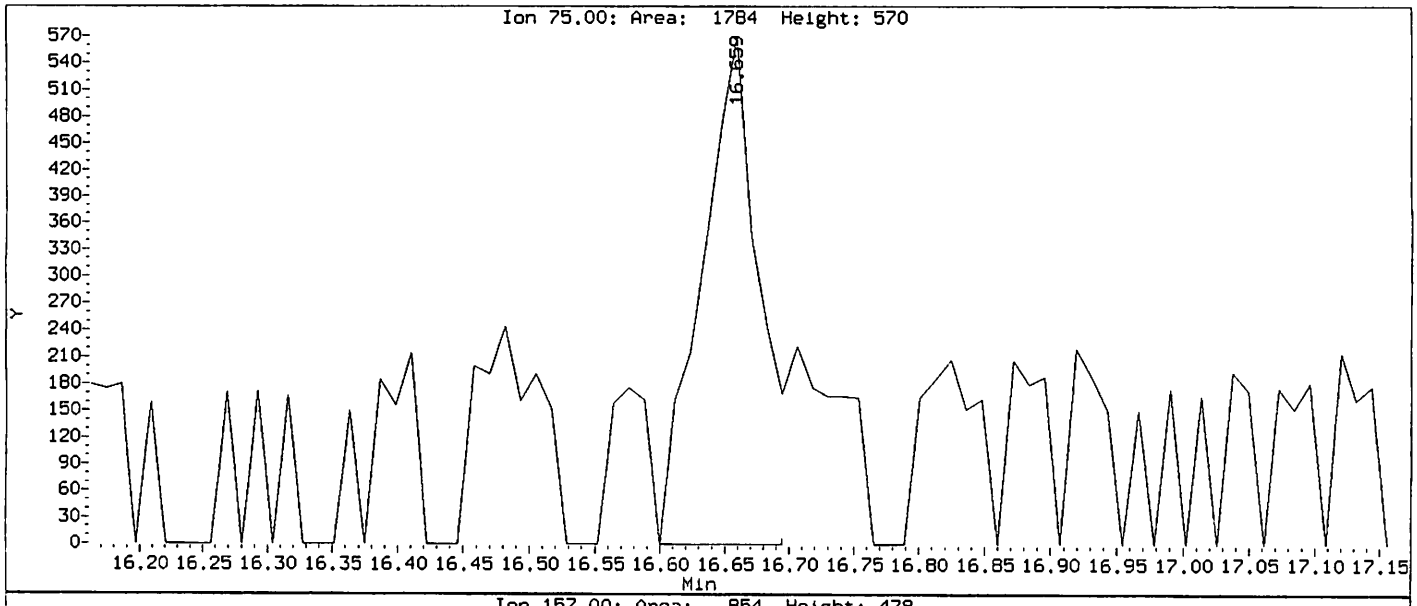
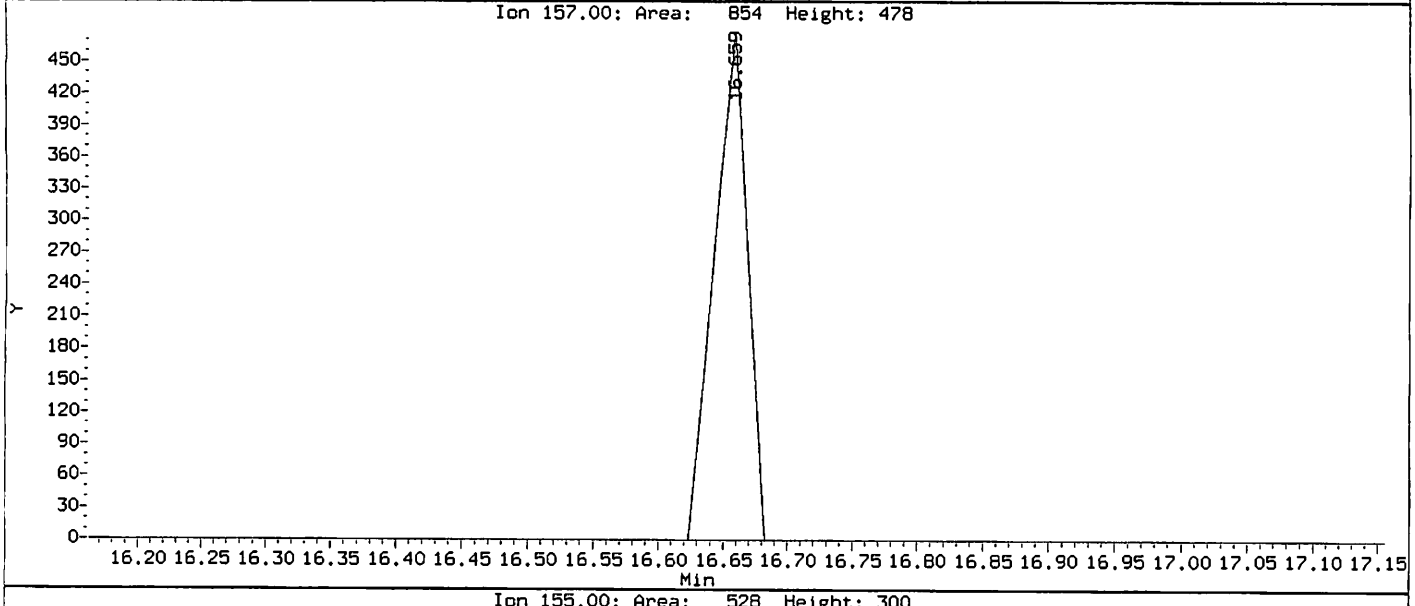
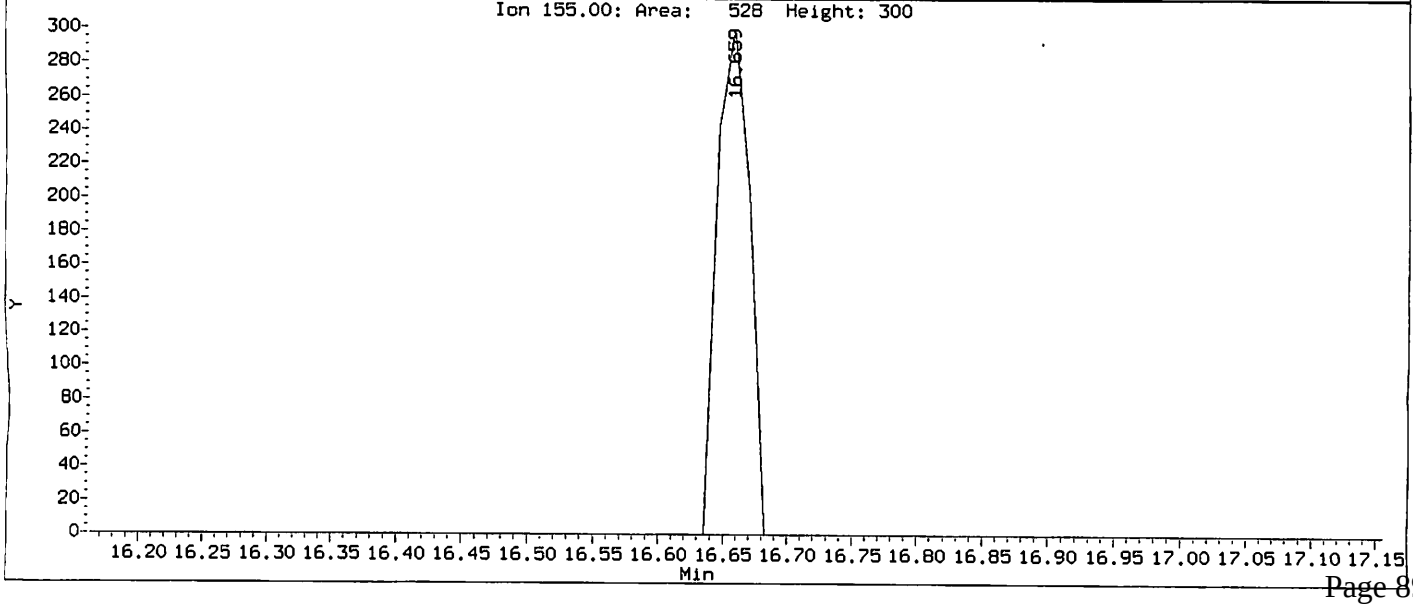
Injection Date: 05-MAR-2014 14:54
Instrument: 5973hp90.i
Client Sample ID: VSTD0.5SY

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8







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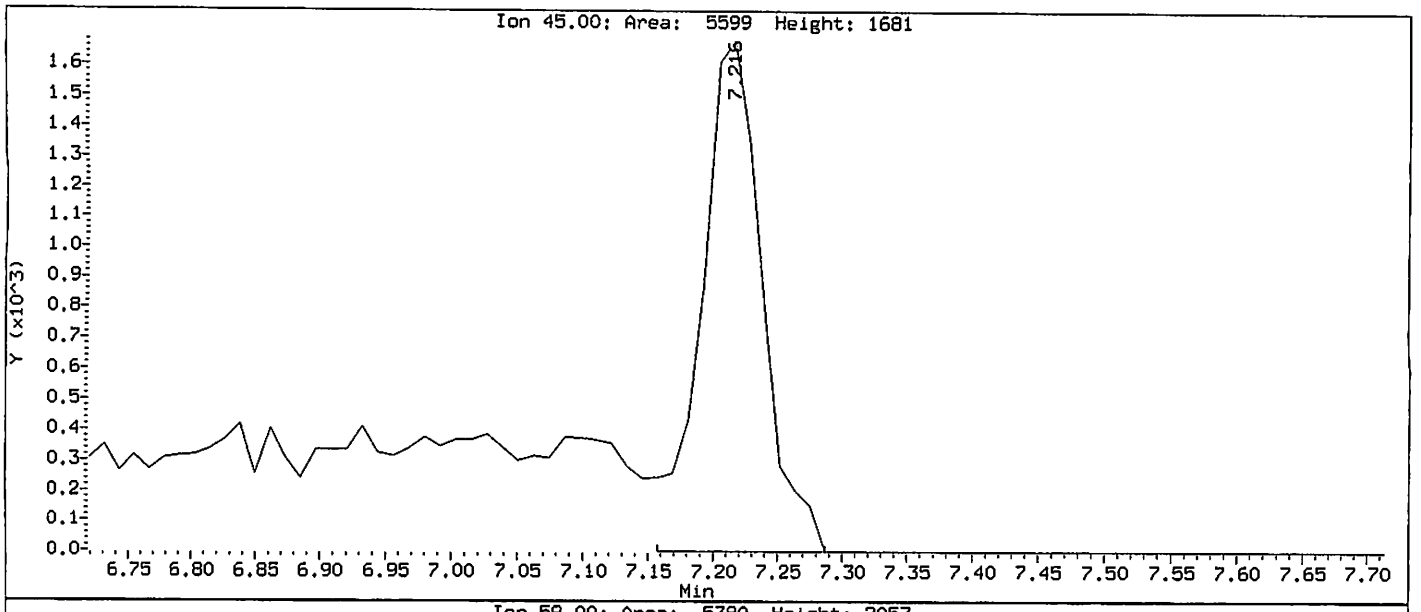
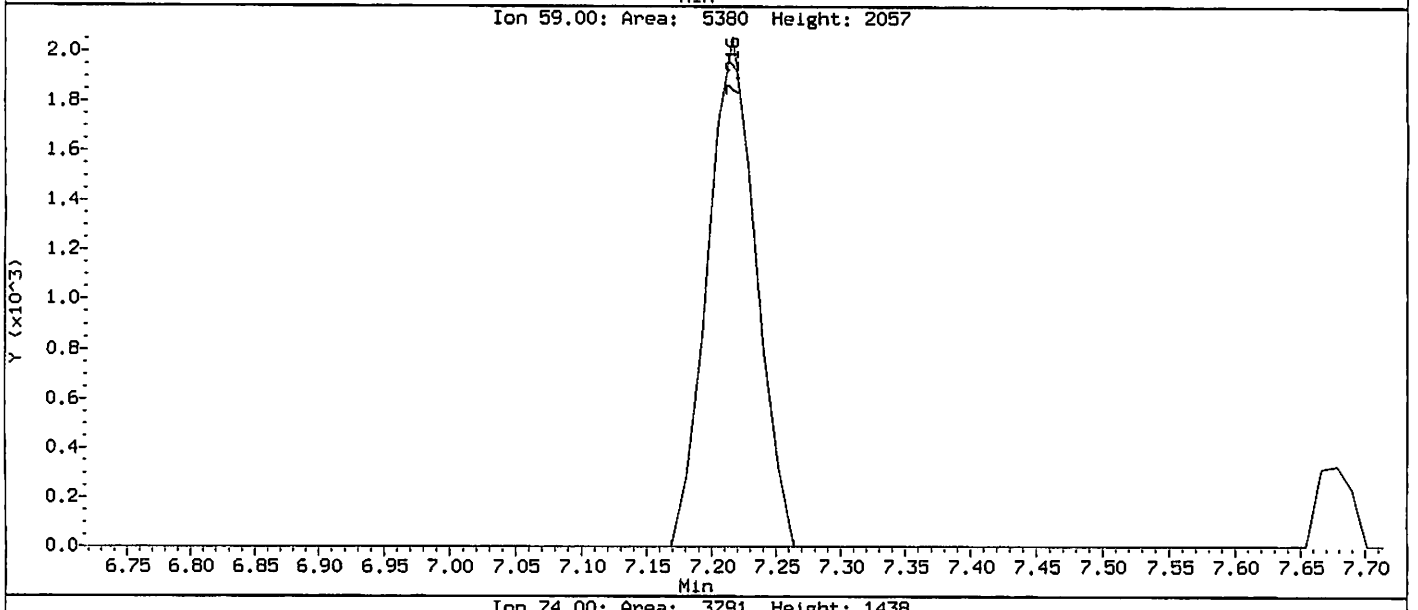
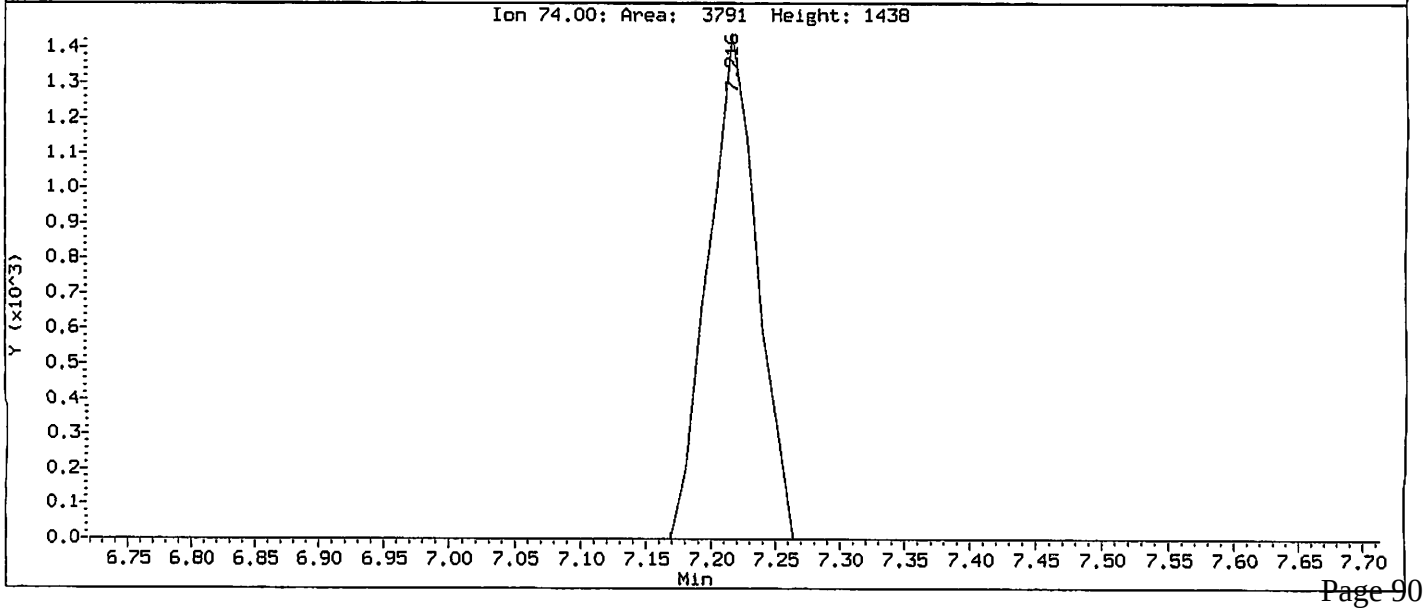
Injection Date: 05-MAR-2014 14:54
Instrument: 5973hp90.i
Client Sample ID: VSTD0.5SY

Compound: Diethyl ether
CAS Number: 60-29-7







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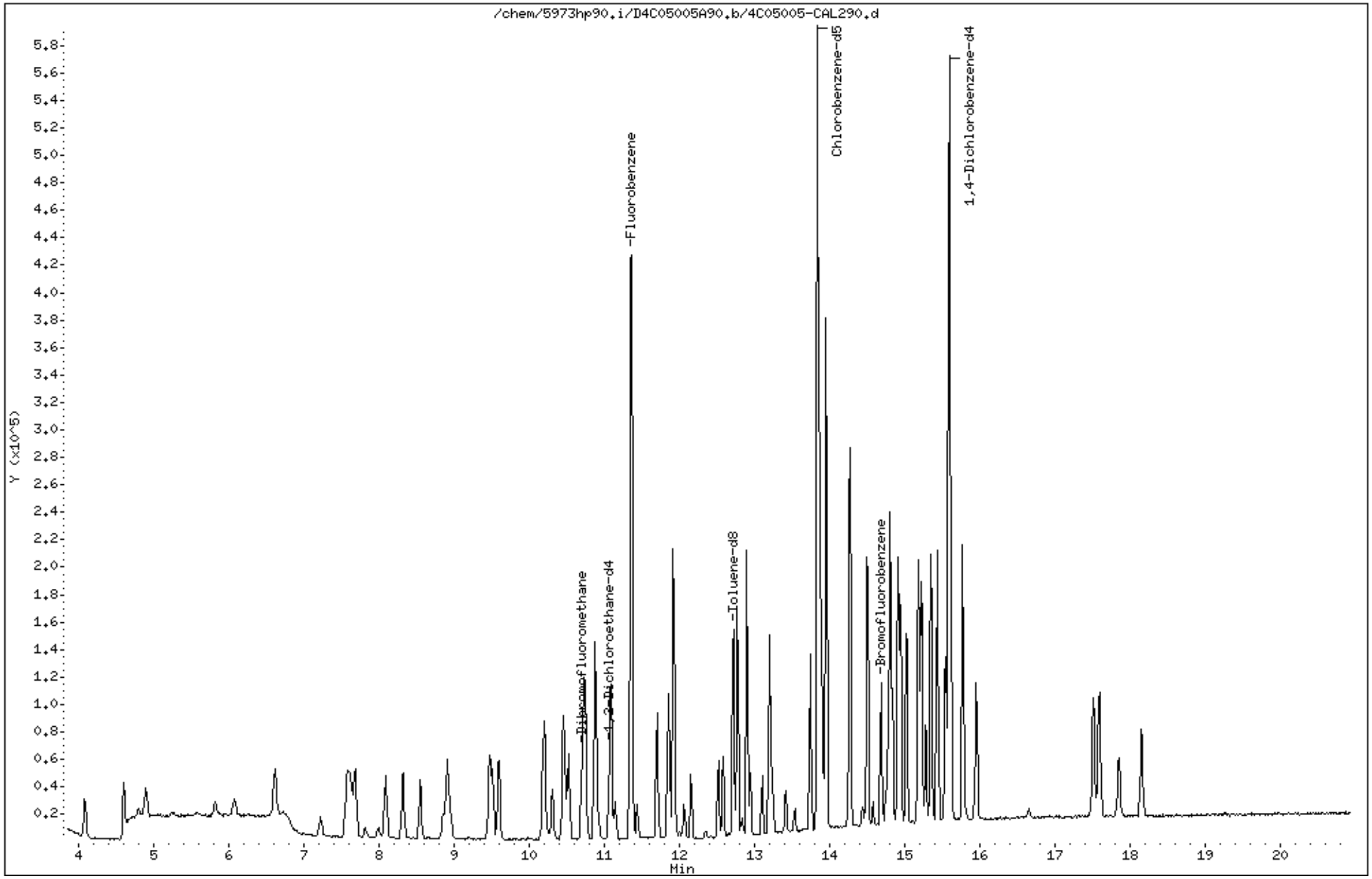
Client ID: VSTD001SY
Instrument: 5973hp90.i
Sample Info: 4C05005-CAL2:JAO
Purge Volume: 25.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



Robert Hai 3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL290.d
Report Date: 06-Mar-2014 11:50

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL290.d
Lab Smp Id: 4C05005-CAL2 Client Smp ID: VSTD001SY
Inj Date : 05-MAR-2014 14:24
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4C05005-CAL2:JAO
Misc Info : VSTD001SY
Comment :
Method : /chem/5973hp90.i/D4C05005A90.b/8260B_25ppbv21.m
Meth Date : 06-Mar-2014 11:50 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 14:24 Cal File: 4C05005-CAL290.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	11.361	11.361	(1.000)	428460	125.000	
* 2 Chlorobenzene-d5	117	13.834	13.834	(1.000)	324175	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.597	15.597	(1.000)	158909	125.000	
$ 4 Dibromofluoromethane	113	10.698	10.698	(0.942)	24595	25.0000	24.8476
$ 5 1,2-Dichloroethane-d4	65	11.065	11.065	(0.974)	22404	25.0000	23.9144
$ 6 Toluene-d8	98	12.721	12.721	(0.920)	101362	25.0000	24.6362
$ 7 Bromofluorobenzene	95	14.686	14.686	(0.942)	35785	25.0000	24.4828
8 Dichlorodifluoromethane	85	4.072	4.072	(0.358)	36839	25.0000	23.9425
9 Chloromethane	50	4.592	4.592	(0.404)	41686	25.0000	24.4952
10 Vinyl Chloride	62	4.888	4.888	(0.430)	31370	25.0000	24.5917
11 Bromomethane	94	5.811	5.811	(0.511)	9476	25.0000	25.0000(M)
12 Chloroethane	64	6.071	6.071	(0.534)	15911	25.0000	24.8981
13 Trichlorofluoromethane	101	6.604	6.604	(0.581)	50025	25.0000	24.1733
14 Acrolein	56	7.550	7.550	(0.665)	6090	250.000	250.000
15 1,1,1-trichloro-2,2,2-trifluo	117	7.574	7.574	(0.667)	15827	25.0000	25.0632

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Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL290.d
Report Date: 06-Mar-2014 11:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.621	7.621	(0.671)	16403	25.0000	25.6008
17 1,1-Dichloroethene	96	7.681	7.681	(0.676)	25452	25.0000	25.7504
18 Acetone	43	7.811	7.811	(0.688)	14335	125.000	125.000
19 Iodomethane	142	7.988	7.988	(0.703)	12855	25.0000	25.0000
20 Carbon disulfide	76	8.083	8.083	(0.711)	83610	25.0000	25.7474
22 3-Chloropropene	39	8.320	8.320	(0.732)	32258	25.0000	24.7525
23 Acetonitrile	41	8.308	8.308	(0.731)	43253	25.0000	24.9925
24 Methyl acetate	43	8.320	8.320	(0.732)	7761	25.0000	25.0000
25 Methylene Chloride	84	8.544	8.544	(0.752)	23372	25.0000	24.3097
26 Acrylonitrile	53	8.947	8.947	(0.788)	18654	250.000	250.000
28 trans-1,2-Dichloroethene	96	8.911	8.911	(0.784)	27004	25.0000	25.1137
27 Methyl-tert-butyl ether	73	8.852	8.852	(0.779)	27108	25.0000	25.0000
30 Isopropyl ether	45	9.467	9.467	(0.833)	67707	25.0000	24.5440
31 Vinyl acetate	43	9.467	9.467	(0.833)	41779	25.0000	25.3099
32 1,1-Dichloroethane	63	9.515	9.515	(0.837)	51364	25.0000	25.0427
33 Chloroprene	53	9.598	9.598	(0.845)	44286	25.0000	25.1639
34 2-butanone	43	10.177	10.177	(0.896)	16761	125.000	121.889
35 2,2-Dichloropropane	77	10.189	10.189	(0.897)	40538	25.0000	25.3531
36 cis-1,2-Dichloroethene	96	10.213	10.213	(0.899)	26052	25.0000	24.7401
37 Propionitrile	54	10.308	10.308	(0.907)	37911	1250.00	1350.91
38 Methacrylonitrile	41	10.450	10.450	(0.920)	52336	250.000	250.177
39 Bromochloromethane	128	10.473	10.473	(0.922)	8451	25.0000	25.1359
40 Chloroform	83	10.521	10.521	(0.926)	49693	25.0000	24.8400
42 1,1,1-Trichloroethane	97	10.722	10.722	(0.944)	53421	25.0000	25.1884
43 Cyclohexane	84	10.745	10.745	(0.946)	40623	25.0000	25.4330
44 1,1-dichloropropene	75	10.876	10.876	(0.957)	41434	25.0000	25.3063
45 Isobutyl alcohol	43	10.911	10.911	(0.960)	14189	1250.00	1271.61
46 Carbon Tetrachloride	117	10.876	10.876	(0.957)	45121	25.0000	25.2681
47 Benzene	78	11.088	11.088	(0.976)	101477	25.0000	25.1516
48 1,2-Dichloroethane	62	11.136	11.136	(0.980)	25183	25.0000	24.4937
49 Trichloroethene	130	11.704	11.704	(1.030)	29099	25.0000	25.1558
50 Methylcyclohexane	83	11.858	11.858	(1.044)	47047	25.0000	25.0521
51 1,2-Dichloropropane	63	11.940	11.940	(1.051)	22990	25.0000	24.8388
52 Methylmethacrylate	69	11.917	11.917	(1.049)	65907	250.000	262.827
53 1,4-dioxane	88	12.011	12.011	(1.057)	3016	1250.00	1214.47
54 Dibromomethane	174	12.059	12.059	(1.061)	8720	25.0000	24.6381
55 Bromodichloromethane	83	12.153	12.153	(1.070)	29548	25.0000	24.5944
56 2-chloroethyl vinyl ether	63	12.343	12.343	(1.086)	1496	50.0000	50.0000(M)
57 cis-1,3-Dichloropropene	75	12.520	12.520	(1.102)	31100	25.0000	24.8172
58 4-Methyl-2-pentanone	43	12.579	12.579	(0.909)	41261	125.000	124.704
59 Toluene	92	12.769	12.769	(0.923)	67512	25.0000	24.8187
60 Ethylmethacrylate	69	12.899	12.899	(0.932)	98652	250.000	283.824
61 trans-1,3-Dichloropropene	75	12.946	12.946	(0.936)	23288	25.0000	24.3362
62 1,1,2-Trichloroethane	97	13.100	13.100	(0.947)	12020	25.0000	24.8588
63 2-hexanone	43	13.207	13.207	(0.955)	28827	125.000	123.400
64 1,3-Dichloropropane	76	13.242	13.242	(0.957)	22752	25.0000	24.5408
65 Tetrachloroethene	164	13.207	13.207	(0.955)	26076	25.0000	25.3399

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Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL290.d
Report Date: 06-Mar-2014 11:50

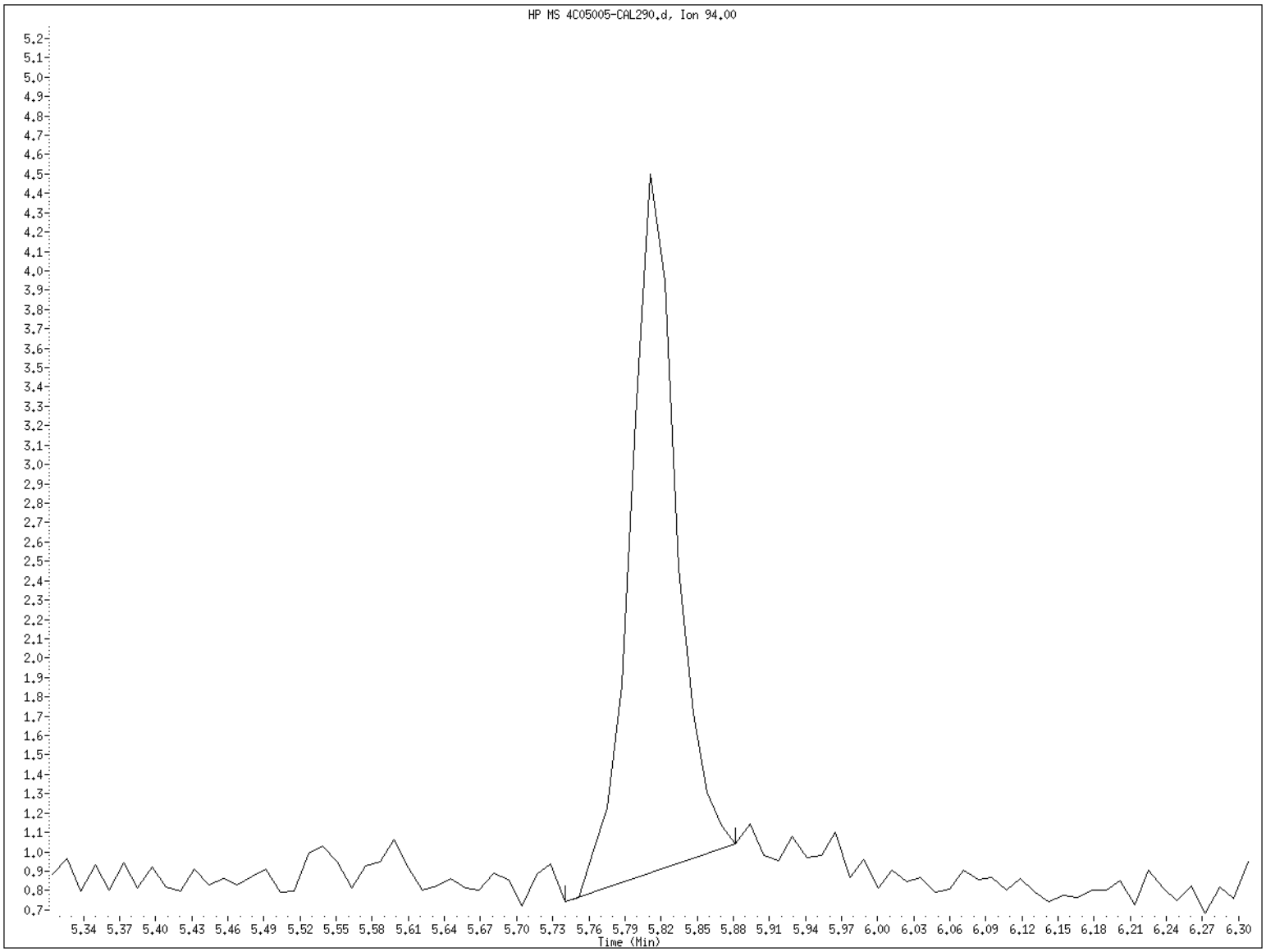
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	13.420	13.420	(0.970)	15667	25.0000	24.8369
67 1,2-Dibromoethane	107	13.538	13.538	(0.979)	11346	25.0000	24.6858
68 1-Chlorohexane	55	13.739	13.739	(0.993)	30339	25.0000	24.9208
69 Chlorobenzene	112	13.857	13.857	(1.002)	68901	25.0000	25.2865
70 Ethylbenzene	106	13.881	13.881	(1.003)	41314	25.0000	25.0606
71 1,1,1,2-Tetrachloroethane	131	13.905	13.905	(1.005)	22745	25.0000	25.0410
72 m,p-Xylene	106	13.952	13.952	(1.009)	99027	50.0000	49.8657
73 m,p-Xylene (part of total)	106	13.952	13.952	(1.009)	99027	50.0000	49.8657
74 o-Xylene	106	14.260	14.260	(1.031)	46274	25.0000	25.3703
75 o-Xylene (part of total)	106	14.260	14.260	(1.031)	46274	25.0000	25.3703
76 Styrene	104	14.272	14.272	(1.032)	69616	25.0000	25.2383
77 Bromoform	173	14.496	14.496	(0.929)	7497	25.0000	25.8393
78 Isopropyl Benzene	105	14.508	14.508	(1.049)	139651	25.0000	25.3320
79 1,1,2,2-Tetrachloroethane	83	14.745	14.745	(0.945)	12747	25.0000	25.0403
81 1,2,3-Trichloropropane	110	14.816	14.816	(1.071)	3638	25.0000	24.0546
80 trans-1,4-dichloro-2-butene	53	14.780	14.780	(1.068)	13421	100.000	96.9264
82 n-Propyl Benzene	91	14.804	14.804	(0.949)	168928	25.0000	25.0670
83 Bromobenzene	156	14.839	14.839	(1.073)	26800	25.0000	25.0858
84 1,3,5-Trimethyl Benzene	105	14.910	14.910	(0.956)	110841	25.0000	25.2674
85 2-Chlorotoluene	126	14.946	14.946	(0.958)	30753	25.0000	25.1483
86 4-Chlorotoluene	126	15.029	15.029	(0.964)	31007	25.0000	25.0428
87 tert-Butyl Benzene	119	15.183	15.183	(0.973)	110948	25.0000	24.8442
88 1,2,4-Trimethyl Benzene	105	15.218	15.218	(0.976)	110816	25.0000	25.4452
89 Pentachloroethane	167	15.289	15.289	(0.980)	14457	25.0000	25.4270
90 sec-Butyl Benzene	105	15.348	15.348	(0.984)	150258	25.0000	25.3476
91 p-Isopropyl Toluene	119	15.431	15.431	(0.989)	124826	25.0000	25.4339
92 1,3-Dichlorobenzene	146	15.549	15.549	(0.997)	57818	25.0000	25.1392
93 1,4-Dichlorobenzene	146	15.620	15.620	(1.002)	55415	25.0000	24.6761
94 n-Butyl Benzene	91	15.774	15.774	(1.011)	124166	25.0000	25.4019
95 1,2-Dichlorobenzene	146	15.952	15.952	(1.023)	46879	25.0000	25.1783
96 1,2-Dibromo-3-Chloropropane	75	16.650	16.650	(1.068)	2139	25.0000	26.7899(M)
97 1,2,4-Trichlorobenzene	180	17.514	17.514	(1.123)	37616	25.0000	24.6502
98 Hexachlorobutadiene	225	17.597	17.597	(1.128)	28677	25.0000	25.2182
99 Naphthalene	128	17.857	17.857	(1.145)	49475	25.0000	25.1697
171 Diethyl ether	45	7.219	7.219	(0.635)	9514	25.0000	26.2188
100 1,2,3-Trichlorobenzene	180	18.165	18.165	(1.165)	31186	25.0000	25.0393
M 101 1,2-Dichloroethene (total)	96				53056	50.0000	49.8577
M 102 Xylene (total)	106				145301	25.0000	79.6629

QC Flag Legend

M - Compound response manually integrated.

3/6/2014

Bromomethane CAS Number 74-83-9 Area = 9476 Manually integrated



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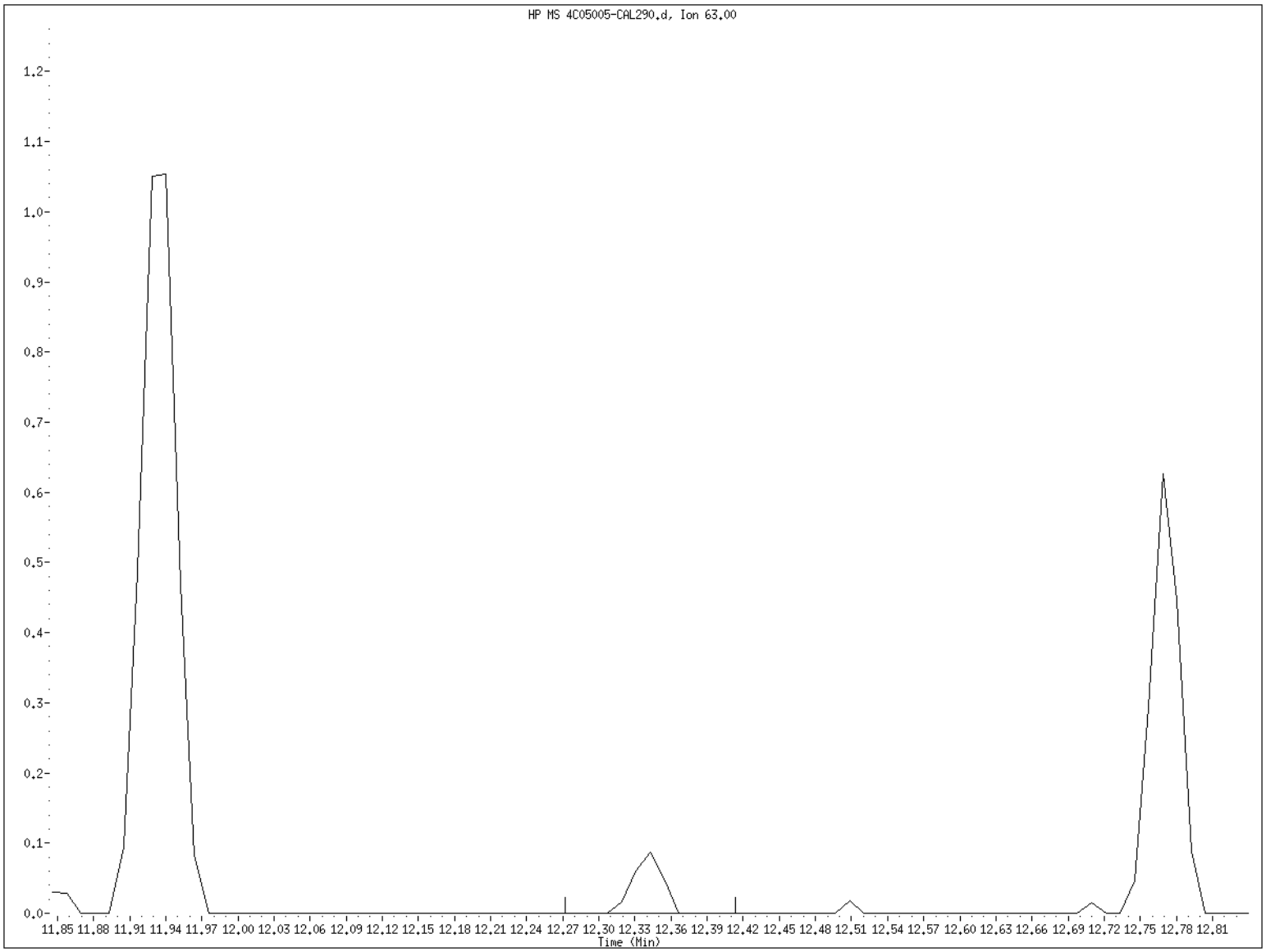
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:24
Retention Time: 5.81
Operator ID: JAO

3/6/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 1496 Manually integrated



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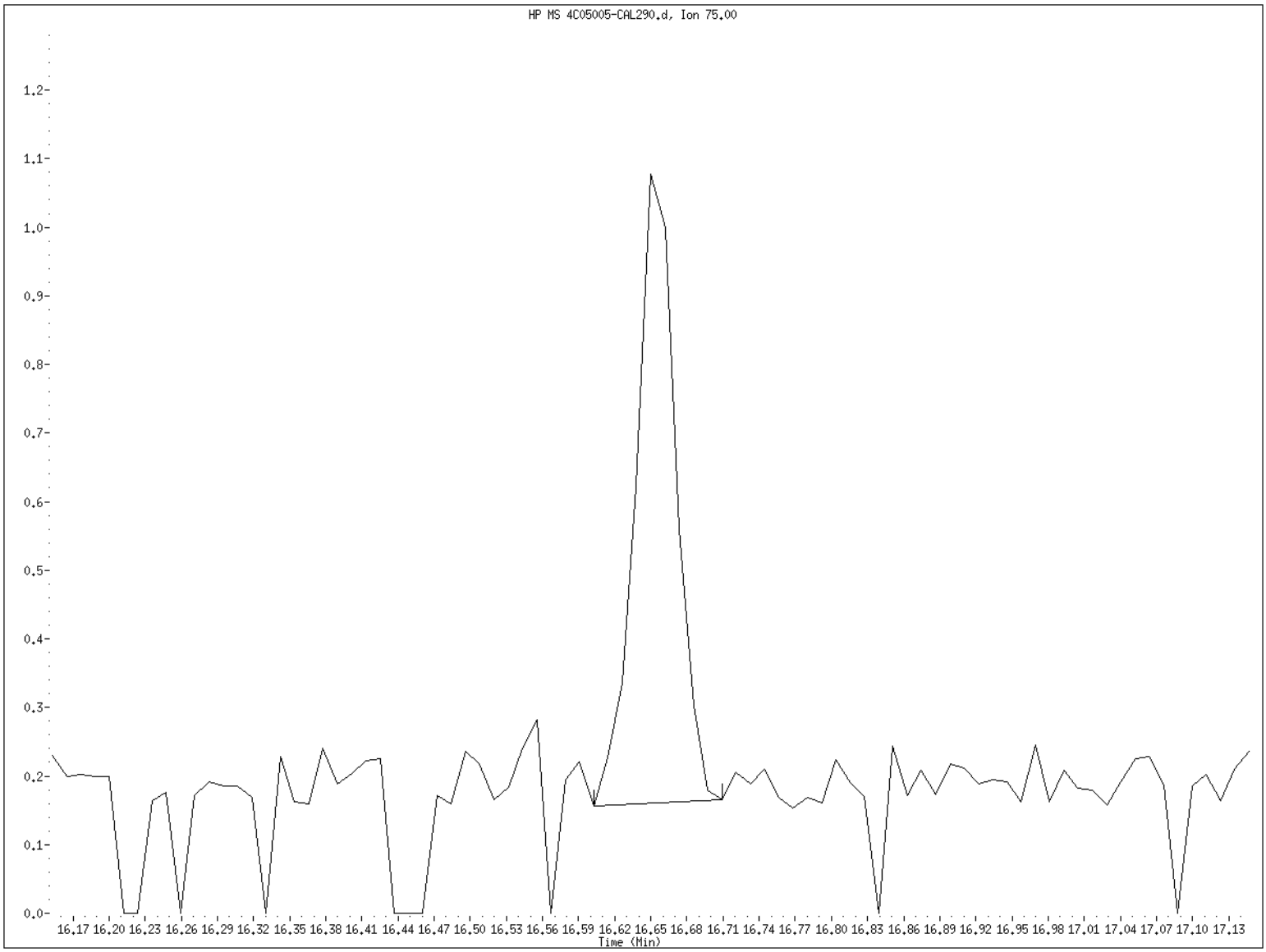
Client ID: VSTD001SY
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:24
Retention Time: 12.34
Operator ID: JAO

3/6/2014

1,2-Dibromo-3-Chloropropane CAS Number 96-12-8 Area = 2139 Manually integrated



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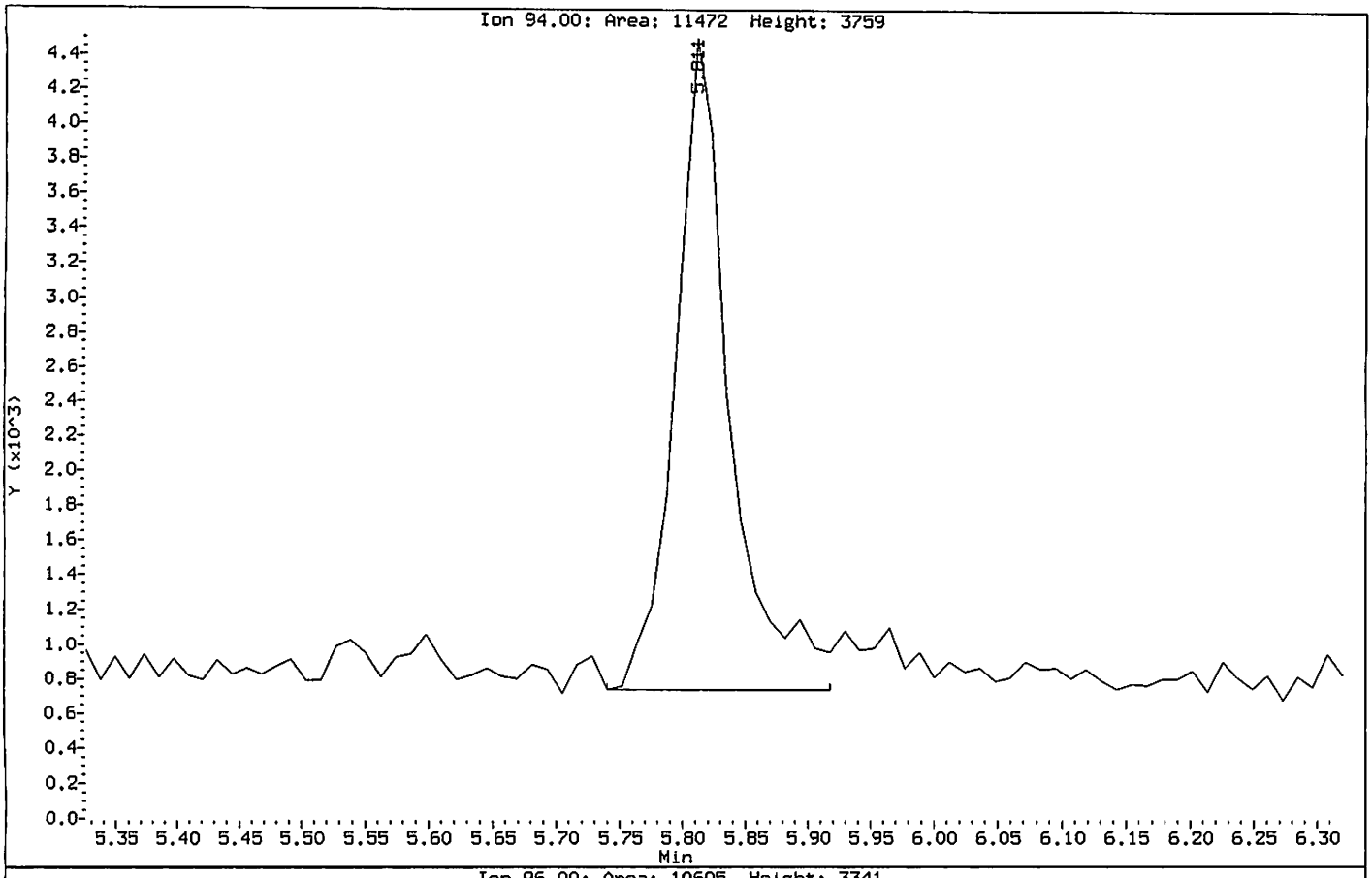
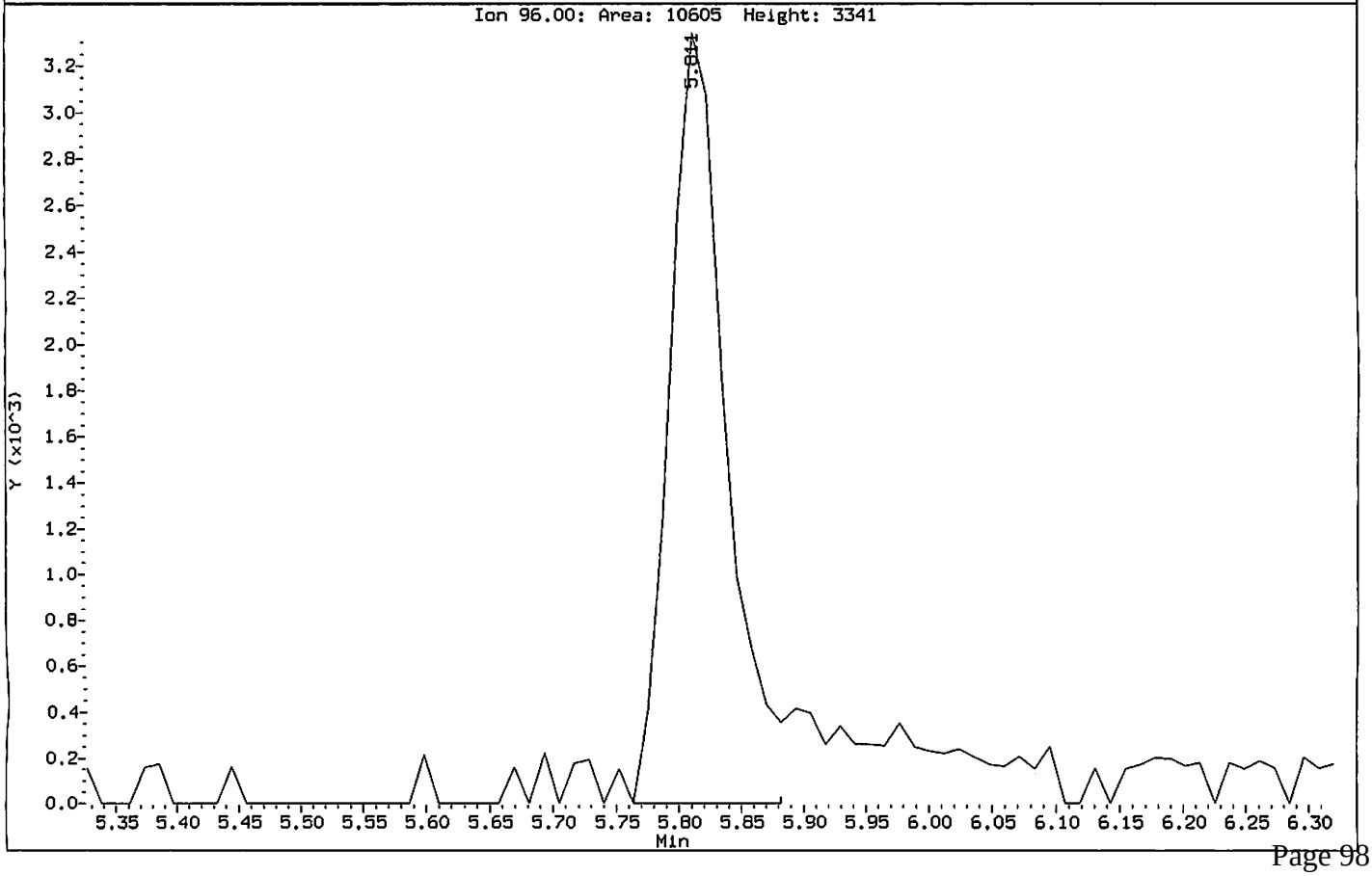
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 14:24
Retention Time: 16.65
Operator ID: JAO

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL290.d
Injection Date: 05-MAR-2014 14:24
Instrument: 5973hp90.i
Client Sample ID: VSTD001SY

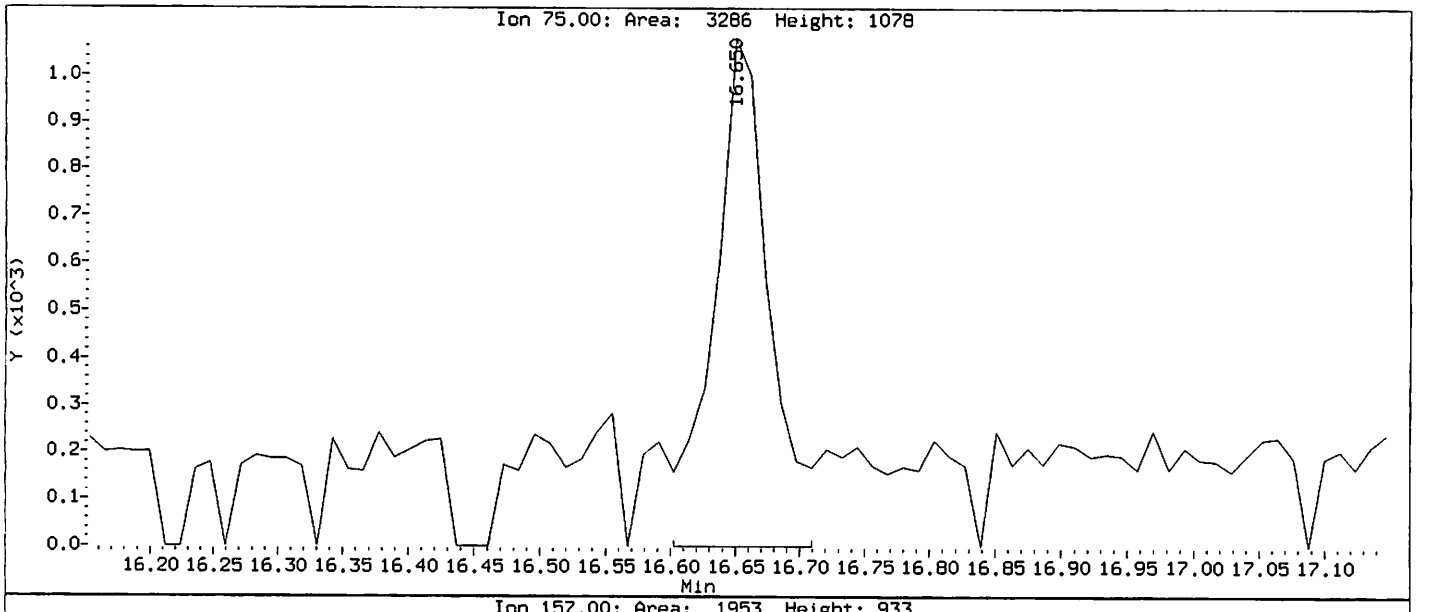
Compound: Bromomethane
CAS Number: 74-83-9

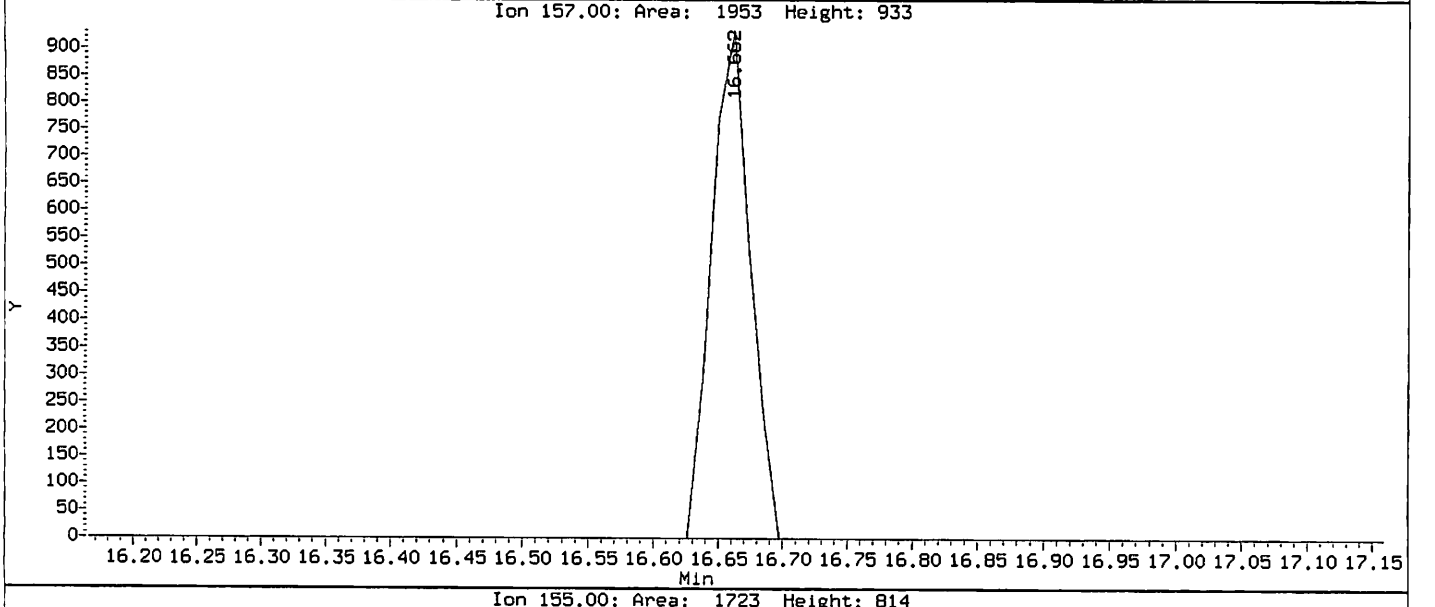


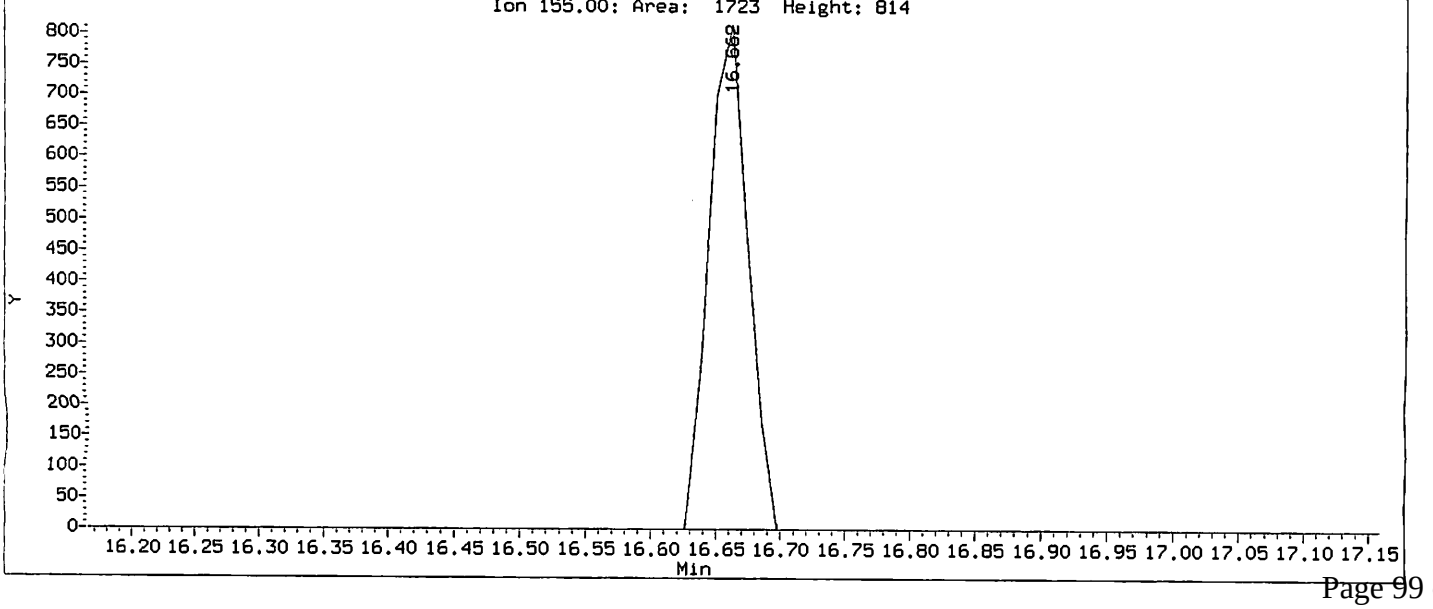


Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL290.d
Injection Date: 05-MAR-2014 14:24
Instrument: 5973hp90.i
Client Sample ID: VSTD001SY

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

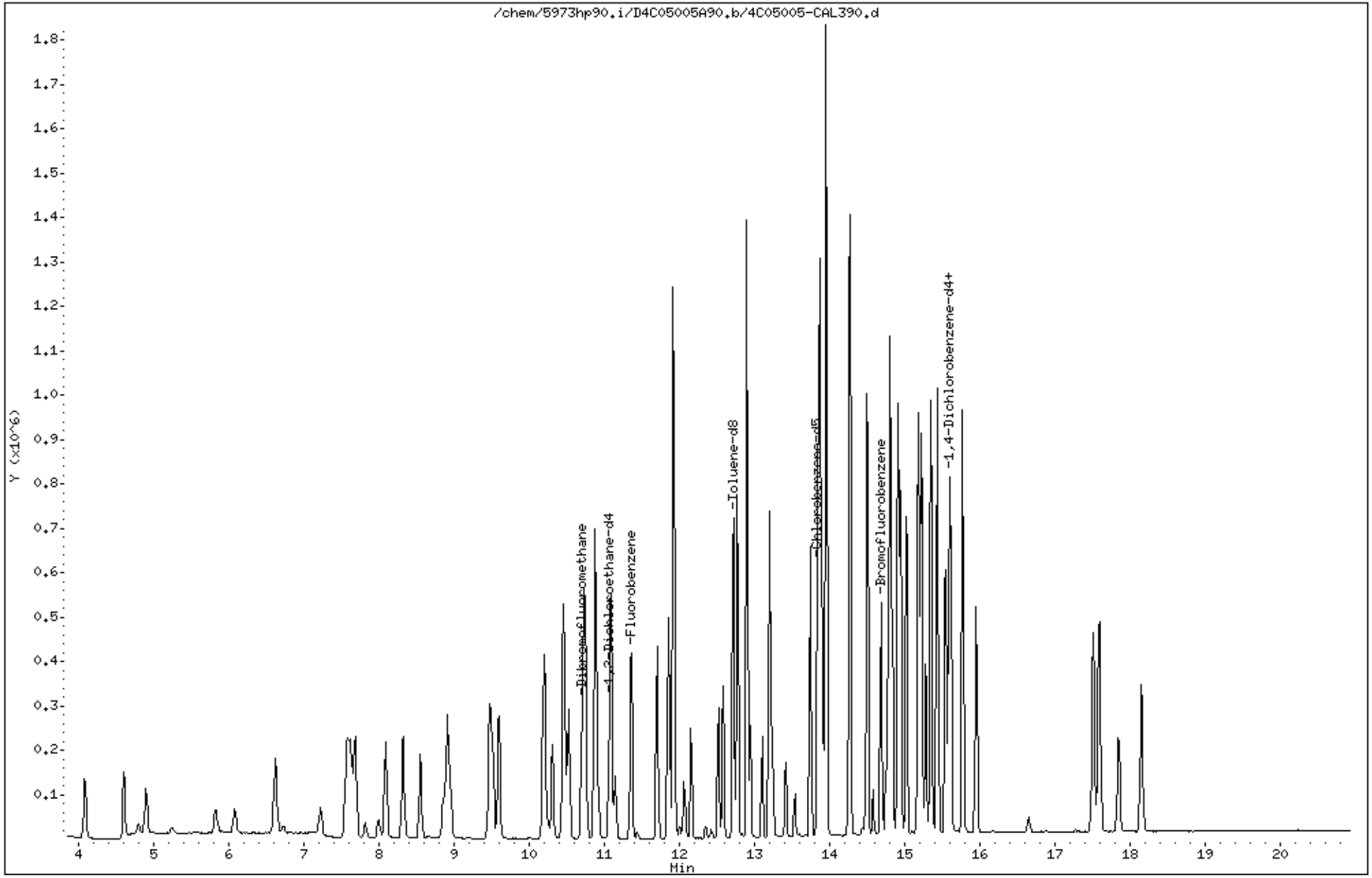






Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL390.d
Date : 05-MAR-2014 16:54
Client ID: VSTD005SY
Sample Info: 4C05005-CAL3:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



Robin Hai 3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL390.d
Report Date: 06-Mar-2014 11:50

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL390.d
Lab Smp Id: 4C05005-CAL3 Client Smp ID: VSTD005SY
Inj Date : 05-MAR-2014 16:54
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4C05005-CAL3:JAO
Misc Info : VSTD005SY
Comment :
Method : /chem/5973hp90.i/D4C05005A90.b/8260B_25ppbv21.m
Meth Date : 06-Mar-2014 11:50 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 16:54 Cal File: 4C05005-CAL390.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	11.360	11.360	(1.000)	410907	125.000	
* 2 Chlorobenzene-d5	117	13.833	13.833	(1.000)	318307	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.597	15.597	(1.000)	167893	125.000	
$ 4 Dibromofluoromethane	113	10.698	10.698	(0.942)	119363	125.000	125.492
$ 5 1,2-Dichloroethane-d4	65	11.065	11.065	(0.974)	114324	125.000	126.487
$ 6 Toluene-d8	98	12.721	12.721	(0.920)	484005	125.000	121.489
$ 7 Bromofluorobenzene	95	14.685	14.685	(0.942)	178981	125.000	118.782
8 Dichlorodifluoromethane	85	4.071	4.071	(0.358)	178765	125.000	122.404
9 Chloromethane	50	4.592	4.592	(0.404)	180668	125.000	115.087
10 Vinyl Chloride	62	4.888	4.888	(0.430)	150972	125.000	123.933
11 Bromomethane	94	5.823	5.823	(0.513)	61476	125.000	125.126
12 Chloroethane	64	6.071	6.071	(0.534)	71823	125.000	119.684
13 Trichlorofluoromethane	101	6.615	6.615	(0.582)	240039	125.000	122.269
14 Acrolein	56	7.550	7.550	(0.665)	39561	1250.00	1250.00
15 1,1,1-trichloro-2,2,2-trifluo	117	7.574	7.574	(0.667)	73921	125.000	123.024

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL390.d
Report Date: 06-Mar-2014 11:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.621	7.621	(0.671)	76508	125.000	124.673
17 1,1-Dichloroethene	96	7.680	7.680	(0.676)	112484	125.000	120.703
18 Acetone	43	7.811	7.811	(0.688)	62334	625.000	625.411
19 Iodomethane	142	7.988	7.988	(0.703)	77668	125.000	125.072
20 Carbon disulfide	76	8.083	8.083	(0.711)	403494	125.000	128.005
22 3-Chloropropene	39	8.308	8.308	(0.731)	146136	125.000	119.498
23 Acetonitrile	41	8.308	8.308	(0.731)	195053	125.000	119.912
24 Methyl acetate	43	8.319	8.319	(0.732)	38049	125.000	125.166
25 Methylene Chloride	84	8.544	8.544	(0.752)	102857	125.000	115.703
26 Acrylonitrile	53	8.947	8.947	(0.788)	111264	1250.00	1250.00
28 trans-1,2-Dichloroethene	96	8.911	8.911	(0.784)	125775	125.000	122.962
27 Methyl-tert-butyl ether	73	8.864	8.864	(0.780)	135529	125.000	125.000
30 Isopropyl ether	45	9.467	9.467	(0.833)	334349	125.000	125.917
31 Vinyl acetate	43	9.467	9.467	(0.833)	212103	125.000	130.848
32 1,1-Dichloroethane	63	9.515	9.515	(0.837)	239332	125.000	122.761
33 Chloroprene	53	9.597	9.597	(0.845)	214571	125.000	126.412
34 2-butanone	43	10.177	10.177	(0.896)	91415	625.000	668.861
35 2,2-Dichloropropane	77	10.189	10.189	(0.897)	186005	125.000	122.509
36 cis-1,2-Dichloroethene	96	10.213	10.213	(0.899)	123894	125.000	123.444
37 Propionitrile	54	10.307	10.307	(0.907)	222437	6250.00	7462.91
38 Methacrylonitrile	41	10.449	10.449	(0.920)	305651	1250.00	1419.93
39 Bromochloromethane	128	10.473	10.473	(0.922)	41138	125.000	126.711
40 Chloroform	83	10.520	10.520	(0.926)	241395	125.000	125.546
42 1,1,1-Trichloroethane	97	10.721	10.721	(0.944)	252958	125.000	124.577
43 Cyclohexane	84	10.745	10.745	(0.946)	190344	125.000	124.506
44 1,1-dichloropropene	75	10.875	10.875	(0.957)	194359	125.000	124.182
45 Isobutyl alcohol	43	10.911	10.911	(0.960)	81937	6250.00	7122.43
46 Carbon Tetrachloride	117	10.875	10.875	(0.957)	219144	125.000	126.961
47 Benzene	78	11.088	11.088	(0.976)	480090	125.000	124.382
48 1,2-Dichloroethane	62	11.136	11.136	(0.980)	133412	125.000	131.685
49 Trichloroethene	130	11.704	11.704	(1.030)	136243	125.000	123.533
50 Methylcyclohexane	83	11.857	11.857	(1.044)	222193	125.000	123.909
51 1,2-Dichloropropane	63	11.928	11.928	(1.050)	111425	125.000	125.352
52 Methylmethacrylate	69	11.917	11.917	(1.049)	392636	1250.00	1481.48
53 1,4-dioxane	88	11.999	11.999	(1.056)	17452	6250.00	6929.43
54 Dibromomethane	174	12.059	12.059	(1.061)	44709	125.000	129.401
55 Bromodichloromethane	83	12.153	12.153	(1.070)	159651	125.000	133.726
56 2-chloroethyl vinyl ether	63	12.343	12.343	(1.086)	7908	250.000	250.000(M)
57 cis-1,3-Dichloropropene	75	12.520	12.520	(1.102)	161495	125.000	131.098
58 4-Methyl-2-pentanone	43	12.579	12.579	(0.909)	233226	625.000	683.996
59 Toluene	92	12.769	12.769	(0.923)	313367	125.000	119.775
60 Ethylmethacrylate	69	12.899	12.899	(0.932)	652194	1250.00	1624.61
61 trans-1,3-Dichloropropene	75	12.946	12.946	(0.936)	128420	125.000	132.548
62 1,1,2-Trichloroethane	97	13.100	13.100	(0.947)	65266	125.000	133.043
63 2-hexanone	43	13.206	13.206	(0.955)	164095	625.000	682.490
64 1,3-Dichloropropane	76	13.242	13.242	(0.957)	121606	125.000	130.595
65 Tetrachloroethene	164	13.206	13.206	(0.955)	125192	125.000	124.265

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Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL390.d
Report Date: 06-Mar-2014 11:50

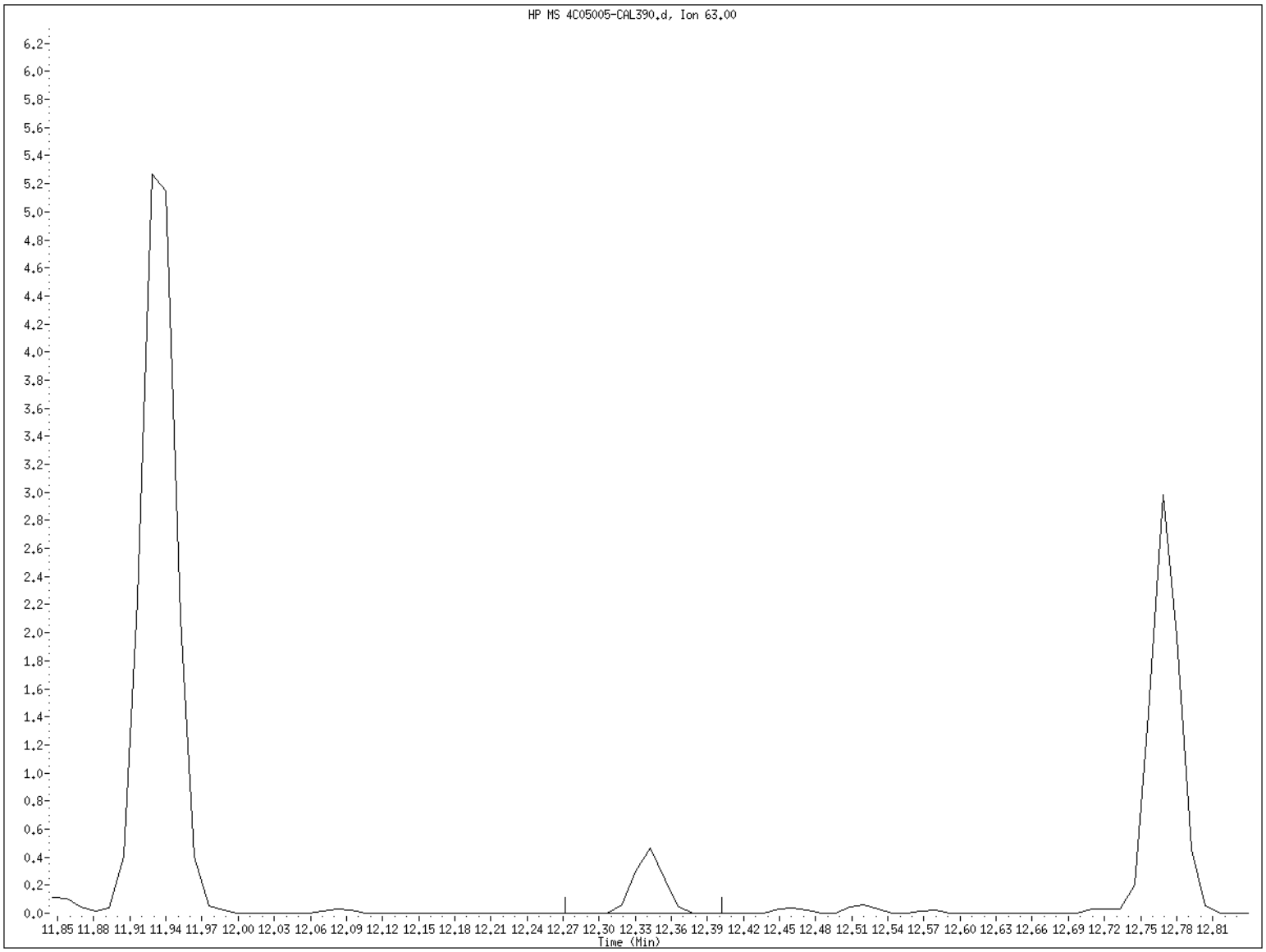
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	13.419	13.419	(0.970)	88125	125.000	136.013
67 1,2-Dibromoethane	107	13.538	13.538	(0.979)	63082	125.000	134.479
68 1-Chlorohexane	55	13.739	13.739	(0.993)	150865	125.000	125.802
69 Chlorobenzene	112	13.857	13.857	(1.002)	340185	125.000	126.424
70 Ethylbenzene	106	13.881	13.881	(1.003)	203462	125.000	125.461
71 1,1,1,2-Tetrachloroethane	131	13.904	13.904	(1.005)	119848	125.000	131.100
72 m,p-Xylene	106	13.952	13.952	(1.009)	490839	250.000	251.145
73 m,p-Xylene (part of total)	106	13.952	13.952	(1.009)	490839	250.000	251.145
74 o-Xylene	106	14.259	14.259	(1.031)	228876	125.000	126.851
75 o-Xylene (part of total)	106	14.259	14.259	(1.031)	228876	125.000	126.851
76 Styrene	104	14.271	14.271	(1.032)	359997	125.000	130.169
77 Bromoform	173	14.484	14.484	(0.929)	43855	125.000	136.489
78 Isopropyl Benzene	105	14.496	14.496	(1.048)	678319	125.000	125.208
79 1,1,2,2-Tetrachloroethane	83	14.745	14.745	(0.945)	72650	125.000	131.543
81 1,2,3-Trichloropropane	110	14.816	14.816	(1.071)	20507	125.000	133.434
80 trans-1,4-dichloro-2-butene	53	14.780	14.780	(1.068)	81951	500.000	564.115
82 n-Propyl Benzene	91	14.804	14.804	(0.949)	846769	125.000	120.885
83 Bromobenzene	156	14.839	14.839	(1.073)	139625	125.000	130.288
84 1,3,5-Trimethyl Benzene	105	14.910	14.910	(0.956)	559492	125.000	122.112
85 2-Chlorotoluene	126	14.946	14.946	(0.958)	152081	125.000	120.043
86 4-Chlorotoluene	126	15.029	15.029	(0.964)	155796	125.000	121.001
87 tert-Butyl Benzene	119	15.182	15.182	(0.973)	559377	125.000	120.629
88 1,2,4-Trimethyl Benzene	105	15.218	15.218	(0.976)	564368	125.000	123.426
89 Pentachloroethane	167	15.289	15.289	(0.980)	80880	125.000	131.265
90 sec-Butyl Benzene	105	15.348	15.348	(0.984)	751698	125.000	121.636
91 p-Isopropyl Toluene	119	15.431	15.431	(0.989)	629826	125.000	122.620
92 1,3-Dichlorobenzene	146	15.549	15.549	(0.997)	297046	125.000	123.149
93 1,4-Dichlorobenzene	146	15.620	15.620	(1.002)	283556	125.000	121.286
94 n-Butyl Benzene	91	15.774	15.774	(1.011)	619621	125.000	121.607
95 1,2-Dichlorobenzene	146	15.952	15.952	(1.023)	241620	125.000	123.543
96 1,2-Dibromo-3-Chloropropane	75	16.650	16.650	(1.068)	13455	125.000	146.062
97 1,2,4-Trichlorobenzene	180	17.513	17.513	(1.123)	199470	125.000	124.144
98 Hexachlorobutadiene	225	17.596	17.596	(1.128)	151608	125.000	125.790
99 Naphthalene	128	17.857	17.857	(1.145)	257655	125.000	124.375
171 Diethyl ether	45	7.219	7.219	(0.635)	37064	125.000	112.030
100 1,2,3-Trichlorobenzene	180	18.152	18.152	(1.164)	163848	125.000	124.676
M 101 1,2-Dichloroethene (total)	96				249669	250.000	246.401
M 102 Xylene (total)	106				719715	125.000	398.891

QC Flag Legend

M - Compound response manually integrated.

3/6/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 7908 Manually integrated



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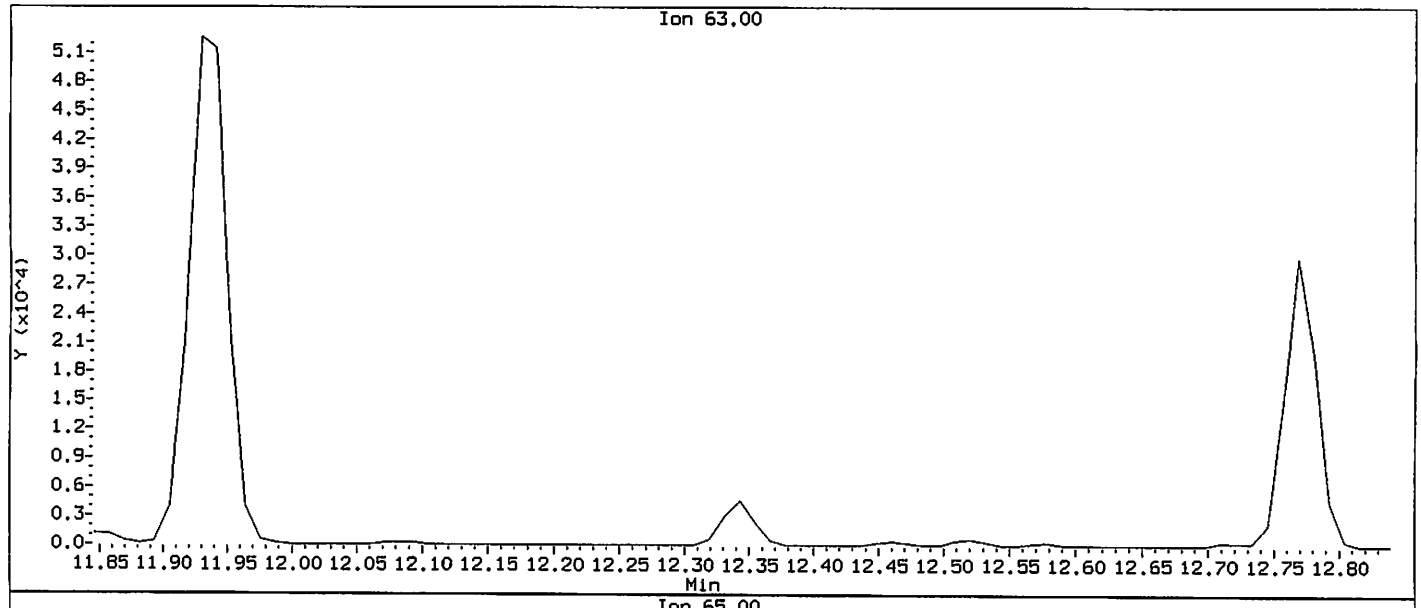
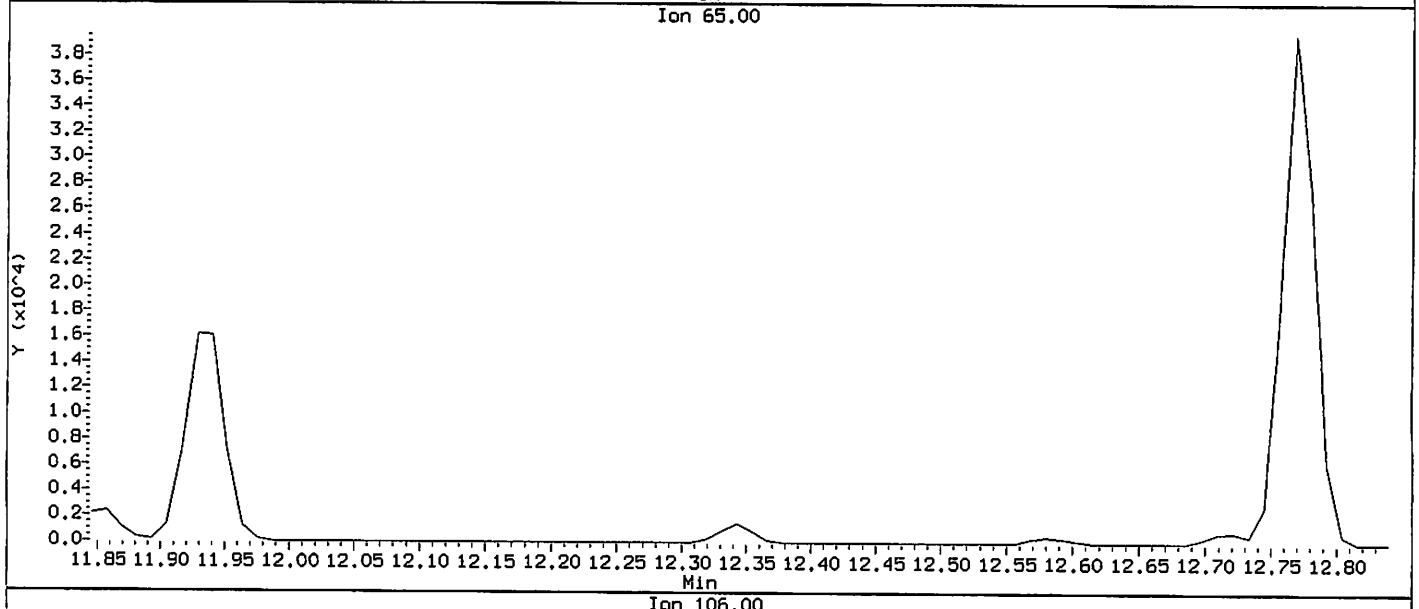
Client ID: VSTD005SY
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 16:54
Retention Time: 12.34
Operator ID: JAO

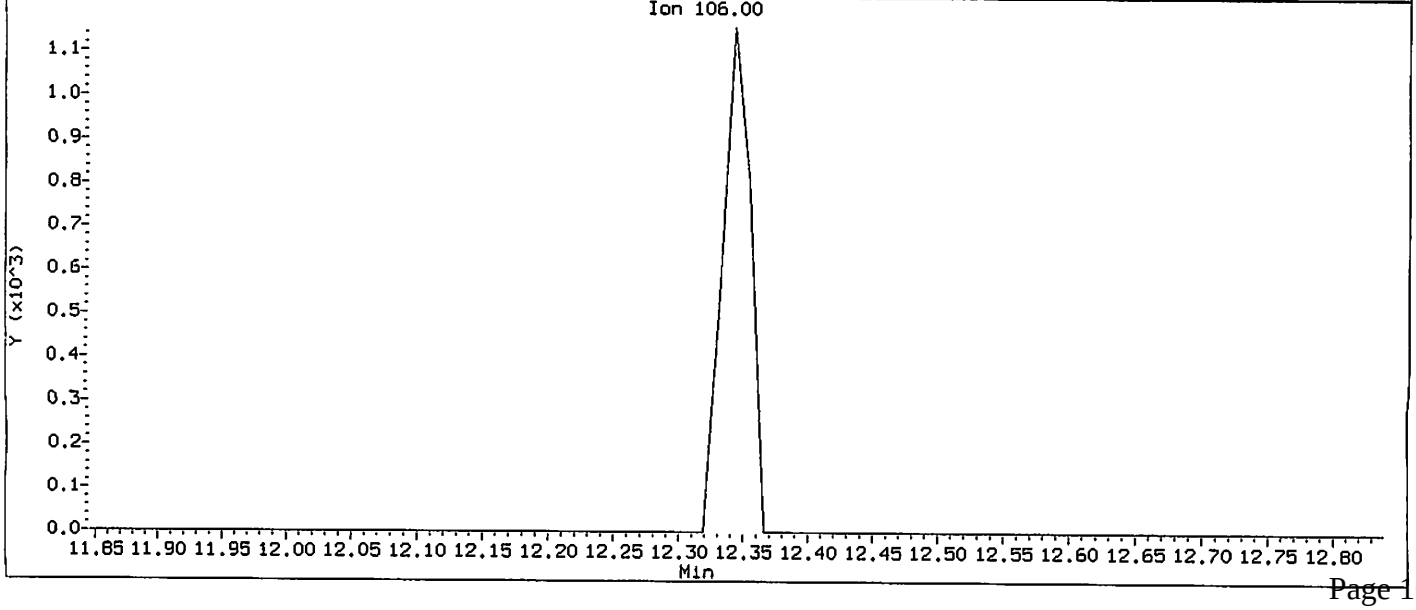
3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL390.d
Injection Date: 05-MAR-2014 16:54
Instrument: 5973hp90.i
Client Sample ID: VSTD005SY

Compound: 2-chloroethyl vinyl ether
CAS Number: 110-75-8







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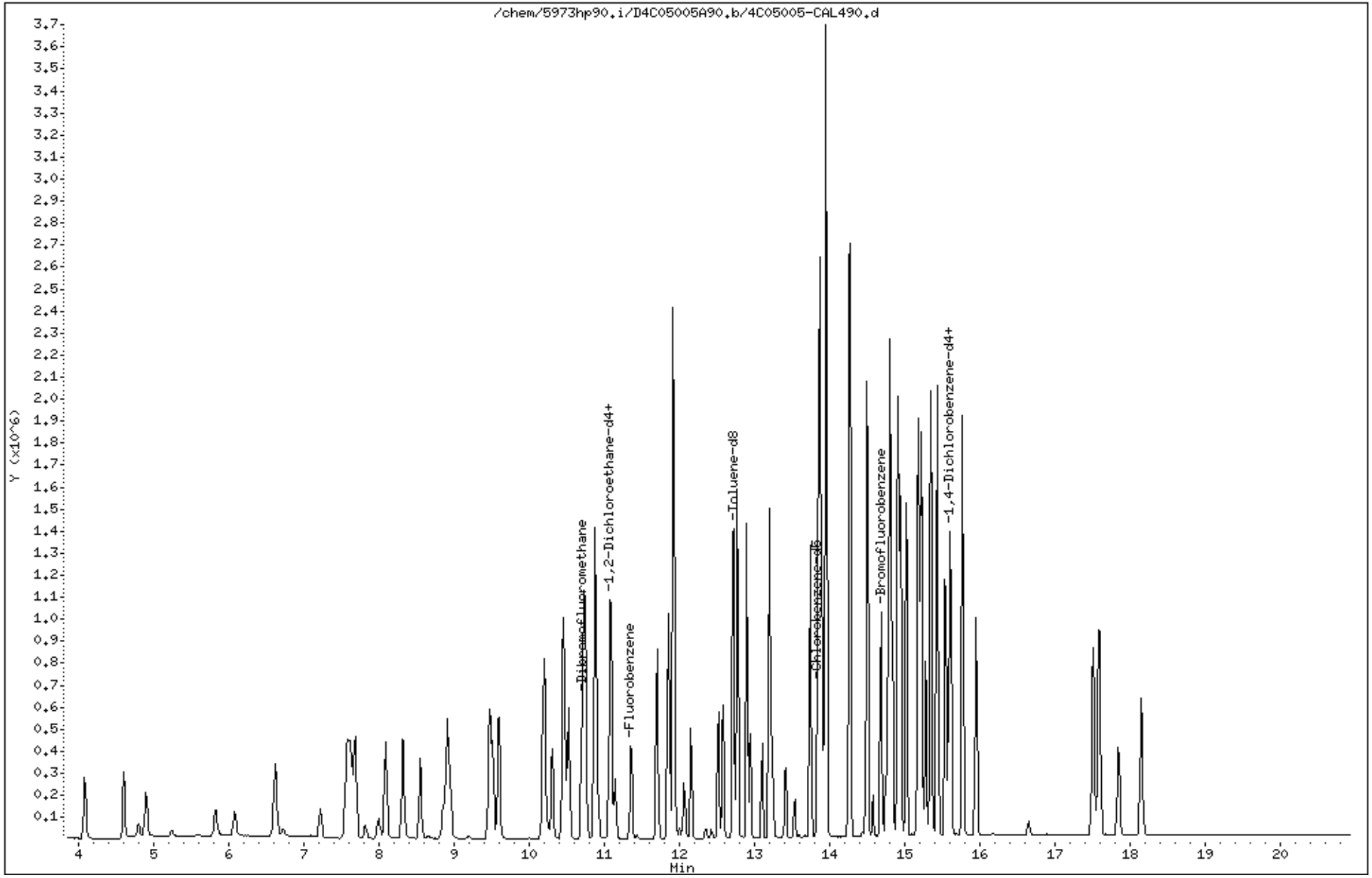
Date : 05-MAR-2014 16:24
Client ID: VSTD010SY
Sample Info: 4C05005-CAL4:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL490.d
Report Date: 06-Mar-2014 11:50

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL490.d
Lab Smp Id: 4C05005-CAL4 Client Smp ID: VSTD010SY
Inj Date : 05-MAR-2014 16:24
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4C05005-CAL4:JAO
Misc Info : VSTD010SY
Comment :
Method : /chem/5973hp90.i/D4C05005A90.b/8260B_25ppbv21.m
Meth Date : 06-Mar-2014 11:50 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 16:24 Cal File: 4C05005-CAL490.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	11.361	11.361	(1.000)	416518	125.000	
* 2 Chlorobenzene-d5	117	13.834	13.834	(1.000)	325002	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.597	15.597	(1.000)	170380	125.000	
$ 4 Dibromofluoromethane	113	10.698	10.698	(0.942)	241229	250.000	250.150
$ 5 1,2-Dichloroethane-d4	65	11.065	11.065	(0.974)	222061	250.000	244.239
$ 6 Toluene-d8	98	12.722	12.722	(0.920)	999623	250.000	246.795
$ 7 Bromofluorobenzene	95	14.686	14.686	(0.942)	356241	250.000	237.007
8 Dichlorodifluoromethane	85	4.072	4.072	(0.358)	360467	250.000	245.089
9 Chloromethane	50	4.593	4.593	(0.404)	352725	250.000	228.127
10 Vinyl Chloride	62	4.889	4.889	(0.430)	300105	250.000	244.742
11 Bromomethane	94	5.823	5.823	(0.513)	143320	250.000	253.735
12 Chloroethane	64	6.072	6.072	(0.534)	146485	250.000	243.044
13 Trichlorofluoromethane	101	6.616	6.616	(0.582)	476252	250.000	241.904
14 Acrolein	56	7.551	7.551	(0.665)	62839	2500.00	2496.34
15 1,1,1-trichloro-2,2,2-trifluo	117	7.575	7.575	(0.667)	150121	250.000	247.347

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Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL490.d
Report Date: 06-Mar-2014 11:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.622	7.622	(0.671)	154125	250.000	248.323
17 1,1-Dichloroethene	96	7.681	7.681	(0.676)	229076	250.000	244.335
18 Acetone	43	7.811	7.811	(0.688)	114772	1250.00	1232.34
19 Iodomethane	142	7.989	7.989	(0.703)	171174	250.000	252.182
20 Carbon disulfide	76	8.083	8.083	(0.711)	822919	250.000	255.618
22 3-Chloropropene	39	8.308	8.308	(0.731)	290011	250.000	237.768
23 Acetonitrile	41	8.308	8.308	(0.731)	390508	250.000	239.996
24 Methyl acetate	43	8.320	8.320	(0.732)	70241	250.000	246.237
25 Methylene Chloride	84	8.545	8.545	(0.752)	197396	250.000	226.052
26 Acrylonitrile	53	8.947	8.947	(0.788)	229423	2500.00	2499.85
28 trans-1,2-Dichloroethene	96	8.912	8.912	(0.784)	249797	250.000	243.127
27 Methyl-tert-butyl ether	73	8.853	8.853	(0.779)	219901	250.000	249.761
30 Isopropyl ether	45	9.468	9.468	(0.833)	655917	250.000	245.239
31 Vinyl acetate	43	9.468	9.468	(0.833)	356143	250.000	224.203
32 1,1-Dichloroethane	63	9.515	9.515	(0.838)	474535	250.000	242.520
33 Chloroprene	53	9.586	9.586	(0.844)	429669	250.000	249.794
34 2-butanone	43	10.178	10.178	(0.896)	155831	1250.00	1153.70
35 2,2-Dichloropropane	77	10.190	10.190	(0.897)	377950	250.000	246.668
36 cis-1,2-Dichloroethene	96	10.213	10.213	(0.899)	248662	250.000	245.793
37 Propionitrile	54	10.308	10.308	(0.907)	440190	12500.0	13990.6
38 Methacrylonitrile	41	10.450	10.450	(0.920)	568718	2500.00	2578.99
39 Bromochloromethane	128	10.474	10.474	(0.922)	81549	250.000	248.345
40 Chloroform	83	10.521	10.521	(0.926)	483571	250.000	248.580
42 1,1,1-Trichloroethane	97	10.722	10.722	(0.944)	511481	250.000	248.875
43 Cyclohexane	84	10.746	10.746	(0.946)	391218	250.000	251.835
44 1,1-dichloropropene	75	10.876	10.876	(0.957)	394205	250.000	248.857
45 Isobutyl alcohol	43	10.911	10.911	(0.960)	146629	12500.0	12555.5
46 Carbon Tetrachloride	117	10.876	10.876	(0.957)	452054	250.000	256.225
47 Benzene	78	11.089	11.089	(0.976)	974545	250.000	249.313
48 1,2-Dichloroethane	62	11.136	11.136	(0.980)	252302	250.000	246.747
49 Trichloroethene	130	11.704	11.704	(1.030)	280016	250.000	250.354
50 Methylcyclohexane	83	11.858	11.858	(1.044)	458376	250.000	251.628
51 1,2-Dichloropropane	63	11.929	11.929	(1.050)	219320	250.000	245.023
52 Methylmethacrylate	69	11.917	11.917	(1.049)	776778	2500.00	2782.52
53 1,4-dioxane	88	12.000	12.000	(1.056)	31045	12500.0	12243.7
54 Dibromomethane	174	12.059	12.059	(1.061)	88746	250.000	252.539
55 Bromodichloromethane	83	12.154	12.154	(1.070)	318944	250.000	260.030
56 2-chloroethyl vinyl ether	63	12.343	12.343	(1.086)	11444	500.000	498.616(M)
57 cis-1,3-Dichloropropene	75	12.521	12.521	(1.102)	321975	250.000	255.842
58 4-Methyl-2-pentanone	43	12.580	12.580	(0.909)	424019	1250.00	1225.79
59 Toluene	92	12.769	12.769	(0.923)	643560	250.000	243.124
60 Ethylmethacrylate	69	12.899	12.899	(0.932)	691982	2500.00	1837.37
61 trans-1,3-Dichloropropene	75	12.947	12.947	(0.936)	253704	250.000	254.817
62 1,1,2-Trichloroethane	97	13.101	13.101	(0.947)	124923	250.000	249.555
63 2-hexanone	43	13.207	13.207	(0.955)	284836	1250.00	1181.47
64 1,3-Dichloropropane	76	13.242	13.242	(0.957)	233960	250.000	247.047
65 Tetrachloroethene	164	13.195	13.195	(0.954)	255863	250.000	249.051

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Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL490.d
Report Date: 06-Mar-2014 11:50

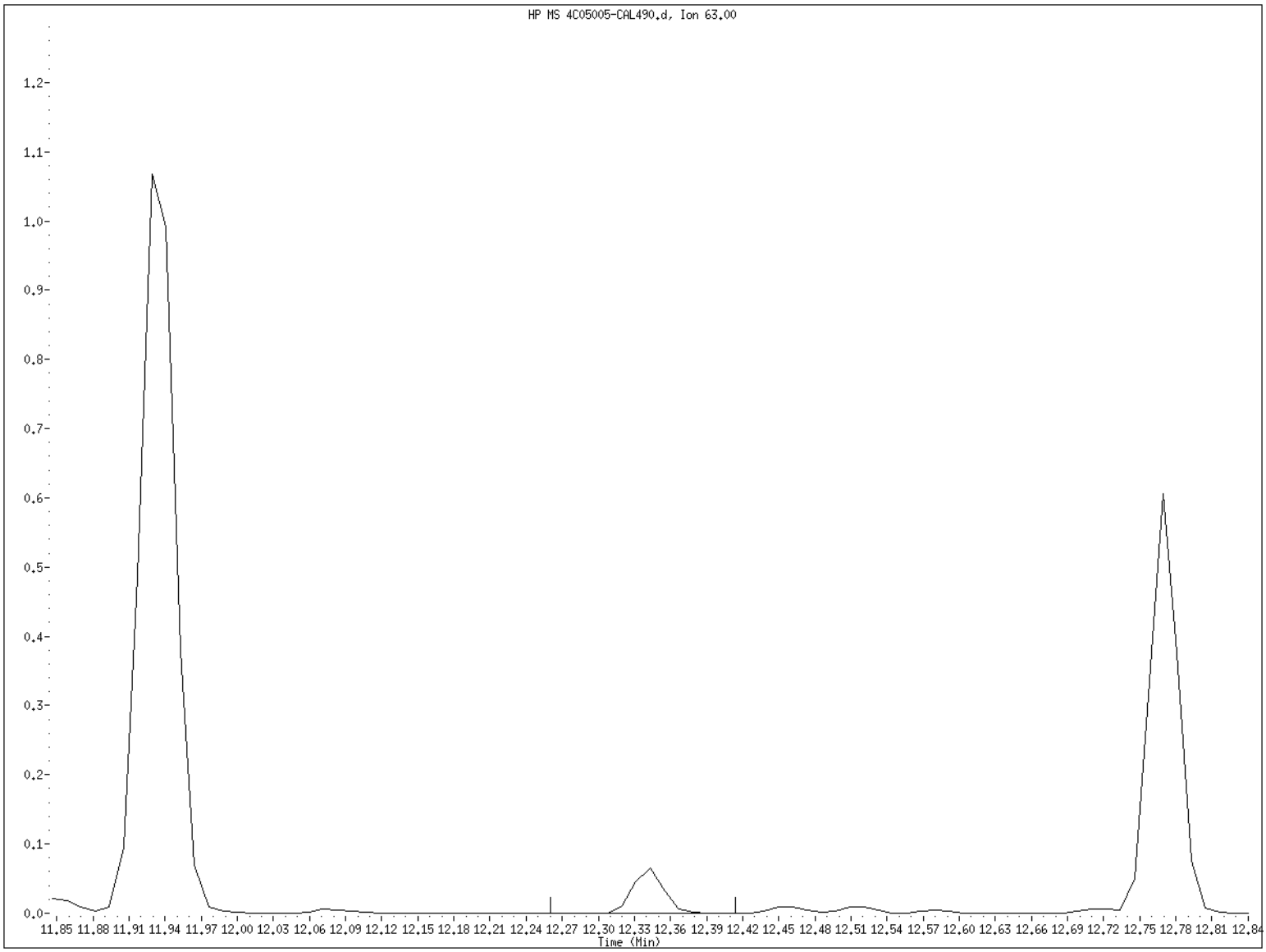
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	13.420	13.420	(0.970)	177358	250.000	263.331
67 1,2-Dibromoethane	107	13.538	13.538	(0.979)	120570	250.000	251.301
68 1-Chlorohexane	55	13.739	13.739	(0.993)	303283	250.000	248.263
69 Chlorobenzene	112	13.858	13.858	(1.002)	684430	250.000	249.338
70 Ethylbenzene	106	13.881	13.881	(1.003)	417598	250.000	251.646
71 1,1,1,2-Tetrachloroethane	131	13.905	13.905	(1.005)	243288	250.000	257.901
72 m,p-Xylene	106	13.952	13.952	(1.009)	1001173	500.000	501.283
73 m,p-Xylene (part of total)	106	13.952	13.952	(1.009)	1001173	500.000	501.283
74 o-Xylene	106	14.260	14.260	(1.031)	467929	250.000	252.988
75 o-Xylene (part of total)	106	14.260	14.260	(1.031)	467929	250.000	252.988
76 Styrene	104	14.272	14.272	(1.032)	731945	250.000	256.843
77 Bromoform	173	14.485	14.485	(0.929)	88527	250.000	265.785
78 Isopropyl Benzene	105	14.497	14.497	(1.048)	1385804	250.000	250.397
79 1,1,2,2-Tetrachloroethane	83	14.745	14.745	(0.945)	137927	250.000	247.056
81 1,2,3-Trichloropropane	110	14.816	14.816	(1.071)	38827	250.000	248.070
80 trans-1,4-dichloro-2-butene	53	14.781	14.781	(1.068)	155171	1000.00	1034.20
82 n-Propyl Benzene	91	14.804	14.804	(0.949)	1729880	250.000	244.981
83 Bromobenzene	156	14.840	14.840	(1.073)	278794	250.000	253.577
84 1,3,5-Trimethyl Benzene	105	14.911	14.911	(0.956)	1155313	250.000	248.853
85 2-Chlorotoluene	126	14.946	14.946	(0.958)	310926	250.000	243.832
86 4-Chlorotoluene	126	15.017	15.017	(0.963)	314713	250.000	243.080
87 tert-Butyl Benzene	119	15.183	15.183	(0.973)	1146860	250.000	245.252
88 1,2,4-Trimethyl Benzene	105	15.219	15.219	(0.976)	1109400	250.000	241.721
89 Pentachloroethane	167	15.278	15.278	(0.979)	171284	250.000	267.528
90 sec-Butyl Benzene	105	15.349	15.349	(0.984)	1540302	250.000	246.690
91 p-Isopropyl Toluene	119	15.432	15.432	(0.989)	1295861	250.000	248.953
92 1,3-Dichlorobenzene	146	15.550	15.550	(0.997)	595438	250.000	244.905
93 1,4-Dichlorobenzene	146	15.609	15.609	(1.001)	568210	250.000	242.036
94 n-Butyl Benzene	91	15.775	15.775	(1.011)	1273868	250.000	247.261
95 1,2-Dichlorobenzene	146	15.952	15.952	(1.023)	478595	250.000	243.296
96 1,2-Dibromo-3-Chloropropane	75	16.650	16.650	(1.068)	22866	250.000	245.929
97 1,2,4-Trichlorobenzene	180	17.514	17.514	(1.123)	381632	250.000	237.843
98 Hexachlorobutadiene	225	17.597	17.597	(1.128)	301492	250.000	247.364
99 Naphthalene	128	17.845	17.845	(1.144)	478542	250.000	232.838
171 Diethyl ether	45	7.220	7.220	(0.635)	88406	250.000	260.076
100 1,2,3-Trichlorobenzene	180	18.153	18.153	(1.164)	308892	250.000	235.951
M 101 1,2-Dichloroethene (total)	96				498459	500.000	488.900
M 102 Xylene (total)	106				1469102	250.000	794.277(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

3/6/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 11444 Manually integrated

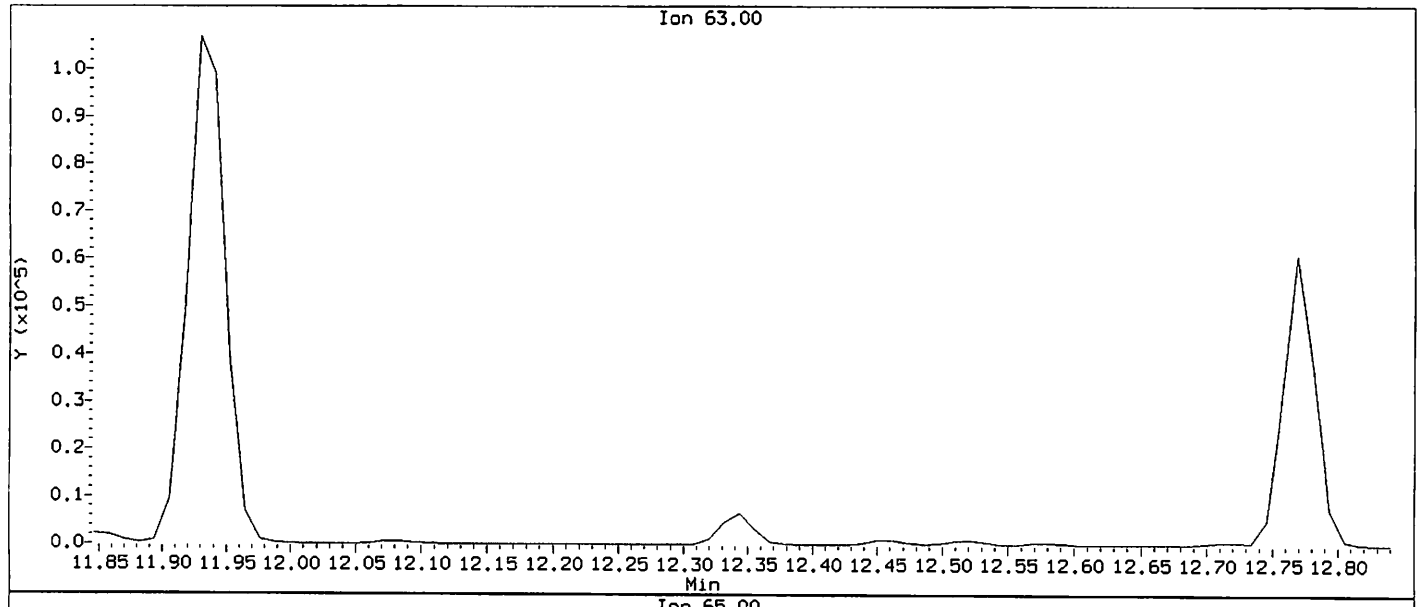


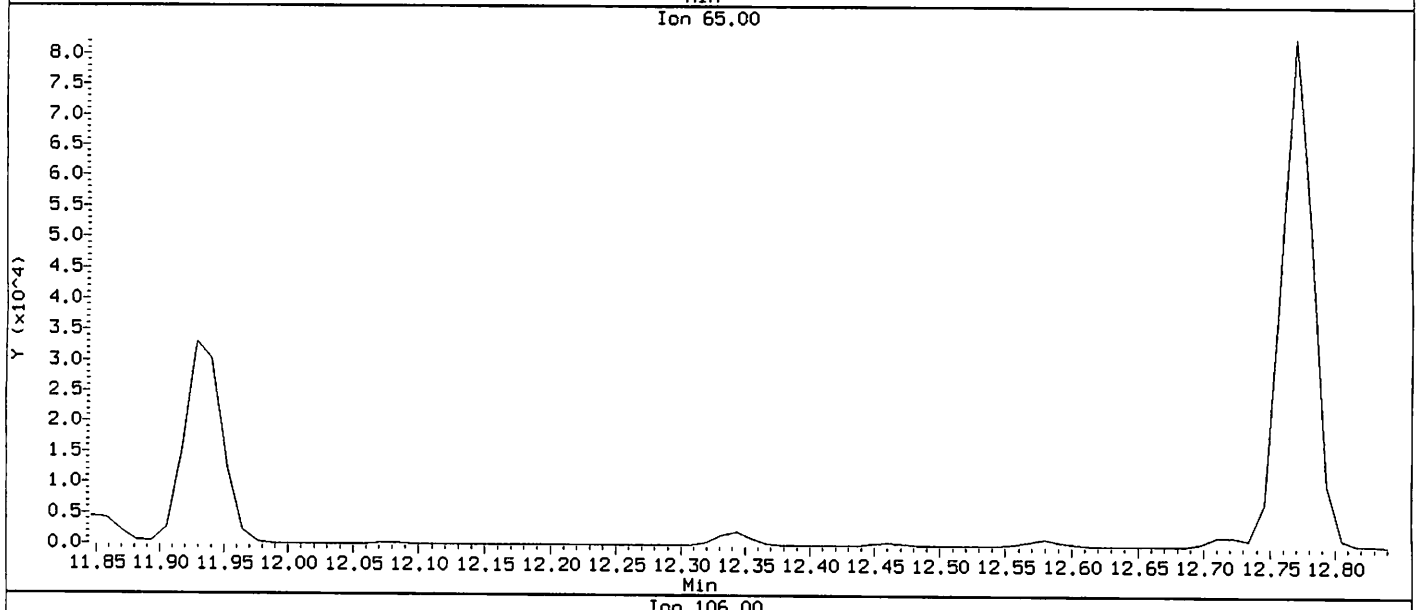
File name: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL490.d
Client ID: VSTD010SY
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 16:24
Retention Time: 12.34
Operator ID: JAO

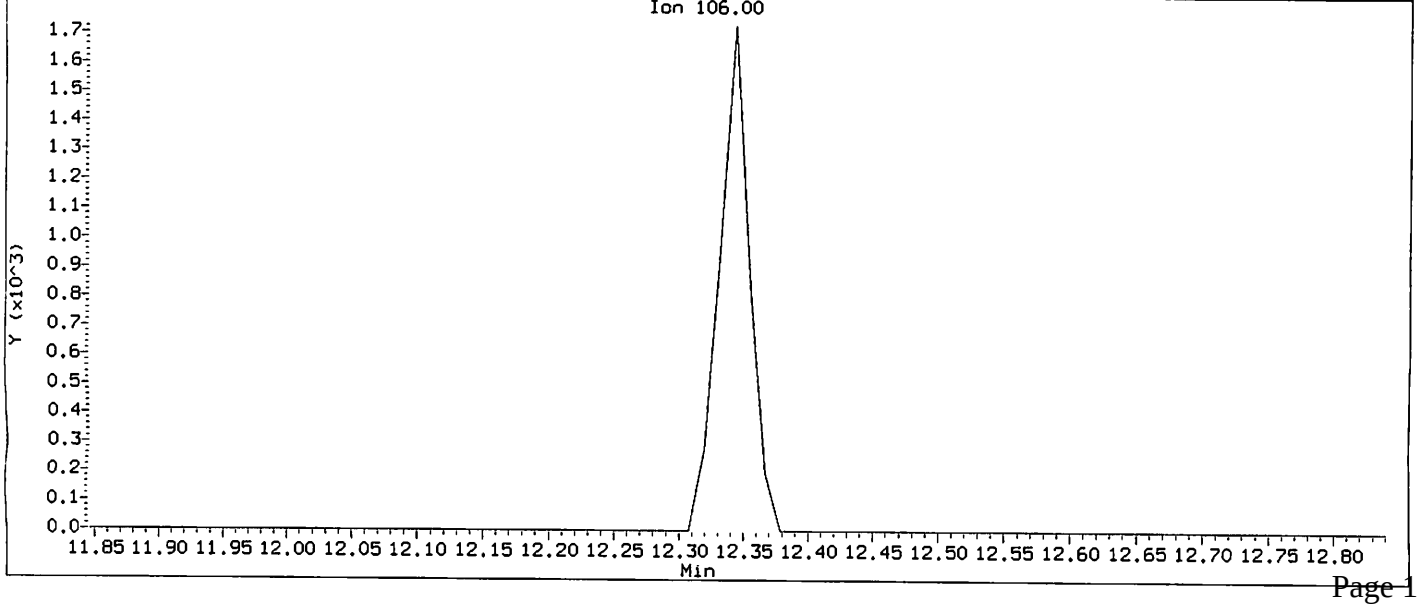
3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL490.d
Injection Date: 05-MAR-2014 16:24
Instrument: 5973hp90.i
Client Sample ID: VSTD010SY

Compound: 2-chloroethyl vinyl ether
CAS Number: 110-75-8







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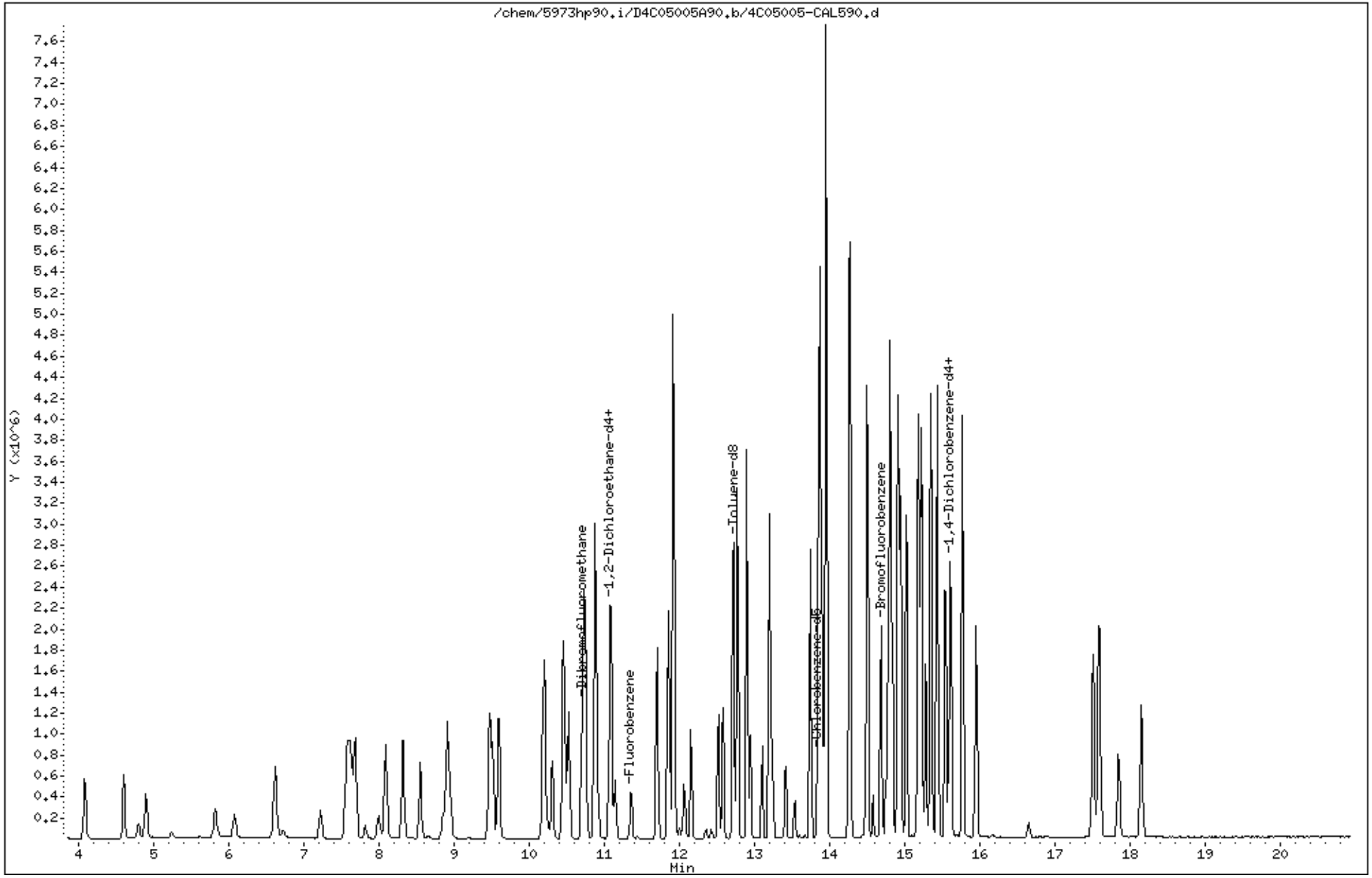
Date : 05-MAR-2014 15:54
Client ID: VSTD020SY
Sample Info: 4C05005-CAL5:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



Robert Hani 3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL590.d
Report Date: 06-Mar-2014 11:50

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL590.d
Lab Smp Id: 4C05005-CAL5 Client Smp ID: VSTD020SY
Inj Date : 05-MAR-2014 15:54
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4C05005-CAL5:JAO
Misc Info : VSTD020SY
Comment :
Method : /chem/5973hp90.i/D4C05005A90.b/8260B_25ppbv21.m
Meth Date : 06-Mar-2014 11:50 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:54 Cal File: 4C05005-CAL590.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	11.360	11.360	(1.000)	437002	125.000	
* 2 Chlorobenzene-d5	117	13.834	13.834	(1.000)	337654	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.597	15.597	(1.000)	173957	125.000	
$ 4 Dibromofluoromethane	113	10.698	10.698	(0.942)	474852	500.000	475.160
$ 5 1,2-Dichloroethane-d4	65	11.065	11.065	(0.974)	430724	500.000	460.461
$ 6 Toluene-d8	98	12.721	12.721	(0.920)	1953037	500.000	470.873
$ 7 Bromofluorobenzene	95	14.685	14.685	(0.942)	704658	500.000	466.793
8 Dichlorodifluoromethane	85	4.071	4.071	(0.358)	742023	500.000	484.577
9 Chloromethane	50	4.592	4.592	(0.404)	720655	500.000	454.374
10 Vinyl Chloride	62	4.888	4.888	(0.430)	622796	500.000	487.195
11 Bromomethane	94	5.811	5.811	(0.511)	333640	500.000	507.488
12 Chloroethane	64	6.071	6.071	(0.534)	300036	500.000	479.372
13 Trichlorofluoromethane	101	6.616	6.616	(0.582)	987442	500.000	482.280
14 Acrolein	56	7.550	7.550	(0.665)	126069	5000.00	5023.01
15 1,1,1-trichloro-2,2,2-trifluo	117	7.574	7.574	(0.667)	315257	500.000	496.061

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL590.d
Report Date: 06-Mar-2014 11:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.621	7.621	(0.671)	320895	500.000	494.211
17 1,1-Dichloroethene	96	7.680	7.680	(0.676)	478016	500.000	488.704
18 Acetone	43	7.811	7.811	(0.688)	229734	2500.00	2478.00
19 Iodomethane	142	7.988	7.988	(0.703)	423294	500.000	511.050
20 Carbon disulfide	76	8.083	8.083	(0.711)	1704964	500.000	503.815
22 3-Chloropropene	39	8.308	8.308	(0.731)	610333	500.000	481.373
23 Acetonitrile	41	8.308	8.308	(0.731)	810121	500.000	479.424
24 Methyl acetate	43	8.319	8.319	(0.732)	134302	500.000	489.965
25 Methylene Chloride	84	8.544	8.544	(0.752)	395625	500.000	443.928
26 Acrylonitrile	53	8.947	8.947	(0.788)	390019	5000.00	4972.05
28 trans-1,2-Dichloroethene	96	8.911	8.911	(0.784)	517276	500.000	483.761
27 Methyl-tert-butyl ether	73	8.852	8.852	(0.779)	362560	500.000	500.440
30 Isopropyl ether	45	9.467	9.467	(0.833)	1321650	500.000	476.516
31 Vinyl acetate	43	9.467	9.467	(0.833)	731029	500.000	449.671
32 1,1-Dichloroethane	63	9.515	9.515	(0.837)	972944	500.000	478.928
33 Chloroprene	53	9.586	9.586	(0.844)	902254	500.000	499.960
34 2-butanone	43	10.177	10.177	(0.896)	317196	2500.00	2286.16
35 2,2-Dichloropropane	77	10.189	10.189	(0.897)	809545	500.000	502.860
36 cis-1,2-Dichloroethene	96	10.213	10.213	(0.899)	514884	500.000	487.998
37 Propionitrile	54	10.307	10.307	(0.907)	794311	25000.0	24244.1
38 Methacrylonitrile	41	10.449	10.449	(0.920)	1082391	5000.00	4739.28
39 Bromochloromethane	128	10.473	10.473	(0.922)	164117	500.000	480.913
40 Chloroform	83	10.520	10.520	(0.926)	997651	500.000	491.002
42 1,1,1-Trichloroethane	97	10.722	10.722	(0.944)	1080910	500.000	501.033
43 Cyclohexane	84	10.745	10.745	(0.946)	824728	500.000	504.795
44 1,1-dichloropropene	75	10.875	10.875	(0.957)	831965	500.000	500.472
45 Isobutyl alcohol	43	10.911	10.911	(0.960)	310233	25000.0	25254.9
46 Carbon Tetrachloride	117	10.875	10.875	(0.957)	971362	500.000	519.616
47 Benzene	78	11.088	11.088	(0.976)	2016524	500.000	493.335
48 1,2-Dichloroethane	62	11.136	11.136	(0.980)	514825	500.000	483.781
49 Trichloroethene	130	11.704	11.704	(1.030)	595435	500.000	505.909
50 Methylcyclohexane	83	11.846	11.846	(1.043)	979334	500.000	509.880(A)
51 1,2-Dichloropropane	63	11.928	11.928	(1.050)	449447	500.000	482.719
52 Methylmethacrylate	69	11.917	11.917	(1.049)	1638932	5000.00	5465.45(A)
53 1,4-dioxane	88	11.999	11.999	(1.056)	66553	25000.0	25013.7
54 Dibromomethane	174	12.059	12.059	(1.061)	179076	500.000	488.494
55 Bromodichloromethane	83	12.153	12.153	(1.070)	666738	500.000	514.376
56 2-chloroethyl vinyl ether	63	12.343	12.343	(1.086)	17711	1000.00	1002.62(M)
57 cis-1,3-Dichloropropene	75	12.520	12.520	(1.102)	663979	500.000	502.292
58 4-Methyl-2-pentanone	43	12.579	12.579	(0.909)	859388	2500.00	2412.28
59 Toluene	92	12.769	12.769	(0.923)	1350178	500.000	492.739
60 Ethylmethacrylate	69	12.899	12.899	(0.932)	1792663	5000.00	4659.57
61 trans-1,3-Dichloropropene	75	12.946	12.946	(0.936)	524283	500.000	505.467
62 1,1,2-Trichloroethane	97	13.100	13.100	(0.947)	251987	500.000	487.543
63 2-hexanone	43	13.206	13.206	(0.955)	578548	2500.00	2345.51
64 1,3-Dichloropropane	76	13.242	13.242	(0.957)	468905	500.000	481.088
65 Tetrachloroethene	164	13.206	13.206	(0.955)	546960	500.000	509.910

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL590.d
Report Date: 06-Mar-2014 11:50

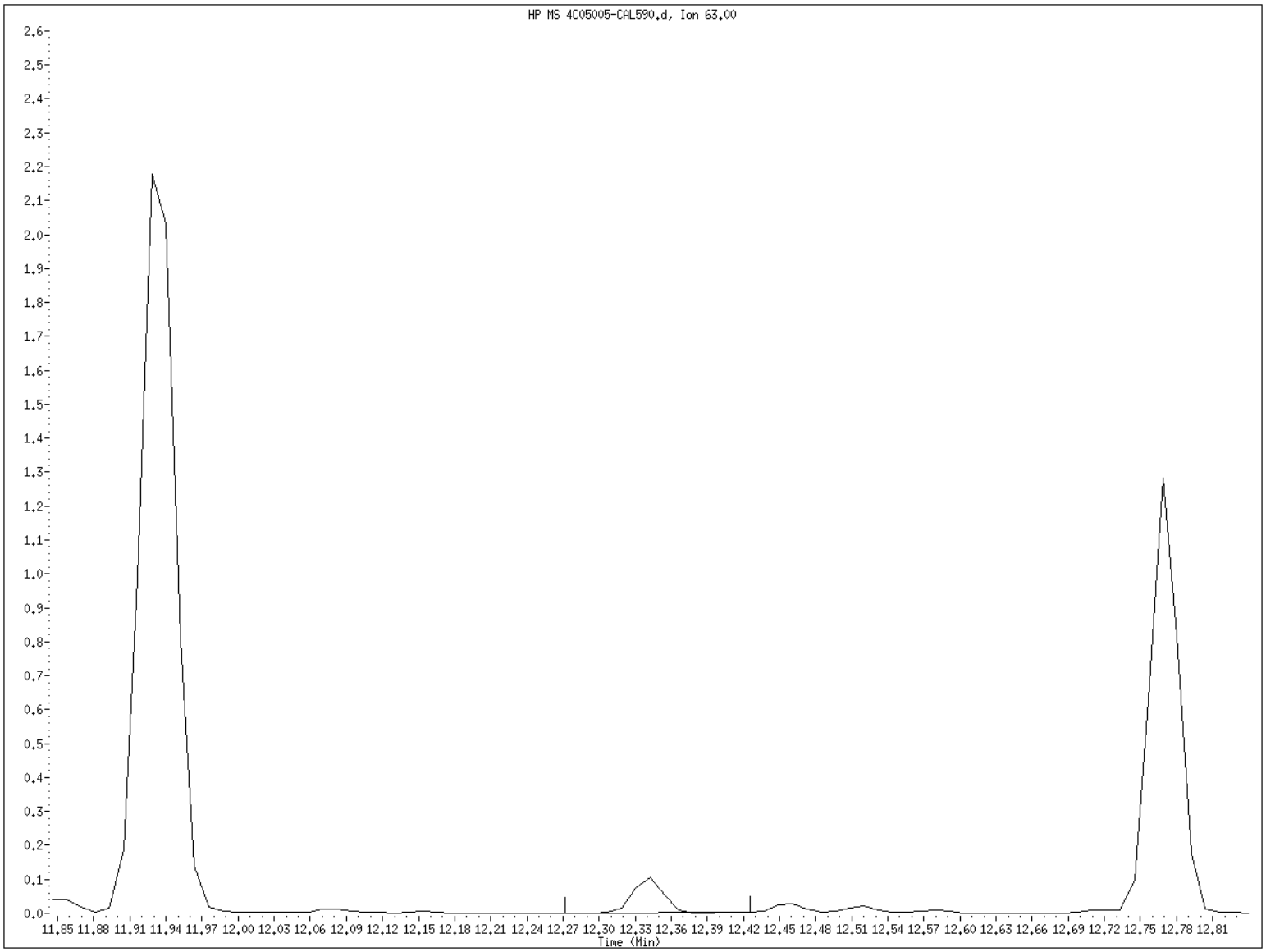
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	13.419	13.419	(0.970)	373155	500.000	526.274
67 1,2-Dibromoethane	107	13.538	13.538	(0.979)	242843	500.000	489.697
68 1-Chlorohexane	55	13.739	13.739	(0.993)	635978	500.000	500.876
69 Chlorobenzene	112	13.857	13.857	(1.002)	1435132	500.000	502.579
70 Ethylbenzene	106	13.881	13.881	(1.003)	887559	500.000	511.774
71 1,1,1,2-Tetrachloroethane	131	13.905	13.905	(1.005)	511922	500.000	517.710
72 m,p-Xylene	106	13.952	13.952	(1.009)	2148817	1000.00	1028.27
73 m,p-Xylene (part of total)	106	13.952	13.952	(1.009)	2148817	1000.00	1028.27
74 o-Xylene	106	14.259	14.259	(1.031)	989818	500.000	512.006(A)
75 o-Xylene (part of total)	106	14.259	14.259	(1.031)	989818	500.000	512.006(A)
76 Styrene	104	14.271	14.271	(1.032)	1524081	500.000	511.745
77 Bromoform	173	14.484	14.484	(0.929)	189759	500.000	545.347
78 Isopropyl Benzene	105	14.496	14.496	(1.048)	2915021	500.000	505.562
79 1,1,2,2-Tetrachloroethane	83	14.745	14.745	(0.945)	277988	500.000	490.108
81 1,2,3-Trichloropropane	110	14.816	14.816	(1.071)	79108	500.000	489.134
80 trans-1,4-dichloro-2-butene	53	14.780	14.780	(1.068)	316831	2000.00	2025.93
82 n-Propyl Benzene	91	14.804	14.804	(0.949)	3607263	500.000	500.278
83 Bromobenzene	156	14.839	14.839	(1.073)	580078	500.000	506.252
84 1,3,5-Trimethyl Benzene	105	14.910	14.910	(0.956)	2422933	500.000	508.892
85 2-Chlorotoluene	126	14.946	14.946	(0.958)	656348	500.000	503.301
86 4-Chlorotoluene	126	15.017	15.017	(0.963)	662819	500.000	501.139
87 tert-Butyl Benzene	119	15.182	15.182	(0.973)	2426202	500.000	506.512
88 1,2,4-Trimethyl Benzene	105	15.218	15.218	(0.976)	2393919	500.000	508.660
89 Pentachloroethane	167	15.277	15.277	(0.979)	363426	500.000	543.790(A)
90 sec-Butyl Benzene	105	15.348	15.348	(0.984)	3246139	500.000	507.334
91 p-Isopropyl Toluene	119	15.431	15.431	(0.989)	2734312	500.000	511.532
92 1,3-Dichlorobenzene	146	15.549	15.549	(0.997)	1227164	500.000	495.476
93 1,4-Dichlorobenzene	146	15.608	15.608	(1.001)	1173286	500.000	491.564
94 n-Butyl Benzene	91	15.774	15.774	(1.011)	2666135	500.000	505.475
95 1,2-Dichlorobenzene	146	15.952	15.952	(1.023)	976924	500.000	489.069
96 1,2-Dibromo-3-Chloropropane	75	16.650	16.650	(1.068)	45926	500.000	486.945
97 1,2,4-Trichlorobenzene	180	17.514	17.514	(1.123)	786347	500.000	483.867
98 Hexachlorobutadiene	225	17.596	17.596	(1.128)	649096	500.000	517.140
99 Naphthalene	128	17.845	17.845	(1.144)	950765	500.000	461.753
171 Diethyl ether	45	7.219	7.219	(0.635)	179164	500.000	501.890
100 1,2,3-Trichlorobenzene	180	18.152	18.152	(1.164)	623940	500.000	473.086
M 101 1,2-Dichloroethene (total)	96				1032160	1000.00	971.731
M 102 Xylene (total)	106				3138635	500.000	1623.53(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

3/6/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 17711 Manually integrated



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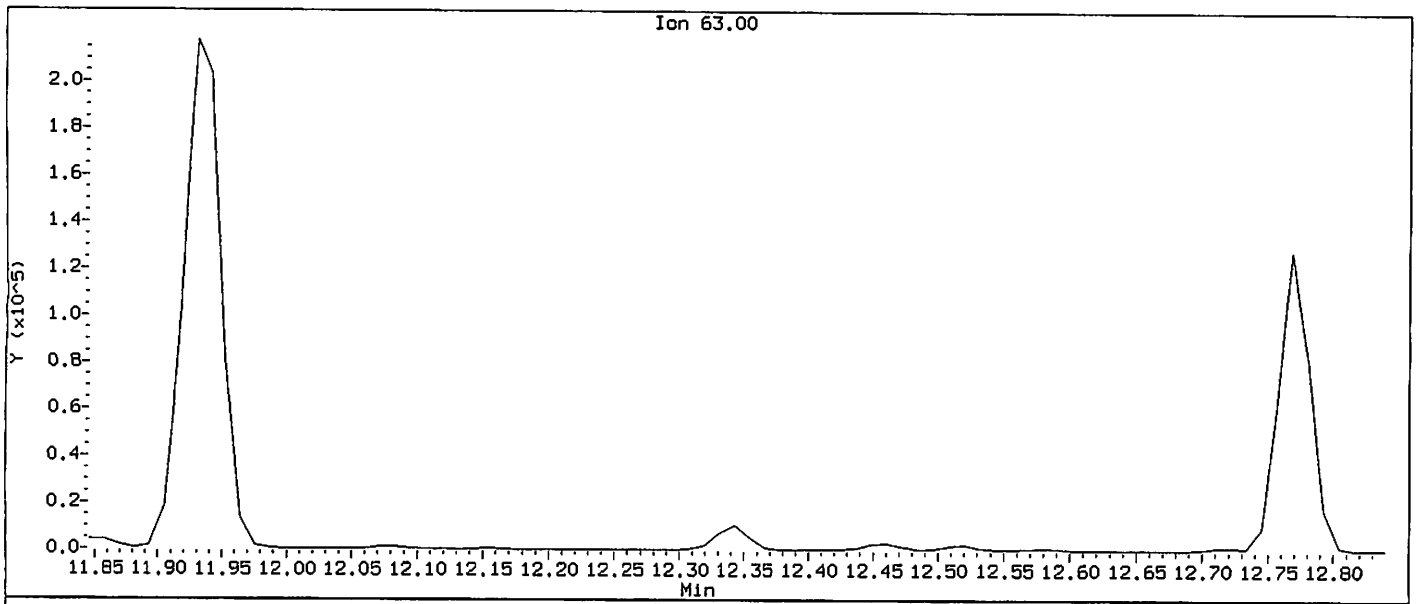
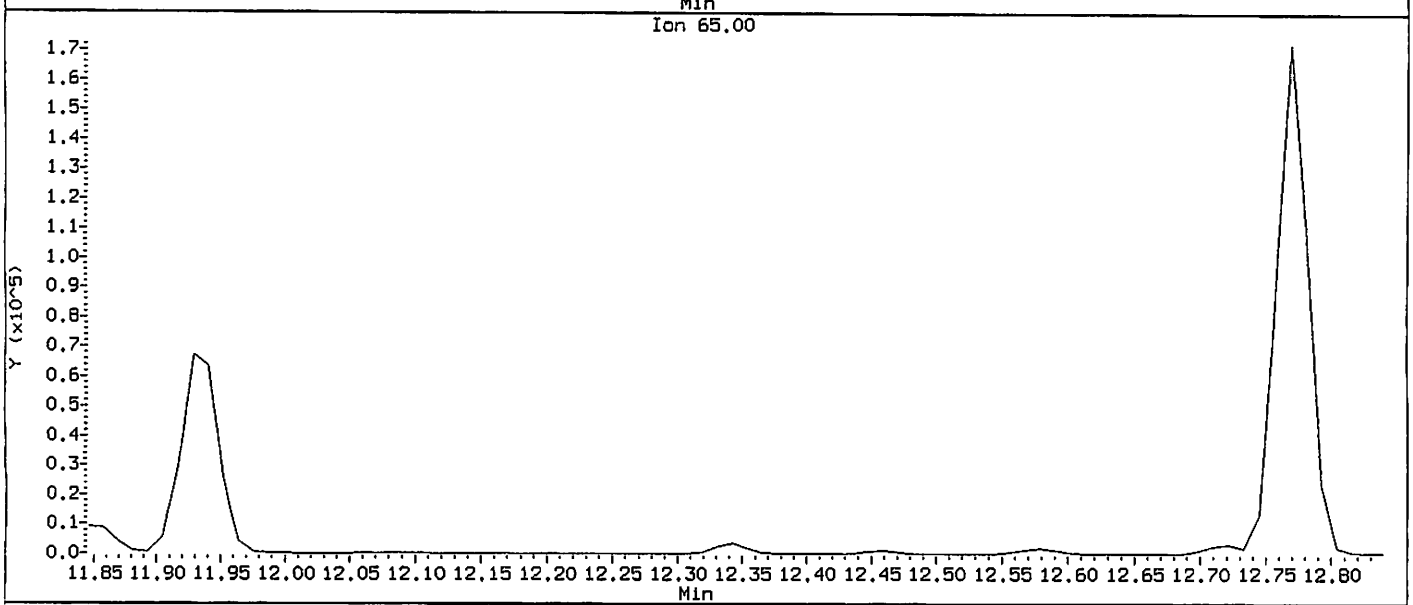
Client ID: VSTD020SY
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 15:54
Retention Time: 12.34
Operator ID: JAO

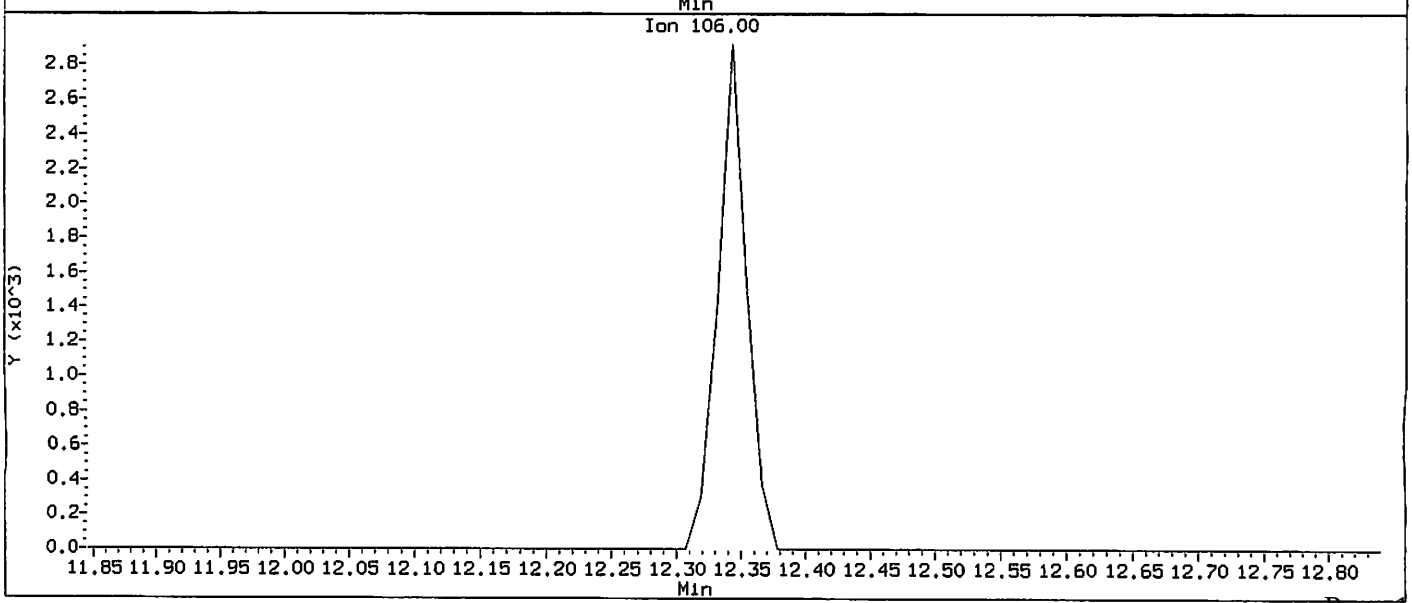
3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL590.d
Injection Date: 05-MAR-2014 15:54
Instrument: 5973hp90.i
Client Sample ID: VSTD020SY

Compound: 2-chloroethyl vinyl ether
CAS Number: 110-75-8

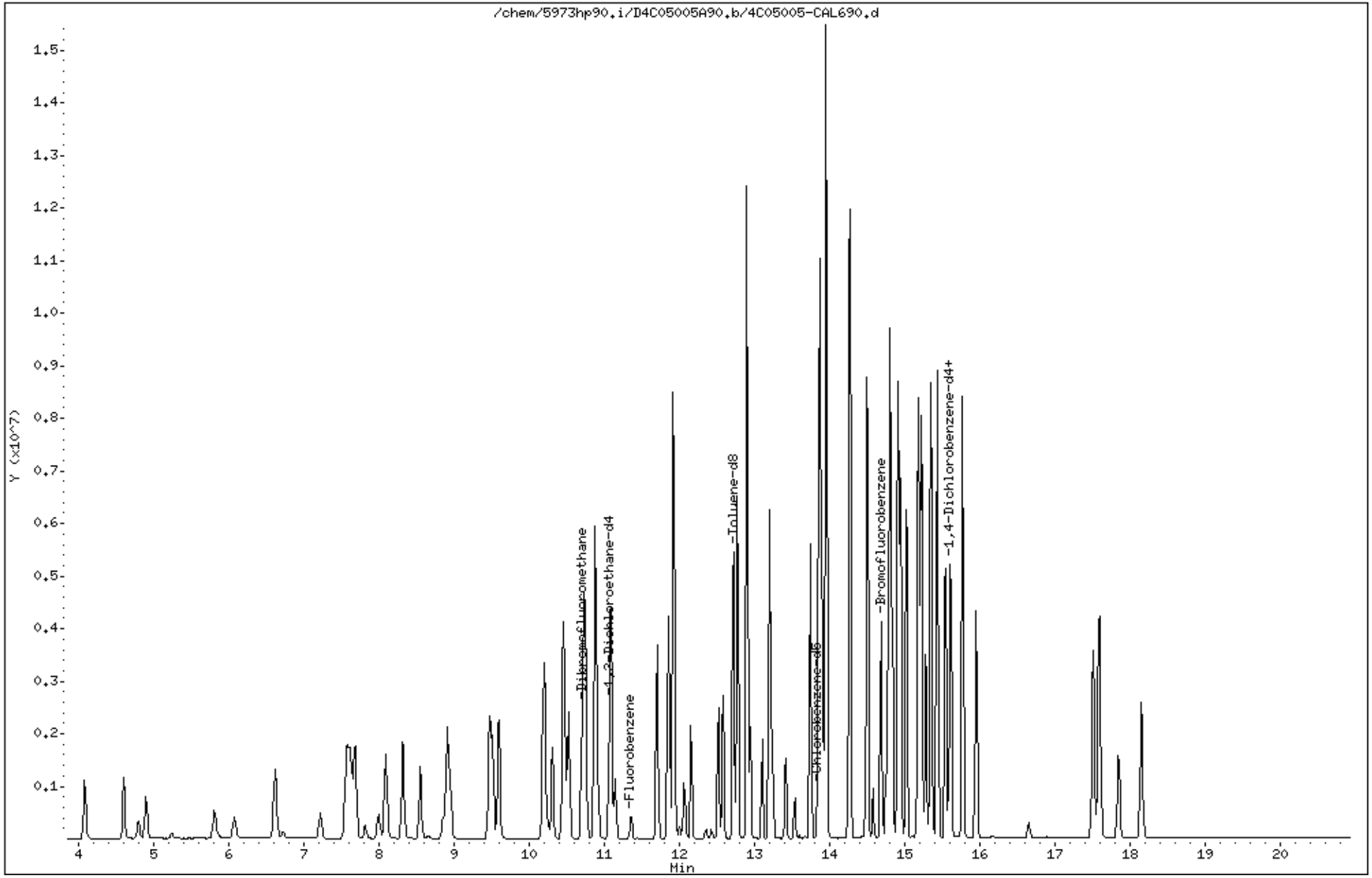






Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL690.d
Date : 05-MAR-2014 15:24
Client ID: VSTD040SY
Sample Info: 4C05005-CAL6:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL690.d
Report Date: 06-Mar-2014 11:50

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL690.d
Lab Smp Id: 4C05005-CAL6 Client Smp ID: VSTD040SY
Inj Date : 05-MAR-2014 15:24
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4C05005-CAL6:JAO
Misc Info : VSTD040SY
Comment :
Method : /chem/5973hp90.i/D4C05005A90.b/8260B_25ppbv21.m
Meth Date : 06-Mar-2014 11:50 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC-DOD.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	11.360	11.360	(1.000)	424675	125.000	
* 2 Chlorobenzene-d5	117	13.833	13.833	(1.000)	348093	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.596	15.596	(1.000)	186761	125.000	
$ 4 Dibromofluoromethane	113	10.698	10.698	(0.942)	912175	1000.00	948.867
$ 5 1,2-Dichloroethane-d4	65	11.064	11.064	(0.974)	861881	1000.00	956.399
$ 6 Toluene-d8	98	12.721	12.721	(0.920)	3703579	1000.00	885.911
$ 7 Bromofluorobenzene	95	14.685	14.685	(0.942)	1427335	1000.00	898.566
8 Dichlorodifluoromethane	85	4.071	4.071	(0.358)	1420071	1000.00	961.619
9 Chloromethane	50	4.592	4.592	(0.404)	1401886	1000.00	923.470
10 Vinyl Chloride	62	4.888	4.888	(0.430)	1151054	1000.00	938.052
11 Bromomethane	94	5.799	5.799	(0.510)	648061	1000.00	999.546
12 Chloroethane	64	6.071	6.071	(0.534)	563880	1000.00	938.477
13 Trichlorofluoromethane	101	6.615	6.615	(0.582)	1959640	1000.00	987.382
14 Acrolein	56	7.550	7.550	(0.665)	409929	10000.0	10014.6(A)
15 1,1,1-trichloro-2,2,2-trifluo	117	7.574	7.574	(0.667)	581032	1000.00	950.175

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL690.d
Report Date: 06-Mar-2014 11:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.621	7.621	(0.671)	604347	1000.00	964.562
17 1,1-Dichloroethene	96	7.680	7.680	(0.676)	878591	1000.00	936.117
18 Acetone	43	7.810	7.810	(0.688)	460159	5000.00	5030.16(A)
19 Iodomethane	142	7.988	7.988	(0.703)	865063	1000.00	1009.15(A)
20 Carbon disulfide	76	8.083	8.083	(0.711)	3189816	1000.00	974.830
22 3-Chloropropene	39	8.307	8.307	(0.731)	1216107	1000.00	989.136
23 Acetonitrile	41	8.307	8.307	(0.731)	1575421	1000.00	965.924
24 Methyl acetate	43	8.319	8.319	(0.732)	265704	1000.00	1002.17(A)
25 Methylene Chloride	84	8.544	8.544	(0.752)	743035	1000.00	878.759
26 Acrylonitrile	53	8.946	8.946	(0.787)	935095	10000.0	10034.6(A)
28 trans-1,2-Dichloroethene	96	8.911	8.911	(0.784)	964836	1000.00	939.711
27 Methyl-tert-butyl ether	73	8.852	8.852	(0.779)	591197	1000.00	1005.51(A)
30 Isopropyl ether	45	9.467	9.467	(0.833)	2527246	1000.00	947.486
31 Vinyl acetate	43	9.479	9.479	(0.834)	1846428	1000.00	1136.77
32 1,1-Dichloroethane	63	9.514	9.514	(0.837)	1847493	1000.00	945.937
33 Chloroprene	53	9.597	9.597	(0.845)	1756907	1000.00	1001.50(A)
34 2-butanone	43	10.177	10.177	(0.896)	659386	5000.00	4908.34
35 2,2-Dichloropropane	77	10.189	10.189	(0.897)	1608416	1000.00	1023.30(A)
36 cis-1,2-Dichloroethene	96	10.212	10.212	(0.899)	994624	1000.00	974.917
37 Propionitrile	54	10.307	10.307	(0.907)	1850480	50000.0	56588.5(A)
38 Methacrylonitrile	41	10.449	10.449	(0.920)	2333332	10000.0	10424.0(A)
39 Bromochloromethane	128	10.473	10.473	(0.922)	335569	1000.00	1009.87(A)
40 Chloroform	83	10.520	10.520	(0.926)	1987704	1000.00	1005.55(A)
42 1,1,1-Trichloroethane	97	10.721	10.721	(0.944)	2164539	1000.00	1026.90(A)
43 Cyclohexane	84	10.745	10.745	(0.946)	1633097	1000.00	1023.71(A)
44 1,1-dichloropropene	75	10.875	10.875	(0.957)	1651389	1000.00	1018.46(A)
45 Isobutyl alcohol	43	10.911	10.911	(0.960)	699703	50000.0	56977.5(A)
46 Carbon Tetrachloride	117	10.875	10.875	(0.957)	1968256	1000.00	1068.59(A)
47 Benzene	78	11.088	11.088	(0.976)	3941769	1000.00	993.601
48 1,2-Dichloroethane	62	11.135	11.135	(0.980)	1060906	1000.00	1021.47(A)
49 Trichloroethene	130	11.703	11.703	(1.030)	1180936	1000.00	1026.94(A)
50 Methylcyclohexane	83	11.857	11.857	(1.044)	1942224	1000.00	1033.56(A)
51 1,2-Dichloropropane	63	11.940	11.940	(1.051)	889596	1000.00	985.948
52 Methylmethacrylate	69	11.916	11.916	(1.049)	2786290	10000.0	9631.74(A)
53 1,4-dioxane	88	11.999	11.999	(1.056)	143436	50000.0	54480.6(A)
54 Dibromomethane	174	12.058	12.058	(1.061)	368213	1000.00	1027.84(A)
55 Bromodichloromethane	83	12.153	12.153	(1.070)	1379515	1000.00	1078.06(A)
56 2-chloroethyl vinyl ether	63	12.342	12.342	(1.086)	31909	2000.00	2019.72(AM)
57 cis-1,3-Dichloropropene	75	12.520	12.520	(1.102)	1385758	1000.00	1064.76(A)
58 4-Methyl-2-pentanone	43	12.579	12.579	(0.909)	1851330	5000.00	5033.95(A)
59 Toluene	92	12.768	12.768	(0.923)	2706136	1000.00	964.729
60 Ethylmethacrylate	69	12.899	12.899	(0.932)	6101613	10000.0	14117.2(A)
61 trans-1,3-Dichloropropene	75	12.946	12.946	(0.936)	1120978	1000.00	1039.96(A)
62 1,1,2-Trichloroethane	97	13.100	13.100	(0.947)	534525	1000.00	1002.65(A)
63 2-hexanone	43	13.206	13.206	(0.955)	1250370	5000.00	4930.77
64 1,3-Dichloropropane	76	13.242	13.242	(0.957)	988285	1000.00	986.258
65 Tetrachloroethene	164	13.206	13.206	(0.955)	1113843	1000.00	1006.04(A)

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL690.d
Report Date: 06-Mar-2014 11:50

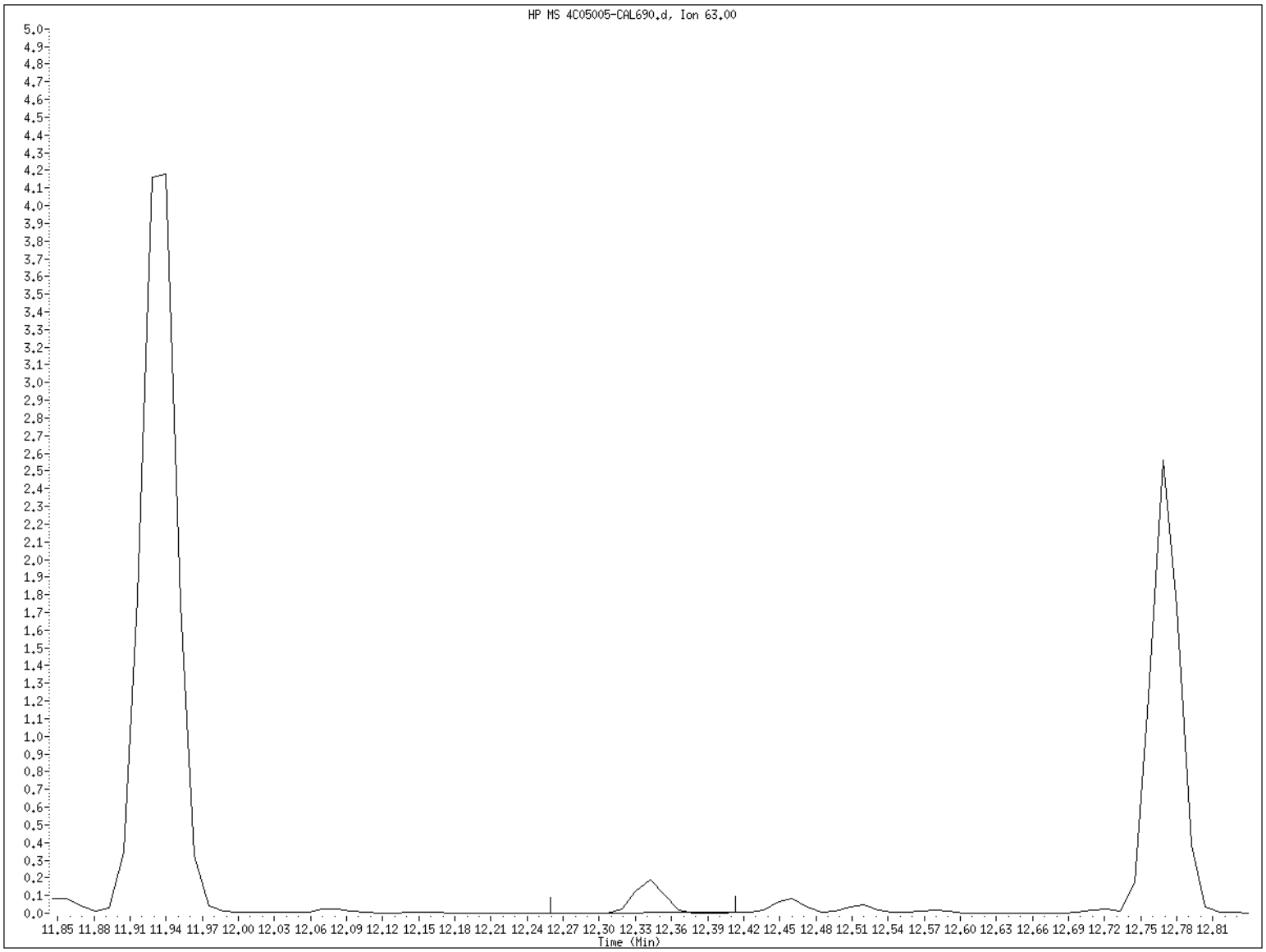
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	13.419	13.419	(0.970)	815049	1000.00	1094.05(A)
67 1,2-Dibromoethane	107	13.537	13.537	(0.979)	518121	1000.00	1011.20(A)
68 1-Chlorohexane	55	13.739	13.739	(0.993)	1320363	1000.00	1007.23(A)
69 Chlorobenzene	112	13.857	13.857	(1.002)	2951746	1000.00	1002.24(A)
70 Ethylbenzene	106	13.881	13.881	(1.003)	1828745	1000.00	1018.97(A)
71 1,1,1,2-Tetrachloroethane	131	13.904	13.904	(1.005)	1089228	1000.00	1056.45(A)
72 m,p-Xylene	106	13.952	13.952	(1.009)	4395962	2000.00	2033.64(A)
73 m,p-Xylene (part of total)	106	13.952	13.952	(1.009)	4395962	2000.00	2033.64(A)
74 o-Xylene	106	14.259	14.259	(1.031)	2052659	1000.00	1024.83(A)
75 o-Xylene (part of total)	106	14.259	14.259	(1.031)	2052659	1000.00	1024.83(A)
76 Styrene	104	14.271	14.271	(1.032)	3217813	1000.00	1039.73(A)
77 Bromoform	173	14.484	14.484	(0.929)	436662	1000.00	1136.88
78 Isopropyl Benzene	105	14.496	14.496	(1.048)	5941778	1000.00	999.665
79 1,1,2,2-Tetrachloroethane	83	14.744	14.744	(0.945)	617076	1000.00	1011.10(A)
81 1,2,3-Trichloropropane	110	14.815	14.815	(1.071)	176397	1000.00	1047.85(A)
80 trans-1,4-dichloro-2-butene	53	14.780	14.780	(1.068)	715185	4000.00	4356.86(A)
82 n-Propyl Benzene	91	14.804	14.804	(0.949)	7335171	1000.00	955.901
83 Bromobenzene	156	14.839	14.839	(1.073)	1238384	1000.00	1039.98(A)
84 1,3,5-Trimethyl Benzene	105	14.910	14.910	(0.956)	5026943	1000.00	986.154
85 2-Chlorotoluene	126	14.946	14.946	(0.958)	1384529	1000.00	990.730
86 4-Chlorotoluene	126	15.028	15.028	(0.964)	1399906	1000.00	988.194
87 tert-Butyl Benzene	119	15.182	15.182	(0.973)	5042544	1000.00	983.737
88 1,2,4-Trimethyl Benzene	105	15.218	15.218	(0.976)	4967977	1000.00	985.983
89 Pentachloroethane	167	15.289	15.289	(0.980)	796852	1000.00	1090.48(A)
90 sec-Butyl Benzene	105	15.348	15.348	(0.984)	6669791	1000.00	975.670
91 p-Isopropyl Toluene	119	15.431	15.431	(0.989)	5666779	1000.00	989.523
92 1,3-Dichlorobenzene	146	15.549	15.549	(0.997)	2609119	1000.00	984.306
93 1,4-Dichlorobenzene	146	15.620	15.620	(1.002)	2470025	1000.00	969.737
94 n-Butyl Benzene	91	15.774	15.774	(1.011)	5460406	1000.00	970.046
95 1,2-Dichlorobenzene	146	15.951	15.951	(1.023)	2072953	1000.00	972.026
96 1,2-Dibromo-3-Chloropropane	75	16.650	16.650	(1.068)	104740	1000.00	1028.51(A)
97 1,2,4-Trichlorobenzene	180	17.513	17.513	(1.123)	1622074	1000.00	940.713
98 Hexachlorobutadiene	225	17.596	17.596	(1.128)	1366326	1000.00	1011.58(A)
99 Naphthalene	128	17.845	17.845	(1.144)	1887297	1000.00	875.084
171 Diethyl ether	45	7.219	7.219	(0.635)	297018	1000.00	877.210
100 1,2,3-Trichlorobenzene	180	18.152	18.152	(1.164)	1268543	1000.00	911.716
M 101 1,2-Dichloroethene (total)	96				1959460	2000.00	1914.52
M 102 Xylene (total)	106				6448621	1000.00	3219.59(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

3/6/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 31909 Manually integrated

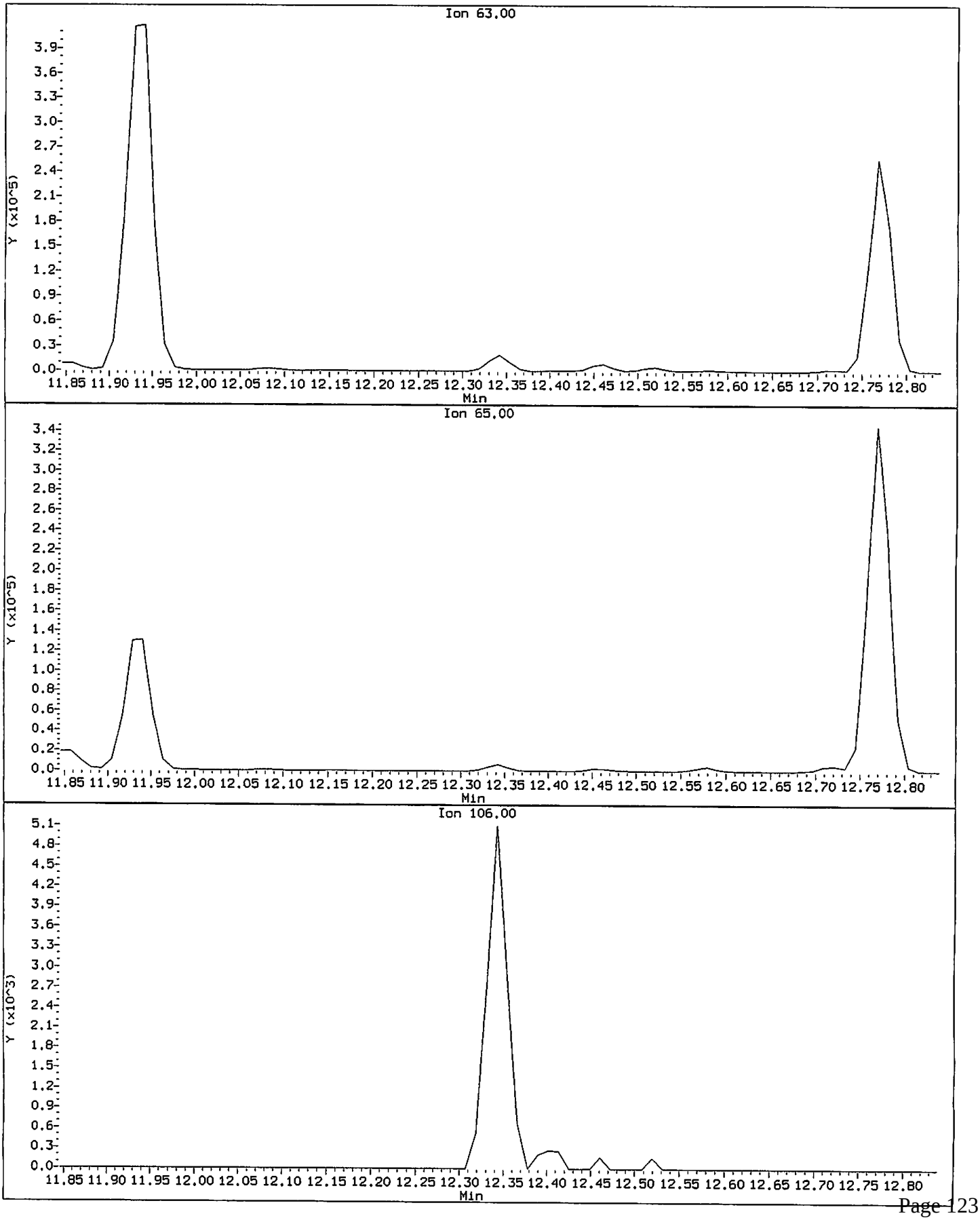


File name: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL690.d
Client ID: VSTD040SY
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 15:24
Retention Time: 12.34
Operator ID: JAO

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-CAL690.d
Injection Date: 05-MAR-2014 15:24
Instrument: 5973hp90.i
Client Sample ID: VSTD040SY

Compound: 2-chloroethyl vinyl ether
CAS Number: 110-75-8



Second Source Calibration Verification

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER SDG: 1403007

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Instrument: 5973hp90 Calibration: 4030602

Lab File ID: 4C05005-SCV190.d Standard ID: 4A07006

Sequence: 4C05005 Injection Date: 03/05/14

Lab Sample ID: 4C05005-SCV1 InjectionTime: 17:55

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Dichlorodifluoromethane	5.000	5.651	13.0	20.00
Vinyl chloride	5.000	5.432	8.6	20.00
Chloroethane	5.000	5.207	4.1	20.00
1,1-Dichloroethene	5.000	5.077	1.5	20.00
Methylene chloride	5.000	4.854	-2.9	20.00
trans-1,2-Dichloroethene	5.000	5.264	5.3	20.00
1,1-Dichloroethane	5.000	5.147	2.9	20.00
cis-1,2-Dichloroethene	5.000	5.375	7.5	20.00
1,1,1-Trichloroethane	5.000	5.229	4.6	20.00
1,2-Dichloroethane	5.000	5.307	6.1	20.00
Benzene	5.000	5.110	2.2	20.00
Trichloroethene	5.000	5.120	2.4	20.00
1,2-Dichloropropane	5.000	5.158	3.2	20.00
Tetrachloroethene	5.000	5.184	3.7	20.00
Chlorobenzene	5.000	5.142	2.8	20.00
1,4-Dichlorobenzene	5.000	5.094	1.9	20.00
Dibromofluoromethane	5.000	5.156	3.1	20.00
1,2-Dichloroethane-d4	5.000	5.223	4.5	20.00
Toluene-d8	5.000	5.203	4.1	20.00

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER

SDG: 1403007

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Instrument: 5973hp90

Calibration: 4030602

Lab File ID: 4C05005-SCV190.d

Standard ID: 4A07006

Sequence: 4C05005

Injection Date: 03/05/14

Lab Sample ID: 4C05005-SCV1

InjectionTime: 17:55

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Bromofluorobenzene	5.000	5.083	1.7	20.00

* Values outside of QC limits

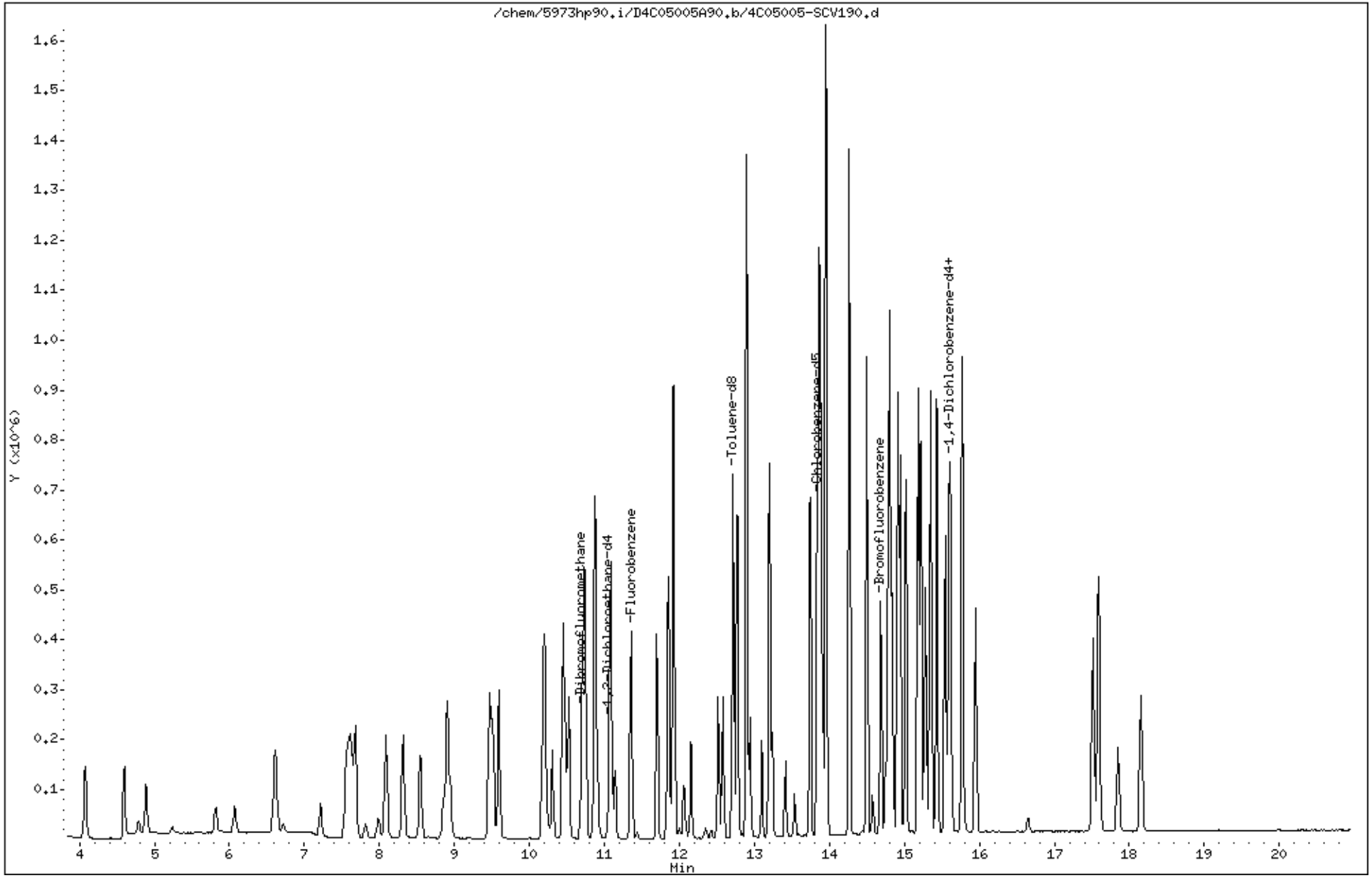
Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-SCV190.d
Date : 05-MAR-2014 17:55
Client ID: VSTD005SZ
Instrument: 5973hp90.i
Sample Info: 4C05005-SCV1:JAO
Purge Volume: 25.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-SCV190.d
Report Date: 06-Mar-2014 10:53

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C05005A90.b/4C05005-SCV190.d
Lab Smp Id: 4C05005-SCV1 Client Smp ID: VSTD005SZ
Inj Date : 05-MAR-2014 17:55
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4C05005-SCV1:JAO
Misc Info : VSTD005SZ
Comment :
Method : /chem/5973hp90.i/D4C05005A90.b/8260B_25ppbv21.m
Meth Date : 06-Mar-2014 10:52 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 9 QC Sample: QCCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SCV.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	11.357	11.360	(1.000)	378432	125.000	
* 2 Chlorobenzene-d5	117	13.842	13.833	(1.000)	288999	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.593	15.596	(1.000)	151360	125.000	
$ 4 Dibromofluoromethane	113	10.694	10.698	(0.942)	110430	128.909	5.15636
$ 5 1,2-Dichloroethane-d4	65	11.061	11.064	(0.974)	104864	130.583	5.22332
$ 6 Toluene-d8	98	12.718	12.721	(0.919)	451475	130.077	5.20309
$ 7 Bromofluorobenzene	95	14.682	14.685	(0.942)	163576	127.063	5.08252
8 Dichlorodifluoromethane	85	4.080	4.071	(0.359)	185918	141.281	5.65123
9 Chloromethane	50	4.600	4.592	(0.405)	174485	128.984	5.15937
10 Vinyl Chloride	62	4.884	4.888	(0.430)	148500	135.808	5.43233
11 Bromomethane	94	5.819	5.799	(0.512)	59591	117.935	4.71740
12 Chloroethane	64	6.068	6.071	(0.534)	69700	130.178	5.20713
13 Trichlorofluoromethane	101	6.612	6.615	(0.582)	238435	134.818	5.39272
14 Acrolein	56	7.559	7.550	(0.666)	36030	1650.14	66.0056(R)
15 1,1,1-trichloro-2,2,2-trifluo	117	7.570	7.574	(0.667)	59400	109.008	4.36033

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-SCV190.d
Report Date: 06-Mar-2014 10:53

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.618	7.621	(0.671)	73459	131.570	5.26281
17 1,1-Dichloroethene	96	7.677	7.680	(0.676)	106151	126.922	5.07687
18 Acetone	43	7.819	7.810	(0.688)	52023	607.518	24.3007
19 Iodomethane	142	7.984	7.988	(0.703)	74292	119.843	4.79372
20 Carbon disulfide	76	8.091	8.083	(0.712)	391494	134.263	5.37053
22 3-Chloropropene	39	8.316	8.307	(0.732)	129603	118.296	4.73182
23 Acetonitrile	41	8.316	8.307	(0.732)	166094	114.280	4.57119
24 Methyl acetate	43	8.316	8.319	(0.732)	32404	126.721	5.06886
25 Methylene Chloride	84	8.541	8.544	(0.752)	91434	121.349	4.85397
26 Acrylonitrile	53	8.943	8.946	(0.787)	96090	1326.48	53.0593
28 trans-1,2-Dichloroethene	96	8.907	8.911	(0.784)	120398	131.592	5.26368
27 Methyl-tert-butyl ether	73	8.860	8.852	(0.780)	120507	137.677	5.50706
30 Isopropyl ether	45	9.475	9.467	(0.834)	322876	135.841	5.43363
31 Vinyl acetate	43	9.475	9.479	(0.834)	218041	150.643	6.02572(R)
32 1,1-Dichloroethane	63	9.511	9.514	(0.837)	223955	128.679	5.14718
33 Chloroprene	53	9.594	9.597	(0.845)	216185	138.292	5.53168
34 2-butanone	43	10.185	10.177	(0.897)	73266	612.021	24.4808
35 2,2-Dichloropropane	77	10.185	10.189	(0.897)	187031	133.533	5.34130
36 cis-1,2-Dichloroethene	96	10.209	10.212	(0.899)	122154	134.365	5.37459
37 Propionitrile	54	10.304	10.307	(0.907)	184803	6341.94	253.677
38 Methacrylonitrile	41	10.446	10.449	(0.920)	251874	1262.73	50.5090
39 Bromochloromethane	128	10.481	10.473	(0.923)	37298	125.961	5.03844
40 Chloroform	83	10.529	10.520	(0.927)	233807	132.732	5.30929
42 1,1,1-Trichloroethane	97	10.718	10.721	(0.944)	245534	130.720	5.22879
43 Cyclohexane	84	10.742	10.745	(0.946)	180544	127.004	5.08017
44 1,1-dichloropropene	75	10.872	10.875	(0.957)	200398	138.694	5.54775
45 Isobutyl alcohol	43	10.907	10.911	(0.960)	62917	5749.46	229.978
46 Carbon Tetrachloride	117	10.872	10.875	(0.957)	215864	131.516	5.26063
47 Benzene	78	11.085	11.088	(0.976)	451611	127.748	5.10992
48 1,2-Dichloroethane	62	11.144	11.135	(0.981)	122782	132.663	5.30653
49 Trichloroethene	130	11.700	11.703	(1.030)	131171	128.004	5.12018
50 Methylcyclohexane	83	11.854	11.857	(1.044)	214637	128.178	5.12710
51 1,2-Dichloropropane	63	11.937	11.940	(1.051)	103670	128.939	5.15755
52 Methylmethacrylate	69	11.913	11.916	(1.049)	305049	1183.36	47.3344
53 1,4-dioxane	88	12.008	11.999	(1.057)	13718	5847.13	233.885
54 Dibromomethane	174	12.055	12.058	(1.061)	39730	124.455	4.97819
55 Bromodichloromethane	83	12.150	12.153	(1.070)	134305	117.782	4.71128
56 2-chloroethyl vinyl ether	63	12.339	12.342	(1.086)	6522	295.267	11.8107(M)
57 cis-1,3-Dichloropropene	75	12.516	12.520	(1.102)	149685	129.066	5.16266
58 4-Methyl-2-pentanone	43	12.576	12.579	(0.909)	192361	630.001	25.2000
59 Toluene	92	12.777	12.768	(0.923)	293814	126.162	5.04646
60 Ethylmethacrylate	69	12.895	12.899	(0.932)	630601	1757.35	70.2938(R)
61 trans-1,3-Dichloropropene	75	12.942	12.946	(0.935)	118608	132.535	5.30141
62 1,1,2-Trichloroethane	97	13.096	13.100	(0.946)	56324	127.255	5.09019
63 2-hexanone	43	13.203	13.206	(0.954)	129237	613.850	24.5540
64 1,3-Dichloropropane	76	13.238	13.242	(0.956)	104032	125.047	5.00189
65 Tetrachloroethene	164	13.203	13.206	(0.954)	119132	129.604	5.18415

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-SCV190.d
Report Date: 06-Mar-2014 10:53

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
66 Dibromochloromethane	129	13.416	13.419	(0.969)	75404	121.912	4.87647
67 1,2-Dibromoethane	107	13.534	13.537	(0.978)	53339	125.386	5.01543
68 1-Chlorohexane	55	13.747	13.739	(0.993)	176624	162.287	6.49149(R)
69 Chlorobenzene	112	13.865	13.857	(1.002)	314337	128.555	5.14220
70 Ethylbenzene	106	13.877	13.881	(1.003)	190191	127.643	5.10571
71 1,1,1,2-Tetrachloroethane	131	13.901	13.904	(1.004)	110357	128.922	5.15689
72 m,p-Xylene	106	13.948	13.952	(1.008)	465830	259.566	10.3826
73 m,p-Xylene (part of total)	106	13.948	13.952	(1.008)	465830	259.566	10.3826
74 o-Xylene	106	14.268	14.259	(1.031)	216683	130.304	5.21216
75 o-Xylene (part of total)	106	14.268	14.259	(1.031)	216683	130.304	5.21216
76 Styrene	104	14.268	14.271	(1.031)	322358	125.457	5.01829
77 Bromoform	173	14.493	14.484	(0.929)	36441	117.068	4.68270
78 Isopropyl Benzene	105	14.504	14.496	(1.048)	641134	129.923	5.19692
79 1,1,2,2-Tetrachloroethane	83	14.753	14.744	(0.946)	62213	125.780	5.03121
81 1,2,3-Trichloropropane	110	14.824	14.815	(1.071)	17557	125.620	5.02478
80 trans-1,4-dichloro-2-butene	53	14.777	14.780	(1.068)	70140	514.660	20.5864
82 n-Propyl Benzene	91	14.800	14.804	(0.949)	805884	129.584	5.18335
83 Bromobenzene	156	14.836	14.839	(1.072)	125258	126.699	5.06798
84 1,3,5-Trimethyl Benzene	105	14.907	14.910	(0.956)	532867	128.984	5.15935
85 2-Chlorotoluene	126	14.942	14.946	(0.958)	145501	128.468	5.13871
86 4-Chlorotoluene	126	15.025	15.028	(0.964)	145738	126.938	5.07752
87 tert-Butyl Benzene	119	15.179	15.182	(0.973)	528719	127.271	5.09084
88 1,2,4-Trimethyl Benzene	105	15.226	15.218	(0.976)	531854	130.244	5.20975
89 Pentachloroethane	167	15.285	15.289	(0.980)	107124	180.885	7.23539(R)
90 sec-Butyl Benzene	105	15.345	15.348	(0.984)	724846	130.831	5.23325
91 p-Isopropyl Toluene	119	15.439	15.431	(0.990)	608412	131.088	5.24351
92 1,3-Dichlorobenzene	146	15.546	15.549	(0.997)	273970	127.531	5.10122
93 1,4-Dichlorobenzene	146	15.617	15.620	(1.002)	262868	127.340	5.09361
94 n-Butyl Benzene	91	15.770	15.774	(1.011)	603773	132.348	5.29390
95 1,2-Dichlorobenzene	146	15.948	15.951	(1.023)	220391	127.514	5.10055
96 1,2-Dibromo-3-Chloropropane	75	16.646	16.650	(1.068)	9597	116.280	4.65119
97 1,2,4-Trichlorobenzene	180	17.510	17.513	(1.123)	173068	123.845	4.95380
98 Hexachlorobutadiene	225	17.593	17.596	(1.128)	155667	142.206	5.68826
99 Naphthalene	128	17.853	17.845	(1.145)	200396	114.650	4.58599
171 Diethyl ether	45	7.215	7.219	(0.635)	42950	142.349	5.69394
100 1,2,3-Trichlorobenzene	180	18.161	18.152	(1.165)	135933	120.546	4.82186
M 101 1,2-Dichloroethene (total)	96				242552	265.948	10.6379
M 102 Xylene (total)	106				682513	410.435	16.4174

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-SCV190.d
Report Date: 06-Mar-2014 10:53

CompuChem

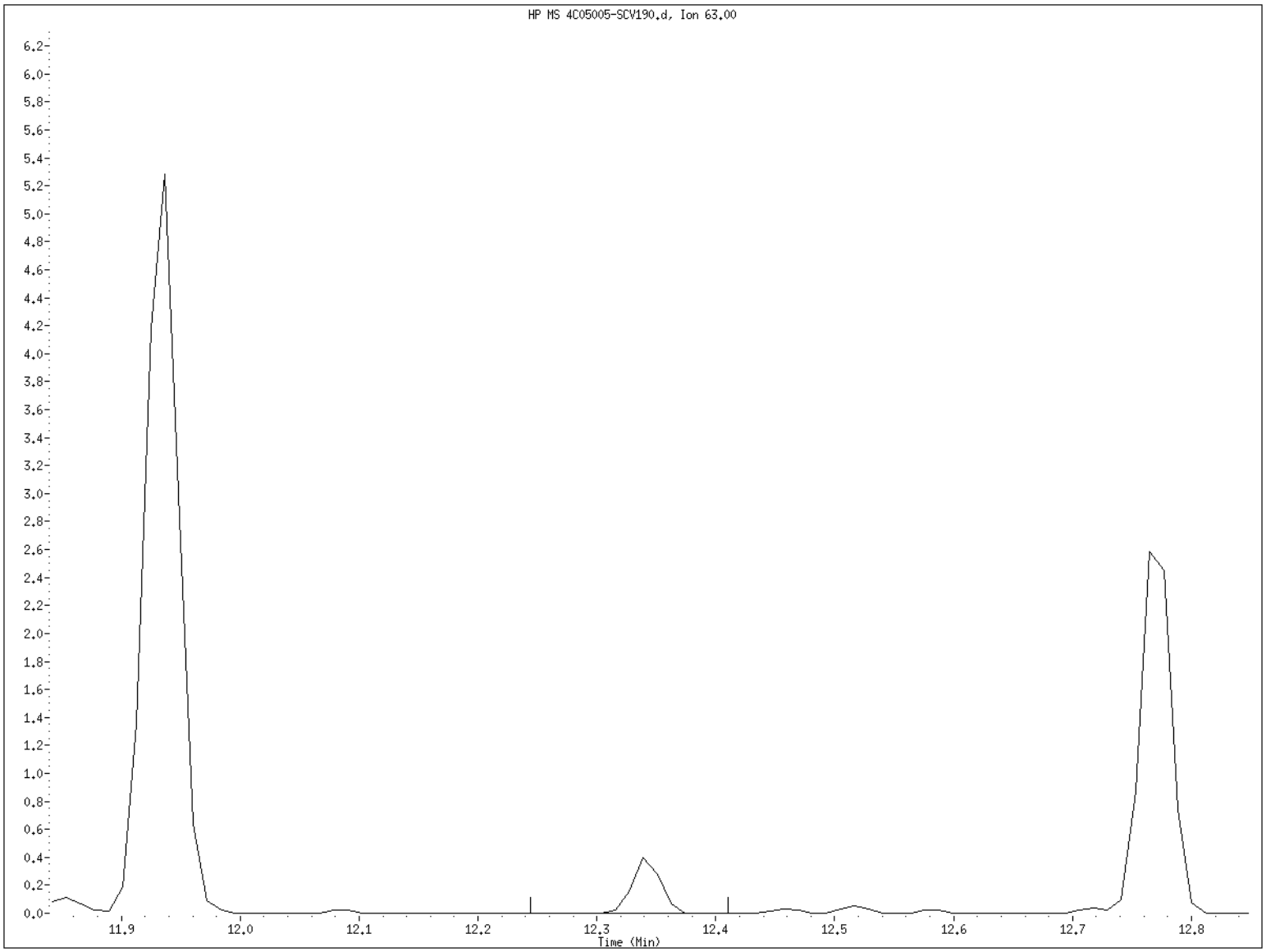
SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C05005A90.b/4C05005-SCV190.d
Lab Smp Id: 4C05005-SCV1 Client Smp ID: VSTD005SZ
Inj Date : 05-MAR-2014 17:55
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4C05005-SCV1:JAO
Misc Info : VSTD005SZ
Comment :
Method : /chem/5973hp90.i/D4C05005A90.b/8260B_25ppbv21.m
Meth Date : 06-Mar-2014 10:52 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 9 QC Sample: QCCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SCV.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/6/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 6522 Manually integrated

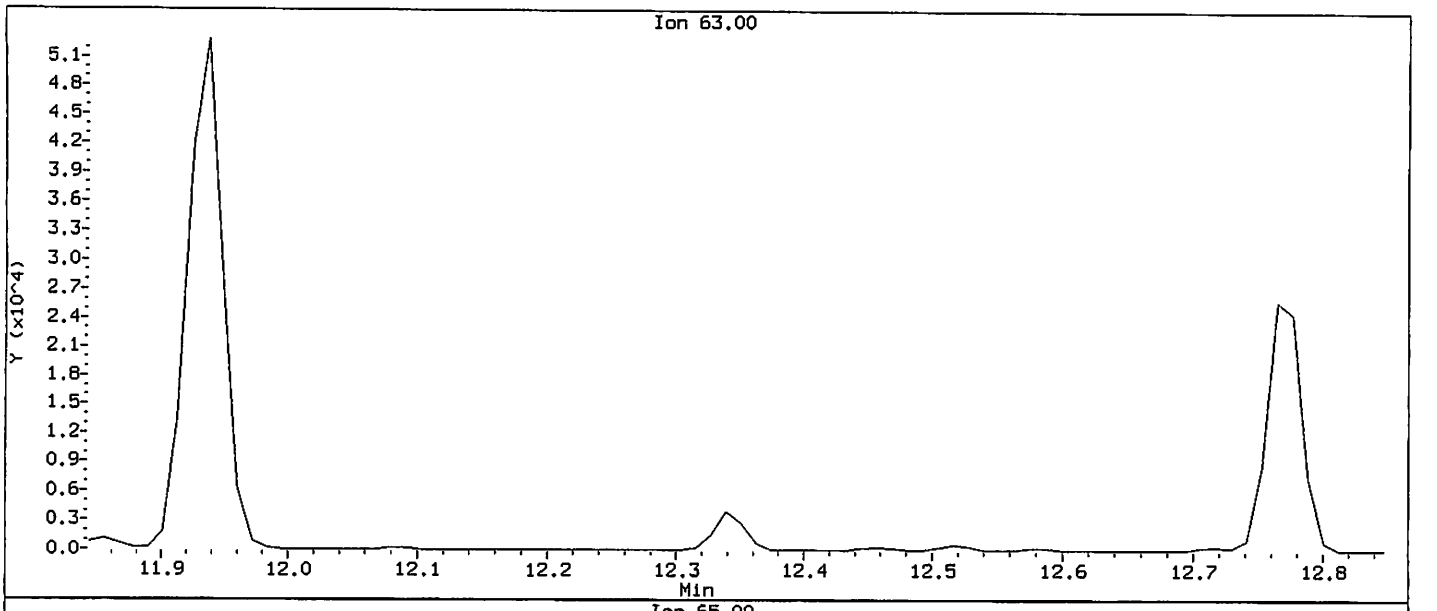


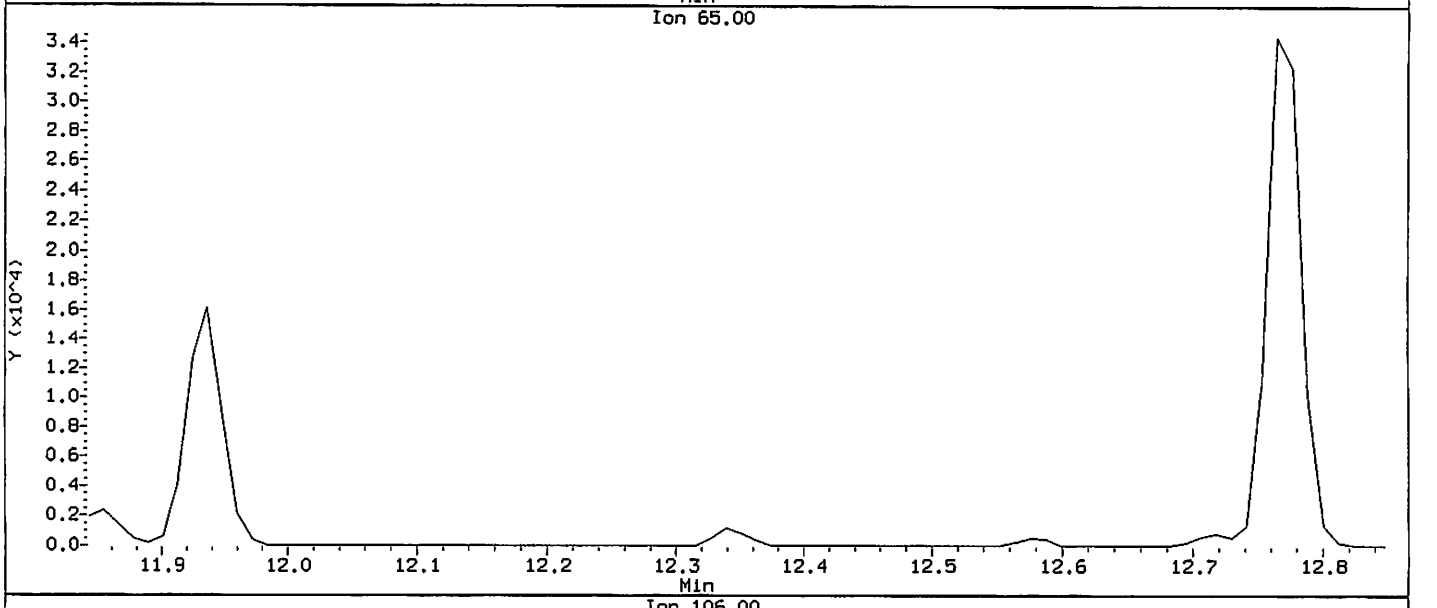
File name: /chem/5973hp90.i/D4C05005A90.b/4C05005-SCV190.d
Client ID: VSTD005SZ
Instrument ID: 5973hp90.i
Injection Date and Time: 05-MAR-2014 17:55
Retention Time: 12.34
Operator ID: JAO

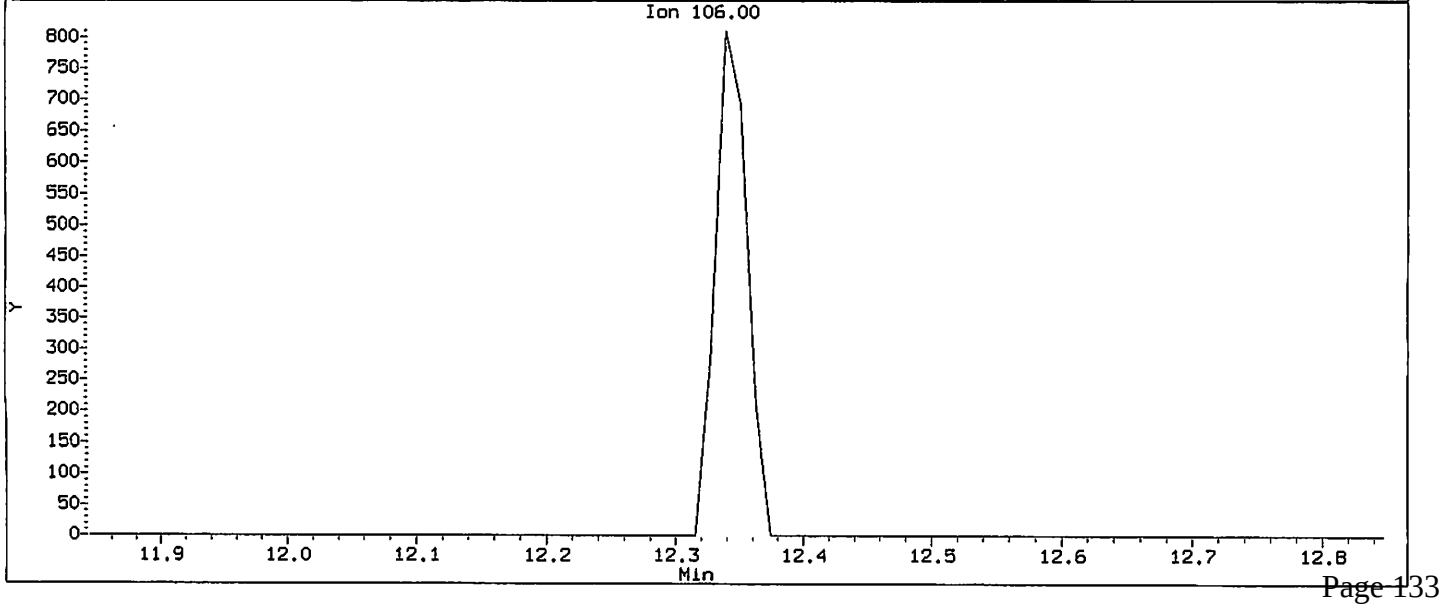
3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-SCV190.d
Injection Date: 05-MAR-2014 17:55
Instrument: 5973hp90.i
Client Sample ID: VSTD005SZ

Compound: 2-chloroethyl vinyl ether
CAS Number: 110-75-8







M. Continuing Calibration Data

(CONTINUING CALIBRATION CHECK)

If more than one instrument is used, forms shall be arranged in order by instrument. If multiple continuing calibrations from the same instrument are used, they shall be in chronological order.

RICs and Quantitation reports for all continuing (12-hour) calibrations. Spectra not required.

EICPs displaying each manual integration.

CONTINUING CALIBRATION CHECK

SW 8260B

Client: DRAPER SDG: 1403007

Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Instrument ID: 5973hp90 Calibration: 4030602

Lab File ID: 4C10002-CCV190.d Calibration Date: 03/05/14 14:00

Sequence: 4C10002 Injection Date: 03/10/14

Lab Sample ID: 4C10002-CCV1 Injection Time: 17:09

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT
Dichlorodifluoromethane	Avg	5.000	4.720	0.4346708	0.4103409	0.001	-5.6	90
Vinyl chloride	Avg	5.000	5.472	0.3611787	0.3952643	0.001	9.4	20
Chloroethane	Avg	5.000	5.780	0.1768546	0.2044424	0.001	15.6	90
1,1-Dichloroethene	Avg	5.000	4.959	0.2762548	0.273963	0.001	-0.8	20
Methylene chloride	Avg	5.000	4.762	0.2488817	0.2370168	0.001	-4.8	90
trans-1,2-Dichloroethene	Avg	5.000	4.888	0.3022125	0.2954348	0.001	-2.2	90
1,1-Dichloroethane	Avg	5.000	4.888	0.5748755	0.5620238	0.1	-2.2	90
cis-1,2-Dichloroethene	Avg	5.000	4.812	0.3002925	0.2890085	0.001	-3.8	90
1,1,1-Trichloroethane	Avg	5.000	5.420	0.6204292	0.6726065	0.001	8.4	90
1,2-Dichloroethane	Avg	5.000	5.427	0.3057075	0.3318449	0.001	8.5	90
Benzene	Avg	5.000	4.732	1.167704	1.105194	0.001	-5.4	90
Trichloroethene	Avg	5.000	4.858	0.3384817	0.328867	0.001	-2.8	90
1,2-Dichloropropane	Avg	5.000	4.573	0.2655779	0.2429001	0.001	-8.5	20
Tetrachloroethene	Avg	5.000	4.415	0.3975802	0.3510324	0.001	-11.7	90
Chlorobenzene	Avg	5.000	4.475	1.057598	0.9466405	0.3	-10.5	90
1,4-Dichlorobenzene	Avg	5.000	4.613	1.704791	1.572987	0.001	-7.7	90
Dibromofluoromethane	Avg	5.000	5.191	0.2829607	0.2937642	0.001	3.8	90
1,2-Dichloroethane-d4	Avg	5.000	5.360	0.2652538	0.2843357	0.001	7.2	90
Toluene-d8	Avg	5.000	4.444	1.501226	1.334438	0.001	-11.1	90
Bromofluorobenzene	Avg	5.000	4.691	1.063162	0.9975403	0.001	-6.2	90

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Environmental Testing Laboratories

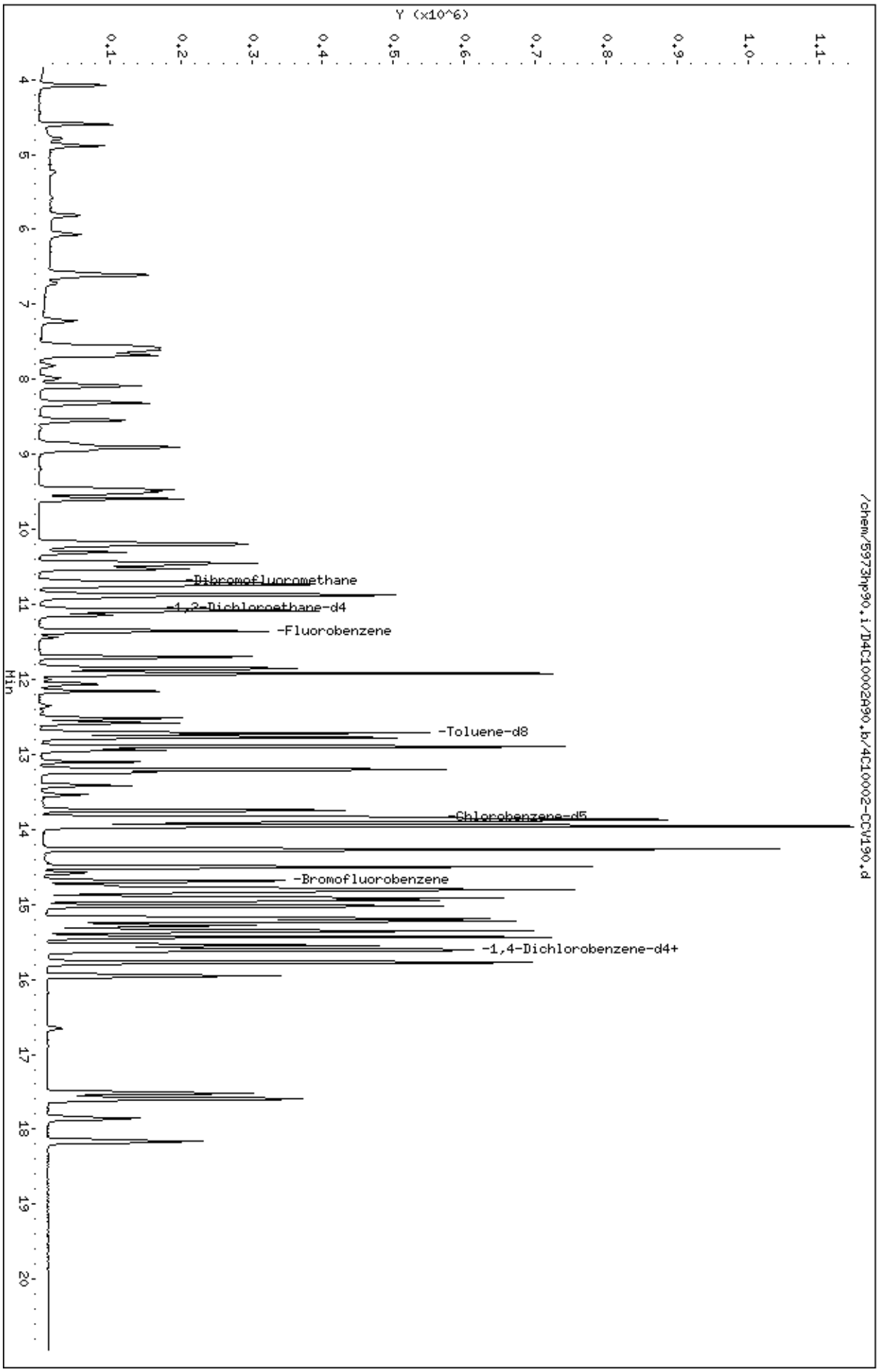
CompuChem

A Division Of

Liberty Analytical Corp.

Data File: /chem/5973hp90.i/D4C10002A90.b/4C10002-CCV190.d
Date : 10-MAR-2014 17:09
Client ID: VSTD005TC
Sample Info: 4C10002-CCV1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



Rolando Hernandez 3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4C10002-CCV190.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/4C10002-CCV190.d
Lab Smp Id: 4C10002-CCV1 Client Smp ID: VSTD005TC
Inj Date : 10-MAR-2014 17:09
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4C10002-CCV1:JAO
Misc Info : VSTD005TC
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	11.357	11.360	(1.000)	289123	125.000	
* 2 Chlorobenzene-d5	117	13.842	13.833	(1.000)	251464	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.593	15.596	(1.000)	128064	125.000	
$ 4 Dibromofluoromethane	113	10.695	10.698	(0.942)	84934	125.000	129.773
$ 5 1,2-Dichloroethane-d4	65	11.062	11.064	(0.974)	82208	125.000	133.992
$ 6 Toluene-d8	98	12.718	12.721	(0.919)	335563	125.000	111.112
$ 7 Bromofluorobenzene	95	14.682	14.685	(0.942)	127749	125.000	117.285
8 Dichlorodifluoromethane	85	4.080	4.071	(0.359)	118639	125.000	118.003
9 Chloromethane	50	4.601	4.592	(0.405)	118870	125.000	115.015
10 Vinyl Chloride	62	4.885	4.888	(0.430)	114280	125.000	136.797
11 Bromomethane	94	5.808	5.799	(0.511)	49646	125.000	127.111
12 Chloroethane	64	6.068	6.071	(0.534)	59109	125.000	144.499
13 Trichlorofluoromethane	101	6.612	6.615	(0.582)	205376	125.000	151.996
14 Acrolein	56	7.559	7.550	(0.666)	20359	1250.00	1199.93
15 1,1,1-trichloro-2,2,2-trifluo	117	7.571	7.574	(0.667)	56754	125.000	136.325

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4C10002-CCV190.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.618	7.621	(0.671)	57596	125.000	135.024
17 1,1-Dichloroethene	96	7.677	7.680	(0.676)	79209	125.000	123.963
18 Acetone	43	7.819	7.810	(0.688)	42242	625.000	647.879
19 Iodomethane	142	7.985	7.988	(0.703)	53418	125.000	114.260
20 Carbon disulfide	76	8.091	8.083	(0.712)	271508	125.000	121.876
22 3-Chloropropene	39	8.316	8.307	(0.732)	101816	125.000	121.639
23 Acetonitrile	41	8.316	8.307	(0.732)	117820	125.000	106.106
24 Methyl acetate	43	8.316	8.319	(0.732)	22740	125.000	115.414
25 Methylene Chloride	84	8.541	8.544	(0.752)	68527	125.000	119.041
26 Acrylonitrile	53	8.943	8.946	(0.787)	62056	1250.00	1110.12
28 trans-1,2-Dichloroethene	96	8.908	8.911	(0.784)	85417	125.000	122.197
27 Methyl-tert-butyl ether	73	8.861	8.852	(0.780)	83554	125.000	122.194
30 Isopropyl ether	45	9.464	9.467	(0.833)	196554	125.000	108.238
31 Vinyl acetate	43	9.476	9.479	(0.834)	126685	125.000	114.562
32 1,1-Dichloroethane	63	9.511	9.514	(0.837)	162494	125.000	122.206
33 Chloroprene	53	9.594	9.597	(0.845)	145498	125.000	121.824
34 2-butanone	43	10.186	10.177	(0.897)	50852	625.000	556.003
35 2,2-Dichloropropane	77	10.186	10.189	(0.897)	144311	125.000	134.858
36 cis-1,2-Dichloroethene	96	10.210	10.212	(0.899)	83559	125.000	120.303
37 Propionitrile	54	10.304	10.307	(0.907)	127481	6250.00	5726.16
38 Methacrylonitrile	41	10.446	10.449	(0.920)	171367	1250.00	1124.50
39 Bromochloromethane	128	10.482	10.473	(0.923)	28727	125.000	126.983
40 Chloroform	83	10.529	10.520	(0.927)	174287	125.000	129.506
42 1,1,1-Trichloroethane	97	10.718	10.721	(0.944)	194466	125.000	135.512
43 Cyclohexane	84	10.742	10.745	(0.946)	126921	125.000	116.862
44 1,1-dichloropropene	75	10.884	10.875	(0.958)	135223	125.000	122.495
45 Isobutyl alcohol	43	10.908	10.911	(0.960)	44583	6250.00	5332.53
46 Carbon Tetrachloride	117	10.872	10.875	(0.957)	175473	125.000	139.931
47 Benzene	78	11.085	11.088	(0.976)	319537	125.000	118.308
48 1,2-Dichloroethane	62	11.144	11.135	(0.981)	95944	125.000	135.687
49 Trichloroethene	130	11.700	11.703	(1.030)	95083	125.000	121.449
50 Methylcyclohexane	83	11.854	11.857	(1.044)	148307	125.000	115.924
51 1,2-Dichloropropane	63	11.937	11.940	(1.051)	70228	125.000	114.326
52 Methylmethacrylate	69	11.913	11.916	(1.049)	237780	1250.00	1207.34
53 1,4-dioxane	88	12.008	11.999	(1.057)	10500	6250.00	5857.97
54 Dibromomethane	174	12.067	12.058	(1.063)	30499	125.000	125.050
55 Bromodichloromethane	83	12.162	12.153	(1.071)	115378	125.000	132.439
56 2-chloroethyl vinyl ether	63	12.339	12.342	(1.086)	3547	250.000	197.857(M)
57 cis-1,3-Dichloropropene	75	12.517	12.520	(1.102)	106720	125.000	120.444
58 4-Methyl-2-pentanone	43	12.576	12.579	(0.909)	130460	625.000	491.046
59 Toluene	92	12.777	12.768	(0.923)	213902	125.000	105.558
60 Ethylmethacrylate	69	12.896	12.899	(0.932)	344311	1250.00	1102.74
61 trans-1,3-Dichloropropene	75	12.943	12.946	(0.935)	90095	125.000	115.701
62 1,1,2-Trichloroethane	97	13.097	13.100	(0.946)	42386	125.000	110.058
63 2-hexanone	43	13.203	13.206	(0.954)	88795	625.000	484.712
64 1,3-Dichloropropane	76	13.239	13.242	(0.956)	78229	125.000	108.068
65 Tetrachloroethene	164	13.203	13.206	(0.954)	88272	125.000	110.365

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4C10002-CCV190.d
Report Date: 11-Mar-2014 09:37

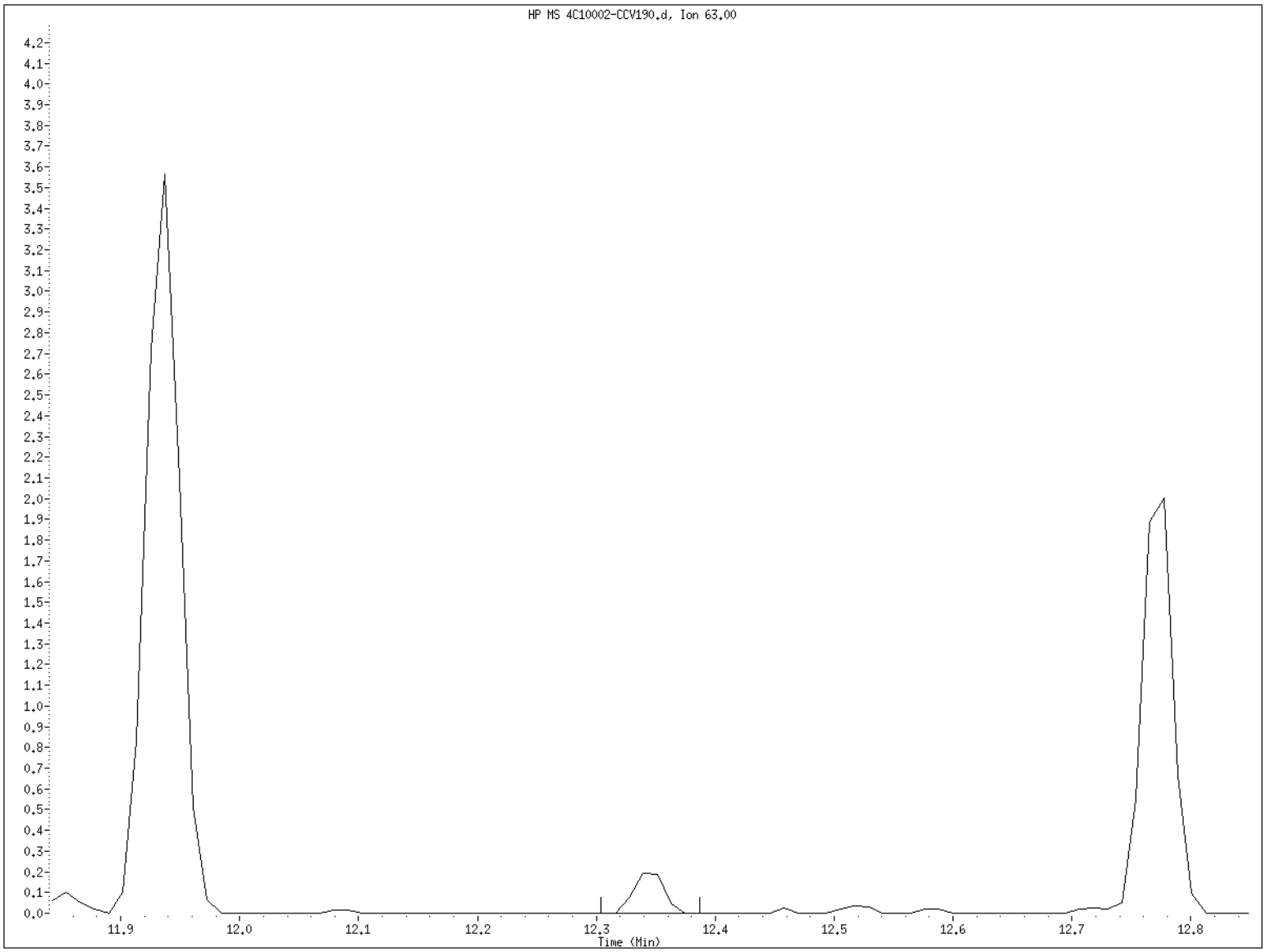
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
66 Dibromochloromethane	129	13.416	13.419	(0.969)	62984	125.000	117.031
67 1,2-Dibromoethane	107	13.535	13.537	(0.978)	41400	125.000	111.847
68 1-Chlorohexane	55	13.748	13.739	(0.993)	103173	125.000	108.949
69 Chlorobenzene	112	13.866	13.857	(1.002)	238046	125.000	111.886
70 Ethylbenzene	106	13.878	13.881	(1.003)	141030	125.000	108.777
71 1,1,1,2-Tetrachloroethane	131	13.901	13.904	(1.004)	87976	125.000	118.117
72 m,p-Xylene	106	13.961	13.952	(1.009)	343151	250.000	219.748
73 m,p-Xylene (part of total)	106	13.961	13.952	(1.009)	343151	250.000	219.748
74 o-Xylene	106	14.268	14.259	(1.031)	158780	125.000	109.736
75 o-Xylene (part of total)	106	14.268	14.259	(1.031)	158780	125.000	109.736
76 Styrene	104	14.280	14.271	(1.032)	241724	125.000	108.118
77 Bromoform	173	14.493	14.484	(0.929)	31154	125.000	118.289
78 Isopropyl Benzene	105	14.505	14.496	(1.048)	486548	125.000	113.314
79 1,1,2,2-Tetrachloroethane	83	14.753	14.744	(0.946)	45931	125.000	109.754
81 1,2,3-Trichloropropane	110	14.824	14.815	(1.071)	14027	125.000	115.343
80 trans-1,4-dichloro-2-butene	53	14.789	14.780	(1.068)	55385	500.000	467.054
82 n-Propyl Benzene	91	14.801	14.804	(0.949)	603540	125.000	114.701
83 Bromobenzene	156	14.848	14.839	(1.073)	97160	125.000	112.948
84 1,3,5-Trimethyl Benzene	105	14.919	14.910	(0.957)	410550	125.000	117.454
85 2-Chlorotoluene	126	14.943	14.946	(0.958)	110147	125.000	114.944
86 4-Chlorotoluene	126	15.025	15.028	(0.964)	107897	125.000	111.074
87 tert-Butyl Benzene	119	15.191	15.182	(0.974)	399982	125.000	113.796
88 1,2,4-Trimethyl Benzene	105	15.227	15.218	(0.976)	407745	125.000	118.015
89 Pentachloroethane	167	15.286	15.289	(0.980)	60172	125.000	120.086
90 sec-Butyl Benzene	105	15.357	15.348	(0.985)	540789	125.000	115.366
91 p-Isopropyl Toluene	119	15.440	15.431	(0.990)	460219	125.000	117.196
92 1,3-Dichlorobenzene	146	15.546	15.549	(0.997)	206414	125.000	113.562
93 1,4-Dichlorobenzene	146	15.617	15.620	(1.002)	201443	125.000	115.336
94 n-Butyl Benzene	91	15.771	15.774	(1.011)	451109	125.000	116.871
95 1,2-Dichlorobenzene	146	15.960	15.951	(1.024)	167858	125.000	114.786
96 1,2-Dibromo-3-Chloropropane	75	16.658	16.650	(1.068)	9012	125.000	129.055
97 1,2,4-Trichlorobenzene	180	17.522	17.513	(1.124)	132394	125.000	111.973
98 Hexachlorobutadiene	225	17.593	17.596	(1.128)	107081	125.000	115.616
99 Naphthalene	128	17.854	17.845	(1.145)	149329	125.000	100.975
171 Diethyl ether	45	7.216	7.219	(0.635)	27998	125.000	121.457
100 1,2,3-Trichlorobenzene	180	18.161	18.152	(1.165)	104341	125.000	109.363
M 101 1,2-Dichloroethene (total)	96				168976	250.000	242.506
M 102 Xylene (total)	106				501931	125.000	346.895

QC Flag Legend

M - Compound response manually integrated.

3/11/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 3547 Manually integrated



File name: /chem/5973hp90.i/D4C10002A90.b/4C10002-CCV190.d
Client ID: VSTD005TC
Instrument ID: 5973hp90.i
Injection Date and Time: 10-MAR-2014 17:09
Retention Time: 12.34
Operator ID: JAO

3/11/2014

N. BFB / DFTPP or FC-43 Data

For each 12-hour period, per instrument utilized, include:

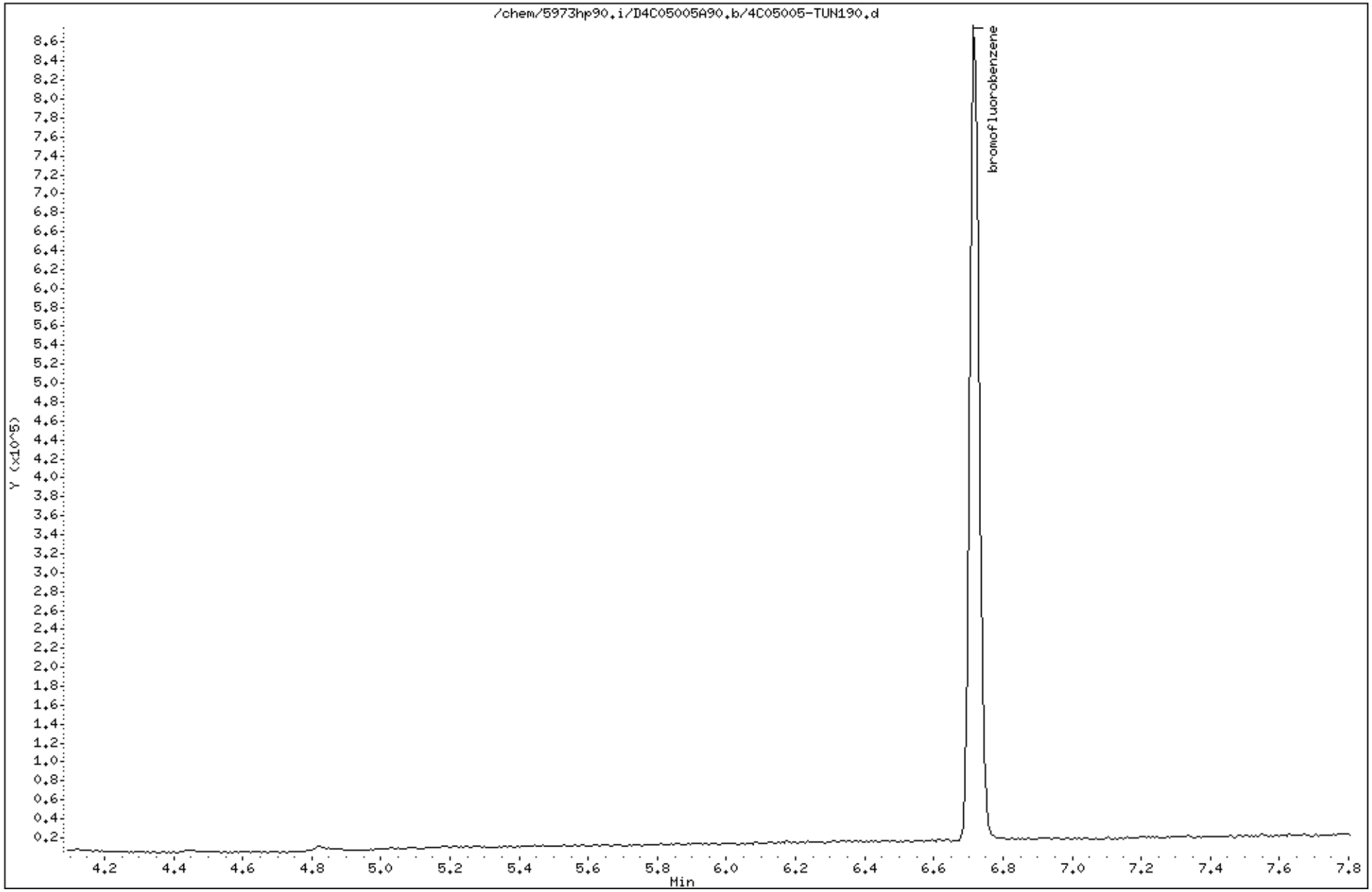
Bar Graph Spectrum and Tabulated Relative Abundances

Mass Listing

RIC

PFTBA (Perfluoro-tri-n-butylamine) scan, showing the relative abundance of the key ions and the Instrument Operating Conditions

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-TUN190.d
Date : 05-MAR-2014 14:00
Client ID: BFBSY
Instrument: 5973hp90.i
Sample Info: 4C05005-TUN1:JAO
Volume Injected (uL): 2.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



Robin Hai 3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-TUN190.d

Date : 05-MAR-2014 14:00

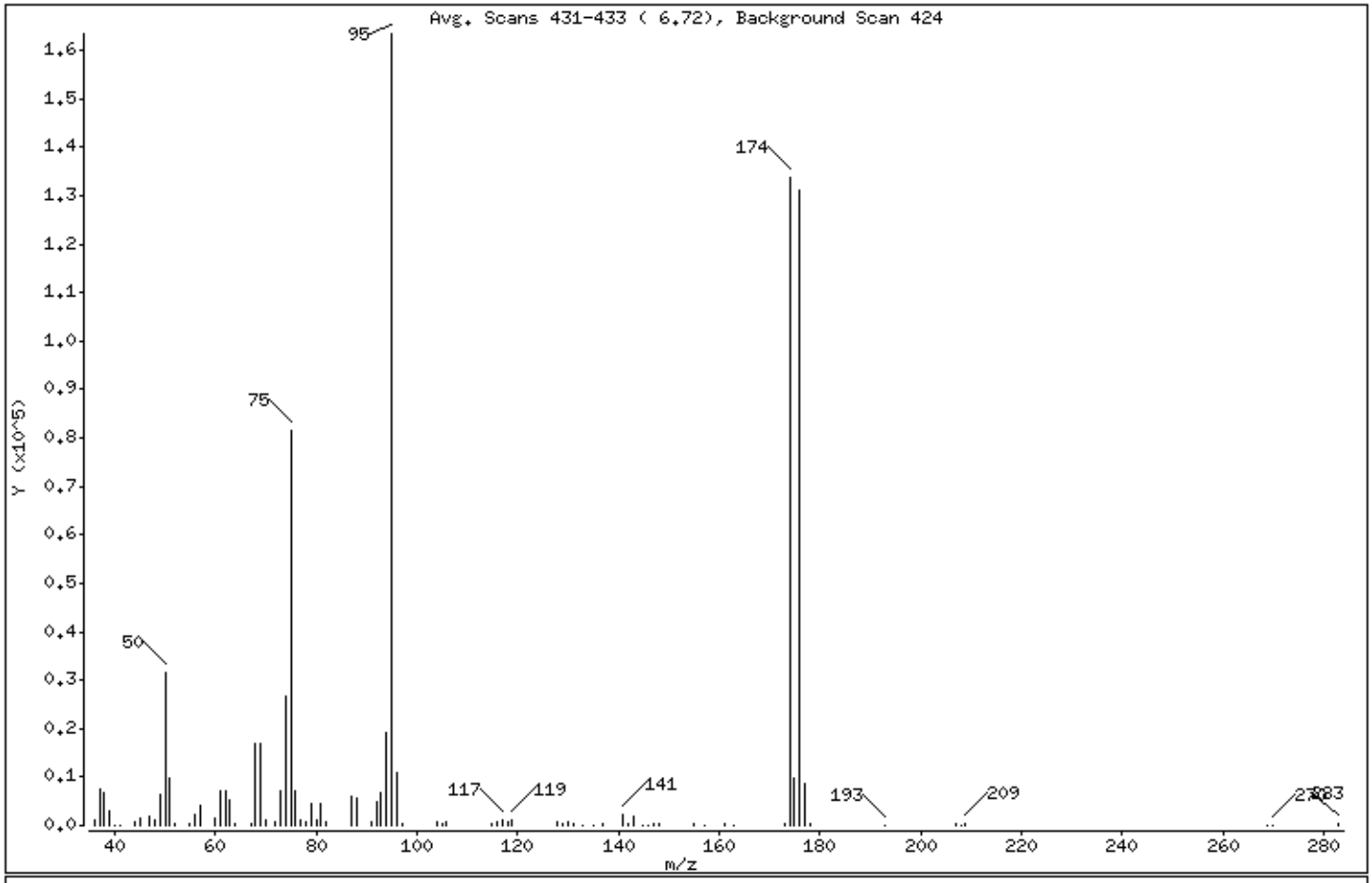
Client ID: BFBSY | Instrument: 5973hp90.i

Sample Info: 4C05005-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

1 bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.26
75	30.00 - 60.00% of mass 95	49.82
96	5.00 - 9.00% of mass 95	6.75
173	Less than 2.00% of mass 174	0.31 (0.38)
174	Greater than 50.00% of mass 95	81.96
175	5.00 - 9.00% of mass 174	6.00 (7.32)
176	95.00 - 101.00% of mass 174	80.16 (97.81)
177	5.00 - 9.00% of mass 176	5.39 (6.72)

3/6/2014

Data File: /chem/5973hp90.i/D4C05005A90.b/4C05005-TUN190.d

Date : 05-MAR-2014 14:00

Client ID: BFBSY | Instrument: 5973hp90.i

Sample Info: 4C05005-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

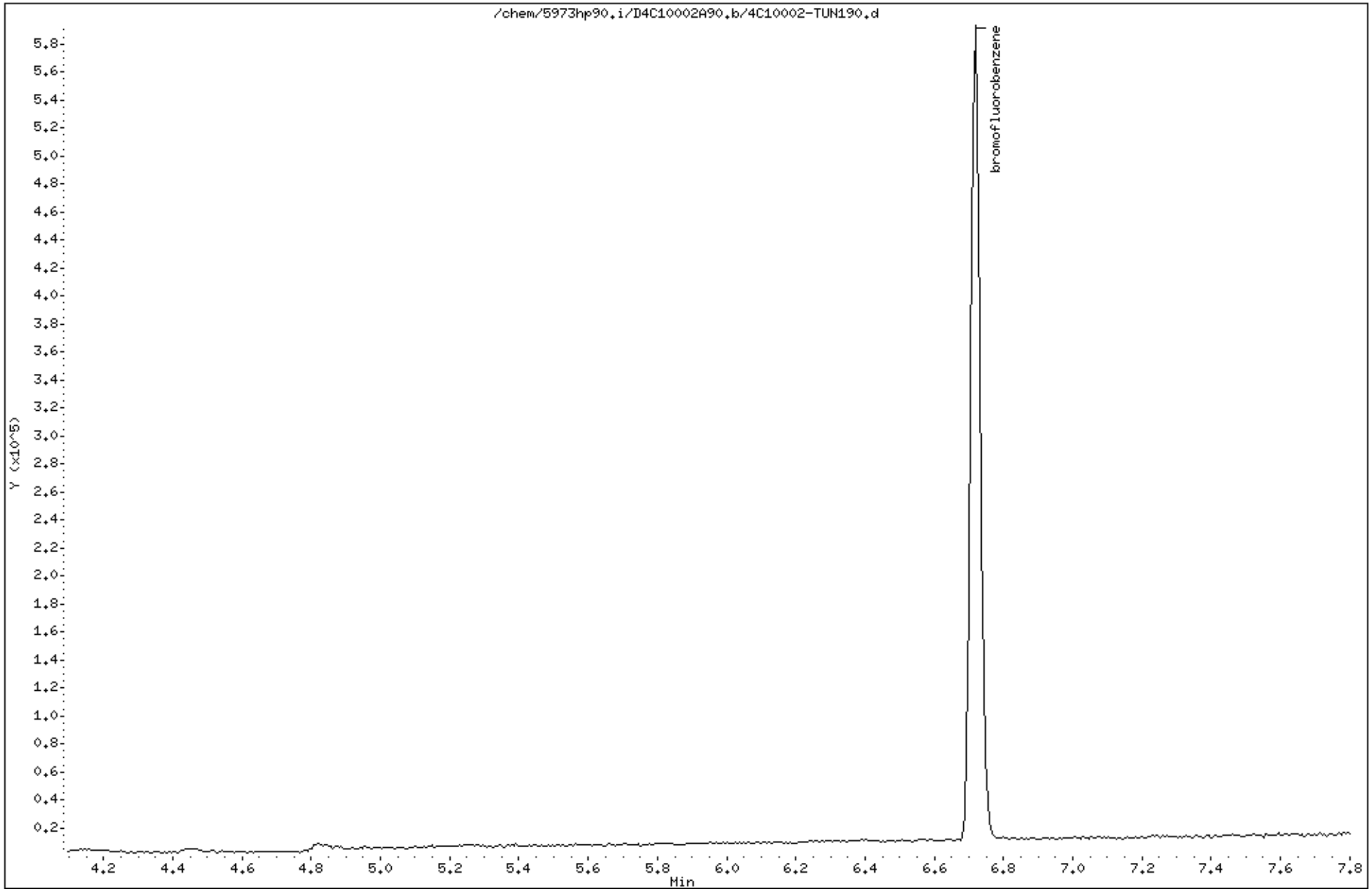
Column phase: SPB-624 | Column diameter: 0.32

Data File: 4C05005-TUN190.d
Spectrum: Avg. Scans 431-433 (6.72), Background Scan 424
Location of Maximum: 95.00
Number of points: 85

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1235	67.00	492	96.00	11036	147.00	436
37.00	7509	68.00	17008	97.00	306	148.00	420
38.00	6850	69.00	16840	104.00	780	155.00	495
39.00	2872	70.00	1269	105.00	255	157.00	126
40.00	101	72.00	828	106.00	759	161.00	245
41.00	108	73.00	6960	115.00	239	163.00	115
44.00	888	74.00	26816	116.00	648	173.00	507
45.00	1521	75.00	81432	117.00	1057	174.00	133952
47.00	2048	76.00	7066	118.00	680	175.00	9805
48.00	987	77.00	1035	119.00	1093	176.00	131032
49.00	6526	78.00	693	128.00	665	177.00	8803
50.00	31480	79.00	4496	129.00	360	178.00	315
51.00	9611	80.00	1175	130.00	737	193.00	39
52.00	484	81.00	4602	131.00	209	207.00	237
55.00	483	82.00	883	133.00	113	208.00	66
56.00	2184	87.00	6166	135.00	122	209.00	259
57.00	4230	88.00	5648	137.00	376	269.00	58
60.00	1466	91.00	687	141.00	2099	270.00	110
61.00	7287	92.00	4744	142.00	239	283.00	219
62.00	7168	93.00	6812	143.00	1912		
63.00	5313	94.00	19216	145.00	103		
64.00	548	95.00	163456	146.00	102		

3/6/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4C10002-TUN190.d
Date : 10-MAR-2014 16:43
Client ID: BFBTC
Instrument: 5973hp90.i
Sample Info: 4C10002-TUN1:JAO
Volume Injected (uL): 2.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



Robin Hai 3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4C10002-TUN190.d

Date : 10-MAR-2014 16:43

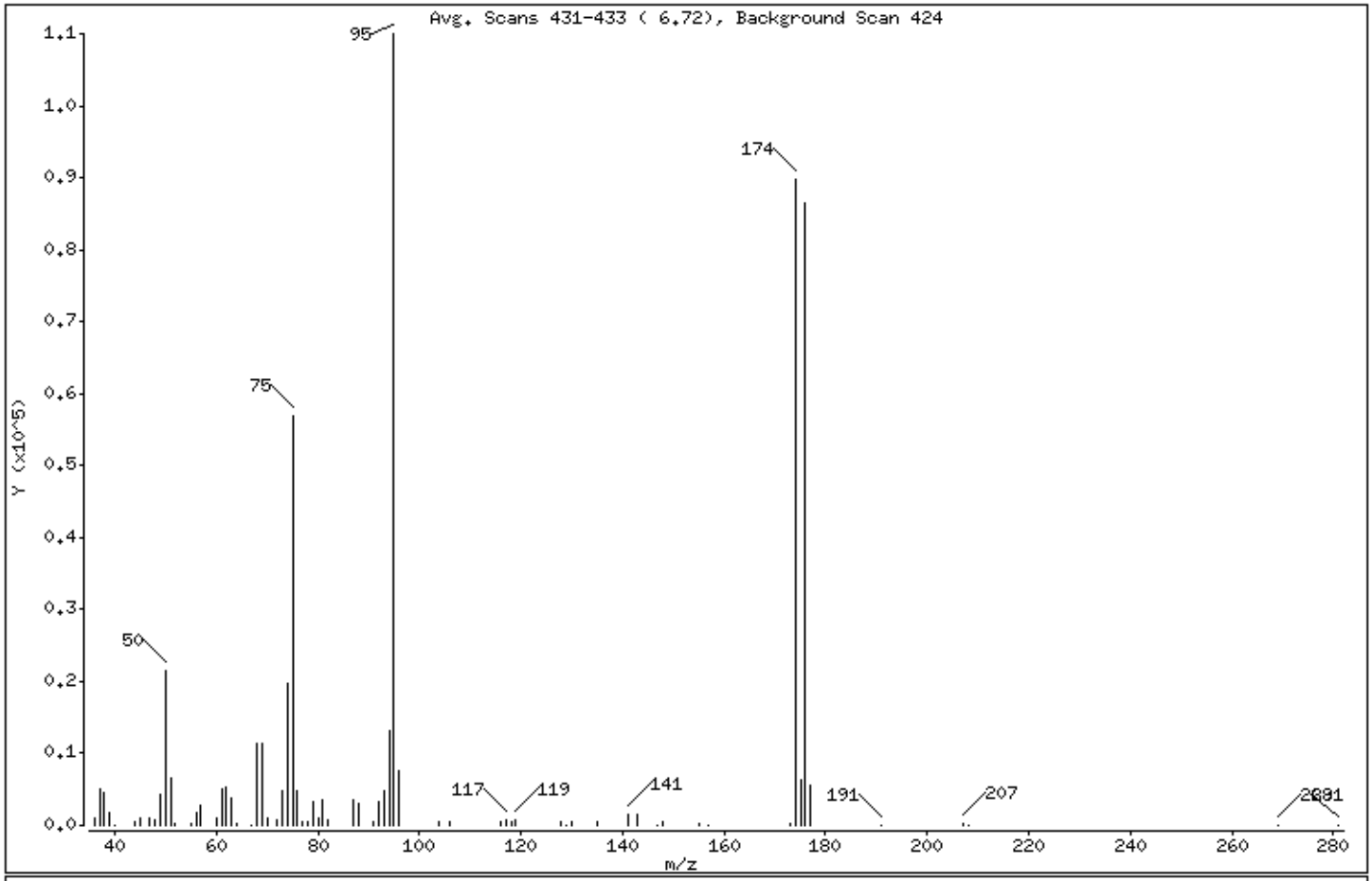
Client ID: BFBTC | Instrument: 5973hp90.i

Sample Info: 4C10002-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

1 bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.48
75	30.00 - 60.00% of mass 95	51.79
96	5.00 - 9.00% of mass 95	6.79
173	Less than 2.00% of mass 174	0.30 (0.37)
174	Greater than 50.00% of mass 95	81.63
175	5.00 - 9.00% of mass 174	5.64 (6.91)
176	95.00 - 101.00% of mass 174	78.71 (96.43)
177	5.00 - 9.00% of mass 176	5.14 (6.53)

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4C10002-TUN190.d

Date : 10-MAR-2014 16:43

Client ID: BFBTC | Instrument: 5973hp90.i

Sample Info: 4C10002-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

Data File: 4C10002-TUN190.d
Spectrum: Avg. Scans 431-433 (6.72), Background Scan 424
Location of Maximum: 95.00
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1108	62.00	5199	87.00	3646	141.00	1521
37.00	5153	63.00	3904	88.00	3163	143.00	1472
38.00	4467	64.00	261	91.00	578	147.00	50
39.00	1856	67.00	108	92.00	3398	148.00	408
40.00	13	68.00	11469	93.00	4893	155.00	220
44.00	495	69.00	11479	94.00	13119	157.00	120
45.00	945	70.00	927	95.00	110088	173.00	331
47.00	1052	72.00	649	96.00	7476	174.00	89864
48.00	677	73.00	4916	104.00	582	175.00	6209
49.00	4351	74.00	19672	106.00	561	176.00	86656
50.00	21440	75.00	57016	116.00	458	177.00	5655
51.00	6567	76.00	4707	117.00	802	191.00	124
52.00	233	77.00	627	118.00	501	207.00	297
55.00	234	78.00	499	119.00	784	208.00	72
56.00	1667	79.00	3223	128.00	440	269.00	41
57.00	2864	80.00	897	129.00	112	281.00	24
60.00	1062	81.00	3452	130.00	458		
61.00	5015	82.00	684	135.00	452		

3/11/2014

O. Blank Data

Arranged by type of blank (method or instrument where applicable) in chronological order, by instrument.

Tabulated Results and TICs shall be included.
(ANALYSIS DATA SHEET)

RIC and Quantitation reports.

Target compound spectra with lab-generated standard Spectra and GC/MS library search spectra for TICs.

ANALYSIS DATA SHEET

SW 8260B

VBLKTC

Client: DRAPER | SDG: 1403007 | Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Matrix: Water | Extraction: EPA 5030B | File ID: 4031006-BLK1R90.d | QC Type: Blank

Initial/Final: 25mL / 25mL | Lab ID: 4031006-BLK1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/10/14 18:33

% Moisture: NA | Analyzed: 03/10/14 18:33

Batch: 4031006 | Sequence: 4C10002 | Calibration: 4030602 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane		0.030	0.50	U
75-01-4	Vinyl chloride		0.070	0.50	U
75-00-3	Chloroethane		0.20	0.50	U
75-35-4	1,1-Dichloroethene		0.040	0.50	U
75-09-2	Methylene chloride		0.020	0.50	U
156-60-5	trans-1,2-Dichloroethene		0.050	0.50	U
75-34-3	1,1-Dichloroethane		0.020	0.50	U
156-59-2	cis-1,2-Dichloroethene		0.030	0.50	U
71-55-6	1,1,1-Trichloroethane		0.020	0.50	U
107-06-2	1,2-Dichloroethane		0.030	0.50	U
71-43-2	Benzene		0.030	0.50	U
79-01-6	Trichloroethene		0.030	0.50	U
78-87-5	1,2-Dichloropropane		0.12	0.50	U
127-18-4	Tetrachloroethene		0.060	0.50	U
108-90-7	Chlorobenzene		0.020	0.50	U
106-46-7	1,4-Dichlorobenzene		0.030	0.50	U

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.677	114	65 - 150	
1,2-Dichloroethane-d4	5.000	6.180	124	59 - 150	
Toluene-d8	5.000	5.002	100	61 - 145	
Bromofluorobenzene	5.000	5.325	106	63 - 143	

Environmental Testing Laboratories

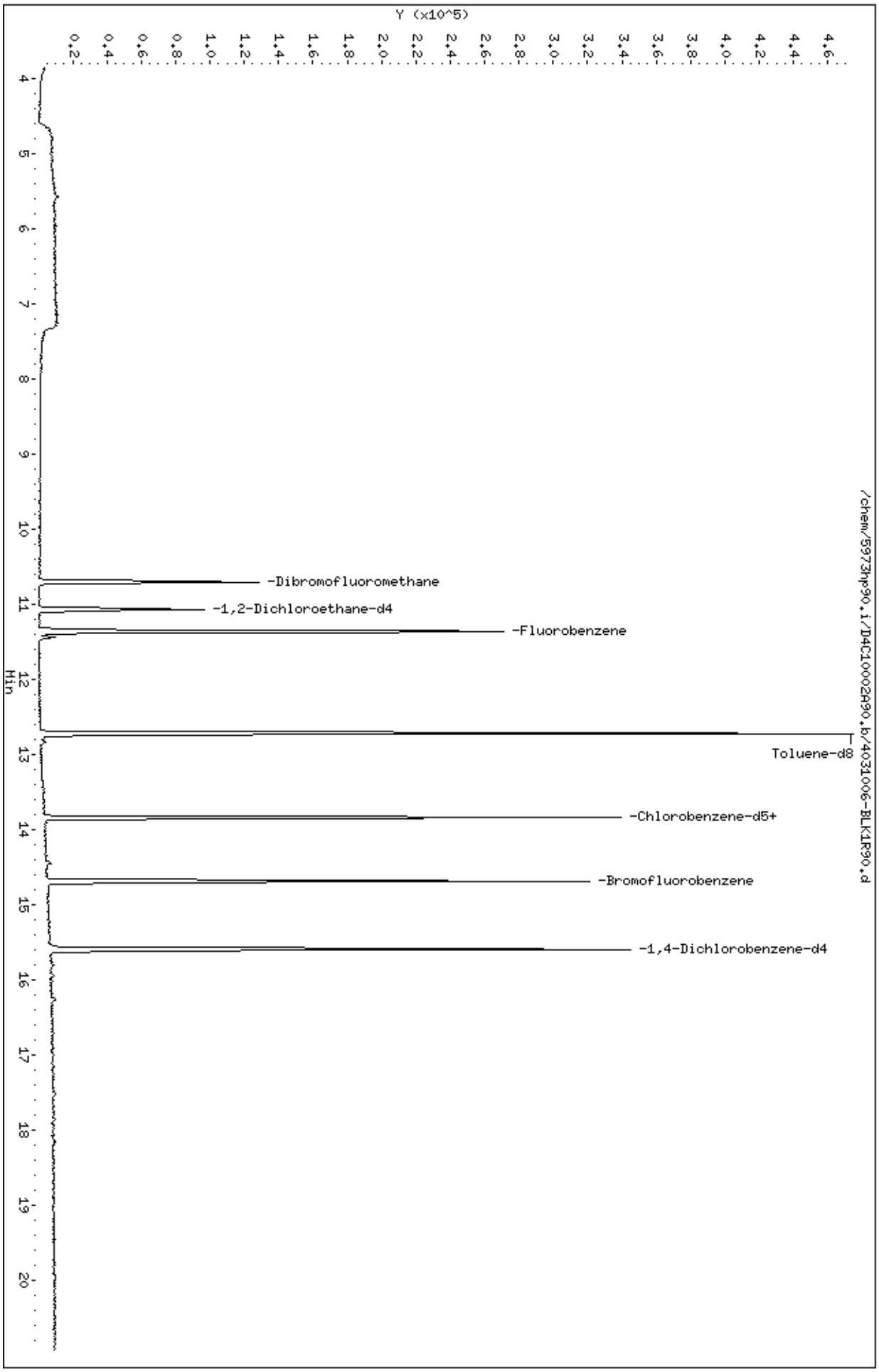
CompuChem

A Division Of

Liberty Analytical Corp.

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BLK1R90.d
Date : 10-MAR-2014 18:33
Client ID: VBLKTC
Sample Info: 4031006-BLK1;JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BLK1R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/4031006-BLK1R90.d
Lab Smp Id: 4031006-BLK1 Client Smp ID: VBLKTC
Inj Date : 10-MAR-2014 18:33
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4031006-BLK1:JAO
Misc Info : VBLKTC
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	11.361	11.360	(1.000)	240146	125.000	
* 2 Chlorobenzene-d5	117	13.846	13.833	(1.000)	193420	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.597	15.596	(1.000)	94242	125.000	
$ 4 Dibromofluoromethane	113	10.698	10.698	(0.942)	77148	141.917	5.67667
$ 5 1,2-Dichloroethane-d4	65	11.065	11.064	(0.974)	78736	154.506	6.18025
$ 6 Toluene-d8	98	12.722	12.721	(0.919)	290486	125.051	5.00205
$ 7 Bromofluorobenzene	95	14.686	14.685	(0.942)	106698	133.114	5.32454
8 Dichlorodifluoromethane	85	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
25 Methylene Chloride	84	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
36 cis-1,2-Dichloroethene	96	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BLK1R90.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
42 1,1,1-Trichloroethane	97	Compound Not Detected.					
47 Benzene	78	Compound Not Detected.					
48 1,2-Dichloroethane	62	Compound Not Detected.					
49 Trichloroethene	130	Compound Not Detected.					
51 1,2-Dichloropropane	63	Compound Not Detected.					
65 Tetrachloroethene	164	Compound Not Detected.					
69 Chlorobenzene	112	Compound Not Detected.					
93 1,4-Dichlorobenzene	146	Compound Not Detected.					

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BLK1R90.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/4031006-BLK1R90.d
Lab Smp Id: 4031006-BLK1 Client Smp ID: VBLKTC
Inj Date : 10-MAR-2014 18:33
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4031006-BLK1:JAO
Misc Info : VBLKTC
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260watauga.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/11/2014

P. Laboratory Control Sample Data

Tabulated Results (ANALYSIS DATA SHEET)

RIC and Quantitation report

ANALYSIS DATA SHEET

SW 8260B

VLCSTC

Client: DRAPER | SDG: 1403007 | Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Matrix: Water | Extraction: EPA 5030B | File ID: 4031006-BS190.d | QC Type: LCS

Initial/Final: 25mL / 25mL | Lab ID: 4031006-BS1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/10/14 18:33

% Moisture: NA | Analyzed: 03/10/14 19:15

Batch: 4031006 | Sequence: 4C10002 | Calibration: 4030602 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane	4.764	0.030	0.50	
75-01-4	Vinyl chloride	5.574	0.070	0.50	
75-00-3	Chloroethane	6.337	0.20	0.50	
75-35-4	1,1-Dichloroethene	5.138	0.040	0.50	
75-09-2	Methylene chloride	5.080	0.020	0.50	
156-60-5	trans-1,2-Dichloroethene	5.128	0.050	0.50	
75-34-3	1,1-Dichloroethane	5.317	0.020	0.50	
156-59-2	cis-1,2-Dichloroethene	5.142	0.030	0.50	
71-55-6	1,1,1-Trichloroethane	6.033	0.020	0.50	
107-06-2	1,2-Dichloroethane	6.393	0.030	0.50	
71-43-2	Benzene	5.047	0.030	0.50	
79-01-6	Trichloroethene	5.164	0.030	0.50	
78-87-5	1,2-Dichloropropane	5.104	0.12	0.50	
127-18-4	Tetrachloroethene	4.800	0.060	0.50	
108-90-7	Chlorobenzene	4.922	0.020	0.50	
106-46-7	1,4-Dichlorobenzene	4.920	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.699	114	65 - 150	
1,2-Dichloroethane-d4	5.000	6.259	125	59 - 150	
Toluene-d8	5.000	4.692	94	61 - 145	
Bromofluorobenzene	5.000	4.832	97	63 - 143	

Environmental Testing Laboratories

CompuChem

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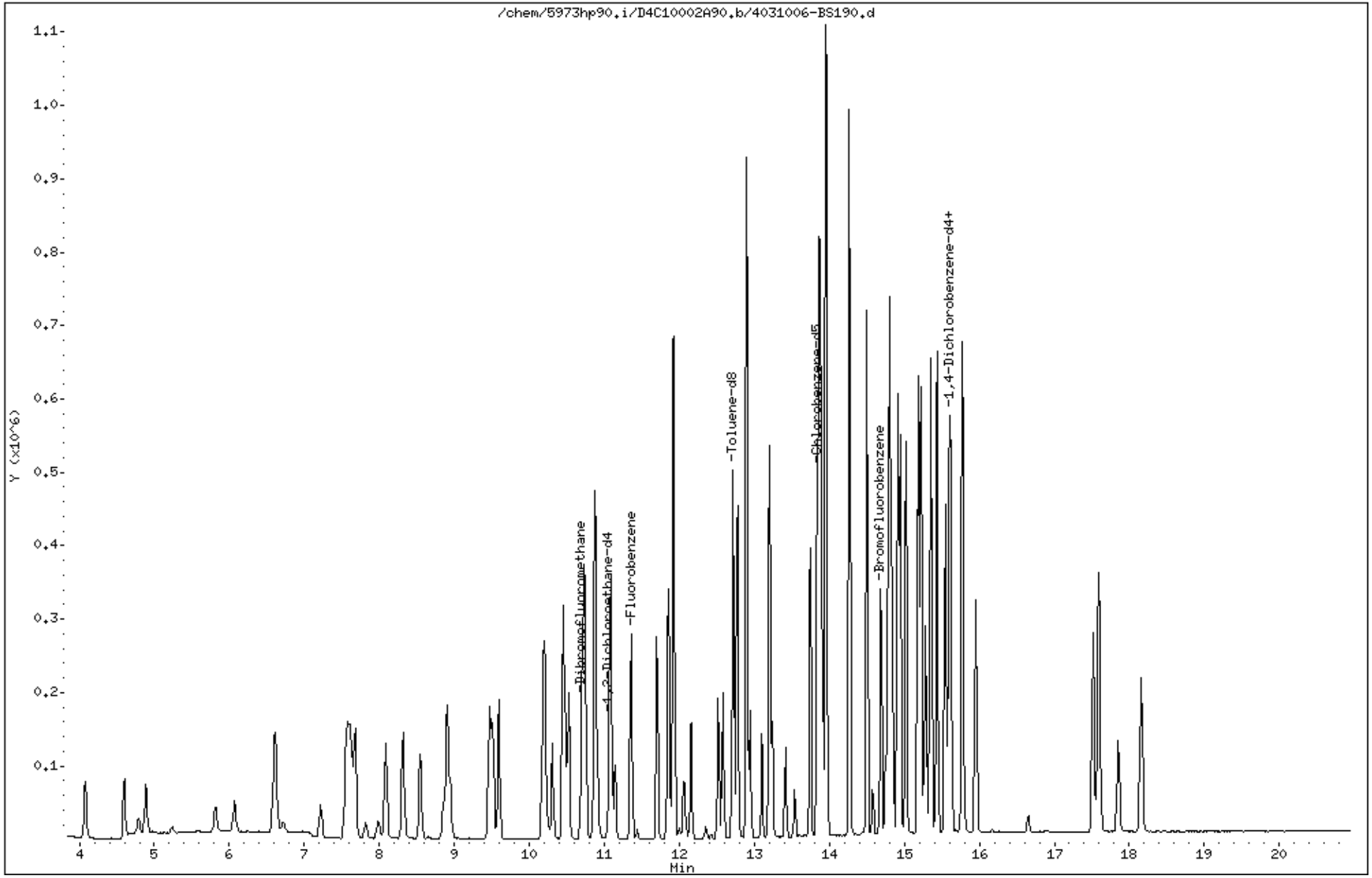
Liberty Analytical Corp.

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BS190.d
Date : 10-MAR-2014 19:15
Client ID: VLCSTC
Sample Info: 4031006-BS1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BS190.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/4031006-BS190.d
Lab Smp Id: 4031006-BS1 Client Smp ID: VLCSTC
Inj Date : 10-MAR-2014 19:15
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4031006-BS1:JAO
Misc Info : VLCSTC
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	11.358	11.360	(1.000)	243613	125.000	
* 2 Chlorobenzene-d5	117	13.843	13.833	(1.000)	211535	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.594	15.596	(1.000)	115514	125.000	
$ 4 Dibromofluoromethane	113	10.695	10.698	(0.942)	78572	142.479	5.69917
$ 5 1,2-Dichloroethane-d4	65	11.062	11.064	(0.974)	80884	156.463	6.25850
$ 6 Toluene-d8	98	12.718	12.721	(0.919)	298016	117.306	4.69225
$ 7 Bromofluorobenzene	95	14.683	14.685	(0.942)	118680	120.796	4.83185
8 Dichlorodifluoromethane	85	4.080	4.071	(0.359)	100886	119.091	4.76365
9 Chloromethane	50	4.601	4.592	(0.405)	95407	109.559	4.38234
10 Vinyl Chloride	62	4.885	4.888	(0.430)	98095	139.359	5.57435
11 Bromomethane	94	5.820	5.799	(0.512)	37861	116.612	4.66448
12 Chloroethane	64	6.068	6.071	(0.534)	54602	158.417	6.33668
13 Trichlorofluoromethane	101	6.613	6.615	(0.582)	195328	171.565	6.86262
14 Acrolein	56	7.559	7.550	(0.666)	18869	1328.93	53.1573
15 1,1,1-trichloro-2,2,2-trifluo	117	7.571	7.574	(0.667)	50316	143.439	5.73754

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BS190.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.618	7.621	(0.671)	53947	150.095	6.00382
17 1,1-Dichloroethene	96	7.678	7.680	(0.676)	69155	128.447	5.13787
18 Acetone	43	7.820	7.810	(0.688)	40333	738.838	29.5535
19 Iodomethane	142	7.985	7.988	(0.703)	43351	110.970	4.43881
20 Carbon disulfide	76	8.080	8.083	(0.711)	243527	129.738	5.18951
22 3-Chloropropene	39	8.317	8.307	(0.732)	93761	132.942	5.31769
23 Acetonitrile	41	8.317	8.307	(0.732)	108637	116.113	4.64451
24 Methyl acetate	43	8.317	8.319	(0.732)	23098	141.615	5.66459
25 Methylene Chloride	84	8.541	8.544	(0.752)	61602	127.002	5.08009
26 Acrylonitrile	53	8.944	8.946	(0.787)	66614	1433.43	57.3374
28 trans-1,2-Dichloroethene	96	8.908	8.911	(0.784)	75501	128.189	5.12755
27 Methyl-tert-butyl ether	73	8.861	8.852	(0.780)	69524	120.330	4.81319
30 Isopropyl ether	45	9.476	9.467	(0.834)	176862	115.589	4.62355
31 Vinyl acetate	43	9.476	9.479	(0.834)	124092	133.181	5.32723
32 1,1-Dichloroethane	63	9.512	9.514	(0.837)	148916	132.916	5.31664
33 Chloroprene	53	9.595	9.597	(0.845)	134734	133.886	5.35545
34 2-butanone	43	10.186	10.177	(0.897)	46913	608.758	24.3503
35 2,2-Dichloropropane	77	10.186	10.189	(0.897)	127092	140.955	5.63818
36 cis-1,2-Dichloroethene	96	10.210	10.212	(0.899)	75240	128.562	5.14249
37 Propionitrile	54	10.305	10.307	(0.907)	129910	6925.37	277.015
38 Methacrylonitrile	41	10.447	10.449	(0.920)	175130	1363.87	54.5549
39 Bromochloromethane	128	10.482	10.473	(0.923)	26527	139.164	5.56655
40 Chloroform	83	10.529	10.520	(0.927)	163294	144.005	5.76018
42 1,1,1-Trichloroethane	97	10.719	10.721	(0.944)	182376	150.829	6.03316
43 Cyclohexane	84	10.742	10.745	(0.946)	112261	122.674	4.90695
44 1,1-dichloropropene	75	10.872	10.875	(0.957)	121907	131.063	5.24252
45 Isobutyl alcohol	43	10.908	10.911	(0.960)	40188	5704.83	228.193
46 Carbon Tetrachloride	117	10.872	10.875	(0.957)	164791	155.962	6.23848
47 Benzene	78	11.085	11.088	(0.976)	287168	126.187	5.04746
48 1,2-Dichloroethane	62	11.145	11.135	(0.981)	95221	159.822	6.39288
49 Trichloroethene	130	11.701	11.703	(1.030)	85168	129.107	5.16429
50 Methylcyclohexane	83	11.855	11.857	(1.044)	133974	124.284	4.97136
51 1,2-Dichloropropane	63	11.937	11.940	(1.051)	66047	127.606	5.10423
52 Methylmethacrylate	69	11.914	11.916	(1.049)	224088	1350.37	54.0149
53 1,4-dioxane	88	12.008	11.999	(1.057)	9425	6240.52	249.621
54 Dibromomethane	174	12.068	12.058	(1.063)	28705	139.681	5.58725
55 Bromodichloromethane	83	12.162	12.153	(1.071)	110966	151.170	6.04678
56 2-chloroethyl vinyl ether	63	12.340	12.342	(1.086)	2835	184.783	7.39132(M)
57 cis-1,3-Dichloropropene	75	12.517	12.520	(1.102)	98306	131.675	5.26699
58 4-Methyl-2-pentanone	43	12.576	12.579	(0.909)	127424	570.150	22.8060
59 Toluene	92	12.778	12.768	(0.923)	195726	114.820	4.59280
60 Ethylmethacrylate	69	12.896	12.899	(0.932)	417702	1590.31	63.6126
61 trans-1,3-Dichloropropene	75	12.943	12.946	(0.935)	86068	131.393	5.25573
62 1,1,2-Trichloroethane	97	13.097	13.100	(0.946)	40467	124.909	4.99638
63 2-hexanone	43	13.204	13.206	(0.954)	88569	574.739	22.9896
64 1,3-Dichloropropane	76	13.239	13.242	(0.956)	74706	122.681	4.90724
65 Tetrachloroethene	164	13.204	13.206	(0.954)	80731	119.990	4.79958

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Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BS190.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
66 Dibromochloromethane	129	13.417	13.419	(0.969)	59415	131.239	5.24954
67 1,2-Dibromoethane	107	13.535	13.537	(0.978)	39199	125.890	5.03562
68 1-Chlorohexane	55	13.748	13.739	(0.993)	97673	122.609	4.90437
69 Chlorobenzene	112	13.866	13.857	(1.002)	220216	123.043	4.92171
70 Ethylbenzene	106	13.878	13.881	(1.003)	129607	118.836	4.75345
71 1,1,1,2-Tetrachloroethane	131	13.902	13.904	(1.004)	82653	131.917	5.27668
72 m,p-Xylene	106	13.961	13.952	(1.009)	315276	240.008	9.60030
73 m,p-Xylene (part of total)	106	13.961	13.952	(1.009)	315276	240.008	9.60030
74 o-Xylene	106	14.268	14.259	(1.031)	145302	119.376	4.77506
75 o-Xylene (part of total)	106	14.268	14.259	(1.031)	145302	119.376	4.77506
76 Styrene	104	14.268	14.271	(1.031)	225709	120.011	4.80043
77 Bromoform	173	14.493	14.484	(0.929)	30494	128.362	5.13449
78 Isopropyl Benzene	105	14.505	14.496	(1.048)	448947	124.293	4.97172
79 1,1,2,2-Tetrachloroethane	83	14.754	14.744	(0.946)	46210	122.418	4.89670
81 1,2,3-Trichloropropane	110	14.825	14.815	(1.071)	14170	138.513	5.54053
80 trans-1,4-dichloro-2-butene	53	14.777	14.780	(1.068)	55830	559.675	22.3870
82 n-Propyl Benzene	91	14.801	14.804	(0.949)	566452	119.349	4.77395
83 Bromobenzene	156	14.848	14.839	(1.073)	92368	127.645	5.10581
84 1,3,5-Trimethyl Benzene	105	14.907	14.910	(0.956)	380643	120.729	4.82915
85 2-Chlorotoluene	126	14.943	14.946	(0.958)	102494	118.578	4.74311
86 4-Chlorotoluene	126	15.026	15.028	(0.964)	101893	116.289	4.65157
87 tert-Butyl Benzene	119	15.180	15.182	(0.973)	377965	119.215	4.76861
88 1,2,4-Trimethyl Benzene	105	15.227	15.218	(0.976)	384353	123.331	4.93323
89 Pentachloroethane	167	15.286	15.289	(0.980)	57342	126.872	5.07486
90 sec-Butyl Benzene	105	15.357	15.348	(0.985)	508689	120.308	4.81232
91 p-Isopropyl Toluene	119	15.440	15.431	(0.990)	429417	121.233	4.84931
92 1,3-Dichlorobenzene	146	15.546	15.549	(0.997)	195731	119.384	4.77538
93 1,4-Dichlorobenzene	146	15.617	15.620	(1.002)	193771	122.997	4.91986
94 n-Butyl Benzene	91	15.771	15.774	(1.011)	423100	121.524	4.86096
95 1,2-Dichlorobenzene	146	15.961	15.951	(1.024)	161420	122.376	4.89505
96 1,2-Dibromo-3-Chloropropane	75	16.659	16.650	(1.068)	8478	134.598	5.38392
97 1,2,4-Trichlorobenzene	180	17.523	17.513	(1.124)	124876	117.089	4.68357
98 Hexachlorobutadiene	225	17.594	17.596	(1.128)	101937	122.020	4.88080
99 Naphthalene	128	17.854	17.845	(1.145)	141288	105.917	4.23669
171 Diethyl ether	45	7.216	7.219	(0.635)	26441	136.130	5.44521
100 1,2,3-Trichlorobenzene	180	18.162	18.152	(1.165)	99436	115.545	4.62178
M 101 1,2-Dichloroethene (total)	96				150741	256.750	10.2700
M 102 Xylene (total)	106				460578	378.399	15.1360

QC Flag Legend

M - Compound response manually integrated.

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BS190.d
Report Date: 11-Mar-2014 09:37

CompuChem

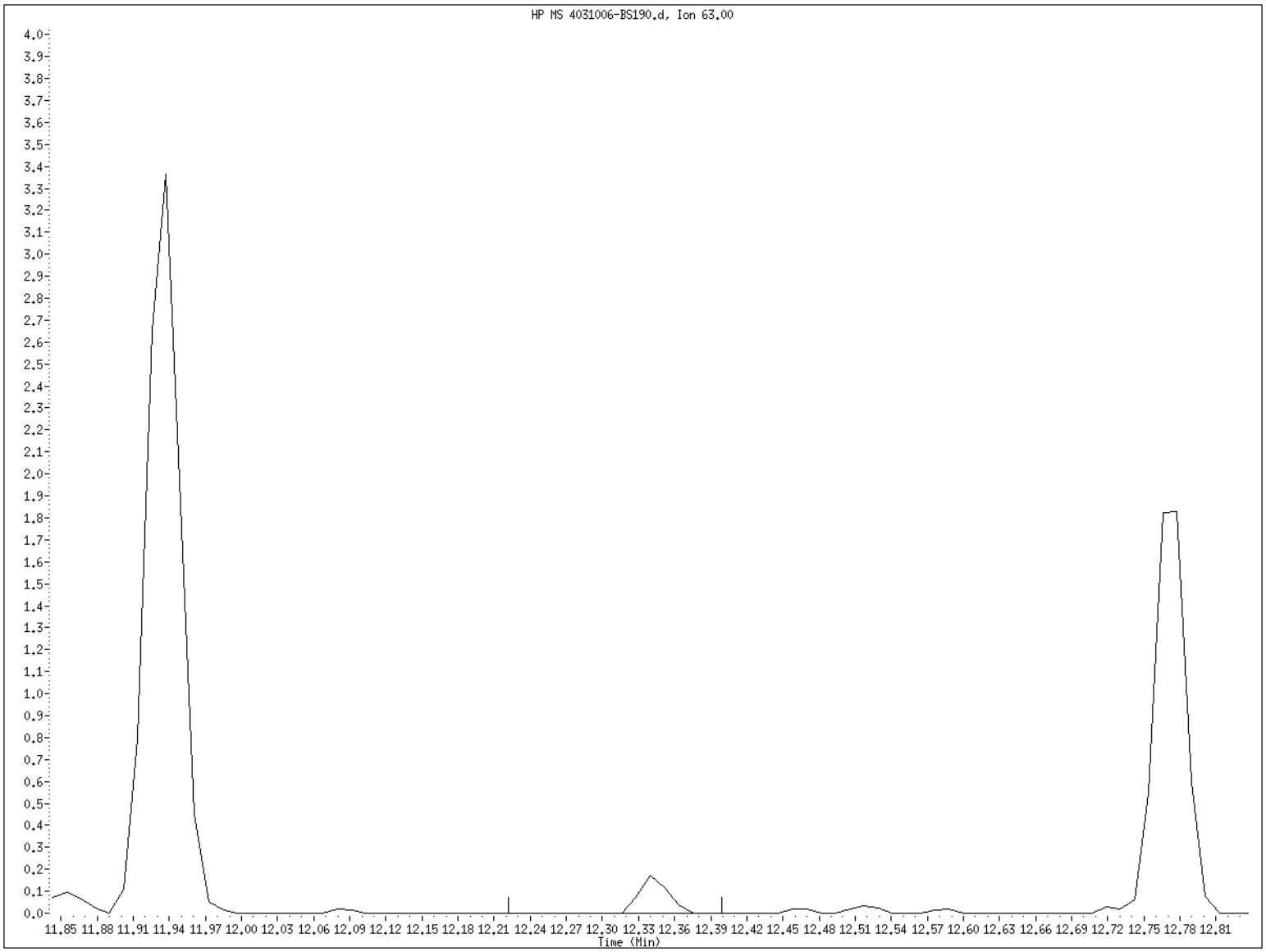
SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/4031006-BS190.d
Lab Smp Id: 4031006-BS1 Client Smp ID: VLCSTC
Inj Date : 10-MAR-2014 19:15
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4031006-BS1:JAO
Misc Info : VLCSTC
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/11/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 2835 Manually integrated



File name: /chem/5973hp90.i/D4C10002A90.b/4031006-BS190.d
Client ID: VLCSTC
Instrument ID: 5973hp90.i
Injection Date and Time: 10-MAR-2014 19:15
Retention Time: 12.34
Operator ID: JAO

3/11/2014

ANALYSIS DATA SHEET

SW 8260B

VLCSDTC

Client: DRAPER | SDG: 1403007 | Project: WATAUGA CO.LF 6520-39/SW 8260B 25ML

Matrix: Water | Extraction: EPA 5030B | File ID: 4031006-BSD190.d | QC Type: LCS Dup

Initial/Final: 25mL / 25mL | Lab ID: 4031006-BSD1 | Column ID: SPB-624

Dilution: 1 | pH: | Prepared: 03/10/14 18:33

% Moisture: NA | Analyzed: 03/10/14 19:45

Batch: 4031006 | Sequence: 4C10002 | Calibration: 4030602 | Instrument: 5973hp90

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
75-71-8	Dichlorodifluoromethane	5.345	0.030	0.50	
75-01-4	Vinyl chloride	6.222	0.070	0.50	
75-00-3	Chloroethane	6.411	0.20	0.50	
75-35-4	1,1-Dichloroethene	5.354	0.040	0.50	
75-09-2	Methylene chloride	5.110	0.020	0.50	
156-60-5	trans-1,2-Dichloroethene	5.303	0.050	0.50	
75-34-3	1,1-Dichloroethane	5.435	0.020	0.50	
156-59-2	cis-1,2-Dichloroethene	5.238	0.030	0.50	
71-55-6	1,1,1-Trichloroethane	6.133	0.020	0.50	
107-06-2	1,2-Dichloroethane	6.360	0.030	0.50	
71-43-2	Benzene	5.153	0.030	0.50	
79-01-6	Trichloroethene	5.176	0.030	0.50	
78-87-5	1,2-Dichloropropane	5.136	0.12	0.50	
127-18-4	Tetrachloroethene	4.879	0.060	0.50	
108-90-7	Chlorobenzene	5.040	0.020	0.50	
106-46-7	1,4-Dichlorobenzene	4.955	0.030	0.50	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	5.000	5.802	116	65 - 150	
1,2-Dichloroethane-d4	5.000	6.443	129	59 - 150	
Toluene-d8	5.000	4.853	97	61 - 145	
Bromofluorobenzene	5.000	4.942	99	63 - 143	

Environmental Testing Laboratories

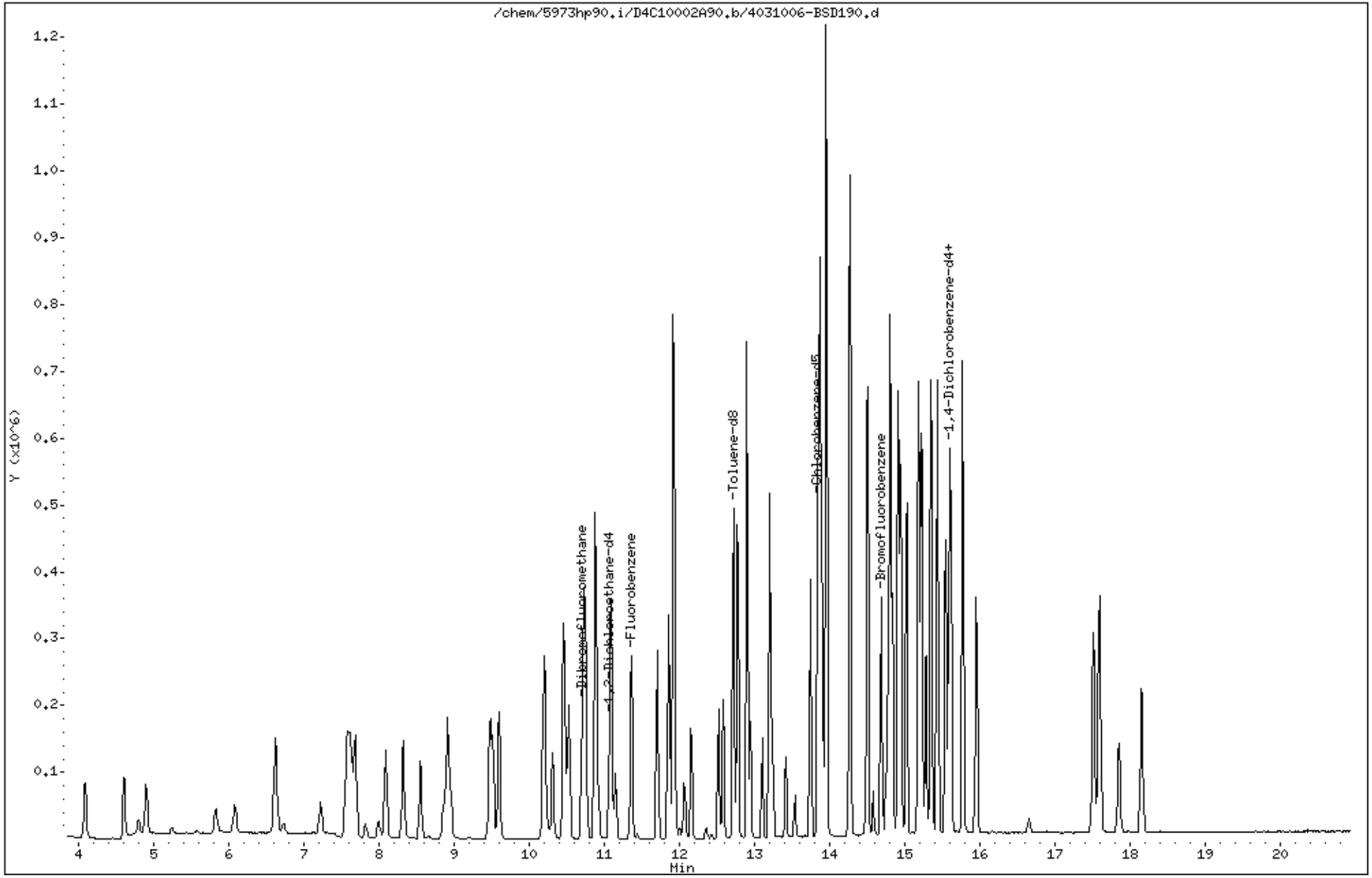
CompuChem

A Division Of

Liberty Analytical Corp.

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BSD190.d
Date : 10-MAR-2014 19:45
Client ID: VLCSDTC
Sample Info: 4031006-BSD1:JAO
Purge Volume: 25.0
Column phase: SPB-624

Instrument: 5973hp90.i
Operator: JAO
Column diameter: 0.32



Robert Hai 3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BSD190.d
Report Date: 11-Mar-2014 09:37

CompuChem

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/4031006-BSD190.d
Lab Smp Id: 4031006-BSD1 Client Smp ID: VLCSDTC
Inj Date : 10-MAR-2014 19:45
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4031006-BSD1:JAO
Misc Info : VLCSDTC
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	25.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	11.361	11.360	(1.000)	243001	125.000	
* 2 Chlorobenzene-d5	117	13.846	13.833	(1.000)	208349	125.000	
* 3 1,4-Dichlorobenzene-d4	152	15.597	15.596	(1.000)	114988	125.000	
$ 4 Dibromofluoromethane	113	10.698	10.698	(0.942)	79784	145.041	5.80165
$ 5 1,2-Dichloroethane-d4	65	11.065	11.064	(0.974)	83055	161.067	6.44267
$ 6 Toluene-d8	98	12.721	12.721	(0.919)	303556	121.314	4.85256
$ 7 Bromofluorobenzene	95	14.686	14.685	(0.942)	120828	123.545	4.94180
8 Dichlorodifluoromethane	85	4.084	4.071	(0.359)	112919	133.631	5.34526
9 Chloromethane	50	4.592	4.592	(0.404)	112157	129.117	5.16470
10 Vinyl Chloride	62	4.888	4.888	(0.430)	109217	155.550	6.22200
11 Bromomethane	94	5.823	5.799	(0.513)	42809	129.981	5.19925
12 Chloroethane	64	6.071	6.071	(0.534)	55106	160.282	6.41127
13 Trichlorofluoromethane	101	6.616	6.615	(0.582)	201483	177.417	7.09669
14 Acrolein	56	7.551	7.550	(0.665)	14279	984.214	39.3686
15 1,1,1-trichloro-2,2,2-trifluo	117	7.574	7.574	(0.667)	51315	146.655	5.86620

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BSD190.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
16 1,1,2-trichloro-1,2,2-trifluo	85	7.622	7.621	(0.671)	55656	155.240	6.20961
17 1,1-Dichloroethene	96	7.681	7.680	(0.676)	71886	133.856	5.35422
18 Acetone	43	7.811	7.810	(0.688)	41630	765.738	30.6295
19 Iodomethane	142	7.988	7.988	(0.703)	47089	118.619	4.74475
20 Carbon disulfide	76	8.083	8.083	(0.711)	244073	130.356	5.21424
22 3-Chloropropene	39	8.320	8.307	(0.732)	95245	135.386	5.41546
23 Acetonitrile	41	8.320	8.307	(0.732)	109199	117.007	4.68030
24 Methyl acetate	43	8.320	8.319	(0.732)	23812	146.765	5.87061
25 Methylene Chloride	84	8.544	8.544	(0.752)	61813	127.758	5.11033
26 Acrylonitrile	53	8.947	8.946	(0.788)	65444	1410.87	56.4347
28 trans-1,2-Dichloroethene	96	8.911	8.911	(0.784)	77892	132.581	5.30325
27 Methyl-tert-butyl ether	73	8.864	8.852	(0.780)	71732	125.418	5.01671
30 Isopropyl ether	45	9.467	9.467	(0.833)	177862	116.535	4.66141
31 Vinyl acetate	43	9.479	9.479	(0.834)	115172	123.919	4.95675
32 1,1-Dichloroethane	63	9.515	9.514	(0.838)	151849	135.875	5.43501
33 Chloroprene	53	9.598	9.597	(0.845)	135385	134.872	5.39488
34 2-butanone	43	10.189	10.177	(0.897)	49611	645.389	25.8156
35 2,2-Dichloropropane	77	10.189	10.189	(0.897)	126524	140.678	5.62712
36 cis-1,2-Dichloroethene	96	10.213	10.212	(0.899)	76445	130.950	5.23801
37 Propionitrile	54	10.308	10.307	(0.907)	128662	6876.11	275.045
38 Methacrylonitrile	41	10.450	10.449	(0.920)	174053	1358.90	54.3560
39 Bromochloromethane	128	10.473	10.473	(0.922)	26842	141.171	5.64684
40 Chloroform	83	10.532	10.520	(0.927)	166249	146.980	5.87919
42 1,1,1-Trichloroethane	97	10.722	10.721	(0.944)	184923	153.321	6.13283
43 Cyclohexane	84	10.745	10.745	(0.946)	115693	126.742	5.06970
44 1,1-dichloropropene	75	10.876	10.875	(0.957)	125618	135.393	5.41571
45 Isobutyl alcohol	43	10.911	10.911	(0.960)	42535	6053.20	242.128
46 Carbon Tetrachloride	117	10.876	10.875	(0.957)	167465	158.892	6.35568
47 Benzene	78	11.089	11.088	(0.976)	292450	128.831	5.15325
48 1,2-Dichloroethane	62	11.148	11.135	(0.981)	94488	158.991	6.35964
49 Trichloroethene	130	11.704	11.703	(1.030)	85150	129.405	5.17620
50 Methylcyclohexane	83	11.858	11.857	(1.044)	135310	125.840	5.03358
51 1,2-Dichloropropane	63	11.941	11.940	(1.051)	66287	128.392	5.13568
52 Methylmethacrylate	69	11.917	11.916	(1.049)	246978	1492.06	59.6823
53 1,4-dioxane	88	12.011	11.999	(1.057)	9363	6215.09	248.603
54 Dibromomethane	174	12.059	12.058	(1.061)	29041	141.672	5.66689
55 Bromodichloromethane	83	12.153	12.153	(1.070)	110486	150.895	6.03579
56 2-chloroethyl vinyl ether	63	12.343	12.342	(1.086)	3178	214.796	8.59185(M)
57 cis-1,3-Dichloropropene	75	12.520	12.520	(1.102)	98425	132.166	5.28665
58 4-Methyl-2-pentanone	43	12.579	12.579	(0.909)	131328	596.604	23.8642
59 Toluene	92	12.769	12.768	(0.922)	197684	117.742	4.70968
60 Ethylmethacrylate	69	12.899	12.899	(0.932)	322005	1244.72	49.7886
61 trans-1,3-Dichloropropene	75	12.946	12.946	(0.935)	85964	133.241	5.32966
62 1,1,2-Trichloroethane	97	13.100	13.100	(0.946)	40063	125.553	5.02214
63 2-hexanone	43	13.207	13.206	(0.954)	89880	592.165	23.6866
64 1,3-Dichloropropane	76	13.242	13.242	(0.956)	75968	126.661	5.06644
65 Tetrachloroethene	164	13.207	13.206	(0.954)	80832	121.977	4.87907

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BSD190.d
Report Date: 11-Mar-2014 09:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
66 Dibromochloromethane	129	13.420	13.419	(0.969)	60006	134.571	5.38283
67 1,2-Dibromoethane	107	13.538	13.537	(0.978)	40005	130.444	5.21774
68 1-Chlorohexane	55	13.739	13.739	(0.992)	95738	122.018	4.88072
69 Chlorobenzene	112	13.857	13.857	(1.001)	222123	126.006	5.04024
70 Ethylbenzene	106	13.881	13.881	(1.003)	128882	119.978	4.79914
71 1,1,1,2-Tetrachloroethane	131	13.905	13.904	(1.004)	84176	136.402	5.45608
72 m,p-Xylene	106	13.952	13.952	(1.008)	319465	246.915	9.87661
73 m,p-Xylene (part of total)	106	13.952	13.952	(1.008)	319465	246.915	9.87661
74 o-Xylene	106	14.272	14.259	(1.031)	147989	123.443	4.93773
75 o-Xylene (part of total)	106	14.272	14.259	(1.031)	147989	123.443	4.93773
76 Styrene	104	14.272	14.271	(1.031)	228192	123.186	4.92745
77 Bromoform	173	14.496	14.484	(0.929)	29845	126.205	5.04820
78 Isopropyl Benzene	105	14.508	14.496	(1.048)	458464	128.869	5.15475
79 1,1,2,2-Tetrachloroethane	83	14.757	14.744	(0.946)	45383	120.777	4.83107
81 1,2,3-Trichloropropane	110	14.816	14.815	(1.070)	14064	139.579	5.58317
80 trans-1,4-dichloro-2-butene	53	14.780	14.780	(1.067)	55525	565.129	22.6052
82 n-Propyl Benzene	91	14.804	14.804	(0.949)	571095	120.877	4.83509
83 Bromobenzene	156	14.840	14.839	(1.072)	92625	129.958	5.19831
84 1,3,5-Trimethyl Benzene	105	14.911	14.910	(0.956)	384244	122.428	4.89713
85 2-Chlorotoluene	126	14.946	14.946	(0.958)	102201	118.780	4.75119
86 4-Chlorotoluene	126	15.029	15.028	(0.964)	106057	121.595	4.86381
87 tert-Butyl Benzene	119	15.183	15.182	(0.973)	383000	121.356	4.85424
88 1,2,4-Trimethyl Benzene	105	15.218	15.218	(0.976)	388218	125.141	5.00563
89 Pentachloroethane	167	15.289	15.289	(0.980)	58701	130.473	5.21890
90 sec-Butyl Benzene	105	15.348	15.348	(0.984)	515183	122.401	4.89605
91 p-Isopropyl Toluene	119	15.431	15.431	(0.989)	432227	122.584	4.90337
92 1,3-Dichlorobenzene	146	15.550	15.549	(0.997)	199666	122.342	4.89366
93 1,4-Dichlorobenzene	146	15.620	15.620	(1.002)	194251	123.865	4.95461
94 n-Butyl Benzene	91	15.774	15.774	(1.011)	432479	124.786	4.99144
95 1,2-Dichlorobenzene	146	15.952	15.951	(1.023)	163513	124.530	4.98121
96 1,2-Dibromo-3-Chloropropane	75	16.650	16.650	(1.068)	9201	146.745	5.86979
97 1,2,4-Trichlorobenzene	180	17.514	17.513	(1.123)	128847	121.365	4.85461
98 Hexachlorobutadiene	225	17.597	17.596	(1.128)	103386	124.321	4.97282
99 Naphthalene	128	17.857	17.845	(1.145)	152006	114.473	4.57893
171 Diethyl ether	45	7.219	7.219	(0.635)	26557	137.072	5.48288
100 1,2,3-Trichlorobenzene	180	18.165	18.152	(1.165)	103417	120.720	4.82881
M 101 1,2-Dichloroethene (total)	96				154337	263.537	10.5415
M 102 Xylene (total)	106				467454	389.921	15.5968

QC Flag Legend

M - Compound response manually integrated.

3/11/2014

Data File: /chem/5973hp90.i/D4C10002A90.b/4031006-BSD190.d
Report Date: 11-Mar-2014 09:37

CompuChem

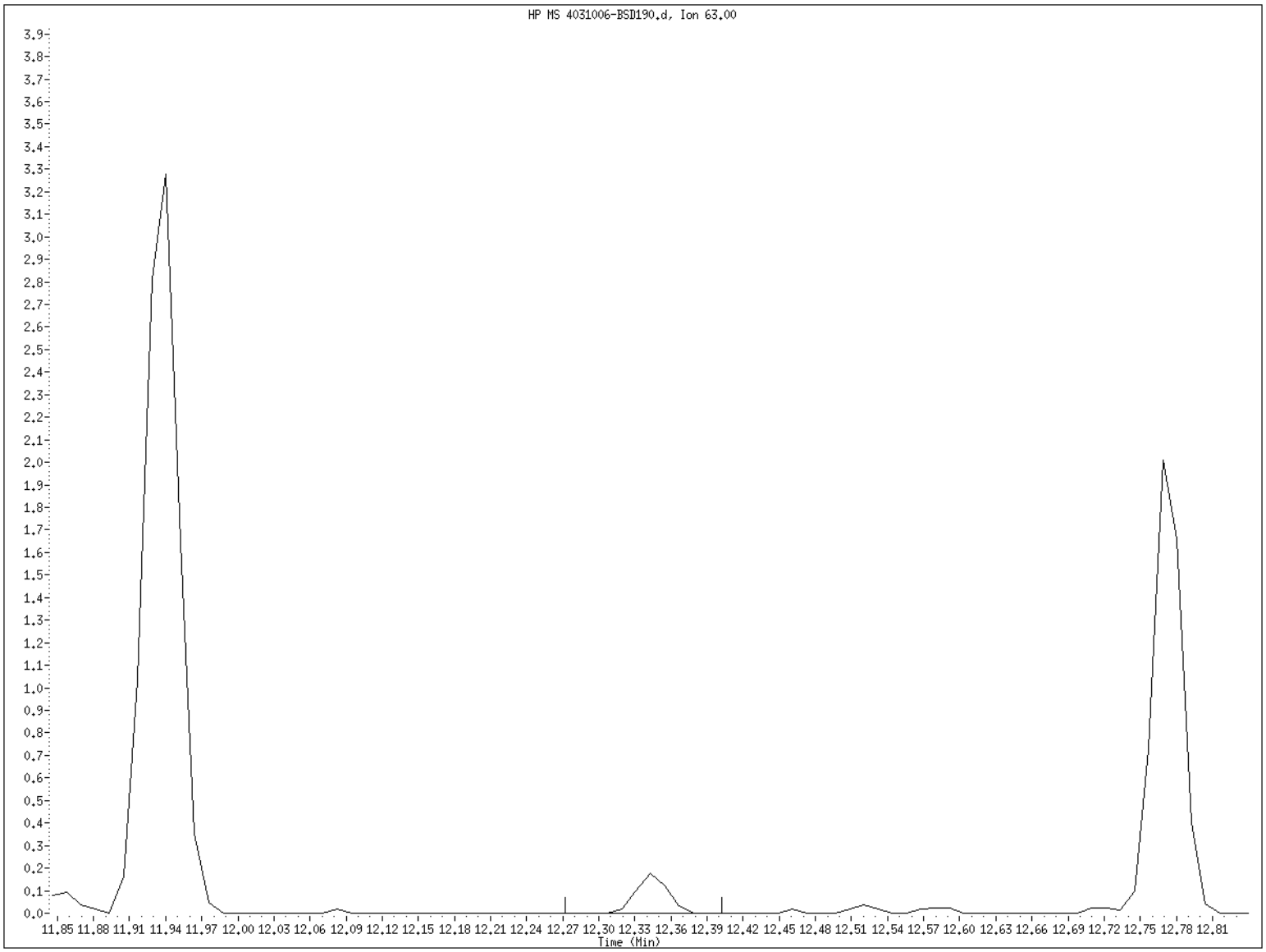
SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5973hp90.i/D4C10002A90.b/4031006-BSD190.d
Lab Smp Id: 4031006-BSD1 Client Smp ID: VLCSDTC
Inj Date : 10-MAR-2014 19:45
Operator : JAO Inst ID: 5973hp90.i
Smp Info : 4031006-BSD1:JAO
Misc Info : VLCSDTC
Comment :
Method : /chem/5973hp90.i/D4C10002A90.b/8260B_25ppbv21.m
Meth Date : 11-Mar-2014 09:37 ron Quant Type: ISTD
Cal Date : 05-MAR-2014 15:24 Cal File: 4C05005-CAL690.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

3/11/2014

2-chloroethyl vinyl ether CAS Number 110-75-8 Area = 3178 Manually integrated



File name: /chem/5973hp90.i/D4C10002A90.b/4031006-BSD190.d
Client ID: VLCSDTC
Instrument ID: 5973hp90.i
Injection Date and Time: 10-MAR-2014 19:45
Retention Time: 12.34
Operator ID: JAO

3/11/2014

S. Run Logs / Prep Sheets / Internal CoC Documents / Standard Preparation Information / Manual Integration Summary

Run Logs

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS VOLATILE RUN LOG 11 N(4) 17 (5973hp90)

DATE 3/5/14 SHIFT/S (A) ✓ (B)____ (C)____
METHOD 5030B/8260B (Water) 5035A/8260B (Soil) SOM01.2 (Circle one) or other: 25mL
Initial Time of Tune: 1400 Time Tune Expires: 0200

ROUTINE MAINTENANCE retune

	REJECTED	FILE NAME	REPORTED	pH	Vial	DATE	TIME	Client ID	SDG#	VOL/WT mL/g	DF+	CHEMIST	COMMENTS (ETC.)/ DISPOSITION
1		4C05005-TUN1		—	—	3/5/14	1400	BFBSY	—	2uL	—	JAO	LCD=SCD
2		-CAL2		—	—	/ /	1424	VSTD001SY	—	25mL	—		
3		-CAL1		—	—	/ /	1454	VSTD0.5SY	—		—		
4		-CAL6		—	—	/ /	1524	VSTD040SY	—		—		
5		-CAL5		—	—	/ /	1554	VSTD020SY	—		—		
6		-CAL4		—	—	/ /	1624	VSTD010SY	—		—		
7		-CAL3		—	—	/ /	1654	VSTD005SY	—		—		
8		-CAL2R	RD	—	—	/ /	1725	VSTD001SY	—		—		
9		-SCV1		—	—	/ /	1755	VSTD005SZ	—		—		
10		4030504-BLK1	CS	—	—	/ /	1831	VBLKSZ	1402089		—		
11		-BLK1R		—	—	/ /	1901	VBLKSZ			—		
12		-BS1		—	—	/ /	1939	VLCSSZ			—		
13		-BSD1		—	—	/ /	2009	VLCSDSZ			—		
14		4C05005-IBL1	CS	—	—	/ /	2045	VIBLKTA	—		—		
15		1402089-05		1	A	/ /	2115	GP-11-77-4	1402089	25mL	—		
16		-06		1	A	/ /	2145	-77-4-DUP			—		
17		-07	SH	1	A	/ /	2215	-13-3			—		
18		-08		1	A	/ /	2245	-35-2			—		
19		-10	SH	1	A	/ /	2315	TB22613			—		
20		-11		1	A	/ /	2346	GP-11-85-3			—		
21		-12		1	A	3/6/14	0016	-85-3-DUP			—		
22		-13		1	A	/ /	0046	-28-3			—		
23		-15	SH	1	A	/ /	0116	~~TB22827/4~~ JAO 3-5-14 JAO 3-5-14			—		
24		-01RE	SH BS	1	B	/ /	0146	GP-11-27-2			—		

+Not applicable to soil matrix

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Tune (ID #7008) Lot No.: 4B21015 Internal Standard Lot No.: 4B27035 Surrogate Lot No.: 4A07007

Calibration Group Code / Lot No.: 4C03015 Second Source Group Code/ Lot No.: 4A07006

REVIEWED BY: TAJ Date: 3/6/14

04/19/12:jcf

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS VOLATILE RUN LOG 11 N(4) 17 (5973hp90)

DATE 3/10/14 SHIFT/S (A) ✓ (B)____ (C)____
METHOD: 5030B/8260B (Water) / 5035A/8260B (Soil) SOM01.2 (Circle one) or other: 25mL
Initial Time of Tune: 1643 Time Tune Expires: 0443

ROUTINE MAINTENANCE retuned

	REJECTED	FILE NAME	REPORTED	pH	Vial	DATE	TIME	Client ID	SDG#	VOL/WT mL/g	DF+	CHEMIST	COMMENTS (ETC.)/ DISPOSITION
1		4C10002-TUN1		–	–	3/10/14	1643	BFBTC	–	2mL	–	JAO	LCD=SCD
2		–CCV1		–	–	/ /	1709	VSTD005TC	–	25mL	–		
3		4031006-BLK1	CS	–	–	/ /	1802	VBLKTC	1403007		–		
4		–BLK1R		–	–	/ /	1833	VBLKTC			–		
5		–BS1		–	–	/ /	1915	VLCSTC			–		
6		–BSD1		–	–	/ /	1945	VLCSDTC			–		
7		4C10002-IBL1	CS	–	–	/ /	2023	VIBLKTC	–	25mL	–		
8		1403007-01R		1	B	/ /	2057	S1 3-10-14	1403007		–		
9		–02R		1	B	/ /	2128	S2			–		
10		–03R		1	B	/ /	2158	S3			–		
11		–04R		1	B	/ /	2228	S4			–		
12		–05R		1	B	/ /	2259	S5			–		
13						/ /							
14						/ /							
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21						/ /							
22						/ /							
23						/ /							
24						/ /							

JAO 3-11-14

+Not applicable to soil matrix

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Tune (ID #7008) Lot No.: 4B21015 Internal Standard Lot No.: 4B27035 Surrogate Lot No.: 4A07007

Calibration Group Code / Lot No.: 4C03015 Second Source Group Code/ Lot No. : —

REVIEWED BY: TAJ Date: 3/11/14

04/19/12:jcf

VOA Internal Chain of Custody Sheet

Dept: PM

Matrix Water **Batch**: 4030605 **Status:** Batched **Analysis**: VOA-8260B 25ML

Lab Id	Client Id	Received	Container	Preparation
1403007-01 A	S-1	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403007-02 A	S-2	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403007-03 A	S-3	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403007-04 A	S-4	03/06/14	01b_40mL VOA, cool, H	EPA 5030B
1403007-05 A	S-5	03/06/14	01b_40mL VOA, cool, H	EPA 5030B

Relinquished By	Date/Time	Received By	Date/Time
#2B	3-7-14	JAD	3-7-14
JAD	3-7-14	#2B	3-7-14
#2B	3-10-14	JAD	3-10-14
JAD	3-10-14	#2B	3-10-14

Manual Integration Report

CompuChem
A Division Of
Liberty Analytical Corp.

Manual Integration Summary

Client:	**Project:**
Work Order:	**Case:**
Sdg:	

Analysis: **Sample Type:**

Lab Id: **Client Id:** **Instrument:**

Analyte	Type	M Flag

Sample Total:

Total Manual Integrations:

CompuChem

A Division Of

Liberty Analytical Corp.

3/27/2014

JANET FRAZIER

DRAPER

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

WorkOrder: 1403006

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER **Work:** 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39 **Sdg:** 1403006

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1403006-01	MW-3	Water	03/03/2014 13:00	03/06/2014 09:43
1403006-02	MW-2	Water	03/04/2014 10:35	03/06/2014 09:43
1403006-03	MW-8	Water	03/04/2014 08:15	03/06/2014 09:43
1403006-04	MW-9	Water	03/03/2014 11:10	03/06/2014 09:43
1403006-05	MW-12	Water	03/03/2014 15:55	03/06/2014 09:43
1403006-06	MW-17	Water	03/03/2014 12:20	03/06/2014 09:43
1403006-07	TRIP BLANK	Water	03/03/2014 00:00	03/06/2014 09:43

ANALYSES DATA PACKAGE COVER PAGE

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Laboratory: COMPUCHEM

SDG: 1403006

Client Sample Id:	Analysis:	Lab Sample Id:
MW-3	EPA 6020A	1403006-01
MW-3	EPA 6010C	1403006-01
MW-2	EPA 6020A	1403006-02
MW-2	EPA 6010C	1403006-02
MW-8	EPA 6020A	1403006-03
MW-8	EPA 6010C	1403006-03
MW-9	EPA 6020A	1403006-04
MW-9	EPA 6010C	1403006-04
MW-12	EPA 6020A	1403006-05
MW-12	EPA 6010C	1403006-05
MW-17	EPA 6020A	1403006-06
MW-17	EPA 6010C	1403006-06

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Susan W Bass

Name: Susan Bass

Date: 03/27/2014

Title: Senior Chemist

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

I. SAMPLE DATA PACKAGE

The Sample Data Summary Package shall contain data for all samples in one Work Order/Sample Delivery Group (SDG), as follows:

A. SDG Narrative

B. Chain of Custody Records

C. Sample Preparation and Analysis Holding Time Data
(HOLDING TIME SUMMARY)

D. MDL
(MDL SUMMARY)

E. Laboratory Control Sample Results
(LCS/LCS DUPLICATE RECOVERY)

F. Matrix Spike Results
(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

G. Serial Dilution Results– if applicable
(SERIAL DILUTION)

H. Post Digestion Spike Sample Recovery Results– if applicable
(POST DIGEST SPIKE SAMPLE RECOVERY)

I. Duplicate Results
(DUPLICATES)

J. Batch Summary
(PREPARATION BATCH SUMMARY)

K. Analysis Sequence Summary
(ANALYSIS SEQUENCE SUMMARY)

L. Target Element Results
(ANALYSIS DATA SHEET)

M. Low Level Initial and Continuing Calibration Check Results– if applicable
(LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK)

N. Initial and Continuing Calibration Results
(INITIAL CALIBRATION DATA)
(INITIAL AND CONTINUING CALIBRATION CHECK)

O. Low Range Standard Results– if applicable
(LOW RANGE STANDARD)

P. High Range Standard– if applicable
(HIGH RANGE STANDARD)

Q. ICP-AES and ICP-MS Instrument Results - if applicable
(ICP INTERFERENCE CHECK SAMPLE)
(ICP-AES AND ICP-MS LINEAR RANGES)
(ICP-AES INTERELEMENT CORRECTION FACTORS)
(ICP-MS TUNE)
(ICPMS Internal Standards Relative Intensity Summary)

R. Method and Instrument Blank Results
(BLANKS)

S. Run Logs/Raw Data

T. Digestion and Distillation Logs

U. Standard Info / Internal Coc Documents

A. SDG Narrative

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1403006
Client: DRAPER
Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

The indicated Sample Delivery Group (SDG) consisting of six (6) water samples was received into the laboratory information management system (LIMS) on March 6, 2014 intact and in good condition with the Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The cooler temperature indicator bottle was found with the samples and the samples temperature was 0.3 degrees Celsius. Temperature was recorded by IR temperature gun.

The samples were prepared and analyzed in accordance with SW846 6010C/6020A methodology for the requested metals.

EQUATIONS FOR LIQUID SAMPLE CALCULATIONS:

Equation for obtaining metals sample results in µg/L as presented on Analysis Data Sheet data sheets from ICP/MS instrument acquired results in µg/L (ppb).

$$\frac{C \times F}{I}$$

Where

C = concentration (µg/L)

F = final volume in liters after sample preparation

I = initial volume in liters

Example: Barium for sample MW-3

$$\frac{187.397\ \mu g/L\ (C) \times 0.05\ L\ (F)}{0.05\ L\ (I)} = 187.4\ \mu g/L \text{ reported as } 187\ \mu g/L$$

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (LLICV, LLCCV, ICV & CCV), blanks (ICB, & CCB), and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within SW-846 methodology.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCSW & PBW) were found to be within acceptable ranges and the field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

The ICP sample matrix spike, CCN = 4030704-MS1 (MW-3S) was found to be inside control limits.

The ICP/MS sample matrix spike, CCN = 4030705-MS1 (MW-3S) was found to be inside control limits.

The ICP sample matrix duplicate spike, CCN = 4030704-MSD1 (MW-3SD) was found to be inside control limits.

The ICP/MS sample matrix duplicate spike, CCN = 4030705-MSD1 (MW-3SD) was found to be inside control limits.

The ICP sample duplicate, CCN = 4030704-DUP1 (MW-3D) was found to be inside control limits.

The ICP/MS sample duplicate, CCN = 4030705-DUP1 (MW-3D) was found to be inside control limits.

A five-fold serial dilution of sample, CCN = SDI1403006-01 (MW-3L) was performed in accordance with SW-846 requirements for ICP and ICP/MS analysis.

The adjusted sample concentration was inside control limits.

The ICP and ICP/MS sample post digestion spike, CCN =4030704/05-PS1 (MW-3A) was performed and passed criteria.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Susan W Bass

Susan W. Bass
Senior Chemist
March 27, 2014

CompuChem's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is CompuChem's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.). This policy is also applicable to non-CLP data packages.

INORGANIC DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. The qualifiers used are:

U : This flag indicates the compound was analyzed for, not detected and is reported as less than the Method Detection Limit (MDL) (or as defined by the client). The Reporting Limit (RL), or Limit of Quantitation (LOQ), and the MDL will be adjusted to reflect any dilution or concentration of the sample and, for soils, the percent moisture.

J : This flag indicates the reported result is an estimated value. The flag is used when an analyte is detected and the result is less than the adjusted RL/LOQ but equal to or greater than the MDL.

Q : This flag denotes that one or more quality control criteria have failed (e.g., LCS recovery, Continuing Calibration Verification, CCV, and interference check standards for ICP-AES/ICP-MS) and reanalyses can't be performed. The Q flag is applied to all specific analyte(s) in all samples associated with the failed quality control criteria.

B : This flag is used when the analyte is found in the associated method or calibration blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

D: This flag is applied to an analyte when the reported result is based on a dilution.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

The extensions: D, S, SD, L, and A are added to the end of the Client ID and represent the following:

D – Matrix Duplicate
S – Matrix Spike
SD – Matrix Spike Duplicate
L – Serial Dilution
A – Post Digestion Spike

Revision 0 (11-09-2010)

B. Chain of Custody Records

The laboratory shall include a copy of the Chain-of-Custody (CoC) documentation for all of the samples in the Work Order/SDG. The CoC documents shall be arranged in increasing Client Sample ID number order, considering both letters and numbers.

CHAIN OF CUSTODY RECORD

Laboratory: CompuChem Environmental Corp., Liberty Analytical 501 Madison Ave. Cary, NC 27513 (800) 833 5097 Fax (919) 379-4050 Attn: Cathy Dover

Client:	Watauga County, NC	**Consultant:**	Draper Aden Associates	**Sample Site:**	Watauga County Landfill
Attn:	Mr. J.V. Potter	**Attn:**	Janet C. Frazier	**Location:**	Watauga County, NC
Address:	842 West King Street?/Courthouse, Suite 1 Boone, NC 28607	**Address:**	2206 South Main Street Blacksburg, Virginia 24060	**Event:**	2014 - 1st Semiannual Assess. Monitoring Event
Phone:	(828) 264-5305	**Phone:**	(540) 552-0444	**DAA JN:**	6520-39
Fax:	0	**Fax:**	(540) 552-0291	**Lab JN:**	
Fax:	0				

Project Specific (PS) or Batch (B) QC: ~~Sample Collection for Project Complete?~~ YES

Carrier: UPS

Tracking Number: 1Z2373912210026359

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

GENERAL NOTES:
1. Level 4 w/ EDD & PDF.
2. Report all calibrated target analytes, same as previous events. (8260)
3. Note that project required quantitation and detection limits are same as previous events.

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	8260C - 25 mL purge	METALS 6010 / 6020	metals pH							
Box 4 - Sample Type					G	G								
Box 3 - Filtered/Unfiltered					U	U								
Required pH of Sample					<2	<2								
Box 2 - Preservative					A	B								
Box 5 - Sample Container Type					3-40ml V	1-500ml P								
MW-2	3/4	1035	GW	4	X	X	<2			1403006	-02			Analyze and report all diluted and undiluted results.
MW-3	3/3	1300	GW	4	X	X	<2				-01			
MW-3ms	3/3	1300	GW	4	X	X	<2				-01			
MW-3msd	3/3	1300	GW	4	X	X	<2				-01			
MW-8	3/4	0815	GW	4	X	X	<2				-03			
MW-9	3/3	1110	GW	4	X	X	<2				-04			
MW-12	3/3	1555	GW	4	X	X	<2				-05			
MW-15			~~GW~~	~~3~~	~~X~~									No Samples Collected
MW-17	3/3	1220	GW	4	X	X	<2			1403006	-06			
Trip Blank	3/3		T	3	X						-07			

Clients Special Instructions:

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.3°C Received on Ice ✓ Yes ____ No
Describe problems, if any: IR CUN: SN0015

Sampler Name (Print): Dale Slaughter	Date: 3/3/14	#1 Relinquished by (Signature): Dale Slaughter	Date: 3/5/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Dale Slaughter	Time: 0730	Company Name: DAA	Time: 0900	Company Name:	Time:	
Sampler Name (Print): Tyler Emery	Date: 3/3/14	#1 Received by (Signature): [illegible]	Date: 3/6/14	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler: Tyler Emery	0730	Company: CompuChem	Time: 0943	Company:		

JVC 2/21/2014 DL 2/17/14 JVC 2-17-14

4/4

ANALYTICAL METHOD: 8260C/5030B – 25mL Purge
TYPE METHOD: GCMS
CLASS: VOLATILE

This 1st Applies to MWs + Trip Blank. JR

No.	ANALYTE	CAS RN
1.	Acetone	67-64-1
2.	Acetonitrile (methyl cyanide)	75-05-8
3.	Acrolein	107-02-8
4.	Acrylonitrile	107-13-1
5.	Allyl chloride	107-05-1
6.	Benzene	71-43-2
7.	Bromochloromethane	74-97-5
8.	Bromodichloromethane	75-27-4
9.	Bromoform (tribromomethane)	75-25-2
10.	Bromomethane; (Methyl bromide)	74-83-9
11.	2-butanone (methyl ethyl ketone - MEK)	78-93-3
12.	Carbon disulfide	75-15-0
13.	Carbon tetrachloride	56-23-5
14.	Chlorobenzene	108-90-7
15.	Chloroethane (ethyl chloride)	75-00-3
16.	Chloroform (trichloromethane)	67-66-3
17.	chloromethane ; (Methyl chloride)	74-87-3
18.	Chloroprene	126-99-8
19.	Dibromochloromethane	124-48-1
20.	dibromomethane, (Methylene bromide)	74-95-3
21.	1,2-dichlorobenzene; (o-dichlorobenzene)	95-50-1
22.	1,3-dichlorobenzene, (m-dichlorobenzene)	541-73-1
23.	1,4-dichlorobenzene; (p-dichlorobenzene)	106-46-7
24.	trans-1,4-dichloro-2-butene	110-57-6
25.	Dichlorodifluoromethane	75-71-8
26.	1,1-dichloroethane	75-34-3
27.	1,2-dichloroethane	107-06-2
28.	1,1-dichloroethene (vinylidene chloride)	75-35-4
29.	cis-1,2-dichloroethene	156-59-2
30.	trans-1,2-dichloroethene	156-60-5
31.	1,2-dichloropropane	78-87-5
32.	1,3-dichloropropane	142-28-9
33.	2,2-dichloropropane	594-20-7
34.	1,1-dichloropropene	563-58-6
35.	cis-1,3-dichloropropene	10061-01-5
36.	trans-1,3-dichloropropene	10061-02-6
37.	Ethylbenzene	100-41-4
38.	Ethyl methacrylate	97-63-2
39.	Hexachlorobutadiene	87-68-3
40.	2-hexanone (methyl butyl ketone - MBK)	591-78-6
41.	iodomethane; (Methyl iodide)	74-88-4
42.	Isobutyl alcohol	78-83-1
43.	Methacrylonitrile	126-98-7
44.	Methyl methacrylate	80-62-6
45.	4-methyl-2-pentanone (methyl isobutyl ketone)	108-10-1
46.	Naphthalene	91-20-3
47.	Propionitrile	107-12-0
48.	Styrene (phenylethene)	100-42-5
49.	1,1,1,2-tetrachloroethane	630-20-6
50.	1,1,2,2-tetrachloroethane	79-34-5
51.	Tetrachloroethene	127-18-4
52.	Toluene (methyl benzene)	108-88-3

53. 1,2,4-trichlorobenzene	120-82-1
54. 1,1,1-trichloroethane (methyl chloroform)	71-55-6
55. 1,1,2-trichloroethane	79-00-5
56. Trichloroethene	79-01-6
57. Trichlorofluoromethane (CFC-11)	75-69-4
58. 1,2,3-trichloropropane	96-18-4
59. Vinyl acetate	108-05-4
60. Xylenes (total)	1330-20-7
61 methylene chloride	75-09-2
62 Vinyl chloride	75-01-4

ANALYTICAL METHOD: See below
TYPE METHOD: See below
CLASS: TOTAL METALS

No.	PARAMETER	METHOD	CAS RN
1	Barium	6010	7440-39-3
2	Iron	6010	7439-89-6
3	Chromium	6010	7440-47-3
4	Cobalt	6020	7440-48-4
5	Nickel	6010	7440-02-0
6	Vanadium	6010	7440-62-2

Use and report most current update of method.
DVR
2/21/2014

KFC – 2/19/2009
\\draperaden.net\daa\teams\environmental\bbg\databases\watauga\pre-event set up\event parameter lists-core mw's surf & res..doc
11/25/98 3:04 PM

Cathy Dover

From: Janet Frazier [jfrazier@daa.com]
Sent: Friday, February 21, 2014 3:07 PM
To: Cathy Dover
Cc: Karen Weber; Ken Coddington; Kathy Olsen; Tiffany Jebson
Subject: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Cathy- we will switch to SW-846.

Groundwater Inorganics. Samples should be analyzed by 6010C for iron, total and by 6020A for Ba, Cr, Co, Ni, V, total .

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Friday, February 21, 2014 11:49 AM
To: Janet Frazier
Cc: Karen Weber; Ken Coddington; Kathy Olsen
Subject: RE: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Thanks! We can analyze the cobalt by ILM05.4 MS if needed.

Cathy Dover
Supervisor of Project Management
CompuChem
501 Madison Ave.
Cary, NC 27513
919-379-4089 office
919-379-4050 fax

From: Janet Frazier [mailto:jfrazier@daa.com]
Sent: Friday, February 21, 2014 11:33 AM
To: Cathy Dover
Cc: Karen Weber; Ken Coddington; Kathy Olsen
Subject: RE: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Cathy- I need to check with Karen on this... I think we are not using SW-846, but keeping the CLP, and requesting that cobalt be analyzed via ICP-MS instead of ICP. I will get back to you.

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Friday, February 21, 2014 10:27 AM
To: Ken Coddington
Cc: Karen Weber; Janet Frazier
Subject: RE: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Hi Ken,

We will ship the containers/coolers so they arrive before Thursday, Feb. 27th.

I have a question concerning the metals methods. We have done the CLP method ILM05.4 for the metals in the past—is it changing to 6010C/6020A for 2014?

Thanks,

Cathy

Cathy Dover
Supervisor of Project Management
CompuChem
501 Madison Ave.
Cary, NC 27513
919-379-4089 office
919-379-4050 fax

From: Ken Coddington [mailto:kcoddington@daa.com]
Sent: Friday, February 21, 2014 9:50 AM
To: Cathy Dover
Cc: Karen Weber; Janet Frazier
Subject: Watauga Co. Landfill 2014 - 1st Semiannual Sample Kit Order

Good Morning Cathy,

Attached is the order for the upcoming 2014 - 1st Semiannual Watauga Co. LF ground water event. Would you please have this order delivered to our Blacksburg address NLT Thursday, February 27th, 2014?

Please contact me with any questions!

As always, I would also appreciate an e-mail acknowledging the receipt of this order.

Thanks,
Ken

Ken Coddington
Senior Environmental Field Coordinator

Draper Aden Associates
Engineering • Surveying • Environmental Services
Lasting Positive Impact

direct 540-552-0444 / fax 540-552-0291 / mobile 540-250-2229
www.daa.com

All the Stormwater News That's Fit to Print - The Inlet

Please consider the environment before printing this email

"The electronic data is provided for convenience only. Any conclusion or information obtained or derived from the data will be at the user's sole risk. Modification or reuse of the data is not authorized by DAA. DAA shall have no legal liability for claims arising out of unauthorized use of the data or modification of the information. Transfer of the data does not transfer any license for use. DAA makes no representation as to the durability of the data or the medium in or on which it is transferred."

WORK ORDER

Printed: 3/7/2014 9:05:08AM

1403006

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA COUNTY LANDFILL 2014+/6520-39**	**Project Number:**	**WATAUGA COUNTY LANDFILL 2014+/6520-39**
SDG:	**1403006** **CASE:**	**Status:**	**Batched**

Report To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540)552-0444
Fax: -

Invoice To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone :(540)552-0444
Fax: -

Date Due:	03/26/2014 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	03/06/2014 09:43
Logged In By:	Cathy Dover	Date Logged In:	03/06/2014 13:40

J & B Flags?: **YES**	TICS?: **NO**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**
Metals ND to? **MDL**	Spike Level: **FULL Spike**		

USE 1403006-01 FOR QC*VOA 8260B 25ML=PPS897O.SUB*6010C MTL=Fe ONLY*6020A MTL=Ba,Cr,Co,Ni & V

Analysis	Due	TAT	Expires	Received	Comments
1403006-01 MW-3 [Water] Sampled 03/03/2014 13:00 Eastern					**USE FOR QC**
6010C METALS	03/26/2014 16:00	20	08/30/2014 13:00	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/30/2014 13:00	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 13:00	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-02 MW-2 [Water] Sampled 03/04/2014 10:35 Eastern					
6010C METALS	03/26/2014 16:00	20	08/31/2014 10:35	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/31/2014 10:35	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/18/2014 10:35	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-03 MW-8 [Water] Sampled 03/04/2014 08:15 Eastern					
6010C METALS	03/26/2014 16:00	20	08/31/2014 08:15	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/31/2014 08:15	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/18/2014 08:15	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-04 MW-9 [Water] Sampled 03/03/2014 11:10 Eastern					
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/30/2014 11:10	03/06/2014 09:43	
6010C METALS	03/26/2014 16:00	20	08/30/2014 11:10	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 11:10	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)

1403006

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA COUNTY LANDFILL 2014+/6520-39**	**Project Number:**	**WATAUGA COUNTY LANDFILL 2014+/6520-39**
SDG:	**1403006** **CASE:**	**Status:**	**Batched**

Analysis	Due	TAT	Expires		Comments
1403006-05 MW-12 [Water] Sampled 03/03/2014 15:55 Eastern					
6010C METALS	03/26/2014 16:00	20	08/30/2014 15:55	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/30/2014 15:55	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 15:55	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-06 MW-17 [Water] Sampled 03/03/2014 12:20 Eastern					
6010C METALS	03/26/2014 16:00	20	08/30/2014 12:20	03/06/2014 09:43	
6020A ICP MS (UPDATE IV)	03/26/2014 16:00	20	08/30/2014 12:20	03/06/2014 09:43	
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 12:20	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)
1403006-07 TRIP BLANK [Water] Sampled 03/03/2014 00:00 Eastern					
VOA-8260B 25ML	03/26/2014 16:00	20	03/17/2014 00:00	03/06/2014 09:43	SubList=VOA- PPS897O (03-06-14)

C. Sample Preparation and Analysis Holding Time Data

(HOLDING TIME SUMMARY)

Sample collection, receipt, preparation and analysis dates with method holding time requirements.

HOLDING TIME SUMMARY

EPA 6010C

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG: 1403006

Sample Name	Date Collected	Date Received	Date Prepared	Date Analyzed	Days to Analysis	Max Days to Analysis*	Q
MW-3	03/03/14	03/06/14	03/07/14	03/18/14	14.6	180	
MW-2	03/04/14	03/06/14	03/07/14	03/18/14	13.7	180	
MW-8	03/04/14	03/06/14	03/07/14	03/18/14	13.8	180	
MW-9	03/03/14	03/06/14	03/07/14	03/18/14	14.7	180	
MW-12	03/03/14	03/06/14	03/07/14	03/18/14	14.5	180	
MW-17	03/03/14	03/06/14	03/07/14	03/18/14	14.7	180	

HOLDING TIME SUMMARY

EPA 6020A

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG: 1403006

Sample Name	Date Collected	Date Received	Date Prepared	Date Analyzed	Days to Analysis	Max Days to Analysis*	Q
MW-3	03/03/14	03/06/14	03/07/14	03/25/14	22.3	180	
MW-2	03/04/14	03/06/14	03/07/14	03/25/14	21.4	180	
MW-8	03/04/14	03/06/14	03/07/14	03/25/14	21.5	180	
MW-9	03/03/14	03/06/14	03/07/14	03/25/14	22.3	180	
MW-12	03/03/14	03/06/14	03/07/14	03/25/14	22.1	180	
MW-17	03/03/14	03/06/14	03/07/14	03/25/14	22.3	180	

Environmental Testing Laboratories

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D. MDL

(MDL SUMMARY)

METHOD DETECTION AND REPORTING LIMITS

Laboratory: COMPUCHEM **SDG:** 1403006

Client: DRAPER **Project:** WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water **Instrument:** P4

Analyte	MDL	RL	Units	Method
Iron	69.4	200	ug/L	EPA 6010C

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METHOD DETECTION AND REPORTING LIMITS

Laboratory: COMPUCHEM **SDG:** 1403006

Client: DRAPER **Project:** WATAUGA COUNTY LANDFILL 2014+/6520-39

Matrix: Water **Instrument:** PEMS

Analyte	MDL	RL	Units	Method
Barium	0.1	10.0	ug/L	EPA 6020A
Chromium	0.068	2.00	ug/L	EPA 6020A
Cobalt	0.0095	1.00	ug/L	EPA 6020A
Nickel	0.0091	1.00	ug/L	EPA 6020A
Vanadium	0.056	5.00	ug/L	EPA 6020A

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E. Laboratory Control Sample Results

(LCS/LCS DUPLICATE RECOVERY)

LCS/LCSD recovery, relative percent difference and quality control acceptance criteria.

LCS / LCS DUPLICATE SUMMARY

EPA 6010C

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4030704-BS1 Matrix: Water Client ID: MLCS01 Batch: 4030704

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	Q	QC LIMITS REC.
Iron	5100	5190	102		80 - 120

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LCS / LCS DUPLICATE SUMMARY

EPA 6020A

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4030705-BS1 Matrix: Water Client ID: MLCS01 Batch: 4030705

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	Q	QC LIMITS REC.
Barium	110.0	110	100		80 - 120
Chromium	110.0	107	96.8		80 - 120
Cobalt	110.0	105	95.5		80 - 120
Nickel	110.0	112	102		80 - 120
Vanadium	110.0	105	95.2		80 - 120

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F. Matrix Spike Results

(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

MS/MSD recovery, relative percent difference and quality control acceptance criteria

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6010C

MW-3S

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4030704-MS1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Iron	5100	7340	12600	103		75 - 125

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6010C

MW-3SD

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4030704-MSD1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Iron	5100	12100	94.1	8.80		20	75 - 125

Environmental Testing Laboratories

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6020A

MW-3S

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4030705-MS1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Barium	110.0	187	283	87.2		75 - 125
Chromium	110.0	10.1	108	89.0		75 - 125
Cobalt	110.0	1.69	97.6	87.2		75 - 125
Nickel	110.0	4.74	102	88.8		75 - 125
Vanadium	110.0	13.8	113	90.5		75 - 125

Environmental Testing Laboratories

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Liberty Analytical Corp.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6020A

MW-3SD

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4030705-MSD1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Barium	110.0	289	92.1	5.53		20	75 - 125
Chromium	110.0	108	88.7	0.304		20	75 - 125
Cobalt	110.0	98.8	88.3	1.28		20	75 - 125
Nickel	110.0	105	91.3	2.80		20	75 - 125
Vanadium	110.0	112	89.7	0.902		20	75 - 125

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G. Serial Dilution Results

(SERIAL DILUTION)

SERIAL DILUTION

EPA 6010C

MW-3L

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4C18001-SRDA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

Sequence: 4C18001 Dilution: 5 Report to MDL: YES

Analyte	Initial Sample Result (I)	Serial Dilution Result (S)	RL	% Difference	Q	Method	QC Limits % Difference
Iron	7338.20	7257.26	200	1.10		EPA 6010C	10

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SERIAL DILUTION

EPA 6020A

MW-3L

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4C25021-SRD1 Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

Sequence: 4C25021 Dilution: 5 Report to MDL: YES

Analyte	Initial Sample Result (I)	Serial Dilution Result (S)	RL	% Difference	Q	Method	QC Limits % Difference
Barium	187.40	189.81	10.0	1.29		EPA 6020A	10
Chromium	10.12	10.51	2.00	3.83		EPA 6020A	10
Cobalt	1.69	5.00 U	1.00			EPA 6020A	10
Nickel	4.74	5.14	1.00	8.34		EPA 6020A	10
Vanadium	13.81	25.00 U	5.00			EPA 6020A	10

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H. Post Digestion Spike Sample Recovery Results

(POST DIGEST SPIKE SAMPLE RECOVERY)

POST DIGEST SPIKE SAMPLE RECOVERY

EPA 6010C

MW-3A

Laboratory: COMPUCHEM

Client: DRAPER

Matrix: Water

SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Laboratory ID: 4030704-PS1

Lab Source ID: 1403006-01

Analyte	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R	Control Limit %R
Iron	11400	7340	4000	103	75 - 125

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POST DIGEST SPIKE SAMPLE RECOVERY

EPA 6020A

MW-3A

Laboratory: COMPUCHEM

Client: DRAPER

Matrix: Water

SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Laboratory ID: 4030705-PS1

Lab Source ID: 1403006-01

Analyte	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R	Control Limit %R
Barium	276	187	100.0	88.3	75 - 125
Chromium	28.2	10.1	20.00	90.2	75 - 125
Cobalt	10.6	1.69	10.00	89.4	75 - 125
Nickel	13.8	4.74	10.00	90.2	75 - 125
Vanadium	58.7	13.8	50.00	89.9	75 - 125

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I. Duplicate Results

(DUPLICATES)

DUPLICATES

EPA 6010C

MW-3D

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4030704-DUP1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	DUPLICATE CONCENTRATION (ug/L)	RPD %	Q	METHOD
Iron	20	*7340*	7120	2.98		EPA 6010C

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DUPLICATES

EPA 6020A

MW-3D

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 4030705-DUP1 % Solid: NA Matrix: Water Lab Source ID: 1403006-01 Source Sample: MW-3

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	DUPLICATE CONCENTRATION (ug/L)	RPD %	Q	METHOD
Barium	20	*187*	176	6.31		EPA 6020A
Chromium	20	*10.1*	10.2	1.19		EPA 6020A
Cobalt	20	*1.69*	1.63	3.59		EPA 6020A
Nickel	20	*4.74*	4.51	5.05		EPA 6020A
Vanadium	20	*13.8*	12.8	7.74		EPA 6020A

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J. Batch Summary

(PREPARATION BATCH SUMMARY)

Sample names, cross-referenced with Lab Sample ID’s, with sample preparation details.

PREPARATION BATCH SUMMARY

EPA 6010C

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Batch: 4030704 Matrix: Water Preparation: EPA 3010A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (mL)	FINAL VOL/WT (mL)
MW-3	1403006-01	03/07/14 09:15	50.0	50.0
MW-2	1403006-02	03/07/14 09:15	50.0	50.0
MW-8	1403006-03	03/07/14 09:15	50.0	50.0
MW-9	1403006-04	03/07/14 09:15	50.0	50.0
MW-12	1403006-05	03/07/14 09:15	50.0	50.0
MW-17	1403006-06	03/07/14 09:15	50.0	50.0
PBW01	4030704-BLK1	03/07/14 09:15	50.0	50.0
MLCS01	4030704-BS1	03/07/14 09:15	50.0	50.0
MW-3D	4030704-DUP1	03/07/14 09:15	50.0	50.0
MW-3S	4030704-MS1	03/07/14 09:15	50.0	50.0
MW-3SD	4030704-MSD1	03/07/14 09:15	50.0	50.0
MW-3A	4030704-PS1	03/07/14 09:15	50.0	50.0

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PREPARATION BATCH SUMMARY

EPA 6020A

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Batch: 4030705 Matrix: Water Preparation: EPA 3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (mL)	FINAL VOL/WT (mL)
MW-3	1403006-01	03/07/14 09:10	50.0	50.0
MW-2	1403006-02	03/07/14 09:10	50.0	50.0
MW-8	1403006-03	03/07/14 09:10	50.0	50.0
MW-9	1403006-04	03/07/14 09:10	50.0	50.0
MW-12	1403006-05	03/07/14 09:10	50.0	50.0
MW-17	1403006-06	03/07/14 09:10	50.0	50.0
PBW01	4030705-BLK1	03/07/14 09:10	50.0	50.0
MLCS01	4030705-BS1	03/07/14 09:10	50.0	50.0
MW-3D	4030705-DUP1	03/07/14 09:10	50.0	50.0
MW-3S	4030705-MS1	03/07/14 09:10	50.0	50.0
MW-3SD	4030705-MSD1	03/07/14 09:10	50.0	50.0
MW-3A	4030705-PS1	03/07/14 09:10	50.0	50.0

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K. Analysis Sequence Summary

(ANALYSIS SEQUENCE SUMMARY)

ANALYSIS SEQUENCE SUMMARY

EPA 6010C

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C18001 Calibration: UNASSIGI Instrument: P4

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
S0	4C18001-CAL1	4C18001_P-001	03/17/14 10:42:46
S RSTD-2	4C18001-CAL3	4C18001_P-004	03/17/14 11:03:53
LLICV	4C18001-CRL1	4C18001_P-006	03/17/14 11:19:33
ICV	4C18001-ICV1	4C18001_P-007	03/17/14 11:26:46
ICB	4C18001-ICB1	4C18001_P-008	03/17/14 11:33:59
ICSA	4C18001-IFA1	4C18001_P-009	03/17/14 11:41:12
ICSAB	4C18001-IFB1	4C18001_P-010	03/17/14 11:48:25
LLCCV	4C18001-CRL2	4C18001_P-011	03/17/14 11:55:38
CCV1	4C18001-CCV1	4C18001_P-012	03/17/14 12:02:51
CCB1	4C18001-CCB1	4C18001_P-013	03/17/14 12:10:05
CCV1	4C18001-CCV2	4C18001_P-024	03/17/14 13:38:04
CCB1	4C18001-CCB2	4C18001_P-025	03/17/14 13:45:18
LLCCV	4C18001-CRL3	4C18001_P-035	03/17/14 14:57:27
CCV1	4C18001-CCV3	4C18001_P-036	03/17/14 15:04:41
CCB1	4C18001-CCB3	4C18001_P-037	03/17/14 15:11:55
CCV1	4C18001-CCV4	4C18001_P-048	03/17/14 16:31:16
CCB1	4C18001-CCB4	4C18001_P-049	03/17/14 16:38:30
LLCCV	4C18001-CRL4	4C18001_P-059	03/17/14 17:50:39
CCV1	4C18001-CCV5	4C18001_P-060	03/17/14 17:57:53
CCB1	4C18001-CCB5	4C18001_P-061	03/17/14 18:05:06
CCV1	4C18001-CCV6	4C18001_P-072	03/17/14 19:24:29
CCB1	4C18001-CCB6	4C18001_P-073	03/17/14 19:31:42
LLCCV	4C18001-CRL5	4C18001_P-083	03/17/14 20:45:28
CCV1	4C18001-CCV7	4C18001_P-084	03/17/14 20:52:42
CCB1	4C18001-CCB7	4C18001_P-085	03/17/14 20:59:55
CCV1	4C18001-CCV8	4C18001_P-096	03/17/14 22:19:20
CCB1	4C18001-CCB8	4C18001_P-097	03/17/14 22:26:33

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ANALYSIS SEQUENCE SUMMARY

EPA 6010C

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C18001 Calibration: UNASSIGI Instrument: P4

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LLCCV	4C18001-CRL6	4C18001_P-107	03/17/14 23:38:45
CCV1	4C18001-CCV9	4C18001_P-108	03/17/14 23:45:58
CCB1	4C18001-CCB9	4C18001_P-109	03/17/14 23:53:11
CCV1	4C18001-CCVA	4C18001_P-120	03/18/14 01:12:40
CCB1	4C18001-CCBA	4C18001_P-121	03/18/14 01:19:54
LLCCV	4C18001-CRL7	4C18001_P-131	03/18/14 02:32:10
CCV1	4C18001-CCVB	4C18001_P-132	03/18/14 02:39:23
CCB1	4C18001-CCBB	4C18001_P-133	03/18/14 02:46:36
PBW01	4030704-BLK1	4C18001_P-136	03/18/14 03:08:17
MLCS01	4030704-BS1	4C18001_P-137	03/18/14 03:15:31
MW-3	1403006-01	4C18001_P-138	03/18/14 03:22:45
MW-3D	4030704-DUP1	4C18001_P-139	03/18/14 03:29:58
MW-3S	4030704-MS1	4C18001_P-140	03/18/14 03:37:12
MW-3SD	4030704-MSD1	4C18001_P-141	03/18/14 03:44:26
MW-3L	4C18001-SRDA	4C18001_P-142	03/18/14 03:51:40
MW-3A	4030704-PS1	4C18001_P-143	03/18/14 03:58:53
CCV1	4C18001-CCVC	4C18001_P-144	03/18/14 04:06:07
CCB1	4C18001-CCBC	4C18001_P-145	03/18/14 04:13:21
MW-2	1403006-02	4C18001_P-146	03/18/14 04:20:34
MW-8	1403006-03	4C18001_P-147	03/18/14 04:27:48
MW-9	1403006-04	4C18001_P-148	03/18/14 04:35:02
MW-12	1403006-05	4C18001_P-149	03/18/14 04:42:16
MW-17	1403006-06	4C18001_P-150	03/18/14 04:49:30
LLCCV	4C18001-CRL8	4C18001_P-151	03/18/14 04:56:43
CCV1	4C18001-CCVD	4C18001_P-152	03/18/14 05:03:56
CCB1	4C18001-CCBD	4C18001_P-153	03/18/14 05:11:10

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ANALYSIS SEQUENCE SUMMARY

EPA 6020A

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C25021 Calibration: 4032609 Instrument: PEMS

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
TUN1	4C25021-TUN1	4C25021_P-001	03/25/14 10:32:36
S0	4C25021-CAL1	4C25021_P-002	03/25/14 18:23:22
S 6020-MS1	4C25021-CAL2	4C25021_P-003	03/25/14 18:25:07
S 6020-MS2	4C25021-CAL3	4C25021_P-004	03/25/14 18:26:52
S 6020-MS3	4C25021-CAL4	4C25021_P-005	03/25/14 18:28:36
S 6020-MS4	4C25021-CAL5	4C25021_P-006	03/25/14 18:30:20
S 6020-MS5	4C25021-CAL6	4C25021_P-007	03/25/14 18:32:05
LLICV	4C25021-CRL1	4C25021_P-008	03/25/14 18:35:31
ICV	4C25021-ICV1	4C25021_P-009	03/25/14 18:37:17
ICB	4C25021-ICB1	4C25021_P-010	03/25/14 18:39:02
ICSA	4C25021-IFA1	4C25021_P-011	03/25/14 18:40:47
ICSAB	4C25021-IFB1	4C25021_P-012	03/25/14 18:42:32
LLICV	4C25021-CRL2	4C25021_P-013	03/25/14 18:44:17
CCV	4C25021-CCV1	4C25021_P-014	03/25/14 18:46:03
CCB	4C25021-CCB1	4C25021_P-015	03/25/14 18:47:47
PBW01	4030705-BLK1	4C25021_P-016	03/25/14 19:00:27
MLCS01	4030705-BS1	4C25021_P-017	03/25/14 19:02:11
MW-3	1403006-01	4C25021_P-018	03/25/14 19:03:56
MW-3D	4030705-DUP1	4C25021_P-019	03/25/14 19:05:40
MW-3S	4030705-MS1	4C25021_P-020	03/25/14 19:07:25
MW-3SD	4030705-MSD1	4C25021_P-021	03/25/14 19:09:09
MW-3L	4C25021-SRD1	4C25021_P-022	03/25/14 19:10:54
MW-3A	4030705-PS1	4C25021_P-023	03/25/14 19:12:38
MW-2	1403006-02	4C25021_P-024	03/25/14 19:14:23
MW-8	1403006-03	4C25021_P-025	03/25/14 19:16:07
CCV	4C25021-CCV2	4C25021_P-026	03/25/14 19:17:53
CCB	4C25021-CCB2	4C25021_P-027	03/25/14 19:19:38

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ANALYSIS SEQUENCE SUMMARY

EPA 6020A

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C25021 Calibration: 4032609 Instrument: PEMS

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MW-9	1403006-04	4C25021_P-028	03/25/14 19:21:24
MW-12	1403006-05	4C25021_P-029	03/25/14 19:23:09
MW-17	1403006-06	4C25021_P-030	03/25/14 19:24:53
LLCCV	4C25021-CRL3	4C25021_P-031	03/25/14 19:26:38
CCV	4C25021-CCV3	4C25021_P-032	03/25/14 19:28:24
CCB	4C25021-CCB3	4C25021_P-033	03/25/14 19:30:08

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L. Target Element Results

(ANALYSIS DATA SHEETS)

ANALYSIS DATA SHEET

MW-3

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 1403006-01 % Solid: Matrix: Water Sampled: 03/03/14 Received: 03/06/14

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-39-3	Barium	187	0.100	10.0	1		EPA 6020A	4C25021	3/25/14 19:03
7440-47-3	Chromium	10.1	0.0680	2.00	1		EPA 6020A	4C25021	3/25/14 19:03
7440-48-4	Cobalt	1.69	0.00950	1.00	1		EPA 6020A	4C25021	3/25/14 19:03
7439-89-6	Iron	7340	69.4	200	1		EPA 6010C	4C18001	3/18/14 3:22
7440-02-0	Nickel	4.74	0.00910	1.00	1		EPA 6020A	4C25021	3/25/14 19:03
7440-62-2	Vanadium	13.8	0.0560	5.00	1		EPA 6020A	4C25021	3/25/14 19:03

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ANALYSIS DATA SHEET

MW-2

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 1403006-02 % Solid: Matrix: Water Sampled: 03/04/14 Received: 03/06/14

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-39-3	Barium	237	0.100	10.0	1		EPA 6020A	4C25021	3/25/14 19:14
7440-47-3	Chromium	0.236	0.0680	2.00	1	J	EPA 6020A	4C25021	3/25/14 19:14
7440-48-4	Cobalt	0.128	0.00950	1.00	1	J	EPA 6020A	4C25021	3/25/14 19:14
7439-89-6	Iron		69.4	200	1	U	EPA 6010C	4C18001	3/18/14 4:20
7440-02-0	Nickel	0.803	0.00910	1.00	1	J	EPA 6020A	4C25021	3/25/14 19:14
7440-62-2	Vanadium	1.11	0.0560	5.00	1	J	EPA 6020A	4C25021	3/25/14 19:14

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ANALYSIS DATA SHEET

MW-8

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 1403006-03 % Solid: Matrix: Water Sampled: 03/04/14 Received: 03/06/14

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-39-3	Barium	62.3	0.100	10.0	1		EPA 6020A	4C25021	3/25/14 19:16
7440-47-3	Chromium	2.83	0.0680	2.00	1		EPA 6020A	4C25021	3/25/14 19:16
7440-48-4	Cobalt	1.12	0.00950	1.00	1		EPA 6020A	4C25021	3/25/14 19:16
7439-89-6	Iron	2220	69.4	200	1		EPA 6010C	4C18001	3/18/14 4:27
7440-02-0	Nickel	2.48	0.00910	1.00	1		EPA 6020A	4C25021	3/25/14 19:16
7440-62-2	Vanadium	3.74	0.0560	5.00	1	J	EPA 6020A	4C25021	3/25/14 19:16

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ANALYSIS DATA SHEET

MW-9

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 1403006-04 % Solid: Matrix: Water Sampled: 03/03/14 Received: 03/06/14

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-39-3	Barium	380	0.100	10.0	1		EPA 6020A	4C25021	3/25/14 19:21
7440-47-3	Chromium	0.432	0.0680	2.00	1	J	EPA 6020A	4C25021	3/25/14 19:21
7440-48-4	Cobalt	4.00	0.00950	1.00	1		EPA 6020A	4C25021	3/25/14 19:21
7439-89-6	Iron	142	69.4	200	1	J	EPA 6010C	4C18001	3/18/14 4:35
7440-02-0	Nickel	1.79	0.00910	1.00	1		EPA 6020A	4C25021	3/25/14 19:21
7440-62-2	Vanadium	0.137	0.0560	5.00	1	J	EPA 6020A	4C25021	3/25/14 19:21

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ANALYSIS DATA SHEET

MW-12

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 1403006-05 % Solid: Matrix: Water Sampled: 03/03/14 Received: 03/06/14

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-39-3	Barium	298	0.100	10.0	1		EPA 6020A	4C25021	3/25/14 19:23
7440-47-3	Chromium	0.312	0.0680	2.00	1	J	EPA 6020A	4C25021	3/25/14 19:23
7440-48-4	Cobalt	1.38	0.00950	1.00	1		EPA 6020A	4C25021	3/25/14 19:23
7439-89-6	Iron		69.4	200	1	U	EPA 6010C	4C18001	3/18/14 4:42
7440-02-0	Nickel	3.16	0.00910	1.00	1		EPA 6020A	4C25021	3/25/14 19:23
7440-62-2	Vanadium	0.694	0.0560	5.00	1	J	EPA 6020A	4C25021	3/25/14 19:23

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ANALYSIS DATA SHEET

MW-17

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Lab ID: 1403006-06 % Solid: Matrix: Water Sampled: 03/03/14 Received: 03/06/14

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-39-3	Barium	238	0.100	10.0	1		EPA 6020A	4C25021	3/25/14 19:24
7440-47-3	Chromium	0.400	0.0680	2.00	1	J	EPA 6020A	4C25021	3/25/14 19:24
7440-48-4	Cobalt	1.25	0.00950	1.00	1		EPA 6020A	4C25021	3/25/14 19:24
7439-89-6	Iron		69.4	200	1	U	EPA 6010C	4C18001	3/18/14 4:49
7440-02-0	Nickel	1.57	0.00910	1.00	1		EPA 6020A	4C25021	3/25/14 19:24
7440-62-2	Vanadium	0.148	0.0560	5.00	1	J	EPA 6020A	4C25021	3/25/14 19:24

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M. Low Level Initial and Continuing Calibration Check Results

(LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK)

LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C18001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	QC Limts
LLICV	4C18001-CRL1	Iron	200.0	173	86	ug/L	J	70 - 130
LLCCV	4C18001-CRL2	Iron	200.0	213	106	ug/L		70 - 130
LLCCV	4C18001-CRL3	Iron	200.0	171	86	ug/L	J	70 - 130
LLCCV	4C18001-CRL4	Iron	200.0	170	85	ug/L	J	70 - 130
LLCCV	4C18001-CRL5	Iron	200.0	197	99	ug/L	J	70 - 130
LLCCV	4C18001-CRL6	Iron	200.0	183	91	ug/L	J	70 - 130
LLCCV	4C18001-CRL7	Iron	200.0	183	92	ug/L	J	70 - 130
LLCCV	4C18001-CRL8	Iron	200.0	194	97	ug/L	J	70 - 130

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LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C25021 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	QC Limts
LLICV	4C25021-CRL1	Barium	10.00	9.76	98	ug/L	J	70 - 130
LLICV	4C25021-CRL1	Chromium	2.000	1.89	95	ug/L	J	70 - 130
LLICV	4C25021-CRL1	Cobalt	1.000	0.952	95	ug/L	J	70 - 130
LLICV	4C25021-CRL1	Nickel	1.000	1.04	104	ug/L		70 - 130
LLICV	4C25021-CRL1	Vanadium	5.000	4.66	93	ug/L	J	70 - 130
LLICV	4C25021-CRL2	Barium	10.00	9.71	97	ug/L	J	70 - 130
LLICV	4C25021-CRL2	Chromium	2.000	1.78	89	ug/L	J	70 - 130
LLICV	4C25021-CRL2	Cobalt	1.000	0.921	92	ug/L	J	70 - 130
LLICV	4C25021-CRL2	Nickel	1.000	0.973	97	ug/L	J	70 - 130
LLICV	4C25021-CRL2	Vanadium	5.000	4.53	91	ug/L	J	70 - 130
LLCCV	4C25021-CRL3	Barium	10.00	9.61	96	ug/L	J	70 - 130
LLCCV	4C25021-CRL3	Chromium	2.000	1.87	94	ug/L	J	70 - 130
LLCCV	4C25021-CRL3	Cobalt	1.000	0.942	94	ug/L	J	70 - 130
LLCCV	4C25021-CRL3	Nickel	1.000	0.959	96	ug/L	J	70 - 130
LLCCV	4C25021-CRL3	Vanadium	5.000	4.58	92	ug/L	J	70 - 130

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N. Initial and Continuing Calibration Results

(INITIAL CALIBRATION DATA)
(INITIAL AND CONTINUING CALIBRATION CHECK)

INITIAL CALIBRATION DATA

EPA 6020A

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Calibration: 4032609 Instrument: PEMS

Calibration Date: 3/25/2014 10:32:28

Compound	QC Sample	Lab ID	Area	Conc (ug/L)
Barium	CAL1	S0	15	0
Barium	CAL2	S 6020-MS1	23176.28	10
Barium	CAL3	S 6020-MS2	47917.33	20
Barium	CAL4	S 6020-MS3	299350.9	125
Barium	CAL5	S 6020-MS4	593172.4	250
Barium	CAL6	S 6020-MS5	1173218	500
Chromium	CAL1	S0	6211.929	0
Chromium	CAL2	S 6020-MS1	22062.09	2
Chromium	CAL3	S 6020-MS2	38272	4
Chromium	CAL4	S 6020-MS3	1000541	125
Chromium	CAL5	S 6020-MS4	1909922	250
Chromium	CAL6	S 6020-MS5	3992482	500
Cobalt	CAL1	S0	18.333	0
Cobalt	CAL2	S 6020-MS1	10087.87	1
Cobalt	CAL3	S 6020-MS2	20280.55	2
Cobalt	CAL4	S 6020-MS3	1259711	125
Cobalt	CAL5	S 6020-MS4	2541673	250
Cobalt	CAL6	S 6020-MS5	5102033	500
Nickel	CAL1	S0	10.185	0
Nickel	CAL2	S 6020-MS1	2264.145	1
Nickel	CAL3	S 6020-MS2	4364.842	2
Nickel	CAL4	S 6020-MS3	273987.8	125
Nickel	CAL5	S 6020-MS4	537108.6	250
Nickel	CAL6	S 6020-MS5	1025701	500
Vanadium	CAL1	S0	2066.851	0

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Vanadium	CAL2	S 6020-MS1	46575.92	5
Vanadium	CAL3	S 6020-MS2	94153.26	10
Vanadium	CAL4	S 6020-MS3	1142083	125
Vanadium	CAL5	S 6020-MS4	2290773	250
Vanadium	CAL6	S 6020-MS5	4674087	500

INITIAL CALIBRATION DATA (Continued)

EPA 6020A

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Calibration: 4032609 Instrument: PEMS

Calibration Date: 3/25/2014 10:32:28

Compound	Slope	Intercept	Linear r	Linear Limit	Q
Barium	0.0008812	0	0.9999	0.998	
Chromium	0.007651	0	0.9996	0.998	
Cobalt	0.009863	0	0.9999	0.998	
Nickel	0.002009	0	0.9999	0.998	
Vanadium	0.009000	0	0.99998	0.998	

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N. Initial and Continuing Calibration Results

(INITIAL CALIBRATION DATA)
(INITIAL AND CONTINUING CALIBRATION CHECK)

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C18001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	Control Limit
ICV	4C18001-ICV1	Iron	5100	5340	105	ug/L		+/-10
CCV1	4C18001-CCV1	Iron	25000	24600	99	ug/L		+/-10
CCV1	4C18001-CCV2	Iron	25000	24600	99	ug/L		+/-10
CCV1	4C18001-CCV3	Iron	25000	24700	99	ug/L		+/-10
CCV1	4C18001-CCV4	Iron	25000	24700	99	ug/L		+/-10
CCV1	4C18001-CCV5	Iron	25000	24900	100	ug/L		+/-10
CCV1	4C18001-CCV6	Iron	25000	24600	99	ug/L		+/-10
CCV1	4C18001-CCV7	Iron	25000	24900	100	ug/L		+/-10
CCV1	4C18001-CCV8	Iron	25000	25100	101	ug/L		+/-10
CCV1	4C18001-CCV9	Iron	25000	24900	100	ug/L		+/-10
CCV1	4C18001-CCVA	Iron	25000	25300	101	ug/L		+/-10
CCV1	4C18001-CCVB	Iron	25000	25200	101	ug/L		+/-10
CCV1	4C18001-CCVC	Iron	25000	25000	100	ug/L		+/-10
CCV1	4C18001-CCVD	Iron	25000	25200	101	ug/L		+/-10

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INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C25021 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	Control Limit
ICV	4C25021-ICV1	Barium	110.0	108	98	ug/L		+/-10
ICV	4C25021-ICV1	Chromium	110.0	101	92	ug/L		+/-10
ICV	4C25021-ICV1	Cobalt	110.0	102	93	ug/L		+/-10
ICV	4C25021-ICV1	Nickel	110.0	109	99	ug/L		+/-10
ICV	4C25021-ICV1	Vanadium	110.0	102	93	ug/L		+/-10
CCV	4C25021-CCV1	Barium	300.0	299	100	ug/L		+/-10
CCV	4C25021-CCV1	Chromium	300.0	310	103	ug/L		+/-10
CCV	4C25021-CCV1	Cobalt	300.0	298	99	ug/L		+/-10
CCV	4C25021-CCV1	Nickel	300.0	305	102	ug/L		+/-10
CCV	4C25021-CCV1	Vanadium	300.0	309	103	ug/L		+/-10
CCV	4C25021-CCV2	Barium	300.0	306	102	ug/L		+/-10
CCV	4C25021-CCV2	Chromium	300.0	303	101	ug/L		+/-10
CCV	4C25021-CCV2	Cobalt	300.0	298	99	ug/L		+/-10
CCV	4C25021-CCV2	Nickel	300.0	306	102	ug/L		+/-10
CCV	4C25021-CCV2	Vanadium	300.0	303	101	ug/L		+/-10
CCV	4C25021-CCV3	Barium	300.0	301	100	ug/L		+/-10
CCV	4C25021-CCV3	Chromium	300.0	309	103	ug/L		+/-10
CCV	4C25021-CCV3	Cobalt	300.0	302	101	ug/L		+/-10
CCV	4C25021-CCV3	Nickel	300.0	303	101	ug/L		+/-10
CCV	4C25021-CCV3	Vanadium	300.0	304	101	ug/L		+/-10

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Q. ICP-AES and ICP-MS Instrument Results

(ICP INTERFERENCE CHECK SAMPLE)
(ICP-AES AND ICP-MS LINEAR RANGES)
(ICP-AES INTERELEMENT CORRECTION FACTORS)
(ICP-MS TUNE)
(ICPMS Internal Standards Relative Intensity Summary)

ICP Interference Check Sample

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C18001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units
ICSA	4C18001-IFA1	Iron	100000	93747.75	94	ug/L
ICSAB	4C18001-IFB1	Iron	100000	95821.74	96	ug/L

* The absence of an entry in the "True" column denotes the lack of a true value for that analyte. The entry in the "%R" column represents a Control Limit, established as +/- 2 times analyte Limit Reporting Limit.

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ICP INTERFERENCE CHECK SAMPLE

EPA 6020A

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C25021 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units
ICSA	4C25021-IFA1	Barium		0.01	20	ug/L
ICSA	4C25021-IFA1	Chromium		0.05	4	ug/L
ICSA	4C25021-IFA1	Cobalt		0.00	2	ug/L
ICSA	4C25021-IFA1	Nickel		0.08	2	ug/L
ICSA	4C25021-IFA1	Vanadium		0.00	10	ug/L
ICSAB	4C25021-IFB1	Barium		0.04	20	ug/L
ICSAB	4C25021-IFB1	Chromium	50.00	49.01	98	ug/L
ICSAB	4C25021-IFB1	Cobalt	50.00	46.72	93	ug/L
ICSAB	4C25021-IFB1	Nickel	50.00	50.53	101	ug/L
ICSAB	4C25021-IFB1	Vanadium	50.00	47.61	95	ug/L

* The absence of an entry in the "True" column denotes the lack of a true value for that analyte. The entry in the "%R" column represents a Control Limit, established as +/- 2 times analyte Limit Reporting Limit.

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ICP-AES AND ICP-MS LINEAR RANGES

ICP-AES LINEAR RANGES

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG: 1403006 Instrument: P4

Analyte	Concentration ug/L	LR Date
Iron	250000	02/27/2014

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ICP-AES INTERELEMENT CORRECTION FACTORS

ICP-AES INTERELEMENT CORRECTION FACTORS

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG No.: 1403006 Instrument: P4 Date: 10/25/13

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ag
Iron	271.44				-0.00160	

Comments:

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG No.: 1403006 Instrument: P4 Date: 10/25/13

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	B	Ba	Be	Cd
Iron	271.44					

Comments:

Environmental Testing Laboratories

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG No.: 1403006 Instrument: P4 Date: 10/25/13

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	K	Mn
Iron	271.44	-0.00393			0.001382	

Comments:

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG No.: 1403006 Instrument: P4 Date: 10/25/13

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Mo	Na	Ni	Pb	Sb
Iron	271.44					

Comments:

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG No.: 1403006 Instrument: P4 Date: 10/25/13

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Se	Sn	Ti	Tl	V
Iron	271.44					0.0053210

Comments:

Environmental Testing Laboratories

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: DRAPER

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

SDG No.: 1403006 Instrument: P4 Date: 10/25/13

Analyte	Wave-length (nm)	Interelement Correction Factors for: Zn				
Iron	271.44					

Comments:

Environmental Testing Laboratories

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ICP-MS Tune

ICP-MS Tune

EPA 6020A

Client: DRAPER SDG: 1403006

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C25021 Date: 03/25/14 ICP-MS Instrument ID: PEMS

Element - Mass	Avg. Measured Mass (amu)	Average Peak Width (amu)	%Height	%RSD
Be - 9	8.975	0.686	10	1.694
Mg - 24	23.975	0.635	10	0.903
Mg - 25	24.925	0.675	10	1.106
Mg - 26	25.925	0.699	10	1.044
Co - 59	58.925	0.701	10	2.425
In - 113	112.825	0.750	10	1.544
In - 115	114.925	0.690	10	1.845
Pb - 206	205.975	0.727	10	0.954
Pb - 207	206.975	0.716	10	0.835
Pb - 208	207.975	0.697	10	0.811

Comments:

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ICPMS Internal Standards Relative Intensity Summary

ICPMS Internal Standards Relative Intensity Summary

EPA 6020A

Client: DRAPER

Work Order: 1403006

Sequence: 4C25021

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Instrument: PEMS

		Internal Standards %RI For:				
Sample No.	**Time**	**Lithium6**	**Scandium45**	**Indium115**	**Terbium159**	**Bismuth209**
S0	3/25/14 18:23	100	100	100	100	100
S 6020-MS1	3/25/14 18:25	101	99	103	101	101
S 6020-MS2	3/25/14 18:26	102	101	101	101	102
S 6020-MS3	3/25/14 18:28	101	99	100	99	100
S 6020-MS4	3/25/14 18:30	98	97	96	99	96
S 6020-MS5	3/25/14 18:32	95	95	94	100	95
LLICV	3/25/14 18:35	96	95	95	98	97
ICV	3/25/14 18:37	96	97	98	99	98
ICB	3/25/14 18:39	95	95	93	99	98
ICSA	3/25/14 18:40	98	96	96	102	97
ICSAB	3/25/14 18:42	96	95	95	100	97
LLICV	3/25/14 18:44	97	96	96	99	98
CCV	3/25/14 18:46	98	96	95	102	98
CCB	3/25/14 18:47	98	97	100	100	100
PBW01	3/25/14 19:00	97	94	94	98	97
MLCS01	3/25/14 19:02	94	92	93	98	97
MW-3	3/25/14 19:03	86	92	86	92	85
MW-3D	3/25/14 19:05	87	90	86	94	84
MW-3S	3/25/14 19:07	87	92	86	93	86
MW-3SD	3/25/14 19:09	89	94	89	94	86
MW-3L	3/25/14 19:10	89	89	85	90	88
MW-3A	3/25/14 19:12	86	88	85	91	84
MW-2	3/25/14 19:14	91	89	85	92	84
MW-8	3/25/14 19:16	95	91	89	94	88
CCV	3/25/14 19:17	94	91	90	95	91
CCB	3/25/14 19:19	94	92	93	98	96
MW-9	3/25/14 19:21	93	91	87	93	86

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ICPMS Internal Standards Relative Intensity Summary

EPA 6020A

Client: DRAPER

Work Order: 1403006

Sequence: 4C25021

Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Instrument: PEMS

		Internal Standards %RI For:				
Sample No.	**Time**	**Lithium6**	**Scandium45**	**Indium115**	**Terbium159**	**Bismuth209**
MW-12	3/25/14 19:23	91	87	85	91	82
MW-17	3/25/14 19:24	91	89	83	88	81
LLCCV	3/25/14 19:26	97	89	90	91	89
CCV	3/25/14 19:28	97	91	92	95	90
CCB	3/25/14 19:30	99	96	92	96	94

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R. Method and Instrument Blank Results

(BLANKS)

BLANKS

EPA 6010C

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C18001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	Found	MDL	RL	Units	Q	Method
ICB	4C18001-ICB1	Iron	10.8	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCB1	Iron	9.89	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCB2	Iron	7.85	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCB3	Iron	8.85	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCB4	Iron	10.4	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCB5	Iron	11.4	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCB6	Iron	7.44	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCB7	Iron	10.9	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCB8	Iron	21.1	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCB9	Iron	11.7	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCBA	Iron	13.4	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCBB	Iron	5.30	69.4	200	ug/L	*U*	EPA 6010C
PBW01	4030704-BLK1	Iron		69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCBC	Iron	10.2	69.4	200	ug/L	*U*	EPA 6010C
CCB1	4C18001-CCBD	Iron	7.79	69.4	200	ug/L	*U*	EPA 6010C

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BLANKS

EPA 6020A

Client: DRAPER SDG: 1403006 Project: WATAUGA COUNTY LANDFILL 2014+/6520-39

Sequence: 4C25021 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	Found	MDL	RL	Units	Q	Method
ICB	4C25021-ICB1	Barium	0.00603	0.100	10.0	ug/L	*U*	EPA 6020A
ICB	4C25021-ICB1	Chromium	-0.0307	0.0680	2.00	ug/L	*U*	EPA 6020A
ICB	4C25021-ICB1	Cobalt	0.00411	0.00950	1.00	ug/L	*U*	EPA 6020A
ICB	4C25021-ICB1	Nickel	0.00204	0.00910	1.00	ug/L	*U*	EPA 6020A
ICB	4C25021-ICB1	Vanadium	0.00302	0.0560	5.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB1	Barium	0.00372	0.100	10.0	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB1	Chromium	-0.00988	0.0680	2.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB1	Cobalt	0.00522	0.00950	1.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB1	Nickel	0.00579	0.00910	1.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB1	Vanadium	0.0121	0.0560	5.00	ug/L	*U*	EPA 6020A
PBW01	4030705-BLK1	Barium		0.100	10.0	ug/L	*U*	EPA 6020A
PBW01	4030705-BLK1	Chromium		0.0680	2.00	ug/L	*U*	EPA 6020A
PBW01	4030705-BLK1	Cobalt	0.0231	0.00950	1.00	ug/L	*J*	EPA 6020A
PBW01	4030705-BLK1	Nickel	0.0281	0.00910	1.00	ug/L	*J*	EPA 6020A
PBW01	4030705-BLK1	Vanadium		0.0560	5.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB2	Barium	0.0175	0.100	10.0	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB2	Chromium	-0.00310	0.0680	2.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB2	Cobalt	0.00725	0.00950	1.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB2	Nickel	0.00824	0.00910	1.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB2	Vanadium	0.00723	0.0560	5.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB3	Barium	0.0189	0.100	10.0	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB3	Chromium	-0.0225	0.0680	2.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB3	Cobalt	0.00965	0.00950	1.00	ug/L	*J*	EPA 6020A
CCB	4C25021-CCB3	Nickel	0.00872	0.00910	1.00	ug/L	*U*	EPA 6020A
CCB	4C25021-CCB3	Vanadium	0.00374	0.0560	5.00	ug/L	*U*	EPA 6020A

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

S. Run Logs/Raw Data

For each reported value, the laboratory shall include in the data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to the quarterly verification of method and instrument parameters submitted as a part of each data package.

Raw data shall be labeled with Client Identification numbers and appropriate codes in order to identify:

- calibration standards, including source and preparation date
- initial and continuing calibration blanks and preparation blanks
- initial and continuing calibration verification standards, , Laboratory Control Sample, and post digestion spike
- diluted and undiluted sample and all weights, dilutions, and volumes used to obtain the reported values
- duplicates
- spikes (indicating standard solutions used, final spike concentrations, and volumes involved).
- instrument used, any instrument adjustments, data corrections or other apparent anomalies on the measurement record, including all data voided or data not used and a brief written explanation
- time and date of each analysis (instrument run logs can be submitted if they contain this information)

Raw Data for:

Instrument: P4

File Name: 4C18001_P-136

Sequence: 4C18001

Analysis: 6010C METALS

Daily Instrument Profile

Nebulizer pressure: 16
Peak position: 0-14031
Peak intensity: 1170
Vernier position: 524

Maintenance: NO NEC

Printed: 3/18/2014 11:05:36 AM

Method(s) (circle one): **ILM05.4** **6010C** **Other** _____

Operator(s): Jcf **Date/Time** 031714/1042 **to** 031814/0511

↑	Specified element(s) fail(s) high
↓	Specified element(s) fail(s) low
RR	Re-run sample(s) neat
RR #X	Re-run at a #-fold dilution
#X	Sample run at a #-fold dilution (aliquot of sample diluted with acidified water)
L	Matrix = leachate
W	Matrix = water
S	Matrix = solid
B	Matrix = biological tissue

SDG	Matrix	Comments
~~14020108~~		~~Jcf 031814~~
1402108	S	Co Only
1403004	W	Pb, Cr, Zn DoD
1403005	W	Pb, Cr, Zn DoD
1403006	W	Fe only
1403011	S	Pb, Cr, Co, Cd, Mn, Ni, + Zn DoD
1403013	S	As, Pb DoD
1403024	W	As, Cd, Cr, Pb, Ni, Ag, V, + Zn
1403025	W	Fe only
1403026	W	Cd, Cr, Cu, Ni, Pb, Ag + Zn
1403027	W	Cd, Cr, Cu, Ni, + Zn

complete

ICP Run Log: P4

File Name: 4C18001

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Action Needed
1	4C18001-CAL1	S0 BLANK	CALIB STD	1	03/17/14	10:42:46	4C18008	
2	4C18001-CAL2	S RSTD-1	CALIB STD	1	03/17/14	10:50:00	10	
3	4C18001-CAL4	S RSTD-3	CALIB STD	1	03/17/14	10:58:13	12	
4	4C18001-CAL3	S RSTD-2	CALIB STD	1	03/17/14	11:03:53	11	
5	4C18001-CAL5	S RSTD-4	CALIB STD	1	03/17/14	11:10:20	14	
6	4C18001-CRL1	LLICV	ICV	1	03/17/14	11:19:33	4B04003	
7	4C18001-ICV1	ICV1	ICV	1	03/17/14	11:26:46	04	
8	4C18001-ICB1	ICB	ICB	1	03/17/14	11:33:59	4C18008	

* **Element ID of Reagents/Solvents used:** NA

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Reviewed By: _____ Date: 3-18-14

ICP Run Log: P4

File Name: 4C18001

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Action Needed
9	4C18001-IFA1	ICSA	ICS	1	03/17/14	11:41:12	4B24002	
10	4C18001-IFB1	ICSAB	ICS	1	03/17/14	11:48:25	1 01	
11	4C18001-CRL2	LLCCV	CCV	1	03/17/14	11:55:38	4B04008	
12	4C18001-CCV1	CCV	CCV	1	03/17/14	12:02:51	1 05	
13	4C18001-CCB1	CCB	CCB	1	03/17/14	12:10:05	4C18008	
14	4C18001-LCV1	LRS DOD	LRS	1	03/17/14	12:25:56	4B04003	
15	HRS DOD	HRS DOD	HRS	1	03/17/14	12:33:09		(H-BE)
16	4030501-BLK2	PBS	PBS	1	03/17/14	12:40:22		(H-MO)
17	4030501-BS2	LCSS	LCS	1	03/17/14	12:47:35		(H-NA)
18	4030501-BSD2	LCSSD	LCS	1	03/17/14	12:54:48		(H-NA)
19	1402108-01RE1	16WC1B	SAMPLE	1	03/17/14	13:02:00		
20	4C18001-SRD1	16WC1BL	SAMPLE	5	03/17/14	13:09:13		
21	4030501-PS2	16WC1BA	SAMPLE	1	03/17/14	13:16:25		
22	4031312-BLK1	PBS01	PBS	1	03/17/14	13:23:38		
23	4031312-BS1	MLCS01	SAMPLE	1	03/17/14	13:30:51		
24	4C18001-CCV2	CCV	CCV	1	03/17/14	13:38:04	4B04005	
25	4C18001-CCB2	CCB	CCB	1	03/17/14	13:45:18	4C18008	
26	4031312-BSD1	MLCSD01	SAMPLE	1	03/17/14	13:52:32		
27	1403011-01	GP-11-27-3-0	SAMPLE	1	03/17/14	13:59:44		
28	4C18001-SRD2	GP-11-27-3-0L	SAMPLE	5	03/17/14	14:06:57		
29	4031312-PS1	GP-11-27-3-0A	SAMPLE	1	03/17/14	14:14:09		
30	1403011-02	GP-11-27-3-1	SAMPLE	1	03/17/14	14:21:22		
31	1403011-03	GP-11-102-5-0	SAMPLE	1	03/17/14	14:28:36		
32	1403011-04	GP-11-102-5-1	SAMPLE	1	03/17/14	14:35:49		
33	1403011-06	GP-11-13-2-1	SAMPLE	1	03/17/14	14:43:02		
34	1403011-07	GP-11-13-2-1	SAMPLE	1	03/17/14	14:50:15		
35	4C18001-CRL3	LLCCV	CCV	1	03/17/14	14:57:27	4B04003	
36	4C18001-CCV3	CCV	CCV	1	03/17/14	15:04:41	1 05	
37	4C18001-CCB3	CCB	CCB	1	03/17/14	15:11:55	4C18008	
38	1403011-08	GP-11-41-3-1	SAMPLE	1	03/17/14	15:19:08		
39	1403011-09	GP-11-41-3-0-D	SAMPLE	1	03/17/14	15:26:21		

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Reviewed By: _____ Date: 3·18·14

ICP Run Log: P4

File Name: 4C18001

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Action Needed
40	1403011-10	GP-11-41-3-0	SAMPLE	1	03/17/14	15:33:33		
41	1403011-11	GP-11-28-2-0	SAMPLE	1	03/17/14	15:40:46		
42	1403011-12	GP-11-28-2-1	SAMPLE	1	03/17/14	15:47:59		
43	4031304-BLK1	PBW01	PBW	1	03/17/14	15:55:11		
44	4031304-BS1	MLCS01	SAMPLE	1	03/17/14	16:02:24		
45	4031304-BSD1	MLCSD01	SAMPLE	1	03/17/14	16:09:37		
46	1403025-01	MW-4	SAMPLE	1	03/17/14	16:16:49		
47	4031304-DUP1	MW-4D	SAMPLE	1	03/17/14	16:24:02		
48	4C18001-CCV4	CCV	CCV	1	03/17/14	16:31:16	4B04005	
49	4C18001-CCB4	CCB	CCB	1	03/17/14	16:38:30	4C18008	
50	4031304-MS1	MW-4S	SAMPLE	1	03/17/14	16:45:43		
51	4031304-MSD1	MW-4SD	SAMPLE	1	03/17/14	16:52:56		
52	4C18001-SRD3	MW-4L	SAMPLE	5	03/17/14	17:00:09		
53	4031304-PS1	MW-4A	SAMPLE	1	03/17/14	17:07:22		
54	1403025-02	MW-2	SAMPLE	1	03/17/14	17:14:36		
55	1403025-03	MW-3	SAMPLE	1	03/17/14	17:21:48		
56	1403025-04	MW-5	SAMPLE	1	03/17/14	17:29:01		
57	1403025-05	MW-7	SAMPLE	1	03/17/14	17:36:14		
58	1403025-06	MW-10	SAMPLE	1	03/17/14	17:43:27		
59	4C18001-CRL4	LLCCV	CCV	1	03/17/14	17:50:39	4B04003	
60	4C18001-CCV5	CCV	CCV	1	03/17/14	17:57:53	L 05	
61	4C18001-CCB5	CCB	CCB	1	03/17/14	18:05:06	4C18008	
62	1403024-01	MW-16	SAMPLE	1	03/17/14	18:12:20		
63	4C18001-SRD4	MW-16L	SAMPLE	5	03/17/14	18:19:32		
64	4031304-PS2	MW-16A	SAMPLE	1	03/17/14	18:26:45		
65	1403024-02	DUP	SAMPLE	1	03/17/14	18:33:58		
66	1403026-01	3-3-14	SAMPLE	1	03/17/14	18:41:10		
67	4C18001-SRD5	3-3-14L	SAMPLE	5	03/17/14	18:48:23		
68	1403026-02	3-4-14	SAMPLE	1	03/17/14	18:55:36		(H-NA)
69	1403026-03	3-5-14	SAMPLE	1	03/17/14	19:02:49		
70	1403026-04	3-6-14	SAMPLE	1	03/17/14	19:10:02		

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Reviewed By: [signature] Date: 3-18-14

ICP Run Log: P4

File Name: 4C18001

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Action Needed
71	1403026-05	3-7-14	SAMPLE	1	03/17/14	19:17:16		
72	4C18001-CCV6	CCV1	CCV	1	03/17/14	19:24:29	4B04005	
73	4C18001-CCB6	CCB1	CCB	1	03/17/14	19:31:42	4C18008	
74	1403027-01	3-3-14	SAMPLE	1	03/17/14	19:40:32		
75	4C18001-SRD6	3-3-14L	SAMPLE	5	03/17/14	19:47:45		
76	1403027-02	3-4-14	SAMPLE	1	03/17/14	19:54:58		
77	1403027-03	3-5-14	SAMPLE	1	03/17/14	20:02:11		
78	1403027-04	3-6-14	SAMPLE	1	03/17/14	20:09:24		
79	1403027-05	3-7-14	SAMPLE	1	03/17/14	20:16:37		(H-NA)
80	4031308-BLK1	PBW01	PBW	1	03/17/14	20:23:50		
81	4031308-BS1	MLCS01	SAMPLE	1	03/17/14	20:31:03		
82	1403004-04	GP-11-24-2	SAMPLE	1	03/17/14	20:38:16		
83	4C18001-CRL5	LLCCV	CCV	1	03/17/14	20:45:28	4B04003	
84	4C18001-CCV7	CCV1	CCV	1	03/17/14	20:52:42	1 05	
85	4C18001-CCB7	CCB1	CCB	1	03/17/14	20:59:55	4C18008	
86	4031308-DUP1	GP-11-24-2D	SAMPLE	1	03/17/14	21:07:08		
87	4031308-MS1	GP-11-24-2S	SAMPLE	1	03/17/14	21:14:21		
88	4031308-MSD1	GP-11-24-2SD	SAMPLE	1	03/17/14	21:21:34		
89	4C18001-SRD7	GP-11-24-2L	SAMPLE	5	03/17/14	21:28:47		
90	4031308-PS1	GP-11-24-2A	SAMPLE	1	03/17/14	21:36:00		
91	1403004-05	GP-11-24-2-DUP	SAMPLE	1	03/17/14	21:43:14		
92	1403004-07	GP-11-102-5	SAMPLE	1	03/17/14	21:50:27		
93	1403005-01	GP-11-24-2	SAMPLE	1	03/17/14	21:57:40		
94	4031308-DUP2	GP-11-24-2D	SAMPLE	1	03/17/14	22:04:53		
95	4031308-MS2	GP-11-24-2S	SAMPLE	1	03/17/14	22:12:06		
96	4C18001-CCV8	CCV1	CCV	1	03/17/14	22:19:20	4B04003	
97	4C18001-CCB8	CCB1	CCB	1	03/17/14	22:26:33	4C18008	
98	4031308-MSD2	GP-11-24-2SD	SAMPLE	1	03/17/14	22:33:47		
99	4C18001-SRD8	GP-11-24-2L	SAMPLE	5	03/17/14	22:41:00		
100	4031308-PS2	GP-11-24-2A	SAMPLE	1	03/17/14	22:48:13		
101	1403005-02	GP-11-24-2-DUP	SAMPLE	1	03/17/14	22:55:26		

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Reviewed By: _____ Date: 3·18·14

ICP Run Log: P4

File Name: 4C18001

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Action Needed
102	1403005-03	GP-11-102-5	SAMPLE	1	03/17/14	23:02:39		
103	4031302-BLK1	PBS01	PBS	1	03/17/14	23:09:52		
104	4031302-BS1	MLCS01	SAMPLE	1	03/17/14	23:17:06		
105	1403013-11	SB-6-4-4-0	SAMPLE	1	03/17/14	23:24:19		
106	4031302-DUP1	SB-6-4-4-0D	SAMPLE	1	03/17/14	23:31:32		
107	4C18001-CRL6	LLCCV	CCV	1	03/17/14	23:38:45	4B04003	(Q-BE)
108	4C18001-CCV9	CCV1	CCV	1	03/17/14	23:45:58	L 05	
109	4C18001-CCB9	CCB1	CCB	1	03/17/14	23:53:11	4C18008	
110	4031302-MS1	SB-6-4-4-0S	SAMPLE	1	03/18/14	00:00:25		
111	4031302-MSD1	SB-6-4-4-0SD	SAMPLE	1	03/18/14	00:07:38		
112	4C18001-SRD9	SB-6-4-4-0L	SAMPLE	5	03/18/14	00:14:52		
113	4031302-PS1	SB-6-4-4-0A	SAMPLE	1	03/18/14	00:22:05		
114	1403013-01	SB-6-4-2-0	SAMPLE	1	03/18/14	00:29:19		
115	1403013-02	SB-6-4-2-1	SAMPLE	1	03/18/14	00:36:32		
116	1403013-03	SB-6-10-2-0	SAMPLE	1	03/18/14	00:43:46		
117	1403013-04	SB-6-10-2-1	SAMPLE	1	03/18/14	00:50:59		
118	1403013-05	SB-6-4-3-0	SAMPLE	1	03/18/14	00:58:13		
119	1403013-06	SB-6-4-3-1	SAMPLE	1	03/18/14	01:05:27		
120	4C18001-CCVA	CCV2	CCV	1	03/18/14	01:12:40	4B04005	
121	4C18001-CCBA	CCB2	CCB	1	03/18/14	01:19:54	4C18008	
122	1403013-07	SB-6-4-1-0	SAMPLE	1	03/18/14	01:27:07		
123	1403013-08	SB-6-4-1-1	SAMPLE	1	03/18/14	01:34:21		
124	1403013-09	SB-6-10-3-0	SAMPLE	1	03/18/14	01:41:34		
125	1403013-10	SB-6-10-3-1	SAMPLE	1	03/18/14	01:48:48		
126	1403013-12	SB-6-4-4-1	SAMPLE	1	03/18/14	01:56:01		
127	1403013-13	SB-6-4-4-0-DUP	SAMPLE	1	03/18/14	02:03:15		
128	1403013-14	SB-6-10-4-0	SAMPLE	1	03/18/14	02:10:29		
129	1403013-15	SB-6-10-4-0-DU	SAMPLE	1	03/18/14	02:17:42		
130	1403013-16	SB-6-10-4-1	SAMPLE	1	03/18/14	02:24:56		
131	4C18001-CRL7	LLCCV	CCV	1	03/18/14	02:32:10	4B04003	(Q-BE)
132	4C18001-CCVB	CCV2	CCV	1	03/18/14	02:39:23	~~5 05~~ 4B04005	

JCK 031814

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Reviewed By: _____ Date: 3-18-14

ICP Run Log: P4

File Name: 4C18001

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Action Needed
133	4C18001-CCBB	CCB2	CCB	1	03/18/14	02:46:36	4C18008	
134	1403013-17	SB-6-10-1-0	SAMPLE	1	03/18/14	02:53:50		
135	1403013-18	SB-6-10-1-1	SAMPLE	1	03/18/14	03:01:03		
136	4030704-BLK1	PBW01	PBW	1	03/18/14	03:08:17		
137	4030704-BS1	MLCS01	SAMPLE	1	03/18/14	03:15:31		
138	1403006-01	MW-3	SAMPLE	1	03/18/14	03:22:45		
139	4030704-DUP1	MW-3D	SAMPLE	1	03/18/14	03:29:58		
140	4030704-MS1	MW-3S	SAMPLE	1	03/18/14	03:37:12		
141	4030704-MSD1	MW-3SD	SAMPLE	1	03/18/14	03:44:26		
142	4C18001-SRDA	MW-3L	SAMPLE	5	03/18/14	03:51:40		
143	4030704-PS1	MW-3A	SAMPLE	1	03/18/14	03:58:53		
144	4C18001-CCVC	CCV2	CCV	1	03/18/14	04:06:07	4B04005	
145	4C18001-CCBC	CCB2	CCB	1	03/18/14	04:13:21	4C18008	
146	1403006-02	MW-2	SAMPLE	1	03/18/14	04:20:34		
147	1403006-03	MW-8	SAMPLE	1	03/18/14	04:27:48		
148	1403006-04	MW-9	SAMPLE	1	03/18/14	04:35:02		
149	1403006-05	MW-12	SAMPLE	1	03/18/14	04:42:16		
150	1403006-06	MW-17	SAMPLE	1	03/18/14	04:49:30		
151	4C18001-CRL8	LLCCV	CCV	1	03/18/14	04:56:43	4B04003	(Q-BE)
152	4C18001-CCVD	CCV2	CCV	1	03/18/14	05:03:56	1 05	
153	4C18001-CCBD	CCB2	CCB	1	03/18/14	05:11:10	4C18008	

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Reviewed By: _____ Date: 3-18-14

Daily Standards/QC Preparation Log for Trace ICP (P3 & P4) 1 of 3 CompuChem a division of Liberty Analytical Corp. Worksheet 1 P(6) R5

STANDARDS and REAGENTS TRACEABILITY

Seq. File Name: 4C18001

	Ref #*	Manufacturer	Lot #	Expiration Date
HNO_3 [Baker Instra-analyzed Trace-Metals grade]		EMD		
HCl [Baker Instra-analyzed Trace-Metals grade]		Caledon		
SM-770-027 multi-element standard mix (RSTD-1)	3E15015	High Purity	1312825	05/10/14
SM-770-028 part A multi-element standard mix (RSTD-2A)	3J05001	High Purity	1326610	09/25/14
SM-770-028 part B multi-element standard mix (RSTD-2B)	3J05002	High Purity	1326611	09/25/14
SM-770-029 part A multi-element standard mix (RSTD-3A)	3D03002	High Purity	1209622	03/29/14
SM-770-029 part B multi-element standard mix (RSTD-3B)	3E16001	High Purity	1308703	11/09/14
SM-770-030 multi-element standard mix (RSTD-4)	3E15014	High Purity	1312826	05/10/14
SPEX-R multi-element standard mix	3E15014	High Purity	1312826	05/10/14
ICP-AES-CRQL multi-element standard mix	3L09046	High Purity	1333613	12/04/14
ICCV-6 multi-element standard mix	3I18011	Inorganic Ventures	G2-MEB487118	09/01/14
ICCV-4 multi-element standard mix	3C13004	Inorganic Ventures	G2MEB462119	04/01/14
ICSA multi-element standard mix	3L30007	Inorganic Venture	G2-MEB491156	01/01/15
ICSB multi-element standard mix	3G10029	Inorganic Venture	F2-MEB427129	08/01/14
ARSENIC (As) 1,000 PPM single-element standard	3L09033	High Purity	1326201	05/27/15
SM-770-020 Internal Standard Mix	3E15018	High Purity	1309902	04/10/14
SM-770-040 multi-element CCV mix (Soln A)	3D12016	High Purity	1309901	04/10/14
SM-770-040 multi-element CCV mix (Soln B)	3D12017	High Purity	1309215	04/10/14
SM-770-045 LRS 6010C (Soln A)	3L09047	High Purity	1333611	12/04/14
SM-770-045 LRS 6010C (Soln B)	3L09048	High Purity	1333612	12/04/14

Multi-Element Stock Standard Concentrations:

Stock Standard	Analyte Concentrations (µg/mL)
RSTD-1 multi-element standard mix	Cd:1,000 Cr:1,000 Cu:1,000 Pb:1,000 Ni:1,000 Se:1,000 Ag:100 Tl:1,000 Zn:1,000
RSTD-2A/2B multi-element standard mix	Part A: As:1,000 Ba:1,000 Be:1,000 Co:1,000 Mn:1,000 Mo:1,000 V:1,000 Part B: Fe:25,000
RSTD-3A/3B multi-element standard mix	Part A: Ca:10,000 Mg:10,000 K:10,000 Na:10,000 Part B: Al:10,000
RSTD-4 multi-element standard mix	Sb:1,000 Bi:1,000 B:1,000 Sn:1,000 Ti:1,000
SPEX-R multi-element standard mix	Mo:1,000 Sn:1,000 Bi:1,000 Ti:1,000 B:1,000
ICP-AES-CRQL-R multi-element standard mix	Ag:10 Be:5 Cd:5 Co:50 Cr:10 Cu:25 Mn:15 Ni:40 Tl:25 V:50 Zn:60 Pb:10 Se:35 As:10 Sb:60
LRS 6010C multi-element standard mix	Al:200 Ba:200 K:5000 Mg:5000 Na:5000 Ca:5000 Ag:5 Be:5 Cd:5 Co:20 Cr:10 Cu:5 Fe:200 Mn:10 Ni:10 Tl:30 V:20 Zn:30 Pb:10 Se:5 As:10 Mo:50 Sn:50 Bi:20 Ti:50 Sb:30 B:50
SM-770-020 Internal Standard Mix	Li:50,000 Y:250
IICCV-6 multi-element standard mix	Ca: 1,100 K:1,100 Na:1,100 Mg:600 Fe:510 Al:260 As:110 B:110 Pb:110 Se:110 Tl:110 Zn:110 Ag:55 Ba:55 Cd:55 Co:55 Cr:55 Cu:55 Mn:55 Ni:55 V:55
IICCV-4 multi-element standard mix	Mo:110 Sb:110 Sn:110 Ti:110
IICSA multi-element standard mix	Al:5,000 Ca:5,000 Mg:5,000 Fe:2,000
IICSB multi-element standard mix	Cd:100 Ni:100 Zn:100 Sb:60 Ba:50 Be:50 Co:50 Cr:50 Cu:50 Mn:50 V:50 Ag:20 As:10 Tl:10 Pb:5 Se:5

Entered By: JCL

Reviewed By: KO

Date: 3-18-14

*Ref# = Logbook ID, Page number, and item number from Materials Receipt Log

**High Purity is abbreviated "HP" on reporting forms

10/17/11: jcf/v

Daily Standards/QC Preparation Log for Trace ICP (P3 & P4) 2 of 3 CompuChem a division of Liberty Analytical Corp. Worksheet 1 P(6) R5

Standard Lot Number*	LIMS ID Number	Preparation instructions	Resultant Analyte Conc. (µg/L)
S0/ICB/CCB– 031714 -JCF	4 C 1 8 0 0 8	Place in a 500 mL volumetric flask: 100 mL deionized water, 20 mL concentrated HNO_3, and 100 mL concentrated HCl. Bring up to volume with deionized water. Transfer to a 2L Teflon bottle and add 1.5L deionized water. Final volume 2 L. Prepare as needed.	N/A
RSTD-1– 031714 -JCF	4 C 1 8 0 1 0	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 0.4 mL RSTD-1 into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	Cd:2,000 Cr:2,000 Cu:2,000 Pb:2,000 Ni:2,000 Se:2,000 Ag:200 Tl:2,000 Zn:2,000
RSTD-2– 031714 -JCF	4 C 1 8 0 1 1	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 0.4 mL each RSTD-2A and RSTD-2B into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	As:2,000 Ba:2,000 Be:2,000 Co:2,000 Fe:50,000 Mn:2,000 Mo:2,000 V:2,000
RSTD-3– 031714 -JCF	4 C 1 8 0 1 2	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 2.0 mL each RSTD-3A and RSTD-3B into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	K:100,000 Na:100,000 Al:100,000 Mg:100,000 Ca:100,000
RSTD-4– 031714 -JCF	4 C 1 8 0 1 4	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 0.4 mL RSTD-4 into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	Sn:2,000 Bi:2,000 Ti:2,000 Sb:2,000 B:2,000
ICV1– 020414 -JCF	4 B 0 4 0 0 4	Place in a 500 mL volumetric flask: 300 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 5.0 mL ICCV-3 into flask and 5.0 mL ICCV-4. Bring up to volume with deionized water. Transfer to a 500mL Teflon bottle. Final volume 500 mL. Prepare as needed.	Al:2,600 Ba:550 K:11,000 Mg:6,100 Na:11,000 Ca:11,000 Ag:550 Be:550 Cd:550 Co:550 Cr:550 Cu:550 Fe:5,100 Mn:550 Ni:550 Tl:1,100 V:550 Zn:1,100 Pb:1100 Se:1,100 As:1,100 Sb:1,100 Mo:1,100 Sn:1,100 Bi:1,100 Ti:1,100 B:1,100
CCV– 020414 -JCF	4 B 0 4 0 0 5	Place in a 500-mL volumetric flask: 300 mL deionized water, 20 mL concentrated HNO_3, and 100 mL concentrated HCl. Add 20 ml of SM-770-40 Soln A and Soln B. Bring up to volume with deionized water. Transfer to a 2000mL Teflon bottle and add 1.5 L of deionized water. Prepare as needed.	Al:50,000 Ba:1,000 K:50,000 Mg:50,000 Na:50,000 Ca:50,000 Ag:100 Be:1,000 Cd:1,000 Co:1,000 Cr:1,000 Cu:1,000 Fe:25,000 Mn:1,000 Ni:1,000 Tl:1,000 V:1,000 Zn:1,100 Pb:1,000 Se:1,000 As:1,000 Mo:1,000 Sn:1,000 Bi:1,000 Ti:1,000 Sb:1,000 B:1,000
LLICV/LLCCV/LRS 6010C- 020414 -JCF	4 B 0 4 0 0 3	In a 500 mL volumetric flask, combine 200 mL deionized water, 5 mL concentrated HNO_3 and 25 mL concentrated HCl. Pipet 0.5 mL of each LRS 6010C Soln A and Soln B. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL. Prepare as needed.	Al:200 Ba:200 K:5000 Mg:5000 Na:5000 Ca:5000 Ag:5 Be:5 Cd:5 Co:20 Cr:10 Cu:5 Fe:200 Mn:10 Ni:10 Tl:30 V:20 Zn:30 Pb:10 Se:5 As:10 Mo:50 Sn:50 Bi:20 Ti:50 Sb:30 B:50

Standard Solutions Prepared By: _____

Entered By: _____

Reviewed By: _____ Date: 3-18-14

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Daily Standards/QC Preparation Log for Trace ICP (P3 & P4) 3 of 3 CompuChem a division of Liberty Analytical Corp. **Worksheet 1 P(6) R5**

Standard Lot Number*	LIMS ID Number	Preparation instructions	Resultant Analyte Conc. (µg/L)
As– 020414 -JCF	4 B 0 4 0 0 2	In a 100 mL volumetric flask, combine 50 mL deionized water, 1 mL concentrated HNO_3, 5 mL concentrated HCl, and 0.1 mL 1000-ppm As standard. Bring to final 100 mL volume	As:1,000
ICSA– 022414 -JCF	4 B 2 4 0 0 2	In a 500-mL volumetric flask, combine 350 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 25.0 mL ICSA into flask. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL.	Al:250,000 Ca:250,000 Fe:100,000 Mg:250,000
ICSAB– 022414 -JCF	4 B 2 4 0 0 1	In a 500-mL volumetric flask, combine 350 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 25.0 mL ICSA and 5.0 mL ICSB and 0.5 mL of Compuchem SPEX into flask. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL.	Ag:200 Al:250,000 Ba:500 Be:500 Ca:250,000 Cd:1000 Co:500 Cr:500 Cu:50 Fe:100,000 Mg:250,000 Mn:500 Ni:1000 Tl:100 V:500 Zn:1000 Pb:60 Se:50 Sb:600 As:100 Sn:1,000 Bi:1,000 Mo:1,000 Ti:1,000 B:1,000
HRS - NA	N A	In a 100 mL volumetric flask, combine 50 mL deionized water, 1mL concentrated HNO_3, and 5 mL concentrated HCl. Pipet 1.6 mL of RSTD-2A, 2.0 mL RSTD-1, RSTD-2B, RSTD-3A, RSTD-3B and RSTD - 4 into flask. Bring up to 100 mL volume with deionized water. Prepare as needed.	Al:200,000 Ba:20,000 K:200,000 Mg:200,000 Na:200,000 Ca:200,000 Ag:2,000 Be:20,000 Cd:20,000 Co:20,000 Cr:20,000 Cu:20,000 Fe:200,000 Mn:20,000 Ni:20,000 Tl:20,000 V:20,000 Zn:20,000 Pb:20,000 Se:20,000 As:20,000 Mo:20,000 Sn:20,000 Bi:20,000 Ti:20,000 Sb:20,000 B:20,000
EPA-CRI- 0 5 2 7 12 –J C F	2 K 2 7 0 0 7	In a 500 mL volumetric flask, combine 300 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 0.50 mL ICP-AES-CRQL-R and 25 µL Compuchem SPEX-R into flask. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL. Prepare as needed.	Ag:10 Be:5 Cd:5 Co:50 Cr:10 Cu:25 Mn:15 Ni:40 Tl:25 V:50 Zn:60 Pb:10 Se:35 As:10 Sb:60 Sn:50 B:50 Mo:50 Bi:50 Ti:50
P4RINSE– 0 5 0 8 1 3 - J C F	3 E 0 8 0 0 1	In a 10 L container, combine 8 L deionized water and 400 mL concentrated HNO_3 Fill with deionized water. Final volume 10 L.	N/A
P5RINSE– NA	N A	In a 10 L container, combine 8 L deionized water and 400 mL concentrated HNO_3 Fill with deionized water. Final volume 10 L.	N/A
P4INTSTD– 0 2 0 2 14- J C F	3 B 0 2 0 0 8	In a 10 L container, combine 8 L deionized water, 400 mL concentrated HNO_3, and 200 mL Internal Mix. Fill with deionized water. Final volume 10 L.	Li:1,000,000 Y:5,000
P5INTSTD– NA	N A	In a 10 L container, combine 8 L deionized water, 400 mL concentrated HNO_3, and 200 mL Internal Mix. Fill with deionized water. Final volume 10 L.	Li:1,000,000 Y:5,000

Standard Solutions Prepared By: _____

Entered By: _____

Reviewed By: _____ Date: 3·18·14

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

10/17/11: jcf/v

STANDARDIZATION RPT. 03/17/14 10:49:56 AM PAGE 1

METHOD: P4S12014 STANDARD: S0 BLANK
RUN TIME: 03/17/14 10:42:46

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
AVGE	.14799	.00791	.00067	-.00718	.04549	.05256	.03129
SDEV	.01345	.00043	.00003	.00005	.00081	.00037	.00015
%RSD	9.0903	5.4719	5.1402	.65725	1.7694	.69852	.47179
#1	.13699	.00741	.00063	-.00715	.04494	.05215	.03128
#2	.14399	.00817	.00069	-.00717	.04511	.05285	.03145
#3	.16299	.00815	.00069	-.00724	.04641	.05268	.03115

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
AVGE	.00053	.68697	-.00000	.00664	-.00197	.00007	.00011
SDEV	.00009	.01873	.00010	.00066	.00022	.00002	.00026
%RSD	17.601	2.7271	3326.3	10.014	11.221	24.771	245.06
#1	.00046	.67197	-.00004	.00592	-.00222	.00005	.00005
#2	.00064	.70796	.00011	.00723	-.00185	.00007	.00039
#3	.00049	.68097	-.00008	.00676	-.00183	.00009	-.00012

ELEM	NI2316	TL1908	V_2924	ZN2062	SB2068	AS1890	22031
AVGE	-.00044	-.00085	.00005	.00024	.00076	-.00049	-.05316
SDEV	.00031	.00068	.00004	.00008	.00029	.00044	.00140
%RSD	69.911	79.435	76.383	32.115	38.287	90.622	2.6294
#1	-.00054	-.00143	.00001	.00015	.00078	-.00043	-.05442
#2	-.00010	-.00011	.00009	.00027	.00046	-.00095	-.05166
#3	-.00070	-.00102	.00006	.00029	.00104	-.00008	-.05339

ELEM	22032	19601	19602	SN1899	MO2020	TI3349	B_2496
AVGE	.00041	-.00029	.00049	.00046	.00004	.00036	.00142
SDEV	.00015	.00039	.00138	.00046	.00010	.00006	.00014
%RSD	37.196	134.67	282.01	101.77	236.09	18.086	9.4990
#1	.00039	.00016	.00182	-.00002	.00004	.00031	.00131
#2	.00057	-.00053	.00057	.00091	-.00005	.00043	.00157
#3	.00026	-.00049	-.00093	.00048	.00014	.00033	.00138

METHOD: P4S12014 STANDARD: S RSTD-1
RUN TIME: 03/17/14 10:50:00

ELEM	AG3280	CD2265	CR2677	CU3247	NI2316	TL1908	ZN2062
AVGE	6.9777	3.8828	.49708	91.249	.89105	.47448	.33220
SDEV	.0226	.0150	.00523	.613	.00354	.00390	.00245
%RSD	.32395	.38668	1.0525	.67160	.39761	.82114	.73835
#1	6.9837	3.8711	.49105	90.723	.88871	.47037	.32963
#2	6.9527	3.8776	.49995	91.102	.88932	.47495	.33246
#3	6.9967	3.8997	.50026	91.922	.89513	.47812	.33452

ELEM	22031	22032	19601	19602
AVGE	4.1692	1.6111	1.0052	1.1224
SDEV	.0167	.0179	.0053	.0102
%RSD	.39976	1.1109	.52810	.91037
#1	4.1555	1.5919	.99914	1.1107
#2	4.1644	1.6273	1.0089	1.1297
#3	4.1878	1.6143	1.0076	1.1268

STANDARDIZATION RPT. 03/17/14 11:03:49 AM PAGE 1

METHOD: P4S12014 STANDARD: S RSTD-3
RUN TIME: 03/17/14 10:58:13

ELEM	AL3082	CA3179	K_7664	MG2790	NA3302
AVGE	2.6357	9.1443	15.032	6.0445	.14495
SDEV	.0011	.0076	.018	.0096	.00022
%RSD	.04128	.08330	.12031	.15827	.15467
#1	2.6344	9.1508	15.050	6.0510	.14521
#2	2.6363	9.1462	15.013	6.0335	.14482
#3	2.6362	9.1360	15.033	6.0490	.14482

STANDARDIZATION RPT. 03/17/14 11:10:16 AM PAGE 1

METHOD: P4S12014 STANDARD: S RSTD-2
RUN TIME: 03/17/14 11:03:53

ELEM	BA4934	BE3130	CO2286	FE2714	MN2576	V_2924	AS1890
AVGE	1.2473	.54808	.55084	.54529	.45124	.26008	.83915
SDEV	.0024	.00141	.00351	.00123	.00035	.00167	.00365
%RSD	.18917	.25719	.63764	.22655	.07721	.64015	.43514
#1	1.2499	.54687	.54787	.54390	.45096	.25822	.83617
#2	1.2452	.54963	.54992	.54627	.45114	.26143	.84323
#3	1.2468	.54774	.55472	.54570	.45163	.26060	.83806

ELEM	MO2020
AVGE	.33729
SDEV	.00271
%RSD	.80255
#1	.33563
#2	.34041
#3	.33583

METHOD: P4S12014 STANDARD: S RSTD-4
RUN TIME: 03/17/14 11:10:20

ELEM	SB2068	SN1899	TI3349	B_2496
AVGE	.35251	.67168	2.3736	1.5907
SDEV	.00152	.00314	.0107	.0038
%RSD	.43040	.46703	.45115	.23807
#1	.35197	.66805	2.3826	1.5863
#2	.35134	.67356	2.3618	1.5930
#3	.35423	.67341	2.3764	1.5928

ANALYSIS REPORT QC STANDARD 03/17/14 11:26:42 AM PAGE 1

METHOD: P4S12014 SAMPLE NAME: LLICV OPERATOR:
RUN TIME: 03/17/14 11:19:33
COMMENT: LICV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.584517	179.7331	196.3847	5.368559	4851.234	4.938514	19.14938
SDEV	.933941	1.2240	.2973	.226070	7.898	.134617	.54681
%RSD	20.37162	.6810142	.1513943	4.210999	.1628002	2.725870	2.855504
#1	4.330746	180.9479	196.6338	5.132050	4847.329	4.808044	18.71324
#2	3.803689	178.5001	196.4649	5.391130	4860.324	4.930572	18.97206
#3	5.619118	179.7512	196.0556	5.582497	4846.050	5.076927	19.76285
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.474130	4.690990	172.6670	5032.509	4816.290	9.868844	4766.857
SDEV	.747166	.138034	2.2633	8.034	14.111	.170032	38.396
%RSD	9.996698	2.942525	1.310785	.1596487	.2929854	1.722919	.8054762
#1	7.665555	4.735121	170.8668	5033.270	4800.152	9.724750	4750.713
#2	8.106960	4.536287	171.9262	5024.122	4826.310	10.05638	4810.690
#3	Q6.649875	4.801561	175.2078	5040.137	4822.408	9.825399	4739.170
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.961982	31.26605	19.04904	28.41308	10.17643	10.13718	27.82737
SDEV	.441305	.78246	.28891	.23479	1.17173	.69322	2.17195
%RSD	4.429889	2.502570	1.516645	.8263558	11.51413	6.838353	7.805086
#1	10.46941	31.56905	18.97799	28.14230	9.502344	10.93554	30.29662
#2	9.667837	30.37741	18.80228	28.56014	9.497531	9.788054	26.97283
#3	9.748694	31.85170	19.36684	28.53681	11.52942	9.687933	26.21266
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.574279	8.266252	11.12993	7.851876	11.27801	48.92364	49.06224
SDEV	1.545968	1.330123	1.10812	1.230312	1.46835	1.66404	.35342
%RSD	16.14710	16.09101	9.956204	15.66902	13.01955	3.401302	.7203462
#1	9.128122	7.738892	10.38259	7.162444	12.81916	50.50738	49.22012
#2	11.29426	7.280673	10.60414	7.120869	11.11954	49.07404	48.65741
#3	8.300452	9.779190	12.40307	9.272316	9.895323	47.18951	49.30921
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	48.58062	48.19825	113272.7
SDEV	.26393	.61110	354.4
%RSD	.5432887	1.267893	.3128358
#1	48.83594	48.69927	113551.3
#2	48.59708	48.37807	113393.0
#3	48.30884	47.51741	112873.9
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

ANALYSIS REPORT QC STANDARD 03/17/14 11:33:56 AM PAGE 1

METHOD: P4S12014 SAMPLE NAME: ICV1 OPERATOR:
RUN TIME: 03/17/14 11:26:46
COMMENT: ICV1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	557.7623	2696.282	567.8018	564.9873	11387.44	554.9396	558.0560
SDEV	.9855	14.036	3.2493	.7302	13.15	1.8108	2.2781
%RSD	.1766935	.5205717	.5722536	.1292440	.1155038	.3263035	.4082194
#1	558.7969	2697.075	564.1469	565.7763	11384.16	554.5526	555.4880
#2	557.6554	2681.867	570.3635	564.8504	11376.24	553.3535	559.8335
#3	556.8346	2709.905	568.8950	564.3353	11401.92	556.9125	558.8467
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	550.0000	2600.000	550.0000	550.0000	11000.00	550.0000	550.0000
RANGE	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	559.3715	550.4011	5339.662	11565.58	6058.953	565.5070	11230.06
SDEV	6.0006	.1407	33.559	37.20	24.669	5.9283	114.58
%RSD	1.072735	.0255658	.6284879	.3216478	.4071491	1.048312	1.020325
#1	554.5414	550.3423	5303.342	11522.80	6031.279	559.5527	11100.10
#2	557.4843	550.5617	5346.121	11583.58	6066.941	565.5594	11273.53
#3	566.0888	550.2994	5369.521	11590.35	6078.637	571.4089	11316.54
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	550.0000	550.0000	5100.000	11000.00	6100.000	550.0000	11000.00
RANGE	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	553.8746	1115.186	557.5389	1120.891	1103.506	1111.449	1137.248
SDEV	1.5834	8.006	2.7137	3.610	6.647	1.238	1.252
%RSD	.2858826	.7179043	.4867303	.3220406	.6023138	.1113834	.1100681
#1	554.1644	1105.949	557.6666	1117.065	1096.358	1110.340	1136.046
#2	552.1663	1119.477	554.7636	1124.237	1104.661	1112.784	1138.544
#3	555.2931	1120.131	560.1865	1121.370	1109.499	1111.223	1137.152
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	550.0000	1100.000	550.0000	1100.000	1100.000	1100.000	1100.000
RANGE	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1084.603	1101.196	1104.754	1097.386	1118.470	1141.476	1126.001
SDEV	2.115	10.501	7.169	2.369	2.837	4.819	.760
%RSD	.1949989	.9536008	.6489639	.2159067	.2536273	.4221588	.0674693
#1	1086.641	1096.103	1096.579	1100.115	1115.444	1136.949	1125.129
#2	1084.748	1094.212	1109.972	1096.190	1121.069	1146.542	1126.514
#3	1082.419	1113.272	1107.710	1095.854	1118.896	1140.938	1126.361
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1100.000					1100.000	1100.000
RANGE	10.40000					10.40000	10.40000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1122.063	1096.874	113089.3
SDEV	2.364	2.864	519.0
%RSD	.2106616	.2610701	.4589595
#1	1124.166	1094.196	113651.2
#2	1119.504	1096.534	112988.9
#3	1122.518	1099.893	112627.8
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1100.000	1100.000	
RANGE	10.40000	10.40000	

ANALYSIS REPORT QC STANDARD 03/17/14 11:41:09 AM PAGE 1

METHOD: P4S12014 SAMPLE NAME: ICB OPERATOR:
RUN TIME: 03/17/14 11:33:59
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9760192	4.481293	.5253872	.7077413	9.657260	.1808315	-1.05989
SDEV	1.048131	4.098980	.2249328	.6404794	4.942882	.6203669	.67744
%RSD	107.3884	91.46869	42.81276	90.49627	51.18307	343.0635	63.91669
#1	1.229713	8.938098	.7574275	1.444035	12.09777	.8916713	-.449258
#2	1.874018	3.632856	.5104253	.3997406	3.968782	-.097874	-.941787
#3	-.175674	.8729253	.3083090	.2794482	12.90523	-.251303	-1.78862
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.940116	-.169100	10.77922	24.07904	19.32258	.3839302	1.279973
SDEV	.595544	.401427	8.53795	16.70904	7.82191	.2668554	99.73595
%RSD	63.34792	237.3910	79.20750	69.39249	40.48066	69.50623	7792.034
#1	-.378136	.1550541	15.23564	42.37377	24.94292	.6773285	114.0584
#2	-.877877	-.618121	16.16689	20.23915	22.63540	.3187776	-75.3089
#3	-1.56434	-.044232	.9351149	9.624203	10.38941	.1556844	-34.9096
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9563065	3.157293	.4131182	.1375530	.2332809	-.905419	1.814700
SDEV	.4889344	2.234354	.5475115	.1935592	.5404787	.683029	2.675100
%RSD	51.12737	70.76802	132.5315	140.7160	231.6858	75.43790	147.4128
#1	.5380073	5.677163	.9591443	.3377220	.5756519	-.418291	-1.17284
#2	.8370871	2.376972	.4160769	.1235757	.5139845	-1.68616	3.988260
#3	1.493825	1.417744	-.135867	-.048639	-.389794	-.611806	2.628681
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	15.00000	10.00000	15.00000	5.000000	5.000000	15.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.648487	-.603712	.6510032	-4.51921	.8986608	-.315605	3.184277
SDEV	.830058	1.903971	.2082962	2.57026	1.617262	.990121	1.471888
%RSD	127.9991	315.3773	31.99619	56.87419	179.9635	313.7219	46.22361
#1	.3076079	.9051217	.4110171	-2.13055	.4364472	.7896467	4.824113
#2	-1.18491	.0266706	.7571290	-4.18809	-.437174	-.614943	1.977505
#3	-1.06816	-2.74293	.7848635	-7.23898	2.696709	-1.12152	2.751212
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	5.000000					10.00000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.5795397	1.647702	112911.3
SDEV	.1633670	1.196217	378.7
%RSD	28.18910	72.59909	.3353752
#1	.7627882	2.134459	112810.8
#2	.4491368	2.523804	112593.1
#3	.5266941	.2848438	113330.1
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	10.00000	

ANALYSIS REPORT QC STANDARD 03/17/14 11:48:22 AM PAGE 1

METHOD: P4S12014 SAMPLE NAME: ICSA OPERATOR:
RUN TIME: 03/17/14 11:41:12
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5173861	249943.7	.7223064	.8388613	245190.0	.5260388	2.591708
SDEV	.3931842	1009.7	.0689580	.1178363	723.8	.0513274	.358394
%RSD	75.99435	.4039607	9.546914	14.04717	.2951938	9.757335	13.82847
#1	.2342822	250821.0	.7996659	.8729841	245943.8	.5365620	2.606798
#2	.9663188	248840.1	.6672915	.9358707	244500.5	.4702654	2.226008
#3	.3515572	250170.2	.6999618	.7077293	245125.9	.5712891	2.942318
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	250000.0	.0000000	.0000000	250000.0	.0000000	.0000000
RANGE	2.500000	50000.00	100.0000	2.500000	50000.00	2.500000	10.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.96277	.3678683	93747.75	21.44206	250071.6	2.857244	200.3764
SDEV	.16666	.2540714	231.36	9.75391	1132.4	.044161	88.5371
%RSD	8.491246	69.06585	.2467922	45.48963	.4528366	1.545572	44.18539
#1	-1.95023	.1103497	94001.28	32.57129	251359.7	2.895753	189.4659
#2	-2.13536	.6183461	93548.05	17.37542	249232.4	2.866936	117.8002
#3	-1.80274	.3749092	93693.92	14.37946	249622.8	2.809042	293.8630
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	100000.0	.0000000	250000.0	.0000000	.0000000
RANGE	5.000000	2.500000	20000.00	2500.000	50000.00	5.000000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8957556	11.73789	-.373770	1.334126	1.186433	1.116240	2.474707
SDEV	.0544930	2.07284	.570604	.200274	1.085733	1.866485	1.150025
%RSD	6.083468	17.65939	152.6617	15.01164	91.51238	167.2117	46.47117
#1	.9366963	12.42261	-.134172	1.511436	-.044615	2.699822	3.788945
#2	.9166661	13.38174	.0379696	1.374041	2.007401	-.941634	1.982343
#3	.8339043	9.409315	-1.02511	1.116900	1.596512	1.590534	1.652835
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	15.00000	10.00000	15.00000	5.000000	5.000000	15.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.257567	23.57359	-9.99053	7.295827	-1.96903	-.289056	-1.52092
SDEV	1.989647	1.88011	.81605	4.231931	3.18569	.577168	1.40699
%RSD	772.4764	7.975478	8.168205	58.00481	161.7895	199.6736	92.50893
#1	1.927515	21.71806	-10.9098	11.20711	-1.54755	-.228937	-.904059
#2	-.735490	25.47735	-9.71014	7.877049	-5.34447	.2556996	-.527729
#3	-1.96473	23.52536	-9.35164	2.803327	.9849358	-.893929	-3.13098
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	5.000000					25.00000	25.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.415833	5.963603	109611.2
SDEV	.327682	.948590	538.2
%RSD	78.80125	15.90632	.4910374
#1	-.485496	5.651117	109229.8
#2	-.703081	7.029015	110226.9
#3	-.058921	5.210678	109376.9
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	25.00000	25.00000	

ANALYSIS REPORT QC STANDARD 03/17/14 11:55:34 AM PAGE 1

METHOD: P4S12014 SAMPLE NAME: ICSAB OPERATOR:
RUN TIME: 03/17/14 11:48:25
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	199.6561	257022.9	518.4656	506.9925	252326.4	970.1451	493.8893
SDEV	.0296	2908.1	8.1922	5.8257	3000.2	9.3741	6.1569
%RSD	.0148450	1.131441	1.580076	1.149062	1.189023	.9662601	1.246621
#1	199.6268	258124.4	522.4977	510.5828	253761.7	976.1114	497.7203
#2	199.6861	253725.0	509.0389	500.2708	248878.1	959.3405	486.7873
#3	199.6554	259219.3	523.8602	510.1238	254339.3	974.9836	497.1605
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	200.0000	250000.0	500.0000	500.0000	250000.0	1000.000	500.0000
RANGE	40.00000	50000.00	100.0000	100.0000	50000.00	2000.000	100.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	490.1113	493.7058	95821.74	11.68802	254466.4	506.5191	423.3523
SDEV	8.0146	2.6481	1116.63	9.69237	2503.4	9.1546	187.7125
%RSD	1.635257	.5363789	1.165320	82.92572	.9837837	1.807363	44.33955
#1	492.9907	492.9402	96376.23	15.24673	255835.7	510.1847	457.2947
#2	481.0548	491.5247	94536.40	19.09799	251577.0	496.0996	591.7777
#3	496.2883	496.6523	96552.60	.7193316	255986.5	513.2728	220.9844
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	500.0000	500.0000	100000.0	.0000000	250000.0	500.0000	.0000000
RANGE	100.0000	100.0000	20000.00	2500.000	50000.00	100.0000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	970.5214	110.2484	496.2191	973.2559	49.99308	50.09633	623.8398
SDEV	8.2976	1.1492	4.3758	9.6562	.91924	.35120	10.0570
%RSD	.8549590	1.042379	.8818240	.9921555	1.838725	.7010456	1.612110
#1	975.9351	111.3030	496.2174	979.7625	50.53713	50.28084	630.8433
#2	960.9684	110.4185	491.8441	962.1610	48.93175	49.69133	612.3159
#3	974.6605	109.0236	500.5956	977.8442	50.51037	50.31682	628.3604
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	100.0000	500.0000	1000.000	50.00000	50.00000	600.0000
RANGE	200.0000	20.00000	100.0000	200.0000	10.00000	10.00000	120.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	99.11238	73.66130	38.17814	54.88976	47.70310	994.4680	978.7781
SDEV	1.58047	2.51654	1.15166	4.76671	2.03611	12.7274	12.7840
%RSD	1.594624	3.416369	3.016550	8.684156	4.268293	1.279817	1.306122
#1	97.43767	76.54177	37.55572	60.10397	45.37652	1003.425	983.0351
#2	99.32171	71.88919	37.47162	50.75603	49.15968	979.8990	964.4088
#3	100.5777	72.55293	39.50708	53.80928	48.57310	1000.080	988.8906
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	100.0000					1000.000	1000.000
RANGE	20.00000					200.0000	200.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1005.379	1010.273	108101.2
SDEV	12.600	7.880	846.1
%RSD	1.253231	.7799437	.7826952
#1	1015.694	1014.557	107295.1
#2	991.3356	1001.180	108982.3
#3	1009.106	1015.084	108026.1
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	200.0000	200.0000	

ANALYSIS REPORT QC STANDARD 03/17/14 12:02:47 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 03/17/14 11:55:38
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.643108	251.8765	196.2015	5.445838	4906.631	5.268639	19.97047
SDEV	.520841	48.9901	1.2248	.199259	44.210	.346095	.83476
%RSD	11.21752	18.70734	.6242610	3.658928	.9010290	6.568959	4.179948
#1	5.238561	Q299.2050	197.5460	5.581454	4957.668	5.377080	19.17362
#2	4.418545	255.0457	195.1492	5.538997	4880.120	5.547527	20.83857
#3	4.272219	201.3787	195.9094	5.217062	4882.106	4.881309	19.89922
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.776997	4.308140	212.9409	5093.388	4828.267	9.994330	4877.660
SDEV	.229660	.063916	20.4762	27.462	49.903	.267677	140.588
%RSD	2.953074	1.483608	9.615903	.5391711	1.033570	2.678286	2.882278
#1	8.018103	4.271213	236.4832	5069.692	4852.433	10.14204	4773.705
#2	7.560815	4.381944	203.0657	5123.485	4861.486	10.15560	5037.619
#3	7.752073	4.271264	199.2738	5086.987	4770.880	9.685343	4821.656
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.37713	31.49126	18.89477	28.53395	9.773694	9.754047	32.57142
SDEV	.64998	1.02014	.34464	.07365	.904343	1.567706	.26764
%RSD	6.263547	3.239443	1.823996	.2580996	9.252830	16.07237	.8217103
#1	10.81689	32.64719	18.64628	28.60459	10.72644	9.221454	32.87676
#2	9.630535	30.71695	19.28822	28.53963	9.667510	11.51866	32.46007
#3	10.68397	31.10964	18.74983	28.45763	8.927131	8.522024	32.37742
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.17133	5.660979	11.82681	8.954621	10.15305	48.78235	50.48685
SDEV	1.47490	2.296453	1.69710	1.972222	2.46336	.24078	1.74438
%RSD	13.20256	40.56635	14.34960	22.02463	24.26227	.4935780	3.455107
#1	10.66181	6.954421	12.60946	11.06031	8.303296	48.57518	52.16663
#2	10.01875	3.009526	12.99135	8.652916	12.94928	48.72536	48.68436
#3	12.83344	7.018991	9.879608	7.150637	9.206583	49.04651	50.60957
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	49.12768	49.10560	111456.3
SDEV	.41258	.46522	377.0
%RSD	.8398137	.9473960	.3382458
#1	49.58223	49.60626	111602.3
#2	49.02394	49.02389	111028.1
#3	48.77687	48.68663	111738.5
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

ANALYSIS REPORT QC STANDARD 03/17/14 12:10:01 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 03/17/14 12:02:51
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	98.47566	50484.11	999.8296	989.6099	49621.46	965.0857	965.2469
SDEV	.32184	326.26	2.8678	3.3576	261.66	8.1332	9.6057
%RSD	.3268244	.6462535	.2868287	.3392811	.5273171	.8427429	.9951514
#1	98.11401	50839.04	1001.508	992.8411	49922.62	974.4748	976.0281
#2	98.73058	50197.27	996.5182	989.8496	49492.02	960.5745	957.5994
#3	98.58238	50416.03	1001.462	986.1389	49449.75	960.2081	962.1133
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	969.4978	970.8990	24623.38	49814.62	48812.09	994.4631	50590.77
SDEV	10.0443	1.8657	231.28	382.37	464.33	7.0556	526.96
%RSD	1.036027	.1921609	.9392763	.7675833	.9512647	.7094909	1.041609
#1	981.0820	969.2664	24890.44	50252.43	49348.19	1002.567	51197.14
#2	964.1966	970.4982	24491.27	49546.20	48536.70	989.6888	50243.73
#3	963.2147	972.9326	24488.44	49645.24	48551.39	991.1331	50331.44
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	975.6062	972.2692	974.1997	1078.296	962.9253	971.3904	1020.257
SDEV	6.4517	5.4395	6.0815	11.405	8.8844	6.5380	4.771
%RSD	.6612974	.5594593	.6242512	1.057675	.9226509	.6730601	.4675925
#1	983.0491	978.5034	977.2736	1089.762	973.1605	978.5686	1025.553
#2	972.1599	968.4896	967.1949	1066.954	958.4124	969.8262	1016.297
#3	971.6095	969.8146	978.1306	1078.172	957.2033	965.7763	1018.920
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	977.1113	959.0047	964.8830	967.7908	973.1874	987.2712	983.1205
SDEV	11.0676	10.7016	8.0006	6.9396	7.0715	8.1720	1.9691
%RSD	1.132682	1.115906	.8291746	.7170544	.7266280	.8277356	.2002881
#1	989.7531	971.2400	974.1195	975.5927	980.0542	995.3605	983.2096
#2	969.1685	954.3857	960.4230	962.3070	973.5802	979.0190	985.0435
#3	972.4123	951.3883	960.1066	965.4728	965.9277	987.4343	981.1083
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	990.3504	993.6211	111650.6
SDEV	2.0101	5.9586	1185.9
%RSD	.2029642	.5996814	1.062158
#1	992.6207	1000.497	110282.7
#2	989.6334	990.4075	112279.1
#3	988.7972	989.9593	112390.0
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

ANALYSIS REPORT QC STANDARD 03/17/14 12:17:15 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 03/17/14 12:10:05
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3221113	14.37864	.3479105	-.104076	-11.0165	.1494724	-.287308
SDEV	.6905014	7.79249	.0676724	.171050	11.2638	.2835672	.407407
%RSD	214.3674	54.19492	19.45109	164.3513	102.2449	189.7122	141.8012
#1	1.083499	23.06281	.4219872	.0784304	1.607446	.4760283	.1777501
#2	-.263544	12.07663	.3324137	-.260727	-14.6173	-.034573	-.581243
#3	.1463786	7.996489	.2893307	-.129932	-20.0395	.0069617	-.458432
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.744320	-.161951	9.887923	16.12776	19.70262	.2391753	-27.7022
SDEV	.275401	.083493	4.287828	3.37660	4.12994	.1447595	78.4094
%RSD	37.00034	51.55479	43.36429	20.93655	20.96136	60.52443	283.0438
#1	-.474544	-.066380	9.316192	18.94160	24.38765	.2009763	54.01211
#2	-1.02502	-.198746	5.914645	17.05817	16.58922	.1173460	-102.325
#3	-.733395	-.220727	14.43293	12.38351	18.13099	.3992036	-34.7938
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4971189	3.297324	-.017076	-.236916	.5079409	-.909903	-1.13021
SDEV	.1427772	1.989807	.239498	.125169	.1689539	1.189278	1.82951
%RSD	28.72093	60.34613	1402.564	52.83285	33.26250	130.7038	161.8738
#1	.6557292	5.277768	-.265997	-.304510	.3590390	.2658225	.9222703
#2	.3788599	1.298284	.0030405	-.313755	.4732287	-.883246	-2.58957
#3	.4567677	3.315920	.2117296	-.092481	.6915549	-2.11228	-1.72331
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	15.00000	10.00000	15.00000	5.000000	5.000000	15.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9731667	-1.85305	1.686520	-1.32010	-.705217	-.493022	2.351042
SDEV	1.387593	2.65029	1.070257	5.86774	3.745485	1.385413	.328030
%RSD	142.5853	143.0231	63.45952	444.4908	531.1111	281.0040	13.95252
#1	-.617319	-4.28608	2.677970	.8382104	-.020050	-2.07987	2.679816
#2	1.936283	-2.24411	1.829717	-7.96133	2.650384	.1249207	2.023762
#3	1.600536	.9710434	.5518730	3.162811	-4.74599	.4758866	2.349549
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	5.000000					10.00000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.3644157	1.765581	112496.7
SDEV	.1787840	.129545	451.7
%RSD	49.06045	7.337233	.4015445
#1	.5056632	1.618621	112030.7
#2	.4241783	1.814897	112932.6
#3	.1634057	1.863225	112526.9
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	10.00000	

ANALYSIS REPORT QC STANDARD 03/17/14 12:33:06 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: LRS DOD OPERATOR:
RUN TIME: 03/17/14 12:25:56
COMMENT: LRS
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.297021	200.6627	193.1539	4.641099	4791.246	5.176028	20.06054
SDEV	.322061	5.7774	.5397	.324303	26.225	.079466	.44900
%RSD	6.080032	2.879150	.2794145	6.987633	.5473538	1.535279	2.238244
#1	4.974943	206.9834	193.7767	4.391549	4761.657	5.088554	19.64546
#2	5.619064	199.3502	192.8598	5.007671	4811.621	5.195764	19.99904
#3	5.297056	195.6544	192.8250	4.524076	4800.459	5.243767	20.53712
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.000000	40.00000	40.00000	1.000000	1000.000	1.000000	4.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.155073	4.058060	179.6763	5033.707	4758.591	9.829056	4870.256
SDEV	.329656	.276260	10.4179	19.072	14.165	.068966	114.818
%RSD	4.607302	6.807690	5.798140	.3788780	.2976681	.7016577	2.357542
#1	8.332077	Q3.785610	190.5187	5052.470	4774.865	9.906652	4975.201
#2	8.358418	4.337978	169.7424	5014.341	4749.036	9.774753	4887.950
#3	Q7.774723	4.050593	178.7677	5034.310	4751.873	9.805761	4747.618
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	2.000000	1.000000	40.00000	1000.000	1000.000	2.000000	1000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.969004	31.14140	19.29174	28.06586	8.861228	10.54175	28.49300
SDEV	.217204	4.28639	.35076	.43156	.304864	1.02611	1.04282
%RSD	2.178792	13.76427	1.818210	1.537658	3.440430	9.733786	3.659919
#1	9.929560	32.52494	19.10259	28.37930	8.924058	10.25755	29.58831
#2	9.774225	34.56515	19.69648	28.24464	9.129782	11.68001	28.37858
#3	10.20323	26.33412	19.07615	27.57365	8.529843	9.687699	27.51211
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	2.000000	6.000000	4.000000	6.000000	2.000000	2.000000	6.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.666668	6.325540	10.12701	6.536616	12.54121	47.33861	48.70033
SDEV	1.614537	1.088927	.32375	.844593	1.71358	1.72631	.22565
%RSD	16.70210	17.21476	3.196919	12.92096	13.66361	3.646721	.4633341
#1	Q7.923776	5.770629	10.49825	7.509832	11.62924	45.42030	48.84205
#2	11.11124	7.580143	9.903280	5.995457	14.51792	48.76700	48.81881
#3	9.964988	5.625848	9.979503	6.104559	11.47648	47.82855	48.44012
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	10.00000					50.00000	50.00000
RANGE	2.000000					10.00000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	48.31390	47.53110	112532.2
SDEV	.02649	.42792	332.4
%RSD	.0548285	.9002923	.2954254
#1	48.32930	47.77336	112857.1
#2	48.32908	47.78293	112547.0
#3	48.28331	47.03701	112192.7
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	10.00000	10.00000	

ANALYSIS REPORT 03/17/14 12:40:19 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: HRS DOD OPERATOR:
RUN TIME: 03/17/14 12:33:09
COMMENT: HRS
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1980.730	158.5878	20365.59	H17893.42	636.9835	19461.32	19762.68
SDEV	2.925	21.7591	133.84	128.86	23.4555	107.02	118.28
%RSD	.1476828	13.72052	.6571819	.7201799	3.682274	.5499228	.5985213
#1	1977.356	171.6764	20211.45	H17755.33	611.4106	19342.34	19881.78
#2	1982.283	170.6169	20452.29	H18010.47	657.4953	19491.91	19645.23
#3	1982.551	133.4700	20433.04	H17914.47	642.0445	19549.72	19761.05
ERRORS	LC PASS	LC PASS	LC PASS	LC HIGH	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	19660.73	19908.52	38.48299	22.40564	-374.371	19882.60	2183.931
SDEV	90.15	100.59	13.84852	6.59114	3.811	105.05	100.798
%RSD	.4585140	.5052474	35.98608	29.41733	1.017902	.5283290	4.615461
#1	19562.22	20017.45	22.58308	29.89562	-371.695	19945.85	2070.530
#2	19680.83	19888.95	44.95783	19.83038	-372.684	19761.34	2217.928
#3	19739.12	19819.15	47.90807	17.49092	-378.734	19940.61	2263.335
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	19918.05	19820.81	19412.32	20243.63	19931.53	19664.53	5.710441
SDEV	124.32	83.97	259.35	68.10	95.59	162.83	3.386117
%RSD	.6241759	.4236487	1.336032	.3364031	.4796100	.8280582	59.29695
#1	19775.43	19727.34	19212.52	20316.58	19856.75	19521.09	6.267385
#2	19975.19	19889.88	19705.41	20232.57	19898.60	19630.99	8.783558
#3	20003.52	19845.20	19319.02	20181.74	20039.23	19841.53	2.080379
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	19541.29	19937.79	19928.40	19558.80	19717.32	-3.43471	19510.98
SDEV	91.19	37.40	145.91	278.14	159.24	1.03392	257.78
%RSD	.4666532	.1875999	.7321700	1.422070	.8075955	30.10203	1.321202
#1	19436.39	19908.30	19831.01	19237.92	19662.46	-4.48250	19213.37
#2	19585.83	19979.86	19858.03	19707.53	19592.77	-2.41525	19664.20
#3	19601.65	19925.21	20096.16	19730.96	19896.74	-3.40639	19655.38
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2.542334	9.693228	112762.3
SDEV	.166171	.557328	308.6
%RSD	6.536148	5.749666	.2736364
#1	2.631109	9.256262	112923.9
#2	2.350631	9.502552	112956.4
#3	2.645263	10.32087	112406.5
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

METHOD: P4S12014 SAMPLE NAME: 4030501-BLK2 OPERATOR:
RUN TIME: 03/17/14 12:40:22
COMMENT: SDG:1402108 CLIENTID:PBS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2537146	9.472250	.7278244	1.136498	74.62234	-.092232	-1.47607
SDEV	.5417996	13.18989	.2084400	.036835	14.22698	.199441	.66462
%RSD	213.5469	139.2477	28.63878	3.241107	19.06531	216.2399	45.02640
#1	-.029378	24.53363	.9554829	1.157597	62.23351	.1343156	-.799627
#2	-.087896	3.901047	.6816409	1.157932	71.47359	-.241341	-2.12820
#3	.8784179	-.017920	.5463493	1.093965	90.15992	-.169670	-1.50038
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000
LOW	-5.00000	-200.000	-200.000	-5.00000	-5000.00	-5.00000	-5.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.394916	.1327060	30.39660	53.68531	32.71207	.5287755	549.5992
SDEV	.905843	.5426492	.91935	9.82745	3.63499	.0894446	125.5789
%RSD	229.3762	408.9107	3.024526	18.30566	11.11208	16.91543	22.84916
#1	.6124594	-.485537	29.88037	65.02255	33.98579	.6285757	652.0713
#2	-1.14242	.5301417	31.45804	47.59368	35.53880	.4558475	409.5113
#3	-.654784	.3535138	29.85137	48.43970	28.61163	.5019034	587.2151
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000
LOW	-5.00000	-5.00000	-100.000	-5000.00	-5000.00	-10.0000	-5000.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.252431	.1474561	.4213622	6.141689	2.375382	.9077650	7.902759
SDEV	.639649	4.122595	.1508359	.149040	1.660855	1.880529	4.449001
%RSD	51.07257	2795.811	35.79722	2.426699	69.91950	207.1603	56.29681
#1	1.307447	1.557531	.5900634	6.286789	H4.287088	2.505709	9.698598
#2	.5870514	-4.49516	.2995095	5.988998	1.551710	1.382103	2.836526
#3	1.862795	3.380001	.3745137	6.149280	1.287347	-1.16452	H11.17315
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000
LOW	-40.0000	-10.0000	-20.0000	-20.0000	-3.00000	-5.00000	-10.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.076801	2.974257	2.076241	-10.3592	6.532698	19.26628	H28.91772
SDEV	2.146997	1.560850	1.742874	2.9617	3.241345	1.32247	21.00860
%RSD	2795.514	52.47865	83.94373	28.58984	49.61725	6.864170	72.64956
#1	1.337839	4.685505	4.088026	-12.7845	10.13925	19.24283	H52.45739
#2	-2.54727	2.608505	1.023954	-7.05850	5.595969	17.95569	H22.22472
#3	.9790250	1.628761	1.116744	-11.2346	3.862875	20.60032	H12.07106
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC HIGH
HIGH	10.00000					100.0000	5.000000
LOW	-10.0000					-100.000	-5.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.1343782	3.422087	109409.7
SDEV	.2750229	.068724	539.0
%RSD	204.6634	2.008255	.4926028
#1	.0086467	3.389761	108938.7
#2	-.055306	3.375487	109997.5
#3	.4497935	3.501014	109292.8
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	40.00000	200.0000	
LOW	-40.0000	-200.000	

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METHOD: P4S12014 SAMPLE NAME: 4030501-BS2 OPERATOR:
RUN TIME: 03/17/14 12:47:35
COMMENT: SDG:1402108 CLIENTID:LCSS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	335.0219	90433.81	1805.521	627.6139	63338.02	602.4080	1047.321
SDEV	.9225	680.17	17.206	4.7254	231.69	3.0609	2.317
%RSD	.2753548	.7521136	.9529597	.7529124	.3658015	.5081159	.2212738
#1	335.0712	89906.80	1806.350	626.3287	63347.14	602.5841	1047.975
#2	334.0757	90193.02	1787.916	623.6641	63101.90	599.2628	1044.747
#3	335.9187	91201.62	1822.298	632.8489	63565.01	605.3770	1049.241
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	712.7241	809.2448	126375.9	25487.90	25890.92	3009.840	H2991.647
SDEV	5.7438	2.9047	628.4	102.79	116.79	12.668	216.086
%RSD	.8058972	.3589386	.4972250	.4033051	.4510715	.4208851	7.222992
#1	714.0037	806.4828	126168.0	25404.14	25828.65	3004.957	2787.965
#2	706.4483	808.9778	125877.8	25456.94	25818.46	3000.340	H2968.674
#3	717.7201	812.2737	127081.8	25602.61	26025.64	3024.222	H3218.302
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	593.8014	1243.365	602.9501	1424.090	885.2424	862.5148	831.3328
SDEV	4.4563	8.375	6.2686	6.796	4.8907	6.9546	8.0570
%RSD	.7504699	.6736004	1.039648	.4772288	.5524692	.8063120	.9691632
#1	595.6687	1234.917	599.6315	1426.581	884.1320	857.0402	837.0273
#2	588.7152	1243.513	599.0385	1416.400	881.0023	860.1641	822.1141
#3	597.0203	1251.665	610.1803	1429.289	890.5928	870.3400	834.8568
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	912.7032	888.6327	883.5513	851.1774	868.1749	1089.641	427.9050
SDEV	9.7651	8.1562	3.9602	12.0645	4.4521	8.449	4.9394
%RSD	1.069910	.9178398	.4482103	1.417389	.5128066	.7753870	1.154316
#1	920.4044	890.6552	880.8769	840.8693	865.1134	1088.680	432.1581
#2	901.7198	879.6556	881.6763	848.2160	866.1291	1081.714	422.4875
#3	915.9852	895.5875	888.1008	864.4468	873.2821	1098.529	429.0695
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	1080.000					1310.000	512.0000
LOW	768.0000					82.90000	340.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2294.301	1051.242	108767.1
SDEV	9.863	3.643	593.4
%RSD	.4298952	.3465307	.5455403
#1	2303.478	1050.822	109333.1
#2	2283.871	1047.827	108818.5
#3	2295.554	1055.076	108149.7
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	3520.000	1370.000	
LOW	512.0000	755.0000	

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METHOD: P4S12014 SAMPLE NAME: 4030501-BSD2 OPERATOR:
RUN TIME: 03/17/14 12:54:48
COMMENT: SDG:1402108 CLIENTID:LCSSD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	335.7549	88968.28	1745.910	610.3904	61196.64	582.1582	1022.520
SDEV	1.6053	682.66	17.418	2.7838	363.72	3.2164	15.683
%RSD	.4781091	.7673058	.9976411	.4560647	.5943389	.5524971	1.533770
#1	334.4866	89000.45	1752.627	609.4086	61151.78	583.0685	1033.257
#2	335.2183	88270.10	1726.134	608.2306	60857.43	578.5847	1004.523
#3	337.5597	89634.28	1758.970	613.5321	61580.70	584.8213	1029.781
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	701.5978	793.2391	123625.8	24977.59	25448.68	2867.170	H2986.658
SDEV	7.2624	6.1974	1049.5	222.21	219.08	31.894	211.573
%RSD	1.035123	.7812825	.8489359	.8896198	.8608624	1.112373	7.083927
#1	696.0627	792.1036	123515.6	25036.89	25436.09	2861.581	2928.084
#2	698.9097	787.6879	122635.7	24731.75	25236.17	2838.439	2810.543
#3	709.8210	799.9258	124726.0	25164.13	25673.78	2901.488	H3221.346
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	582.2770	1222.496	597.2919	1380.509	861.7316	822.3613	829.6401
SDEV	2.6034	4.187	5.0025	19.406	.9363	3.9263	3.6475
%RSD	.4471120	.3424851	.8375310	1.405722	.1086512	.4774376	.4396436
#1	583.0503	1218.943	593.6189	1387.529	862.0043	824.1464	830.6904
#2	579.3745	1221.434	595.2676	1358.569	860.6893	817.8596	825.5827
#3	584.4061	1227.112	602.9894	1395.428	862.5013	825.0778	832.6472
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	886.1104	867.1033	859.0515	818.4960	824.2909	1074.817	422.9917
SDEV	4.4820	5.0399	1.1486	12.6737	.5190	10.874	2.9928
%RSD	.5058031	.5812340	.1337008	1.548412	.0629619	1.011707	.7075215
#1	883.0268	867.6999	859.1624	823.6490	824.3945	1079.727	423.8468
#2	884.0526	861.7916	860.1405	804.0575	824.7502	1062.354	419.6644
#3	891.2517	871.8182	857.8514	827.7815	823.7279	1082.371	425.4638
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	1080.000					1310.000	512.0000
LOW	768.0000					82.90000	340.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2264.685	1033.662	109261.4
SDEV	18.618	7.601	344.1
%RSD	.8220837	.7353744	.3148892
#1	2249.070	1030.765	108993.7
#2	2259.697	1027.935	109649.5
#3	2285.289	1042.285	109141.1
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	3520.000	1370.000	
LOW	512.0000	755.0000	

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METHOD: P4S12014 SAMPLE NAME: 1402108-01RE1 OPERATOR:
RUN TIME: 03/17/14 13:02:00
COMMENT: SDG:1402108 CLIENTID:16WC1B 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	29.33553	94731.85	753.8617	15.82544	12294.85	-7.79552	512.0621
SDEV	1.68770	279.70	3.5019	.30679	24.71	.05014	2.6618
%RSD	5.753080	.2952541	.4645233	1.938610	.2009487	.6431537	.5198206
#1	28.05692	95034.30	753.6183	15.76117	12309.50	-7.84053	512.8177
#2	28.70118	94678.73	757.4789	16.15928	12266.33	-7.80454	509.1041
#3	31.24848	94482.52	750.4878	15.55587	12308.74	-7.74148	514.2643
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	265.9425	164.0513	199324.2	19481.85	59393.62	16775.46	1296.958
SDEV	2.0885	1.2577	795.5	29.29	249.17	179.05	383.732
%RSD	.7853174	.7666553	.3991178	.1503600	.4195245	1.067313	29.58711
#1	266.8765	162.8955	199277.5	19486.18	59337.86	16840.53	1011.394
#2	263.5500	165.3907	198553.1	19508.74	59177.05	16572.98	1146.328
#3	267.4011	163.8678	200142.1	19450.63	59665.94	16912.88	1733.152
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	252.1525	18.24734	335.9244	448.0758	41.14358	12.14680	1.428413
SDEV	1.2995	1.79467	.9367	.2857	1.03330	1.48993	2.233714
%RSD	.5153812	9.835265	.2788493	.0637718	2.511457	12.26607	156.3773
#1	251.7982	20.31588	335.5256	447.8133	41.44558	12.28715	4.005625
#2	253.5924	17.10483	335.2531	448.3802	41.99224	10.59166	.2290459
#3	251.0668	17.32131	336.9946	448.0341	39.99292	13.56160	.0505686
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	49.14027	46.31094	38.56363	12.07088	12.18459	22.04543	9.502502
SDEV	1.51124	6.08200	4.48159	10.07843	3.93032	2.65713	.501286
%RSD	3.075352	13.13297	11.62129	83.49372	32.25651	12.05296	5.275301
#1	47.81460	41.74639	41.29526	3.995398	16.42669	20.86623	9.106438
#2	50.78585	43.97105	41.00417	8.851581	11.46028	20.18198	9.334971
#3	48.82037	53.21538	33.39146	23.36566	8.666802	25.08807	10.06610
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2586.158	70.92389	109014.7
SDEV	10.227	.43659	768.8
%RSD	.3954521	.6155812	.7051951
#1	2597.117	71.42239	108148.2
#2	2584.488	70.60957	109281.1
#3	2576.869	70.73971	109614.9
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

METHOD: P4S12014 SAMPLE NAME: SDI1402108-01 OPERATOR:
RUN TIME: 03/17/14 13:09:13
COMMENT: SDG:1402108 CLIENTID:16WC1BL 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	6.528760	18942.09	147.4372	3.080197	2458.429	-2.09285	103.6436
SDEV	.705435	101.55	.7351	.328163	20.034	.23312	.5162
%RSD	10.80503	.5360995	.4986059	10.65397	.8149267	11.13909	.4980230
#1	7.338934	19021.83	148.2640	3.318030	2461.083	-2.16825	103.9452
#2	6.196825	18976.67	146.8571	3.216755	2477.004	-2.27894	103.0476
#3	6.050521	18827.77	147.1906	2.705805	2437.200	-1.83135	103.9380
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	51.88254	32.61339	44033.71	4066.034	11951.40	3325.254	121.3027
SDEV	1.06159	1.13569	268.54	30.754	53.42	30.394	253.1051
%RSD	2.046149	3.482287	.6098555	.7563539	.4469523	.9140334	208.6559
#1	52.93442	33.31261	44343.56	4099.602	12011.95	3359.950	402.7948
#2	51.90170	33.22456	43889.52	4059.286	11910.95	3312.479	-87.5158
#3	50.81149	31.30299	43868.08	4039.216	11931.31	3303.332	48.62897
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	51.29853	2.740498	67.99657	92.21100	7.815062	1.151139	1.295909
SDEV	.56535	1.827762	.35954	.28389	.092176	2.670390	1.980691
%RSD	1.102086	66.69452	.5287582	.3078723	1.179468	231.9780	152.8419
#1	50.66656	4.819582	67.85328	92.52632	7.761109	-1.60614	1.088546
#2	51.75624	1.386678	68.40565	91.97573	7.762584	3.725209	3.372124
#3	51.47279	2.015234	67.73077	92.13094	7.921495	1.334345	-.572943
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.62701	5.949692	8.746207	-1.92404	2.686319	3.761533	2.245302
SDEV	3.25622	2.038631	.902291	2.74785	2.659471	1.314165	.363764
%RSD	30.64096	34.26448	10.31637	142.8164	99.00060	34.93695	16.20110
#1	11.37041	5.976406	8.651976	-4.95484	.0656014	5.277540	2.519194
#2	13.44726	3.897835	9.691916	.4045968	5.382920	2.945896	1.832564
#3	7.063375	7.974834	7.894730	-1.22188	2.610435	3.061163	2.384148
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	508.6284	15.71884	112960.1
SDEV	4.3860	1.04331	598.6
%RSD	.8623189	6.637348	.5299280
#1	510.2583	16.44075	113231.7
#2	511.9660	16.19314	113374.7
#3	503.6607	14.52264	112273.8
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4030501-PS2 OPERATOR:
RUN TIME: 03/17/14 13:16:25
COMMENT: SDG:1402108 CLIENTID:16WC1BA 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	136.0026	97062.32	5277.246	124.9316	12064.62	98.62257	936.2421
SDEV	.7074	91.18	18.528	.2149	35.90	.21717	5.2517
%RSD	.5201308	.0939348	.3511001	.1720059	.2975919	.2202054	.5609302
#1	135.2210	97165.22	5266.733	124.9021	12061.25	98.76880	940.2168
#2	136.1878	97030.14	5298.640	125.1597	12102.10	98.37303	938.2211
#3	136.5990	96991.59	5266.365	124.7329	12030.53	98.72589	930.2885
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	473.7546	271.9789	199333.4	19106.64	58219.56	16556.80	1507.753
SDEV	3.2674	1.4068	395.6	12.04	226.78	30.49	94.647
%RSD	.6896846	.5172364	.1984442	.0630384	.3895179	.1841830	6.277365
#1	477.0592	271.2008	199748.7	19115.96	58433.38	16572.46	1612.498
#2	473.6789	271.1331	199290.6	19110.93	58243.57	16576.28	1482.385
#3	470.5257	273.6028	198961.0	19093.04	57981.74	16521.65	1428.374
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	461.8389	663.2597	755.0814	1081.696	249.9064	207.9303	641.0201
SDEV	.4682	1.9082	5.2394	2.061	2.3550	2.9105	3.0239
%RSD	.1013746	.2876951	.6938842	.1904904	.9423690	1.399768	.4717346
#1	461.8580	665.2466	759.4508	1083.575	251.3523	210.6935	641.4578
#2	461.3615	661.4415	756.5206	1082.020	251.1780	204.8920	637.8012
#3	462.2973	663.0909	749.2728	1079.493	247.1889	208.2055	643.8013
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	254.3310	251.0249	249.3510	203.7061	210.0392	1105.945	1089.170
SDEV	2.8109	4.2511	1.4237	7.0144	.8799	2.100	4.826
%RSD	1.105228	1.693493	.5709636	3.443409	.4189128	.1898752	.4431198
#1	256.2826	253.3117	250.3771	210.1486	210.9655	1108.227	1084.268
#2	251.1091	253.6431	249.9503	196.2336	209.2146	1105.514	1089.324
#3	255.6013	246.1199	247.7257	204.7362	209.9374	1104.094	1093.917
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	3584.385	1111.275	109250.5
SDEV	3.407	2.991	457.5
%RSD	.0950493	.2691096	.4188007
#1	3580.506	1110.464	108909.0
#2	3585.754	1108.773	109072.1
#3	3586.894	1114.587	109770.3
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4031312-BLK1 OPERATOR:
RUN TIME: 03/17/14 13:23:38
COMMENT: SDG:1403011 CLIENTID:PBS01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0292595	-3.05999	.4179058	.3914874	22.95707	-.194565	-1.26315
SDEV	.3561509	3.96022	.1400838	.4745000	15.25799	.125847	.12622
%RSD	1217.213	129.4194	33.52042	121.2044	66.46314	64.68131	9.992633
#1	.2634589	1.462800	.2783661	.8590354	40.47783	-.234358	-1.20783
#2	-.380597	-5.90586	.5585274	-.089672	15.80098	-.295705	-1.17404
#3	.2049165	-4.73690	.4168237	.4050985	12.59242	-.053632	-1.40759
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000
LOW	-2.50000	-100.000	-100.000	-2.50000	-2500.00	-2.50000	-10.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.06500	-.713950	24.50020	45.67801	22.98457	.3702128	398.8086
SDEV	.39741	.889671	5.26628	11.93389	3.00928	.1185830	255.9790
%RSD	37.31522	124.6126	21.49486	26.12612	13.09261	32.03104	64.18594
#1	-.719422	.2873368	30.02101	38.85446	26.16116	.5071405	226.6220
#2	-1.49925	-1.41355	19.53202	59.45787	22.61601	.3019783	692.9622
#3	-.976320	-1.01564	23.94757	38.72171	20.17656	.3015197	276.8416
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000
LOW	-5.00000	-2.50000	-100.000	-2500.00	-2500.00	-5.00000	-2500.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.163066	-1.81308	.1428523	2.928460	.9497386	.5026023	8.976822
SDEV	.319614	2.61833	.5377154	.257335	.7456564	2.613738	4.887701
%RSD	27.48034	144.4132	376.4135	8.787397	78.51175	520.0410	54.44801
#1	1.515875	-.474005	.5209644	3.217841	1.731487	3.510694	13.79206
#2	1.080457	-4.83014	-.472714	2.842212	.8713635	-1.21397	4.019746
#3	.8928652	-.135112	.3803069	2.725327	.2463654	-.788922	9.118659
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	15.00000	15.00000	15.00000	5.000000	5.000000	15.00000
LOW	-5.00000	-15.0000	-15.0000	-15.0000	-5.00000	-5.00000	-15.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8776249	1.699326	.5753630	-7.45555	4.475602	19.76314	2.212096
SDEV	1.322678	.495850	1.203300	2.74508	2.553241	.42684	.353453
%RSD	150.7111	29.17925	209.1376	36.81927	57.04800	2.159786	15.97821
#1	1.748940	1.338239	1.927663	-4.32180	7.420958	19.86433	2.553290
#2	-.644350	2.264681	.1756101	-9.43493	2.890244	19.29480	2.235455
#3	1.528285	1.495058	-.377184	-8.60992	3.115603	20.13030	1.847543
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	5.000000					25.00000	25.00000
LOW	-5.00000					-25.0000	-25.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.1401929	3.512993	108278.2
SDEV	.3592032	.803614	252.3
%RSD	256.2207	22.87547	.2329724
#1	.4619045	4.432621	108562.1
#2	-.247386	3.160457	108079.7
#3	.2060598	2.945902	108192.9
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	25.00000	25.00000	
LOW	-25.0000	-25.0000	

METHOD: P4S12014 SAMPLE NAME: 4031312-BS1 OPERATOR:
RUN TIME: 03/17/14 13:30:51
COMMENT: SDG:1403011 CLIENTID:MLCS01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	341.3125	80359.76	1776.148	628.7849	63930.57	610.2202	1054.316
SDEV	2.0027	451.25	10.600	7.2403	428.66	3.8971	8.275
%RSD	.5867636	.5615392	.5967950	1.151477	.6705142	.6386308	.7848999
#1	340.1411	80879.16	1786.043	635.3494	64327.84	614.0239	1063.562
#2	343.6249	80136.04	1777.439	629.9860	63987.64	610.4006	1047.602
#3	340.1714	80064.07	1764.961	621.0190	63476.23	606.2361	1051.784
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	693.3484	824.0339	117294.4	25084.14	25008.24	2943.406	2862.490
SDEV	3.5833	2.4431	433.5	129.60	101.19	26.602	179.443
%RSD	.5168166	.2964830	.3695636	.5166696	.4046185	.9037970	6.268764
#1	695.6620	821.3106	117793.7	25223.35	25115.84	2963.655	2659.685
#2	695.1625	824.7579	117014.1	24966.98	24993.87	2913.277	2927.118
#3	689.2208	826.0332	117075.4	25062.09	24915.00	2953.285	H3000.666
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	606.8496	1257.391	574.6263	1418.826	913.6909	846.7805	836.0441
SDEV	4.0578	5.971	5.6613	4.921	8.0118	6.8710	12.1717
%RSD	.6686602	.4748594	.9852136	.3468474	.8768562	.8114234	1.455866
#1	609.4208	1264.211	575.2798	1422.938	916.8632	849.8682	844.3157
#2	608.9562	1253.106	579.9324	1420.168	904.5787	838.9073	841.7488
#3	602.1718	1254.855	568.6666	1413.373	919.6307	851.5658	822.0678
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	914.4067	905.1457	917.9586	842.6536	848.8407	1081.206	425.7981
SDEV	8.3710	6.4145	9.1230	10.0886	5.4552	10.769	5.4677
%RSD	.9154616	.7086729	.9938384	1.197245	.6426637	.9960233	1.284113
#1	924.0069	910.1119	920.2353	849.2174	850.1931	1093.266	426.7917
#2	910.5826	897.9035	907.9128	831.0370	842.8365	1077.801	430.7009
#3	908.6308	907.4216	925.7276	847.7065	853.4924	1072.551	419.9017
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	1080.000					1310.000	512.0000
LOW	768.0000					82.90000	340.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1891.432	1054.102	108239.3
SDEV	17.200	.431	813.5
%RSD	.9093537	.0408980	.7516147
#1	1891.016	1054.405	107375.7
#2	1908.835	1054.291	108991.2
#3	1874.443	1053.608	108351.0
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	3520.000	1370.000	
LOW	512.0000	755.0000	

ANALYSIS REPORT QC STANDARD 03/17/14 01:45:15 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 03/17/14 13:38:04
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	100.3534	50260.57	978.1182	975.9356	49409.94	970.1937	963.6884
SDEV	.4047	230.62	5.9996	3.8118	125.61	2.5615	1.5128
%RSD	.4032430	.4588540	.6133820	.3905831	.2542280	.2640193	.1569824
#1	100.8132	50114.00	977.6249	973.8290	49353.07	968.5279	965.4163
#2	100.1950	50526.40	984.3492	980.3358	49553.93	968.9100	963.0466
#3	100.0517	50141.30	972.3804	973.6420	49322.82	973.1432	962.6022
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	948.1548	985.8826	24619.19	50218.68	48830.28	982.8769	51398.46
SDEV	4.9374	3.3970	33.79	142.84	110.24	1.1841	168.92
%RSD	.5207397	.3445595	.1372522	.2844311	.2257580	.1204703	.3286491
#1	949.8231	989.5229	24618.38	50314.35	48900.92	982.7955	51547.59
#2	952.0420	982.7974	24653.38	50287.21	48886.67	981.7356	51432.78
#3	942.5994	985.3274	24585.81	50054.50	48703.25	984.0996	51215.02
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	979.7474	980.7056	951.9484	1079.566	967.8525	970.9320	1008.846
SDEV	1.1270	8.7452	11.3198	7.595	4.5627	3.9064	3.550
%RSD	.1150252	.8917263	1.189119	.7035574	.4714256	.4023310	.3519073
#1	979.1948	974.8408	945.0029	1087.945	962.7076	966.8726	1010.654
#2	979.0033	976.5189	965.0106	1077.621	971.4078	974.6649	1011.128
#3	981.0439	990.7571	945.8317	1073.132	969.4420	971.2584	1004.756
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	984.4954	964.4421	969.5553	982.2363	965.2881	985.7848	963.7660
SDEV	3.3585	8.7636	4.4943	9.8990	5.6992	2.2411	2.0065
%RSD	.3411387	.9086747	.4635389	1.007805	.5904161	.2273458	.2081910
#1	980.6584	955.4851	966.3137	973.1305	963.7482	986.1706	965.3799
#2	985.9262	964.8427	974.6857	980.8055	971.5991	987.8080	961.5195
#3	986.9015	972.9987	967.6666	992.7729	960.5172	983.3758	964.3987
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	973.0171	1002.707	112123.6
SDEV	5.5882	2.750	355.5
%RSD	.5743159	.2742406	.3170990
#1	968.2736	999.6100	112501.5
#2	979.1773	1003.648	111795.7
#3	971.6004	1004.863	112073.7
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

ANALYSIS REPORT QC STANDARD 03/17/14 01:52:28 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 03/17/14 13:45:18
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0487623	3.635364	.2459496	-1.07846	-52.5926	.4139338	.7520251
SDEV	.3380259	4.868015	.1475385	.12650	14.1710	.1972037	.1613351
%RSD	693.2120	133.9072	59.98730	11.72930	26.94493	47.64135	21.45342
#1	.4390809	4.770612	.4157733	-1.19643	-64.2637	.6127127	.7424080
#2	-.146436	7.835442	.1727657	-.944884	-56.6896	.2183441	.5957137
#3	-.146358	-1.69996	.1493097	-1.09406	-36.8244	.4107448	.9179537
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.55686	-.765419	7.847472	17.49279	18.30031	.1349451	106.5936
SDEV	.46843	.250948	2.995791	3.28456	4.32871	.0451398	112.6579
%RSD	30.08790	32.78572	38.17523	18.77664	23.65374	33.45047	105.6892
#1	-1.55373	-.838678	7.588957	19.81187	18.42830	.0828330	75.32900
#2	-1.09000	-.971586	10.96414	13.73426	22.56361	.1600800	12.87003
#3	-2.02684	-.485994	4.989317	18.93224	13.90903	.1619222	231.5818
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6545889	3.171165	.2599282	-.630320	.7504290	.0415868	.5841591
SDEV	.3331578	2.025879	.6633560	.192288	1.043346	1.752251	2.219350
%RSD	50.89573	63.88437	255.2074	30.50644	139.0333	4213.481	379.9222
#1	.6335236	4.304476	.9737403	-.408288	-.308154	-.098880	-.053566
#2	.9977796	.8322544	.1436365	-.742316	1.777839	1.859844	3.052555
#3	.3324637	4.376766	-.337592	-.740357	.7816024	-1.63620	-1.24651
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.420669	-2.24327	2.244893	.0940445	.0152895	-.573024	1.284961
SDEV	2.863108	2.67968	1.827872	1.034616	2.865605	.579445	.398278
%RSD	201.5323	119.4545	81.42357	1100.135	18742.35	101.1206	30.99535
#1	4.373586	-1.38193	.2277935	-.974254	.3380418	-.014980	1.736168
#2	-1.34327	-.100166	2.715300	.1650688	2.705853	-.532362	1.136396
#3	1.231689	-5.24770	3.791586	1.091318	-2.99803	-1.17173	.9823192
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.2399035	.9571784	111755.7
SDEV	.1290436	.3405662	445.8
%RSD	53.78978	35.58022	.3989316
#1	.3885598	1.345940	111322.9
#2	.1567312	.8141154	112213.5
#3	.1744196	.7114797	111730.5
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

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METHOD: P4S12014 SAMPLE NAME: 4031312-BSD1 OPERATOR:
RUN TIME: 03/17/14 13:52:32
COMMENT: SDG:1403011 CLIENTID:MLCSD01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	342.2299	81009.41	1737.286	627.1959	63989.19	609.3832	1056.045
SDEV	.5409	1425.39	25.875	9.9698	1069.61	7.2230	16.140
%RSD	.1580594	1.759531	1.489376	1.589589	1.671541	1.185296	1.528312
#1	342.5698	82536.27	1764.368	638.1307	65156.23	617.0484	1072.270
#2	342.5138	80778.18	1734.674	624.8461	63755.77	608.3978	1055.874
#3	341.6061	79713.77	1712.817	618.6108	63055.57	602.7036	1039.992
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	702.9119	812.3522	118650.5	24622.63	25294.06	2901.611	2893.635
SDEV	11.2397	4.9769	1652.1	277.77	357.25	48.735	306.810
%RSD	1.599022	.6126500	1.392411	1.128102	1.412397	1.679578	10.60292
#1	714.9112	817.2084	120405.2	24927.41	25686.61	2950.172	2880.384
#2	701.1952	812.5853	118421.3	24556.77	25207.60	2901.956	H3206.856
#3	692.6293	807.2628	117125.0	24383.72	24987.97	2852.704	2593.665
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	602.8249	1266.270	575.1538	1421.105	893.7834	853.6351	824.3480
SDEV	7.6538	12.889	9.3077	22.048	12.2543	8.8015	8.6518
%RSD	1.269663	1.017849	1.618305	1.551497	1.371062	1.031066	1.049531
#1	611.4309	1280.936	585.8904	1445.416	907.9286	862.7628	832.9027
#2	600.2637	1261.131	570.2069	1415.498	887.0316	845.2007	824.5388
#3	596.7801	1256.744	569.3641	1402.402	886.3899	852.9417	815.6023
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	924.0098	888.4095	896.4678	855.2536	852.8268	1073.542	414.7969
SDEV	13.9805	13.4695	11.7180	11.6395	8.0334	14.081	1.8862
%RSD	1.513022	1.516140	1.307127	1.360938	.9419777	1.311603	.4547361
#1	939.9818	903.9009	909.9410	864.4377	861.9265	1086.731	416.5201
#2	918.0551	879.4636	890.8114	842.1635	846.7169	1075.180	412.7817
#3	913.9927	881.8640	888.6511	859.1596	849.8373	1058.713	415.0889
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	1080.000					1310.000	512.0000
LOW	768.0000					82.90000	340.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1920.095	1049.614	106754.5
SDEV	21.797	12.017	969.0
%RSD	1.135217	1.144923	.9077108
#1	1945.263	1062.856	105683.8
#2	1907.341	1046.586	107008.3
#3	1907.680	1039.401	107571.3
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	3520.000	1370.000	
LOW	512.0000	755.0000	

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METHOD: P4S12014 SAMPLE NAME: 1403011-01 OPERATOR:
RUN TIME: 03/17/14 13:59:44
COMMENT: SDG:1403011 CLIENTID:GP-11-27-3-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.916814	110819.7	672.9059	5.745087	5369.981	-2.06972	38.18157
SDEV	.581698	1324.1	6.8448	.484106	86.119	.26773	1.44127
%RSD	63.44775	1.194818	1.017196	8.426443	1.603716	12.93569	3.774789
#1	-.262565	109295.9	665.0628	6.301980	5283.483	-2.35744	36.67326
#2	-1.37562	111473.5	675.9818	5.508602	5455.716	-2.02383	38.32662
#3	-1.11225	111689.8	677.6732	5.424677	5370.744	-1.82790	39.54483
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	111.6474	54.30815	86610.12	4825.034	9987.542	2265.858	1044.222
SDEV	1.7346	.37643	1030.88	59.863	131.470	19.283	24.384
%RSD	1.553623	.6931376	1.190256	1.240668	1.316337	.8510186	2.335179
#1	110.4259	54.07914	85570.70	4762.810	9854.082	2254.206	1021.071
#2	110.8835	54.74261	86627.42	4830.078	9991.618	2255.253	1041.919
#3	113.6329	54.10273	87632.24	4882.216	10116.93	2288.116	1069.676
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	70.22390	7.646365	176.3954	1297.620	2656.829	3.963716	6.405454
SDEV	1.11243	2.553381	1.5463	14.040	29.955	3.376257	1.757869
%RSD	1.584114	33.39339	.8765872	1.082013	1.127462	85.17909	27.44331
#1	69.12112	4.849203	174.7184	1282.362	2626.496	3.195660	4.383533
#2	70.20486	9.852205	176.7030	1300.502	2657.601	7.657830	7.571261
#3	71.34573	8.237686	177.7647	1309.995	2686.390	1.037656	7.261570
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	51.53588	2640.456	2665.003	-5.08115	8.479257	21.74308	6.256243
SDEV	.08555	43.214	24.417	2.75993	3.831393	2.15272	.584654
%RSD	.1660033	1.636601	.9161945	54.31709	45.18548	9.900719	9.345130
#1	51.54225	2603.361	2638.046	-4.43878	7.007046	19.72316	5.592821
#2	51.61807	2630.100	2671.331	-2.69905	12.82840	21.49838	6.479678
#3	51.44732	2687.907	2685.633	-8.10562	5.602327	24.00769	6.696230
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1605.647	20.89753	109119.1
SDEV	25.160	.45980	1039.2
%RSD	1.566965	2.200257	.9523506
#1	1579.260	21.05276	110226.0
#2	1629.367	20.38021	108966.9
#3	1608.314	21.25962	108164.4
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: SDI1403011-01 OPERATOR:
RUN TIME: 03/17/14 14:06:57
COMMENT: SDG:1403011 CLIENTID:GP-11-27-3-0L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6187921	23122.51	134.8321	.5186012	1070.579	-.734294	7.293271
SDEV	.4549372	204.88	.4804	.4016558	18.638	.225983	1.018098
%RSD	73.52021	.8860416	.3563044	77.44984	1.740940	30.77562	13.95941
#1	.7554468	23014.22	134.2781	.0954114	1091.317	-.966828	6.300355
#2	.9897391	22994.51	135.0852	.8945438	1055.228	-.515487	7.244652
#3	.1111903	23358.81	135.1331	.5658483	1065.191	-.720566	8.334807
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	21.47740	10.75032	18605.16	1044.954	2088.792	460.5346	342.2135
SDEV	.37663	.61827	111.33	.769	15.711	3.4871	241.2940
%RSD	1.753609	5.751154	.5983789	.0735553	.7521355	.7571804	70.50977
#1	21.41291	11.36863	18487.44	1045.834	2073.897	456.6123	619.7535
#2	21.88211	10.75021	18619.27	1044.613	2087.271	461.7073	182.1963
#3	21.13717	10.13210	18708.76	1044.415	2105.207	463.2842	224.6908
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	14.94216	1.087812	36.43815	275.1365	553.8615	1.205347	.2107895
SDEV	.14523	4.071605	.21992	1.9531	1.4396	3.529493	.9768072
%RSD	.9719144	374.2930	.6035533	.7098576	.2599153	292.8196	463.4042
#1	14.88599	-2.32166	36.42211	273.2185	552.3415	3.057125	-.524682
#2	14.83341	5.596045	36.22669	275.0681	555.2043	3.423580	1.319109
#3	15.10708	-.010950	36.66566	277.1229	554.0388	-2.86466	-.162058
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.95335	548.0356	556.7699	-.899266	2.255969	2.871779	.6757665
SDEV	2.06719	1.1933	1.9989	9.213046	1.834657	.927639	.8397429
%RSD	18.87265	.2177413	.3590121	1024.507	81.32457	32.30190	124.2652
#1	9.982557	547.0248	554.9957	.4325933	4.367318	3.767843	1.530469
#2	13.32725	547.7302	558.9356	7.575364	1.350694	1.915498	.6450010
#3	9.550250	549.3520	556.3784	-10.7058	1.049895	2.931996	-.148171
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	329.9501	4.974722	112590.5
SDEV	1.6704	.722907	802.4
%RSD	.5062595	14.53161	.7126425
#1	331.5266	5.412307	113415.4
#2	328.1995	4.140313	112543.5
#3	330.1241	5.371547	111812.7
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031312-PS1 OPERATOR:
RUN TIME: 03/17/14 14:14:09
COMMENT: SDG:1403011 CLIENTID:GP-11-27-3-0A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	107.8187	113081.2	5209.806	116.8017	5374.516	107.0773	476.0580
SDEV	1.0901	323.3	18.975	.1682	15.340	.6261	1.3495
%RSD	1.011032	.2859175	.3642133	.1439978	.2854214	.5847269	.2834722
#1	106.5793	112720.2	5189.607	116.6355	5360.321	107.1269	477.5775
#2	108.6287	113344.2	5212.554	116.9718	5372.439	106.4279	474.9992
#3	108.2481	113179.2	5227.257	116.7977	5390.789	107.6771	475.5973
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	326.4528	167.0157	89379.61	4786.740	9813.429	2457.742	1441.773
SDEV	2.6547	.8687	174.87	9.474	25.802	9.280	34.848
%RSD	.8131845	.5201299	.1956447	.1979248	.2629233	.3775650	2.416996
#1	329.2242	166.7132	89474.31	4781.952	9818.030	2465.224	1401.631
#2	326.2014	167.9952	89486.70	4797.653	9836.620	2460.644	1459.437
#3	323.9327	166.3387	89177.82	4780.616	9785.636	2447.358	1464.252
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	289.7961	664.2726	600.8843	1922.920	2797.160	201.9550	612.6506
SDEV	1.0149	2.0306	1.3044	2.253	10.461	4.3488	9.6241
%RSD	.3502145	.3056838	.2170749	.1171631	.3739696	2.153355	1.570892
#1	290.6758	664.6964	599.4087	1923.808	2785.531	197.1551	602.9499
#2	288.6857	662.0635	601.8834	1924.593	2800.146	203.0772	612.8059
#3	290.0269	666.0578	601.3608	1920.358	2805.802	205.6327	622.1962
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	261.6072	2795.501	2797.988	194.2217	205.8157	1110.986	1088.911
SDEV	2.1440	20.384	25.664	2.6501	5.3998	1.897	4.683
%RSD	.8195648	.7291615	.9172190	1.364497	2.623614	.1707628	.4300774
#1	264.0106	2815.858	2770.390	191.2264	200.1147	1109.811	1084.475
#2	259.8912	2795.555	2802.439	196.2621	206.4793	1109.972	1088.451
#3	260.9197	2775.091	2821.135	195.1764	210.8530	1113.175	1093.807
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2686.107	1073.530	108813.7
SDEV	13.098	1.576	354.0
%RSD	.4876303	.1468258	.3253540
#1	2693.442	1072.599	108470.6
#2	2670.985	1075.350	109177.7
#3	2693.896	1072.640	108792.8
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

METHOD: P4S12014 SAMPLE NAME: 1403011-02 OPERATOR:
RUN TIME: 03/17/14 14:21:22
COMMENT: SDG:1403011 CLIENTID:GP-11-27-3-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.842229	161285.2	380.6751	4.070622	4391.683	-3.57482	66.23279
SDEV	.370715	394.1	1.3184	.197938	20.413	.15027	.73971
%RSD	44.01594	.2443228	.3463383	4.862595	.4648191	4.203561	1.116833
#1	-.705549	160832.1	381.4029	3.885394	4368.113	-3.73137	67.08215
#2	-1.26188	161547.6	381.4693	4.047274	4403.249	-3.56136	65.88626
#3	-.559260	161475.9	379.1532	4.279199	4403.686	-3.43174	65.72996
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	118.3272	58.69861	107810.3	5025.915	7809.477	1858.662	1145.796
SDEV	1.4797	.27596	528.8	5.022	29.118	14.063	58.525
%RSD	1.250502	.4701312	.4905171	.0999161	.3728592	.7566101	5.107788
#1	116.7222	58.50713	107315.1	5022.324	7792.084	1842.831	1152.637
#2	119.6372	59.01493	108367.3	5031.653	7843.093	1869.708	1200.600
#3	118.6221	58.57377	107748.5	5023.768	7793.252	1863.447	1084.151
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	83.12195	11.48851	198.0117	232.6890	88.74590	2.969572	9.295922
SDEV	1.06387	3.07066	.5240	1.9424	.32044	1.914872	2.610969
%RSD	1.279896	26.72809	.2646072	.8347737	.3610783	64.48312	28.08726
#1	82.06741	13.43771	197.8349	234.6919	88.45110	3.660921	12.03816
#2	84.19492	13.07894	197.5989	232.5616	88.69964	4.442761	9.009823
#3	83.10353	7.948872	198.6011	230.8133	89.08695	.8050337	6.839785
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	30.99674	99.29649	83.47838	-.629766	4.766431	21.06781	6.916457
SDEV	1.13527	2.55915	1.73143	4.563121	2.209773	1.19720	.474145
%RSD	3.662554	2.577282	2.074108	724.5738	46.36116	5.682601	6.855309
#1	32.25858	100.7907	82.29041	-3.34116	7.156601	20.35461	7.253323
#2	30.05815	100.7572	82.67975	4.638517	4.344917	22.44998	6.374254
#3	30.67348	96.34150	85.46499	-3.18666	2.797775	20.39884	7.121795
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1892.742	24.15547	108301.2
SDEV	18.331	.51300	187.6
%RSD	.9684734	2.123740	.1732088
#1	1872.150	24.43294	108207.7
#2	1898.796	24.46998	108178.7
#3	1907.280	23.56350	108517.1
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403011-03 OPERATOR:
RUN TIME: 03/17/14 14:28:36
COMMENT: SDG:1403011 CLIENTID:GP-11-102-5-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.05129	146007.4	631.9126	5.111996	5299.744	-4.69580	49.34660
SDEV	.88549	839.0	6.0070	.606147	53.868	.07411	1.17926
%RSD	84.22844	.5746126	.9506077	11.85734	1.016425	1.578140	2.389754
#1	-2.02745	146973.1	637.3272	4.910047	5360.238	-4.64859	50.55257
#2	-.299726	145458.0	625.4509	5.793338	5256.963	-4.65760	48.19600
#3	-.826702	145591.0	632.9597	4.632603	5282.032	-4.78121	49.29124
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	141.5532	70.51075	128325.7	5800.373	12329.33	2435.030	1054.391
SDEV	1.3929	.42613	912.1	21.200	94.34	26.316	68.854
%RSD	.9839835	.6043457	.7107783	.3654921	.7651553	1.080723	6.530246
#1	143.0613	70.99679	129356.5	5824.239	12438.00	2465.248	1044.060
#2	141.2832	70.33415	127623.1	5783.724	12268.42	2417.145	1127.828
#3	140.3151	70.20132	127997.4	5793.155	12281.57	2422.698	991.2866
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	85.11246	12.58964	223.2279	255.9692	77.84849	4.000559	3.946114
SDEV	1.43465	.82193	.5068	2.2834	1.67948	.462040	2.697122
%RSD	1.685596	6.528604	.2270311	.8920794	2.157370	11.54938	68.34881
#1	86.75026	13.42004	223.6635	258.4416	76.49229	3.558174	6.951581
#2	84.07807	11.77645	223.3486	253.9394	79.72709	3.963485	3.150374
#3	84.50905	12.57243	222.6716	255.5267	77.32609	4.480019	1.736386
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	66.50877	86.05249	73.75250	-2.90852	7.449806	19.14479	5.618722
SDEV	1.89359	3.43424	1.45259	2.79179	1.659581	1.34736	1.241956
%RSD	2.847133	3.990862	1.969545	95.98667	22.27684	7.037712	22.10389
#1	68.67979	82.17029	73.65742	-4.22455	7.443588	19.76213	7.025460
#2	65.19804	88.69384	75.25030	.2980531	5.793343	20.07286	5.156745
#3	65.64851	87.29335	72.34979	-4.79905	9.112488	17.59937	4.673960
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2188.204	24.43314	107783.0
SDEV	15.497	1.22812	386.9
%RSD	.7082217	5.026456	.3589349
#1	2205.333	25.84441	107368.6
#2	2175.155	23.84801	108134.7
#3	2184.123	23.60700	107845.8
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403011-04 OPERATOR:
RUN TIME: 03/17/14 14:35:49
COMMENT: SDG:1403011 CLIENTID:GP-11-102-5-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.332568	58629.94	144.1449	.9150068	1385.425	-.648053	10.53715
SDEV	.779533	660.12	2.2996	.4916222	9.952	.337219	1.57441
%RSD	234.3978	1.125910	1.595343	53.72880	.7183198	52.03572	14.94148
#1	-.420264	58199.57	142.9282	1.351657	1382.381	-.870975	8.922735
#2	.4871038	59389.96	146.7972	.3825242	1396.543	-.260103	12.06824
#3	-1.06455	58300.28	142.7092	1.010839	1377.350	-.813081	10.62048
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	44.09375	20.09058	30448.15	1390.442	1635.591	247.6672	865.2457
SDEV	1.07060	.27785	375.72	36.528	26.683	2.7888	224.6357
%RSD	2.428000	1.382975	1.233980	2.627113	1.631370	1.126022	25.96207
#1	43.60945	20.34776	30187.92	1365.450	1615.873	247.3584	735.1801
#2	45.32092	20.12812	30878.90	1432.364	1665.953	250.5975	1124.632
#3	43.35088	19.79588	30277.64	1373.513	1624.946	245.0456	735.9247
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	22.71142	2.247094	64.56863	29.39309	21.76057	1.101826	3.874677
SDEV	.53834	5.494637	1.29821	.69209	.36506	1.378283	2.319067
%RSD	2.370349	244.5219	2.010591	2.354588	1.677604	125.0908	59.85189
#1	22.79736	.8258858	63.62688	28.70004	21.47867	2.490968	5.737165
#2	23.20162	8.312712	66.04954	30.08421	22.17293	1.079844	4.609693
#3	22.13528	-2.39731	64.02946	29.39504	21.63011	-.265334	1.277172
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	19.73752	25.71447	19.78642	-8.72832	6.009418	21.05572	9.088361
SDEV	.89285	2.57956	.74426	1.73418	1.926594	2.31044	2.405160
%RSD	4.523617	10.03155	3.761487	19.86846	32.05958	10.97296	26.46418
#1	20.75830	23.92638	20.25648	-7.17991	7.319047	20.29939	8.627495
#2	19.35241	28.67157	18.92832	-10.6022	6.911979	23.64953	11.69061
#3	19.10186	24.54546	20.17445	-8.40288	3.797228	19.21823	6.946981
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	563.4414	12.88971	107351.2
SDEV	6.7681	1.47135	625.8
%RSD	1.201208	11.41491	.5829623
#1	561.2792	12.40128	107910.3
#2	571.0264	14.54316	106675.2
#3	558.0186	11.72469	107468.2
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403011-06 OPERATOR:
RUN TIME: 03/17/14 14:43:02
COMMENT: SDG:1403011 CLIENTID:GP-11-13-2-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.356457	97777.25	391.6729	4.244443	5298.427	-2.90675	27.06371
SDEV	.794842	847.08	.9783	.564458	44.407	.24029	1.38733
%RSD	222.9838	.8663390	.2497850	13.29874	.8381095	8.266552	5.126173
#1	.5607214	98501.78	390.5897	4.706497	5329.738	-2.68204	28.64766
#2	-.785693	96845.91	392.4923	4.411527	5247.605	-2.87815	26.47912
#3	-.844401	97984.05	391.9368	3.615305	5317.936	-3.16006	26.06434
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	83.09509	39.13968	73355.99	4316.114	7781.993	1666.730	999.4378
SDEV	.38411	.58976	320.49	11.488	45.425	11.586	62.7590
%RSD	.4622560	1.506816	.4369005	.2661578	.5837136	.6951152	6.279430
#1	83.53457	39.80322	73725.62	4328.663	7832.604	1679.907	1049.602
#2	82.82352	38.67520	73186.80	4313.562	7768.619	1662.143	1019.648
#3	82.92718	38.94063	73155.55	4306.116	7744.757	1658.140	929.0637
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	61.70097	4.035885	151.7799	208.7675	218.7301	3.377296	5.960151
SDEV	1.09359	1.869179	1.8805	.4162	1.8510	2.632105	3.066979
%RSD	1.772397	46.31399	1.238989	.1993532	.8462493	77.93527	51.45808
#1	62.58094	2.505915	153.8913	209.2311	220.8090	1.517660	9.452414
#2	60.47665	6.119288	150.2849	208.6455	218.1209	6.389010	4.723372
#3	62.04531	3.482452	151.1634	208.4259	217.2605	2.225219	3.704668
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	27.82512	222.8777	216.6593	-6.80286	8.459632	20.03319	5.072609
SDEV	.80773	3.8613	.9036	2.20784	4.158777	1.39512	.723150
%RSD	2.902891	1.732485	.4170812	32.45463	49.16026	6.964032	14.25598
#1	27.78270	227.0340	217.7010	-8.72480	6.631098	18.44374	4.349810
#2	28.65323	222.1975	216.0856	-7.29248	13.21939	21.05504	5.796110
#3	27.03944	219.4017	216.1914	-4.39131	5.528412	20.60081	5.071907
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1347.755	19.27630	108292.3
SDEV	5.582	.91417	561.2
%RSD	.4141882	4.742454	.5182641
#1	1353.991	20.31303	107654.7
#2	1343.224	18.58591	108510.5
#3	1346.050	18.92995	108711.7
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403011-07 OPERATOR:
RUN TIME: 03/17/14 14:50:15
COMMENT: SDG:1403011 CLIENTID:GP-11-13-2-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.637162	180300.8	463.2806	3.846819	5737.252	-5.31419	52.10160
SDEV	.179257	1195.8	1.4926	.297073	60.200	.17705	.66648
%RSD	28.13370	.6632018	.3221707	7.722551	1.049286	3.331723	1.279183
#1	-.598686	181595.1	464.4956	4.186179	5806.713	-5.13277	52.86546
#2	-.480267	179237.2	461.6145	3.720474	5700.199	-5.48653	51.80085
#3	-.832533	180069.9	463.7315	3.633803	5704.843	-5.32329	51.63851
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	151.6966	70.27008	142809.9	6209.402	12770.66	1672.513	1296.153
SDEV	1.0361	.41487	423.2	13.525	47.08	13.459	70.451
%RSD	.6829858	.5903931	.2963694	.2178110	.3686923	.8047045	5.435427
#1	152.4302	70.02152	143076.8	6224.938	12817.50	1674.485	1324.967
#2	152.1482	70.03970	143031.0	6203.009	12771.15	1684.877	1347.630
#3	150.5114	70.74902	142321.9	6200.259	12723.33	1658.177	1215.861
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	101.8432	14.32739	257.7134	255.6578	49.57716	4.172728	4.855803
SDEV	.8019	2.88611	4.0629	.2900	.66129	2.140935	1.726543
%RSD	.7873868	20.14400	1.576536	.1134145	1.333869	51.30780	35.55627
#1	102.0389	12.13811	261.2181	255.9926	49.23490	6.576969	6.420199
#2	100.9616	13.24605	253.2601	255.4933	49.15713	2.472291	5.143860
#3	102.5292	17.59802	258.6619	255.4876	50.33943	3.468923	3.003349
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	37.11164	60.79153	43.97824	-7.43731	9.968930	23.37766	6.395209
SDEV	1.16853	2.27726	1.01525	1.69400	3.438826	2.68196	.922088
%RSD	3.148684	3.746015	2.308531	22.77710	34.49544	11.47234	14.41842
#1	38.40848	62.10052	42.81160	-7.27001	13.48997	20.29759	5.570548
#2	36.14056	58.16199	44.66132	-5.83316	6.618679	24.63871	6.224275
#3	36.78587	62.11209	44.46179	-9.20875	9.798145	25.19667	7.390804
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2628.306	28.17234	108181.7
SDEV	17.772	.30294	589.6
%RSD	.6761767	1.075309	.5450412
#1	2647.633	27.84714	107511.9
#2	2624.615	28.22333	108622.5
#3	2612.669	28.44655	108410.7
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

ANALYSIS REPORT QC STANDARD 03/17/14 03:04:37 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 03/17/14 14:57:27
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.809086	198.5859	193.4521	3.600660	4831.576	5.064418	19.62410
SDEV	.689396	4.1071	1.3229	1.055769	24.964	.256922	1.01411
%RSD	14.33529	2.068188	.6838572	29.32154	.5166904	5.073081	5.167681
#1	4.096575	197.1861	192.0642	Q2.388088	4814.227	4.800159	19.04617
#2	5.472771	195.3616	193.5931	4.097864	4860.188	5.079782	19.03107
#3	4.857912	203.2099	194.6988	4.316029	4820.314	5.313313	20.79507
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.415141	3.755930	171.0421	5135.426	4801.042	9.796856	5006.334
SDEV	.049825	.356987	5.3804	23.940	31.075	.119651	143.479
%RSD	.6719411	9.504614	3.145673	.4661653	.6472642	1.221324	2.865954
#1	7.373614	Q3.431948	166.9292	5131.810	4803.685	9.872842	5092.434
#2	7.470389	3.697204	169.0659	5113.501	4768.729	9.658933	5085.867
#3	7.401419	4.138638	177.1312	5160.968	4830.710	9.858793	4840.702
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.33600	30.39361	18.62485	28.27498	9.172518	8.273958	26.98399
SDEV	.22656	1.69819	.28777	.34505	1.756074	.431144	1.48877
%RSD	2.191929	5.587331	1.545059	1.220334	19.14495	5.210860	5.517237
#1	10.17455	28.53868	18.42805	28.18108	9.072516	8.352031	26.13557
#2	10.23846	31.87178	18.95512	27.98661	7.468582	7.809113	26.11338
#3	10.59499	30.77038	18.49139	28.65727	10.97646	8.660732	28.70303
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.32057	5.856299	10.82798	9.678472	7.572648	49.67104	48.62884
SDEV	1.77899	.160495	2.70660	4.939028	3.110070	.82488	.73071
%RSD	17.23735	2.740552	24.99631	51.03107	41.06978	1.660692	1.502620
#1	9.689685	5.937776	10.63738	8.274138	8.390811	49.34927	47.81568
#2	12.32902	5.959713	8.221725	15.16759	4.135284	49.05552	48.84045
#3	8.942993	5.671409	13.62484	5.593689	10.19185	50.60831	49.23039
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	48.11237	47.54343	112298.7
SDEV	.35448	1.07537	617.3
%RSD	.7367832	2.261865	.5496640
#1	47.85720	46.80154	112796.9
#2	48.51713	47.05203	112491.0
#3	47.96278	48.77670	111608.1
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

ANALYSIS REPORT QC STANDARD 03/17/14 03:11:51 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 03/17/14 15:04:41
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	99.71914	50411.25	978.5227	978.4108	49548.13	978.0931	965.7368
SDEV	.55665	75.54	3.0887	4.0026	98.68	1.4474	8.5837
%RSD	.5582144	.1498530	.3156505	.4090939	.1991557	.1479779	.8888189
#1	99.17206	50468.25	977.1803	977.7791	49502.75	979.2413	969.7583
#2	100.2849	50439.94	976.3323	982.6917	49661.34	976.4674	955.8806
#3	99.70047	50325.57	982.0555	974.7616	49480.31	978.5708	971.5713
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	953.7158	982.3411	24748.49	50218.84	49185.17	987.0493	51487.36
SDEV	7.7817	4.3902	123.53	185.12	159.03	12.1192	238.10
%RSD	.8159385	.4469073	.4991496	.3686258	.3233199	1.227822	.4624420
#1	947.5444	978.6179	24747.55	50402.62	49258.23	981.5394	51531.53
#2	951.1453	981.2234	24625.44	50032.41	49002.75	978.6641	51230.26
#3	962.4575	987.1821	24872.49	50221.47	49294.54	1000.945	51700.27
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	985.3586	987.8112	950.4343	1084.411	974.8149	981.8196	1010.379
SDEV	.9702	6.3991	4.5485	6.867	3.8213	6.8586	3.400
%RSD	.0984586	.6478043	.4785732	.6332681	.3920029	.6985630	.3364761
#1	984.8064	985.9797	953.3200	1092.065	979.2187	988.8726	1014.030
#2	984.7906	982.5275	952.7919	1078.788	972.8531	981.4129	1007.304
#3	986.4788	994.9263	945.1910	1082.382	972.3731	975.1734	1009.803
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	989.7687	965.8262	979.3027	984.9517	980.2559	991.2237	973.0062
SDEV	4.6138	5.5326	4.6439	4.0945	8.3245	7.0687	8.2468
%RSD	.4661446	.5728399	.4742072	.4157090	.8492120	.7131247	.8475615
#1	994.0819	969.9529	983.8448	989.5743	988.5221	998.3870	964.4015
#2	984.9040	959.5394	979.5001	983.4996	980.3710	984.2536	973.7758
#3	990.3203	967.9864	974.5633	981.7811	971.8744	991.0305	980.8412
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	974.5179	1004.393	110883.6
SDEV	5.5885	3.400	390.3
%RSD	.5734680	.3385045	.3519462
#1	976.6569	1003.164	110436.1
#2	978.7211	1001.778	111153.0
#3	968.1758	1008.236	111061.7
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

ANALYSIS REPORT QC STANDARD 03/17/14 03:19:05 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 03/17/14 15:11:55
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1366471	8.177601	.3248081	-.746072	-28.4933	.2691205	-.215043
SDEV	.5401573	10.55417	.1608268	.492518	17.5532	.3914894	1.140156
%RSD	395.2937	129.0620	49.51441	66.01482	61.60483	145.4699	530.1985
#1	.7319752	11.46506	.3651197	-.349869	-18.9410	.0396552	-1.02925
#2	-.322133	16.69680	.4616443	-1.29750	-17.7877	.7211560	1.088027
#3	.0000988	-3.62905	.1476603	-.590845	-48.7511	.0465503	-.703905
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.35066	-.478451	8.846408	17.77696	23.57993	.2308930	8.787990
SDEV	.31845	.538616	3.865829	8.80506	4.84539	.1453381	174.9243
%RSD	23.57711	112.5748	43.69942	49.53076	20.54880	62.94611	1990.493
#1	-.983811	.1327706	5.123887	19.94851	26.71693	.2395606	168.8986
#2	-1.51225	-.684500	12.84116	25.29306	26.02357	.3717033	35.37212
#3	-1.55590	-.883624	8.574182	8.089296	17.99929	.0814150	-177.907
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.725816	1.148579	.0309008	-.411018	.2209665	-1.27617	3.993711
SDEV	.178760	3.480017	.5903315	.441338	.6872958	2.05678	1.725116
%RSD	10.35801	302.9845	1910.409	107.3770	311.0407	161.1686	43.19582
#1	1.698587	2.566124	.5508078	.0715366	-.239184	-3.20444	3.798471
#2	1.916628	3.696099	.1527376	-.510395	-.108933	.8886574	5.808141
#3	1.562232	-2.81649	-.610843	-.794195	1.011016	-1.51271	2.374521
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.073090	-4.52626	2.590879	-4.50687	.3366603	-.991185	1.894194
SDEV	.875995	3.14928	1.688869	1.21629	3.675012	.287192	.927848
%RSD	1198.511	69.57797	65.18517	26.98751	1091.608	28.97460	48.98379
#1	.5139003	-2.07324	.6763212	-3.60518	-3.00448	-1.30569	2.405058
#2	.3468214	-8.07764	3.869296	-5.89023	4.272908	-.924997	2.454338
#3	-1.07999	-3.42792	3.227020	-4.02520	-.258447	-.742866	.8231852
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.4975942	.8249903	111483.7
SDEV	.3661869	.8889792	1036.2
%RSD	73.59148	107.7563	.9294844
#1	.6307094	1.213136	112421.1
#2	.7786040	1.453895	110371.0
#3	.0834691	-.192060	111659.1
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

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METHOD: P4S12014 SAMPLE NAME: 1403011-08 OPERATOR:
RUN TIME: 03/17/14 15:19:08
COMMENT: SDG:1403011 CLIENTID:GP-11-41-3-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.436367	53364.46	88.48786	1.248200	667.7150	-.239624	9.117598
SDEV	.265715	107.25	.42176	.107413	11.2764	.085508	.270826
%RSD	60.89270	.2009805	.4766287	8.605424	1.688810	35.68442	2.970367
#1	-.680449	53462.19	88.42922	1.314983	660.9958	-.338325	9.061477
#2	-.153321	53249.72	88.93587	1.124296	661.4157	-.187979	9.412087
#3	-.475330	53381.48	88.09849	1.305322	680.7337	-.192568	8.879229
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	42.60304	10.74595	20957.44	2684.357	3328.737	152.7112	741.1546
SDEV	1.08759	.29978	95.97	6.755	17.646	1.2037	75.8667
%RSD	2.552857	2.789695	.4579285	.2516367	.5300977	.7882512	10.23629
#1	43.83536	10.93016	20975.23	2677.942	3317.887	153.0769	653.5562
#2	42.19642	10.40004	21043.27	2691.407	3349.098	153.6897	784.1513
#3	41.77735	10.90765	20853.82	2683.722	3319.226	151.3670	785.7564
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	24.53226	2.359471	42.52414	44.56797	17.06833	.4062228	2.224103
SDEV	.60170	5.660311	.44906	.63540	1.30213	3.258034	1.418625
%RSD	2.452694	239.8975	1.056022	1.425677	7.628907	802.0312	63.78416
#1	23.90369	7.276269	42.90204	43.91935	16.33948	-2.46235	2.367966
#2	24.59020	-3.82826	42.64267	45.18926	16.29383	3.948411	3.565315
#3	25.10290	3.630405	42.02770	44.59531	18.57166	-.267392	.7390275
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	6.460191	23.39898	13.90762	-4.43711	2.824148	19.96695	3.655032
SDEV	1.845862	.92604	1.57814	1.27545	4.423078	1.33991	1.013914
%RSD	28.57287	3.957619	11.34730	28.74505	156.6164	6.710641	27.74023
#1	4.466740	22.46571	13.28083	-5.90979	-.741325	18.44448	3.917032
#2	6.803600	23.41359	12.73916	-3.71402	7.773772	20.96676	4.512231
#3	8.110231	24.31762	15.70286	-3.68752	1.439996	20.48963	2.535832
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1015.357	20.29565	108797.6
SDEV	2.675	.57845	199.2
%RSD	.2634148	2.850114	.1831246
#1	1016.594	20.70972	108602.7
#2	1012.288	20.54250	108789.1
#3	1017.188	19.63473	109000.9
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403011-09 OPERATOR:
RUN TIME: 03/17/14 15:26:21
COMMENT: SDG:1403011 CLIENTID:GP-11-41-3-0-D 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6056195	168592.4	448.7008	4.802581	5380.601	-5.58436	39.83332
SDEV	.6418127	385.5	2.0943	1.597485	25.154	.20001	.39745
%RSD	105.9762	.2286308	.4667493	33.26306	.4674973	3.581691	.9977811
#1	1.337179	168830.2	447.9466	6.636599	5403.975	-5.43275	40.25512
#2	.3425013	168147.7	451.0678	3.714562	5383.847	-5.50928	39.46580
#3	.1371784	168799.4	447.0881	4.056583	5353.981	-5.81105	39.77906
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	135.6776	68.72205	137102.8	5230.057	10425.89	944.2183	1395.544
SDEV	.3695	.55097	165.6	22.720	29.81	1.4896	323.448
%RSD	.2723702	.8017401	.1207748	.4344155	.2859058	.1577565	23.17720
#1	135.9953	68.09053	137286.2	5250.828	10457.60	942.7302	1753.411
#2	135.2721	68.97103	136964.5	5233.551	10421.61	944.2151	1124.051
#3	135.7655	69.10458	137057.5	5205.792	10398.45	945.7093	1309.171
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	83.00896	15.58080	238.2541	196.0362	53.27779	.0214609	3.019493
SDEV	.60552	4.26470	2.9027	.3472	.80219	2.967975	3.136768
%RSD	.7294592	27.37151	1.218327	.1771155	1.505679	13829.69	103.8839
#1	82.34436	19.67871	241.3726	196.3471	53.93721	1.355369	-.317337
#2	83.15316	11.16689	235.6308	196.1000	53.51144	2.088440	5.907943
#3	83.52936	15.89679	237.7589	195.6615	52.38470	-3.37943	3.467873
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	34.14137	65.37807	47.23655	-4.34667	2.202142	21.62910	6.315368
SDEV	4.03100	5.87895	2.56383	10.92439	3.722485	.35547	.485542
%RSD	11.80678	8.992235	5.427645	251.3276	169.0393	1.643469	7.688255
#1	29.51537	71.91056	44.96384	7.138702	-1.53207	21.24394	5.801767
#2	36.00818	60.51277	50.01586	-5.57196	5.912785	21.94454	6.766876
#3	36.90054	63.71088	46.72994	-14.6068	2.225716	21.69883	6.377461
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2205.851	25.85554	107755.8
SDEV	13.532	.90230	323.8
%RSD	.6134818	3.489786	.3004762
#1	2221.321	25.03178	107383.1
#2	2196.207	26.81988	107916.5
#3	2200.025	25.71495	107967.9
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

METHOD: P4S12014 SAMPLE NAME: 1403011-10 OPERATOR:
RUN TIME: 03/17/14 15:33:33
COMMENT: SDG:1403011 CLIENTID:GP-11-41-3-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6384142	156446.4	453.6415	3.659324	6973.131	-5.07049	38.00849
SDEV	.3377709	6.3	2.6457	.258990	23.447	.23228	1.10845
%RSD	52.90779	.0040567	.5832233	7.077543	.3362468	4.581024	2.916319
#1	.7556856	156445.2	455.1632	3.957040	7000.020	-5.11013	37.64852
#2	.2576377	156440.7	455.1747	3.534949	6956.954	-4.82094	39.25219
#3	.9019193	156453.2	450.5864	3.485981	6962.417	-5.28040	37.12477
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	129.5035	66.26753	125129.8	5152.092	10345.98	1083.003	1186.888
SDEV	.5262	.51497	254.9	12.509	29.15	3.152	177.277
%RSD	.4063030	.7771100	.2036789	.2427849	.2817584	.2910489	14.93629
#1	129.3460	65.69293	125049.5	5159.081	10337.77	1084.716	1387.900
#2	130.0905	66.68741	125415.1	5159.545	10378.36	1084.927	1052.873
#3	129.0741	66.42223	124924.8	5137.651	10321.82	1079.365	1119.892
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	78.77115	9.207848	216.5754	282.9523	72.63593	1.168820	5.593551
SDEV	.75026	3.519418	.7814	.8211	1.00005	1.542250	4.034082
%RSD	.9524536	38.22194	.3608169	.2901852	1.376800	131.9493	72.12022
#1	77.92191	12.10130	215.7033	283.5093	73.75928	-.318465	2.039298
#2	79.04748	10.23240	217.2121	283.3383	72.30595	1.064216	9.978220
#3	79.34405	5.289837	216.8107	282.0093	71.84257	2.760709	4.763135
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	32.96311	84.13430	66.89520	-.219363	1.861759	20.84052	6.111629
SDEV	1.65215	2.39818	.30619	1.867752	1.387583	.45050	.832322
%RSD	5.012108	2.850414	.4577147	851.4437	74.53075	2.161674	13.61867
#1	31.06327	86.85030	67.22340	-2.13033	.5859985	20.61433	6.453599
#2	33.76282	83.24401	66.84495	-.129702	1.660168	20.54793	5.162793
#3	34.06323	82.30859	66.61724	1.601944	3.339111	21.35930	6.718495
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2037.948	25.30410	108112.3
SDEV	16.382	.26585	387.4
%RSD	.8038456	1.050619	.3583506
#1	2056.688	25.00124	108245.5
#2	2030.806	25.41212	107675.8
#3	2026.349	25.49894	108415.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403011-11 OPERATOR:
RUN TIME: 03/17/14 15:40:46
COMMENT: SDG:1403011 CLIENTID:GP-11-28-2-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.01963	97325.15	704.8826	6.131340	11446.19	-1.88486	32.44843
SDEV	.19207	179.61	5.6829	.178630	37.53	.11783	.69955
%RSD	18.83738	.1845419	.8062200	2.913393	.3278484	6.251512	2.155887
#1	-1.22464	97201.56	709.8881	6.302027	11481.24	-1.75925	32.28875
#2	-.843851	97531.17	706.0547	5.945706	11406.60	-1.90237	33.21402
#3	-.990385	97242.70	698.7051	6.146286	11450.74	-1.99296	31.84253
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	112.5083	107.4483	78162.40	4796.843	10184.04	3768.287	1330.055
SDEV	.5348	.5085	199.31	12.978	13.21	22.265	110.993
%RSD	.4753814	.4732691	.2549896	.2705560	.1297388	.5908444	8.345003
#1	113.0718	106.8890	77977.27	4784.093	10175.38	3750.790	1445.801
#2	112.0077	107.5732	78373.36	4810.038	10199.25	3793.348	1224.521
#3	112.4452	107.8828	78136.57	4796.398	10177.49	3760.722	1319.844
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	69.64820	1.088053	148.2572	524.4703	239.6341	6.540421	6.897211
SDEV	1.22015	4.552701	.4194	.6133	1.1500	1.249719	3.408801
%RSD	1.751882	418.4264	.2828894	.1169295	.4799065	19.10762	49.42289
#1	70.89734	-4.11927	148.4814	524.6318	240.9051	5.362708	5.814014
#2	68.45926	4.316162	147.7734	524.9867	238.6654	6.407100	4.161625
#3	69.58800	3.067265	148.5169	523.7925	239.3318	7.851456	10.71599
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	61.74317	239.8369	239.5328	-9.73838	14.66751	22.00855	4.754983
SDEV	.87670	1.3908	2.3811	1.85715	2.79235	.49575	.968017
%RSD	1.419906	.5798835	.9940585	19.07042	19.03768	2.252539	20.35795
#1	62.31952	238.2383	242.2364	-7.80815	11.93815	21.46146	4.497004
#2	60.73426	240.5030	237.7479	-9.89438	14.54551	22.13618	5.825854
#3	62.17574	240.7693	238.6140	-11.5126	17.51886	22.42801	3.942090
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1473.522	19.34921	109140.5
SDEV	7.794	.36907	286.2
%RSD	.5289387	1.907393	.2621960
#1	1482.432	19.38809	109168.5
#2	1467.974	18.96224	108841.4
#3	1470.159	19.69729	109411.7
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403011-12 OPERATOR:
RUN TIME: 03/17/14 15:47:59
COMMENT: SDG:1403011 CLIENTID:GP-11-28-2-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.11432	144990.9	679.4021	6.686579	10149.39	-4.27536	44.49850
SDEV	.47124	744.8	3.6414	.139668	45.54	.17447	1.75773
%RSD	42.28948	.5136892	.5359644	2.088781	.4487056	4.080736	3.950100
#1	-1.26076	145842.9	683.5974	6.748846	10201.35	-4.09870	46.49533
#2	-1.49496	144666.9	677.0608	6.526607	10116.40	-4.27983	43.18524
#3	-.587247	144463.0	677.5481	6.784284	10130.41	-4.44755	43.81492
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	120.9092	86.29144	106654.2	6167.166	10512.05	3707.706	1191.634
SDEV	.5551	.29321	941.7	60.497	84.01	37.214	181.128
%RSD	.4590665	.3397903	.8829884	.9809454	.7991632	1.003693	15.19999
#1	121.1756	86.46081	107516.4	6234.272	10593.61	3738.507	1084.851
#2	120.2711	86.46064	105649.3	6116.809	10425.79	3666.356	1089.284
#3	121.2808	85.95287	106797.0	6150.416	10516.75	3718.255	1400.767
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	81.83491	6.692684	190.5301	240.6983	80.80708	3.780602	4.524330
SDEV	.80007	1.320366	.1907	2.7515	1.21514	.629561	6.072298
%RSD	.9776620	19.72850	.1000843	1.143112	1.503749	16.65240	134.2143
#1	82.73756	5.284119	190.6682	243.4778	81.97253	4.032298	10.61480
#2	81.21322	6.891668	190.3125	237.9758	80.90101	3.064132	-1.52963
#3	81.55396	7.902264	190.6096	240.6412	79.54771	4.245376	4.487817
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	39.47678	87.21004	77.61028	-8.32153	9.822481	18.56366	6.776552
SDEV	2.25537	.72749	2.17155	3.20865	1.692794	2.45081	.745053
%RSD	5.713153	.8341775	2.798024	38.55836	17.23387	13.20222	10.99457
#1	42.02058	86.68075	79.62183	-11.4794	11.77638	18.66557	7.192920
#2	37.72166	86.90977	77.90100	-8.42084	8.797901	16.06348	7.220351
#3	38.68809	88.03960	75.30801	-5.06438	8.893166	20.96193	5.916385
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1733.207	24.08939	108759.2
SDEV	5.720	.74970	1134.4
%RSD	.3300456	3.112171	1.043043
#1	1739.387	24.87711	107449.5
#2	1732.136	24.00644	109432.1
#3	1728.097	23.38460	109396.0
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031304-BLK1 OPERATOR:
RUN TIME: 03/17/14 15:55:11
COMMENT: SDG:1403025 CLIENTID:PBW01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.302554	-8.30352	-.000178	-1.04270	-55.8262	-.508895	-2.04102
SDEV	.118357	3.48840	.059643	.16621	11.2569	.131117	.79752
%RSD	39.11921	42.01109	33483.27	15.94078	20.16420	25.76501	39.07440
#1	-.322042	-11.0405	.0494243	-.910915	-52.3307	-.625852	-2.77041
#2	-.409958	-4.37562	-.066356	-1.22943	-68.4161	-.367155	-1.18947
#3	-.175663	-9.49439	.0163971	-.987747	-46.7316	-.533676	-2.16317
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000
LOW	-5.00000	-200.000	-200.000	-5.00000	-5000.00	-5.00000	-5.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.18384	-.721479	4.990059	5.210489	4.507881	.1226843	232.2503
SDEV	.45357	.108840	7.278816	1.698819	2.139613	.1215238	41.2714
%RSD	20.76941	15.08569	145.8663	32.60383	47.46384	99.05406	17.77021
#1	-2.49766	-.596444	5.327960	5.209695	6.856534	.0006711	190.5836
#2	-2.39006	-.794986	12.09404	6.909706	2.669614	.1236692	233.0527
#3	-1.66380	-.773007	-2.45182	3.512068	3.997494	.2437127	273.1146
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000
LOW	-5.00000	-5.00000	-100.000	-5000.00	-5000.00	-10.0000	-5000.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	6.974483	1.036399	-.199620	1.763620	.6610603	.1920348	-.298578
SDEV	.494425	2.699693	.208040	.175836	.7605057	3.120895	.761857
%RSD	7.089061	260.4878	104.2175	9.970196	115.0433	1625.172	255.1615
#1	6.443369	.5126399	-.406834	1.884401	.3432498	-3.39701	.0348472
#2	7.421410	-1.36304	.0092356	1.844572	.1110113	1.705353	-1.17031
#3	7.058670	3.959594	-.201263	1.561888	1.528920	2.267758	.2397243
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000
LOW	-40.0000	-10.0000	-20.0000	-20.0000	-3.00000	-5.00000	-10.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1414608	.3224871	.8299491	-5.32737	2.947494	.1278036	-.545547
SDEV	1.247110	1.729536	1.321912	.79924	4.287767	1.548042	.504964
%RSD	881.5942	536.3117	159.2762	15.00252	145.4716	1211.266	92.56113
#1	.5002412	2.053306	-.510631	-6.24573	-1.97489	.1678730	-.936801
#2	-1.24571	-1.40576	.8681125	-4.78915	4.947625	1.655422	.0244854
#3	1.169854	.3199186	2.132366	-4.94725	5.869744	-1.43988	-.724325
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	10.00000					100.0000	5.000000
LOW	-10.0000					-100.000	-5.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.082618	-.230142	111451.8
SDEV	.122567	.709111	255.9
%RSD	148.3536	308.1187	.2296189
#1	-.211950	-1.04116	111680.2
#2	.0318221	.0777859	111175.2
#3	-.067725	.2729504	111499.9
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	40.00000	200.0000	
LOW	-40.0000	-200.000	

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METHOD: P4S12014 SAMPLE NAME: 4031304-BS1 OPERATOR:
RUN TIME: 03/17/14 16:02:24
COMMENT: SDG:1403025 CLIENTID:MLCS01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	532.0366	2644.335	550.7296	543.9328	10985.09	544.2803	536.1805
SDEV	1.6462	98.239	20.6934	16.3618	340.14	18.3253	22.2131
%RSD	.3094062	3.715059	3.757446	3.008058	3.096363	3.366882	4.142847
#1	531.5059	2757.396	574.6090	562.8221	11377.59	565.3606	561.6034
#2	533.8826	2595.787	539.5286	534.8117	10801.12	535.3309	526.4150
#3	530.7213	2579.822	538.0512	534.1645	10776.56	532.1493	520.5230
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	3120.000	660.0000	660.0000	13200.00	660.0000	660.0000
LOW	440.0000	2080.000	440.0000	440.0000	8800.000	440.0000	440.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	526.9387	539.4066	5232.872	11330.91	5771.079	540.6922	11351.20
SDEV	17.1577	3.0345	178.845	315.62	199.451	19.6317	313.27
%RSD	3.256118	.5625646	3.417724	2.785481	3.456036	3.630850	2.759761
#1	545.7722	541.1769	5437.905	11692.80	5998.917	562.5994	11711.75
#2	522.8477	541.1401	5151.724	11187.31	5686.284	534.7847	11145.60
#3	512.1963	535.9026	5108.987	11112.62	5628.037	524.6926	11196.26
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	660.0000	6120.000	13200.00	7200.000	660.0000	13200.00
LOW	440.0000	440.0000	4080.000	8800.000	4800.000	440.0000	8800.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	545.5236	1095.475	533.2680	1085.055	1070.619	1028.627	1091.338
SDEV	17.3679	26.957	19.8444	36.861	26.288	31.540	37.074
%RSD	3.183704	2.460785	3.721290	3.397169	2.455366	3.066223	3.397079
#1	565.5579	1126.315	555.7617	1127.573	1100.893	1064.847	1134.018
#2	536.2899	1083.713	525.8065	1065.493	1057.386	1013.805	1067.118
#3	534.7231	1076.397	518.2358	1062.097	1053.577	1007.227	1072.878
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	1320.000	660.0000	1320.000	1320.000	1320.000	1320.000
LOW	440.0000	880.0000	440.0000	880.0000	880.0000	880.0000	880.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1049.682	1054.957	1078.526	1027.514	1029.182	1109.937	1094.526
SDEV	33.348	16.268	32.138	22.269	36.302	31.453	35.287
%RSD	3.177008	1.542078	2.979763	2.167277	3.527299	2.833724	3.223941
#1	1088.163	1071.580	1115.620	1052.489	1071.017	1145.398	1135.049
#2	1031.689	1054.224	1059.051	1020.329	1010.548	1099.000	1070.576
#3	1029.195	1039.068	1060.906	1009.725	1005.981	1085.412	1077.953
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH	1320.000						
LOW	880.0000						

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1081.987	1062.009	109389.9
SDEV	26.697	32.821	3177.4
%RSD	2.467368	3.090417	2.904692
#1	1112.761	1099.800	105721.5
#2	1065.040	1045.588	111165.0
#3	1068.159	1040.641	111283.1
ERRORS	NOCHECK	LC PASS	NOCHECK
HIGH		1320.000	
LOW		880.0000	

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METHOD: P4S12014 SAMPLE NAME: 4031304-BSD1 OPERATOR:
RUN TIME: 03/17/14 16:09:37
COMMENT: SDG:1403025 CLIENTID:MLCSD01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	537.3763	2614.592	548.0240	541.1432	10901.95	540.9162	530.1234
SDEV	.6739	5.118	3.2921	1.5219	35.27	.7248	3.3923
%RSD	.1254024	.1957414	.6007229	.2812299	.3234883	.1340023	.6399080
#1	536.6930	2608.777	551.5748	539.4063	10868.00	541.1940	533.9838
#2	538.0403	2616.589	547.4241	542.2427	10938.40	541.4611	527.6179
#3	537.3956	2618.411	545.0731	541.7806	10899.44	540.0936	528.7687
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	3120.000	660.0000	660.0000	13200.00	660.0000	660.0000
LOW	440.0000	2080.000	440.0000	440.0000	8800.000	440.0000	440.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	525.2988	543.6449	5165.774	11243.17	5737.100	538.1302	11338.42
SDEV	5.5066	1.5136	17.372	17.37	21.221	1.9673	136.93
%RSD	1.048270	.2784097	.3362841	.1544974	.3698981	.3655756	1.207646
#1	527.4666	541.9815	5181.925	11251.97	5752.992	539.2850	11491.45
#2	529.3915	544.0122	5167.999	11254.39	5745.308	539.2469	11227.47
#3	519.0383	544.9410	5147.396	11223.16	5713.001	535.8587	11296.35
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	660.0000	6120.000	13200.00	7200.000	660.0000	13200.00
LOW	440.0000	440.0000	4080.000	8800.000	4800.000	440.0000	8800.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	541.3289	1087.742	530.0159	1074.149	1064.327	1025.270	1085.855
SDEV	.6173	2.658	1.4818	5.723	2.570	5.801	5.244
%RSD	.1140341	.2443193	.2795805	.5328035	.2414316	.5657785	.4829196
#1	541.7314	1089.140	530.5074	1080.576	1063.836	1023.611	1091.729
#2	540.6182	1084.678	528.3508	1072.264	1062.038	1031.719	1081.644
#3	541.6371	1089.409	531.1896	1069.606	1067.106	1020.479	1084.193
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	1320.000	660.0000	1320.000	1320.000	1320.000	1320.000
LOW	440.0000	880.0000	440.0000	880.0000	880.0000	880.0000	880.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1044.135	1051.680	1070.728	1026.379	1024.715	1091.432	1086.095
SDEV	3.928	2.536	3.662	13.351	2.618	7.246	2.592
%RSD	.3761748	.2410959	.3420277	1.300786	.2554738	.6638748	.2386817
#1	1048.588	1048.785	1071.438	1025.873	1022.482	1089.962	1088.927
#2	1042.653	1052.749	1066.763	1039.977	1027.596	1099.300	1085.520
#3	1041.163	1053.506	1073.984	1013.289	1024.068	1085.034	1083.839
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH	1320.000						
LOW	880.0000						

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1071.755	1055.055	111304.0
SDEV	2.501	2.165	119.1
%RSD	.2333663	.2051996	.1069667
#1	1069.754	1052.717	111324.2
#2	1074.559	1055.456	111411.7
#3	1070.951	1056.992	111176.1
ERRORS	NOCHECK	LC PASS	NOCHECK
HIGH		1320.000	
LOW		880.0000	

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METHOD: P4S12014 SAMPLE NAME: 1403025-01 OPERATOR:
RUN TIME: 03/17/14 16:16:49
COMMENT: SDG:1403025 CLIENTID:MW-4 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0291927	19.71415	204.9708	-1.01285	55066.18	-.253342	8.561323
SDEV	.3377051	11.13633	5.8886	.88028	1803.65	.506342	2.649723
%RSD	1156.815	56.48901	2.872900	86.91129	3.275429	199.8648	30.94992
#1	.1463682	10.62675	202.3442	-.260416	54387.24	-.602600	7.435677
#2	.2927030	16.37863	200.8526	-.797221	53700.52	-.484788	6.660263
#3	-.351493	32.13708	211.7156	-1.98090	57110.77	.3273612	11.58803
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.53668	-.883050	7246.238	6200.759	13581.25	4617.315	47295.27
SDEV	.47396	.408916	249.449	151.077	392.16	142.367	1485.28
%RSD	30.84329	46.30721	3.442466	2.436435	2.887505	3.083320	3.140431
#1	-1.14019	-.728606	7114.958	6117.300	13392.70	4535.139	46667.10
#2	-2.06163	-1.34670	7089.843	6109.823	13318.98	4535.100	46227.30
#3	-1.40821	-.573850	7533.912	6375.155	14032.07	4781.706	48991.42
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.526920	-2.84299	.5555795	6.848331	.0831850	4.704888	2.764757
SDEV	.306097	1.15806	.2502339	.432419	1.319926	1.921863	2.458365
%RSD	6.761712	40.73387	45.04017	6.314220	1586.735	40.84821	88.91795
#1	4.654543	-2.64386	.2762919	6.729051	1.011063	4.635528	.5442348
#2	4.748555	-4.08770	.7593780	6.488071	-1.42789	2.818645	2.343509
#3	4.177662	-1.79741	.6310687	7.327869	.6663792	6.660492	5.406528
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.217910	-4.02640	2.134728	-4.18038	9.140751	-1.45594	2.828544
SDEV	1.262113	.94869	1.963285	2.50598	1.999723	1.63578	.327493
%RSD	56.90552	23.56166	91.96885	59.94629	21.87701	112.3524	11.57815
#1	1.829848	-4.78357	3.903872	-2.57389	8.234721	-.513729	3.173433
#2	3.628487	-4.33339	.0225215	-7.06793	7.754412	-3.34478	2.521784
#3	1.195394	-2.96223	2.477793	-2.89932	11.43312	-.509312	2.790414
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.101656	232.4116	108496.3
SDEV	.331369	8.1645	2394.3
%RSD	325.9717	3.512947	2.206784
#1	-.296805	228.8911	109752.7
#2	-.289113	226.5980	110001.0
#3	.2809506	241.7458	105735.4
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4031304-DUP1 OPERATOR:
RUN TIME: 03/17/14 16:24:02
COMMENT: SDG:1403025 CLIENTID:MW-4D 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6831884	7.219690	200.1988	-1.07723	53889.65	-1.03312	5.426924
SDEV	.5040315	4.383575	1.2015	.17631	246.13	.02039	.284638
%RSD	73.77635	60.71694	.6001303	16.36676	.4567328	1.973622	5.244922
#1	1.259028	9.023409	198.9319	-.953893	53617.26	-1.02526	5.687677
#2	.4684419	10.41364	201.3219	-1.27917	54096.07	-1.01783	5.469823
#3	.3220953	2.222019	200.3426	-.998627	53955.63	-1.05627	5.123272
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.01795	-.272140	7084.226	6077.492	13278.37	4527.683	46240.97
SDEV	.37747	.236140	19.134	26.454	57.27	22.568	370.05
%RSD	37.08109	86.77149	.2700964	.4352860	.4312735	.4984547	.8002666
#1	-1.40350	-.419206	7067.976	6072.946	13240.82	4529.088	46375.84
#2	-1.00122	.0002416	7105.315	6105.924	13344.29	4549.517	46524.67
#3	-.649127	-.397456	7079.387	6053.605	13250.01	4504.445	45822.40
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.074566	-.950331	.4433373	4.459655	-1.28031	4.860635	3.783219
SDEV	.203989	2.870064	.3411401	.110928	1.03809	1.980078	2.540991
%RSD	5.006398	302.0068	76.94822	2.487359	81.08144	40.73703	67.16479
#1	4.137833	-4.01513	.7581489	4.348875	-.362035	7.111646	6.017106
#2	4.239425	-.509960	.4909847	4.459362	-2.40669	3.388110	4.313683
#3	3.846439	1.674097	.0808783	4.570729	-1.07220	4.082150	1.018869
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4399814	-2.11912	-.861685	.5048154	7.035172	-1.05700	1.437164
SDEV	.6986855	.36605	1.426607	1.061573	3.139331	1.12319	.174565
%RSD	158.7989	17.27358	165.5601	210.2893	44.62338	106.2624	12.14648
#1	-.297933	-1.69679	.3041949	.0042397	10.65991	-2.03558	1.482087
#2	.5264968	-2.31530	-2.45247	-.213919	5.186315	-1.30483	1.584877
#3	1.091380	-2.34525	-.436781	1.724126	5.259287	.1694117	1.244528
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.056229	225.4251	110908.4
SDEV	.206921	1.1315	590.7
%RSD	367.9929	.5019402	.5326406
#1	.1649824	224.1266	110562.9
#2	-.088637	226.1997	110571.7
#3	-.245034	225.9490	111590.5
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 03/17/14 16:31:16
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	100.4506	50660.89	991.5216	1009.918	49644.57	977.7203	962.7350
SDEV	.7188	257.33	1.0818	4.290	174.09	.7984	2.9594
%RSD	.7155772	.5079451	.1091031	.4248028	.3506685	.0816558	.3073915
#1	100.6934	50948.09	991.4283	1010.797	49845.00	978.2399	960.1952
#2	99.64181	50451.29	990.4894	1005.257	49531.03	976.8011	962.0250
#3	101.0165	50583.30	992.6469	1013.701	49557.68	978.1201	965.9848
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	954.9429	988.8133	24743.81	50560.78	49133.54	986.2044	51535.16
SDEV	2.1682	3.2960	31.99	56.34	100.61	3.6587	98.60
%RSD	.2270499	.3333283	.1292751	.1114376	.2047609	.3709836	.1913323
#1	955.0887	985.7988	24729.13	50506.94	49061.47	982.5912	51422.53
#2	952.7056	988.3085	24721.78	50619.34	49090.68	986.1150	51577.02
#3	957.0346	992.3326	24780.50	50556.06	49248.48	989.9069	51605.93
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	987.6472	988.3721	954.2149	1085.647	978.5441	985.2150	1025.914
SDEV	4.0974	6.8367	7.9372	4.195	2.1205	2.3013	6.512
%RSD	.4148637	.6917105	.8318047	.3863678	.2166980	.2335802	.6347640
#1	987.9828	984.2868	961.4117	1087.686	978.0204	985.4883	1027.200
#2	983.3923	984.5647	945.7018	1080.823	976.7346	982.7893	1018.854
#3	991.5664	996.2648	955.5312	1088.433	980.8774	987.3674	1031.686
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	990.0707	969.9947	982.8126	988.9824	983.3341	991.8954	978.6088
SDEV	4.3297	4.8118	2.6378	10.7868	8.3851	2.7471	7.6885
%RSD	.4373084	.4960652	.2683977	1.090700	.8527183	.2769583	.7856566
#1	988.4741	964.8948	984.5736	980.3930	988.0320	990.0678	971.0579
#2	986.7661	970.6353	979.7798	1001.089	973.6533	995.0546	978.3407
#3	994.9720	974.4542	984.0843	985.4653	988.3170	990.5640	986.4279
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	976.7634	1005.224	111074.9
SDEV	8.0072	3.541	229.4
%RSD	.8197640	.3523056	.2065159
#1	984.5206	1002.294	110949.5
#2	977.2418	1004.219	110935.6
#3	968.5278	1009.159	111339.7
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

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METHOD: P4S12014 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 03/17/14 16:38:30
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1072840	16.42459	.3214694	-.605850	-50.7446	.3874857	.3320613
SDEV	.2656851	4.92185	.0308758	.398833	9.0773	.1971443	.4745916
%RSD	247.6464	29.96637	9.604573	65.83026	17.88825	50.87781	142.9229
#1	-.087992	19.57406	.2924346	-.229971	-41.1003	.4285985	.8219464
#2	.0000098	18.94683	.3180689	-.563348	-59.1218	.5608318	-.125594
#3	.4098343	10.75287	.3539046	-1.02423	-52.0116	.1730269	.2998311
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.78763	-.551818	10.38140	16.04446	21.14961	.3458871	71.53391
SDEV	.51407	.217728	10.16146	6.50150	3.83640	.1005616	98.76598
%RSD	28.75704	39.45654	97.88144	40.52176	18.13936	29.07353	138.0688
#1	-2.35084	-.485389	13.45798	20.99138	24.66910	.4394424	141.4772
#2	-1.66838	-.795022	18.64904	8.680657	17.06008	.3586761	-41.4484
#3	-1.34366	-.375041	-.962824	18.46136	21.71964	.2395428	114.5730
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5836344	-.448009	.5277317	-.527660	.1894953	-1.62973	-.034067
SDEV	.5342020	3.304441	.5148799	.390812	.8231456	.48345	2.620240
%RSD	91.53025	737.5837	97.56471	74.06517	434.3883	29.66429	7691.347
#1	.9778461	.9903834	.8912581	-.093931	.7373564	-1.44947	-.955355
#2	.7974051	-4.22786	-.061447	-.636619	.5882124	-2.17742	2.922389
#3	-.024348	1.893448	.7533845	-.852429	-.757083	-1.26232	-2.06924
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6645582	-2.05203	1.308422	-3.42315	-.734475	-.311922	2.067573
SDEV	1.799149	1.63930	.625554	7.23249	3.256717	1.790945	.490349
%RSD	270.7285	79.88686	47.80981	211.2817	443.4076	574.1637	23.71617
#1	-.387436	-1.77883	1.993372	-8.42120	2.031071	.5294620	2.297030
#2	2.741980	-.566495	1.164567	-6.71840	.0895647	-2.36863	2.401124
#3	-.360869	-3.81077	.7673260	4.870143	-4.32406	.9033980	1.504565
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.4591702	.9948428	112515.7
SDEV	.0453914	.3641414	84.6
%RSD	9.885529	36.60290	.0751524
#1	.4117922	1.403894	112519.3
#2	.4634462	.7060149	112598.4
#3	.5022724	.8746197	112429.4
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

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METHOD: P4S12014 SAMPLE NAME: 4031304-MS1 OPERATOR:
RUN TIME: 03/17/14 16:45:43
COMMENT: SDG:1403025 CLIENTID:MW-4S 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	528.2316	2618.168	737.9448	538.3575	63231.39	530.8018	529.9792
SDEV	1.3813	11.200	4.7562	3.2638	39.43	.8899	2.9839
%RSD	.2614892	.4277611	.6445238	.6062488	.0623606	.1676518	.5630262
#1	527.8793	2609.590	741.4052	542.0411	63246.74	531.7073	528.2563
#2	529.7548	2614.075	732.5212	535.8258	63186.59	529.9284	528.2567
#3	527.0605	2630.838	739.9080	537.2058	63260.84	530.7698	533.4248
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	515.8497	537.9734	11958.71	17092.41	18546.19	4917.200	56351.59
SDEV	3.4655	2.0990	25.18	62.39	40.34	17.369	219.05
%RSD	.6718035	.3901741	.2105292	.3649974	.2174846	.3532365	.3887173
#1	515.8954	536.2165	11936.10	17081.61	18530.10	4920.743	56099.18
#2	519.2922	540.2979	11954.18	17036.13	18516.37	4898.333	56463.68
#3	512.3616	537.4059	11985.84	17159.49	18592.08	4932.525	56491.90
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	537.6118	1067.986	522.8646	1057.626	1046.249	1025.173	1076.253
SDEV	.7803	5.543	4.2822	2.471	6.223	5.275	4.918
%RSD	.1451488	.5189972	.8189933	.2336458	.5947841	.5145916	.4569558
#1	537.9417	1062.962	527.6773	1055.394	1048.316	1029.129	1075.438
#2	538.1729	1067.065	519.4755	1060.281	1039.256	1019.183	1071.793
#3	536.7206	1073.932	521.4410	1057.203	1051.176	1027.206	1081.527
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1039.336	1034.369	1052.180	1023.673	1025.922	1082.410	1079.479
SDEV	2.780	13.383	5.917	6.995	5.791	3.795	4.152
%RSD	.2674525	1.293862	.5623952	.6833067	.5644807	.3505982	.3846227
#1	1037.483	1047.162	1048.891	1031.676	1027.858	1078.238	1084.180
#2	1037.991	1020.465	1048.637	1018.729	1019.411	1083.335	1076.313
#3	1042.532	1035.481	1059.011	1020.614	1030.497	1085.657	1077.946
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1064.156	1266.047	110118.2
SDEV	5.845	3.672	597.2
%RSD	.5493004	.2900018	.5422988
#1	1066.738	1261.906	110134.7
#2	1068.266	1267.332	110707.0
#3	1057.464	1268.904	109513.0
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4031304-MSD1 OPERATOR:
RUN TIME: 03/17/14 16:52:56
COMMENT: SDG:1403025 CLIENTID:MW-4SD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	546.7943	2668.436	744.9420	554.2178	63766.35	545.9023	545.8116
SDEV	1.0742	49.880	7.8284	8.0086	1032.54	9.2564	13.5570
%RSD	.1964483	1.869244	1.050868	1.445033	1.619252	1.695621	2.483829
#1	547.9660	2660.804	747.5811	552.6260	63693.25	546.7622	545.4883
#2	545.8561	2721.692	751.1098	562.9028	64833.49	554.6989	559.5274
#3	546.5606	2622.812	736.1352	547.1246	62772.30	536.2460	532.4191
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	531.1547	556.5455	12116.77	17358.10	18782.63	4951.292	56899.43
SDEV	7.6519	1.4606	189.17	262.78	282.50	70.352	1130.50
%RSD	1.440620	.2624373	1.561232	1.513871	1.504026	1.420889	1.986844
#1	525.4634	556.7574	12082.45	17405.03	18746.43	4923.173	56917.98
#2	539.8534	557.8885	12320.75	17594.25	19081.49	5031.355	58020.55
#3	528.1472	554.9905	11947.10	17075.01	18519.99	4899.348	55759.77
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	550.8341	1096.907	538.1494	1090.597	1080.543	1053.405	1101.952
SDEV	8.2089	21.450	5.8602	21.134	15.637	19.433	13.295
%RSD	1.490268	1.955491	1.088962	1.937863	1.447140	1.844749	1.206473
#1	549.9512	1087.467	535.0208	1095.000	1084.812	1058.881	1105.691
#2	559.4487	1121.458	544.9100	1109.183	1093.602	1069.513	1112.977
#3	543.1023	1081.796	534.5174	1067.608	1063.214	1031.822	1087.188
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1064.488	1056.054	1092.768	1048.887	1055.661	1110.967	1100.121
SDEV	18.086	23.049	11.943	25.405	16.827	21.495	9.376
%RSD	1.699025	2.182556	1.092926	2.422075	1.593978	1.934797	.8522629
#1	1068.852	1062.971	1095.716	1061.136	1057.755	1114.667	1101.187
#2	1079.992	1074.852	1102.962	1065.847	1071.343	1130.371	1108.919
#3	1044.619	1030.338	1079.628	1019.678	1037.885	1087.862	1090.258
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1090.847	1297.171	110891.3
SDEV	14.555	21.463	1817.3
%RSD	1.334284	1.654634	1.638812
#1	1088.642	1297.088	110643.0
#2	1106.379	1318.676	109210.9
#3	1077.521	1275.749	112819.9
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: SDI1403025-01 OPERATOR:
RUN TIME: 03/17/14 17:00:09
COMMENT: SDG:1403025 CLIENTID:MW-4L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0976619	.5653496	40.22807	-.997688	10750.37	.0827222	2.051671
SDEV	.6640821	4.388416	.21534	.383766	87.20	.1130693	.865358
%RSD	679.9807	776.2305	.5352877	38.46553	.8111664	136.6856	42.17818
#1	-.146419	-.898922	40.16206	-.568910	10760.89	.0119775	3.015795
#2	.8492447	-2.90372	40.46868	-1.30897	10831.84	.2131264	1.796974
#3	-.409840	5.498691	40.05345	-1.11518	10658.39	.0230626	1.342247
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.01361	-.993901	1426.927	1239.316	2691.683	910.2632	9206.778
SDEV	.27625	.267735	11.528	6.586	13.285	8.8526	88.242
%RSD	13.71917	26.93776	.8079076	.5313898	.4935548	.9725301	.9584411
#1	-1.69737	-.839137	1440.029	1246.090	2706.955	920.4726	9268.228
#2	-2.20791	-1.30305	1422.418	1238.921	2685.299	905.6003	9105.665
#3	-2.13554	-.839511	1418.335	1232.936	2682.796	904.7169	9246.442
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.187783	.9295430	-.329030	.9041194	-.125447	.1157445	.2095317
SDEV	.243172	2.875855	.380655	.2090107	1.106782	1.378024	1.899128
%RSD	20.47277	309.3838	115.6901	23.11760	882.2727	1190.575	906.3676
#1	1.466422	1.092281	.0408539	1.084404	.0909606	.7344426	-.872332
#2	1.018414	-2.02423	-.308332	.9529318	.8571489	-1.46320	-.901464
#3	1.078514	3.720574	-.719612	.6750220	-1.32445	1.075986	2.402391
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2947216	-3.76385	1.690878	-1.89581	1.119906	-1.33713	1.713229
SDEV	.6119339	1.31893	2.317661	1.80890	2.746538	1.94858	.085756
%RSD	207.6311	35.04196	137.0685	95.41542	245.2471	145.7283	5.005489
#1	.0250579	-3.98294	2.124709	-3.87832	3.037260	-2.38545	1.744632
#2	.9951720	-4.95951	3.760969	-.335051	-2.02653	-2.53714	1.778857
#3	-.136065	-2.34909	-.813043	-1.47406	2.348988	.9111900	1.616199
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.010042	46.82356	111544.3
SDEV	.028172	.94492	652.7
%RSD	280.5421	2.018035	.5851884
#1	.0163273	47.91265	110805.0
#2	-.006729	46.22179	111786.8
#3	-.039725	46.33624	112041.1
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4031304-PS1 OPERATOR:
RUN TIME: 03/17/14 17:07:22
COMMENT: SDG:1403025 CLIENTID:MW-4A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	111.3305	4463.513	4667.643	113.5744	52747.19	108.4841	438.6803
SDEV	.5689	120.908	148.581	2.7850	1355.51	3.4345	13.6373
%RSD	.5109911	2.708814	3.183214	2.452107	2.569829	3.165920	3.108712
#1	110.7669	4330.937	4498.067	110.4784	51246.21	104.6460	423.3021
#2	111.9046	4567.702	4774.999	115.8753	53882.02	111.2678	449.3034
#3	111.3201	4491.900	4729.863	114.3697	53113.34	109.5385	443.4355
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	214.2041	111.2542	11373.80	5945.868	12897.82	4624.052	45104.18
SDEV	5.0193	.9326	295.25	121.955	340.64	123.432	1085.19
%RSD	2.343222	.8382341	2.595880	2.051095	2.641046	2.669345	2.405970
#1	208.8633	110.1792	11053.36	5806.237	12524.38	4493.082	43876.02
#2	218.8239	111.7383	11634.83	6031.514	13191.50	4738.226	45933.58
#3	214.9253	111.8452	11433.21	5999.852	12977.58	4640.849	45502.94
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	224.1595	661.9587	433.0183	660.1113	213.9765	210.0527	669.6038
SDEV	6.0323	18.2782	14.0458	15.4971	2.5049	3.7652	18.1862
%RSD	2.691055	2.761228	3.243697	2.347657	1.170625	1.792501	2.715967
#1	217.7295	641.5825	417.3395	642.5296	211.7733	209.9386	648.8178
#2	229.6938	676.9111	444.4518	671.7873	216.7010	213.8737	682.5839
#3	225.0553	667.3827	437.2634	666.0171	213.4551	206.3459	677.4098
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	215.9616	210.5577	215.6832	204.3051	212.9221	1102.783	1105.526
SDEV	6.3583	3.5616	2.0500	1.5529	5.4600	27.510	28.244
%RSD	2.944188	1.691528	.9504464	.7600888	2.564335	2.494597	2.554839
#1	208.7391	206.9388	214.1869	202.5828	213.6109	1071.378	1074.848
#2	220.7153	214.0591	218.0197	205.5983	218.0051	1122.616	1130.451
#3	218.4303	210.6752	214.8428	204.7343	207.1503	1114.357	1111.278
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1094.264	1294.505	111118.6
SDEV	28.201	29.477	1670.1
%RSD	2.577120	2.277119	1.503011
#1	1064.678	1261.871	112941.5
#2	1120.836	1319.200	109662.1
#3	1097.279	1302.444	110752.1
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403025-02 OPERATOR:
RUN TIME: 03/17/14 17:14:36
COMMENT: SDG:1403025 CLIENTID:MW-2 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.214758	23.09893	26.35089	-.524161	2213.620	-.518520	21.84117
SDEV	.643084	5.45358	.21949	.226580	13.536	.111394	.16125
%RSD	299.4455	23.60968	.8329524	43.22711	.6114966	21.48298	.7382619
#1	-.556392	16.82593	26.59415	-.354419	2228.857	-.576430	21.70013
#2	.5270414	26.71360	26.16765	-.781453	2209.016	-.390099	21.80644
#3	-.614924	25.75726	26.29087	-.436610	2202.986	-.589030	22.01696
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.11336	.6551919	28.13373	1178.394	947.9305	47.46815	3417.944
SDEV	1.02152	.8407429	13.07497	8.203	5.0740	.21508	72.003
%RSD	91.75104	128.3201	46.47436	.6961127	.5352698	.4531016	2.106609
#1	-1.63086	-.154509	21.83745	1171.206	946.1232	47.34233	3335.035
#2	.0633480	1.523871	43.16558	1176.646	944.0075	47.71650	3464.780
#3	-1.77257	.5962136	19.39816	1187.330	953.6606	47.34563	3454.018
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.050716	.9662466	.1259937	5.875695	.4954768	.1501028	4.439266
SDEV	.419096	1.989913	.1750289	.364997	2.017179	1.700335	1.401914
%RSD	13.73763	205.9426	138.9187	6.211979	407.1188	1132.781	31.57986
#1	2.993155	2.100888	.1455658	5.568050	-.082392	-1.81065	4.220555
#2	3.495618	-1.33145	.2904139	6.278995	2.738525	1.218301	5.937681
#3	2.663376	2.129300	-.057998	5.780040	-1.16970	1.042663	3.159561
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.039809	-3.50647	2.493294	-6.83039	3.635007	.5412908	1.664964
SDEV	2.115443	4.15008	1.042850	5.47459	.746973	1.208746	.529866
%RSD	5313.962	118.3550	41.82619	80.15054	20.54942	223.3081	31.82445
#1	-1.45256	-5.46355	2.603995	-12.8173	3.684317	.3472334	1.590575
#2	-1.05918	1.260283	3.476377	-2.07946	2.864601	-.558687	2.228094
#3	2.392312	-6.31614	1.399509	-5.59439	4.356104	1.835326	1.176224
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.0487257	5.649069	111989.2
SDEV	.2379354	.222452	430.0
%RSD	488.3157	3.937858	.3839562
#1	-.225945	5.431634	112251.4
#2	.1805726	5.876220	112223.3
#3	.1915499	5.639354	111493.0
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403025-03 OPERATOR:
RUN TIME: 03/17/14 17:21:48
COMMENT: SDG:1403025 CLIENTID:MW-3 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4586541	33.25865	117.9363	-.799417	24613.69	-2.20559	33.36747
SDEV	.4165056	3.40261	.9737	.149374	53.30	.14738	.86653
%RSD	90.81039	10.23075	.8255769	18.68532	.2165489	6.682137	2.596922
#1	.2634475	34.83762	119.0495	-.947036	24572.63	-2.10859	34.34407
#2	.9369118	29.35342	117.5157	-.802867	24673.92	-2.13300	33.06773
#3	.1756031	35.58492	117.2437	-.648349	24594.51	-2.37519	32.69060
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.26890	-.478144	24293.65	5686.100	11948.41	1959.040	52499.49
SDEV	.40044	.077542	59.00	11.392	25.07	8.661	67.40
%RSD	17.64896	16.21732	.2428601	.2003523	.2097970	.4421037	.1283804
#1	-2.31787	-.551786	24351.10	5694.987	11971.75	1956.014	52437.54
#2	-2.64261	-.485430	24233.21	5673.257	11921.92	1952.298	52571.26
#3	-1.84623	-.397216	24296.65	5690.056	11951.56	1968.808	52489.68
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.853751	-2.88316	.6559548	7.610690	-5.58392	1.043832	4.367561
SDEV	.300502	.85360	.1320995	.180999	.89161	.596419	2.413022
%RSD	16.21046	29.60650	20.13851	2.378226	15.96746	57.13750	55.24873
#1	2.089610	-1.90763	.5909777	7.814508	-6.60594	1.027687	6.943204
#2	1.515415	-3.24887	.8079581	7.468726	-4.96529	1.648159	2.159291
#3	1.956228	-3.49298	.5689287	7.548836	-5.18054	.4556486	4.000189
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.25135	-8.57212	-4.09223	-3.65465	3.389443	.3880448	.1343770
SDEV	1.72306	.85941	1.15854	4.49153	2.617139	.7543877	.2731401
%RSD	137.6957	10.02567	28.31071	122.8990	77.21441	194.4074	203.2641
#1	-1.40380	-9.01192	-5.40492	1.390232	.8465767	.4521989	.4245824
#2	.5428642	-7.58182	-3.65916	-7.21906	6.075015	1.108307	.0962374
#3	-2.89312	-9.12262	-3.21261	-5.13513	3.246738	-.396371	-.117689
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.114962	240.2293	111433.4
SDEV	.099957	.2348	639.2
%RSD	86.94848	.0977280	.5736116
#1	-.218058	240.0061	110726.6
#2	-.108356	240.2076	111602.6
#3	-.018471	240.4742	111970.9
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403025-04 OPERATOR:
RUN TIME: 03/17/14 17:29:01
COMMENT: SDG:1403025 CLIENTID:MW-5 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2439973	29.66725	31.92669	-.845202	2002.243	-.354577	-1.50300
SDEV	.4814237	5.66013	.15966	.986514	15.114	.254871	1.20526
%RSD	197.3070	19.07872	.5000680	116.7193	.7548633	71.88027	80.19043
#1	.7905725	35.40878	32.10801	-.154392	2013.514	-.064164	-.167912
#2	.0585188	29.50078	31.86488	-.406200	2008.147	-.541067	-1.83023
#3	-.117099	24.09219	31.80719	-1.97501	1985.068	-.458499	-2.51085
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.64191	-.699225	42.97407	2132.131	903.2004	2.688755	2822.736
SDEV	.53083	.256098	5.13907	14.321	8.2410	.139708	311.777
%RSD	32.33027	36.62598	11.95854	.6716665	.9124209	5.196000	11.04521
#1	-1.44569	-.529816	42.04109	2147.164	912.3611	2.832307	3182.416
#2	-1.23712	-.574021	38.36541	2130.580	896.3897	2.680719	2629.564
#3	-2.24292	-.993838	48.51572	2118.649	900.8503	2.553238	2656.228
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.014326	1.557937	.1518683	4.006316	.1345833	-.398785	3.560332
SDEV	.540210	1.953022	.2995420	.306022	.8093360	2.398935	1.509498
%RSD	13.45705	125.3595	197.2380	7.638494	601.3642	601.5608	42.39768
#1	4.292588	3.723402	.3616377	4.029338	.1258735	-1.79978	4.944800
#2	4.358676	-.070108	.2851494	4.300177	.9482391	2.371205	3.785171
#3	3.391713	1.020518	-.191182	3.689433	-.670363	-1.76778	1.951026
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1868525	-2.44214	1.420866	-5.88274	2.338976	-.281477	.6760290
SDEV	1.614656	3.06112	.688299	5.05858	2.846975	.607527	.7208113
%RSD	864.1340	125.3457	48.44221	85.99010	121.7189	215.8355	106.6243
#1	1.192028	-.923767	.6497583	-11.6710	3.128328	.3867938	1.499263
#2	1.044166	-.437027	1.639687	-2.30959	4.707985	-.800410	.3706354
#3	-1.67564	-5.96563	1.973154	-3.66762	-.819385	-.430815	.1581887
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.158322	9.030524	112308.2
SDEV	.130328	1.014515	759.2
%RSD	82.31853	11.23429	.6759963
#1	-.054025	10.04634	111449.9
#2	-.116518	9.027919	112582.8
#3	-.304423	8.017315	112891.9
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403025-05 OPERATOR:
RUN TIME: 03/17/14 17:36:14
COMMENT: SDG:1403025 CLIENTID:MW-7 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.234218	45.38205	164.4573	.0311483	7715.506	-.149777	-1.04498
SDEV	.482060	2.93540	.5766	.5003920	14.366	.060581	.13038
%RSD	205.8170	6.468191	.3505864	1606.484	.1861971	40.44746	12.47643
#1	.3221603	46.73895	164.4736	-.482435	7717.163	-.087693	-1.01659
#2	-.527054	47.39352	165.0256	.0586670	7700.383	-.208734	-.931143
#3	-.497760	42.01368	163.8728	.5172130	7728.972	-.152904	-1.18722
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.03871	-.213593	73.04446	1184.976	2833.363	893.9592	2274.385
SDEV	.28907	.140247	3.75988	6.319	10.080	2.2049	125.177
%RSD	14.17918	65.66064	5.147388	.5332687	.3557586	.2466434	5.503777
#1	-1.73812	-.132656	69.29043	1192.225	2830.182	891.4536	2392.907
#2	-2.06333	-.132588	76.81016	1182.068	2844.650	895.6032	2143.474
#3	-2.31469	-.375536	73.03279	1180.634	2825.258	894.8208	2286.774
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.457737	-2.39575	-.251833	5.815779	1.027599	-.799627	1.911560
SDEV	.248267	3.32176	.069068	.036961	.891285	1.588859	1.228953
%RSD	17.03096	138.6521	27.42613	.6355305	86.73468	198.7001	64.29055
#1	1.258684	-.362072	-.320439	5.857464	.0280172	.9103784	2.908926
#2	1.378603	-6.22901	-.182311	5.787006	1.315221	-2.23029	2.287104
#3	1.735925	-.596177	-.252750	5.802867	1.739558	-1.07897	.5386515
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1326170	-2.05541	2.566640	-5.80630	1.699848	-1.08437	.0151445
SDEV	1.863166	3.76734	.554218	4.05287	1.214688	.55827	.6409131
%RSD	1404.922	183.2891	21.59314	69.80125	71.45862	51.48355	4231.998
#1	-1.97309	-6.33879	3.206489	-1.18941	1.958589	-1.65213	.6892490
#2	.8035399	-.571227	2.256883	-7.45219	.3766365	-1.06488	-.586402
#3	1.567405	.7437928	2.236549	-8.77730	2.764318	-.536096	-.057414
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.048315	4.709290	112346.2
SDEV	.125619	.508303	431.4
%RSD	259.9985	10.79363	.3839847
#1	.0853132	4.510552	111986.5
#2	-.066265	5.286936	112227.7
#3	-.163994	4.330380	112824.5
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403025-06 OPERATOR:
RUN TIME: 03/17/14 17:43:27
COMMENT: SDG:1403025 CLIENTID:MW-10 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.029240	1.472017	76.46500	.4311493	56306.98	-.934763	-2.32592
SDEV	.332619	10.60483	1.40423	.1111561	879.94	.410104	2.11314
%RSD	1137.540	720.4284	1.836434	25.78135	1.562759	43.87252	90.85194
#1	-.263522	7.353263	76.82040	.5484391	56912.01	-.883566	-1.94714
#2	-.175670	-10.7703	74.91722	.4176488	55297.53	-1.36806	-4.60284
#3	.3514712	7.833044	77.65739	.3273601	56711.39	-.552661	-.427782
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.19262	-.765676	185.6521	7214.195	17119.49	674.8112	40568.58
SDEV	.30867	.193005	10.8638	128.754	277.23	8.4420	608.59
%RSD	14.07780	25.20716	5.851686	1.784735	1.619398	1.251015	1.500157
#1	-2.13540	-.817138	182.3466	7264.293	17282.48	678.6247	40655.93
#2	-2.52590	-.552155	176.8250	7067.922	16799.39	665.1353	39921.04
#3	-1.91656	-.927733	197.7847	7310.370	17276.60	680.6737	41128.78
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.434926	-2.34126	-.245944	11.21394	1.748892	2.211103	4.210309
SDEV	.306846	1.19892	.217993	.31292	.830830	1.551190	2.431804
%RSD	5.645812	51.20828	88.63506	2.790445	47.50605	70.15457	57.75832
#1	5.770018	-3.63940	-.084233	11.26867	2.219230	3.972179	1.409069
#2	5.167684	-2.10880	-.159743	10.87727	.7895932	1.047456	5.779633
#3	5.367076	-1.27560	-.493857	11.49588	2.237854	1.613676	5.442225
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.121484	-.652066	2.947411	-6.24510	6.432758	-.821624	-.212182
SDEV	.798818	1.115155	.997065	2.82114	2.375104	.436966	.891731
%RSD	71.22863	171.0187	33.82851	45.17368	36.92202	53.18325	420.2669
#1	1.271575	.6184880	3.018238	-5.96186	8.931644	-.956069	-.011202
#2	.2582673	-1.46856	1.916820	-9.19717	6.161985	-1.17557	.5619076
#3	1.834611	-1.10612	3.907173	-3.57626	4.204645	-.333233	-1.18725
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.248648	3.067925	112061.2
SDEV	.147542	.118389	1649.5
%RSD	59.33786	3.858934	1.471950
#1	-.379212	2.967321	111388.3
#2	-.278148	3.038071	113940.8
#3	-.088584	3.198384	110854.6
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 03/17/14 17:50:39
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.189776	194.1410	192.5498	4.869476	4767.819	4.624683	17.47748
SDEV	.746741	4.5286	2.2641	.303930	59.696	.488197	1.16660
%RSD	14.38870	2.332633	1.175839	6.241533	1.252054	10.55634	6.674882
#1	5.941340	198.0495	194.5467	4.665043	4823.491	5.088058	18.80988
#2	5.180034	189.1783	190.0901	5.218733	4704.783	4.114968	16.63958
#3	4.447954	195.1951	193.0127	4.724653	4775.184	4.671023	16.98297
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.135643	4.499344	170.4141	5073.049	4755.831	9.746318	4829.491
SDEV	.460425	.197933	1.8162	50.337	68.815	.196494	48.873
%RSD	6.452465	4.399161	1.065782	.9922521	1.446962	2.016083	1.011968
#1	7.460721	4.602465	169.3360	5113.016	4816.174	9.972458	4875.387
#2	7.337430	4.624424	169.3952	5016.517	4680.887	9.649232	4834.980
#3	Q6.608777	4.271142	172.5110	5089.616	4770.432	9.617265	4778.105
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.69293	30.44851	18.52207	28.37095	9.427137	9.044386	32.00102
SDEV	.71609	1.93124	.12633	.27640	.712020	.564781	2.33991
%RSD	6.696820	6.342630	.6820436	.9742227	7.552874	6.244552	7.311981
#1	9.882518	29.77027	18.65721	28.65435	10.14360	8.646248	34.18730
#2	11.24029	28.94788	18.40694	28.10213	9.418173	8.796138	32.28276
#3	10.95597	32.62737	18.50205	28.35637	8.719643	9.690772	29.53299
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.736324	5.020268	11.62711	7.069417	10.03028	48.82833	48.38879
SDEV	1.541833	1.356550	.55133	3.134031	2.00934	1.63489	.66263
%RSD	17.64853	27.02147	4.741769	44.33223	20.03274	3.348245	1.369384
#1	7.277969	5.899495	12.26231	10.50316	7.719078	48.05046	47.63929
#2	8.581109	5.703353	11.27264	4.362997	11.00928	47.72761	48.63026
#3	10.34989	3.457958	11.34638	6.342095	11.36250	50.70691	48.89681
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	47.87532	47.61465	114666.0
SDEV	.44336	.82738	1162.0
%RSD	.9260716	1.737653	1.013378
#1	48.35943	48.44544	113451.4
#2	47.48905	46.79073	115767.1
#3	47.77748	47.60780	114779.5
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

ANALYSIS REPORT QC STANDARD 03/17/14 06:05:03 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 03/17/14 17:57:53
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	100.6038	50918.31	988.8204	975.6154	50027.15	986.0794	977.4088
SDEV	.2618	663.62	5.4703	16.6302	640.55	9.7871	11.0280
%RSD	.2602542	1.303295	.5532178	1.704586	1.280395	.9925310	1.128289
#1	100.5186	50488.96	983.6203	965.4304	49649.68	981.1273	977.8089
#2	100.8976	50583.32	988.3149	966.6095	49665.04	979.7581	966.1862
#3	100.3952	51682.65	994.5259	994.8062	50766.73	997.3530	988.2313
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	978.2740	987.0188	24938.84	50289.07	49622.83	1000.266	51364.99
SDEV	12.0891	1.0864	249.48	383.13	493.82	8.674	347.73
%RSD	1.235754	.1100722	1.000359	.7618514	.9951392	.8671927	.6769767
#1	968.7643	986.9887	24828.81	50188.06	49372.33	997.6428	51292.33
#2	974.1792	988.1200	24763.28	49966.58	49304.46	993.2069	51059.33
#3	991.8787	985.9478	25224.41	50712.59	50191.69	1009.950	51743.31
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	994.1902	992.0570	972.4286	1103.323	983.1464	987.4406	1030.072
SDEV	9.6642	13.6766	19.9935	8.040	10.0997	10.5542	10.102
%RSD	.9720700	1.378605	2.056042	.7286651	1.027284	1.068842	.9807156
#1	989.5458	983.7659	956.2141	1097.778	977.8351	982.0911	1022.151
#2	987.7250	984.5624	966.3035	1099.647	976.8104	980.6323	1026.616
#3	1005.300	1007.843	994.7682	1112.543	994.7935	999.5984	1041.448
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	992.1082	980.2919	984.5716	987.1506	987.5853	999.0076	985.4338
SDEV	11.6105	13.3291	9.8009	13.6960	9.2579	6.8817	15.5592
%RSD	1.170281	1.359707	.9954475	1.387432	.9374303	.6888575	1.578921
#1	985.0413	967.6302	982.9302	977.3407	984.4627	994.9832	972.6724
#2	985.7752	979.0449	975.6950	981.3129	980.2925	995.0859	980.8624
#3	1005.508	994.2007	995.0895	1002.798	998.0008	1006.954	1002.767
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	989.0795	1008.290	111461.2
SDEV	15.2844	13.017	953.0
%RSD	1.545320	1.290959	.8550034
#1	980.0026	998.6735	111736.5
#2	980.5099	1003.096	112246.3
#3	1006.726	1023.102	110400.9
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

ANALYSIS REPORT QC STANDARD 03/17/14 06:12:16 PM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 03/17/14 18:05:06
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6637606	6.836669	.4945209	.4773613	-4.65425	.2385441	-.173192
SDEV	.4669529	3.846760	.0447131	.5618914	10.63551	.1226898	.650552
%RSD	70.34959	56.26659	9.041695	117.7078	228.5118	51.43272	375.6247
#1	.1464895	7.864610	.5076876	.7565291	6.615317	.1895570	-.334363
#2	.7906086	10.06503	.4447028	.8449961	-14.5154	.1479162	-.728009
#3	1.054184	2.580364	.5311722	-.169441	-6.06272	.3781593	.5427960
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.84977	.2281254	11.39964	28.34668	26.25017	.3888320	178.3532
SDEV	.62739	.3101770	4.11367	8.49840	1.44654	.0654249	107.8794
%RSD	33.91689	135.9677	36.08591	29.98023	5.510589	16.82601	60.48638
#1	-1.74580	.1985162	6.671969	37.83032	27.89856	.4286868	58.17509
#2	-2.52265	-.066185	14.16231	21.42125	25.65964	.4244844	210.0541
#3	-1.28087	.5520453	13.36465	25.78846	25.19233	.3133248	266.8302
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.043372	.8430740	-.136047	-.487705	.5826303	.3461151	-.141244
SDEV	.637902	.6055763	.307399	.242425	1.426471	3.839506	2.913851
%RSD	61.13853	71.82956	225.9497	49.70736	244.8330	1109.315	2062.994
#1	.3067918	.2495368	-.472645	-.272783	2.137795	-3.11620	-2.35671
#2	1.409107	.8196740	.1298246	-.439840	-.664972	4.475417	-1.22652
#3	1.414218	1.460011	-.065322	-.750493	.2750682	-.320875	3.159504
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9345929	-2.23533	1.989354	1.030594	.0042833	-.584155	1.455989
SDEV	1.098716	2.09472	1.837045	9.131412	1.259363	1.123821	.980609
%RSD	117.5609	93.70952	92.34382	886.0340	29401.74	192.3840	67.35001
#1	-.004970	-.380484	3.394901	-6.67915	-1.33750	.4493063	1.894438
#2	2.142679	-1.81832	-.089306	11.11464	1.160678	-.421223	2.140876
#3	.6660694	-4.50719	2.662466	-1.34371	.1896681	-1.78055	.3326543
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.3937602	2.159705	114224.1
SDEV	.0991454	.650976	633.5
%RSD	25.17914	30.14192	.5546526
#1	.3425975	2.904829	114183.5
#2	.5080355	1.701338	114877.1
#3	.3306478	1.872946	113611.9
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

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METHOD: P4S12014 SAMPLE NAME: 1403024-01 OPERATOR:
RUN TIME: 03/17/14 18:12:20
COMMENT: SDG:1403024 CLIENTID:MW-16 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1561889	17.20019	72.53577	.3389759	44542.07	-.589826	3.399379
SDEV	.8200393	6.65254	.43263	.9263449	157.51	.324127	1.237257
%RSD	525.0305	38.67710	.5964404	273.2776	.3536241	54.95303	36.39656
#1	.9663234	24.26154	72.57700	1.377132	44654.28	-.262565	4.759972
#2	.1756519	16.28854	72.08399	.0430316	44609.94	-.596185	3.096434
#3	-.673409	11.05050	72.94630	-.403236	44362.01	-.910726	2.341731
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.98957	-.235599	477.1133	6859.971	14088.39	376.3689	23384.59
SDEV	.28767	.025345	16.0929	20.919	70.11	1.4526	210.24
%RSD	14.45897	10.75764	3.372978	.3049415	.4976361	.3859623	.8990464
#1	-1.77149	-.220827	493.8349	6883.602	14169.16	378.0462	23545.54
#2	-1.88161	-.264865	475.7722	6843.821	14043.37	375.5256	23461.50
#3	-2.31560	-.221107	461.7329	6852.489	14052.62	375.5348	23146.73
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	14.75671	-.014285	-.051732	9.321769	1.204399	.7865711	3.746129
SDEV	.28642	2.962143	.444873	.281550	1.331347	3.114322	3.417263
%RSD	1.940943	20736.23	859.9498	3.020350	110.5403	395.9365	91.22118
#1	15.06482	2.655182	.1368108	9.646781	1.731431	3.843603	6.983159
#2	14.70677	.5029401	.2678199	9.166013	-.309782	-2.38204	4.081817
#3	14.49855	-3.20098	-.559828	9.152512	2.191548	.8981518	.1734099
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.196066	.5046584	1.553586	-4.46977	3.410695	-.391947	.3072552
SDEV	2.266310	.6488615	1.998404	3.74858	3.693930	.703157	.4036225
%RSD	1155.893	128.5744	128.6317	83.86515	108.3043	179.4010	131.3639
#1	2.281199	-.178302	2.684712	-.316955	5.920655	.3371884	.7023435
#2	-.704269	.5793147	-.753825	-5.48909	-.830954	-.447159	.3238138
#3	-2.16513	1.112963	2.729872	-7.60327	5.142385	-1.06587	-.104392
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.5618450	5.610064	111697.4
SDEV	.1774722	.509428	586.6
%RSD	31.58740	9.080605	.5252103
#1	.7415391	6.177560	111164.9
#2	.5573145	5.192234	111600.9
#3	.3866814	5.460398	112326.3
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: SDI1403024-01 OPERATOR:
RUN TIME: 03/17/14 18:19:32
COMMENT: SDG:1403024 CLIENTID:MW-16L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6832485	32.80512	14.89425	.4064610	9075.415	.3218392	1.780523
SDEV	.5588840	5.82708	.03675	.6860856	42.316	.2407917	.798507
%RSD	81.79806	17.76271	.2467685	168.7949	.4662673	74.81738	44.84678
#1	.2635643	31.97356	14.87778	.6398108	9094.594	.5978979	2.690906
#2	1.317649	39.00330	14.93636	.9454343	9026.906	.1550982	1.198778
#3	.4685317	27.43850	14.86861	-.365862	9104.746	.2125217	1.451885
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.25678	.2282352	98.91823	1411.225	2902.373	77.02076	4842.553
SDEV	.56522	.6034043	9.26555	7.743	19.657	.69010	67.615
%RSD	25.04555	264.3783	9.366875	.5487056	.6772765	.8959966	1.396273
#1	-2.85997	-.441715	90.59883	1419.780	2924.846	77.80304	4904.080
#2	-2.17106	.7289559	97.25203	1409.199	2893.898	76.49821	4770.165
#3	-1.73932	.3974650	108.9038	1404.696	2888.376	76.76102	4853.415
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	17.10132	2.741394	.0951682	209.8554	.8628331	-.067354	-.042320
SDEV	.45269	3.725497	.2944319	1.9050	1.143458	.262429	2.877944
%RSD	2.647090	135.8979	309.3806	.9077796	132.5237	389.6262	6800.425
#1	16.81893	-.223000	-.110001	211.8946	-.439258	.0869600	-3.08788
#2	17.62345	6.923333	.4325280	208.1214	1.324366	.0813414	.3289419
#3	16.86156	1.523850	-.037023	209.5502	1.703391	-.370363	2.631976
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.202200	.0513871	1.267788	.1792619	-.190584	-1.42590	-.139230
SDEV	2.503958	1.179676	2.071438	2.867440	1.065264	1.33630	.302884
%RSD	208.2814	2295.663	163.3900	1599.582	558.9464	93.71634	217.5428
#1	-1.26099	.5241850	-.920418	.8843151	-.311228	-2.91297	.1984133
#2	1.122558	.9213253	1.525424	2.628411	-1.19039	-.325766	-.387023
#3	3.745029	-1.29135	3.198356	-2.97494	.9298655	-1.03896	-.229078
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.0001204	.7418174	112343.4
SDEV	.1603829	.5521616	684.8
%RSD	133226.1	74.43364	.6095478
#1	-.182315	.5612376	111653.8
#2	.0637601	1.361660	113023.3
#3	.1189165	.3025549	112353.2
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4031304-PS2 OPERATOR:
RUN TIME: 03/17/14 18:26:45
COMMENT: SDG:1403024 CLIENTID:MW-16A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	111.1249	4464.059	4574.682	111.3278	43939.62	109.4709	445.0683
SDEV	.1498	.389	15.145	.4866	87.27	.2097	2.4459
%RSD	.1348079	.0087074	.3310628	.4371269	.1986227	.1915146	.5495469
#1	111.0861	4464.145	4573.019	110.8157	43885.69	109.5833	447.7505
#2	111.2903	4463.634	4560.438	111.7843	44040.31	109.2290	442.9612
#3	110.9984	4464.396	4590.590	111.3833	43892.87	109.6003	444.4934
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	217.9638	110.1593	5044.748	6712.437	13862.20	592.9318	22932.54
SDEV	2.6711	.7134	10.852	8.001	18.12	4.5288	268.55
%RSD	1.225489	.6475710	.2151059	.1192031	.1306987	.7637946	1.171033
#1	214.8811	109.7687	5042.977	6720.949	13852.64	587.8643	23152.52
#2	219.4166	109.7266	5034.891	6711.294	13883.09	594.3475	23011.84
#3	219.5936	110.9827	5056.376	6705.069	13850.86	596.5837	22633.28
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	234.5909	661.5664	436.8572	678.8560	216.1104	210.4288	669.8898
SDEV	.3075	3.9778	2.8667	3.4731	1.2336	1.8456	.7928
%RSD	.1310937	.6012688	.6562049	.5116158	.5708420	.8770843	.1183462
#1	234.7572	662.7815	435.8080	682.1149	216.4970	209.8925	668.9744
#2	234.2361	664.7948	440.1006	675.2024	217.1044	208.9108	670.3510
#3	234.7796	657.1227	434.6628	679.2508	214.7297	212.4832	670.3442
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	216.9884	214.9279	216.7005	202.8568	214.2090	1118.019	1113.106
SDEV	1.4321	4.2199	.4294	1.2342	2.3242	5.727	4.144
%RSD	.6599707	1.963391	.1981654	.6084231	1.085005	.5122440	.3722493
#1	217.4905	215.4166	217.0362	203.4555	213.1060	1117.286	1109.080
#2	215.3730	218.8822	216.2166	201.4374	212.6417	1124.076	1117.357
#3	218.1019	210.4850	216.8487	203.6776	216.8793	1112.693	1112.882
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1100.440	1073.931	112298.4
SDEV	1.528	1.077	367.1
%RSD	.1388724	.1003222	.3268797
#1	1100.375	1074.139	111929.5
#2	1102.000	1072.764	112302.1
#3	1098.946	1074.889	112663.6
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403024-02 OPERATOR:
RUN TIME: 03/17/14 18:33:58
COMMENT: SDG:1403024 CLIENTID:DUP 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0683578	16.83122	73.15375	1.657067	44903.85	-.086608	4.341830
SDEV	.4760777	4.52379	.51352	.577366	39.07	.112495	.224447
%RSD	696.4493	26.87738	.7019671	34.84263	.0870073	129.8906	5.169399
#1	.4392710	21.97722	73.70864	2.049984	44866.91	-.210623	4.572058
#2	-.468478	13.48123	73.05732	1.927046	44944.75	-.058071	4.329781
#3	.2342808	15.03521	72.69528	.9941719	44899.88	.0088713	4.123650
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.55571	-.147294	551.7004	6866.098	14154.10	376.1110	23364.56
SDEV	.11025	.321822	7.4797	21.383	20.45	.5256	326.31
%RSD	4.313707	218.4897	1.355757	.3114256	.1444960	.1397590	1.396596
#1	-2.45997	.2208035	555.9918	6883.868	14168.81	376.7165	23562.90
#2	-2.67624	-.287211	543.0637	6872.059	14162.75	375.8446	23542.82
#3	-2.53091	-.375474	556.0459	6842.367	14130.75	375.7718	22987.94
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	14.73613	.8771842	-.149339	8.193649	1.768920	2.591268	3.097430
SDEV	.16481	.4594329	.106463	.165505	.669903	2.781638	2.593768
%RSD	1.118406	52.37587	71.28972	2.019922	37.87076	107.3466	83.73935
#1	14.69807	.4596911	-.056725	8.349586	1.556305	5.632397	4.907639
#2	14.59367	.8024644	-.265656	8.020001	2.519329	1.965780	.1259305
#3	14.91664	1.369397	-.125635	8.211362	1.231126	.1756267	4.258721
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5430824	.5469515	2.378835	-2.30722	5.036734	.5265667	1.286872
SDEV	3.145430	2.681940	2.047458	2.82278	2.762052	2.545433	.441717
%RSD	579.1810	490.3432	86.06977	122.3456	54.83817	483.4018	34.32489
#1	2.009766	-1.56172	3.112831	.8089457	8.040400	3.336583	1.643506
#2	-3.06782	-.362875	3.958120	-3.03752	4.463571	-.132059	.7927650
#3	2.687302	3.565449	.0655531	-4.69310	2.606231	-1.62482	1.424344
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.5703965	7.769293	112287.2
SDEV	.2163673	.898621	193.7
%RSD	37.93279	11.56631	.1724745
#1	.8088650	8.801687	112157.9
#2	.5156949	7.162867	112193.8
#3	.3866299	7.343327	112509.9
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

METHOD: P4S12014 SAMPLE NAME: 1403026-01 OPERATOR:
RUN TIME: 03/17/14 18:41:10
COMMENT: SDG:1403026 CLIENTID:3-3-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.440266	151.4291	-7.83716	1.197624	1184.534	-.067423	-.807141
SDEV	.245569	1.9772	.07068	.268804	7.805	.068506	.221777
%RSD	10.06319	1.305670	.9018112	22.44476	.6589125	101.6055	27.47689
#1	2.284151	153.0180	-7.86194	.8929390	1192.210	.0041060	-.912391
#2	2.723323	152.0543	-7.89210	1.298676	1176.606	-.132440	-.956697
#3	2.313323	149.2149	-7.75743	1.401257	1184.786	-.073936	-.552336
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.728418	2.171352	-1.13259	905.6451	326.0258	1.322639	159230.5
SDEV	.428467	.150298	.95982	10.1610	1.9602	.142882	85.3
%RSD	5.544049	6.921842	84.74567	1.121963	.6012397	10.80277	.0535471
#1	7.262215	2.119648	-1.68798	896.7558	328.1603	1.443329	159245.1
#2	8.104960	2.340676	-1.68551	903.4581	324.3064	1.359715	159138.9
#3	7.818079	2.053731	-.024285	916.7216	325.6108	1.164875	159307.6
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.258165	.0451083	-.303197	6.240833	1.318038	-.511745	2.152611
SDEV	.315175	1.515030	.344715	.100227	.953547	2.229516	2.928311
%RSD	25.05041	3358.654	113.6935	1.605995	72.34594	435.6691	136.0353
#1	1.538675	.5347468	-.668405	6.278100	.2429187	-2.68410	-.782221
#2	.9171084	1.254767	-.257689	6.317089	1.649829	-.621978	5.074357
#3	1.318712	-1.65419	.0165043	6.127311	2.061366	1.770842	2.165699
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6994871	1.215241	1.369198	-9.29942	3.875397	2.407987	.5033112
SDEV	2.957223	1.335402	1.438669	4.32565	1.973110	.392062	.4491850
%RSD	422.7701	109.8878	105.0738	46.51522	50.91375	16.28172	89.24599
#1	-.734427	.5600595	.0844252	-14.2920	3.111031	2.852691	.3271849
#2	4.100300	2.751695	1.099561	-6.67287	2.398825	2.259061	1.013869
#3	-1.26741	.3339679	2.923609	-6.93341	6.116336	2.112209	.1688795
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.084920	4.224064	112359.6
SDEV	.117199	1.146437	206.7
%RSD	138.0100	27.14063	.1839922
#1	-.220248	3.447822	112337.7
#2	-.017849	3.683527	112576.3
#3	-.016664	5.540843	112164.6
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: SDI1403026-01 OPERATOR:
RUN TIME: 03/17/14 18:48:23
COMMENT: SDG:1403026 CLIENTID:3-3-14L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9468435	20.73816	-1.48182	.6675600	227.9588	.0305303	-.058985
SDEV	.4482651	6.21180	.07596	.1377992	27.4265	.1461471	.135737
%RSD	47.34311	29.95350	5.125802	20.64222	12.03134	478.6946	230.1217
#1	1.112716	13.67872	-1.49979	.7857343	258.5186	-.026748	.0086120
#2	1.288532	25.36778	-1.39850	.5161975	205.4827	.1966408	.0296812
#3	.4392823	23.16798	-1.54719	.7007484	219.8750	-.078302	-.215248
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.066048	.5372352	12.03478	185.1196	74.22331	.3940302	32070.46
SDEV	.658507	1.111014	5.89512	5.2421	2.98008	.1422877	139.17
%RSD	997.0177	206.8022	48.98398	2.831733	4.015017	36.11086	.4339524
#1	.5708504	1.744632	17.62703	187.7350	77.46281	.5514750	31919.27
#2	-.744221	-.441959	12.59983	188.5395	73.60863	.2746366	32193.23
#3	-.024772	.3090328	5.877487	179.0844	71.59851	.3559790	32098.86
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.481033	-.076153	-.244009	.8144361	.3234849	-.240034	3.189478
SDEV	.680431	2.137066	.373835	.1382608	.2743041	.965430	4.045443
%RSD	45.94300	2806.294	153.2058	16.97627	84.79658	402.2053	126.8372
#1	2.028869	2.350926	.1410367	.9717328	.1759008	-1.26537	7.773987
#2	.7193721	-1.67572	-.605522	.7594385	.6399844	-.106262	1.673312
#3	1.694857	-.903663	-.267541	.7121369	.1545694	.6515332	.1211342
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2283488	-.219248	.5942985	.0195635	-.369745	.8658084	.2965225
SDEV	1.115149	.665927	.6784330	.8337934	1.573415	1.288251	.7539701
%RSD	488.3534	303.7320	114.1569	4261.993	425.5411	148.7917	254.2708
#1	.0876670	.5282465	-.000154	-.200305	-1.79722	1.512375	.8543346
#2	1.407164	-.749193	1.333386	.9412580	-.629342	1.702720	-.561266
#3	-.809784	-.436798	.4496635	-.682263	1.317325	-.617670	.5964990
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.1653896	.4149220	113356.6
SDEV	.2829961	.9095733	264.4
%RSD	171.1087	219.2155	.2332213
#1	.4829208	.6272268	113602.2
#2	.0734618	1.199566	113390.9
#3	-.060214	-.582027	113076.8
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403026-02 OPERATOR:
RUN TIME: 03/17/14 18:55:36
COMMENT: SDG:1403026 CLIENTID:3-4-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.99070	788.2533	-26.2844	1.225082	5529.412	2.581058	3.821412
SDEV	.27205	11.6669	.3041	.548233	72.713	.351449	.507122
%RSD	2.475300	1.480099	1.157143	44.75069	1.315028	13.61647	13.27054
#1	11.30302	801.7231	-26.5974	1.852388	5612.958	2.890576	4.087914
#2	10.80528	781.7206	-26.2657	.9850789	5494.867	2.198999	3.236602
#3	10.86380	781.3162	-25.9900	.8377793	5480.410	2.653598	4.139719
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	45.72198	74.92069	99.23680	5053.346	2030.341	22.26123	H680162.1
SDEV	1.01552	1.18650	11.49430	36.324	23.473	.25269	4934.9
%RSD	2.221082	1.583675	11.58270	.7188200	1.156098	1.135116	.7255500
#1	46.71211	76.25312	109.1421	5095.289	2056.504	22.49789	H685857.9
#2	44.68284	73.97835	86.63349	5032.646	2011.129	21.99510	H677165.8
#3	45.77100	74.53058	101.9348	5032.104	2023.389	22.29071	H677462.7
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	77.94923	.5405636	.2687111	151.3874	7.308235	1.063519	4.867855
SDEV	1.17091	.8316961	.2203865	.9735	.827969	1.425293	1.703658
%RSD	1.502147	153.8572	82.01617	.6430479	11.32926	134.0168	34.99811
#1	79.30074	-.116171	.4613220	152.4547	7.393984	.3342163	6.510039
#2	77.30666	.2620997	.0283709	151.1593	8.089992	2.705882	4.984779
#3	77.24029	1.475761	.3164402	150.5483	6.440729	.1504573	3.108748
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7788800	7.471895	7.226404	-1.48975	2.338131	59.57579	.4596460
SDEV	.5056431	1.269328	1.392945	2.89780	1.214798	.45444	.8350981
%RSD	64.91926	16.98803	19.27577	194.5156	51.95594	.7627850	181.6829
#1	.1995953	6.012294	8.083669	-4.36801	2.681693	60.08115	-.463770
#2	1.131743	8.317311	7.976381	1.427214	3.344148	59.44548	1.161909
#3	1.005301	8.086081	5.619163	-1.52847	.9885522	59.20075	.6807991
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.5640572	18.25385	109574.9
SDEV	.3348366	.75430	443.1
%RSD	59.36218	4.132303	.4043459
#1	.7629483	17.46143	109218.4
#2	.1774752	18.96315	110070.9
#3	.7517480	18.33697	109435.4
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403026-03 OPERATOR:
RUN TIME: 03/17/14 19:02:49
COMMENT: SDG:1403026 CLIENTID:3-5-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.879486	153.1034	-7.69061	.7464386	1142.073	-.258194	-2.15415
SDEV	.832972	.7385	.03889	.0452411	5.967	.259655	.53694
%RSD	28.92778	.4823432	.5056166	6.060930	.5224380	100.5660	24.92597
#1	3.835952	153.8923	-7.64751	.7641427	1148.798	-.535169	-2.30044
#2	2.313378	152.4287	-7.70125	.7801503	1137.414	-.020285	-1.55923
#3	2.489129	152.9891	-7.72307	.6950226	1140.007	-.219129	-2.60280
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.302520	2.959038	2.993384	898.5427	319.3655	1.310380	156538.2
SDEV	.420669	.563634	6.450098	7.1831	2.5193	.072865	600.4
%RSD	5.760607	19.04789	215.4784	.7994150	.7888541	5.560568	.3835504
#1	7.774136	3.533498	-1.56428	903.2634	321.4497	1.392523	156067.0
#2	6.965980	2.406893	10.37364	902.0884	320.0810	1.253540	157214.2
#3	7.167446	2.936723	.1707916	890.2761	316.5658	1.285076	156333.3
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.464279	-2.18465	-.190711	4.560183	.4808219	-.956180	4.253972
SDEV	.147214	4.38386	.556227	.043319	.9942610	1.849548	5.287283
%RSD	10.05371	200.6670	291.6596	.9499325	206.7836	193.4309	124.2905
#1	1.614326	2.870919	.4199342	4.608624	.9943069	-2.58831	7.456410
#2	1.320071	-4.49061	-.323631	4.525164	1.113352	-1.33299	7.154270
#3	1.458438	-4.93424	-.668437	4.546760	-.665193	1.052757	-1.84876
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.584986	.5964131	.4229654	-4.70986	.9177358	1.981680	-.205654
SDEV	1.911952	1.350739	.8307475	4.34642	1.138938	1.223896	.740108
%RSD	326.8372	226.4771	196.4103	92.28360	124.1030	61.76052	359.8812
#1	1.440050	1.499812	.7417868	-6.99776	-.386997	3.169555	.6398853
#2	-.835938	1.245803	1.047076	-7.43443	1.713052	2.050792	-.735934
#3	-2.35907	-.956376	-.519967	.3026263	1.427152	.7246925	-.520912
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.007114	2.908356	112268.2
SDEV	.120745	.675406	754.6
%RSD	1697.239	23.22295	.6721169
#1	-.109155	3.190569	113062.1
#2	-.038375	3.396886	111560.3
#3	.1261867	2.137615	112182.4
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

METHOD: P4S12014 SAMPLE NAME: 1403026-04 OPERATOR:
RUN TIME: 03/17/14 19:10:02
COMMENT: SDG:1403026 CLIENTID:3-6-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.010770	105.0957	-5.37784	.4996690	783.4808	.0516420	-.862502
SDEV	.593165	5.0182	.12902	.1362084	9.8510	.3338225	.669441
%RSD	29.49942	4.774889	2.399029	27.25972	1.257341	646.4164	77.61613
#1	2.489008	99.30982	-5.34671	.5214303	790.4913	-.326010	-1.63545
#2	2.196281	107.7141	-5.51957	.6236867	787.7333	.3073378	-.483846
#3	1.347020	108.2631	-5.26724	.3538901	772.2178	.1735984	-.468207
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.021999	2.370155	9.385302	612.6879	226.5682	.9963526	108742.8
SDEV	.489712	.670440	7.386876	11.7424	1.1504	.1141574	1419.5
%RSD	9.751341	28.28674	78.70686	1.916545	.5077568	11.45753	1.305346
#1	4.456846	3.091667	.9126762	601.7383	225.3123	.9030113	107126.7
#2	5.320993	1.766387	12.76903	611.2370	226.8211	.9624165	109787.3
#3	5.288157	2.252412	14.47419	625.0884	227.5710	1.123630	109314.5
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.053085	-2.60437	-.192892	4.400133	1.154090	-1.42486	2.009155
SDEV	.469768	1.65115	.307999	.184773	1.567517	1.69471	2.497956
%RSD	44.60872	63.39936	159.6744	4.199266	135.8228	118.9388	124.3287
#1	.5625940	-1.23241	.0722651	4.228707	-.610725	-2.99378	2.761115
#2	1.498943	-4.43691	-.530732	4.375842	2.384610	-1.65325	-.778402
#3	1.097717	-2.14379	-.120209	4.595851	1.688384	.3724643	4.044751
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.737187	-1.17936	2.318907	-4.22899	-.024997	1.049519	.1159373
SDEV	.655860	3.99052	1.407465	2.32057	1.417437	.520106	.4109112
%RSD	88.96785	338.3645	60.69519	54.87295	5670.378	49.55659	354.4254
#1	-1.07801	-4.17206	1.167113	-6.04960	-1.46827	.4782586	.3742383
#2	-1.15247	3.351309	1.901837	-5.02135	.0281740	1.174662	.3314727
#3	.0189133	-2.71732	3.887773	-1.61601	1.365106	1.495637	-.357899
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.0357420	1.911107	112891.9
SDEV	.1988234	.498126	1068.5
%RSD	556.2743	26.06480	.9464590
#1	.2113231	1.839720	114125.5
#2	-.180147	2.441076	112295.1
#3	.0760499	1.452526	112255.2
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

METHOD: P4S12014 SAMPLE NAME: 1403026-05 OPERATOR:
RUN TIME: 03/17/14 19:17:16
COMMENT: SDG:1403026 CLIENTID:3-7-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.357779	221.6304	-10.8243	.4561783	1652.601	.1086439	.1255972
SDEV	.443431	.9365	.1040	.0634370	7.103	.0541931	.3062045
%RSD	13.20608	.4225417	.9604559	13.90618	.4297961	49.88136	243.7989
#1	3.162584	221.4551	-10.8729	.3829477	1645.838	.1573311	-.048688
#2	3.865321	222.6421	-10.7050	.4913080	1651.966	.0502554	-.053680
#3	3.045431	220.7939	-10.8951	.4942792	1660.001	.1183452	.4791599
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.81456	3.702468	-.372035	1282.202	452.0910	2.003655	218810.5
SDEV	.38680	.602953	10.26278	2.857	4.6261	.104906	1427.8
%RSD	3.273959	16.28516	2758.550	.2228300	1.023259	5.235755	.6525252
#1	11.39958	3.157684	-11.1447	1280.317	452.0016	1.884162	218611.2
#2	11.87899	4.350307	9.290565	1280.800	447.5103	2.080618	217492.8
#3	12.16510	3.599414	.7380695	1285.490	456.7611	2.046184	220327.4
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.832907	-1.05606	-.252091	15.20641	.1179012	-1.24277	2.304349
SDEV	.228956	3.51564	.139359	.04980	1.292433	3.50913	4.609678
%RSD	12.49144	332.9022	55.28106	.3274816	1096.200	282.3637	200.0426
#1	1.899784	-2.69434	-.391946	15.24830	-1.37187	-2.74229	-2.97747
#2	1.577959	2.979717	-.113234	15.21958	.7865061	-3.75300	5.516167
#3	2.020978	-3.45355	-.251094	15.15135	.9390678	2.766985	4.374347
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6365829	-2.92089	1.634858	-8.35907	2.309943	2.807350	.0923263
SDEV	1.573237	1.65935	1.532990	.51714	5.358318	.297379	.9866207
%RSD	247.1378	56.80972	93.76897	6.186572	231.9676	10.59286	1068.623
#1	-1.00613	-4.25238	.0660630	-7.76200	-.236304	2.666638	1.011518
#2	.7862394	-1.06192	1.709172	-8.66562	-1.30048	2.606442	.2155982
#3	2.129644	-3.44837	3.129339	-8.64960	8.466614	3.148970	-.950137
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.134833	4.863149	112413.8
SDEV	.203574	.644837	140.2
%RSD	150.9819	13.25965	.1246805
#1	-.358114	4.229816	112375.8
#2	.0404592	4.840725	112569.1
#3	-.086845	5.518905	112296.6
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: CCV1 OPERATOR:
RUN TIME: 03/17/14 19:24:29
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	100.6047	50358.37	1008.416	965.8122	49521.73	966.7028	973.7980
SDEV	.1781	129.79	5.831	3.4797	22.19	.3167	4.8289
%RSD	.1770576	.2577385	.5782383	.3602907	.0448098	.0327599	.4958876
#1	100.4876	50232.36	1002.325	969.8022	49546.60	966.6247	968.5165
#2	100.8097	50351.11	1008.977	964.2270	49503.96	966.4324	974.8903
#3	100.5168	50491.64	1013.947	963.4072	49514.61	967.0512	977.9872
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	972.0996	990.0710	24635.71	50023.38	49049.12	991.0314	50432.43
SDEV	2.1838	2.5959	66.36	156.73	125.76	2.1113	215.45
%RSD	.2246476	.2621920	.2693799	.3133187	.2563914	.2130363	.4272051
#1	974.2582	987.0823	24658.27	50016.86	49121.49	993.1373	50534.43
#2	969.8915	991.3665	24561.01	49870.01	48903.91	988.9149	50184.93
#3	972.1489	991.7642	24687.85	50183.27	49121.98	991.0419	50577.95
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	976.2285	980.2115	967.0455	1095.310	969.4730	978.9344	1028.728
SDEV	.5338	.7344	.2181	3.939	3.3869	5.8888	4.548
%RSD	.0546796	.0749195	.0225494	.3596566	.3493498	.6015560	.4420944
#1	976.8439	979.4838	966.8602	1092.234	969.6334	985.6733	1024.461
#2	975.8901	980.9523	966.9905	1093.947	966.0088	974.7787	1028.210
#3	975.9515	980.1986	967.2858	1099.750	972.7768	976.3511	1033.513
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	981.8994	977.4122	965.5095	972.8126	981.9905	1014.751	990.5230
SDEV	2.8928	6.2360	1.9731	10.8343	4.7686	14.067	6.1347
%RSD	.2946083	.6380113	.2043592	1.113707	.4856070	1.386221	.6193367
#1	982.5941	977.3716	965.7702	982.9976	987.0091	999.2167	984.2617
#2	978.7225	971.1965	963.4189	961.4288	981.4435	1026.627	996.5227
#3	984.3815	983.6683	967.3392	974.0114	977.5190	1018.411	990.7844
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	979.2200	987.1721	113827.8
SDEV	2.3809	2.0393	429.6
%RSD	.2431423	.2065783	.3773988
#1	980.2646	985.4813	113745.7
#2	980.8999	986.5982	114292.5
#3	976.4953	989.4369	113445.1
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

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METHOD: P4S12014 SAMPLE NAME: CCB1 OPERATOR:
RUN TIME: 03/17/14 19:31:42
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.048775	-2.87423	.3460321	.4080201	-6.31240	.4601233	.2254224
SDEV	.131938	12.90337	.1378951	.3453445	13.04975	.2600659	1.190247
%RSD	270.5023	448.9330	39.85037	84.63907	206.7322	56.52091	528.0073
#1	-.058511	9.950316	.5021684	.6868240	-.975257	.5362133	.8611149
#2	-.175576	-15.8550	.2409242	.5155273	3.222815	.1704993	-1.14770
#3	.0877608	-2.71800	.2950037	.0217091	-21.1847	.6736573	.9628526
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.87423	.2869918	7.443330	17.04972	20.67906	.2170423	24.68477
SDEV	.80980	.2027163	4.945482	8.40278	6.76008	.2039322	175.5658
%RSD	43.20677	70.63486	66.44179	49.28399	32.69048	93.95965	711.2311
#1	-2.13545	.2427480	12.41978	25.28895	28.47526	.3885482	-101.971
#2	-2.52118	.1100515	2.529409	8.492422	17.11741	-.008452	-49.0716
#3	-.966069	.5081759	7.380804	17.36778	16.44452	.2710306	225.0968
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8743931	2.411099	-.180230	-.720599	.7063060	-2.26690	-.120338
SDEV	.5345333	3.055145	.652787	.218026	.3870100	1.48109	2.381379
%RSD	61.13193	126.7117	362.1958	30.25622	54.79353	65.33569	1978.907
#1	.5839406	-1.04077	-.337332	-.488043	.2941240	-.567587	.5795152
#2	.5479690	3.506683	-.740131	-.920386	.7628770	-3.28357	-2.77322
#3	1.491270	4.767387	.5367719	-.753367	1.061917	-2.94953	1.832694
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.206411	-1.76644	1.940681	-3.85361	-1.47482	-.417172	.9522430
SDEV	2.289828	.13261	.522960	4.14801	1.49924	.679693	.8624343
%RSD	103.7807	7.506998	26.94723	107.6397	101.6557	162.9288	90.56872
#1	2.694555	-1.86246	1.370655	-.598248	-.552385	-.547367	1.944422
#2	-.288128	-1.82172	2.053096	-8.52398	-.667355	-1.02235	.5301762
#3	4.212805	-1.61514	2.398292	-2.43860	-3.20472	.3182013	.3821314
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.2915768	1.468796	114622.0
SDEV	.2279206	.313334	662.4
%RSD	78.16830	21.33270	.5779141
#1	.4900227	1.817828	114309.1
#2	.0426467	1.376805	115382.9
#3	.3420609	1.211754	114174.1
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

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METHOD: P4S12014 SAMPLE NAME: 1403027-01 OPERATOR:
RUN TIME: 03/17/14 19:40:32
COMMENT: SDG:1403027 CLIENTID:3-3-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.870599	294.4141	-13.5819	.9075066	2125.102	.0303309	-.590163
SDEV	.389895	7.5611	.1775	1.002003	26.754	.3324394	.988261
%RSD	8.005077	2.568200	1.307247	110.4127	1.258940	1096.043	167.4558
#1	4.772949	303.1436	-13.7870	1.531529	2146.970	.3292660	.4954407
#2	4.538810	290.1789	-13.4791	-.248280	2133.066	.0894160	-.828400
#3	5.300037	289.9197	-13.4797	1.439271	2095.271	-.327689	-1.43753
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	15.10907	5.005715	19.13035	1677.821	578.8071	2.942739	277316.8
SDEV	.71273	.299719	5.88047	16.334	4.4471	.061209	1744.4
%RSD	4.717239	5.987534	30.73895	.9735107	.7683259	2.080000	.6290281
#1	15.91920	4.659872	18.60471	1696.323	580.3489	3.004512	279330.0
#2	14.57851	5.167414	13.53035	1665.398	573.7943	2.941596	276255.2
#3	14.82949	5.189860	25.25600	1671.743	582.2781	2.882110	276365.1
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.125967	-3.38022	.4570194	9.587749	1.529855	.0170112	4.063046
SDEV	.417973	1.03393	.4324913	.155407	.479041	4.592192	2.500181
%RSD	19.66035	30.58752	94.63304	1.620892	31.31284	26995.16	61.53465
#1	2.219700	-4.53570	.7137566	9.752912	1.890149	-2.28865	2.120267
#2	2.489116	-3.06260	-.042312	9.565934	.9862227	-2.96552	3.185080
#3	1.669087	-2.54237	.6996133	9.444403	1.713194	5.305198	6.883790
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.073336	.2275296	2.179882	-7.95058	3.994727	3.299097	.0346657
SDEV	1.896471	.7037254	1.022820	5.19957	4.442381	.364132	.5805364
%RSD	176.6895	309.2895	46.92087	65.39859	111.2061	11.03733	1674.673
#1	2.874812	.1654741	2.751033	-8.99709	1.060434	3.383085	.6876360
#2	-.905649	.9602277	.9990413	-12.5473	1.818086	3.613896	-.423139
#3	1.250844	-.443113	2.789572	-2.30735	9.105662	2.900309	-.160500
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.040805	6.830389	113241.2
SDEV	.104326	.182631	751.7
%RSD	255.6686	2.673794	.6637856
#1	-.111430	6.970231	112472.6
#2	-.090010	6.897170	113276.2
#3	.0790239	6.623768	113974.7
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: SDI1403027-01 OPERATOR:
RUN TIME: 03/17/14 19:47:45
COMMENT: SDG:1403027 CLIENTID:3-3-14L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9858762	42.74659	-2.75993	.5655454	434.4347	-.429313	-1.92815
SDEV	.4832473	2.61647	.31153	.4281958	8.8247	.139461	.66743
%RSD	49.01704	6.120888	11.28779	75.71378	2.031304	32.48478	34.61529
#1	.4978257	39.73302	-3.10906	1.051212	437.0871	-.348675	-1.35245
#2	.9956303	44.06692	-2.51031	.2424145	424.5879	-.590349	-2.65973
#3	1.464173	44.43981	-2.66042	.4030099	441.6289	-.348915	-1.77226
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.565156	.5814344	6.521084	315.1241	119.3519	.6896633	57347.19
SDEV	.131032	.1019792	1.276285	25.9731	1.5919	.0867950	481.18
%RSD	8.371818	17.53924	19.57167	8.242186	1.333774	12.58513	.8390690
#1	1.703645	.6403457	7.624780	285.6752	117.7922	.5896063	57572.15
#2	1.548684	.4636790	6.814986	334.7653	120.9741	.7347084	56794.74
#3	1.443139	.6402786	5.123485	324.9316	119.2893	.7446752	57674.70
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.061812	1.558691	-.177433	1.792791	.4100422	.8420416	1.332172
SDEV	.517876	.496468	.077599	.437126	.5344395	1.429167	2.579835
%RSD	48.77286	31.85159	43.73428	24.38246	130.3377	169.7264	193.6563
#1	1.373188	1.796599	-.130686	2.256861	.6797417	.0940796	-1.16713
#2	1.348255	1.891433	-.134605	1.732683	-.205507	2.489966	3.985631
#3	.4639937	.9880398	-.267008	1.388829	.7558922	-.057921	1.178011
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.39569	-3.32193	2.273085	-4.60360	3.560675	.4866574	.1134433
SDEV	.78377	1.95673	1.745393	1.36081	1.972173	1.883889	.5977792
%RSD	32.71598	58.90340	76.78519	29.55968	55.38761	387.1079	526.9407
#1	-3.24702	-5.00248	3.516449	-6.17216	3.222395	-1.54241	-.510118
#2	-2.23595	-1.17376	.2777471	-3.90011	5.680108	.8220821	.6815794
#3	-1.70408	-3.78955	3.025060	-3.73854	1.779523	2.180304	.1688691
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.158487	.7216851	114418.0
SDEV	.202485	.1008756	781.1
%RSD	127.7618	13.97779	.6826301
#1	.0747221	.8314007	113793.1
#2	-.260578	.6329486	115293.6
#3	-.289604	.7007061	114167.3
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

METHOD: P4S12014 SAMPLE NAME: 1403027-02 OPERATOR:
RUN TIME: 03/17/14 19:54:58
COMMENT: SDG:1403027 CLIENTID:3-4-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.757956	235.2356	-11.6315	1.342588	1783.590	-.257009	-1.76980
SDEV	.581437	.9499	.0510	.110502	7.039	.180496	.40040
%RSD	15.47216	.4038007	.4383180	8.230487	.3946682	70.22935	22.62425
#1	3.250498	236.2058	-11.6110	1.234822	1776.117	-.435998	-1.60388
#2	4.392386	235.1934	-11.5939	1.455636	1784.557	-.075043	-2.22649
#3	3.630984	234.3075	-11.6895	1.337307	1790.096	-.259986	-1.47903
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	12.26617	4.203074	14.24542	1393.068	484.0042	2.157194	235555.4
SDEV	.54875	.222007	2.15028	9.988	3.9624	.040719	686.9
%RSD	4.473670	5.282020	15.09453	.7169606	.8186653	1.887605	.2916099
#1	12.34540	4.438303	14.54414	1383.764	484.6520	2.200515	234763.0
#2	11.68211	4.173708	16.23073	1403.622	487.6027	2.151362	235980.9
#3	12.77099	3.997212	11.96140	1391.816	479.7578	2.119706	235922.4
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.928560	1.049774	-.134744	10.50024	1.896410	-.754318	-.308035
SDEV	.726107	3.157864	.595127	.22287	1.245865	2.611259	1.719124
%RSD	37.65022	300.8136	441.6725	2.122549	65.69598	346.1746	558.0946
#1	1.657376	-2.58017	-.792878	10.49914	1.094483	2.210047	-.652961
#2	2.751230	3.164315	.0230884	10.72367	3.331716	-2.71408	1.557402
#3	1.377075	2.565176	.3655575	10.27792	1.263031	-1.75893	-1.82854
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9169964	.1550530	2.765623	-5.35467	1.542410	3.846415	.6525152
SDEV	.7752602	1.867170	1.561512	2.93572	3.031256	3.009819	1.213244
%RSD	84.54343	1204.215	56.46148	54.82545	196.5273	78.24996	185.9334
#1	1.788228	-2.00091	2.639699	-3.37741	4.999481	5.185069	.6904959
#2	.6595530	1.219093	4.386284	-8.72790	.2882234	5.954680	1.846323
#3	.3032085	1.246975	1.270886	-3.95871	-.660475	.3994973	-.579273
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.080624	5.142613	112728.7
SDEV	.227436	.342326	234.4
%RSD	282.0962	6.656652	.2079030
#1	.1623529	5.301328	112572.9
#2	-.288419	4.749736	112998.3
#3	-.115804	5.376774	112615.0
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403027-03 OPERATOR:
RUN TIME: 03/17/14 20:02:11
COMMENT: SDG:1403027 CLIENTID:3-5-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.011700	193.2454	-9.97389	.3479980	1519.905	-.434344	-2.19626
SDEV	.692254	7.0869	.31510	2.160160	44.631	.413517	1.89724
%RSD	17.25588	3.667304	3.159278	620.7392	2.936452	95.20509	86.38501
#1	4.802237	187.3695	-9.61292	1.834179	1468.601	-.896681	-4.36032
#2	3.513942	191.2509	-10.1940	1.339768	1541.330	-.306517	-1.40949
#3	3.718920	201.1159	-10.1148	-2.12995	1549.783	-.099833	-.818980
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.42578	3.224175	5.319947	1196.285	417.5319	1.682915	203836.6
SDEV	1.08649	1.264615	21.95717	24.771	11.9442	.138261	5195.3
%RSD	10.42122	39.22291	412.7329	2.070658	2.860663	8.215579	2.548757
#1	10.33317	3.710283	13.50728	1167.948	404.2114	1.775176	197856.9
#2	9.388555	1.788633	-19.5546	1213.823	421.0956	1.523948	207243.6
#3	11.55561	4.173608	22.00712	1207.085	427.2885	1.749622	206409.1
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.537969	1.087905	.0995387	7.750140	2.023424	.7998050	-.007025
SDEV	.601009	1.836695	.4942267	.563996	1.274258	1.941173	5.917838
%RSD	39.07809	168.8287	496.5169	7.277232	62.97535	242.7058	84244.65
#1	1.344985	-.682441	.6701775	7.712835	2.614001	2.668316	.2685896
#2	1.057157	2.984441	-.191989	7.205722	.5610244	-1.20667	-6.05785
#3	2.211765	.9617137	-.179573	8.331862	2.895247	.9377688	5.768191
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.057156	3.926473	1.073168	-1.04963	1.723029	3.126077	-.167076
SDEV	2.284785	5.757111	4.724244	4.34215	4.884473	.454865	.444369
%RSD	3997.464	146.6230	440.2149	413.6842	283.4817	14.55066	265.9677
#1	1.490836	3.341571	2.250606	-3.11842	5.557240	2.664095	-.617700
#2	-2.68130	9.953708	-4.12844	3.940056	-3.77628	3.573474	.2707627
#3	1.018992	-1.51586	5.097334	-3.97052	3.388129	3.140661	-.154292
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.319450	4.084022	113882.8
SDEV	.618560	.860064	1992.5
%RSD	193.6333	21.05924	1.749624
#1	.1012174	3.865772	116126.8
#2	-1.02968	3.354108	112320.9
#3	-.029886	5.032184	113200.8
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403027-04 OPERATOR:
RUN TIME: 03/17/14 20:09:24
COMMENT: SDG:1403027 CLIENTID:3-6-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.533456	213.2252	-10.6949	1.004771	1660.454	-.018036	-1.27001
SDEV	.147370	7.9110	.0995	.449680	3.950	.308682	.61749
%RSD	4.170710	3.710161	.9307863	44.75446	.2378987	1711.517	48.62066
#1	3.513820	222.3433	-10.5841	1.374636	1658.931	.3291022	-.610391
#2	3.689660	208.1869	-10.7768	1.135451	1657.492	-.261648	-1.83427
#3	3.396888	209.1455	-10.7239	.5042249	1664.939	-.121561	-1.36536
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.59444	4.409184	18.90651	1299.613	450.5146	2.155882	217238.8
SDEV	.06142	.255293	3.23936	11.101	1.5546	.106928	621.8
%RSD	.5297267	5.790038	17.13355	.8541420	.3450820	4.959836	.2862136
#1	11.54711	4.703971	20.37981	1311.065	450.5858	2.279335	217608.4
#2	11.66385	4.261873	21.14736	1288.901	448.9256	2.095942	216520.9
#3	11.57237	4.261707	15.19237	1298.872	452.0324	2.092369	217587.0
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.135305	-.961589	-.133189	10.01442	.5906732	-.299132	3.494198
SDEV	.900501	1.297299	.632337	.09139	.6041944	2.304200	3.039574
%RSD	42.17203	134.9120	474.7669	.9126241	102.2891	770.2958	86.98917
#1	2.097434	-2.31246	.5703084	10.11179	.4635336	.9700921	1.319021
#2	1.254336	-.846812	-.315619	10.00100	1.248320	-2.95887	6.967256
#3	3.054143	.2745077	-.654256	9.930486	.0601660	1.091384	2.196317
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.38059	-1.60412	1.686267	-7.62777	3.359586	2.624077	-.052131
SDEV	2.54207	2.42676	1.550835	6.12524	1.198556	1.193436	.500757
%RSD	184.1285	151.2829	91.96857	80.30184	35.67571	45.48022	960.5819
#1	-3.84729	1.174386	.1084796	-2.32791	2.616515	3.613473	-.525024
#2	-1.52518	-2.67858	3.208666	-14.3338	2.719974	2.960108	.4724768
#3	1.230681	-3.30818	1.741654	-6.22157	4.742271	1.298650	-.103845
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.068457	4.780837	113422.8
SDEV	.073095	.150490	690.1
%RSD	106.7744	3.147779	.6084495
#1	.0103856	4.614804	112631.8
#2	-.081788	4.819444	113735.0
#3	-.133969	4.908262	113901.7
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403027-05 OPERATOR:
RUN TIME: 03/17/14 20:16:37
COMMENT: SDG:1403027 CLIENTID:3-7-14 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.60562	326.4570	-16.5280	1.043657	2234.983	.9283368	-.984804
SDEV	.64437	2.9416	.0447	.505729	21.630	.2416010	.251590
%RSD	5.552195	.9010673	.2706833	48.45739	.9678086	26.02514	25.54720
#1	12.24002	327.9722	-16.4983	.9823992	2230.535	1.169524	-1.20490
#2	11.62512	328.3322	-16.5794	.5713478	2258.492	.6863242	-1.03897
#3	10.95173	323.0667	-16.5061	1.577226	2215.923	.9291621	-.710543
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	20.19358	36.79057	36.74134	1863.527	677.9236	4.970885	H303470.1
SDEV	.50233	.37733	.93810	11.858	3.4716	.079870	1419.3
%RSD	2.487585	1.025623	2.553250	.6363220	.5120898	1.606760	.4676738
#1	20.06538	36.43741	37.26859	1856.238	674.7624	4.936777	H302698.8
#2	19.76777	37.18814	37.29720	1877.210	681.6389	5.062147	H305108.0
#3	20.74759	36.74615	35.65825	1857.134	677.3696	4.913732	H302603.5
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	42.77294	-1.58941	.2888367	74.96017	3.857674	-1.69949	2.926152
SDEV	1.23797	.74693	.4611732	.81997	.670185	2.33767	3.696938
%RSD	2.894281	46.99395	159.6657	1.093875	17.37278	137.5514	126.3413
#1	43.35046	-1.99250	.6500490	74.52516	4.395783	-2.39138	1.196898
#2	43.61662	-.727534	.4470890	75.90597	4.070261	-3.61311	.4107477
#3	41.35174	-2.04820	-.230628	74.44936	3.106979	.9060299	7.170809
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.47622	1.807609	4.881036	-6.62342	.7586776	38.11115	-.354655
SDEV	1.18763	2.962459	.648577	3.89495	2.192091	2.56733	.441937
%RSD	80.45087	163.8882	13.28770	58.80578	288.9357	6.736419	124.6106
#1	-.768225	4.907013	4.140417	-5.12558	-1.02644	36.12302	.1547299
#2	-2.84734	1.511475	5.347602	-11.0449	.0971228	41.00959	-.582813
#3	-.813101	-.995660	5.155089	-3.69973	3.205352	37.20083	-.635881
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.4297182	7.707666	112985.8
SDEV	.0559664	.478538	185.3
%RSD	13.02398	6.208593	.1640198
#1	.4262053	7.165119	113148.2
#2	.4873584	8.069658	113025.3
#3	.3755910	7.888222	112783.9
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4031308-BLK1 OPERATOR:
RUN TIME: 03/17/14 20:23:50
COMMENT: SDG:1403004 CLIENTID:PBW01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5466883	-7.26627	.2052647	1.042615	6.387703	-.233614	-1.02243
SDEV	1.074452	10.06595	.0707778	.398617	16.77920	.332957	.84960
%RSD	196.5382	138.5298	34.48123	38.23245	262.6797	142.5242	83.09666
#1	1.786325	2.172833	.2752662	.9572598	-12.9690	.1231039	-.161280
#2	-.029282	-6.11209	.1337353	.6935895	15.33855	-.287778	-1.04601
#3	-.116977	-17.8596	.2067926	1.476996	16.79359	-.536168	-1.85999
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000
LOW	-2.50000	-100.000	-100.000	-2.50000	-2500.00	-2.50000	-10.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.05212	-.118020	-1.64861	3.682414	5.858872	.1275849	114.0868
SDEV	.33660	.276122	7.67307	11.53012	2.948713	.1662305	187.7118
%RSD	16.40271	233.9621	465.4261	313.1132	50.32903	130.2901	164.5343
#1	-1.67221	.1984828	6.697212	16.99394	9.234151	.3137936	213.3810
#2	-2.31315	-.242914	-8.39765	-3.18844	4.559206	.0748207	-102.417
#3	-2.17099	-.309628	-3.24540	-2.75826	3.783257	-.005860	231.2966
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000
LOW	-5.00000	-2.50000	-100.000	-2500.00	-2500.00	-5.00000	-2500.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6688734	-.950116	-.497273	2.502197	.5691504	-.980464	4.025330
SDEV	.7434406	1.528711	.471656	.213016	.6958674	3.322372	2.269224
%RSD	111.1482	160.8973	94.84848	8.513174	122.2642	338.8570	56.37362
#1	1.493728	-2.15290	-.540545	2.747264	-.117893	1.003950	3.881717
#2	.4623954	-1.46762	-.005472	2.361427	1.273518	-4.81604	6.362950
#3	.0504968	.7701765	-.945802	2.397899	.5518258	.8706950	1.831323
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	15.00000	15.00000	15.00000	5.000000	5.000000	15.00000
LOW	-5.00000	-15.0000	-15.0000	-15.0000	-5.00000	-5.00000	-15.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.160682	-1.90304	1.803244	-9.24957	3.147787	1.295994	-.105866
SDEV	2.665508	.68757	1.286849	4.49674	3.912104	1.536033	.611333
%RSD	123.3642	36.12989	71.36303	48.61564	124.2811	118.5216	577.4614
#1	3.678256	-1.79721	.7203628	-10.8781	6.935942	2.674598	-.348873
#2	-.917083	-2.63739	3.225881	-12.7052	-.877480	-.359738	-.558329
#3	3.720872	-1.27453	1.463488	-4.16547	3.384898	1.573121	.5896052
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	5.000000					25.00000	25.00000
LOW	-5.00000					-25.0000	-25.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.0028329	.5722744	113851.8
SDEV	.2075651	.5265559	389.8
%RSD	7326.986	92.01109	.3423367
#1	.2268571	1.073362	113511.1
#2	-.182957	.6199661	113767.5
#3	-.035402	.0234950	114276.8
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	25.00000	25.00000	
LOW	-25.0000	-25.0000	

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METHOD: P4S12014 SAMPLE NAME: 4031308-BS1 OPERATOR:
RUN TIME: 03/17/14 20:31:03
COMMENT: SDG:1403004 CLIENTID:MLCS01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	541.1919	2582.448	547.8495	526.5388	10916.69	534.5146	535.9171
SDEV	2.5739	57.004	9.4817	8.8969	198.39	10.3392	13.7775
%RSD	.4755987	2.207374	1.730710	1.689693	1.817313	1.934313	2.570817
#1	538.4806	2516.669	536.9719	516.3129	10688.83	522.6072	520.0209
#2	543.6019	2613.282	554.3659	532.5056	11051.07	541.2166	543.3159
#3	541.4932	2617.396	552.2106	530.7977	11010.17	539.7199	544.4145
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	3120.000	660.0000	660.0000	13200.00	660.0000	660.0000
LOW	440.0000	2080.000	440.0000	440.0000	8800.000	440.0000	440.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	535.8178	542.9042	5126.665	11078.67	5731.252	540.8873	11013.22
SDEV	11.3999	5.1114	115.990	168.11	110.343	10.3114	244.69
%RSD	2.127568	.9414968	2.262487	1.517402	1.925283	1.906380	2.221756
#1	522.6545	537.0088	4992.735	10884.63	5603.840	528.9810	10737.72
#2	542.3324	545.6085	5194.560	11171.03	5795.147	546.9047	11096.68
#3	542.4664	546.0955	5192.699	11180.34	5794.771	546.7763	11205.25
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	660.0000	6120.000	13200.00	7200.000	660.0000	13200.00
LOW	440.0000	440.0000	4080.000	8800.000	4800.000	440.0000	8800.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	532.5187	1080.462	535.7605	1095.482	1065.987	1028.689	1084.005
SDEV	10.9737	21.130	11.7812	22.838	13.294	11.199	19.158
%RSD	2.060711	1.955656	2.198967	2.084731	1.247098	1.088715	1.767345
#1	520.1082	1056.065	522.2174	1069.217	1052.294	1019.065	1062.109
#2	540.9390	1092.352	541.4215	1106.565	1066.824	1026.021	1097.684
#3	536.5088	1092.968	543.6427	1110.663	1078.842	1040.982	1092.221
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	1320.000	660.0000	1320.000	1320.000	1320.000	1320.000
LOW	440.0000	880.0000	440.0000	880.0000	880.0000	880.0000	880.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1028.384	1068.197	1064.972	1006.433	1039.801	1117.345	1094.553
SDEV	14.691	12.369	13.861	18.119	8.066	20.186	20.678
%RSD	1.428574	1.157931	1.301583	1.800311	.7756803	1.806586	1.889182
#1	1012.318	1054.620	1051.220	988.5803	1034.285	1094.038	1072.150
#2	1041.134	1071.145	1064.756	1005.912	1036.060	1128.821	1112.908
#3	1031.699	1078.825	1078.940	1024.807	1049.057	1129.178	1098.600
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH	1320.000						
LOW	880.0000						

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1068.101	1028.655	114935.7
SDEV	20.506	21.004	1315.9
%RSD	1.919818	2.041847	1.144935
#1	1044.424	1004.506	116424.8
#2	1079.899	1038.797	114453.2
#3	1079.981	1042.664	113929.1
ERRORS	NOCHECK	LC PASS	NOCHECK
HIGH		1320.000	
LOW		880.0000	

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METHOD: P4S12014 SAMPLE NAME: 1403004-04 OPERATOR:
RUN TIME: 03/17/14 20:38:16
COMMENT: SDG:1403004 CLIENTID:GP-11-24-2 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1853961	140.6373	24.99504	1.338456	7407.758	-.625597	-2.90492
SDEV	.6157793	8.9414	.09760	.448759	32.591	.425672	1.10085
%RSD	332.1426	6.357790	.3904819	33.52815	.4399639	68.04263	37.89620
#1	-.409946	149.7619	25.08175	1.658393	7427.646	-.160285	-1.63440
#2	.8197572	131.8910	24.88934	.8254786	7425.482	-.995405	-3.50523
#3	.1463765	140.2589	25.01403	1.531497	7370.145	-.721099	-3.57512
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.76839	-.021894	117.2368	1831.942	10055.99	203.9830	14150.48
SDEV	.20197	.554478	18.1143	4.361	57.23	1.0581	57.91
%RSD	11.42118	2532.575	15.45106	.2380267	.5691174	.5186986	.4092549
#1	-1.70603	.2870650	138.1416	1836.960	10121.48	205.2011	14212.53
#2	-1.99419	-.662022	106.1753	1829.069	10030.94	203.4560	14141.06
#3	-1.60495	.3092750	107.3935	1829.799	10015.56	203.2920	14097.86
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.505666	.7174857	.3835803	7.867169	.7739089	.8516743	1.214273
SDEV	.638284	.4765037	.5130916	.352594	.5804784	2.271002	3.062660
%RSD	25.47362	66.41299	133.7638	4.481841	75.00603	266.6515	252.2217
#1	2.750611	.1788542	-.031438	8.273901	.7484988	3.012775	4.350126
#2	1.781191	1.084079	.9572628	7.648004	.2065528	-1.51522	-1.76953
#3	2.985198	.8895243	.2249158	7.679603	1.366675	1.057468	1.062224
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.378782	1.681780	.3204961	-5.79021	4.167531	.0029763	.5714158
SDEV	4.618915	2.059606	1.174885	.82395	3.068563	1.965121	.4226225
%RSD	334.9996	122.4658	366.5833	14.23006	73.63023	66025.22	73.96059
#1	5.845165	-.645571	1.444331	-4.83907	6.932703	-.561966	1.051344
#2	-3.37888	2.421717	-.899526	-6.28550	.8662356	2.188689	.4080101
#3	1.670059	3.269194	.4166839	-6.24606	4.703654	-1.61779	.2548930
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2.334482	23.53926	114085.3
SDEV	.190415	1.35694	911.2
%RSD	8.156631	5.764596	.7987008
#1	2.519063	25.08987	113059.1
#2	2.138725	22.95890	114799.4
#3	2.345658	22.56901	114397.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 03/17/14 20:45:28
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.326338	224.2933	201.1012	6.057254	4947.173	4.982697	18.95221
SDEV	.175781	5.4363	.9094	.165193	19.276	.048025	.57798
%RSD	3.300222	2.423749	.4522151	2.727185	.3896277	.9638352	3.049686
#1	5.502141	221.1893	200.0515	6.234961	4925.833	5.028723	18.91157
#2	5.326296	221.1202	201.6522	6.028431	4952.368	4.986473	19.54945
#3	5.150578	230.5705	201.5999	5.908370	4963.319	4.932896	18.39563
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.397674	6.030713	197.4422	5173.864	4896.115	10.21776	5019.756
SDEV	.790402	.337305	7.8006	24.605	35.206	.15636	142.410
%RSD	9.412152	5.593120	3.950832	.4755686	.7190543	1.530242	2.836991
#1	7.797200	6.104000	188.9889	5146.638	4855.511	10.08082	4941.192
#2	8.102673	5.662789	204.3625	5194.510	4914.718	10.18433	5184.144
#3	9.293149	6.325349	198.9752	5180.446	4918.118	10.38813	4933.933
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.44512	31.15973	19.07966	32.44186	10.85835	10.15259	29.20609
SDEV	.83622	1.04693	.57272	.17583	.31768	1.25000	.98212
%RSD	7.306302	3.359888	3.001718	.5419930	2.925633	12.31218	3.362719
#1	10.59923	31.90855	18.42302	32.62014	10.96004	11.56650	28.13938
#2	11.46484	31.60722	19.33995	32.43686	10.50228	9.696914	29.40605
#3	12.27131	29.96342	19.47600	32.26858	11.11273	9.194346	30.07284
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.58687	5.854670	13.35628	5.740684	12.35512	51.19147	50.34960
SDEV	1.66691	2.242202	1.59403	4.406967	3.19081	1.27334	.88972
%RSD	15.74510	38.29768	11.93470	76.76728	25.82582	2.487411	1.767075
#1	10.04598	5.388379	13.74154	3.638008	15.52470	50.39485	50.37805
#2	9.257576	8.293354	11.60493	10.80518	9.143495	50.51952	51.22475
#3	12.45706	3.882277	14.72238	2.778865	12.39717	52.66003	49.44600
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	49.30145	48.03864	115373.5
SDEV	.47880	.97584	386.0
%RSD	.9711770	2.031371	.3345852
#1	48.92803	46.93852	115306.0
#2	49.13506	48.37758	115025.7
#3	49.84124	48.79982	115788.9
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

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METHOD: P4S12014 SAMPLE NAME: CCV1 OPERATOR:
RUN TIME: 03/17/14 20:52:42
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	102.0772	50693.83	1020.667	964.0748	50108.70	980.0571	982.9199
SDEV	.1964	482.70	8.436	10.8156	518.39	8.5920	9.7527
%RSD	.1923946	.9521881	.8265412	1.121865	1.034528	.8766793	.9922188
#1	102.2454	50155.52	1016.517	951.9385	49511.39	970.2891	971.7474
#2	101.8614	50837.80	1015.109	972.6944	50441.11	983.4375	987.2824
#3	102.1249	51088.16	1030.374	967.5915	50373.61	986.4448	989.7299
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	986.0754	997.4509	24900.46	50380.86	49589.67	1001.360	50601.46
SDEV	13.7259	2.9099	248.43	352.62	491.47	11.316	368.63
%RSD	1.391970	.2917337	.9976757	.6999168	.9910818	1.130060	.7285050
#1	970.9888	995.5817	24628.97	50054.31	49047.27	990.1246	50181.12
#2	989.4123	995.9673	24955.99	50333.50	49716.31	1001.200	50753.52
#3	997.8252	1000.803	25116.43	50754.77	50005.43	1012.755	50869.74
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	988.6398	983.6060	975.3383	1112.630	983.4600	995.0892	1044.524
SDEV	8.8016	6.4516	11.9119	10.542	6.8895	12.6608	11.570
%RSD	.8902743	.6559148	1.221305	.9474872	.7005348	1.272328	1.107681
#1	979.0278	977.8188	961.5839	1100.716	976.4713	982.2788	1033.305
#2	990.5865	982.4368	982.1555	1116.422	983.6629	995.3939	1043.853
#3	996.3051	990.5622	982.2756	1120.751	990.2457	1007.595	1056.416
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	990.4666	997.3249	976.5380	976.9499	1004.145	1026.248	1010.362
SDEV	9.3427	7.9390	6.4196	16.3738	11.342	6.906	11.267
%RSD	.9432641	.7960307	.6573857	1.676009	1.129469	.6729137	1.115121
#1	979.9944	988.7716	970.3304	958.5226	994.1390	1018.823	998.4868
#2	997.9467	998.7455	976.1330	982.4998	1001.831	1027.441	1011.698
#3	993.4588	1004.458	983.1504	989.8275	1016.465	1032.480	1020.901
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	988.8261	996.2878	114033.6
SDEV	13.9589	10.8479	707.3
%RSD	1.411662	1.088830	.6202908
#1	972.8804	984.8984	114745.1
#2	998.8369	997.4673	114025.0
#3	994.7609	1006.498	113330.5
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

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METHOD: P4S12014 SAMPLE NAME: CCB1 OPERATOR:
RUN TIME: 03/17/14 20:59:55
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.361119	-3.98278	.3736326	1.596769	31.35242	.0049370	-1.62684
SDEV	.987007	2.75032	.1400692	.710926	11.87465	.5740617	2.70266
%RSD	273.3192	69.05534	37.48848	44.52277	37.87474	11627.73	166.1289
#1	-1.40543	-6.42839	.3333170	2.348715	22.23139	-.195599	-3.99082
#2	.5563059	-1.00540	.5294384	1.506012	44.77930	-.441957	-2.20924
#3	-.234228	-4.51455	.2581425	.9355797	27.04658	.6523666	1.319534
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.33472	.4268399	10.87642	15.39735	24.02654	.3676782	-6.47763
SDEV	.45744	1.169230	21.58219	11.40457	7.41684	.1378488	210.3982
%RSD	34.27214	273.9270	198.4309	74.06840	30.86936	37.49170	3248.073
#1	-1.47851	.0216909	6.029992	14.96329	25.57787	.2960912	-238.337
#2	-.822664	1.744757	34.46979	27.01276	30.54502	.5265927	172.2881
#3	-1.70299	-.485928	-7.87051	4.216011	15.95674	.2803508	46.61594
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8440640	1.678492	-.204499	-.432344	.5505158	-.401922	-.394755
SDEV	.7431669	.487262	.594169	.460326	.8610311	1.041129	5.259625
%RSD	88.04627	29.02972	290.5484	106.4722	156.4044	259.0375	1332.377
#1	.7455525	1.118503	-.798856	-.403723	.3110548	.1709406	-4.93638
#2	1.631574	1.911226	.3894819	.0130040	1.505931	.2269719	5.368031
#3	.1550660	2.005746	-.204124	-.906313	-.165438	-1.60368	-1.61591
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.414702	-2.70153	2.173963	-1.07885	-.064071	-.590452	1.651008
SDEV	4.135951	1.11554	1.847597	1.01907	1.168481	.978777	1.055829
%RSD	292.3550	41.29295	84.98749	94.45920	1823.730	165.7674	63.95059
#1	-1.55116	-2.34674	1.637821	-.043775	.2780343	.5338234	2.759818
#2	6.139367	-3.95132	4.230337	-1.11164	.8951737	-1.05255	1.535555
#3	-.344105	-1.80653	.6537315	-2.08113	-1.36542	-1.25263	.6576499
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.3327376	1.370846	115441.9
SDEV	.5770395	1.381601	2751.9
%RSD	173.4218	100.7845	2.383801
#1	.3129055	2.868225	116958.7
#2	.9194375	1.098826	117101.6
#3	-.234130	.1454876	112265.3
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

METHOD: P4S12014 SAMPLE NAME: 4031308-DUP1 OPERATOR:
RUN TIME: 03/17/14 21:07:08
COMMENT: SDG:1403004 CLIENTID:GP-11-24-2D 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1464247	117.1620	24.65123	2.487980	7355.792	-.995098	-4.50934
SDEV	.9296792	6.1326	.57240	.523966	189.376	.308199	2.00854
%RSD	634.9197	5.234298	2.321982	21.05988	2.574522	30.97166	44.54173
#1	-.907727	123.0981	24.99314	1.897893	7468.078	-.730307	-2.94924
#2	.8492182	110.8501	23.99041	2.898731	7137.145	-1.33341	-6.77560
#3	.4977827	117.5379	24.97012	2.667316	7462.151	-.921581	-3.80319
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.51073	1.045232	101.1018	1802.591	9912.790	201.4063	13988.16
SDEV	.63859	.234051	12.6969	32.776	236.987	5.5341	469.28
%RSD	42.27010	22.39223	12.55855	1.818288	2.390722	2.747731	3.354830
#1	-1.25211	1.258637	103.9193	1811.609	10060.56	205.2739	14120.55
#2	-2.23806	.7949208	87.23280	1766.250	9639.440	195.0671	13466.91
#3	-1.04202	1.082137	112.1533	1829.914	10038.37	203.8778	14377.02
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.107206	.0646627	-.048282	7.202881	1.692546	4.863559	3.008754
SDEV	.221853	1.267030	.181029	.178100	.428010	3.591671	1.991929
%RSD	10.52831	1959.445	374.9389	2.472627	25.28794	73.84860	66.20447
#1	2.137794	.9296311	-.178102	7.406705	2.013417	8.220906	.9057548
#2	1.871645	.6540570	-.125259	7.077272	1.206574	1.076270	3.253514
#3	2.312177	-1.38970	.1585136	7.124666	1.857647	5.293502	4.866993
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.267338	-.689057	2.881407	-2.06165	8.320868	-1.93007	.1613161
SDEV	1.552784	1.357560	1.306591	5.95889	2.830100	.43749	.3312606
%RSD	580.8310	197.0171	45.34560	289.0352	34.01208	22.66713	205.3487
#1	-.920032	-1.33824	3.686576	1.653857	11.49940	-2.01004	.4095701
#2	-1.38724	.8712085	1.373853	-8.93484	6.074216	-1.45811	.2892032
#3	1.505256	-1.60014	3.583793	1.096036	7.388984	-2.32206	-.214825
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2.220613	23.05260	115780.4
SDEV	.123331	.91505	2078.1
%RSD	5.553921	3.969410	1.794858
#1	2.160299	23.12459	114476.9
#2	2.139047	22.10368	118176.9
#3	2.362494	23.92953	114687.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031308-MS1 OPERATOR:
RUN TIME: 03/17/14 21:14:21
COMMENT: SDG:1403004 CLIENTID:GP-11-24-2S 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	544.3616	2922.361	591.4680	535.3419	18893.93	543.9962	549.9164
SDEV	1.0165	8.685	1.5486	3.0411	66.84	2.3018	3.1478
%RSD	.1867374	.2971760	.2618238	.5680717	.3537522	.4231301	.5724227
#1	543.2482	2932.188	593.2557	538.7435	18970.49	543.5367	547.7872
#2	545.2402	2919.176	590.6121	534.3965	18864.06	546.4931	553.5322
#3	544.5963	2915.718	590.5363	532.8858	18847.23	541.9588	548.4297
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	556.9515	552.2826	5402.092	13115.84	16442.00	775.6339	25901.21
SDEV	2.1741	.8484	18.930	12.73	59.01	6.5207	246.04
%RSD	.3903512	.1536138	.3504263	.0970888	.3588839	.8406991	.9499164
#1	555.8047	551.9091	5381.030	13102.33	16396.33	775.5019	25924.51
#2	559.4589	553.2537	5417.686	13117.58	16508.62	782.2196	25644.35
#3	555.5911	551.6851	5407.561	13127.62	16421.04	769.1801	26134.77
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	546.8182	1091.417	551.5340	1120.998	1083.506	1056.673	1130.903
SDEV	1.6183	3.643	3.5124	1.475	3.882	7.733	5.521
%RSD	.2959560	.3337780	.6368507	.1315704	.3582466	.7318166	.4881576
#1	545.7827	1087.407	555.4981	1119.414	1081.304	1047.860	1136.922
#2	548.6831	1094.522	550.2947	1122.332	1087.988	1062.321	1129.713
#3	545.9888	1092.322	548.8092	1121.249	1081.227	1059.838	1126.075
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1058.938	1093.594	1078.560	1028.128	1070.924	1163.510	1135.012
SDEV	3.735	5.595	8.613	4.961	11.134	8.986	3.194
%RSD	.3527104	.5116072	.7985821	.4825522	1.039679	.7723082	.2814371
#1	1057.829	1096.772	1073.671	1025.616	1058.965	1153.138	1136.487
#2	1055.884	1087.134	1088.505	1024.926	1080.990	1168.968	1137.202
#3	1063.102	1096.876	1073.505	1033.843	1072.816	1168.422	1131.347
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1107.427	1070.676	114212.9
SDEV	4.030	2.362	163.8
%RSD	.3639453	.2206285	.1433757
#1	1111.641	1068.049	114328.7
#2	1103.610	1072.625	114284.5
#3	1107.029	1071.354	114025.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031308-MSD1 OPERATOR:
RUN TIME: 03/17/14 21:21:34
COMMENT: SDG:1403004 CLIENTID:GP-11-24-2SD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	540.6348	2973.544	583.5525	523.5761	18354.72	534.2750	538.9056
SDEV	.8142	7.739	2.2249	1.5472	59.56	1.2099	.3522
%RSD	.1505972	.2602519	.3812749	.2955050	.3244961	.2264536	.0653545
#1	540.9667	2970.964	581.0661	524.1182	18348.03	533.6437	538.9859
#2	541.2307	2967.424	585.3557	521.8308	18298.79	533.5112	539.2108
#3	539.7071	2982.242	584.2358	524.7793	18417.35	535.6699	538.5203
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	539.9975	540.6243	5330.781	12854.77	15882.37	752.3010	25034.42
SDEV	3.4368	.7554	32.501	14.26	46.41	3.9253	159.72
%RSD	.6364493	.1397208	.6096932	.1109588	.2921796	.5217776	.6380083
#1	536.2928	540.4406	5295.486	12838.79	15833.25	747.8326	25122.00
#2	540.6179	541.4547	5337.383	12866.22	15888.40	755.1933	25131.20
#3	543.0819	539.9778	5359.475	12859.29	15925.47	753.8772	24850.07
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	535.4965	1078.921	539.7989	1101.824	1058.662	1033.280	1114.890
SDEV	.9718	4.227	2.8836	1.223	5.674	3.917	2.899
%RSD	.1814736	.3917655	.5341934	.1109589	.5359143	.3791001	.2599840
#1	535.9824	1076.836	540.1943	1101.225	1053.445	1034.509	1111.584
#2	534.3776	1076.143	536.7380	1101.017	1064.702	1036.435	1116.090
#3	536.1296	1083.786	542.4643	1103.231	1057.838	1028.896	1116.995
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1039.602	1069.616	1053.282	1011.067	1044.370	1136.290	1118.264
SDEV	3.616	2.122	9.416	7.063	3.779	2.998	.231
%RSD	.3478091	.1983612	.8940089	.6985921	.3618620	.2638271	.0206348
#1	1043.773	1070.464	1045.037	1017.645	1042.929	1134.190	1118.044
#2	1037.337	1067.201	1063.543	1011.953	1048.658	1139.723	1118.504
#3	1037.698	1071.182	1051.264	1003.602	1041.524	1134.956	1118.245
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1082.283	1052.071	114166.9
SDEV	4.424	3.410	310.7
%RSD	.4087461	.3240995	.2721882
#1	1083.354	1048.543	114493.5
#2	1077.422	1052.322	114132.3
#3	1086.073	1055.349	113874.9
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: SDI1403004-04 OPERATOR:
RUN TIME: 03/17/14 21:28:47
COMMENT: SDG:1403004 CLIENTID:GP-11-24-2L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5173372	13.91046	5.219780	1.468125	1541.068	-.340120	-2.26410
SDEV	.0676342	8.03203	.025939	.287636	45.586	.130718	.90941
%RSD	13.07353	57.74092	.4969418	19.59210	2.958083	38.43290	40.16650
#1	.5564128	7.333749	5.201023	1.188143	1593.415	-.228438	-1.29273
#2	.5563589	22.86217	5.208935	1.453382	1519.678	-.308026	-2.40431
#3	.4392399	11.53545	5.249382	1.762849	1510.110	-.483896	-3.09527
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.82016	.0220495	24.07760	379.4252	2075.883	41.56528	2821.378
SDEV	.27372	.4976457	15.56743	5.4625	16.124	.45179	142.734
%RSD	15.03801	2256.944	64.65520	1.439666	.7767209	1.086940	5.059006
#1	-2.13543	.5961143	40.32482	380.3502	2092.182	41.97930	2813.300
#2	-1.64321	-.242882	22.61476	384.3661	2075.526	41.63315	2967.979
#3	-1.68183	-.287084	9.293236	373.5593	2059.940	41.08340	2682.855
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7445002	2.922991	-.068176	1.205201	1.073457	-1.90609	-.515975
SDEV	1.062856	.346332	.172361	.020343	.663223	2.45494	1.582047
%RSD	142.7610	11.84855	252.8165	1.687912	61.78381	128.7946	306.6128
#1	-.444093	2.755349	-.262656	1.225763	.8147387	-.099131	-2.01231
#2	1.603555	2.692380	.0656947	1.204756	.5785863	-4.70110	1.139718
#3	1.074038	3.321245	-.007569	1.185085	1.827046	-.918033	-.675330
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9890391	-.334450	1.776216	.3687620	-3.04191	-1.56362	1.983233
SDEV	.3166222	1.545408	.654369	5.688086	3.71075	1.24345	.223580
%RSD	32.01311	462.0738	36.84063	1542.482	121.9872	79.52361	11.27351
#1	1.354492	.3160930	1.063543	6.630393	-3.45895	-1.51634	1.983963
#2	.8153968	-2.09878	1.915131	-1.04499	-6.52652	-.344489	1.759289
#3	.7972281	.7793334	2.349974	-4.47912	.8597349	-2.83003	2.206447
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.4399632	5.777116	115050.9
SDEV	.1279879	.728673	904.0
%RSD	29.09058	12.61309	.7857438
#1	.4690448	6.479890	114134.4
#2	.2999370	5.826411	115076.5
#3	.5509078	5.025047	115941.9
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031308-PS1 OPERATOR:
RUN TIME: 03/17/14 21:36:00
COMMENT: SDG:1403004 CLIENTID:GP-11-24-2A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	114.2073	4647.073	4654.902	111.4731	7425.179	109.8506	443.9300
SDEV	.3984	52.901	54.452	1.5658	105.756	1.6898	5.7518
%RSD	.3488032	1.138368	1.169772	1.404642	1.424295	1.538282	1.295649
#1	114.4216	4675.365	4677.871	112.3135	7464.179	111.0914	448.8108
#2	114.4526	4586.042	4592.730	109.6666	7305.460	107.9261	437.5888
#3	113.7476	4679.811	4694.106	112.4393	7505.896	110.5344	445.3904
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	223.4674	113.0438	4704.991	1791.628	9890.706	426.0154	14189.81
SDEV	1.5241	.4184	30.680	18.673	86.497	1.7489	301.19
%RSD	.6820417	.3701563	.6520793	1.042213	.8745286	.4105293	2.122561
#1	223.2278	112.6477	4724.904	1810.601	9964.589	427.8148	14476.21
#2	222.0773	113.4815	4669.660	1773.271	9795.560	424.3217	13875.74
#3	225.0972	113.0023	4720.410	1791.013	9911.970	425.9097	14217.48
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	223.0559	663.2091	449.7301	690.7544	219.0821	213.5365	683.3406
SDEV	3.3539	13.2027	7.2024	7.4966	3.6386	3.5510	10.1893
%RSD	1.503623	1.990731	1.601503	1.085272	1.660858	1.662927	1.491096
#1	225.6438	675.8710	452.4667	698.6371	222.0715	217.0835	690.5058
#2	219.2668	649.5250	441.5605	683.7153	215.0306	209.9816	671.6762
#3	224.2571	664.2312	455.1632	689.9108	220.1441	213.5444	687.8398
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	219.9334	220.6471	218.3006	204.7477	217.9242	1134.319	1133.892
SDEV	2.2944	5.7021	2.6557	6.1690	3.0975	14.685	14.432
%RSD	1.043229	2.584262	1.216520	3.012986	1.421362	1.294620	1.272790
#1	221.6888	224.7103	220.7540	208.2353	221.5009	1147.129	1138.706
#2	217.3372	214.1287	215.4807	197.6248	216.1506	1118.292	1117.669
#3	220.7741	223.1023	218.6671	208.3830	216.1212	1137.535	1145.303
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1118.218	1077.155	115541.5
SDEV	16.918	11.905	1389.0
%RSD	1.512919	1.105259	1.202192
#1	1122.921	1084.540	114107.8
#2	1099.446	1063.420	116881.1
#3	1132.286	1083.504	115635.6
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403004-05 OPERATOR:
RUN TIME: 03/17/14 21:43:14
COMMENT: SDG:1403004 CLIENTID:GP-11-24-2-DUP 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8198583	363.8084	28.20194	1.746499	8066.639	-.274933	-.809940
SDEV	.9636331	.1262	.22264	.248166	25.519	.023717	.284103
%RSD	117.5365	.0346946	.7894478	14.20934	.3163524	8.626318	35.07702
#1	-.263564	363.7491	28.18708	2.032339	8086.123	-.292034	-1.10950
#2	1.141945	363.9534	27.98711	1.586024	8076.042	-.247859	-.544347
#3	1.581194	363.7228	28.43164	1.621135	8037.753	-.284907	-.775973
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.909653	2.053905	304.8858	1984.591	10551.15	218.1404	14927.47
SDEV	.756481	.246010	3.7860	1.837	12.01	.4617	74.91
%RSD	83.16148	11.97767	1.241772	.0925700	.1137929	.2116647	.5018072
#1	-1.56946	1.788797	300.5782	1983.533	10563.67	217.7046	14977.32
#2	-1.07549	2.274828	307.6854	1983.527	10550.06	218.6243	14841.33
#3	-.084012	2.098092	306.3939	1986.712	10539.73	218.0921	14963.75
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.839317	2.599424	.4118107	11.50452	.7384296	1.514549	3.718368
SDEV	.661246	.729670	.1787566	.11444	.7682071	.533000	1.654226
%RSD	17.22300	28.07046	43.40747	.9947606	104.0326	35.19199	44.48797
#1	3.203415	1.947177	.2088446	11.42019	-.128097	.9480844	4.138843
#2	3.791253	3.387445	.5458130	11.45858	1.007402	2.006173	5.121779
#3	4.523283	2.463649	.4807746	11.63480	1.335983	1.589388	1.894481
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1107035	.9342805	.6404962	-.934975	2.737369	-.209421	1.444673
SDEV	2.493535	.7586727	1.507305	3.458954	.979790	.393038	.935747
%RSD	2252.444	81.20395	235.3339	369.9515	35.79312	187.6780	64.77228
#1	.2447161	1.794692	-1.08821	-4.06404	3.450283	-.435793	.5082579
#2	-2.44714	.3614098	1.329762	2.779228	1.620121	-.436890	2.379751
#3	2.534530	.6467397	1.679935	-1.52011	3.141703	.2444190	1.446009
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	4.983157	25.22288	114417.9
SDEV	.146049	.38816	78.9
%RSD	2.930860	1.538905	.0689785
#1	4.850134	25.24458	114370.8
#2	5.139441	25.59973	114509.1
#3	4.959895	24.82433	114374.0
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403004-07 OPERATOR:
RUN TIME: 03/17/14 21:50:27
COMMENT: SDG:1403004 CLIENTID:GP-11-102-5 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4000350	871.3778	13.19765	1.887860	10779.81	-.494574	-2.03488
SDEV	.2624555	5.3434	.06000	.617376	63.42	.214332	.43959
%RSD	65.60813	.6132184	.4546281	32.70242	.5883049	43.33677	21.60292
#1	.7026219	867.9745	13.15582	2.561901	10851.55	-.282555	-1.63260
#2	.2633609	868.6224	13.26639	1.751846	10756.65	-.490019	-1.96793
#3	.2341221	877.5366	13.17073	1.349832	10731.23	-.711147	-2.50410
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.215606	.5525650	1501.991	1531.032	1500.546	62.23568	5278.808
SDEV	.214406	.4195330	3.769	7.412	9.438	.19670	84.694
%RSD	99.44373	75.92464	.2509559	.4841122	.6289997	.3160530	1.604406
#1	-.450657	.9058940	1501.652	1539.395	1511.099	62.40858	5280.248
#2	-.165410	.0888868	1505.918	1528.426	1497.626	62.27677	5193.403
#3	-.030750	.6629142	1498.403	1525.276	1492.912	62.02168	5362.772
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.191271	2.493108	.9892334	3.164843	1.195466	.3932548	.2411574
SDEV	.622136	2.642239	.1355729	.232786	1.326928	2.395729	1.625536
%RSD	14.84361	105.9817	13.70484	7.355369	110.9967	609.2053	674.0559
#1	3.479297	5.440616	.9881217	2.897033	-.003643	-2.21193	-.219663
#2	4.464356	.3370247	1.125359	3.278811	2.621061	2.501628	-1.10422
#3	4.630161	1.701683	.8542198	3.318686	.9689811	.8900642	2.047353
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2064978	.2045544	1.690044	-3.45924	2.316511	-.302182	.8538367
SDEV	1.090388	.3578936	2.149564	1.67746	3.138023	.359719	.6408323
%RSD	528.0386	174.9626	127.1898	48.49200	135.4634	119.0402	75.05326
#1	-.672850	.6101393	-.310218	-5.10682	-.766756	-.068849	1.249191
#2	-.134217	-.066893	3.962904	-3.51748	5.506565	-.716446	.1144610
#3	1.426561	.0704168	1.417446	-1.75343	2.209724	-.121252	1.197858
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	10.86326	21.43860	115198.1
SDEV	.05724	.37973	173.3
%RSD	.5268757	1.771254	.1503963
#1	10.88503	21.03455	115265.5
#2	10.79834	21.49313	115001.3
#3	10.90642	21.78811	115327.6
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403005-01 OPERATOR:
RUN TIME: 03/17/14 21:57:40
COMMENT: SDG:1403005 CLIENTID:GP-11-24-2 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0976110	-22.2777	22.24157	1.641358	7204.123	-.299372	-2.13570
SDEV	.3822016	5.3589	.07129	.071192	22.564	.139899	.47461
%RSD	391.5559	24.05513	.3205112	4.337354	.3132102	46.73064	22.22267
#1	.5271088	-16.1256	22.32228	1.720518	7180.577	-.217909	-2.01778
#2	-.029236	-24.7771	22.18721	1.620975	7206.235	-.460911	-2.65815
#3	-.205040	-25.9302	22.21521	1.582582	7225.556	-.219297	-1.73116
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.12379	.5152637	-47.9413	1742.002	9781.523	187.1223	13756.76
SDEV	.36198	.4284409	2.6285	10.344	22.228	.6505	163.84
%RSD	17.04423	83.14983	5.482701	.5938231	.2272451	.3476102	1.191009
#1	-2.52335	.0220089	-45.8155	1748.555	9794.402	186.4926	13831.34
#2	-2.03029	.7948509	-47.1280	1730.076	9755.856	187.0827	13568.89
#3	-1.81772	.7289313	-50.8803	1747.374	9794.310	187.7917	13870.05
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.165680	-2.00635	-.019066	7.426439	1.426787	4.269513	2.883517
SDEV	.417976	.64107	.354205	.273790	.943364	1.275157	2.334881
%RSD	19.29997	31.95222	1857.766	3.686693	66.11809	29.86657	80.97338
#1	2.273588	-1.56509	-.152703	7.655671	2.110820	3.491810	5.184283
#2	2.519121	-2.74170	-.287011	7.123274	1.818943	3.575586	2.950315
#3	1.704331	-1.71225	.3825160	7.500371	.3505972	5.741142	.5159537
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.405910	-.255924	2.266723	-.800438	6.800582	-1.92377	.2019681
SDEV	1.274164	2.124065	.443087	2.353304	.749921	.45967	.2253462
%RSD	313.9033	829.9591	19.54746	294.0022	11.02730	23.89402	111.5751
#1	.8307083	1.660811	2.335328	-2.44356	6.454939	-1.43778	-.056229
#2	-1.71456	.1109429	2.671505	-1.85322	6.285815	-1.98195	.3031078
#3	-.333874	-2.53953	1.793335	1.895464	7.660994	-2.35157	.3590252
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.144903	21.70010	114918.3
SDEV	.035154	.42906	426.6
%RSD	24.26013	1.977218	.3712167
#1	-.172104	22.06888	114696.6
#2	-.157395	21.22919	115410.1
#3	-.105209	21.80223	114648.3
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031308-DUP2 OPERATOR:
RUN TIME: 03/17/14 22:04:53
COMMENT: SDG:1403005 CLIENTID:GP-11-24-2D 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3416720	-1.04049	23.81074	1.235001	7576.485	-.627794	-3.66387
SDEV	.6943295	18.36715	.32684	1.208219	26.939	.410541	1.47866
%RSD	203.2152	1765.244	1.372643	97.83137	.3555551	65.39432	40.35791
#1	1.112706	20.01162	24.18615	1.512142	7607.279	-.159139	-1.97568
#2	-.234171	-9.33976	23.65652	2.280570	7557.280	-.800345	-4.28668
#3	.1464811	-13.7933	23.58954	-.087709	7564.896	-.923897	-4.72923
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.62849	-.309292	-43.5053	1835.609	10336.07	199.0241	14623.06
SDEV	.66597	.797286	18.7665	4.576	12.52	1.0283	205.81
%RSD	40.89485	257.7782	43.13609	.2493125	.1211496	.5166755	1.407450
#1	-.859775	.2871754	-22.5473	1840.327	10342.48	200.2021	14831.07
#2	-1.99493	-1.21484	-58.7542	1831.189	10344.08	198.5641	14618.59
#3	-2.03077	-.000207	-49.2146	1835.310	10321.64	198.3061	14419.51
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.663162	1.430862	-.261273	3.664631	.6800633	1.136950	2.927627
SDEV	.552186	1.764034	.399260	.160343	.6530520	.674697	.404926
%RSD	20.73424	123.2847	152.8130	4.375417	96.02812	59.34271	13.83119
#1	3.108414	2.550534	.1930370	3.794012	1.420124	1.479135	3.373715
#2	2.835788	2.344650	-.556325	3.485244	.4353702	1.571992	2.583261
#3	2.045286	-.602598	-.420533	3.714636	.1846956	.3597240	2.825903
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.057655	1.866279	.0877004	-2.48429	2.944749	-.289523	.5941169
SDEV	3.234781	1.409896	.2966318	6.74588	2.667854	1.724769	.1786227
%RSD	305.8446	75.54584	338.2330	271.5422	90.59697	595.7279	30.06524
#1	3.794893	3.408235	.4274133	4.613584	-.085846	-2.09268	.4102270
#2	-2.51198	1.547613	-.120061	-3.25435	3.981441	1.344383	.7669596
#3	1.890049	.6429894	-.044251	-8.81209	4.938652	-.120275	.6051642
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.170775	22.52756	115069.1
SDEV	.208216	.15041	888.7
%RSD	121.9243	.6676621	.7722879
#1	.0633804	22.60443	114166.1
#2	-.240604	22.35426	115098.7
#3	-.335101	22.62401	115942.7
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031308-MS2 OPERATOR:
RUN TIME: 03/17/14 22:12:06
COMMENT: SDG:1403005 CLIENTID:GP-11-24-2S 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	542.4689	2576.838	584.2833	531.2601	18484.82	535.3447	539.6871
SDEV	1.4031	7.429	6.3150	1.1951	25.25	1.8313	3.5017
%RSD	.2586504	.2883011	1.080804	.2249632	.1366054	.3420806	.6488400
#1	543.2794	2572.925	587.6309	529.8801	18455.96	537.2579	541.7831
#2	540.8487	2572.183	588.2197	531.9476	18502.84	533.6080	541.6337
#3	543.2786	2585.405	576.9993	531.9528	18495.67	535.1682	535.6446
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	543.1716	544.4476	5121.878	12848.69	15924.80	741.5513	25372.92
SDEV	1.4821	.7136	30.178	39.65	64.21	2.8144	65.16
%RSD	.2728539	.1310605	.5891973	.3085772	.4032113	.3795270	.2568255
#1	543.9346	545.2123	5149.711	12894.46	15992.41	743.1252	25373.02
#2	544.1167	543.7995	5126.120	12826.52	15917.34	743.2266	25307.70
#3	541.4635	544.3312	5089.804	12825.08	15864.64	738.3020	25438.03
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	537.4159	1075.606	545.8274	1103.799	1062.161	1038.320	1116.328
SDEV	1.2772	2.853	2.3662	7.963	5.650	3.284	4.250
%RSD	.2376544	.2651996	.4335061	.7213979	.5319262	.3162392	.3807342
#1	538.7781	1073.240	543.9325	1111.835	1067.675	1037.164	1115.488
#2	536.2454	1078.773	545.0703	1103.649	1062.424	1042.025	1120.936
#3	537.2242	1074.804	548.4796	1095.911	1056.384	1035.770	1112.561
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1045.430	1071.860	1057.377	1017.809	1048.559	1119.472	1119.343
SDEV	4.441	5.669	5.687	3.015	6.258	3.326	1.136
%RSD	.4248157	.5288552	.5378730	.2962148	.5968144	.2971239	.1015134
#1	1049.829	1077.463	1062.877	1020.439	1045.514	1122.350	1120.288
#2	1040.947	1071.990	1057.737	1014.519	1055.757	1120.236	1119.660
#3	1045.514	1066.128	1051.519	1018.470	1044.407	1115.830	1118.082
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1086.683	1051.154	114724.9
SDEV	3.890	4.010	305.4
%RSD	.3579677	.3814539	.2662368
#1	1084.060	1050.431	114477.0
#2	1084.836	1047.555	114631.7
#3	1091.152	1055.476	115066.1
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: CCV1 OPERATOR:
RUN TIME: 03/17/14 22:19:20
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	103.0593	51103.31	1037.706	985.0726	50804.52	984.0893	993.7452
SDEV	.3835	104.09	3.085	2.2143	100.20	2.7779	8.5517
%RSD	.3721247	.2036856	.2973306	.2247897	.1972219	.2822788	.8605486
#1	103.4682	51028.31	1038.551	984.0123	50708.55	981.5053	984.0428
#2	103.0022	51059.47	1034.287	983.5878	50796.54	983.7355	1000.186
#3	102.7076	51222.15	1040.282	987.6177	50908.47	987.0271	997.0065
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1014.341	1004.963	25134.32	50323.11	50166.12	1017.505	50791.50
SDEV	7.076	1.912	90.92	194.61	148.36	7.833	188.42
%RSD	.6975666	.1902155	.3617392	.3867148	.2957333	.7698098	.3709708
#1	1012.734	1006.070	25047.69	50114.02	50050.61	1009.747	50592.27
#2	1008.207	1006.063	25126.26	50356.38	50114.32	1017.356	50815.40
#3	1022.082	1002.756	25229.00	50498.94	50333.44	1025.411	50966.83
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	992.3223	986.4552	998.3362	1122.397	988.7709	1003.554	1058.280
SDEV	1.7788	3.5321	7.7662	5.697	5.4812	5.351	5.014
%RSD	.1792606	.3580610	.7779177	.5075990	.5543429	.5332003	.4738193
#1	990.5070	982.6149	1004.953	1115.893	983.4540	997.5915	1053.290
#2	992.3975	987.1860	989.7860	1126.506	988.4561	1007.938	1058.232
#3	994.0623	989.5648	1000.269	1124.791	994.4028	1005.134	1063.319
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	999.4215	994.7328	985.7947	982.4354	1014.098	1023.176	1028.157
SDEV	3.8468	14.5719	3.9723	3.6019	7.106	6.067	3.259
%RSD	.3849076	1.464902	.4029526	.3666258	.7007604	.5929718	.3169994
#1	996.9677	986.7692	981.7991	980.9353	1005.907	1017.132	1024.720
#2	1003.855	985.8783	989.7432	986.5448	1018.618	1023.130	1028.548
#3	997.4419	1011.551	985.8417	979.8259	1017.769	1029.266	1031.204
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1005.966	997.1545	115440.9
SDEV	1.675	2.8958	511.1
%RSD	.1665307	.2904021	.4427546
#1	1004.943	993.8874	115936.4
#2	1005.056	998.1717	115470.7
#3	1007.899	999.4045	114915.5
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

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METHOD: P4S12014 SAMPLE NAME: CCB1 OPERATOR:
RUN TIME: 03/17/14 22:26:33
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7223226	-4.06886	.5291130	1.623899	44.23605	.1441979	-1.32320
SDEV	.3225596	7.43869	.2429586	.190321	13.25268	.3891482	.29129
%RSD	44.65588	182.8201	45.91810	11.72002	29.95901	269.8709	22.01447
#1	.3513926	.6227812	.8094882	1.821139	58.80454	.5119085	-1.21168
#2	.9369907	-.183668	.3804841	1.609211	32.89558	.1840119	-1.10414
#3	.8785847	-12.6457	.3973670	1.441348	41.00802	-.263327	-1.65378
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.676754	.6697985	21.14047	30.44209	25.31711	.5312214	33.63773
SDEV	.216993	.4132501	11.33075	17.51182	10.82143	.2174318	65.17907
%RSD	32.06382	61.69768	53.59742	57.52502	42.74353	40.93054	193.7677
#1	-.847602	.1987445	8.276309	50.22322	37.65870	.7653436	-16.3366
#2	-.432603	.8393198	29.63914	16.91919	20.83954	.4926888	9.888565
#3	-.750058	.9713313	25.50597	24.18386	17.45308	.3356320	107.3613
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.268095	1.471937	-.114011	-.450913	.7593821	1.609616	-1.22561
SDEV	.168045	2.480972	.503240	.211200	1.172246	1.955425	1.62658
%RSD	13.25176	168.5515	441.3944	46.83828	154.3683	121.4840	132.7162
#1	1.365390	.0887824	-.007624	-.449277	2.112367	-.344570	-.480518
#2	1.364841	4.336159	.3275290	-.240536	.0477774	1.607140	-.105038
#3	1.074054	-.009130	-.661939	-.662926	.1180016	3.566278	-3.09127
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8677423	-2.58143	2.427141	-.589550	2.707446	-.373463	1.768144
SDEV	.8497835	2.03879	.739834	3.260311	4.057347	1.369792	.854706
%RSD	97.93040	78.97893	30.48169	553.0172	149.8588	366.7813	48.33915
#1	1.832814	-.227576	3.280442	2.770929	-1.90009	1.061121	2.676315
#2	.5388588	-3.79263	1.964959	-3.73949	4.276342	-1.66765	1.648633
#3	.2315539	-3.72409	2.036024	-.800090	5.746086	-.513859	.9794834
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.3666283	1.596508	116473.4
SDEV	.1819841	.914234	283.5
%RSD	49.63721	57.26459	.2434385
#1	.3099301	2.441929	116229.9
#2	.5702121	.6262839	116405.7
#3	.2197428	1.721311	116784.7
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

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METHOD: P4S12014 SAMPLE NAME: 4031308-MSD2 OPERATOR:
RUN TIME: 03/17/14 22:33:47
COMMENT: SDG:1403005 CLIENTID:GP-11-24-2SD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	535.5010	2541.029	577.7519	523.3891	18321.92	528.5325	532.3040
SDEV	3.4135	5.739	4.5436	1.4006	66.12	2.2958	1.7769
%RSD	.6374328	.2258646	.7864292	.2676077	.3608533	.4343688	.3338198
#1	534.4085	2542.448	572.5154	521.8121	18249.22	525.9423	531.5397
#2	532.7676	2545.925	580.6506	524.4885	18378.44	530.3162	534.3352
#3	539.3270	2534.713	580.0898	523.8667	18338.11	529.3391	531.0371
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	539.2224	536.0519	5065.533	12719.12	15890.04	738.1683	25146.56
SDEV	3.9904	3.2924	4.782	20.90	25.23	4.7612	138.44
%RSD	.7400203	.6141866	.0943978	.1643321	.1587839	.6450014	.5505462
#1	541.5498	536.8818	5068.699	12696.95	15913.90	743.2689	25169.35
#2	541.5026	532.4239	5067.869	12721.94	15892.60	737.3948	25272.19
#3	534.6148	538.8498	5060.033	12738.47	15863.63	733.8412	24998.13
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	528.9995	1064.935	537.2083	1087.830	1050.363	1024.894	1096.545
SDEV	2.3768	5.023	3.3394	.678	8.797	4.338	4.828
%RSD	.4492937	.4716359	.6216163	.0623661	.8375244	.4232827	.4402698
#1	526.3279	1061.260	533.3619	1087.622	1044.944	1022.184	1091.115
#2	530.8795	1070.658	539.3673	1088.587	1060.514	1029.898	1100.352
#3	529.7909	1062.888	538.8957	1087.279	1045.632	1022.601	1098.170
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1029.950	1054.036	1048.588	998.3263	1038.158	1113.534	1097.706
SDEV	3.040	13.539	8.272	4.3126	4.420	3.716	12.198
%RSD	.2951803	1.284512	.7889056	.4319832	.4257183	.3336978	1.111247
#1	1026.458	1054.092	1040.465	996.5542	1034.980	1116.583	1084.005
#2	1032.008	1067.547	1057.002	1003.243	1043.205	1114.623	1107.388
#3	1031.384	1040.468	1048.298	995.1820	1036.290	1109.395	1101.725
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1067.973	1039.374	114728.1
SDEV	6.569	4.000	638.6
%RSD	.6150999	.3848647	.5566535
#1	1060.476	1035.227	114755.5
#2	1072.721	1039.685	114076.3
#3	1070.721	1043.209	115352.7
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: SDI1403005-01 OPERATOR:
RUN TIME: 03/17/14 22:41:00
COMMENT: SDG:1403005 CLIENTID:GP-11-24-2L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2049798	-22.3650	4.600372	1.378628	1463.660	-.399060	-2.54326
SDEV	.3657342	6.7337	.026785	.403750	16.483	.324499	.50750
%RSD	178.4246	30.10798	.5822411	29.28634	1.126143	81.31566	19.95472
#1	.3221314	-27.6561	4.618448	.9301472	1475.801	-.694096	-2.94043
#2	-.204976	-14.7854	4.613069	1.492586	1444.896	-.051506	-1.97151
#3	.4977842	-24.6536	4.569600	1.713152	1470.283	-.451579	-2.71783
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.19320	-.000007	-14.3317	358.7137	1997.913	37.62356	2585.448
SDEV	.08713	.309114	4.1510	1.8561	3.570	.08014	197.517
%RSD	3.972676	4416818.	28.96407	.5174228	.1787103	.2130084	7.639564
#1	-2.10083	.1324261	-15.3562	357.9933	1993.998	37.54783	2813.486
#2	-2.20484	.2208267	-9.76429	360.8220	1998.749	37.61536	2474.921
#3	-2.27392	-.353274	-17.8745	357.3258	2000.991	37.70748	2467.939
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7262569	2.100097	-.017085	1.184522	1.167870	-2.16214	-.775407
SDEV	.2524757	.408228	.131293	.197705	.354497	2.81864	1.881076
%RSD	34.76397	19.43853	768.4869	16.69071	30.35417	130.3633	242.5919
#1	.6112711	1.922067	-.149404	1.317787	1.261584	-2.07748	1.342913
#2	.5517418	2.567106	-.015007	1.278413	1.466095	.6132138	-2.25048
#3	1.015758	1.811119	.1131573	.9573664	.7759312	-5.02215	-1.41865
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.191350	-.935842	2.218008	-4.08115	-1.20418	-1.03574	.7604045
SDEV	1.535773	2.389407	1.687417	2.68324	3.32595	1.27884	.9249492
%RSD	70.08341	255.3215	76.07806	65.74711	276.2013	123.4706	121.6391
#1	2.782010	-.336802	2.059437	-6.03758	-.100505	-1.30860	1.828061
#2	3.344101	-3.56777	3.979113	-1.02230	1.429640	-2.15613	.2018112
#3	.4479389	1.097046	.6154730	-5.18358	-4.94166	.3575033	.2513414
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.049604	5.317410	116736.7
SDEV	.209252	.410637	283.3
%RSD	421.8487	7.722503	.2427111
#1	-.013977	5.422688	117010.5
#2	.1395483	5.665158	116444.7
#3	-.274382	4.864383	116754.8
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031308-PS2 OPERATOR:
RUN TIME: 03/17/14 22:48:13
COMMENT: SDG:1403005 CLIENTID:GP-11-24-2A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	115.1815	4601.209	4793.492	115.5826	7474.910	112.9026	458.1438
SDEV	.2363	128.924	92.336	2.1630	186.245	3.6170	13.6141
%RSD	.2051903	2.801954	1.926284	1.871385	2.491602	3.203610	2.971581
#1	115.4173	4536.288	4751.942	114.2611	7365.056	110.9242	450.4865
#2	114.9446	4749.689	4899.303	118.0788	7689.951	117.0772	473.8623
#3	115.1825	4517.652	4729.230	114.4079	7369.724	110.7063	450.0826
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	230.8529	115.2873	4677.181	1774.322	10014.38	424.9912	14235.62
SDEV	6.2979	.7199	114.846	33.540	249.81	9.8172	159.82
%RSD	2.728120	.6244557	2.455459	1.890284	2.494533	2.309971	1.122649
#1	226.9921	115.0986	4618.490	1761.701	9863.020	419.0715	14264.09
#2	238.1204	116.0828	4809.513	1812.342	10302.72	436.3234	14379.28
#3	227.4462	114.6806	4603.540	1748.924	9877.408	419.5789	14063.48
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	229.6740	678.1132	461.3927	708.3487	222.9017	215.5432	705.3981
SDEV	5.3894	14.9764	13.9436	18.0951	2.6347	3.3241	15.9778
%RSD	2.346541	2.208544	3.022066	2.554540	1.182020	1.542210	2.265077
#1	226.8346	672.8824	451.7464	698.2634	220.7357	214.9057	696.7343
#2	235.8895	695.0035	477.3798	729.2390	225.8349	219.1399	723.8365
#3	226.2981	666.4538	455.0517	697.5439	222.1345	212.5840	695.6235
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	223.7451	224.3500	222.1785	205.0688	220.7725	1140.970	1174.501
SDEV	3.0472	5.0731	1.5868	3.2825	3.4775	25.501	25.488
%RSD	1.361893	2.261259	.7142206	1.600703	1.575158	2.235060	2.170133
#1	221.5618	219.3634	221.4206	205.7008	219.5012	1127.394	1157.173
#2	227.2263	229.5055	224.0022	207.9893	224.7068	1170.387	1203.768
#3	222.4471	224.1810	221.1127	201.5162	218.1095	1125.128	1162.563
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1141.753	1102.699	114478.1
SDEV	31.452	26.216	1900.2
%RSD	2.754674	2.377406	1.659860
#1	1122.648	1087.730	115318.0
#2	1178.053	1132.969	112302.7
#3	1124.558	1087.397	115813.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

METHOD: P4S12014 SAMPLE NAME: 1403005-02 OPERATOR:
RUN TIME: 03/17/14 22:55:26
COMMENT: SDG:1403005 CLIENTID:GP-11-24-2-DUP 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1366726	-20.4979	23.67390	2.523560	7506.196	-.621378	-3.28343
SDEV	.5982488	2.8208	.04865	.619394	20.888	.166220	.44370
%RSD	437.7241	13.76131	.2055072	24.54446	.2782712	26.75027	13.51334
#1	.8199779	-18.5949	23.72432	2.166286	7527.516	-.571586	-2.77228
#2	-.292855	-19.1602	23.67013	2.165619	7505.304	-.485744	-3.50878
#3	-.117105	-23.7387	23.62724	3.238774	7485.769	-.806803	-3.56924
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.74748	.6550674	-56.2944	1814.919	10193.56	190.5523	14279.71
SDEV	.33994	.3308052	7.5131	1.974	22.62	.3279	93.34
%RSD	19.45315	50.49942	13.34617	.1087669	.2218655	.1720928	.6536210
#1	-1.35966	.7506194	-48.2434	1814.006	10216.55	190.9156	14288.98
#2	-1.99389	.9275795	-57.5210	1817.184	10192.78	190.2782	14182.08
#3	-1.88888	.2870033	-63.1188	1813.567	10171.34	190.4632	14368.06
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.365664	1.590151	-.131705	4.836441	1.233581	3.400152	4.208704
SDEV	.347942	1.129979	.300957	.242663	.527024	2.070925	2.270485
%RSD	14.70801	71.06114	228.5088	5.017388	42.72312	60.90686	53.94736
#1	2.332073	1.529207	-.419349	4.940330	1.185088	3.015518	6.812890
#2	2.729184	.4918766	.1809984	5.009864	.7324792	1.548508	3.168835
#3	2.035737	2.749368	-.156764	4.559129	1.783176	5.636429	2.644387
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6556422	1.229513	1.235458	-4.39416	7.291360	-1.25537	.8583350
SDEV	.8706467	1.397711	1.428872	1.98983	2.330770	1.31630	.8934563
%RSD	132.7929	113.6800	115.6553	45.28354	31.96618	104.8531	104.0918
#1	-.100777	2.201545	.6774762	-5.92861	7.480772	-2.71611	1.861367
#2	1.607348	1.859276	.1697672	-5.10800	4.871664	-.888756	.5658873
#3	.4603556	-.372281	2.859130	-2.14588	9.521645	-.161250	.1477510
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.0094596	24.34151	114651.4
SDEV	.0395995	1.00436	225.7
%RSD	418.6149	4.126121	.1968561
#1	.0242762	25.33735	114707.9
#2	.0395143	24.35834	114402.9
#3	-.035412	23.32884	114843.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

METHOD: P4S12014 SAMPLE NAME: 1403005-03 OPERATOR:
RUN TIME: 03/17/14 23:02:39
COMMENT: SDG:1403005 CLIENTID:GP-11-102-5 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1952558	-9.95075	10.84249	2.007669	11479.27	-.412461	-3.14739
SDEV	.5888482	7.09857	.04695	.144608	52.07	.268267	.47887
%RSD	301.5778	71.33705	.4330104	7.202784	.4535953	65.04069	15.21491
#1	-.292812	-1.87199	10.87603	1.842964	11485.24	-.721719	-3.63729
#2	.8492711	-15.1901	10.78884	2.113806	11528.09	-.242444	-2.68036
#3	.0293080	-12.7902	10.86261	2.066236	11424.47	-.273219	-3.12451
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.01791	2.318567	959.0948	1580.559	1564.077	55.47595	5586.940
SDEV	.19407	.309098	2.8056	3.327	5.022	.11210	133.938
%RSD	9.617282	13.33143	.2925271	.2104979	.3210785	.2020700	2.397348
#1	-1.92463	2.539391	962.1443	1580.078	1565.012	55.55336	5650.338
#2	-1.88809	2.450992	958.5172	1584.100	1568.566	55.52710	5677.408
#3	-2.24100	1.965320	956.6230	1577.498	1558.654	55.34740	5433.072
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.023706	1.446975	-.155460	9.043672	1.120389	1.828248	3.775541
SDEV	.429092	1.409758	.067305	.147429	1.977774	.326339	3.135078
%RSD	10.66411	97.42793	43.29419	1.630186	176.5257	17.84984	83.03652
#1	3.677222	2.615154	-.087745	9.213884	-.077985	1.784260	5.962985
#2	3.890218	-.118917	-.222348	8.956114	.0359739	2.174350	5.179824
#3	4.503675	1.844690	-.156288	8.961018	3.403178	1.526134	.1838136
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.06296	-1.97204	2.664133	-3.15993	4.318494	.2828031	1.214912
SDEV	.97510	2.25514	1.900970	4.67689	2.385216	.3957169	.795128
%RSD	91.73436	114.3555	71.35417	148.0061	55.23259	139.9266	65.44736
#1	-1.90256	-3.86885	1.814449	-8.52398	6.930550	-.111560	.3136142
#2	-1.29285	-2.56870	1.336202	-1.01966	3.768855	.6798598	1.513986
#3	.0065461	.5214294	4.841749	.0638490	2.256076	.2801099	1.817136
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.106847	22.01862	114853.4
SDEV	.179318	.43304	351.9
%RSD	167.8262	1.966714	.3063503
#1	-.170920	22.27066	115124.9
#2	.0957056	22.26660	114455.9
#3	-.245328	21.51859	114979.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

METHOD: P4S12014 SAMPLE NAME: 4031302-BLK1 OPERATOR:
RUN TIME: 03/17/14 23:09:52
COMMENT: SDG:1403013 CLIENTID:PBS01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.107304	-19.5822	.4060480	2.355186	120.6171	-.276763	-2.61546
SDEV	.332973	2.1531	.0885277	.467523	12.2466	.105527	.31392
%RSD	310.3084	10.99534	21.80228	19.85077	10.15325	38.12899	12.00266
#1	-.380564	-17.2834	.3038284	H2.880933	108.0191	-.159565	-2.40262
#2	-.204913	-21.5518	.4564328	2.198471	121.3533	-.364249	-2.97599
#3	.2635649	-19.9113	.4578829	1.986154	132.4790	-.306474	-2.46777
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000
LOW	-2.50000	-100.000	-100.000	-2.50000	-2500.00	-2.50000	-10.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.34708	.5666015	20.23586	32.70421	21.18775	.3966979	545.5340
SDEV	.31358	.2560571	6.21507	2.44496	2.92694	.0416649	129.0380
%RSD	23.27831	45.19175	30.71317	7.475982	13.81428	10.50292	23.65352
#1	-1.12949	.4413309	18.01687	29.88707	18.39100	.4387604	621.6832
#2	-1.70652	.3972978	15.43483	34.27290	20.94278	.3554424	618.3727
#3	-1.20524	.8611758	27.25587	33.95265	24.22948	.3958908	396.5460
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000
LOW	-5.00000	-2.50000	-100.000	-2500.00	-2500.00	-5.00000	-2500.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.322132	.0302628	-.401714	1.704626	2.206475	1.682337	4.978642
SDEV	.662736	1.213234	.273220	.103929	1.741224	1.069143	1.955234
%RSD	50.12630	4008.993	68.01365	6.096894	78.91426	63.55106	39.27245
#1	1.076637	-.892537	-.674247	1.588268	3.753382	2.277227	5.811436
#2	.8171704	-.421172	-.403081	1.788238	2.545303	.4480642	2.744889
#3	2.072587	1.404498	-.127812	1.737373	.3207407	2.321719	6.379601
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	15.00000	15.00000	15.00000	5.000000	5.000000	15.00000
LOW	-5.00000	-15.0000	-15.0000	-15.0000	-5.00000	-5.00000	-15.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.18852	1.360554	2.628655	-10.1224	7.575765	20.04837	.0536050
SDEV	.86347	2.611613	2.280788	2.7506	.475562	1.15042	.0309510
%RSD	72.65037	191.9522	86.76636	27.17381	6.277415	5.738237	57.73894
#1	-1.44190	.8068137	5.224310	-7.87877	7.347505	19.16052	.0722752
#2	-.226715	4.204631	1.716737	-13.1912	7.257364	19.63657	.0178780
#3	-1.89695	-.929783	.9449181	-9.29733	8.122425	21.34802	.0706617
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	5.000000					25.00000	25.00000
LOW	-5.00000					-25.0000	-25.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.1757386	3.842913	112930.6
SDEV	.3285645	.188748	319.0
%RSD	186.9621	4.911577	.2825148
#1	-.203276	3.691971	112566.7
#2	.3799198	4.054539	113162.3
#3	.3505724	3.782229	113062.9
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	25.00000	25.00000	
LOW	-25.0000	-25.0000	

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METHOD: P4S12014 SAMPLE NAME: 4031302-BS1 OPERATOR:
RUN TIME: 03/17/14 23:17:06
COMMENT: SDG:1403013 CLIENTID:MLCS01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	343.6028	80446.05	1826.288	619.0566	63433.29	592.0855	1057.039
SDEV	.7914	602.08	10.195	4.6849	405.45	3.2813	13.654
%RSD	.2303369	.7484316	.5582227	.7567760	.6391703	.5541863	1.291683
#1	343.6233	80471.52	1834.778	619.6806	63511.41	595.4553	1062.979
#2	342.8013	81035.00	1829.105	623.3981	63793.98	591.9004	1066.716
#3	344.3838	79831.64	1814.981	614.0909	62994.46	588.9006	1041.421
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	723.8764	810.2499	120195.4	24383.27	25179.82	2916.342	2796.836
SDEV	6.6919	2.7812	726.7	104.60	133.64	28.813	132.101
%RSD	.9244592	.3432575	.6045951	.4289926	.5307451	.9879873	4.723225
#1	719.0457	813.0146	120501.9	24469.15	25240.79	2921.358	2906.872
#2	731.5148	810.2828	120718.7	24413.88	25272.11	2942.318	2833.305
#3	721.0687	807.4524	119365.7	24266.78	25026.57	2885.350	2650.332
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	586.2211	1242.570	596.2423	1441.851	883.7250	851.0531	899.9440
SDEV	2.9051	6.410	6.6852	16.430	5.5841	6.9548	8.7535
%RSD	.4955620	.5158691	1.121214	1.139489	.6318784	.8171983	.9726718
#1	588.9742	1243.474	589.9464	1455.332	886.4966	855.7508	909.6807
#2	586.5043	1248.479	603.2584	1446.672	887.3810	854.3450	892.7258
#3	583.1848	1235.755	595.5223	1423.551	877.2973	843.0635	897.4255
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	916.0977	899.5336	875.8341	822.3558	865.3801	1100.708	434.3703
SDEV	2.7201	7.0248	5.6072	11.2397	4.9134	7.845	2.6792
%RSD	.2969172	.7809407	.6402167	1.366773	.5677745	.7127321	.6168004
#1	918.8525	898.9168	880.2974	828.5458	869.3328	1105.276	436.8346
#2	916.0269	906.8465	877.6645	829.1398	866.9286	1105.199	431.5184
#3	913.4138	892.8375	869.5404	809.3818	859.8790	1091.650	434.7580
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	1080.000					1310.000	512.0000
LOW	768.0000					82.90000	340.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	2043.201	1015.592	111476.6
SDEV	17.693	3.906	661.6
%RSD	.8659537	.3845708	.5935216
#1	2029.114	1019.100	110898.7
#2	2063.059	1016.293	111332.7
#3	2037.431	1011.383	112198.3
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	3520.000	1370.000	
LOW	512.0000	755.0000	

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METHOD: P4S12014 SAMPLE NAME: 1403013-11 OPERATOR:
RUN TIME: 03/17/14 23:24:19
COMMENT: SDG:1403013 CLIENTID:SB-6-4-4-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.270298	9340.102	32.30419	3.002878	7867.661	-2.44480	6.654019
SDEV	.382803	30.094	.11618	.221402	59.054	.12705	.350543
%RSD	141.6224	.3221979	.3596456	7.372991	.7505969	5.196635	5.268147
#1	-.533775	9346.681	32.34523	3.252944	7883.825	-2.31654	7.024736
#2	.1688047	9366.361	32.39429	2.831815	7916.950	-2.57059	6.609398
#3	-.445924	9307.263	32.17307	2.923874	7802.208	-2.44726	6.327922
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	24.86202	23.42124	37474.88	1565.513	3091.627	538.9136	1001.238
SDEV	.32525	.20896	76.18	7.356	1.392	2.0327	97.559
%RSD	1.308239	.8922017	.2032780	.4699065	.0450348	.3771769	9.743854
#1	25.11924	23.49465	37404.75	1566.654	3092.696	537.3800	919.8124
#2	24.49641	23.58359	37555.93	1572.232	3092.132	541.2191	1109.369
#3	24.97041	23.18548	37463.97	1557.652	3090.052	538.1415	974.5324
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.30892	2.268820	41.69670	183.7077	269.4914	1.663992	7.288348
SDEV	.39164	2.611728	.72566	.9988	.6787	.987674	1.389682
%RSD	3.463135	115.1139	1.740332	.5436928	.2518419	59.35569	19.06717
#1	10.86807	-.358322	41.28866	184.7224	270.0668	2.494472	6.113519
#2	11.44203	4.864855	42.53452	183.6750	269.6646	.5718271	6.929165
#3	11.61666	2.299928	41.26691	182.7256	268.7430	1.925679	8.822360
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	15.12165	269.5098	269.4821	-9.43188	7.203505	23.36430	1.681762
SDEV	.78866	3.0898	2.0153	3.83579	3.175615	.93973	.574278
%RSD	5.215435	1.146439	.7478325	40.66831	44.08431	4.022073	34.14740
#1	15.56500	266.6000	271.7975	-13.8597	10.65920	24.43277	2.344250
#2	14.21109	272.7526	268.1227	-7.12329	4.413508	22.99398	1.325467
#3	15.58887	269.1768	268.5262	-7.31264	6.537807	22.66615	1.375569
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	485.0401	20.92679	111968.7
SDEV	3.7879	.18231	309.3
%RSD	.7809451	.8711879	.2761984
#1	485.5752	21.10575	111650.5
#2	488.5320	20.93331	111987.3
#3	481.0131	20.74131	112268.2
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031302-DUP1 OPERATOR:
RUN TIME: 03/17/14 23:31:32
COMMENT: SDG:1403013 CLIENTID:SB-6-4-4-0D 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3449068	8958.984	33.28152	2.329801	9084.470	-2.36410	5.774779
SDEV	.3959665	123.666	.70161	.746214	118.887	.52736	2.142762
%RSD	114.8039	1.380353	2.108117	32.02909	1.308683	22.30726	37.10553
#1	.7253609	9101.343	34.09165	1.501343	9221.703	-1.76513	8.232469
#2	-.064935	8897.487	32.87084	2.538898	9018.910	-2.56847	4.793426
#3	.3742942	8878.123	32.88207	2.949162	9012.796	-2.75869	4.298443
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	24.96187	30.79617	34195.39	1610.865	3194.125	544.8431	1033.576
SDEV	.71014	.13995	594.84	24.877	58.749	10.8335	100.846
%RSD	2.844906	.4544257	1.739533	1.544355	1.839283	1.988371	9.757010
#1	25.75090	30.71587	34880.68	1639.551	3261.934	557.3048	918.0845
#2	24.76069	30.95777	33812.48	1595.199	3161.916	537.6667	1078.426
#3	24.37402	30.71488	33893.02	1597.846	3158.525	539.5578	1104.217
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.90906	3.634991	40.02515	208.9317	284.6644	2.918898	12.82432
SDEV	.55996	2.593583	1.17352	3.9794	4.6022	2.906485	1.47714
%RSD	5.133021	71.35046	2.931960	1.904661	1.616723	99.57471	11.51830
#1	10.93793	5.512603	41.37975	213.5246	289.9356	-.355091	13.02328
#2	11.45403	4.716730	39.31731	206.7583	281.4446	5.194954	14.19189
#3	10.33522	.6756401	39.37838	206.5122	282.6130	3.916832	11.25777
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	14.68509	287.1362	283.4302	-8.73821	8.738604	22.61758	1.751600
SDEV	1.44483	7.5053	3.1939	6.79578	1.065552	1.45029	.898823
%RSD	9.838770	2.613837	1.126889	77.77089	12.19361	6.412216	51.31439
#1	15.70472	295.5789	287.1181	-16.5429	7.726582	21.37887	2.564158
#2	15.31886	281.2208	281.5562	-4.13060	9.850634	24.21292	.7861299
#3	13.03168	284.6089	281.6163	-5.54109	8.638594	22.26096	1.904513
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	462.9276	19.23407	110740.0
SDEV	5.9300	.89000	1635.2
%RSD	1.280979	4.627181	1.476640
#1	469.7341	19.84338	108852.9
#2	460.1710	19.64610	111629.7
#3	458.8776	18.21272	111737.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 03/17/14 23:38:45
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.687438	201.8146	205.6345	Q6.646954	4993.416	4.176469	15.99093
SDEV	.190551	3.9292	2.5172	.689746	59.288	.213056	1.14500
%RSD	3.350379	1.946952	1.224113	10.37687	1.187321	5.101331	7.160324
#1	5.501972	205.8334	207.6774	6.166598	5051.975	4.397157	17.20860
#2	5.882696	197.9816	202.8225	Q7.437308	4933.425	3.971969	14.93601
#3	5.677647	201.6287	206.4038	6.336958	4994.848	4.160281	15.82819
ERRORS	QC PASS	QC PASS	QC PASS	QC FAIL	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.702538	5.581846	182.8358	5171.454	4868.467	10.08298	4854.210
SDEV	.733992	.465412	6.6557	38.739	57.751	.10012	68.509
%RSD	9.529222	8.337967	3.640264	.7490901	1.186221	.9929593	1.411323
#1	8.519169	5.839514	190.5207	5212.614	4921.605	10.18356	4823.198
#2	7.490637	5.861440	178.9168	5135.705	4807.006	9.983329	4806.691
#3	7.097806	5.044583	179.0701	5166.042	4876.792	10.08206	4932.741
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.87521	32.86694	19.39639	31.78732	10.06248	7.480432	27.25847
SDEV	.52770	2.25560	.22783	.60707	.72448	3.007889	1.43331
%RSD	4.852344	6.862822	1.174610	1.909797	7.199800	40.21009	5.258223
#1	11.20946	30.95240	19.46135	32.46722	9.228973	Q4.035443	28.43999
#2	10.26686	32.29495	19.14313	31.29958	10.54102	9.585590	27.67141
#3	11.14931	35.35347	19.58468	31.59515	10.41746	8.820262	25.66402
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.26321	11.03759	9.575504	7.664951	7.388206	48.85955	51.18326
SDEV	.27386	3.05712	2.583247	2.710100	4.736898	2.01785	.35603
%RSD	2.668380	27.69738	26.97765	35.35704	64.11431	4.129909	.6956028
#1	10.05875	14.48388	6.605306	7.335925	2.387572	50.63275	51.13083
#2	10.57436	9.976511	10.82269	5.134386	11.80775	49.28198	50.85635
#3	10.15653	8.652380	11.29852	10.52454	7.969295	46.66392	51.56260
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	49.60600	46.78308	116738.0
SDEV	.85284	.62112	1141.7
%RSD	1.719237	1.327665	.9780268
#1	50.47302	47.02362	115476.1
#2	48.76808	47.24796	117699.5
#3	49.57690	46.07766	117038.4
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

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METHOD: P4S12014 SAMPLE NAME: CCV1 OPERATOR:
RUN TIME: 03/17/14 23:45:58
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	102.1343	50454.97	1033.680	971.0430	50342.42	975.5779	988.2960
SDEV	.2769	92.30	4.467	1.8251	83.46	1.0392	4.8572
%RSD	.2711073	.1829278	.4321373	.1879497	.1657783	.1065241	.4914725
#1	101.9190	50561.34	1036.594	968.9630	50248.43	976.7668	986.4802
#2	102.0372	50396.12	1028.537	971.7893	50370.99	974.8425	984.6083
#3	102.4466	50407.44	1035.908	972.3766	50407.84	975.1244	993.7995
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	998.5417	998.2800	24864.29	50006.07	49681.77	1010.094	50357.89
SDEV	10.6053	2.2481	135.04	127.87	236.95	9.069	63.16
%RSD	1.062082	.2251925	.5430971	.2557022	.4769264	.8978445	.1254251
#1	989.4611	1000.873	24759.45	49963.41	49465.21	1003.380	50375.65
#2	995.9665	996.8725	24816.76	49904.98	49645.25	1006.491	50287.75
#3	1010.197	997.0948	25016.67	50149.81	49934.86	1020.411	50410.27
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	985.4777	977.9355	984.7881	1118.613	982.9557	1000.789	1050.336
SDEV	.5209	5.8987	3.1426	1.988	4.7634	4.745	1.340
%RSD	.0528535	.6031809	.3191163	.1776781	.4845961	.4740884	.1275554
#1	986.0620	971.2564	987.9702	1118.104	977.6826	995.7961	1048.821
#2	985.3090	982.4315	981.6865	1116.930	986.9468	1005.239	1050.823
#3	985.0621	980.1185	984.7076	1120.806	984.2379	1001.331	1051.364
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	990.3481	997.3773	975.7560	979.1032	1011.615	1003.198	1020.563
SDEV	3.6352	13.2477	5.8069	6.5348	7.509	1.556	3.685
%RSD	.3670660	1.328254	.5951142	.6674293	.7422447	.1550733	.3610655
#1	986.6010	984.5829	974.2377	975.2922	1006.033	1004.208	1017.437
#2	993.8600	996.5129	982.1712	975.3685	1020.152	1001.407	1019.627
#3	990.5834	1011.036	970.8591	986.6488	1008.661	1003.981	1024.626
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	994.0430	985.6013	115484.7
SDEV	1.4991	2.4864	312.1
%RSD	.1508100	.2522757	.2702793
#1	993.0256	982.7603	115832.1
#2	993.3389	986.6622	115394.4
#3	995.7646	987.3812	115227.7
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

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METHOD: P4S12014 SAMPLE NAME: CCB1 OPERATOR:
RUN TIME: 03/17/14 23:53:11
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3025880	-24.8418	.3078187	1.919507	47.95067	-.175327	-2.37040
SDEV	.3102931	2.0324	.2148135	.104439	13.69535	.236046	.50211
%RSD	102.5464	8.181524	69.78573	5.440932	28.56133	134.6316	21.18247
#1	.5856531	-27.0015	.4993728	1.843564	56.85136	.0972211	-2.43453
#2	-.029174	-24.5574	.3485155	2.038608	54.82047	-.313978	-2.83736
#3	.3512852	-22.9666	.0755678	1.876348	32.18017	-.309225	-1.83931
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.41769	.8317935	11.65414	15.91488	18.09826	.2342149	22.78106
SDEV	.34871	.2258670	6.38927	10.40347	3.90152	.0607624	102.4064
%RSD	24.59666	27.15421	54.82404	65.36946	21.55744	25.94302	449.5241
#1	-1.68275	.9274863	7.566103	27.43127	22.14405	.3001645	-29.5474
#2	-1.54766	.5738327	8.379441	13.11669	14.35910	.1805022	-42.8881
#3	-1.02267	.9940614	19.01687	7.196672	17.79162	.2219779	140.7786
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7648042	3.832087	-.007318	-.644138	-.323216	.1002990	-.991000
SDEV	.3686296	.665722	.660629	.082321	.558147	.4855234	4.159469
%RSD	48.19921	17.37231	9027.660	12.77997	172.6856	484.0761	419.7242
#1	.5505471	4.123291	-.008829	-.554886	.2678316	.5701473	-2.34123
#2	.5534078	3.070379	-.667190	-.717088	-.841281	.1302614	-4.30760
#3	1.190458	4.302590	.6540659	-.660440	-.396197	-.399512	3.675837
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.757105	-1.29140	.1600107	-1.55418	.9261936	-.219156	1.391517
SDEV	2.290431	.97004	.9155265	3.62515	1.508752	.839210	.722874
%RSD	130.3525	75.11484	572.1658	233.2517	162.8981	382.9279	51.94865
#1	2.960732	-1.61242	1.206403	2.341527	-.314318	.0311150	2.062193
#2	3.194785	-2.06024	-.232855	-4.82842	2.605780	-1.15503	1.486518
#3	-.884202	-.201552	-.493516	-2.17564	.4871192	.4664467	.6258390
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.1147564	1.302168	116499.6
SDEV	.0425848	.532039	418.5
%RSD	37.10888	40.85791	.3592580
#1	.0845112	1.812757	116180.1
#2	.0963025	.7510030	116973.4
#3	.1634557	1.342744	116345.3
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

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METHOD: P4S12014 SAMPLE NAME: 4031302-MS1 OPERATOR:
RUN TIME: 03/18/14 00:00:25
COMMENT: SDG:1403013 CLIENTID:SB-6-4-4-0S 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	517.8931	14625.45	611.4049	533.9334	18020.95	522.6176	548.5252
SDEV	1.8530	31.72	1.0780	1.4739	37.22	1.0531	1.1751
%RSD	.3578041	.2169028	.1763232	.2760372	.2065437	.2015026	.2142279
#1	519.4940	14629.68	610.6173	534.3936	18030.57	523.5857	547.1908
#2	518.3222	14654.84	612.6335	535.1223	18052.42	522.7706	548.9789
#3	515.8632	14591.82	610.9639	532.2844	17979.87	521.4963	549.4056
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	579.4770	562.7855	44020.41	12191.22	8792.387	1087.668	11344.75
SDEV	4.3198	2.3219	97.04	13.39	25.325	3.563	200.30
%RSD	.7454618	.4125643	.2204457	.1098059	.2880336	.3276149	1.765535
#1	574.8215	563.7200	43924.52	12206.12	8763.145	1083.906	11282.89
#2	583.3557	564.4945	44118.56	12187.31	8807.124	1090.993	11182.69
#3	580.2537	560.1420	44018.16	12180.22	8806.893	1088.106	11568.68
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	544.6763	1056.641	593.6891	1267.735	1335.179	989.4207	942.5684
SDEV	.7596	3.250	2.2132	1.485	6.007	1.6293	5.8275
%RSD	.1394640	.3075633	.3727899	.1171583	.4499339	.1646675	.6182609
#1	545.2756	1055.625	592.9827	1266.042	1328.421	987.5670	945.7791
#2	543.8220	1060.277	596.1693	1268.343	1337.204	990.6254	946.0843
#3	544.9314	1054.020	591.9153	1268.820	1339.913	990.0697	935.8416
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1022.212	1347.391	1329.083	958.8490	1004.683	1097.410	1118.319
SDEV	3.112	4.570	9.901	4.9361	4.463	3.157	2.630
%RSD	.3044179	.3391662	.7449149	.5147945	.4441952	.2876911	.2351733
#1	1025.774	1347.714	1318.790	963.2585	999.7028	1095.565	1116.099
#2	1020.017	1351.791	1329.922	959.7718	1006.029	1101.056	1121.224
#3	1020.846	1342.668	1338.537	953.5166	1008.319	1095.611	1117.635
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1622.919	1011.986	111546.8
SDEV	10.890	.712	301.2
%RSD	.6710045	.0703227	.2700535
#1	1631.212	1011.991	111734.9
#2	1626.959	1012.694	111706.3
#3	1610.587	1011.271	111199.4
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031302-MSD1 OPERATOR:
RUN TIME: 03/18/14 00:07:38
COMMENT: SDG:1403013 CLIENTID:SB-6-4-4-0SD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	518.1180	14210.32	606.6075	535.5065	18390.47	522.8648	553.3002
SDEV	.6617	24.40	4.2823	1.0647	20.14	1.2517	1.7283
%RSD	.1277105	.1716715	.7059482	.1988131	.1095175	.2393919	.3123584
#1	517.3862	14232.85	611.4985	535.8493	18405.63	524.0919	554.9927
#2	518.6743	14184.41	603.5323	534.3127	18398.17	522.9128	553.3696
#3	518.2934	14213.69	604.7916	536.3575	18367.62	521.5898	551.5382
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	577.9109	561.6360	42130.17	12046.95	8889.614	1081.532	11085.57
SDEV	1.0072	1.5419	71.24	25.80	4.586	5.638	213.18
%RSD	.1742886	.2745309	.1691045	.2141336	.0515933	.5212987	1.923080
#1	576.9183	560.6265	42121.88	12076.05	8890.071	1077.568	10900.60
#2	577.8823	560.8707	42063.44	12037.95	8884.816	1079.042	11318.73
#3	578.9322	563.4108	42205.20	12026.87	8893.955	1087.986	11037.39
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	545.0826	1055.066	591.4238	1282.718	1323.881	979.6324	945.2570
SDEV	1.9952	.794	1.9773	1.414	7.008	9.1096	8.5233
%RSD	.3660291	.0752674	.3343345	.1102432	.5293606	.9299049	.9016885
#1	547.3666	1055.983	589.2140	1284.328	1331.973	987.3198	954.8810
#2	543.6799	1054.598	592.0312	1281.678	1319.775	982.0068	942.2282
#3	544.2011	1054.617	593.0261	1282.148	1319.896	969.5707	938.6617
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1016.572	1340.872	1315.399	941.2241	998.8077	1096.301	1119.662
SDEV	5.042	6.633	10.315	8.8839	9.3487	1.119	6.816
%RSD	.4959543	.4946802	.7841972	.9438710	.9359873	.1020919	.6087913
#1	1022.149	1342.453	1326.742	947.2041	1007.347	1097.014	1126.951
#2	1015.231	1333.591	1312.877	945.4523	1000.256	1096.878	1118.592
#3	1012.337	1346.571	1306.579	931.0158	988.8192	1095.011	1113.445
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1629.773	1007.857	112306.3
SDEV	6.715	2.163	272.4
%RSD	.4120293	.2146288	.2425116
#1	1630.510	1009.341	112002.7
#2	1636.088	1005.375	112387.1
#3	1622.719	1008.855	112529.1
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: SDI1403013-11 OPERATOR:
RUN TIME: 03/18/14 00:14:52
COMMENT: SDG:1403013 CLIENTID:SB-6-4-4-0L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2524911	1904.579	6.689783	1.886894	1601.416	-.738253	-.739218
SDEV	.2657690	4.244	.201301	.220510	11.042	.130573	.700036
%RSD	105.2587	.2228269	3.009087	11.68640	.6895284	17.68674	94.69949
#1	.0572376	1900.558	6.714756	1.676622	1606.768	-.872967	.0576441
#2	.1450808	1909.015	6.877432	1.867676	1608.763	-.612259	-1.02014
#3	.5551549	1904.165	6.477159	2.116384	1588.718	-.729533	-1.25516
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.00453	6.106218	7982.251	336.5313	633.6549	107.5661	232.1321
SDEV	.35188	.298360	29.731	9.9686	4.5732	.2845	153.0416
%RSD	3.517215	4.886165	.3724665	2.962175	.7217203	.2644488	65.92865
#1	10.23999	6.408131	8002.754	337.5554	638.9233	107.7495	370.7414
#2	10.17356	6.098981	7995.846	345.9485	630.7090	107.7104	257.7607
#3	9.600023	5.811543	7948.153	326.0902	631.3325	107.2384	67.89424
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.093991	1.691286	7.970311	37.31565	55.16783	.7466962	2.568769
SDEV	.284181	1.011865	.412673	.16001	.98908	1.302937	1.706554
%RSD	6.941406	59.82818	5.177624	.4287937	1.792849	174.4936	66.43468
#1	4.336710	1.785340	8.193888	37.34979	54.06686	-.732315	.7666990
#2	4.163876	2.652840	8.222952	37.45583	55.98131	1.725033	2.779346
#3	3.781388	.6356769	7.494093	37.14132	55.45534	1.247370	4.160262
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.993098	52.97090	56.26455	-1.23050	1.733707	3.327696	1.020602
SDEV	.563706	.18423	1.39245	1.19099	2.458425	1.787709	.951512
%RSD	18.83352	.3477917	2.474822	96.78914	141.8016	53.72212	93.23044
#1	3.473890	52.77910	54.70967	.0092681	-1.10265	5.358966	1.997893
#2	3.132693	53.14649	57.39649	-1.33493	3.252618	2.630432	.0971552
#3	2.372711	52.98711	56.68750	-2.36583	3.051158	1.993690	.9667590
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	95.80617	5.593668	116420.5
SDEV	.58616	1.470378	323.9
%RSD	.6118178	26.28648	.2781728
#1	95.89920	7.109381	116057.7
#2	96.34026	5.498362	116680.5
#3	95.17907	4.173262	116523.3
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4031302-PS1 OPERATOR:
RUN TIME: 03/18/14 00:22:05
COMMENT: SDG:1403013 CLIENTID:SB-6-4-4-0A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	108.2471	13496.44	4714.056	112.6132	7743.539	104.5354	447.9654
SDEV	.4978	256.79	91.820	1.9121	154.271	3.0157	11.3458
%RSD	.4599172	1.902651	1.947787	1.697954	1.992256	2.884890	2.532750
#1	107.6809	13546.00	4713.577	113.3216	7773.091	105.4005	450.9613
#2	108.6166	13724.84	4806.115	114.0700	7880.897	107.0241	457.5127
#3	108.4436	13218.49	4622.477	110.4480	7576.630	101.1817	435.4223
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	248.5735	134.1370	40621.89	1532.656	2972.369	746.4934	1064.441
SDEV	5.5792	.4503	831.20	18.758	62.820	16.8748	165.526
%RSD	2.244476	.3356969	2.046190	1.223918	2.113456	2.260538	15.55048
#1	248.5279	134.0634	40777.35	1529.266	2984.223	747.5724	896.1562
#2	254.1753	134.6196	41364.38	1552.878	3028.418	762.8028	1070.103
#3	243.0172	133.7281	39723.93	1515.823	2904.468	729.1050	1227.062
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	228.4169	647.7776	487.4428	845.5314	472.8095	203.5191	627.8319
SDEV	5.9471	8.9274	8.3227	15.6474	9.3396	2.5816	12.5370
%RSD	2.603599	1.378164	1.707424	1.850598	1.975333	1.268470	1.996874
#1	230.8854	647.2577	487.3924	851.7033	474.7696	204.5535	619.3688
#2	232.7322	656.9535	495.7906	857.1517	481.0134	205.4230	642.2349
#3	221.6331	639.1214	479.1454	827.7393	462.6454	200.5807	621.8919
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	226.0611	476.7577	470.8382	187.2837	211.6245	1106.502	1132.165
SDEV	3.9630	6.7903	10.6141	1.4489	3.3298	20.801	27.484
%RSD	1.753052	1.424270	2.254293	.7736530	1.573456	1.879880	2.427592
#1	229.6354	478.4011	472.9563	188.7064	212.4651	1113.867	1136.181
#2	226.7486	482.5754	480.2335	187.3348	214.4534	1122.619	1157.420
#3	221.7994	469.2964	459.3247	185.8099	207.9549	1083.021	1102.893
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1582.380	1030.766	112855.8
SDEV	36.384	22.317	2152.5
%RSD	2.299348	2.165075	1.907274
#1	1585.651	1035.921	112026.5
#2	1617.019	1050.055	111241.4
#3	1544.471	1006.323	115299.6
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-01 OPERATOR:
RUN TIME: 03/18/14 00:29:19
COMMENT: SDG:1403013 CLIENTID:SB-6-4-2-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3263170	9256.652	33.02794	3.139067	11075.81	-2.08460	6.919126
SDEV	.1993234	2.315	.31868	.283422	43.77	.10589	.276852
%RSD	61.08273	.0250134	.9648908	9.028856	.3952105	5.079476	4.001262
#1	.2580116	9254.088	33.39461	3.402795	11125.74	-2.12056	7.140864
#2	.1701265	9257.278	32.87159	2.839383	11044.03	-1.96542	6.608829
#3	.5508131	9258.590	32.81764	3.175025	11057.68	-2.16783	7.007686
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	21.19200	19.44999	28720.49	1403.379	2848.705	264.9386	687.9609
SDEV	.50429	.19878	59.79	4.854	9.499	.9614	176.9707
%RSD	2.379604	1.022026	.2081673	.3458739	.3334619	.3628754	25.72395
#1	20.75279	19.25118	28730.11	1400.268	2846.493	264.9015	489.9856
#2	21.74270	19.45004	28774.89	1408.972	2859.115	265.9180	743.0967
#3	21.08050	19.64875	28656.48	1400.897	2840.506	263.9962	830.8003
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.35801	2.722849	34.27228	143.2554	70.89877	1.696705	14.04307
SDEV	.61322	3.059177	.11652	.1822	.67110	1.863323	1.15457
%RSD	4.590624	112.3521	.3399836	.1272139	.9465586	109.8200	8.221607
#1	13.00630	5.805687	34.14597	143.1638	71.04899	1.147050	13.41151
#2	13.00164	-.312105	34.37558	143.4653	71.48202	3.773027	15.37565
#3	14.06609	2.674966	34.29531	143.1372	70.16528	.1700396	13.34206
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	18.39421	74.08172	69.30956	-11.2572	8.163858	18.62647	1.857263
SDEV	2.15120	1.45473	1.61843	.4979	3.037988	.58362	1.483641
%RSD	11.69499	1.963687	2.335069	4.422940	37.21265	3.133306	79.88319
#1	19.26523	72.73032	70.20946	-11.2188	7.320620	18.51595	2.965981
#2	19.97330	73.89338	70.27802	-11.7732	11.53439	18.10601	2.433941
#3	15.94409	75.62144	67.44118	-10.7796	5.636564	19.25746	.1718654
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	405.9306	20.26066	113096.2
SDEV	2.5038	.50818	124.2
%RSD	.6168044	2.508205	.1098406
#1	408.7995	19.87845	112960.9
#2	404.8062	20.83736	113205.2
#3	404.1862	20.06617	113122.4
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-02 OPERATOR:
RUN TIME: 03/18/14 00:36:32
COMMENT: SDG:1403013 CLIENTID:SB-6-4-2-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.025983	13227.95	19.91047	3.536620	5190.794	-2.70485	6.899334
SDEV	.418549	384.26	.61031	.570465	140.700	.43498	2.303975
%RSD	1610.865	2.904943	3.065281	16.13024	2.710572	16.08136	33.39416
#1	-.123413	12784.35	19.22775	4.195299	5028.656	-3.20704	4.243984
#2	-.387224	13458.35	20.10047	3.201213	5262.919	-2.44617	8.085108
#3	.4326877	13441.15	20.40318	3.213348	5280.808	-2.46134	8.368910
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	26.99141	4.090275	31974.97	2332.835	4312.418	208.6769	750.4040
SDEV	.68769	.435265	947.20	55.587	129.020	6.5260	80.0943
%RSD	2.547793	10.64146	2.962318	2.382791	2.991826	3.127335	10.67349
#1	26.22639	4.590281	30882.57	2269.027	4163.490	201.2244	822.6599
#2	27.55823	3.884436	32567.91	2358.717	4390.262	213.3697	764.2702
#3	27.18961	3.796106	32474.44	2370.762	4383.503	211.4366	664.2819
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	16.32690	-.683439	39.88370	60.38332	6.658092	1.255624	8.013299
SDEV	.84035	.699570	.95714	1.57318	.387719	.503732	2.962259
%RSD	5.147047	102.3602	2.399821	2.605328	5.823278	40.11803	36.96679
#1	15.65491	-1.09301	38.77850	58.56704	6.409981	.9624816	10.46916
#2	16.05665	.1243277	40.43469	61.26412	7.104880	.9671136	8.847297
#3	17.26912	-1.08163	40.43792	61.31879	6.459413	1.837277	4.723442
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	14.03490	8.351466	5.812555	-8.89922	6.325326	19.89028	.6608439
SDEV	1.82898	1.152561	.761785	3.52726	1.494022	1.07278	.2403375
%RSD	13.03167	13.80071	13.10586	39.63567	23.61968	5.393476	36.36827
#1	12.47778	9.351715	4.941203	-12.9683	7.917318	20.77896	.6220065
#2	16.04906	8.611620	6.352520	-7.01838	4.953767	20.19329	.4422902
#3	13.57787	7.091062	6.143942	-6.71099	6.104895	18.69859	.9182349
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	648.8771	18.44176	114180.1
SDEV	17.6587	.56923	2413.6
%RSD	2.721424	3.086636	2.113897
#1	628.5171	18.85991	116966.5
#2	658.0922	17.79350	112838.9
#3	660.0221	18.67188	112734.9
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

METHOD: P4S12014 SAMPLE NAME: 1403013-03 OPERATOR:
RUN TIME: 03/18/14 00:43:46
COMMENT: SDG:1403013 CLIENTID:SB-6-10-2-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.488035	151418.4	374.2858	7.830676	3107.689	-2.72160	73.50829
SDEV	.474573	2816.9	5.1334	.528642	68.882	.49647	3.35253
%RSD	97.24174	1.860344	1.371532	6.750907	2.216512	18.24197	4.560755
#1	-.791512	154533.4	379.4405	8.224336	3183.164	-2.20975	77.21437
#2	-.731449	149049.9	369.1738	8.037870	3048.217	-3.20111	70.68665
#3	.0588572	150672.0	374.2432	7.229821	3091.686	-2.75394	72.62382
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	145.9586	49.54769	97362.33	3235.914	8723.418	644.5561	1145.785
SDEV	3.1481	.66019	1584.26	39.644	164.736	10.8297	189.756
%RSD	2.156834	1.332431	1.627181	1.225132	1.888437	1.680180	16.56120
#1	149.4090	49.00568	99077.59	3276.297	8897.528	656.8783	1041.830
#2	143.2428	49.35446	95953.97	3197.052	8570.014	636.5497	1030.722
#3	145.2239	50.28293	97055.44	3234.393	8702.711	640.2404	1364.802
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	85.11636	5.190001	180.7048	389.7452	92.67615	2.185819	3.870369
SDEV	2.02239	1.661541	4.8641	6.1668	1.75475	.716325	1.273308
%RSD	2.376027	32.01427	2.691717	1.582259	1.893417	32.77148	32.89888
#1	87.09808	4.396980	186.2018	396.6119	94.43874	2.834135	2.419535
#2	83.05562	7.099474	176.9580	384.6792	90.92935	1.416817	4.802243
#3	85.19540	4.073547	178.9546	387.9444	92.66035	2.306505	4.389328
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	65.69497	104.7764	86.63495	-8.76649	7.653657	21.67702	4.275524
SDEV	3.13671	3.3956	1.00383	4.87193	1.771168	1.10132	.536561
%RSD	4.774652	3.240835	1.158690	55.57450	23.14146	5.080610	12.54960
#1	69.16913	107.8044	87.76574	-7.74741	8.116867	21.34343	3.698724
#2	63.07099	101.1052	85.84897	-14.0674	9.147194	20.78105	4.759817
#3	64.84479	105.4196	86.29013	-4.48470	5.696911	22.90657	4.368032
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1532.266	21.97528	112844.6
SDEV	34.077	.61703	1927.9
%RSD	2.223983	2.807825	1.708452
#1	1569.478	22.55812	110893.6
#2	1502.583	21.32897	114748.5
#3	1524.736	22.03875	112891.7
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-04 OPERATOR:
RUN TIME: 03/18/14 00:50:59
COMMENT: SDG:1403013 CLIENTID:SB-6-10-2-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.025276	13372.87	40.49013	3.221709	1912.849	-1.64723	4.647608
SDEV	.199321	47.51	.06083	.264389	8.421	.14907	.597970
%RSD	788.5757	.3552533	.1502400	8.206489	.4402547	9.050008	12.86619
#1	-.181482	13422.37	40.45806	3.184554	1922.346	-1.54745	4.919713
#2	-.093558	13368.62	40.56029	3.502710	1909.908	-1.81859	3.961977
#3	.1992118	13327.64	40.45204	2.977862	1906.293	-1.57563	5.061135
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	22.95517	6.230188	19507.16	1319.436	2497.122	177.7221	754.9830
SDEV	.88958	.797661	42.11	5.048	10.013	.7148	47.7856
%RSD	3.875314	12.80316	.2158875	.3826033	.4009741	.4021837	6.329365
#1	23.03201	6.929583	19553.26	1325.022	2506.986	178.3705	794.5137
#2	22.02966	5.361454	19470.71	1318.086	2486.967	177.8400	701.8791
#3	23.80384	6.399528	19497.51	1315.201	2497.413	176.9557	768.5561
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.72678	-.661871	35.52059	60.04439	18.07266	.7196646	6.405511
SDEV	.61014	2.260102	.24114	.39856	.45706	.9738830	3.998605
%RSD	5.202948	341.4719	.6788660	.6637695	2.529035	135.3245	62.42445
#1	11.86269	-2.67053	35.71635	60.37414	17.68676	-.144415	7.886593
#2	11.06015	-1.10046	35.25123	59.60149	17.95381	1.774980	1.877671
#3	12.25751	1.785381	35.59420	60.15754	18.57741	.5284291	9.452270
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.598038	22.06995	16.07689	-6.65163	4.399680	20.60065	1.046758
SDEV	3.738645	5.60586	2.65716	7.53712	2.375770	1.30990	.894375
%RSD	43.48254	25.40040	16.52783	113.3124	53.99870	6.358517	85.44245
#1	7.657602	16.35957	18.34923	-14.5087	7.026850	20.99408	.4306017
#2	5.419399	27.56508	13.15526	.5185209	2.402161	19.13913	2.072590
#3	12.71711	22.28520	16.72617	-5.96472	3.770028	21.66874	.6370812
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	535.6948	12.24795	112082.3
SDEV	1.1171	1.29661	453.5
%RSD	.2085401	10.58638	.4045899
#1	536.9505	13.01160	111583.9
#2	534.8111	10.75085	112192.6
#3	535.3229	12.98141	112470.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-05 OPERATOR:
RUN TIME: 03/18/14 00:58:13
COMMENT: SDG:1403013 CLIENTID:SB-6-4-3-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0812440	12142.67	34.48698	3.021375	8001.806	-1.74467	5.047390
SDEV	.4838371	13.89	.09701	.320423	33.404	.30751	.587639
%RSD	595.5355	.1143786	.2812991	10.60522	.4174505	17.62595	11.64243
#1	.0519678	12127.50	34.43599	3.130392	7998.608	-1.39474	5.725873
#2	-.387290	12145.72	34.59885	3.273065	7970.117	-1.97188	4.716236
#3	.5790545	12154.77	34.42609	2.660668	8036.694	-1.86737	4.700061
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	23.51683	7.432617	24945.51	1739.151	3279.773	170.3595	857.1277
SDEV	.23798	.320239	85.25	7.013	13.298	.8583	199.7830
%RSD	1.011955	4.308563	.3417269	.4032160	.4054596	.5038152	23.30842
#1	23.69651	7.439958	25043.62	1737.610	3294.998	170.9280	894.8786
#2	23.24693	7.108771	24889.60	1746.806	3273.896	169.3722	1035.342
#3	23.60705	7.749123	24903.30	1733.037	3270.426	170.7782	641.1625
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.47659	-.142883	40.76400	82.02831	72.54077	1.571720	6.797089
SDEV	.24236	1.881293	.06996	.52744	.60686	2.545706	1.609303
%RSD	1.798382	1316.664	.1716242	.6430007	.8365756	161.9695	23.67635
#1	13.36801	.6595430	40.72353	82.01936	71.84066	.5446352	8.654266
#2	13.75426	-2.29234	40.84478	82.56017	72.91647	4.470518	5.923491
#3	13.30751	1.204145	40.72368	81.50540	72.86519	-.299993	5.813510
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	16.77052	73.24287	72.19012	-10.6506	7.673627	19.27777	.5254104
SDEV	.74513	.49070	.74137	7.8867	.794028	2.42397	.5157077
%RSD	4.443065	.6699612	1.026965	74.04885	10.34749	12.57393	98.15331
#1	17.59810	72.79781	71.36267	-15.4859	8.547781	16.84758	1.113660
#2	16.15291	73.16170	72.79391	-1.54983	7.476073	21.69548	.1511213
#3	16.56055	73.76909	72.41377	-14.9162	6.997027	19.29024	.3114500
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	549.8574	16.45095	112375.2
SDEV	2.2610	.41594	513.2
%RSD	.4112065	2.528354	.4566610
#1	550.5924	16.03978	111849.3
#2	547.3203	16.44158	112874.7
#3	551.6595	16.87149	112401.6
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-06 OPERATOR:
RUN TIME: 03/18/14 01:05:27
COMMENT: SDG:1403013 CLIENTID:SB-6-4-3-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2475680	14181.06	22.96541	3.509301	4080.677	-2.40373	11.17884
SDEV	.6016836	132.78	.40984	.584445	35.204	.43088	2.03898
%RSD	243.0377	.9363026	1.784577	16.65417	.8627089	17.92541	18.23966
#1	.1988035	14325.56	23.43597	4.125987	4120.684	-1.95240	13.52964
#2	-.328249	14064.43	22.68656	3.438340	4054.431	-2.81073	9.890510
#3	.8721499	14153.18	22.77371	2.963576	4066.919	-2.44805	10.11637
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	26.64770	4.155775	31988.96	2189.317	4628.962	220.2239	613.1968
SDEV	.75373	.167069	308.05	24.957	42.333	3.2765	225.7292
%RSD	2.828517	4.020172	.9629992	1.139955	.9145234	1.487820	36.81187
#1	27.50996	4.347040	32344.44	2218.009	4676.754	224.0048	363.1888
#2	26.11413	4.081942	31800.25	2172.638	4596.175	218.4534	802.0418
#3	26.31901	4.038341	31822.19	2177.304	4613.959	218.2136	674.3599
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	18.57167	3.908327	38.36076	100.6514	3.607480	1.096209	7.526469
SDEV	.31833	1.544064	.61335	1.8097	1.250088	1.447008	1.717247
%RSD	1.714081	39.50702	1.598900	1.797972	34.65268	132.0011	22.81611
#1	18.70633	3.204086	38.11491	102.5980	2.334313	-.528476	7.512608
#2	18.20814	2.841939	37.90847	99.02002	3.654992	1.570719	5.816194
#3	18.80054	5.678956	39.05889	100.3361	4.833135	2.246385	9.250605
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	24.44311	5.218830	2.802852	-7.79298	5.534031	20.01983	.1768553
SDEV	4.48434	2.234952	.818938	1.95004	2.616286	1.63201	.4322967
%RSD	18.34601	42.82478	29.21802	25.02302	47.27631	8.151962	244.4353
#1	27.20922	3.252968	1.875512	-6.67141	2.538276	20.56949	.5724258
#2	19.26918	4.753813	3.106245	-10.0447	7.369605	18.18396	-.284603
#3	26.85093	7.649708	3.426800	-6.66284	6.694213	21.30605	.2427430
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	499.5759	16.39801	112295.4
SDEV	3.9588	.58231	1031.1
%RSD	.7924386	3.551086	.9182090
#1	504.0562	16.96028	111105.0
#2	496.5497	15.79754	112870.9
#3	498.1218	16.43621	112910.3
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: CCV2 OPERATOR:
RUN TIME: 03/18/14 01:12:40
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	102.1296	51554.29	1056.692	989.4466	51168.08	979.5436	997.5086
SDEV	.3088	253.76	5.549	4.2502	190.06	2.1227	4.6177
%RSD	.3023321	.4922107	.5251491	.4295515	.3714393	.2167024	.4629280
#1	101.8255	51835.03	1062.912	993.1592	51369.70	977.4854	992.8709
#2	102.4429	51341.25	1054.913	984.8107	50992.21	979.4200	997.5489
#3	102.1203	51486.59	1052.250	990.3699	51142.34	981.7253	1002.106
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1028.023	1005.913	25252.92	50689.29	50349.36	1029.482	51010.93
SDEV	6.820	1.928	25.52	68.61	51.04	4.062	143.59
%RSD	.6633840	.1916686	.1010640	.1353596	.1013802	.3945873	.2814879
#1	1035.557	1006.742	25240.93	50762.21	50340.54	1032.260	50870.36
#2	1022.271	1003.709	25235.60	50626.01	50303.29	1024.820	51157.36
#3	1026.243	1007.288	25282.23	50679.63	50404.23	1031.365	51005.08
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	991.6197	985.0838	1013.741	1128.073	986.6157	1001.804	1066.335
SDEV	2.2676	6.2755	7.863	5.363	3.8165	4.153	5.823
%RSD	.2286748	.6370535	.7756271	.4753854	.3868246	.4145774	.5460695
#1	989.4523	977.8376	1022.676	1122.071	982.2803	999.6771	1070.198
#2	991.4310	988.7459	1007.879	1132.394	988.0989	999.1459	1059.638
#3	993.9757	988.6679	1010.667	1129.754	989.4680	1006.591	1069.169
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	998.1243	1000.502	979.6833	978.6022	1013.388	1009.543	1037.565
SDEV	2.3239	3.850	4.1591	2.1865	7.315	1.164	1.934
%RSD	.2328289	.3848035	.4245303	.2234265	.7218239	.1153150	.1864123
#1	998.7469	996.3038	975.2793	979.9141	1009.544	1009.028	1035.891
#2	1000.073	1003.868	980.2266	979.8144	1008.797	1008.724	1037.122
#3	995.5525	1001.334	983.5440	976.0782	1021.824	1010.875	1039.683
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1014.351	994.1193	114987.8
SDEV	4.358	3.7346	317.5
%RSD	.4296549	.3756729	.2761030
#1	1019.299	991.6744	115312.3
#2	1012.673	992.2653	114973.2
#3	1011.082	998.4181	114677.8
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

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METHOD: P4S12014 SAMPLE NAME: CCB2 OPERATOR:
RUN TIME: 03/18/14 01:19:54
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8784260	-17.0960	.4987885	2.378634	51.54208	.0860965	-1.47594
SDEV	.3098857	6.2983	.1923340	.291338	12.85490	.2474324	.51048
%RSD	35.27738	36.84062	38.56024	12.24811	24.94058	287.3896	34.58653
#1	.9955139	-9.83732	.7195998	2.637119	55.65503	.3704130	-.922066
#2	1.112708	-21.1153	.3677878	2.435849	61.83717	-.031651	-1.92753
#3	.5270563	-20.3353	.4089779	2.062933	37.13405	-.080473	-1.57822
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.45424	.9644531	13.44421	18.44595	24.64434	.4126887	-86.0007
SDEV	.12250	.3521301	7.56283	17.44498	10.16113	.1386696	398.4002
%RSD	8.423315	36.51086	56.25346	94.57349	41.23111	33.60150	463.2524
#1	-1.44304	.7952794	22.12603	36.58462	36.28949	.5667573	113.7994
#2	-1.58195	1.369244	8.287256	1.789201	20.06333	.3734219	-544.764
#3	-1.33773	.7288356	9.919339	16.96403	17.58020	.2978868	172.9623
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.176553	2.517627	.3192055	.1726347	.5618322	-.592183	-2.20647
SDEV	.712080	2.052195	.2292034	.0921277	.5654023	.146349	1.56113
%RSD	60.52252	81.51308	71.80432	53.36569	100.6354	24.71348	70.75269
#1	1.941746	.1780014	.5838633	.2241526	1.120537	-.587237	-.648492
#2	1.054567	3.361680	.1857062	.0662721	.5749964	-.740942	-3.77074
#3	.5333465	4.013199	.1880470	.2274792	-.010037	-.448369	-2.20017
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.359812	-1.27904	1.480749	-1.61958	-.079355	-.197053	1.284108
SDEV	.935630	.75202	.643101	3.26560	1.469422	1.461944	1.350801
%RSD	260.0331	58.79549	43.43077	201.6318	1851.701	741.9023	105.1938
#1	.7194216	-.437853	1.898423	-3.96472	1.098868	-.181634	2.761866
#2	-.856474	-1.88627	1.803645	-3.00424	.3889085	-1.66665	.9774764
#3	-.942383	-1.51301	.7401791	2.110206	-1.72584	1.257120	.1129814
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.3671234	1.090440	116829.4
SDEV	.0839444	.503811	161.5
%RSD	22.86544	46.20258	.1382363
#1	.3500579	1.275314	116880.5
#2	.4582893	1.475698	116959.1
#3	.2930230	.5203084	116648.5
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

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METHOD: P4S12014 SAMPLE NAME: 1403013-07 OPERATOR:
RUN TIME: 03/18/14 01:27:07
COMMENT: SDG:1403013 CLIENTID:SB-6-4-1-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6659450	12354.40	29.52956	3.160806	5489.869	-2.23905	7.779689
SDEV	.4099990	130.21	.22684	.249354	69.261	.32137	1.106711
%RSD	61.56649	1.053965	.7681687	7.888936	1.261619	14.35298	14.22564
#1	.3730439	12498.41	29.78887	3.312262	5568.637	-1.86877	8.990118
#2	1.134507	12244.97	29.43190	2.873009	5438.490	-2.40297	6.819574
#3	.4902840	12319.82	29.36792	3.297147	5462.481	-2.44541	7.529375
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	41.88711	26.23558	41066.59	1997.760	3915.396	187.8598	1012.780
SDEV	1.13206	.49165	520.42	16.613	46.546	3.0584	137.873
%RSD	2.702648	1.873990	1.267247	.8315839	1.188783	1.628000	13.61330
#1	43.04002	25.79415	41667.38	2016.920	3969.001	191.3719	861.7479
#2	41.84419	26.76545	40755.12	1987.363	3885.225	185.7837	1044.697
#3	40.77712	26.14715	40777.26	1988.998	3891.961	186.4238	1131.895
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	15.71553	3.771242	46.63135	873.2636	1199.255	1.587061	20.30872
SDEV	.52697	3.463216	.40341	9.4375	5.856	1.582500	2.25493
%RSD	3.353176	91.83225	.8650973	1.080712	.4883085	99.71262	11.10328
#1	15.54591	6.153732	47.09658	884.0258	1205.954	.6694174	19.02602
#2	15.29425	5.361485	46.37857	866.4002	1195.106	.6773967	22.91240
#3	16.30642	-.201490	46.41890	869.3648	1196.706	3.414369	18.98774
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	21.52140	1214.133	1191.827	-7.93039	6.338543	21.86879	1.462617
SDEV	2.51610	13.150	3.769	2.62522	1.078860	.92322	.593351
%RSD	11.69114	1.083088	.3162636	33.10333	17.02063	4.221654	40.56773
#1	22.29340	1227.145	1195.374	-9.72646	5.859457	20.84703	2.046607
#2	23.56105	1200.849	1192.238	-9.14714	5.582196	22.11634	1.480916
#3	18.70975	1214.406	1187.869	-4.91755	7.573976	22.64300	.8603289
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	600.2948	16.95052	112848.7
SDEV	6.5974	.76743	1073.4
%RSD	1.099031	4.527495	.9511484
#1	607.8518	17.81327	111687.1
#2	595.6824	16.34392	113803.7
#3	597.3503	16.69437	113055.4
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-08 OPERATOR:
RUN TIME: 03/18/14 01:34:21
COMMENT: SDG:1403013 CLIENTID:SB-6-4-1-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5688698	13381.30	19.33389	3.675859	3747.167	-4.16932	6.552164
SDEV	.5542289	14.60	.13715	.272078	23.511	.23174	.270992
%RSD	97.42632	.1091338	.7093812	7.401763	.6274218	5.558238	4.135919
#1	.9592230	13365.91	19.45439	3.506689	3766.530	-3.90183	6.821103
#2	.8128832	13394.97	19.18464	3.989710	3721.007	-4.29668	6.556224
#3	-.065497	13383.03	19.36264	3.531178	3753.964	-4.30944	6.279164
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	28.11426	3.922671	49037.62	1954.585	3817.639	170.0689	769.1295
SDEV	.74751	1.064889	50.58	4.785	9.355	1.2209	81.8744
%RSD	2.658829	27.14705	.1031357	.2447912	.2450440	.7178768	10.64507
#1	28.26741	4.526521	49000.93	1952.330	3815.300	168.6653	740.7770
#2	28.77334	4.548384	49095.32	1960.081	3827.942	170.8848	861.4116
#3	27.30204	2.693107	49016.62	1951.344	3809.676	170.6566	705.2000
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	15.01891	3.221967	43.33899	187.8275	11.64605	2.853576	6.466100
SDEV	.33318	1.652967	.52758	.3536	1.15283	2.208602	4.242581
%RSD	2.218431	51.30304	1.217340	.1882768	9.898898	77.39767	65.61268
#1	14.68295	4.438855	43.83935	187.5607	12.86233	5.396721	5.865351
#2	15.02454	3.886977	43.38976	188.2286	10.56938	1.416979	10.97704
#3	15.34924	1.340068	42.78785	187.6932	11.50644	1.747030	2.555914
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	29.40106	13.54257	10.69906	-3.55088	6.050895	19.17366	.9889522
SDEV	2.29300	2.00815	1.87679	2.13490	3.311321	2.48467	.1899432
%RSD	7.799023	14.82843	17.54162	60.12312	54.72449	12.95878	19.20651
#1	31.98567	14.76366	11.91294	-2.97361	9.575503	19.19649	.9362750
#2	28.60641	14.63917	8.537384	-1.76397	3.004963	21.64684	.8309074
#3	27.61110	11.22487	11.64687	-5.91505	5.572219	16.67765	1.199674
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	546.2883	15.84636	112498.6
SDEV	1.5395	1.09311	69.8
%RSD	.2818144	6.898196	.0620034
#1	548.0545	16.58270	112462.2
#2	545.2307	16.36602	112454.5
#3	545.5796	14.59036	112579.0
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-09 OPERATOR:
RUN TIME: 03/18/14 01:41:34
COMMENT: SDG:1403013 CLIENTID:SB-6-10-3-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.142138	50818.78	157.7553	4.544220	3306.754	-3.18309	10.82920
SDEV	.702902	242.30	1.1288	.593285	4.759	.27820	.97056
%RSD	494.5200	.4768013	.7155149	13.05583	.1439195	8.740004	8.962468
#1	.3067153	51036.85	156.9049	5.223562	3305.231	-2.87122	11.71911
#2	-.952201	50861.55	157.3250	4.281089	3302.943	-3.40573	10.97419
#3	.2190710	50557.94	159.0359	4.128009	3312.089	-3.27232	9.794297
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	54.01920	22.84343	54208.19	2335.559	4530.962	228.8902	764.4556
SDEV	.42211	.35877	248.72	18.196	19.191	2.3062	213.4588
%RSD	.7814040	1.570569	.4588300	.7790752	.4235523	1.007557	27.92299
#1	54.50377	22.52735	54379.27	2356.311	4548.408	229.7224	905.5170
#2	53.82240	22.76955	54322.43	2328.030	4534.073	230.6647	518.8794
#3	53.73142	23.23339	53922.87	2322.336	4510.406	226.2833	868.9705
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	31.13339	2.258028	94.11811	157.8892	84.92690	2.245116	3.666003
SDEV	.48247	1.340454	.78592	1.4252	.75882	1.203660	3.813559
%RSD	1.549675	59.36394	.8350409	.9026515	.8934923	53.61237	104.0250
#1	30.65224	2.660053	95.01905	159.4452	85.78618	1.527320	7.945671
#2	31.61716	.7625656	93.57327	157.5754	84.64566	3.634730	.6280780
#3	31.13078	3.351464	93.76200	156.6471	84.34885	1.573299	2.424260
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	24.34089	91.88090	81.45496	-7.13319	6.927133	19.47243	2.081036
SDEV	.97071	1.61738	1.82698	2.16627	.868516	.76234	.464017
%RSD	3.987973	1.760303	2.242934	30.36886	12.53788	3.914977	22.29741
#1	25.42593	90.25519	83.55488	-7.62176	6.094896	20.10838	1.789648
#2	23.55487	93.48982	80.23006	-4.76436	7.827871	19.68154	1.837330
#3	24.04186	91.89771	80.57993	-9.01345	6.858631	18.62735	2.616129
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1036.883	13.23575	112754.7
SDEV	.806	.44752	423.4
%RSD	.0777507	3.381110	.3755469
#1	1036.407	13.64357	112378.9
#2	1036.428	12.75701	112671.7
#3	1037.814	13.30667	113213.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-10 OPERATOR:
RUN TIME: 03/18/14 01:48:48
COMMENT: SDG:1403013 CLIENTID:SB-6-10-3-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1320414	9772.880	19.78425	3.342248	4078.087	-1.32295	3.051955
SDEV	1.057527	38.825	.04790	.694142	22.112	.29148	.880902
%RSD	800.9054	.3972759	.2421336	20.76870	.5422185	22.03257	28.86352
#1	.7860380	9744.395	19.82725	4.139730	4068.138	-1.09878	3.016390
#2	-1.08803	9817.103	19.73261	2.873875	4103.426	-1.65246	2.189374
#3	.6981163	9757.143	19.79289	3.013138	4062.698	-1.21762	3.950100
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	23.04983	2.251758	14904.18	1683.935	2794.733	118.7325	838.2602
SDEV	.35383	.681342	24.14	5.388	2.198	.6383	41.7382
%RSD	1.535086	30.25824	.1619580	.3199937	.0786381	.5375878	4.979140
#1	23.44772	2.730167	14881.68	1686.715	2794.587	118.6420	880.8655
#2	22.93122	2.553451	14929.68	1677.724	2792.612	119.4113	797.4469
#3	22.77053	1.471655	14901.18	1687.366	2797.000	118.1444	836.4683
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.18181	1.311264	28.46081	50.79828	11.81089	.1093814	4.928283
SDEV	.16561	3.478461	.29911	.11138	.66063	4.005147	.199197
%RSD	1.626495	265.2754	1.050959	.2192570	5.593432	3661.635	4.041919
#1	10.36984	5.225084	28.34306	50.89355	11.45771	-3.42608	5.153945
#2	10.11790	.1361451	28.23849	50.82545	12.57304	4.459087	4.854014
#3	10.05767	-1.42744	28.80088	50.67583	11.40191	-.704867	4.776890
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.902530	14.64163	10.39752	-5.95632	3.137576	19.40776	.8207108
SDEV	1.041755	.69310	1.11708	9.13938	3.951761	.81952	.7449083
%RSD	21.24934	4.733751	10.74369	153.4401	125.9495	4.222654	90.76379
#1	3.829017	14.02831	10.17422	-16.5079	3.104928	19.98592	1.082710
#2	4.969253	14.50302	11.60938	-.842018	7.105560	18.46990	1.399222
#3	5.909319	15.39355	9.408954	-.519017	-.797760	19.76747	-.019800
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	951.9786	13.33700	112932.3
SDEV	4.9401	.48990	443.5
%RSD	.5189259	3.673228	.3926851
#1	949.8271	13.72528	113223.8
#2	957.6296	13.49914	113151.1
#3	948.4792	12.78659	112421.9
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-12 OPERATOR:
RUN TIME: 03/18/14 01:56:01
COMMENT: SDG:1403013 CLIENTID:SB-6-4-4-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6652552	11195.52	21.53006	3.570761	3339.463	-5.45378	5.852970
SDEV	.1341281	79.44	.18781	.169573	16.732	.25405	.902856
%RSD	20.16190	.7095638	.8722978	4.748922	.5010294	4.658301	15.42560
#1	.8115717	11286.30	21.67878	3.753531	3357.546	-5.16263	6.722022
#2	.6360739	11138.71	21.59240	3.418539	3336.312	-5.63049	4.919735
#3	.5481201	11161.55	21.31902	3.540214	3324.531	-5.56820	5.917152
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	24.39126	2.395291	65654.16	1779.077	3582.795	309.6993	819.3275
SDEV	.58178	.190692	387.22	5.205	27.006	1.6457	320.8155
%RSD	2.385185	7.961112	.5897815	.2925838	.7537566	.5313873	39.15596
#1	25.06274	2.564888	66091.98	1784.574	3611.186	311.3381	612.1714
#2	24.07279	2.188874	65356.66	1778.436	3557.430	308.0468	656.9406
#3	24.03826	2.432110	65513.86	1774.223	3579.770	309.7129	1188.870
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.38672	3.465686	50.88995	55.06678	-7.82944	2.560540	4.734806
SDEV	.55610	3.053009	.61057	.15715	.50756	.593410	1.233211
%RSD	4.154090	88.09249	1.199775	.2853872	6.482734	23.17518	26.04564
#1	13.56101	5.962646	51.48559	54.88688	-7.56412	2.631381	4.423269
#2	12.76436	4.372374	50.26548	55.13619	-8.41468	3.115350	3.687239
#3	13.83480	.0620365	50.91879	55.17728	-7.50953	1.934890	6.093911
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	109.1057	-7.47892	-8.00456	-4.34026	6.005662	18.76806	.6423930
SDEV	1.2087	3.34505	1.51187	8.65271	4.992268	1.03901	.3040786
%RSD	1.107822	44.72641	18.88766	199.3590	83.12602	5.536060	47.33529
#1	108.1137	-9.85060	-6.42272	-12.0571	9.964514	17.74733	.4208240
#2	110.4519	-8.93330	-8.15587	-5.97791	7.655058	19.82444	.5172873
#3	108.7513	-3.65287	-9.43509	5.014247	.3974132	18.73241	.9890677
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	559.5419	14.14597	112041.8
SDEV	4.0348	.45115	1060.9
%RSD	.7210974	3.189223	.9469182
#1	564.1185	14.51947	110845.8
#2	556.4982	14.27373	112409.9
#3	558.0089	13.64473	112869.6
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-13 OPERATOR:
RUN TIME: 03/18/14 02:03:15
COMMENT: SDG:1403013 CLIENTID:SB-6-4-4-0-DUP 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.973209	9464.376	28.00458	2.666581	6195.834	-3.43393	4.680880
SDEV	1.723147	190.381	.36110	.516011	112.545	.35613	1.716941
%RSD	177.0581	2.011559	1.289434	19.35105	1.816456	10.37093	36.67988
#1	-.416867	9313.508	27.69933	3.200245	6128.642	-3.12505	4.388694
#2	-2.90580	9678.281	28.40319	2.170250	6325.764	-3.35327	6.525165
#3	.4030363	9401.340	27.91120	2.629248	6133.096	-3.82348	3.128780
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	23.74137	19.05654	43707.52	1539.019	2580.717	467.4107	621.5732
SDEV	.68003	.43486	832.04	6.667	52.643	8.9543	268.5101
%RSD	2.864346	2.281954	1.903656	.4331735	2.039847	1.915733	43.19846
#1	23.46656	19.18912	43212.91	1531.934	2553.673	461.2653	573.5388
#2	24.51580	19.40968	44668.14	1545.168	2641.384	477.6845	380.3223
#3	23.24174	18.57082	43241.52	1539.956	2547.092	463.2823	910.8586
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.818366	-.332451	42.49728	176.9333	248.0278	2.687322	7.864537
SDEV	.486685	6.542410	.32955	3.3698	3.1574	1.011058	.739971
%RSD	4.956880	1967.935	.7754706	1.904583	1.273013	37.62327	9.408958
#1	9.997753	1.162896	42.65731	175.5765	247.2676	3.378595	8.205593
#2	10.18990	-7.49309	42.11827	180.7701	251.4959	1.526918	8.372477
#3	9.267449	5.332838	42.71627	174.4534	245.3198	3.156451	7.015542
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	16.82192	243.8509	250.1130	-11.3321	9.686428	20.44446	.5254475
SDEV	1.70844	4.2762	6.6928	6.6051	1.999353	.84873	.3034496
%RSD	10.15603	1.753601	2.675903	58.28612	20.64076	4.151399	57.75070
#1	15.88167	247.0346	247.3838	-9.62958	9.872826	20.46548	.7471700
#2	18.79395	238.9904	257.7391	-18.6218	11.58605	19.58541	.1796160
#3	15.79014	245.5275	245.2160	-5.74501	7.600404	21.28248	.6495565
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	508.8759	15.12946	111839.5
SDEV	11.1638	.64602	1575.6
%RSD	2.193816	4.269972	1.408804
#1	500.9465	14.94946	113165.4
#2	521.6425	15.84639	110097.7
#3	504.0387	14.59252	112255.5
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-14 OPERATOR:
RUN TIME: 03/18/14 02:10:29
COMMENT: SDG:1403013 CLIENTID:SB-6-10-4-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4427509	17188.94	46.19737	3.438542	1517.445	-1.72319	3.051674
SDEV	.6003182	33.50	.16199	.236827	5.144	.22606	1.089064
%RSD	135.5883	.1948821	.3506519	6.887429	.3390217	13.11860	35.68743
#1	.0816304	17183.21	46.38303	3.655230	1522.456	-1.46337	4.306644
#2	.1108894	17224.94	46.12433	3.185727	1517.702	-1.87482	2.354561
#3	1.135733	17158.68	46.08477	3.474669	1512.177	-1.83137	2.493818
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	25.50336	5.775306	22413.06	1360.049	2274.076	96.68854	773.4122
SDEV	.34069	.765616	56.79	4.181	5.174	.80181	175.5104
%RSD	1.335852	13.25671	.2533888	.3073813	.2275139	.8292693	22.69300
#1	25.81385	6.400898	22412.49	1362.145	2270.400	95.98893	632.2170
#2	25.55732	6.003474	22470.13	1362.768	2279.992	97.56351	969.9139
#3	25.13891	4.921545	22356.55	1355.236	2271.835	96.51316	718.1056
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.10170	1.349789	38.57180	62.38263	43.48128	2.088952	4.537814
SDEV	.48568	3.514885	.22114	.70180	.85119	2.744188	.771317
%RSD	3.706985	260.4026	.5733190	1.124992	1.957594	131.3667	16.99756
#1	13.15221	2.153299	38.37894	63.11018	42.84288	2.622980	3.662633
#2	13.56015	4.393348	38.52329	62.32793	44.44767	4.526874	5.118493
#3	12.59274	-2.49728	38.81317	61.70978	43.15329	-.882997	4.832315
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.12507	45.38890	42.52878	-10.2849	8.266486	19.48212	.1239700
SDEV	1.80772	.36170	1.35171	5.2705	2.971185	1.20250	1.084630
%RSD	13.77301	.7968972	3.178341	51.24545	35.94253	6.172302	874.9129
#1	14.46701	45.19032	41.67080	-13.8932	10.86858	19.11163	-.630370
#2	13.83874	45.16998	44.08694	-4.23648	8.901876	20.82626	1.366963
#3	11.06945	45.80639	41.82860	-12.7250	5.029005	18.50847	-.364683
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	575.4668	10.90572	112924.8
SDEV	.3449	.74984	593.7
%RSD	.0599327	6.875654	.5257418
#1	575.2260	11.66999	112340.8
#2	575.3125	10.87598	113527.7
#3	575.8619	10.17119	112906.0
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

METHOD: P4S12014 SAMPLE NAME: 1403013-15 OPERATOR:
RUN TIME: 03/18/14 02:17:42
COMMENT: SDG:1403013 CLIENTID:SB-6-10-4-0-DU 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.181270	16846.28	42.39360	3.042420	1424.165	-1.68310	2.128294
SDEV	.305710	26.83	.15205	.090193	5.542	.05628	.415612
%RSD	168.6494	.1592717	.3586743	2.964507	.3891446	3.344036	19.52795
#1	-.034721	16817.32	42.55869	2.945745	1421.103	-1.70846	2.608197
#2	.0235771	16870.30	42.25928	3.057214	1430.562	-1.61860	1.890250
#3	-.532665	16851.21	42.36283	3.124302	1420.829	-1.72225	1.886435
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	23.54190	6.141310	20048.10	1253.453	2135.065	89.37485	735.6993
SDEV	.50031	.530069	8.38	6.350	4.106	.14272	234.3478
%RSD	2.125170	8.631202	.0418216	.5066146	.1923303	.1596922	31.85374
#1	23.33948	6.531032	20043.93	1255.275	2132.819	89.41170	975.3314
#2	24.11169	6.355178	20057.76	1258.692	2139.805	89.49554	724.7466
#3	23.17451	5.537718	20042.63	1246.390	2132.573	89.21732	507.0199
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.84359	.3800438	34.40866	77.96473	31.44101	.8180219	6.354584
SDEV	.18920	.5750564	.82463	.36622	.61455	1.055140	1.454120
%RSD	1.597506	151.3132	2.396580	.4697263	1.954607	128.9867	22.88300
#1	11.70740	.7348347	33.57092	78.20812	31.80549	-.398795	7.870340
#2	11.76375	.6887374	35.21953	78.14252	30.73148	1.479702	6.222265
#3	12.05963	-.283441	34.43554	77.54356	31.78607	1.373158	4.971146
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.55701	32.55486	30.88479	-10.2003	6.318819	19.67211	.3609555
SDEV	1.61944	.51750	.68550	1.8333	2.441256	.47778	.3458947
%RSD	14.01261	1.589624	2.219532	17.97332	38.63469	2.428720	95.82752
#1	11.69518	32.66212	31.37768	-8.33337	3.562437	19.24799	.6977243
#2	13.10294	31.99214	30.10196	-11.9981	8.208382	20.18973	.0066055
#3	9.872914	33.01033	31.17472	-10.2695	7.185638	19.57861	.3785366
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	539.7956	8.640163	112251.1
SDEV	2.0717	.060673	126.7
%RSD	.3837883	.7022164	.1128370
#1	537.9301	8.683077	112135.5
#2	542.0252	8.570747	112386.5
#3	539.4316	8.666662	112231.3
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-16 OPERATOR:
RUN TIME: 03/18/14 02:24:56
COMMENT: SDG:1403013 CLIENTID:SB-6-10-4-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0666907	4152.116	13.37822	2.958361	1389.779	-.813511	-1.97534
SDEV	.6587473	12.317	.12584	.125060	7.224	.100852	.64915
%RSD	987.7658	.2966320	.9405977	4.227348	.5197655	12.39712	32.86279
#1	.2911772	4164.949	13.36084	2.945554	1382.395	-.850727	-2.16538
#2	-.674959	4140.391	13.26198	3.089333	1390.110	-.890467	-2.50827
#3	.5838537	4151.008	13.51184	2.840198	1396.831	-.699340	-1.25238
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.724102	2.331054	5840.258	651.9163	537.0429	32.81615	676.1137
SDEV	.384254	.401093	15.829	14.6661	5.2749	.15117	219.4593
%RSD	4.974744	17.20651	.2710286	2.249689	.9822152	.4606433	32.45894
#1	7.710582	2.699146	5858.476	650.0038	534.2524	32.98584	647.5200
#2	7.346787	1.903581	5829.877	638.3003	533.7495	32.76677	472.3527
#3	8.114939	2.390436	5832.420	667.4448	543.1269	32.69586	908.4683
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.333885	-1.68323	10.09590	16.57959	6.394011	.5025092	6.208728
SDEV	.771028	2.64510	1.04657	.17314	.575930	.6310528	4.639882
%RSD	23.12700	157.1441	10.36632	1.044299	9.007337	125.5804	74.73160
#1	2.950519	-3.70750	10.17779	16.77234	7.024825	1.085926	11.46779
#2	2.829683	-2.65184	9.010786	16.43724	6.260951	.5888826	2.693088
#3	4.221454	1.309638	11.09912	16.52919	5.896256	-.167281	4.465303
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.150682	5.699021	6.740825	-11.2603	6.374992	19.32464	.3221550
SDEV	.591241	1.993732	.978104	4.0786	2.974217	1.95554	.3286692
%RSD	14.24444	34.98377	14.51015	36.22123	46.65444	10.11943	102.0221
#1	4.782452	7.339092	6.867767	-14.5373	8.885708	18.66769	.6907616
#2	4.058888	3.479845	7.649259	-12.5512	7.148967	17.78215	.2160840
#3	3.610707	6.278125	5.705448	-6.69244	3.090301	21.52406	.0596194
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	287.5300	4.521662	112857.0
SDEV	1.0300	.538833	310.6
%RSD	.3582350	11.91670	.2752456
#1	286.5829	5.107746	113002.8
#2	287.3803	4.047734	113068.0
#3	288.6266	4.409506	112500.3
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

ANALYSIS REPORT QC STANDARD 03/18/14 02:39:19 AM PAGE 1

METHOD: P4S12014 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 03/18/14 02:32:10
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.677731	206.5364	206.3543	Q6.567181	4987.044	4.222321	15.49696
SDEV	.178116	3.5331	1.3073	.095090	5.062	.130075	.25175
%RSD	3.137099	1.710629	.6335019	1.447964	.1015120	3.080649	1.624507
#1	5.882707	210.3668	206.5544	Q6.665937	4982.991	4.177739	15.23481
#2	5.560620	203.4051	207.5500	6.476238	4992.719	4.120399	15.51926
#3	5.589865	205.8373	204.9585	Q6.559367	4985.424	4.368824	15.73682
ERRORS	QC PASS	QC PASS	QC PASS	QC FAIL	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.757029	4.860303	183.4074	5171.545	4890.597	10.12171	4637.940
SDEV	.404243	.529180	17.3631	8.849	9.540	.06821	85.424
%RSD	5.211307	10.88779	9.466955	.1711052	.1950717	.6738807	1.841847
#1	8.174769	5.176832	200.3715	5163.528	4879.669	10.19986	4711.519
#2	7.728524	5.154685	184.1797	5181.040	4894.850	10.09113	4658.042
#3	7.367793	4.249393	165.6711	5170.068	4897.270	10.07414	4544.257
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.38349	29.36550	19.06871	31.90802	9.571010	9.394746	29.01252
SDEV	.63968	1.99609	.11630	.17419	1.106879	1.033221	.65124
%RSD	6.160565	6.797385	.6098831	.5459017	11.56491	10.99786	2.244695
#1	10.06785	29.96090	19.07740	32.09209	10.46920	10.56922	28.71397
#2	11.11965	27.13947	18.94832	31.88619	9.909392	8.989158	28.56408
#3	9.962986	30.99615	19.18043	31.74577	8.334436	8.625856	29.75952
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.331924	6.997514	10.85567	6.460188	10.85972	49.21600	50.93122
SDEV	1.773727	1.673880	2.37179	2.514478	2.39862	.87395	.42310
%RSD	21.28832	23.92107	21.84841	38.92268	22.08728	1.775749	.8307293
#1	7.016145	6.787764	12.30700	5.607609	13.04621	50.18912	50.59071
#2	7.630530	5.438394	12.14138	4.482848	11.23882	48.49798	51.40488
#3	10.34910	8.766383	8.118633	9.290107	8.294126	48.96090	50.79807
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	49.65504	46.42917	116728.0
SDEV	.22739	.14912	181.7
%RSD	.4579329	.3211829	.1556999
#1	49.91667	46.48530	116572.2
#2	49.50507	46.54208	116927.7
#3	49.54339	46.26012	116684.1
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

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METHOD: P4S12014 SAMPLE NAME: CCV2 OPERATOR:
RUN TIME: 03/18/14 02:39:23
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	102.0138	51436.12	1050.079	981.2931	51017.70	983.2120	996.7539
SDEV	.6585	148.40	4.406	6.1727	193.17	4.7091	7.0056
%RSD	.6455327	.2885156	.4195541	.6290329	.3786340	.4789468	.7028387
#1	101.2725	51273.94	1045.855	977.2001	50829.66	978.6718	988.7889
#2	102.2380	51469.27	1054.647	988.3931	51215.62	988.0735	999.5123
#3	102.5310	51565.14	1049.735	978.2862	51007.81	982.8908	1001.960
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1019.573	1005.055	25202.38	50565.70	50314.19	1025.656	50686.81
SDEV	1.908	7.161	79.78	217.89	186.12	4.222	285.80
%RSD	.1871315	.7124606	.3165662	.4309028	.3699084	.4116215	.5638475
#1	1020.896	1001.255	25110.73	50314.11	50099.78	1021.184	50359.76
#2	1020.436	1000.595	25256.24	50693.24	50408.85	1029.572	50812.12
#3	1017.386	1013.314	25240.19	50689.75	50433.96	1026.211	50888.54
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	992.7779	987.6989	1005.154	1127.726	990.1164	1008.765	1062.042
SDEV	5.2308	12.7192	2.573	6.349	9.2826	6.849	3.609
%RSD	.5268868	1.287757	.2559684	.5629513	.9375289	.6789777	.3398367
#1	987.9641	973.0488	1002.227	1120.424	983.2447	1009.115	1060.216
#2	998.3442	995.9230	1007.059	1130.821	1000.676	1015.432	1066.199
#3	992.0254	994.1249	1006.175	1131.934	986.4282	1001.747	1059.710
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1001.874	1001.312	984.5271	986.7852	1019.738	1029.109	1029.285
SDEV	6.840	14.120	8.2282	3.5838	10.418	8.129	7.477
%RSD	.6827248	1.410161	.8357467	.3631811	1.021660	.7899070	.7264435
#1	993.9986	986.3798	981.6796	982.6516	1022.327	1019.843	1022.083
#2	1006.335	1014.448	993.8008	989.0214	1028.617	1035.042	1037.010
#3	1005.287	1003.108	978.1010	988.6825	1008.269	1032.441	1028.761
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1009.184	995.8007	114391.8
SDEV	5.485	6.0750	444.4
%RSD	.5434940	.6100590	.3884465
#1	1005.586	988.7867	114548.1
#2	1015.497	999.3992	113890.4
#3	1006.470	999.2161	114736.9
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

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METHOD: P4S12014 SAMPLE NAME: CCB2 OPERATOR:
RUN TIME: 03/18/14 02:46:36
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6539755	-13.8689	.3595278	2.066357	38.01664	.0327371	-1.64906
SDEV	.1883379	10.4839	.1630557	.493764	10.04345	.2771923	.56938
%RSD	28.79892	75.59285	45.35274	23.89539	26.41856	846.7228	34.52755
#1	.7321193	-1.79247	.5448718	2.601367	26.53284	.3499850	-1.00729
#2	.4391443	-20.6364	.2381702	1.969517	42.35759	-.162642	-2.09361
#3	.7906629	-19.1777	.2955413	1.628187	45.15949	-.089132	-1.84629
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.83268	.2797254	5.297588	13.45602	19.28364	.3398733	-15.7156
SDEV	.25352	.3453972	4.737133	10.10840	9.24851	.0373037	250.2299
%RSD	13.83336	123.4773	89.42055	75.12182	47.96039	10.97575	1592.243
#1	-1.54060	-.088499	.0215572	24.19067	29.46970	.3420076	267.6302
#2	-1.96162	.5965300	6.685383	4.119400	16.96876	.3760640	-206.393
#3	-1.99581	.3311454	9.185824	12.05798	11.41246	.3015484	-108.384
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.139076	2.817303	.0117523	-.360941	1.379722	.2024838	-.103382
SDEV	.155190	1.615823	.4986157	.105213	.676486	1.261112	2.205560
%RSD	13.62420	57.35355	4242.692	29.14972	49.03062	622.8212	2133.411
#1	1.153059	2.850253	-.340527	-.444873	1.174302	1.431396	-1.93622
#2	1.286801	1.185256	.5822803	-.242906	.8297571	.2645898	2.344383
#3	.9773679	4.416398	-.206497	-.395044	2.135108	-1.08853	-.718305
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.006253	-1.74442	2.939307	-2.53095	1.567042	-.728914	.7839712
SDEV	1.660593	2.02336	1.037872	2.57152	2.770813	1.321069	.6265445
%RSD	82.77089	115.9900	35.31007	101.6030	176.8180	181.2380	79.91933
#1	3.074320	-4.02029	3.767559	-2.42340	3.355797	.7892975	1.455821
#2	2.851347	-1.06401	1.775064	-5.15455	2.969982	-1.61647	.2156215
#3	.0930911	-.148981	3.275298	-.014892	-1.62465	-1.35957	.6804710
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.2216505	2.047756	116002.0
SDEV	.2819864	.361869	458.4
%RSD	127.2212	17.67148	.3951415
#1	.5472171	2.331973	115602.2
#2	.0542685	1.640384	116502.3
#3	.0634660	2.170911	115901.5
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

METHOD: P4S12014 SAMPLE NAME: 1403013-17 OPERATOR:
RUN TIME: 03/18/14 02:53:50
COMMENT: SDG:1403013 CLIENTID:SB-6-10-1-0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1885562	17232.19	58.28335	3.385717	4419.513	-1.96570	4.114244
SDEV	.8242670	108.27	.48501	.329266	16.028	.07040	1.052403
%RSD	437.1467	.6283072	.8321576	9.725139	.3626712	3.581226	25.57950
#1	-.680164	17223.96	58.44966	3.512615	4437.052	-2.04338	3.385144
#2	.9596811	17344.35	57.73707	3.011883	4415.861	-1.90611	3.636855
#3	.2861509	17128.27	58.66333	3.632652	4405.626	-1.94762	5.320734
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	27.82875	12.66649	25585.60	2168.412	3260.494	208.7369	950.4363
SDEV	.95032	.55225	34.43	21.239	6.799	.9011	397.1511
%RSD	3.414898	4.359967	.1345663	.9794667	.2085409	.4316746	41.78619
#1	28.45349	13.22593	25569.93	2160.274	3257.466	208.4244	602.7316
#2	26.73510	12.12172	25625.08	2152.446	3255.734	209.7526	865.3386
#3	28.29765	12.65181	25561.79	2192.517	3268.281	208.0337	1383.239
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	15.14100	-.741315	41.11780	94.25410	41.55834	.2863963	3.704837
SDEV	.54559	.354992	.09777	.59836	.58499	.3568745	2.655817
%RSD	3.603366	47.88683	.2377835	.6348320	1.407628	124.6086	71.68514
#1	15.08196	-.332164	41.13754	93.59605	41.93525	.4971464	5.338363
#2	14.62734	-.967484	41.01167	94.40080	40.88443	-.125651	.6403946
#3	15.71371	-.924297	41.20420	94.76547	41.85533	.4876932	5.135753
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	12.66032	42.79268	40.94194	-9.20066	5.022708	20.56961	2.069362
SDEV	1.94953	.68993	.94418	1.95609	1.344838	4.94681	1.455815
%RSD	15.39871	1.612258	2.306133	21.26028	26.77516	24.04914	70.35092
#1	14.90957	42.12892	41.83841	-11.4577	6.465494	15.76220	1.249465
#2	11.61512	42.74303	39.95638	-7.99688	3.803958	20.30170	1.208396
#3	11.45627	43.50610	41.03104	-8.14742	4.798671	25.64494	3.750225
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	554.1322	12.90023	111935.1
SDEV	1.9136	.46659	454.9
%RSD	.3453296	3.616947	.4063575
#1	555.6990	12.55813	112302.4
#2	554.6981	12.71083	111426.3
#3	551.9995	13.43175	112076.7
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 1403013-18 OPERATOR:
RUN TIME: 03/18/14 03:01:03
COMMENT: SDG:1403013 CLIENTID:SB-6-10-1-1 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8115124	11524.14	21.54184	3.329614	5062.467	-2.43142	7.020504
SDEV	1.731913	8.82	.32595	.180615	22.783	.19891	.637711
%RSD	213.4180	.0765401	1.513086	5.424506	.4500436	8.180982	9.083554
#1	.1674698	11514.38	21.37233	3.123510	5036.168	-2.55095	7.126688
#2	2.773177	11531.55	21.91762	3.405047	5076.225	-2.20180	7.598458
#3	-.506110	11526.48	21.33559	3.460284	5075.007	-2.54152	6.336366
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2000.000	200000.0	20000.00	20000.00	200000.0	20000.00	20000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	30.49583	2.719650	30879.59	1985.580	3425.453	166.4951	1079.418
SDEV	.69532	.480772	78.36	28.254	12.001	1.2089	605.407
%RSD	2.280038	17.67771	.2537728	1.422964	.3503567	.7260851	56.08649
#1	31.05370	3.271198	30797.69	1977.919	3411.882	165.1654	968.7151
#2	29.71684	2.389217	30887.21	2016.874	3434.667	166.7920	1732.537
#3	30.71696	2.498534	30953.87	1961.946	3429.810	167.5279	537.0007
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	200000.0	200000.0	200000.0	20000.00	200000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	14.50632	1.949407	51.85064	53.61328	8.325535	-.391438	3.487640
SDEV	.29088	3.395281	1.45389	.49311	.585105	1.710005	1.782798
%RSD	2.005199	174.1700	2.804001	.9197475	7.027832	436.8518	51.11761
#1	14.44521	5.850079	50.77490	53.17092	7.666266	-1.27630	3.877102
#2	14.25085	.3403950	53.50470	53.52400	8.527222	-1.47770	1.542307
#3	14.82290	-.342254	51.27231	54.14493	8.783117	1.579679	5.043511
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00	20000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	20.46008	13.03321	5.975103	-7.30201	3.058559	19.66805	.6965300
SDEV	1.20752	8.86589	4.213687	7.52275	5.453433	1.00313	1.120986
%RSD	5.901839	68.02535	70.52074	103.0231	178.3008	5.100304	160.9386
#1	21.39855	7.571449	7.713481	-12.3223	4.238306	18.61938	.0262459
#2	19.09778	23.26282	1.170347	1.347303	-2.88819	19.76639	1.990655
#3	20.88392	8.265373	9.041481	-10.9310	7.825557	20.61839	.0726888
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	20000.00					20000.00	20000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1017.091	16.25695	112309.6
SDEV	2.284	.49801	1024.3
%RSD	.2245148	3.063380	.9119931
#1	1016.840	16.81810	111439.1
#2	1014.943	15.86754	112051.5
#3	1019.490	16.08521	113438.2
ERRORS	LC PASS	NOCHECK	NOCHECK
HIGH	20000.00		
LOW	-40000.0		

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METHOD: P4S12014 SAMPLE NAME: 4030704-BLK1 OPERATOR:
RUN TIME: 03/18/14 03:08:17
COMMENT: SDG:1403006 CLIENTID:PBW01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5368415	-40.0438	.0641119	1.832970	29.28095	-.586752	-3.54169
SDEV	.6522753	4.2423	.0880458	.320311	13.91819	.116735	.25447
%RSD	121.5024	10.59403	137.3314	17.47495	47.53326	19.89514	7.184843
#1	.2050009	-36.8107	.0125189	1.566212	41.15967	-.718035	-3.43298
#2	.1172070	-38.4734	.0140421	2.188225	13.96673	-.547578	-3.83246
#3	1.288317	-44.8474	.1657746	1.744474	32.71647	-.494642	-3.35964
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.29788	-.257618	7.683886	4.171956	6.051712	.0812714	174.4527
SDEV	.60240	.514236	4.571679	8.293872	2.634090	.0450049	108.6222
%RSD	26.21544	199.6118	59.49695	198.8006	43.52636	55.37602	62.26456
#1	-2.41425	.3311778	11.79329	9.441169	8.041305	.1066072	69.09141
#2	-2.83360	-.618559	2.759545	-5.38832	3.064538	.0293096	286.0659
#3	-1.64578	-.485472	8.498821	8.463016	7.049294	.1078976	168.2010
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7297515	2.859254	.0359426	1.607685	1.271908	-2.10318	2.402123
SDEV	.7208320	.386446	.6175752	.143691	.659146	3.17457	2.825706
%RSD	98.77773	13.51564	1718.227	8.937785	51.82339	150.9415	117.6337
#1	1.539785	2.919621	-.140524	1.445229	1.893474	1.039269	1.395346
#2	.4905169	2.446177	-.474192	1.659699	1.341540	-5.30892	.2176853
#3	.1589531	3.211965	.7225434	1.718126	.5807104	-2.03988	5.593338
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.747705	.5709477	1.621720	-7.56379	.6229749	-.060494	.4760308
SDEV	1.685419	4.353614	3.159696	5.08199	5.715004	1.507234	.9450091
%RSD	225.4124	762.5242	194.8361	67.18848	917.3730	2491.549	198.5185
#1	-1.04236	-3.29555	4.483955	-11.2960	7.197537	1.063934	-.193149
#2	-2.26636	-.278169	2.150038	-9.61940	-3.15688	-1.77314	.0641685
#3	1.065614	5.286567	-1.76883	-1.77599	-2.17173	.5277281	1.557073
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.104729	-1.19846	115882.4
SDEV	.307594	.73563	169.4
%RSD	293.7061	61.38113	.1461961
#1	.1870276	-.882771	116050.6
#2	-.426029	-2.03924	115884.9
#3	-.075185	-.673367	115711.8
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4030704-BS1 OPERATOR:
RUN TIME: 03/18/14 03:15:31
COMMENT: SDG:1403006 CLIENTID:MLCS01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	544.0593	2581.033	561.7812	533.6729	11081.99	537.1077	540.6064
SDEV	.7915	7.085	2.8451	1.7810	13.82	1.5824	.3535
%RSD	.1454861	.2745051	.5064469	.3337272	.1247096	.2946094	.0653927
#1	544.0985	2572.854	563.8151	535.4881	11097.94	536.2900	541.0132
#2	544.8305	2585.267	558.5300	533.6025	11074.44	538.9316	540.4316
#3	543.2489	2584.979	562.9987	531.9282	11073.58	536.1014	540.3743
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	549.3298	549.3372	5190.083	11161.87	5797.789	546.2592	10966.52
SDEV	.2684	1.9970	10.448	10.76	10.294	2.0979	76.02
%RSD	.0488621	.3635275	.2013140	.0964125	.1775550	.3840534	.6931820
#1	549.6272	547.1138	5182.299	11159.77	5798.192	548.6687	10907.64
#2	549.2565	550.9784	5201.958	11173.52	5807.875	545.2717	11052.34
#3	549.1056	549.9195	5185.991	11152.30	5787.298	544.8373	10939.59
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	538.1691	1076.591	549.6179	1108.853	1066.244	1035.396	1112.556
SDEV	1.5188	7.379	1.2749	2.138	3.921	3.024	3.291
%RSD	.2822195	.6853686	.2319598	.1928326	.3677435	.2920819	.2957857
#1	536.9714	1068.871	548.7772	1111.278	1066.379	1034.909	1114.153
#2	539.8774	1077.328	548.9917	1108.044	1062.257	1032.644	1108.772
#3	537.6586	1083.573	551.0848	1107.237	1070.096	1038.633	1114.744
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1039.468	1076.164	1061.380	1017.867	1044.147	1126.518	1131.144
SDEV	.714	6.826	4.478	10.874	4.053	.833	5.595
%RSD	.0686534	.6342952	.4218581	1.068316	.3881239	.0739248	.4946341
#1	1039.930	1082.290	1058.524	1025.759	1039.477	1127.354	1125.519
#2	1039.828	1068.806	1059.077	1005.463	1046.214	1126.513	1131.203
#3	1038.646	1077.396	1066.541	1022.378	1046.749	1125.688	1136.709
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1096.189	1030.487	115790.7
SDEV	3.290	3.481	131.2
%RSD	.3001659	.3378364	.1133307
#1	1099.397	1026.472	115757.0
#2	1092.822	1032.321	115935.5
#3	1096.349	1032.668	115679.7
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403006-01 OPERATOR:
RUN TIME: 03/18/14 03:22:45
COMMENT: SDG:1403006 CLIENTID:MW-3 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4951535	3754.749	196.3675	2.155004	38701.63	-.831146	-.363639
SDEV	.2552639	12.676	.3672	.257940	33.60	.144595	.223020
%RSD	51.55248	.3375999	.1870011	11.96933	.0868219	17.39703	61.32995
#1	.2023496	3751.037	196.3894	2.450544	38726.39	-.895838	-.339144
#2	.6122461	3744.343	196.7233	1.975219	38663.38	-.665501	-.153878
#3	.6708650	3768.866	195.9899	2.039250	38715.11	-.932100	-.597895
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.628202	7.332277	7338.249	3123.379	16678.03	51.76345	7888.882
SDEV	.391367	.496920	10.416	2.359	41.20	.12938	103.878
%RSD	4.064798	6.777159	.1419407	.0755262	.2470306	.2499461	1.316771
#1	9.182396	6.831661	7334.739	3125.565	16708.93	51.64983	7959.168
#2	9.786990	7.339752	7349.966	3120.878	16693.92	51.90427	7937.916
#3	9.915220	7.825417	7330.041	3123.692	16631.26	51.73625	7769.563
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.179370	2.813203	16.35968	15.18306	2.279577	1.838413	4.331665
SDEV	.401692	3.555985	.20237	.02660	1.379822	3.788033	2.396939
%RSD	7.755616	126.4034	1.236975	.1751693	60.52976	206.0491	55.33527
#1	5.605505	6.380273	16.22546	15.16314	3.000657	5.733553	4.048302
#2	4.807672	2.790928	16.59244	15.17278	3.149460	-1.83256	2.089004
#3	5.124933	-.731591	16.26115	15.21326	.6886131	1.614245	6.857691
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4807823	1.618511	2.609456	-5.58512	5.544513	.3959232	.7370682
SDEV	1.068080	.941406	2.269940	4.37910	4.629530	.6372719	.7464551
%RSD	222.1545	58.16498	86.98900	78.40651	83.49751	160.9584	101.2736
#1	-.567362	.5403080	4.228829	-4.54609	10.86557	-.338809	1.555046
#2	.4419709	2.277425	3.584666	-10.3903	2.439788	.7280440	.5634087
#3	1.567738	2.037799	.0148747	-1.81898	3.328180	.7985344	.0927502
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	326.8582	17.96680	114765.7
SDEV	.7297	.37647	382.5
%RSD	.2232522	2.095356	.3333274
#1	326.7973	18.29484	114411.3
#2	326.1608	18.04979	114714.5
#3	327.6164	17.55576	115171.3
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4030704-DUP1 OPERATOR:
RUN TIME: 03/18/14 03:29:58
COMMENT: SDG:1403006 CLIENTID:MW-3D 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3683160	3644.533	197.5531	2.279708	39228.79	-.961868	-.868888
SDEV	.4144455	8.809	1.3977	.519320	143.47	.360749	.306427
%RSD	112.5244	.2417136	.7075283	22.78012	.3657357	37.50506	35.26652
#1	.8465747	3649.323	198.7738	2.828799	39259.10	-1.01263	-.769239
#2	.1439001	3634.367	197.8571	2.213893	39072.57	-1.29455	-1.21274
#3	.1144731	3649.910	196.0283	1.796433	39354.68	-.578425	-.624689
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.647049	6.654899	7123.072	3100.415	16830.99	50.56631	8038.448
SDEV	.356392	.347289	16.185	1.662	51.07	.07755	207.394
%RSD	4.660521	5.218552	.2272191	.0536001	.3034483	.1533550	2.580023
#1	7.910329	6.721220	7137.095	3098.564	16881.25	50.51089	8042.105
#2	7.241496	6.279232	7105.361	3100.902	16779.14	50.53311	7829.249
#3	7.789320	6.964246	7126.758	3101.779	16832.58	50.65493	8243.988
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.889049	-.869273	16.02873	24.53012	2.261103	-.291850	-.226139
SDEV	.414573	2.963934	.46225	.41863	1.840653	.138185	2.519610
%RSD	8.479631	340.9672	2.883905	1.706579	81.40508	47.34792	1114.185
#1	4.995156	1.004819	16.17281	24.93334	3.253753	-.145995	-.557395
#2	4.431734	-4.28639	15.51160	24.09763	.1372070	-.420811	-2.56374
#3	5.240255	.6737505	16.40179	24.55938	3.392349	-.308743	2.442714
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8202083	2.285411	2.248809	-4.70547	1.911547	-.992284	-.151497
SDEV	2.075709	.542924	2.965761	1.90043	1.060577	1.957613	.483832
%RSD	253.0709	23.75609	131.8814	40.38766	55.48263	197.2836	319.3668
#1	-1.57654	1.695856	4.031375	-6.42168	2.987036	.7054166	-.011927
#2	2.035413	2.764810	-1.17478	-5.03169	1.881065	-3.13366	.2472078
#3	2.001747	2.395568	3.889834	-2.66305	.8665401	-.548614	-.689773
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	318.3619	16.93149	114452.4
SDEV	1.3768	.80188	315.1
%RSD	.4324599	4.736048	.2753213
#1	319.1281	17.83715	114398.5
#2	316.7724	16.64558	114790.9
#3	319.1850	16.31175	114167.7
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4030704-MS1 OPERATOR:
RUN TIME: 03/18/14 03:37:12
COMMENT: SDG:1403006 CLIENTID:MW-3S 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	537.0195	7769.497	762.5519	538.1669	50443.64	532.4097	546.9772
SDEV	.9178	47.016	8.2857	1.1778	258.59	2.4284	6.2713
%RSD	.1709053	.6051320	1.086580	.2188481	.5126240	.4561162	1.146536
#1	536.8624	7823.236	770.0128	538.4301	50741.96	535.1048	553.7371
#2	536.1904	7735.951	753.6345	536.8799	50283.50	530.3917	545.8463
#3	538.0057	7749.304	764.0085	539.1909	50305.46	531.7325	541.3484
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	559.7334	552.9657	12577.87	14062.37	22847.03	608.0394	18968.09
SDEV	4.9756	2.0532	95.59	81.79	187.72	5.3073	349.71
%RSD	.8889208	.3713098	.7599882	.5815967	.8216220	.8728602	1.843670
#1	565.2042	553.9255	12686.49	14147.02	23059.97	614.1656	19341.47
#2	555.4783	550.6083	12506.58	13983.78	22705.48	604.8347	18914.58
#3	558.5176	554.3632	12540.53	14056.31	22775.65	605.1179	18648.22
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	538.9876	1074.099	563.3980	1121.085	1057.432	1033.131	1052.879
SDEV	2.7176	2.980	5.1857	9.387	8.603	8.184	12.184
%RSD	.5042016	.2774773	.9204274	.8373339	.8135946	.7921160	1.157217
#1	541.6985	1076.229	569.3190	1131.924	1063.271	1040.366	1060.191
#2	536.2634	1070.693	559.6647	1115.807	1061.473	1034.777	1038.814
#3	539.0009	1075.376	561.2101	1115.525	1047.552	1024.249	1059.632
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1046.181	1065.251	1053.528	1006.629	1046.361	1052.392	1114.964
SDEV	5.065	10.430	8.930	10.194	8.133	8.857	10.615
%RSD	.4841055	.9790694	.8476384	1.012639	.7772355	.8416142	.9520312
#1	1051.264	1076.428	1056.702	1018.139	1051.462	1062.613	1117.805
#2	1041.135	1063.546	1060.438	1003.005	1050.640	1047.582	1103.218
#3	1046.143	1055.779	1043.445	998.7423	1036.983	1046.981	1123.869
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1391.891	1051.987	113753.7
SDEV	3.653	5.069	909.0
%RSD	.2624187	.4818830	.7990941
#1	1396.083	1056.995	112720.2
#2	1389.397	1046.859	114111.8
#3	1390.192	1052.105	114429.1
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4030704-MSD1 OPERATOR:
RUN TIME: 03/18/14 03:44:26
COMMENT: SDG:1403006 CLIENTID:MW-3SD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	533.7895	7483.481	760.3549	536.4446	49916.46	528.2570	537.7675
SDEV	.8262	36.650	2.4297	4.3529	228.54	4.7801	3.7824
%RSD	.1547811	.4897395	.3195455	.8114368	.4578500	.9048787	.7033496
#1	533.9065	7523.042	761.3652	541.1865	50148.82	533.7049	541.7988
#2	532.9111	7476.716	762.1164	535.5172	49908.61	526.3007	534.2966
#3	534.5511	7450.686	757.5831	532.6301	49691.94	524.7653	537.2072
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	554.6542	546.3601	12136.05	13985.65	22456.25	598.8231	18864.93
SDEV	2.1585	1.8898	67.38	79.40	108.69	1.8729	301.18
%RSD	.3891574	.3458859	.5551826	.5677164	.4840101	.3127560	1.596499
#1	554.8329	546.4564	12213.82	14077.29	22581.16	600.9418	19209.24
#2	556.7178	544.4239	12098.98	13942.22	22383.28	597.3884	18650.39
#3	552.4119	548.1998	12095.35	13937.44	22404.30	598.1391	18735.16
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	537.2376	1067.397	557.7936	1102.018	1052.512	1024.769	1054.637
SDEV	4.5619	4.206	1.1611	7.253	6.119	6.854	6.908
%RSD	.8491437	.3940021	.2081591	.6581685	.5814134	.6687918	.6550476
#1	542.4932	1065.434	559.0885	1110.273	1058.688	1032.669	1061.791
#2	534.3021	1072.226	557.4474	1096.665	1052.398	1021.223	1048.004
#3	534.9174	1064.533	556.8451	1099.115	1046.450	1020.415	1054.117
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1041.445	1063.631	1046.961	1006.192	1034.044	1045.145	1119.895
SDEV	8.001	7.525	6.155	10.864	5.053	10.215	6.751
%RSD	.7682738	.7074625	.5879039	1.079695	.4887071	.9774190	.6028215
#1	1050.658	1068.250	1053.914	1018.629	1039.679	1055.413	1127.674
#2	1036.239	1067.695	1044.761	998.5563	1032.540	1034.983	1116.454
#3	1037.438	1054.948	1042.208	1001.389	1029.914	1045.038	1115.559
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1376.318	1048.512	113411.9
SDEV	8.160	5.842	787.8
%RSD	.5928946	.5571743	.6946670
#1	1382.728	1055.199	112511.5
#2	1379.094	1044.403	113749.9
#3	1367.132	1045.932	113974.5
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: SDI1403006-01 OPERATOR:
RUN TIME: 03/18/14 03:51:40
COMMENT: SDG:1403006 CLIENTID:MW-3L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6241908	748.3161	38.82307	1.635620	7606.918	-.764128	-3.76614
SDEV	.7731503	11.8045	.32379	.228241	55.163	.256690	1.37610
%RSD	123.8644	1.577473	.8340229	13.95439	.7251734	33.59257	36.53885
#1	1.463451	761.7499	39.17098	1.375114	7665.815	-.512068	-2.24114
#2	-.059054	743.5984	38.53053	1.731285	7556.460	-.755104	-4.14205
#3	.4681751	739.6001	38.76772	1.800461	7598.481	-1.02521	-4.91523
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.040885	1.466377	1451.451	635.9791	3290.038	10.10561	1505.823
SDEV	.350142	.216289	14.534	11.5153	36.631	.24517	221.490
%RSD	856.4055	14.74986	1.001348	1.810634	1.113401	2.426099	14.70887
#1	.3269423	1.216629	1463.031	648.7529	3332.090	10.37588	1749.704
#2	-.079449	1.591468	1456.182	626.3947	3265.063	10.04345	1450.587
#3	-.370148	1.591035	1435.141	632.7897	3272.961	9.897505	1317.179
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.554422	4.424937	3.112920	2.960166	.5885807	.8006756	-1.10684
SDEV	.501684	3.244448	1.025503	.563218	1.428799	1.562797	2.50612
%RSD	32.27464	73.32189	32.94344	19.02657	242.7532	195.1848	226.4214
#1	1.701690	7.883162	4.182676	3.543175	.8893003	2.188124	-1.15029
#2	1.965990	3.943601	3.017784	2.918240	1.843085	1.106239	1.420723
#3	.9955862	1.448047	2.138300	2.419083	-.966643	-.892336	-3.59096
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.165554	-1.11670	1.439800	-2.14474	2.271072	-2.51256	.7769210
SDEV	.930259	.66505	2.418316	1.96798	1.716819	.86235	.3688481
%RSD	561.9086	59.55477	167.9620	91.75841	75.59508	34.32143	47.47562
#1	.3691599	-1.67471	2.169237	-1.75488	4.156566	-2.90387	1.128848
#2	.3739007	-1.29460	3.409432	-.400868	1.858560	-1.52394	.8087062
#3	-1.23972	-.380793	-1.25927	-4.27847	.7980894	-3.10988	.3932089
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	64.24346	5.245714	116023.0
SDEV	.56968	.768551	931.7
%RSD	.8867456	14.65104	.8030136
#1	64.80889	5.460610	115044.3
#2	63.66963	5.883944	116125.6
#3	64.25185	4.392588	116899.1
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 4030704-PS1 OPERATOR:
RUN TIME: 03/18/14 03:58:53
COMMENT: SDG:1403006 CLIENTID:MW-3A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	114.4792	8005.485	4815.894	111.5829	36747.96	106.7577	436.4509
SDEV	.4338	310.875	188.812	3.2045	1303.95	4.6904	20.2152
%RSD	.3789672	3.883273	3.920594	2.871862	3.548349	4.393537	4.631716
#1	114.2137	8215.173	4944.388	114.0530	37602.81	109.5733	449.9253
#2	114.9798	7648.319	4599.112	107.9619	35247.13	101.3431	413.2066
#3	114.2440	8152.964	4904.181	112.7339	37393.94	109.3568	446.2207
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	231.5179	119.8496	11445.65	3006.806	15728.44	272.7573	7837.782
SDEV	9.3799	1.7288	432.01	79.561	615.69	11.2841	298.975
%RSD	4.051501	1.442481	3.774438	2.646019	3.914523	4.137037	3.814541
#1	236.7450	120.8271	11710.04	3058.840	16124.83	278.2698	7968.332
#2	220.6890	117.8535	10947.12	2915.220	15019.13	259.7766	7495.733
#3	237.1196	120.8683	11679.80	3046.357	16041.36	280.2256	8049.281
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	222.7796	657.0269	458.3087	683.3849	216.3224	209.5360	679.8207
SDEV	7.9850	22.3486	15.5098	24.7865	5.5744	6.9014	26.5329
%RSD	3.584253	3.401474	3.384130	3.627019	2.576884	3.293650	3.902925
#1	228.7568	668.6843	470.1742	699.6271	220.6899	215.1507	696.6484
#2	213.7111	631.2598	440.7587	654.8551	210.0438	201.8311	649.2344
#3	225.8708	671.1366	463.9931	695.6724	218.2334	211.6261	693.5793
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	216.4859	217.3155	215.8265	202.8045	212.8965	1118.397	1128.644
SDEV	6.7549	5.3955	5.7423	7.0439	6.8305	39.130	38.478
%RSD	3.120263	2.482785	2.660616	3.473224	3.208363	3.498783	3.409189
#1	218.6966	222.3677	219.8521	208.5918	218.4251	1140.861	1151.162
#2	208.9026	211.6322	209.2508	194.9615	205.2607	1073.213	1084.215
#3	221.8584	217.9465	218.3765	204.8603	215.0038	1141.116	1150.554
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1408.601	1061.539	116608.6
SDEV	49.379	36.318	3343.2
%RSD	3.505557	3.421285	2.867045
#1	1445.320	1084.650	114354.8
#2	1352.464	1019.677	120449.8
#3	1428.018	1080.288	115021.2
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

ANALYSIS REPORT QC STANDARD 03/18/14 04:13:17 AM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCV2 OPERATOR:
RUN TIME: 03/18/14 04:06:07
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	102.7471	51290.06	1036.758	978.6914	50721.57	981.2732	988.5790
SDEV	.8028	119.37	2.473	7.0575	187.68	.8880	5.1482
%RSD	.7813582	.2327409	.2384977	.7211193	.3700138	.0904945	.5207632
#1	101.8301	51165.45	1034.905	971.5434	50527.12	980.2539	986.5388
#2	103.0877	51403.39	1039.565	985.6549	50901.64	981.6870	984.7637
#3	103.3234	51301.34	1035.803	978.8757	50735.94	981.8789	994.4346
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1006.052	1011.470	25040.75	50480.67	49827.81	1015.426	50832.23
SDEV	2.378	4.396	60.03	67.95	134.02	6.257	174.62
%RSD	.2363495	.4345941	.2397447	.1345981	.2689702	.6161517	.3435191
#1	1005.799	1015.760	25031.41	50426.08	49865.95	1010.560	50647.06
#2	1003.811	1006.976	24985.94	50459.16	49678.85	1013.235	50855.72
#3	1008.546	1011.675	25104.91	50556.77	49938.62	1022.484	50993.92
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	991.7726	989.5642	998.0649	1118.977	980.9567	993.6501	1058.399
SDEV	3.5583	6.8365	5.3102	6.860	2.8070	.9628	2.282
%RSD	.3587779	.6908628	.5320520	.6130246	.2861458	.0968933	.2156345
#1	987.7536	981.7749	994.7259	1121.576	977.8355	994.3797	1056.985
#2	993.0427	992.3485	1004.188	1111.198	983.2740	992.5588	1061.032
#3	994.5216	994.5693	995.2805	1124.158	981.7607	994.0117	1057.181
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	998.3625	986.9097	977.9849	972.9793	1003.970	1017.183	1026.709
SDEV	4.0267	7.0988	1.7015	3.0644	1.078	4.478	4.501
%RSD	.4033294	.7192951	.1739803	.3149504	.1073558	.4402100	.4383662
#1	993.9897	978.7878	977.3603	972.8953	1005.106	1014.999	1026.924
#2	1001.918	990.0113	979.9105	969.9578	1003.842	1014.216	1031.099
#3	999.1800	991.9298	976.6840	976.0849	1002.962	1022.333	1022.105
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1006.849	997.8956	115315.5
SDEV	7.535	2.4034	436.6
%RSD	.7483702	.2408504	.3785751
#1	999.0503	995.1431	115678.4
#2	1014.089	998.9650	115437.1
#3	1007.408	999.5789	114831.1
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

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METHOD: P4S12014 SAMPLE NAME: CCB2 OPERATOR:
RUN TIME: 03/18/14 04:13:21
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9370243	-18.0138	.2913028	1.735847	32.18911	-.621627	-3.75699
SDEV	.4792395	5.8836	.1122235	.952406	12.16152	.632039	2.60869
%RSD	51.14483	32.66133	38.52467	54.86692	37.78148	101.6749	69.43555
#1	.8198635	-23.6905	.3920543	2.787809	45.00165	-1.30536	Q-6.69825
#2	1.463980	-11.9432	.3115030	1.487554	30.76096	-.500788	-2.84936
#3	.5272294	-18.4078	.1703512	.9321795	20.80471	-.058732	-1.72336
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.83844	.7214378	10.17773	9.636511	14.99369	.2693344	29.48438
SDEV	.66593	.4904423	14.42391	8.779105	8.06602	.2205141	255.8233
%RSD	36.22264	67.98123	141.7202	91.10253	53.79606	81.87374	867.6571
#1	-1.86453	.8613914	23.76919	14.58633	21.09984	.4725511	281.8753
#2	-1.15985	1.126691	11.71887	14.82301	18.03134	.3005933	36.21623
#3	-2.49095	.1762312	-4.95486	-.499806	5.849903	.0348588	-229.638
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7774507	2.831129	.1139849	-.350755	.3917263	1.161670	1.238495
SDEV	.9776801	2.228730	.9149395	.255909	1.151910	.439863	2.245185
%RSD	125.7546	78.72232	802.6846	72.95963	294.0599	37.86467	181.2833
#1	1.277648	3.143618	.3051518	-.220818	1.687330	.7447865	2.604780
#2	1.403828	4.887123	.9182380	-.185882	.0046086	1.621379	2.463442
#3	-.349124	.4626449	-.881435	-.645564	-.516759	1.118845	-1.35274
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8462615	-.731575	.9523969	1.516116	.9846097	-1.05534	1.620382
SDEV	1.232649	.912683	1.880622	.908478	1.081225	.38945	1.643667
%RSD	145.6581	124.7560	197.4620	59.92143	109.8126	36.90232	101.4370
#1	.2457035	-1.19028	3.123837	1.995864	.1200847	-.934023	3.343429
#2	2.264092	.3194725	-.152730	.4683345	2.196933	-.740994	1.448042
#3	.0289895	-1.32392	-.113916	2.084148	.6368112	-1.49101	.0696754
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.2191027	2.482235	116487.4
SDEV	.2918525	.701846	2841.7
%RSD	133.2036	28.27474	2.439480
#1	.4701815	2.836684	119490.5
#2	.2882360	2.936170	116130.9
#3	-.101109	1.673852	113840.8
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

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METHOD: P4S12014 SAMPLE NAME: 1403006-02 OPERATOR:
RUN TIME: 03/18/14 04:20:34
COMMENT: SDG:1403006 CLIENTID:MW-2 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8588284	-17.1534	251.0402	2.261429	39846.91	-.862931	-4.60189
SDEV	.3493072	1.7124	6.8125	.255154	819.00	.484805	2.22402
%RSD	40.67253	9.982680	2.713726	11.28287	2.055364	56.18114	48.32847
#1	1.258971	-18.4131	248.5825	2.331462	39499.62	-1.05845	-4.47750
#2	.6148248	-15.2037	258.7406	1.978571	40782.33	-.310898	-2.44267
#3	.7026896	-17.8435	245.7976	2.474253	39258.77	-1.21945	-6.88550
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.83255	.4862151	7.187847	5065.119	7435.992	28.16485	5612.755
SDEV	.19793	.3714282	6.617635	82.777	160.511	.50377	66.460
%RSD	10.80083	76.39174	92.06700	1.634258	2.158565	1.788664	1.184096
#1	-1.61335	.3538760	.3191283	5027.984	7361.348	27.85779	5560.461
#2	-1.88609	.1990807	7.722444	5159.961	7620.232	28.74625	5590.261
#3	-1.99820	.9056886	13.52197	5007.412	7326.396	27.89051	5687.544
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.082816	.6731506	.7854349	3.639598	1.666159	.6160944	.8758137
SDEV	.496117	3.840051	.2864462	.368402	.763272	2.122534	5.363933
%RSD	45.81730	570.4593	36.46976	10.12205	45.81030	344.5144	612.4514
#1	.5501680	-3.43437	1.110701	3.225573	2.524543	2.550692	-1.60515
#2	1.531751	4.173349	.6747917	3.762008	1.410077	.9519260	-2.79852
#3	1.166529	1.280475	.5708121	3.931213	1.063857	-1.65433	7.031109
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7516199	1.774941	1.611707	-6.10437	3.971185	-.645743	.5272223
SDEV	2.026121	1.818217	.398873	7.41382	.962341	.545397	.7339727
%RSD	269.5673	102.4382	24.74849	121.4511	24.23310	84.46042	139.2150
#1	2.980088	3.866385	1.854486	1.696918	2.976835	-.021521	-.178140
#2	-.979555	.5701272	1.829276	-6.95219	4.897955	-.885616	1.286799
#3	.2543267	.8883112	1.151358	-13.0578	4.038765	-1.03009	.4730076
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.4987120	8.672110	116008.9
SDEV	.1828036	.737771	2213.6
%RSD	36.65514	8.507395	1.908153
#1	.4762094	8.317748	116288.7
#2	.3282014	9.520205	113668.7
#3	.6917251	8.178375	118069.4
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403006-03 OPERATOR:
RUN TIME: 03/18/14 04:27:48
COMMENT: SDG:1403006 CLIENTID:MW-8 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8679509	1204.638	68.80014	2.254709	11247.26	-.258857	-4.07192
SDEV	.5887533	38.828	1.57514	.352077	270.43	.603963	2.38232
%RSD	67.83257	3.223175	2.289438	15.61517	2.404387	233.3193	58.50610
#1	.3799293	1236.324	69.99103	1.988578	11443.30	.3101121	-2.35207
#2	1.521848	1161.325	67.01415	2.653930	10938.74	-.892593	-6.79116
#3	.7020754	1216.264	69.39524	2.121619	11359.73	-.194089	-3.07253
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9763327	9.247784	2224.418	6725.479	1554.062	60.67325	822.2310
SDEV	.2594167	.923052	59.965	144.423	41.654	1.83989	135.1159
%RSD	26.57052	9.981329	2.695770	2.147398	2.680323	3.032453	16.43284
#1	.8173724	9.122582	2274.597	6841.856	1588.390	62.29414	846.4408
#2	1.275689	10.22705	2158.008	6563.848	1507.722	58.67339	943.6053
#3	.8359362	8.393724	2240.649	6770.731	1566.073	61.05222	676.6467
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.707586	1.147193	4.726663	122.0747	1.195787	1.505544	4.532968
SDEV	.520856	2.001646	.446094	2.7463	.934240	1.774283	1.886650
%RSD	19.23693	174.4820	9.437824	2.249684	78.12761	117.8500	41.62062
#1	2.112191	-1.15321	4.594029	124.2088	.1307007	.2071949	3.588535
#2	2.931659	2.103269	5.224033	118.9763	1.580016	.7822023	6.705327
#3	3.078906	2.491524	4.361929	123.0391	1.876646	3.527234	3.305044
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4653968	.7437676	1.421304	-4.05083	4.279458	.0912727	.2241506
SDEV	2.588110	3.060235	.770337	3.67609	2.874671	.9638298	1.087647
%RSD	556.1082	411.4505	54.19931	90.74902	67.17371	1055.990	485.2305
#1	.2566062	-2.55588	1.471822	-7.85226	4.230776	-.787323	.0553994
#2	3.151578	3.488704	.6269513	-.514420	1.429438	-.061055	1.386311
#3	-2.01199	1.298482	2.165138	-3.78582	7.178161	1.122196	-.769258
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	99.42876	9.413750	116889.7
SDEV	2.31193	.741435	2541.9
%RSD	2.325211	7.876081	2.174632
#1	101.1968	9.561194	115114.7
#2	96.81253	10.07038	119801.7
#3	100.2769	8.609671	115752.7
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403006-04 OPERATOR:
RUN TIME: 03/18/14 04:35:02
COMMENT: SDG:1403006 CLIENTID:MW-9 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2538263	-25.9657	411.8316	2.231078	26119.61	-.994938	-.509962
SDEV	.5626999	7.3852	1.9586	.250900	61.56	.162446	.583070
%RSD	221.6870	28.44201	.4755747	11.24569	.2357027	16.32721	114.3360
#1	-.351310	-19.2494	411.8634	2.517103	26048.62	-.814584	.0441583
#2	.7613056	-24.7729	413.7741	2.048154	26158.33	-1.12976	-.455836
#3	.3514833	-33.8746	409.8574	2.127976	26151.88	-1.04047	-1.11821
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.77394	.5887560	142.0859	6821.508	6482.983	460.3231	5759.286
SDEV	.47409	.5449327	9.6221	10.106	32.489	4.1644	112.341
%RSD	26.72495	92.55662	6.771997	.1481439	.5011441	.9046705	1.950606
#1	-1.33105	.4414171	153.1114	6832.400	6520.442	464.5145	5886.581
#2	-1.71675	.1326424	135.3843	6819.688	6462.474	460.2685	5674.017
#3	-2.27403	1.192208	137.7622	6812.436	6466.034	456.1862	5717.260
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.564174	.4496762	-.259234	3.950268	.4600272	.8511041	3.869584
SDEV	.605582	3.836999	.477034	.160991	1.203074	1.836141	.941746
%RSD	23.61702	853.2805	184.0167	4.075454	261.5223	215.7363	24.33714
#1	2.926213	-2.81726	-.499055	3.885260	-.789942	-1.26567	4.248516
#2	2.901252	4.675035	.2901246	4.133599	1.609959	2.013703	4.562837
#3	1.865058	-.508741	-.568771	3.831945	.5600650	1.805281	2.797398
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.293884	-.428302	.9033755	-4.43634	3.490756	-3.18697	-.005395
SDEV	3.344993	.208553	1.705378	4.41055	2.402827	2.00096	1.273078
%RSD	1138.203	48.69293	188.7785	99.41885	68.83399	62.78567	23599.39
#1	-1.99709	-.667200	-.851378	-7.46839	1.830936	-1.15258	.6799006
#2	-2.44450	-.282579	2.554668	-6.46403	6.246108	-5.15274	.7782376
#3	3.559934	-.335128	1.006836	.6234140	2.395225	-3.25560	-1.47432
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.026647	2.173181	116141.8
SDEV	.030645	.450146	598.7
%RSD	115.0016	20.71370	.5155265
#1	-.054873	1.759944	115650.6
#2	-.031017	2.106747	115966.0
#3	.0059479	2.652853	116808.7
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403006-05 OPERATOR:
RUN TIME: 03/18/14 04:42:16
COMMENT: SDG:1403006 CLIENTID:MW-12 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3708592	-30.4914	319.4563	2.671353	48705.89	-1.03530	-3.20888
SDEV	.2558472	5.4443	3.9664	.489505	668.05	.56743	2.30975
%RSD	68.98767	17.85537	1.241611	18.32423	1.371602	54.80852	71.98003
#1	.5855912	-25.0422	323.7302	2.407936	49459.28	-.383488	-.542405
#2	.4392072	-35.9309	315.8936	2.369964	48472.71	-1.41897	-4.49320
#3	.0877793	-30.5009	318.7452	3.236160	48185.68	-1.30343	-4.59103
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.86529	1.244178	-112.773	3178.610	20965.90	8.082047	9529.027
SDEV	.11418	.025481	4.095	24.664	349.91	.172075	217.510
%RSD	6.121424	2.048032	3.631496	.7759413	1.668970	2.129104	2.282602
#1	-1.77961	1.214755	-108.662	3207.039	21364.60	8.278441	9778.843
#2	-1.99492	1.258833	-116.853	3165.868	20823.23	8.009963	9381.654
#3	-1.82134	1.258946	-112.804	3162.922	20709.85	7.957736	9426.585
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.889473	.4644822	.3193364	5.297924	.3315329	-.099516	2.977813
SDEV	.139124	2.039861	.1393253	.250521	.5187128	1.658123	1.946830
%RSD	4.814845	439.1689	43.62962	4.728656	156.4589	1666.188	65.37785
#1	2.740574	1.606568	.3738072	5.584801	.1832582	1.738061	.7700983
#2	2.911700	-1.89059	.1610048	5.122288	.9082376	-1.48398	3.714732
#3	3.016145	1.677470	.4231973	5.186683	-.096897	-.552625	4.448609
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.65128	-.654651	.8237327	-3.77730	1.736516	.4861049	-.384212
SDEV	3.02770	3.098434	2.322929	6.80689	1.053811	1.040854	.568981
%RSD	183.3548	473.2958	282.0004	180.2052	60.68535	214.1213	148.0905
#1	-4.17409	-.048545	.2988274	3.243334	.9864465	1.666023	-.319728
#2	-2.48595	-4.01135	3.364201	-10.3481	2.941348	.0941930	.1497802
#3	1.706202	2.095946	-1.19183	-4.22710	1.281753	-.301901	-.982688
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.0314519	9.554009	114980.1
SDEV	.0859750	.740381	1136.7
%RSD	273.3536	7.749428	.9886194
#1	.1147535	10.22315	113736.6
#2	-.056968	9.680257	115237.9
#3	.0365699	8.758620	115965.7
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: 1403006-06 OPERATOR:
RUN TIME: 03/18/14 04:49:30
COMMENT: SDG:1403006 CLIENTID:MW-17 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1757251	-27.2302	246.9836	2.064707	25669.97	-.767549	-2.14486
SDEV	.8056692	5.5685	1.3060	.476346	67.68	.267622	.46607
%RSD	458.4828	20.44983	.5287765	23.07087	.2636515	34.86710	21.72955
#1	.9663688	-25.5275	247.9026	2.565162	25689.87	-.462988	-1.68851
#2	-.644173	-22.7118	247.5596	1.616834	25594.58	-.965145	-2.62007
#3	.2049791	-33.4513	245.4887	2.012125	25725.48	-.874514	-2.12599
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	3000.000	700000.0	60000.00	5000.000	700000.0	30000.00	60000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.10990	1.604613	-58.6597	4207.283	10736.75	15.60183	6214.682
SDEV	.53395	.438554	1.7738	6.759	37.21	.21980	225.724
%RSD	25.30708	27.33085	3.023881	.1606452	.3465331	1.408797	3.632102
#1	-1.49867	1.104014	-56.8736	4215.066	10777.83	15.84078	6305.734
#2	-2.48552	1.921096	-58.6845	4202.890	10705.32	15.55642	5957.654
#3	-2.34552	1.788729	-60.4209	4203.893	10727.10	15.40828	6380.659
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	250000.0	300000.0	700000.0	60000.00	300000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.150868	.0906408	-.201219	7.887201	1.103025	-1.16049	1.609504
SDEV	.202844	1.964534	.152412	.086527	.911655	.38455	1.003179
%RSD	9.430772	2167.383	75.74432	1.097060	82.65037	33.13732	62.32846
#1	2.001775	1.896224	-.287593	7.791219	2.150246	-1.60453	2.766595
#2	2.068974	.3770903	-.290827	7.959225	.4866219	-.940436	1.078131
#3	2.381856	-2.00139	-.025239	7.911161	.6722080	-.936501	.9837873
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	60000.00	60000.00	60000.00	40000.00	60000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.532166	1.285356	1.011840	-6.95391	1.731777	-.551809	-.125836
SDEV	.746558	2.293223	.222435	3.36592	2.124003	1.688682	1.137995
%RSD	140.2867	178.4115	21.98325	48.40317	122.6487	306.0267	904.3456
#1	-1.08914	3.916084	1.268493	-4.22162	-.298047	-2.48503	-1.43851
#2	-.823489	-.291402	.8748944	-10.7139	3.938849	.1942769	.5824554
#3	.3161315	.2313873	.8921314	-5.92625	1.554529	.6353291	.4785456
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	30000.00					60000.00	50000.00
LOW	-20000.0					-40000.0	-20000.0

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	-.273759	6.828109	115128.9
SDEV	.025722	.170421	684.0
%RSD	9.396007	2.495880	.5940943
#1	-.290642	7.007973	114340.3
#2	-.244155	6.807317	115561.3
#3	-.286481	6.669038	115485.0
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	60000.00	
LOW	-40000.0	-40000.0	

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METHOD: P4S12014 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 03/18/14 04:56:43
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	6.048493	207.7188	207.4755	Q6.976831	5045.614	4.361535	16.40873
SDEV	.426699	4.2886	.3717	.361958	39.536	.054579	.48103
%RSD	7.054639	2.064636	.1791677	5.188004	.7835646	1.251382	2.931557
#1	5.911810	203.2645	207.3732	Q6.853389	5004.615	4.359388	15.85352
#2	Q6.526787	208.0721	207.8877	Q7.384363	5048.723	4.417156	16.67231
#3	5.706883	211.8199	207.1657	Q6.692741	5083.503	4.308060	16.70036
ERRORS	QC PASS	QC PASS	QC PASS	QC FAIL	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.360639	6.163661	193.6510	5164.931	4928.510	10.18654	4838.925
SDEV	.393100	.606432	5.8927	31.738	23.200	.02956	148.410
%RSD	4.701788	9.838826	3.042966	.6144950	.4707404	.2901976	3.067010
#1	8.417225	5.486542	187.5448	5137.993	4902.468	10.16929	4874.014
#2	8.722379	6.347652	194.1041	5156.879	4936.091	10.16965	4676.114
#3	7.942313	Q6.656791	199.3041	5199.919	4946.972	10.22067	4966.646
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.61263	31.20248	19.99380	32.38593	10.12339	9.797776	30.65048
SDEV	.28158	1.67758	.17042	.31773	.43249	.950174	2.13953
%RSD	2.424768	5.376432	.8523649	.9810652	4.272190	9.697856	6.980409
#1	11.58258	32.13300	20.18855	32.02741	10.01168	10.84242	28.69853
#2	11.90803	29.26587	19.92083	32.63265	10.60078	9.565925	30.31496
#3	11.34728	32.20858	19.87201	32.49771	9.757723	8.984985	32.93795
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.715554	10.50280	9.933822	10.42355	9.485247	51.43730	52.43537
SDEV	1.244123	1.88678	1.454233	3.97361	.568535	.59419	.32032
%RSD	12.80548	17.96451	14.63921	38.12145	5.993889	1.155164	.6108831
#1	8.447752	12.41883	8.809744	14.86940	8.831843	51.71013	52.58910
#2	9.764348	8.646711	11.57620	9.183172	9.756900	50.75570	52.64984
#3	10.93456	10.44284	9.415524	7.218084	9.866997	51.84607	52.06716
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	50.00739	47.21600	117729.0
SDEV	.35049	.51930	358.1
%RSD	.7008697	1.099843	.3042009
#1	49.63627	46.61687	117350.7
#2	50.33274	47.49424	117773.3
#3	50.05316	47.53689	118062.9
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

ANALYSIS REPORT QC STANDARD 03/18/14 05:11:06 AM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCV2 OPERATOR:
RUN TIME: 03/18/14 05:03:56
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	103.0276	51334.32	1050.093	988.0919	51068.95	983.5418	1000.333
SDEV	.3659	97.73	3.853	1.9438	74.96	1.5875	8.068
%RSD	.3551593	.1903821	.3669625	.1967222	.1467813	.1614057	.8065571
#1	103.1442	51430.82	1047.822	989.4657	51140.84	981.9658	1000.196
#2	103.3210	51336.73	1054.543	985.8679	51074.76	983.5192	1008.470
#3	102.6176	51235.40	1047.915	988.9422	50991.26	985.1405	992.3348
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1022.504	1000.554	25176.16	50282.17	50293.04	1024.521	50690.70
SDEV	2.053	2.173	35.09	129.65	104.33	1.485	614.13
%RSD	.2007442	.2171468	.1393701	.2578362	.2074484	.1449857	1.211522
#1	1023.966	1001.593	25185.90	50298.73	50356.27	1026.186	51149.70
#2	1020.157	998.0568	25205.35	50402.73	50350.23	1024.044	50929.33
#3	1023.388	1002.011	25137.23	50145.04	50172.62	1023.333	49993.07
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	993.3509	986.3546	1013.513	1130.991	988.2277	1007.775	1068.408
SDEV	1.2049	6.5575	3.519	5.891	2.5551	8.429	2.427
%RSD	.1212996	.6648229	.3472315	.5209065	.2585568	.8363875	.2271295
#1	993.5848	980.1831	1016.883	1130.964	987.0017	999.0536	1065.665
#2	992.0461	985.6409	1009.862	1136.896	991.1648	1015.877	1070.274
#3	994.4217	993.2397	1013.794	1125.113	986.5167	1008.393	1069.287
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	999.3679	1001.872	981.4162	983.4764	1019.905	1026.909	1038.581
SDEV	2.9049	7.211	6.6688	9.1410	11.086	1.542	5.269
%RSD	.2906784	.7197339	.6795117	.9294615	1.087002	.1501338	.5072963
#1	1000.204	1009.982	975.5289	982.8118	1007.162	1028.585	1032.743
#2	1001.763	996.1854	988.6585	992.9316	1027.333	1026.592	1040.017
#3	996.1367	999.4474	980.0612	974.6858	1025.221	1025.551	1042.983
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	1013.164	991.2529	114784.1
SDEV	4.630	1.8608	564.9
%RSD	.4569734	.1877188	.4921214
#1	1012.340	990.3433	114653.1
#2	1009.001	990.0219	114296.2
#3	1018.150	993.3935	115402.9
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

ANALYSIS REPORT QC STANDARD 03/18/14 05:18:20 AM PAGE 1

METHOD: P4S12014 SAMPLE NAME: CCB2 OPERATOR:
RUN TIME: 03/18/14 05:11:10
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2635769	-30.2612	.2334152	2.198512	37.53148	-.176962	-2.07281
SDEV	.7154276	7.3664	.0500309	.289548	14.31683	.154354	.88510
%RSD	271.4303	24.34289	21.43430	13.17018	38.14620	87.22467	42.70055
#1	1.083425	-33.1554	.2498281	2.487063	42.49558	-.118569	-2.18410
#2	-.234227	-21.8871	.2731780	1.907978	21.39329	-.060323	-1.13733
#3	-.058467	-35.7410	.1772394	2.200496	48.70556	-.351994	-2.89701
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.91478	.4783649	7.786028	9.599394	13.19090	.1686502	-105.446
SDEV	.41441	.3568236	8.779353	1.466255	2.34893	.0238460	135.522
%RSD	21.64242	74.59235	112.7578	15.27445	17.80722	14.13933	128.5234
#1	-1.79021	.0663405	14.01241	10.32851	10.57593	.1412763	-82.0236
#2	-1.57695	.6844755	11.60112	7.911509	15.12203	.1849131	16.83915
#3	-2.37718	.6842788	-2.25545	10.55816	13.87474	.1797611	-251.152
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.145742	2.803512	-.208255	-.454771	.2623819	.8920153	.8321273
SDEV	.322247	2.553899	.395403	.135953	.3563943	2.361310	.6694109
%RSD	28.12566	91.09644	189.8649	29.89486	135.8304	264.7163	80.44575
#1	1.188896	.2958194	.1856462	-.562369	.6730990	3.000005	.9423622
#2	1.444238	5.401237	-.205268	-.499969	.0793955	1.335708	1.439578
#3	.8040920	2.713478	-.605143	-.301976	.0346513	-1.65967	.1144411
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	MO2020
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0046419	-2.31329	1.548147	.0547585	1.309913	-2.18909	1.524920
SDEV	.6361168	3.39338	1.160156	2.542183	2.316197	.90055	.705473
%RSD	13703.95	146.6904	74.93835	4642.537	176.8207	41.13779	46.26297
#1	-.424761	1.588439	.2159740	2.669457	3.164929	-1.23221	2.042096
#2	-.296752	-3.95209	2.091972	-.097078	2.050923	-2.31502	1.811391
#3	.7354387	-4.57623	2.336496	-2.40810	-1.28611	-3.02005	.7212729
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	10.00000

ELEM	TI3349	B_2496	Y_3710
UNITS	UG/L	UG/LITER	PPM
AVGE	.2430388	1.839415	116752.9
SDEV	.2794583	.625925	743.9
%RSD	114.9851	34.02851	.6371185
#1	.0087436	2.278591	117201.3
#2	.5523484	2.116943	115894.3
#3	.1680243	1.122709	117163.1
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	40.00000	200.0000	

Raw Data for:

Instrument: PEMS

File Name: 4C25021_P-019

Sequence: 4C25021

Analysis: 6020A ICP MS (UPDATE IV)

Daily Instrument Profile

Detector Cross Cal: 02/25/14
Analog Voltage: -1650
Pulse Voltage: 950
Nebulizer Pressure: 0.89

Maintenance: NONE

Printed: 3/25/2014 8:28:33 PM

Method(s) (circle one): **ILM05.4** **SW-846/6020A** **Other** _____

Operator(s): JCK **Date/Time** 032514/1023 **to** 032514/2020

Tune Date/Time 032514/1032

↑	Specified element(s) fail(s) high
↓	Specified element(s) fail(s) low
RR	Re-run sample(s) neat
RR #X	Re-run at a #-fold dilution
#X	Sample run at a #-fold dilution (aliquot of sample diluted with acidified water)
L	Matrix = leachate
W	Matrix = water
S	Matrix = solid
B	Matrix = biological tissue

SDG	Matrix	Comments
1403006	Water	complete
1403023	Water	

ICP-MS Run Log:

File Name: 4C25021.rep

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Action Needed
1	TUN1	Tune	CALIB STD		03/25/14	10:32:36	3K25003	
2	CAL1	S0	CALIB STD	1	03/25/14	18:23:22	4C25017	
3	CAL2	S 6020-MS1	CALIB STD	1	03/25/14	18:25:07	18	
4	CAL3	S 6020-MS2	CALIB STD	1	03/25/14	18:26:52	19	
5	CAL4	S 6020-MS3	CALIB STD	1	03/25/14	18:28:36	20	
6	CAL5	S 6020-MS4	CALIB STD	1	03/25/14	18:30:20	21	
7	CAL6	S 6020-MS5	CALIB STD	1	03/25/14	18:32:05	22	
8	CRL1	LLICV	ICV	1	03/25/14	18:35:31	18	
9	ICV1	ICV	ICV	1	03/25/14	18:37:17	23	
10	ICB1	ICB	ICB	1	03/25/14	18:39:02	17	
11	IFA1	ICSA	ICS	1	03/25/14	18:40:47	25	
12	IFB1	ICSAB	ICS	1	03/25/14	18:42:32	26	
13	CRL2	LLCCV	CCV	1	03/25/14	18:44:17	18	
14	CCV1	CCV	CCV	1	03/25/14	18:46:03	27	
15	CCB1	CCB	CCB	1	03/25/14	18:47:47	17	

*** Element ID of Reagents/Solvents used:** FS : 3K2010

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: [signature] Date: 3/25/14

ICP-MS Run Log:

File Name: 4C25021.rep

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Action Needed
16	4030705-BLK1	PBW01	BLANK	1	03/25/14	19:00:27		
17	4030705-BS1	MLCS01	SAMPLE	1	03/25/14	19:02:11		
18	1403006-01	MW-3	SAMPLE	1	03/25/14	19:03:56		
19	4030705-DUP1	MW-3D	SAMPLE	1	03/25/14	19:05:40		
20	4030705-MS1	MW-3S	SAMPLE	1	03/25/14	19:07:25		
21	4030705-MSD1	MW-3SD	SAMPLE	1	03/25/14	19:09:09		
22	SRD1	MW-3L	SAMPLE	5	03/25/14	19:10:54		
23	4030705-PS1	MW-3A	SAMPLE	1	03/25/14	19:12:38		
24	1403006-02	MW-2	SAMPLE	1	03/25/14	19:14:23		
25	1403006-03	MW-8	SAMPLE	1	03/25/14	19:16:07		
26	CCV2	CCV	CCV	1	03/25/14	19:17:53	4C23027	
27	CCB2	CCB	CCB	1	03/25/14	19:19:38	L 17	
28	1403006-04	MW-9	SAMPLE	1	03/25/14	19:21:24		
29	1403006-05	MW-12	SAMPLE	1	03/25/14	19:23:09		
30	1403006-06	MW-17	SAMPLE	1	03/25/14	19:24:53		
31	CRL3	LLCCV	CCV	1	03/25/14	19:26:38	4C25018	
32	CCV3	CCV	CCV	1	03/25/14	19:28:24	L 27	
33	CCB3	CCB	CCB	1	03/25/14	19:30:08	17	
34	4031305-BLK1	PBW01	BLANK	1	03/25/14	19:43:20		
35	4031305-BS1	MLCS01	SAMPLE	1	03/25/14	19:45:04		
36	4031305-BSD1	MLCSD01	SAMPLE	1	03/25/14	19:46:49		
37	1403023-01	MW-4	SAMPLE	1	03/25/14	19:48:33		
38	4031305-DUP1	MW-4D	SAMPLE	1	03/25/14	19:50:18		
39	4031305-MS1	MW-4S	SAMPLE	1	03/25/14	19:52:02		
40	4031305-MSD1	MW-4SD	SAMPLE	1	03/25/14	19:53:47		
41	SRD2	MW-4L	SAMPLE	5	03/25/14	19:55:31		
42	4031305-PS1	MW-4A	SAMPLE	1	03/25/14	19:57:16		
43	1403023-02	MW-2	SAMPLE	1	03/25/14	19:59:00		
44	CCV4	CCV	CCV	1	03/25/14	20:00:46	4C25027	
45	CCB4	CCB	CCB	1	03/25/14	20:02:31	L 17	
46	1403023-03	MW-3	SAMPLE	1	03/25/14	20:04:18		

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Reviewed By: _____ Date: 3/25/14

ICP-MS Run Log:

File Name: 4C25021.rep

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Action Needed
47	1403023-04	MW-5	SAMPLE	1	03/25/14	20:06:02		
48	1403023-05	MW-7	SAMPLE	1	03/25/14	20:07:47		
49	1403023-06	MW-10	SAMPLE	1	03/25/14	20:09:31		
50	1403024-01	MW-16	SAMPLE	1	03/25/14	20:11:16		
51	SRD3	MW-16L	SAMPLE	5	03/25/14	20:13:00		
52	4031305-PS2	MW-16A	SAMPLE	1	03/25/14	20:14:45		
53	CRL4	LLCCV	CCV	1	03/25/14	20:16:30	4C25018	
54	CCV5	CCV	CCV	1	03/25/14	20:18:16	27	
55	CCB5	CCB	CCB	1	03/25/14	20:20:01	17	

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Reviewed By: _____ Date: 3/25/14

Standards/QC Preparation for ICP-MS (PEMS)

 CompuChem a division of Liberty Analytical Corp. **WORKSHEET 1 AA(1)**

STANDARDS and REAGENTS TRACEABILITY Seq. File Name: 4C25020 / 4C25021

STANDARD / REAGENT	Reference # *	Manufacturer	Lot #	Expiration Date
Nitric Acid (HNO3)	HNO3-D-061913-JCF	EMD	51196	01/18
Hydrochloric Acid (HCl)	HCL-D-061913-JCF	Caledon	82842	11/17
ICP-MS-TS-3 (Pre Tune Soln)	3K25002	High Purity	1304204	11/11/14
Q-6042-M (CAL Standard)	3H26022	NSI	081913	08/31/15
ICCV-6	3I18011	Inorganic Ventures	G2-MEB487118	09/01/14
ICCV-4	3C13004	Inorganic Ventures	G2MEB462119	04/01/14
SM-770-032 (CP-MS-CRQL-Rev multi-element solution)	3J22026	High Purity	1326612	09/25/14
6020ICS-9A multi-element solution	3L02016	Inorganic Ventures	G2-MEB454073	01/01/15
6020ICS-9B multi-element solution	3L02017	Inorganic Ventures	F2-MEB429070	01/01/15
LITHIUM^6 (Li^6) 1000 mg/L single element standard	3C19012	High Purity	1231246	09/08/14
SCANDIUM (Sc) 1,000 mg/L single element standard	3E16009	High Purity	1222829	11/09/14
INDIUM (In) 1,000 mg/L single element standard	3E16008	High Purity	1307214	11/09/14
TERBIUM (Tb) 1,000 mg/L single element standard	3E16010	High Purity	1229013	11/09/14
BISMUTH (Bi) 1,000 mg/L single element standard	3C19011	High Purity	1226103	09/08/14

*Ref# = Logbook ID, Page number, and item number from Materials Receipt Log

Multi-Element Stock Standard Concentrations:

Stock Standard	Analyte Concentrations (µg/mL)
Pre Tune Solution	Be: 10 Mg: 10 Co: 10 In: 10 Pb: 10
CAL standard	Al: 1000 Sb: 100 As: 100 Ba: 100 Be: 100 B: 100 Cd: 100 Ca: 1000 Cr: 100 Co: 100 Cu: 100 Fe: 1000 Pb: 100 Mg: 1000 Mn: 100 Mo: 100 Ni: 100 K: 1000 Se: 100 Si: 100 Ag: 100 Na: 1000 Tl: 100 Ti: 100 V: 100 Zn: 100 Sn: 100 Sr: 100
CP-MS-CRQL-Rev multi-element solution	Be: 1 V: 5 Cr: 2 Mn: 1 Co: 1 Ni: 1 Cu: 2 Zn: 2 As: 1 Se: 5 Ag: 1 Cd: 1 Sb: 2 Ba: 10 Tl: 1 Pb: 1 Al: 30 Sn: 1 Mo: 1

Entered By: [illegible]

Reviewed By: [illegible] Date: 3/25/14

Standards/QC Preparation for ICP-MS (PEMS) CompuChem a division of Liberty Analytical Corp. WORKSHEET 1 AA(1)

Standard Lot Number *	Preparation Instructions	Resultant Analyte Conc. (µg/L)
Instrument Tune Solution– 11 20 13 – JCF	Place in a 500-mLvolumetric flask: 0.5 mL of PRE-Tuning solution and 5 mL distilled nitric acid. Dilute to volume with deionized water	Li^7: 10 Be: 10 Mg: 10 Co: 10 In: 10 Ce: 10 Pb: 10 U: 10
Internal Standard– 11 20 13 – JCF	Place in a 100-mLvolumetric flask: 50 mL of deionized water , 1.0 mL of distilled nitric acid. Pipet: 2.0 mL of Lithium^6, 1.0 mL of Scandium, 1.0 mL of Indium, 1.0 mL of Terbium, and 1.0 mL of Bismuth. Dilute to volume with deionized water	Li^6: 20000 Sc: 10000 In: 10000 Tb: 10000 Bi: 10000
S0/ICB/CCB– 03 25 14 – JCF	Place in a 100-mL volumetric flask: 1 mL distilled nitric acid and 1mL Internal Standard. Dilute to volume with deionized water. Prepare Daily.	Li^6: 200 Sc: 100 In: 100 Tb: 100 Bi: 100
S 6020-MS1/LLICV/LLCCV–03 25 14 – JCF	Place in a 100-mL volumetric flask: 1 mL distilled nitric acid and 1 mL Internal Standard. Pipet 0.100 mL of CP-MS-CRQL, into flask. Dilute to volume with deionized water	Li^6: 200 Be: 1 Al: 30 Sc: 100 V: 5 Cr: 2 Mn: 1 Co: 1 Ni: 1 Cu: 2 Zn: 2 As: 1 Se: 5 Mo: 1 Ag: 1 Cd: 1 In: 100 Sn: 1 Sb: 2 Ba: 10 Tb: 100 Tl: 1 Pb: 1 Bi: 100
S 6020-MS2 –03 25 14 – JCF	Place in a 100-mL volumetric flask: Pipet 1.0 mL distilled nitric acid and 1 mL Internal Standard. Pipet 0.200 mL of CP-MS-CRQL, into flask. Dilute to volume with deionized water.	Li^6: 200 Be: 2 Al: 60 Sc: 100 V: 10 Cr: 4 Mn: 2 Co: 2 Ni: 2 Cu: 4 Zn: 4 As: 2 Se: 10 Mo: 2 Ag: 2 Cd: 2 In: 100 Sn: 2 Sb: 4 Ba: 20 Tb: 100 Tl: 2 Pb: 2 Bi: 100
S 6020-MS3–03 25 14 – JCF	Place in a 100-mL volumetric flask: 1 mL distilled nitric acid and 1 mL Internal Standard. Pipet 0.125 mL of CAL Standard into flask. Dilute to volume with deionized water	Li^6: 200 Be: 125 Al: 1250 Sc: 100 V: 125 Cr: 125 Mn: 125 Co: 125 Ni: 125 Cu: 125 Zn: 125 As: 125 Se: 125 Mo: 125 Ag: 125 Cd: 125 In: 100 Sn: 125 Sb: 125 Ba: 125 Tb: 100 Tl: 125 Pb: 125 Bi: 100 Al: 1250 Ca: 1250 Na: 1250 Mg: 1250 Fe: 1250 K: 1250
S 6020-MS4–03 25 14 – JCF	Place in a 100-mL volumetric flask: 1 mL distilled nitric acid and 1 mL Internal Standard. Pipet 0.250 mL of CAL Standard into flask. Dilute to volume with deionized water	Li^6: 200 Be: 250 Al: 2500 Sc: 100 V: 250 Cr: 250 Mn: 250 Co: 250 Ni: 250 Cu: 250 Zn: 250 As: 250 Se: 250 Mo: 250 Ag: 250 Cd: 250 In: 100 Sn: 250 Sb: 250 Ba: 250 Tb: 100 Tl: 250 Pb: 250 Bi: 100 Al: 2500 Ca: 2500 Na: 2500 Mg: 2500 Fe: 2500 K: 2500

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Standard Solutions Prepared By: _____

Entered By: _____ Date: 03/25/14

Reviewed By: _____ Date: 3/25/14

Standards/QC Preparation for ICP-MS (PEMS) 3 of 3 CompuChem a division of Liberty Analytical Corp. WORKSHEET 1 AA(1)

Standard Lot Number *	Preparation Instructions	Resultant Analyte Conc. (µg/L)
S 6020-MS5–03 25 14 – JCF	Place in a 100-mL volumetric flask: 1 mL distilled nitric acid and 1 mL Internal Standard. Pipet 0.50 mL of CAL Standard into flask. Dilute to volume with deionized water	Li^6: 200 Be: 500 Al: 5000 Sc: 100 V: 500 Cr: 500 Mn: 500 Co: 500 Ni: 500 Cu: 500 Zn: 500 As: 500 Se: 500 Mo: 500 Ag: 500 Cd: 500 In: 100 Sn: 500 Sb: 500 Ba: 500 Tb: 100 Tl: 500 Pb: 500 Bi: 100 Al: 5000 Ca: 5000 Na: 5000 Mg: 5000 Fe: 5000 K: 5000
ICV– 03 25 14 – JCF	Place in a 200-mL volumetric flask: 2 mL distilled nitric acid and 2 mL Internal Standard. Pipet 0.4 ml of ICCV-4 and ICCV-6 X Dilute to volume with deionized water.	Sb: 220 As: 220 Ba: 110 Be: 110 Cr: 110 Co: 110 Cu: 110 Pb: 220 Mn: 110 Ni: 110 Se: 220 Ag: 110 Tl: 220 V: 110 Zn: 220 Cd: 110 Li^6: 200 Sc: 100 In: 100 Tb: 100 Bi: 100 Mo: 110 Sn: 110
ICSA– 03 25 14 – JCF	Place in a 200-mL volumetric flask: 2 mL distilled nitric acid and 2 mL Internal Standard. Pipet 10.0 mL of ICS Part A into flask. Dilute to volume with deionized water.	Al: 100000 Sb: 1.5 As 0.1 Ba: 1.2 Be: 0 Cd: 0.7 Ca: 100000 C: 200000 Cl: 1000000, Li^6: 200 Sc: 100 In: 100 Tb: 100 Bi: 100
ICSAB– 03 25 14 – JCF	Place in a 200-mL volumetric flask: 2 mL distilled nitric acid and 2 mL Internal Standard. Pipet 10.0 mL of ICS Part A and 0.250 mL of ICS Part B. Dilute to volume with deionized water.	Al: 100000 As 25 Cd: 25Ca: 100000 C: 200000 Cl: 1000000 Cr: 50 Co: 20 Cu: 25 Fe: 10000 Mn: 50 Mo: 2000 Ni: 50 P: 100000 K: 10000 Se: 15 Ag: 15 Na: 100000 S: 100000 Tl: 21 Ti: 2000 V: 50 Zn: 25, Li^6: 200 Sc: 100 In: 100 Tb: 100 Bi: 100
CCV– 03 25 14 – JCF	Place in a 200-mL volumetric flask: 2 mL distilled nitric acid, and 2 mL Internal Standard. Pipet 0.600 mL of CAL Standard. Dilute to volume with deionized water.	Li: 200 Be: 300 Sc: 100 V: 300 Cr: 300 Mn: 300 Co: 300 Ni: 300 Cu: 300 Zn: 300 As: 300 Se: 300 Mo: 300 Ag: 300 Cd: 300 In: 100 Sn: 300 Sb: 300 Ba: 300 Tb: 100 Tl: 300 Pb: 300 Bi: 100 Al: 3000 Na: 3000 Ca: 3000 K:3000 Mg: 3000 Fe: 3000

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Standard Solutions Prepared By: _____ JCF 032514

Entered By: _____ Date: ~~04~~ 032514

Reviewed By: _____ Date: 3/25/14

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

QUANTITATIVE ANALYSIS REPORT

Calibration File:
Dataset File: C:\Elandata\Dataset\Default\S 6020-MS5.6679
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Sample Date/Time: Tuesday, March 25, 2014 18:32:05

Calibration Report

Analyte	Mass	Curve Type	Slope	Intercept	Corr Coeff
Li	6	Linear Thru Zero	0.0000000	0.0000000	0.0000000
Be	9	Linear Thru Zero	0.0010251	0.0000000	0.9999967
Sc	45	Linear Thru Zero	0.0000000	0.0000000	0.0000000
V	51	Linear Thru Zero	0.0090001	0.0000000	0.9998284
Cr	52	Linear Thru Zero	0.0076514	0.0000000	0.9996931
Mn	55	Linear Thru Zero	0.0123197	0.0000000	0.9998883
Co	59	Linear Thru Zero	0.0098635	0.0000000	0.9999230
Ni	60	Linear Thru Zero	0.0020096	0.0000000	0.9999212
Cu	63	Linear Thru Zero	0.0047172	0.0000000	0.9998092
Cu	65	Linear Thru Zero	0.0022109	0.0000000	0.9999822
Zn	66	Linear Thru Zero	0.0011845	0.0000000	0.9999834
As	75	Linear Thru Zero	0.0012706	0.0000000	0.9999906
Se	82	Linear Thru Zero	0.0001298	0.0000000	0.9999992
Ag	107	Linear Thru Zero	0.0038268	0.0000000	0.9998842
Ag	109	Linear Thru Zero	0.0037160	0.0000000	0.9998937
Cd	111	Linear Thru Zero	0.0008136	0.0000000	0.9999917
In	113	Linear Thru Zero	0.0000000	0.0000000	0.0000000
In	115	Linear Thru Zero	0.0000000	0.0000000	0.0000000
Sb	121	Linear Thru Zero	0.0018400	0.0000000	0.9999495
Ba	135	Linear Thru Zero	0.0005077	0.0000000	0.9999708
Ba	137	Linear Thru Zero	0.0008812	0.0000000	0.9999529
Tb	159	Linear Thru Zero	0.0000000	0.0000000	0.0000000
Tl	205	Linear Thru Zero	0.0110549	0.0000000	0.9998879
Pb	206	Linear Thru Zero	0.0036476	0.0000000	0.9996530
Pb	207	Linear Thru Zero	0.0065458	0.0000000	0.9999301
Pb	208	Linear Thru Zero	0.0100643	0.0000000	0.9999553
Bi	209	Linear Thru Zero	0.0000000	0.0000000	0.0000000

6020A TUNING REPORT SUMMARY

Sample ID: TUNE

Sample Date/Time: Tuesday, March 25, 2014 10:32:36
Sample Description: 100 PPB TUNING SOLN @ 10% PEAK HEIGHT
Number of Replicates: 5
Sample File: C:\Elandata1\Sample\021311.sam
Method File: C:\Elandata1\Method\6020\6020ATUNE.mth
Dataset File: C:\Elandata\Dataset\Default\TUNE.6545

Tuning File

Analyte	Exact Mass	Measured Mass	Measured Peak Width
Be	9.012	8.975	0.686
Mg	23.985	23.975	0.635
Mg	24.986	24.925	0.675
Mg	25.983	25.925	0.699
Co	58.933	58.925	0.701
In	112.904	112.825	0.750
In	114.904	114.925	0.690
Pb	205.975	205.975	0.727
Pb	206.976	206.975	0.716
Pb	207.977	207.975	0.697

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD
Be	9	3699.844	1.694
Mg	24	32488.734	0.903
Mg	25	4515.499	1.106
Mg	26	5311.410	1.044
Co	59	97612.396	2.425
In	113	8645.460	1.544
In	115	193860.607	1.845
Pb	206	49380.189	0.954
Pb	207	40949.516	0.835
Pb	208	98194.053	0.811

RAW DATA

Replicate 1

Analyte	Mass	Meas. Intensity
Be	9	3669.473
Mg	24	32467.823
Mg	25	4542.031
Mg	26	5336.223
Co	59	95456.634
In	113	8527.656
In	115	191706.893
Pb	206	48804.806

Pb	207	40823.759
Pb	208	97428.919

Replicate 2

Analyte	Mass	Meas. Intensity
Be	9	3702.085
Mg	24	32611.288
Mg	25	4517.420
Mg	26	5288.398
Co	59	98768.565
In	113	8705.557
In	115	194273.184
Pb	206	49761.905
Pb	207	41171.179
Pb	208	98489.634

Replicate 3

Analyte	Mass	Meas. Intensity
Be	9	3756.505
Mg	24	32845.653
Mg	25	4560.840
Mg	26	5360.837
Co	59	100982.310
In	113	8834.504
In	115	199577.361
Pb	206	49933.156
Pb	207	41223.193
Pb	208	99120.622

Replicate 4

Analyte	Mass	Meas. Intensity
Be	9	3760.307
Mg	24	32478.658
Mg	25	4526.024
Mg	26	5346.629
Co	59	97490.111
In	113	8648.387
In	115	193575.302
Pb	206	49343.037
Pb	207	41124.588
Pb	208	98635.662

Replicate 5

Analyte	Mass	Meas. Intensity
Be	9	3610.852
Mg	24	32040.247
Mg	25	4431.182
Mg	26	5224.965
Co	59	95364.360
In	113	8511.196
In	115	190170.295
Pb	206	49058.040
Pb	207	40404.863
Pb	208	97295.429

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S0

Sample Date/Time: Tuesday, March 25, 2014 18:23:22
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\S0.6674

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	331237.700	1.822				ppb
⌊	Be	9	2.778	34.641				ppb
⌈>	Sc	45	1078476.534	2.781				ppb
|	V	51	2066.851	1.580				ppb
|	Cr	52	6211.929	1.007				ppb
|	Mn	55	1240.385	76.701				ppb
|	Co	59	18.333	0.000				ppb
|	Ni	60	10.185	31.492				ppb
|	Cu	63	94.445	5.094				ppb
|	Cu	65	51.852	52.580				ppb
|	Zn	66	98.149	18.196				ppb
|	As	75	-153.918	11.778				ppb
⌊	Se	82	37.222	5.170				ppb
⌈	Ag	107	31.482	22.205				ppb
|	Ag	109	29.630	14.321				ppb
|	Cd	111	0.530	816.971				ppb
|	In	113	88637.340	3.986				ppb
⌊>	In	115	2027177.946	4.281				ppb
⌈	Sb	121	84.723	35.578				ppb
|	Ba	135	11.111	22.913				ppb
|	Ba	137	15.000	29.397				ppb
⌊>	Tb	159	2670759.771	0.920				ppb
⌈	Tl	205	22.222	10.825				ppb
|	Pb	206	19.444	44.607				ppb
|	Pb	207	33.333	45.069				ppb
|	Pb	208	70.834	32.752				ppb
⌊>	Bi	209	1427481.364	2.143				ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	332209.668		ppb
⌊	Be	9	3.333		ppb
⌈>	Sc	45	1043923.271		ppb
|	V	51	2101.675		ppb
|	Cr	52	6240.280		ppb
|	Mn	55	2333.606		ppb
|	Co	59	18.333		ppb
|	Ni	60	8.333		ppb
|	Cu	63	91.667		ppb
|	Cu	65	36.111		ppb
|	Zn	66	105.556		ppb
|	As	75	-173.846		ppb
⌊	Se	82	36.111		ppb
⌈	Ag	107	25.000		ppb
|	Ag	109	30.556		ppb

	Cd	111	-4.471		ppb
	In	113	84816.506		ppb
>	In	115	1967565.678		ppb
	Sb	121	50.000		ppb
	Ba	135	11.667		ppb
	Ba	137	13.333		ppb
>	Tb	159	2644979.417		ppb
	Tl	205	20.833		ppb
	Pb	206	29.167		ppb
	Pb	207	50.000		ppb
	Pb	208	95.834		ppb
>	Bi	209	1392180.846		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	324774.655		ppb
	Be	9	1.667		ppb
>	Sc	45	1093685.627		ppb
	V	51	2061.951		ppb
	Cr	52	6255.289		ppb
	Mn	55	787.531		ppb
	Co	59	18.333		ppb
	Ni	60	8.333		ppb
	Cu	63	91.667		ppb
	Cu	65	36.111		ppb
	Zn	66	111.112		ppb
	As	75	-138.405		ppb
	Se	82	36.111		ppb
	Ag	107	30.556		ppb
	Ag	109	33.333		ppb
	Cd	111	3.183		ppb
	In	113	89309.537		ppb
>	In	115	1987233.021		ppb
	Sb	121	100.001		ppb
	Ba	135	13.333		ppb
	Ba	137	11.667		ppb
>	Tb	159	2693913.329		ppb
	Tl	205	20.833		ppb
	Pb	206	16.667		ppb
	Pb	207	29.167		ppb
	Pb	208	66.667		ppb
>	Bi	209	1446197.522		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	336728.776		ppb
	Be	9	3.333		ppb
>	Sc	45	1097820.705		ppb
	V	51	2036.926		ppb
	Cr	52	6140.218		ppb
	Mn	55	600.018		ppb
	Co	59	18.333		ppb
	Ni	60	13.889		ppb
	Cu	63	100.001		ppb
	Cu	65	83.334		ppb
	Zn	66	77.778		ppb
	As	75	-149.504		ppb
	Se	82	39.445		ppb
	Ag	107	38.889		ppb
	Ag	109	25.000		ppb
	Cd	111	2.879		ppb
	In	113	91785.976		ppb
>	In	115	2126735.139		ppb
	Sb	121	104.167		ppb

	Ba	135	8.333	ppb
	Ba	137	20.000	ppb
>	Tb	159	2673386.568	ppb
	Tl	205	25.000	ppb
	Pb	206	12.500	ppb
	Pb	207	20.833	ppb
	Pb	208	50.000	ppb
>	Bi	209	1444065.723	ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6					
	Be	9					
>	Sc	45					
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115					
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS1

Sample Date/Time: Tuesday, March 25, 2014 18:25:07
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\S 6020-MS1.6675

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	335953.190	3.888	335953.190			ppb
⌊	Be	9	313.894	8.633	0.001	1.00000	7.70	ppb
⌈>	Sc	45	1072610.058	2.496	1072610.058			ppb
|	V	51	46575.918	1.087	0.042	5.00000	1.87	ppb
|	Cr	52	22062.091	1.424	0.015	2.00000	3.07	ppb
|	Mn	55	13461.844	4.384	0.011	1.00000	2.73	ppb
|	Co	59	10087.865	1.750	0.009	1.00000	4.24	ppb
|	Ni	60	2264.145	1.889	0.002	1.00000	0.80	ppb
|	Cu	63	9947.538	1.415	0.009	2.00000	2.29	ppb
|	Cu	65	4938.257	3.053	0.005	2.00000	5.30	ppb
|	Zn	66	2567.923	3.720	0.002	2.00000	4.73	ppb
|	As	75	1079.203	1.670	0.001	1.00000	2.79	ppb
⌊	Se	82	694.654	2.739	0.001	5.00000	2.51	ppb
⌈	Ag	107	7258.190	3.230	0.003	1.00000	7.26	ppb
|	Ag	109	7172.016	2.020	0.003	1.00000	7.67	ppb
|	Cd	111	1623.358	9.324	0.001	1.00000	12.76	ppb
|	In	113	93241.172	2.363	0.001			ppb
⌊>	In	115	2080843.879	5.594	2080843.879			ppb
⌈	Sb	121	9419.713	1.475	0.003	2.00000	2.49	ppb
|	Ba	135	13307.744	3.239	0.005	10.00000	2.84	ppb
|	Ba	137	23176.278	2.110	0.009	10.00000	1.14	ppb
⌊>	Tb	159	2702438.620	1.046	2702438.620			ppb
⌈	Tl	205	14340.833	1.647	0.010	1.00000	2.64	ppb
|	Pb	206	4755.297	1.760	0.003	1.00000	2.91	ppb
|	Pb	207	8824.182	2.325	0.006	1.00000	2.86	ppb
|	Pb	208	13506.671	2.455	0.009	1.00000	1.61	ppb
⌊>	Bi	209	1437100.549	1.151	1437100.549			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	321463.538		ppb
⌊	Be	9	308.338	1.026767	ppb
⌈>	Sc	45	1099680.164		ppb
|	V	51	47153.112	4.933047	ppb
|	Cr	52	22050.952	1.929435	ppb
|	Mn	55	14143.328	1.027506	ppb
|	Co	59	9899.898	0.956457	ppb
|	Ni	60	2300.265	0.990794	ppb
|	Cu	63	9935.489	1.947295	ppb
|	Cu	65	4878.968	1.925019	ppb
|	Zn	66	2508.648	1.901133	ppb
|	As	75	1087.220	0.984400	ppb
⌊	Se	82	697.247	4.888472	ppb
⌈	Ag	107	7338.803	1.078393	ppb
|	Ag	109	7311.005	1.086802	ppb

	Cd	111	1705.544	1.118917	ppb
	In	113	90709.554		ppb
>	In	115	1946889.589		ppb
	Sb	121	9441.955	2.015958	ppb
	Ba	135	12811.535	9.682210	ppb
	Ba	137	22780.919	9.886049	ppb
>	Tb	159	2687118.263		ppb
	Tl	205	14485.484	1.008447	ppb
	Pb	206	4717.779	0.990417	ppb
	Pb	207	8589.362	0.971743	ppb
	Pb	208	13334.391	0.985808	ppb
>	Bi	209	1439185.740		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	339569.106		ppb
	Be	9	290.004	0.913232	ppb
>	Sc	45	1046142.352		ppb
	V	51	46367.778	5.106909	ppb
	Cr	52	21753.635	2.029603	ppb
	Mn	55	13121.103	0.999523	ppb
	Co	59	10250.251	1.041146	ppb
	Ni	60	2216.912	1.003819	ppb
	Cu	63	9813.146	2.022474	ppb
	Cu	65	5109.638	2.121332	ppb
	Zn	66	2516.983	2.009385	ppb
	As	75	1091.828	1.032255	ppb
	Se	82	674.467	4.975502	ppb
	Ag	107	7441.657	0.986443	ppb
	Ag	109	7021.909	0.941424	ppb
	Cd	111	1715.851	1.015824	ppb
	In	113	94284.055		ppb
>	In	115	2157366.665		ppb
	Sb	121	9270.962	1.944102	ppb
	Ba	135	13589.227	10.090278	ppb
	Ba	137	23723.106	10.114613	ppb
>	Tb	159	2735061.229		ppb
	Tl	205	14468.793	1.021194	ppb
	Pb	206	4851.176	1.032639	ppb
	Pb	207	8968.691	1.028871	ppb
	Pb	208	13296.725	0.996635	ppb
>	Bi	209	1419611.529		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	346826.925		ppb
	Be	9	343.339	1.060001	ppb
>	Sc	45	1072007.660		ppb
	V	51	46206.864	4.960044	ppb
	Cr	52	22381.686	2.040962	ppb
	Mn	55	13121.103	0.972972	ppb
	Co	59	10113.445	1.002397	ppb
	Ni	60	2275.259	1.005387	ppb
	Cu	63	10093.981	2.030231	ppb
	Cu	65	4826.164	1.953649	ppb
	Zn	66	2678.136	2.089482	ppb
	As	75	1058.562	0.983345	ppb
	Se	82	712.248	5.136026	ppb
	Ag	107	6994.112	0.935164	ppb
	Ag	109	7183.135	0.971774	ppb
	Cd	111	1448.678	0.865259	ppb
	In	113	94729.906		ppb
>	In	115	2138275.383		ppb
	Sb	121	9546.221	2.039940	ppb

|	Ba	135	13522.470	10.227512	ppb
|	Ba	137	23024.810	9.999338	ppb
|>	Tb	159	2685136.369		ppb
|	Tl	205	14068.222	0.970359	ppb
|	Pb	206	4696.936	0.976944	ppb
|	Pb	207	8914.492	0.999386	ppb
|	Pb	208	13888.897	1.017557	ppb
|>	Bi	209	1452504.379		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6					
	Be	9					
>	Sc	45					
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115					
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS2

Sample Date/Time: Tuesday, March 25, 2014 18:26:52
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\S 6020-MS2.6676

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	336425.230	1.551	336425.230			ppb
	Be	9	646.688	7.822	0.002	2.01289	7.12	ppb
>	Sc	45	1086996.077	2.195	1086996.077			ppb
	V	51	94153.257	0.049	0.085	10.04010	2.22	ppb
	Cr	52	38271.998	1.522	0.029	3.99541	3.20	ppb
	Mn	55	25974.050	6.109	0.023	1.99963	8.73	ppb
	Co	59	20280.547	1.524	0.019	1.99687	1.32	ppb
	Ni	60	4364.842	3.498	0.004	1.98060	3.87	ppb
	Cu	63	20064.559	1.922	0.018	4.00014	4.12	ppb
	Cu	65	9873.395	3.704	0.009	3.99326	5.88	ppb
	Zn	66	5152.253	0.540	0.005	4.00732	2.76	ppb
	As	75	2638.087	11.236	0.003	2.04341	11.39	ppb
	Se	82	1398.246	6.501	0.001	10.04163	7.24	ppb
	Ag	107	15513.896	4.950	0.008	2.03413	2.92	ppb
	Ag	109	14925.949	1.969	0.007	2.02428	5.66	ppb
	Cd	111	3112.196	3.773	0.002	1.99025	2.99	ppb
	In	113	91650.207	2.625	0.001			ppb
>	In	115	2039274.412	6.869	2039274.412			ppb
	Sb	121	19173.924	1.737	0.007	4.02253	0.22	ppb
	Ba	135	27286.626	1.331	0.010	20.12641	2.40	ppb
	Ba	137	47917.331	1.788	0.018	20.15801	1.62	ppb
>	Tb	159	2685466.685	1.647	2685466.685			ppb
	Tl	205	29624.378	1.586	0.020	2.00956	1.72	ppb
	Pb	206	9753.366	1.797	0.007	2.00726	2.29	ppb
	Pb	207	18080.443	1.394	0.012	2.00682	1.88	ppb
	Pb	208	27794.620	0.230	0.019	2.00890	0.64	ppb
>	Bi	209	1449949.509	0.487	1449949.509			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	332674.752		ppb
	Be	9	588.351	1.851828	ppb
>	Sc	45	1063089.218		ppb
	V	51	94155.245	10.267873	ppb
	Cr	52	37956.900	4.061033	ppb
	Mn	55	27642.319	2.182049	ppb
	Co	59	19926.500	2.005856	ppb
	Ni	60	4259.240	1.975633	ppb
	Cu	63	20412.479	4.159282	ppb
	Cu	65	10185.740	4.209797	ppb
	Zn	66	5173.560	4.114816	ppb
	As	75	2586.262	2.046319	ppb
	Se	82	1357.870	9.964621	ppb
	Ag	107	15345.098	2.099868	ppb
	Ag	109	14588.411	2.061801	ppb

	Cd	111	3037.558	2.026498	ppb
	In	113	92004.638		ppb
>	In	115	1952097.403		ppb
	Sb	121	18888.656	4.025186	ppb
	Ba	135	27611.400	20.682600	ppb
	Ba	137	47934.612	20.481723	ppb
>	Tb	159	2643799.718		ppb
	Tl	205	30116.114	2.039682	ppb
	Pb	206	9721.390	1.997371	ppb
	Pb	207	17949.774	1.989038	ppb
	Pb	208	27843.436	2.009228	ppb
>	Bi	209	1452231.133		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	334216.573		ppb
	Be	9	678.356	2.126573	ppb
>	Sc	45	1110815.951		ppb
	V	51	94198.495	9.821565	ppb
	Cr	52	37915.075	3.847880	ppb
	Mn	55	24484.104	1.834321	ppb
	Co	59	20419.159	1.967100	ppb
	Ni	60	4295.367	1.906624	ppb
	Cu	63	19649.842	3.830357	ppb
	Cu	65	9471.150	3.743931	ppb
	Zn	66	5120.755	3.893692	ppb
	As	75	2370.997	1.809298	ppb
	Se	82	1334.533	9.356150	ppb
	Ag	107	14844.343	2.017977	ppb
	Ag	109	15064.116	2.115298	ppb
	Cd	111	3051.491	2.022559	ppb
	In	113	89086.729		ppb
>	In	115	1964869.648		ppb
	Sb	121	19093.210	4.012713	ppb
	Ba	135	26894.450	19.867924	ppb
	Ba	137	47052.102	19.827689	ppb
>	Tb	159	2680700.701		ppb
	Tl	205	29577.009	2.017317	ppb
	Pb	206	9942.440	2.057355	ppb
	Pb	207	18370.991	2.050223	ppb
	Pb	208	27818.164	2.021630	ppb
>	Bi	209	1442034.921		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	342384.366		ppb
	Be	9	673.356	2.060266	ppb
>	Sc	45	1087083.063		ppb
	V	51	94106.033	10.030866	ppb
	Cr	52	38944.018	4.077305	ppb
	Mn	55	25795.728	1.982511	ppb
	Co	59	20495.983	2.017654	ppb
	Ni	60	4539.919	2.059544	ppb
	Cu	63	20131.354	4.010784	ppb
	Cu	65	9963.294	4.026049	ppb
	Zn	66	5162.443	4.013452	ppb
	As	75	2957.003	2.274626	ppb
	Se	82	1502.335	10.804115	ppb
	Ag	107	16352.248	1.984539	ppb
	Ag	109	15125.319	1.895740	ppb
	Cd	111	3247.539	1.921683	ppb
	In	113	93859.254		ppb
>	In	115	2200856.183		ppb
	Sb	121	19539.905	4.029706	ppb

	Ba	135	27354.028	19.828704	ppb
	Ba	137	48765.280	20.164604	ppb
>	Tb	159	2731899.636		ppb
	Tl	205	29180.012	1.971681	ppb
	Pb	206	9596.269	1.967063	ppb
	Pb	207	17920.565	1.981214	ppb
	Pb	208	27722.259	1.995843	ppb
>	Bi	209	1455582.474		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6					
	Be	9					
>	Sc	45					
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115					
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS3

Sample Date/Time: Tuesday, March 25, 2014 18:28:36
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\S 6020-MS3.6677

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	336022.074	2.035	336022.074			ppb
⌊	Be	9	42856.096	1.627	0.128	125.00275	3.51	ppb
⌈>	Sc	45	1067330.178	0.456	1067330.178			ppb
|	V	51	1142082.938	1.987	1.068	125.01230	1.99	ppb
|	Cr	52	1000541.291	0.924	0.932	125.00171	0.59	ppb
|	Mn	55	1576925.776	2.155	1.476	125.00142	1.85	ppb
|	Co	59	1259711.193	0.722	1.180	125.00045	0.27	ppb
|	Ni	60	273987.790	1.814	0.257	125.00059	2.22	ppb
|	Cu	63	628653.520	2.497	0.589	125.00393	2.58	ppb
|	Cu	65	302438.918	0.924	0.283	125.00014	1.13	ppb
|	Zn	66	162135.463	1.351	0.152	125.00711	1.76	ppb
|	As	75	171951.180	0.864	0.161	125.00097	0.75	ppb
⌊	Se	82	17279.734	1.594	0.016	125.03472	1.48	ppb
⌈	Ag	107	926051.473	0.630	0.459	124.99928	3.09	ppb
|	Ag	109	908227.557	1.675	0.450	124.99980	3.43	ppb
|	Cd	111	202871.594	0.732	0.101	125.00182	4.40	ppb
|	In	113	289644.687	0.733	0.100			ppb
⌊>	In	115	2020054.891	3.781	2020054.891			ppb
⌈	Sb	121	617140.062	1.216	0.233	125.00812	1.85	ppb
|	Ba	135	173641.921	1.006	0.065	125.14117	0.61	ppb
|	Ba	137	299350.895	1.042	0.113	125.07776	0.99	ppb
⌊>	Tb	159	2651931.776	1.460	2651931.776			ppb
⌈	Tl	205	1842490.954	2.485	1.296	125.00081	2.87	ppb
|	Pb	206	612245.989	1.748	0.431	125.00117	2.68	ppb
|	Pb	207	1124249.098	0.944	0.791	125.00079	1.69	ppb
|	Pb	208	1713880.200	0.696	1.206	125.00052	0.75	ppb
⌊>	Bi	209	1421722.674	1.135	1421722.674			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	335739.673		ppb
⌊	Be	9	42418.108	123.772514	ppb
⌈>	Sc	45	1065423.280		ppb
|	V	51	1165406.870	127.797860	ppb
|	Cr	52	1002803.349	125.512939	ppb
|	Mn	55	1592292.092	126.450845	ppb
|	Co	59	1257019.688	124.957616	ppb
|	Ni	60	273098.345	124.810054	ppb
|	Cu	63	646188.420	128.718526	ppb
|	Cu	65	299756.925	124.110691	ppb
|	Zn	66	161637.528	124.840049	ppb
|	As	75	173060.545	126.031598	ppb
⌊	Se	82	17509.204	126.926685	ppb
⌈	Ag	107	922587.299	127.628065	ppb
|	Ag	109	917274.793	129.385463	ppb

|	Cd	111	203523.925	128.479198	ppb
|	In	113	291851.786		ppb
|>	In	115	1969513.680		ppb
⌈	Sb	121	608509.168	123.564738	ppb
|	Ba	135	174026.193	125.739332	ppb
|	Ba	137	296540.920	124.218716	ppb
|>	Tb	159	2645026.605		ppb
⌈	Tl	205	1790082.516	121.011378	ppb
|	Pb	206	601371.193	122.334176	ppb
|	Pb	207	1112009.164	123.198694	ppb
|	Pb	208	1708217.295	124.150776	ppb
|>	Bi	209	1426658.334		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	329328.343		ppb
|	Be	9	43660.103	129.877100	ppb
⌈>	Sc	45	1072858.751		ppb
|	V	51	1140753.929	124.221197	ppb
|	Cr	52	1008447.497	125.343570	ppb
|	Mn	55	1600507.612	126.222208	ppb
|	Co	59	1269847.094	125.357908	ppb
|	Ni	60	269522.717	122.322174	ppb
|	Cu	63	623866.224	123.409984	ppb
|	Cu	65	302226.844	124.266119	ppb
|	Zn	66	160237.488	122.899857	ppb
|	As	75	172530.631	124.776000	ppb
|	Se	82	17355.603	124.937082	ppb
⌈	Ag	107	932785.263	120.566546	ppb
|	Ag	109	916746.121	120.820718	ppb
|	Cd	111	201172.166	118.656742	ppb
|	In	113	289467.294		ppb
|>	In	115	2107908.372		ppb
⌈	Sb	121	620757.843	123.777532	ppb
|	Ba	135	175164.138	124.277776	ppb
|	Ba	137	302706.588	124.513488	ppb
|>	Tb	159	2693630.202		ppb
⌈	Tl	205	1874688.115	126.010398	ppb
|	Pb	206	612597.819	123.909554	ppb
|	Pb	207	1129903.204	124.469544	ppb
|	Pb	208	1727590.783	124.845039	ppb
|>	Bi	209	1434815.275		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	342998.207		ppb
|	Be	9	42490.079	121.358639	ppb
⌈>	Sc	45	1063708.503		ppb
|	V	51	1120088.015	123.017854	ppb
|	Cr	52	990373.028	124.148613	ppb
|	Mn	55	1537977.624	122.331221	ppb
|	Co	59	1252266.798	124.685817	ppb
|	Ni	60	279342.307	127.869555	ppb
|	Cu	63	615905.916	122.883291	ppb
|	Cu	65	305332.984	126.623617	ppb
|	Zn	66	164531.373	127.281417	ppb
|	As	75	170262.364	124.195320	ppb
|	Se	82	16974.394	123.240397	ppb
⌈	Ag	107	922781.858	126.803233	ppb
|	Ag	109	890661.758	124.793219	ppb
|	Cd	111	203918.689	127.869519	ppb
|	In	113	287614.982		ppb
|>	In	115	1982742.623		ppb
⌈	Sb	121	622153.176	127.682100	ppb

|	Ba	135	171735.432	125.406399	ppb
|	Ba	137	298805.178	126.501085	ppb
|>	Tb	159	2617138.522		ppb
⌈	Tl	205	1862702.230	127.980644	ppb
|	Pb	206	622768.955	128.759785	ppb
|	Pb	207	1130834.927	127.334117	ppb
|	Pb	208	1705832.522	126.005756	ppb
|>	Bi	209	1403694.411		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6					
	Be	9					
>	Sc	45					
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115					
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS4

Sample Date/Time: Tuesday, March 25, 2014 18:30:20
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\S 6020-MS4.6678

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	324509.981	1.066	324509.981			ppb
	Be	9	83589.077	1.657	0.258	250.46666	1.02	ppb
>	Sc	45	1046063.554	2.185	1046063.554			ppb
	V	51	2290773.112	1.289	2.188	251.20761	1.15	ppb
	Cr	52	1909921.588	2.654	1.821	248.83937	3.94	ppb
	Mn	55	3150037.721	2.488	3.012	250.99537	4.64	ppb
	Co	59	2541672.782	1.910	2.431	251.46421	4.13	ppb
	Ni	60	537108.558	2.381	0.514	250.03084	4.21	ppb
	Cu	63	1184320.260	2.380	1.132	247.99809	1.67	ppb
	Cu	65	579609.397	1.322	0.554	248.89067	3.31	ppb
	Zn	66	308675.689	1.553	0.295	248.56946	3.66	ppb
	As	75	333557.641	0.533	0.319	249.47255	2.35	ppb
	Se	82	33978.745	0.994	0.032	250.24305	2.30	ppb
	Ag	107	1810906.477	1.018	0.935	250.92699	1.41	ppb
	Ag	109	1755329.737	0.677	0.906	250.34408	0.84	ppb
	Cd	111	396814.314	1.099	0.205	250.92267	1.45	ppb
	In	113	466833.605	1.775	0.197			ppb
>	In	115	1937256.186	0.702	1937256.186			ppb
	Sb	121	1195253.185	0.562	0.451	248.36579	1.10	ppb
	Ba	135	338117.934	0.553	0.127	248.66697	1.53	ppb
	Ba	137	593172.382	0.564	0.224	249.54062	0.45	ppb
>	Tb	159	2652639.596	1.009	2652639.596			ppb
	Tl	205	3753904.549	1.249	2.741	252.73754	1.48	ppb
	Pb	206	1193148.813	2.263	0.871	250.54994	1.47	ppb
	Pb	207	2203413.225	1.365	1.608	250.83741	0.77	ppb
	Pb	208	3443342.334	0.376	2.514	252.06168	0.80	ppb
>	Bi	209	1369832.374	0.988	1369832.374			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	326967.746		ppb
	Be	9	85132.508	253.178682	ppb
>	Sc	45	1019677.703		ppb
	V	51	2259968.190	254.207259	ppb
	Cr	52	1928778.616	257.713140	ppb
	Mn	55	3233546.972	264.146166	ppb
	Co	59	2597126.008	263.441494	ppb
	Ni	60	546886.783	261.024489	ppb
	Cu	63	1160152.377	249.207313	ppb
	Cu	65	585915.174	257.990044	ppb
	Zn	66	313456.381	258.818933	ppb
	As	75	333817.005	256.038651	ppb
	Se	82	33933.031	256.302049	ppb
	Ag	107	1829371.025	253.097030	ppb
	Ag	109	1769020.114	251.915885	ppb

	Cd	111	391790.672	247.366958	ppb
	In	113	475928.839		ppb
>	In	115	1940135.998		ppb
	Sb	121	1188189.527	246.003906	ppb
	Ba	135	338443.565	247.995877	ppb
	Ba	137	593994.294	248.989999	ppb
>	Tb	159	2662108.646		ppb
	Tl	205	3778791.156	251.683743	ppb
	Pb	206	1223865.352	254.273150	ppb
	Pb	207	2237046.527	251.950075	ppb
	Pb	208	3456200.431	250.289755	ppb
>	Bi	209	1384613.637		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	320553.342		ppb
	Be	9	82453.534	250.118268	ppb
>	Sc	45	1059711.521		ppb
	V	51	2318852.740	250.974282	ppb
	Cr	52	1948483.982	250.488704	ppb
	Mn	55	3078108.930	241.941258	ppb
	Co	59	2520971.737	246.056135	ppb
	Ni	60	522637.467	240.026374	ppb
	Cu	63	1177532.579	243.384629	ppb
	Cu	65	571084.740	241.958908	ppb
	Zn	66	303869.974	241.419705	ppb
	As	75	331662.879	244.781118	ppb
	Se	82	34337.184	249.549780	ppb
	Ag	107	1810832.229	252.836646	ppb
	Ag	109	1747640.381	251.160530	ppb
	Cd	111	399603.200	254.620361	ppb
	In	113	464863.641		ppb
>	In	115	1922452.483		ppb
	Sb	121	1201572.627	247.725400	ppb
	Ba	135	336106.698	245.244469	ppb
	Ba	137	596030.235	248.789431	ppb
>	Tb	159	2673386.568		ppb
	Tl	205	3783102.354	256.896479	ppb
	Pb	206	1182425.030	250.465615	ppb
	Pb	207	2194083.874	251.941922	ppb
	Pb	208	3443513.217	254.245795	ppb
>	Bi	209	1358065.974		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	326008.856		ppb
	Be	9	83181.189	248.103027	ppb
>	Sc	45	1058801.438		ppb
	V	51	2293498.405	248.441275	ppb
	Cr	52	1852502.166	238.316263	ppb
	Mn	55	3138457.262	246.898672	ppb
	Co	59	2506920.602	244.895000	ppb
	Ni	60	541801.425	249.041660	ppb
	Cu	63	1215275.824	251.402330	ppb
	Cu	65	581828.275	246.723072	ppb
	Zn	66	308700.713	245.469742	ppb
	As	75	335193.038	247.597878	ppb
	Se	82	33666.019	244.877332	ppb
	Ag	107	1792516.178	246.847291	ppb
	Ag	109	1749328.716	247.955820	ppb
	Cd	111	399049.071	250.780705	ppb
	In	113	459708.334		ppb
>	In	115	1949180.077		ppb
	Sb	121	1195997.401	251.368072	ppb

|	Ba	135	339803.538	252.760554	ppb
|	Ba	137	589492.616	250.842440	ppb
|>	Tb	159	2622423.573		ppb
⌈	Tl	205	3699820.137	249.632390	ppb
|	Pb	206	1173156.055	246.911047	ppb
¦	Pb	207	2179109.274	248.620234	ppb
|	Pb	208	3430313.354	251.649496	ppb
|>	Bi	209	1366817.510		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6					
	Be	9					
>	Sc	45					
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115					
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS5

Sample Date/Time: Tuesday, March 25, 2014 18:32:05
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\S 6020-MS5.6679

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	315789.604	2.183	315789.604			ppb
⌊	Be	9	161650.059	1.129	0.512	499.49668	2.11	ppb
⌈>	Sc	45	1028086.415	0.942	1028086.415			ppb
|	V	51	4674086.305	1.860	4.545	505.02450	2.80	ppb
|	Cr	52	3992482.183	0.094	3.878	506.82096	0.89	ppb
|	Mn	55	6384744.013	2.649	6.210	504.04282	2.91	ppb
|	Co	59	5102032.455	2.125	4.962	503.09519	1.23	ppb
|	Ni	60	1025701.272	0.354	0.998	496.49040	0.91	ppb
|	Cu	63	2449085.503	0.938	2.382	505.03559	1.75	ppb
|	Cu	65	1133808.198	1.422	1.103	498.85960	2.33	ppb
|	Zn	66	608469.870	0.151	0.592	499.61862	1.00	ppb
|	As	75	651578.963	0.863	0.634	498.94005	0.56	ppb
⌊	Se	82	66783.761	1.106	0.065	500.13934	1.43	ppb
⌈	Ag	107	3675866.398	1.936	1.929	504.13914	1.93	ppb
|	Ag	109	3568722.914	0.882	1.873	504.06012	1.35	ppb
|	Cd	111	774207.302	0.769	0.406	499.46891	1.59	ppb
|	In	113	851685.770	0.838	0.403			ppb
⌊>	In	115	1905398.052	1.025	1905398.052			ppb
⌈	Sb	121	2473560.396	0.973	0.924	502.18842	1.42	ppb
|	Ba	135	677539.164	0.612	0.253	498.48234	0.50	ppb
|	Ba	137	1173218.395	0.721	0.438	497.33898	0.74	ppb
⌊>	Tb	159	2677020.040	0.659	2677020.040			ppb
⌈	Tl	205	7548452.713	1.543	5.560	502.98892	2.59	ppb
|	Pb	206	2512151.452	1.944	1.851	507.34321	2.92	ppb
|	Pb	207	4471473.649	1.043	3.294	503.18230	2.06	ppb
|	Pb	208	6851393.484	0.223	5.046	501.41981	1.07	ppb
⌊>	Bi	209	1357757.050	1.044	1357757.050			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	313034.011		ppb
⌊	Be	9	163309.364	508.932066	ppb
⌈>	Sc	45	1019019.585		ppb
|	V	51	4751590.197	517.881252	ppb
|	Cr	52	3992532.722	511.315128	ppb
|	Mn	55	6512842.489	518.694140	ppb
|	Co	59	5023208.628	499.764444	ppb
|	Ni	60	1022419.534	499.278922	ppb
|	Cu	63	2454908.889	510.688430	ppb
|	Cu	65	1144846.604	508.125579	ppb
|	Zn	66	608178.842	503.792243	ppb
|	As	75	645084.065	498.354480	ppb
⌊	Se	82	67250.373	508.090570	ppb
⌈	Ag	107	3746027.616	515.370595	ppb
|	Ag	109	3603766.629	510.585271	ppb

	Cd	111	780680.128	505.188307	ppb
	In	113	852506.960		ppb
	In	115	1899386.951		ppb
	Sb	121	2445866.430	494.388139	ppb
	Ba	135	682273.740	499.784436	ppb
	Ba	137	1182848.495	499.239866	ppb
	Tb	159	2688675.466		ppb
	Tl	205	7434231.304	490.678836	ppb
	Pb	206	2490904.931	498.274508	ppb
	Pb	207	4443657.121	495.327708	ppb
	Pb	208	6862496.961	497.521536	ppb
	Bi	209	1370513.277		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
	Li	6	310701.260		ppb
	Be	9	159695.024	501.404837	ppb
	Sc	45	1026956.558		ppb
	V	51	4690599.667	507.278327	ppb
	Cr	52	3988712.000	506.871297	ppb
	Mn	55	6193061.300	489.408972	ppb
	Co	59	5057225.481	499.260162	ppb
	Ni	60	1029606.619	498.902724	ppb
	Cu	63	2468581.187	509.563695	ppb
	Cu	65	1141270.373	502.623229	ppb
	Zn	66	609497.257	500.981872	ppb
	As	75	654810.280	501.957904	ppb
	Se	82	65932.194	494.274353	ppb
	Ag	107	3677814.488	498.678945	ppb
	Ag	109	3559551.199	497.037827	ppb
	Cd	111	768954.569	490.414728	ppb
	In	113	858374.246		ppb
	In	115	1927217.738		ppb
	Sb	121	2489539.410	503.782046	ppb
	Ba	135	675789.916	495.591455	ppb
	Ba	137	1166964.753	493.089663	ppb
	Tb	159	2685655.437		ppb
	Tl	205	7544090.795	501.684344	ppb
	Pb	206	2477526.855	499.335280	ppb
	Pb	207	4445439.972	499.262807	ppb
	Pb	208	6833966.998	499.188956	ppb
	Bi	209	1360256.750		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
	Li	6	323633.540		ppb
	Be	9	161945.789	488.153145	ppb
	Sc	45	1038283.101		ppb
	V	51	4580069.050	489.913936	ppb
	Cr	52	3996201.827	502.276464	ppb
	Mn	55	6448328.249	504.025344	ppb
	Co	59	5225663.255	510.260953	ppb
	Ni	60	1025077.661	491.289568	ppb
	Cu	63	2423766.433	494.854641	ppb
	Cu	65	1115307.616	485.829988	ppb
	Zn	66	607733.510	494.081732	ppb
	As	75	654842.544	496.507770	ppb
	Se	82	67168.716	498.053103	ppb
	Ag	107	3603757.090	498.367881	ppb
	Ag	109	3542850.912	504.557250	ppb
	Cd	111	772987.209	502.803697	ppb
	In	113	844176.105		ppb
	In	115	1889589.466		ppb
	Sb	121	2485275.348	508.395067	ppb

|	Ba	135	674553.837	500.071131	ppb
|	Ba	137	1169841.937	499.687425	ppb
|>	Tb	159	2656729.219		ppb
⌈	Tl	205	7667036.042	516.603583	ppb
|	Pb	206	2568022.571	524.419830	ppb
|	Pb	207	4525323.854	514.956394	ppb
|	Pb	208	6857716.495	507.548935	ppb
|>	Bi	209	1342501.123		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6					
	Be	9					
>	Sc	45					
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115					
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: LLICV

Sample Date/Time: Tuesday, March 25, 2014 18:35:31
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\LLICV.6680

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	319050.309	1.330	319050.309			ppb
⌊	Be	9	326.672	13.266	0.001	0.98965	11.99	ppb
⌈>	Sc	45	1023518.987	1.974	1023518.987			ppb
|	V	51	44874.156	3.577	0.042	4.65827	2.88	ppb
|	Cr	52	20725.950	5.894	0.014	1.89278	6.20	ppb
|	Mn	55	13033.501	4.798	0.012	0.94016	4.32	ppb
|	Co	59	9639.674	9.790	0.009	0.95245	8.40	ppb
|	Ni	60	2156.717	13.919	0.002	1.04253	12.40	ppb
|	Cu	63	9706.603	11.669	0.009	1.99068	10.71	ppb
|	Cu	65	4934.567	14.439	0.005	2.15670	13.29	ppb
|	Zn	66	2742.046	12.346	0.003	2.18376	11.82	ppb
|	As	75	1475.628	35.776	0.002	1.24415	31.39	ppb
⌊	Se	82	681.505	7.297	0.001	4.86175	6.72	ppb
⌈	Ag	107	9461.938	13.749	0.005	1.28254	14.18	ppb
|	Ag	109	8967.952	12.734	0.005	1.25188	13.19	ppb
|	Cd	111	1742.118	15.789	0.001	1.11470	16.71	ppb
|	In	113	88043.002	2.641	0.002			ppb
⌊>	In	115	1922593.114	2.206	1922593.114			ppb
⌈	Sb	121	9907.699	6.867	0.004	2.03081	7.15	ppb
|	Ba	135	12976.750	2.108	0.005	9.71142	1.66	ppb
|	Ba	137	22627.255	3.254	0.009	9.76132	4.15	ppb
⌊>	Tb	159	2629847.812	2.194	2629847.812			ppb
⌈	Tl	205	14959.911	12.633	0.011	0.98053	12.49	ppb
|	Pb	206	4992.920	9.050	0.004	0.98961	9.01	ppb
|	Pb	207	9193.808	9.495	0.007	1.01564	9.40	ppb
|	Pb	208	13895.908	11.445	0.010	0.99692	11.31	ppb
⌊>	Bi	209	1377977.623	0.353	1377977.623			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	315614.929		ppb
⌊	Be	9	300.005	0.919113	ppb
⌈>	Sc	45	1000250.690		ppb
|	V	51	43815.640	4.654189	ppb
|	Cr	52	19654.296	1.815294	ppb
|	Mn	55	12653.834	0.933511	ppb
|	Co	59	8878.940	0.898231	ppb
|	Ni	60	1883.511	0.932344	ppb
|	Cu	63	9065.218	1.902705	ppb
|	Cu	65	4442.653	1.987155	ppb
|	Zn	66	2580.889	2.101526	ppb
|	As	75	1151.879	1.018696	ppb
⌊	Se	82	653.910	4.769908	ppb
⌈	Ag	107	8403.529	1.157879	ppb
|	Ag	109	8050.461	1.142383	ppb

	Cd	111	1599.917	1.040190	ppb
	In	113	85366.994		ppb
>	In	115	1889925.270		ppb
	Sb	121	9383.567	1.961033	ppb
	Ba	135	12663.013	9.666479	ppb
	Ba	137	22197.943	9.765244	ppb
>	Tb	159	2577925.329		ppb
	Tl	205	14097.430	0.927814	ppb
	Pb	206	4909.538	0.977047	ppb
	Pb	207	8872.823	0.984153	ppb
	Pb	208	12958.996	0.933328	ppb
>	Bi	209	1372354.503		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	317742.401		ppb
	Be	9	303.338	0.923139	ppb
>	Sc	45	1033645.946		ppb
	V	51	44085.852	4.525987	ppb
	Cr	52	20467.591	1.835158	ppb
	Mn	55	12691.382	0.903283	ppb
	Co	59	9344.364	0.914805	ppb
	Ni	60	2108.556	1.010412	ppb
	Cu	63	9040.196	1.835500	ppb
	Cu	65	4609.395	1.995213	ppb
	Zn	66	2514.205	1.976683	ppb
	As	75	1190.189	1.018583	ppb
	Se	82	651.688	4.590650	ppb
	Ag	107	9067.998	1.198476	ppb
	Ag	109	8606.480	1.171436	ppb
	Cd	111	1567.260	0.977265	ppb
	In	113	89570.186		ppb
>	In	115	1970514.388		ppb
	Sb	121	9663.000	1.933633	ppb
	Ba	135	13101.911	9.577700	ppb
	Ba	137	22206.295	9.354763	ppb
>	Tb	159	2691978.623		ppb
	Tl	205	13655.150	0.893194	ppb
	Pb	206	4588.552	0.907356	ppb
	Pb	207	8526.828	0.939871	ppb
	Pb	208	12996.543	0.930330	ppb
>	Bi	209	1380741.564		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	323793.599		ppb
	Be	9	376.674	1.126684	ppb
>	Sc	45	1036660.325		ppb
	V	51	46720.975	4.794641	ppb
	Cr	52	22055.963	2.027885	ppb
	Mn	55	13755.287	0.983690	ppb
	Co	59	10695.717	1.044300	ppb
	Ni	60	2478.085	1.184844	ppb
	Cu	63	11014.396	2.233823	ppb
	Cu	65	5751.654	2.487719	ppb
	Zn	66	3131.046	2.473060	ppb
	As	75	2084.815	1.695170	ppb
	Se	82	738.916	5.224680	ppb
	Ag	107	10914.286	1.491257	ppb
	Ag	109	10246.914	1.441818	ppb
	Cd	111	2059.176	1.326643	ppb
	In	113	89191.826		ppb
>	In	115	1907339.683		ppb
	Sb	121	10676.530	2.197778	ppb

|	Ba	135	13165.327	9.890085	ppb
|	Ba	137	23477.527	10.163953	ppb
|>	Tb	159	2619639.484		ppb
⌈	Tl	205	17127.154	1.120581	ppb
¦	Pb	206	5480.668	1.084417	ppb
|	Pb	207	10181.773	1.122902	ppb
|	Pb	208	15732.186	1.127115	ppb
|>	Bi	209	1380836.801		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		96.321			
	Be	9	98.965				
>	Sc	45		94.904			
	V	51	93.165				
	Cr	52	94.639				
	Mn	55	94.016				
	Co	59	95.245				
	Ni	60	104.253				
	Cu	63	99.534				
	Cu	65	107.835				
	Zn	66	109.188				
	As	75	124.415				
	Se	82	97.235				
	Ag	107	128.254				
	Ag	109	125.188				
	Cd	111	111.470				
	In	113					
>	In	115		94.841			
	Sb	121	101.541				
	Ba	135	97.114				
	Ba	137	97.613				
>	Tb	159		98.468			
	Tl	205	98.053				
	Pb	206	98.961				
	Pb	207	101.564				
	Pb	208	99.692				
>	Bi	209		96.532			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: ICV

Sample Date/Time: Tuesday, March 25, 2014 18:37:17
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\ICV.6681

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	319065.505	0.954	319065.505			ppb
⌊	Be	9	35384.738	2.298	0.111	108.17782	1.88	ppb
⌈>	Sc	45	1042621.922	2.279	1042621.922			ppb
|	V	51	957948.580	0.709	0.917	101.91023	2.49	ppb
|	Cr	52	814038.818	0.544	0.775	101.32185	2.17	ppb
|	Mn	55	1286881.893	2.258	1.233	100.09441	0.08	ppb
|	Co	59	1049856.739	0.346	1.007	102.12504	2.56	ppb
|	Ni	60	227432.528	1.407	0.218	108.59229	3.15	ppb
|	Cu	63	523394.293	0.516	0.502	106.44385	2.68	ppb
|	Cu	65	254557.454	1.951	0.244	110.45611	3.46	ppb
|	Zn	66	266456.800	2.702	0.256	215.70604	2.35	ppb
|	As	75	295877.472	0.640	0.284	223.52495	1.80	ppb
⌊	Se	82	29381.630	1.947	0.028	216.90083	3.40	ppb
⌈	Ag	107	828613.223	1.493	0.416	108.79492	4.30	ppb
|	Ag	109	801437.726	2.585	0.403	108.33921	4.00	ppb
|	Cd	111	168708.181	2.315	0.085	104.33547	7.82	ppb
|	In	113	256089.262	1.077	0.085			ppb
⌊>	In	115	1993566.058	5.926	1993566.058			ppb
⌈	Sb	121	1063564.001	0.294	0.403	219.29342	2.07	ppb
|	Ba	135	146725.118	2.484	0.056	109.64259	3.55	ppb
|	Ba	137	250408.708	0.380	0.095	107.80081	1.45	ppb
⌊>	Tb	159	2636344.021	1.825	2636344.021			ppb
⌈	Tl	205	3272216.837	1.482	2.348	212.38869	1.14	ppb
|	Pb	206	1024247.798	0.384	0.735	201.49064	0.42	ppb
|	Pb	207	1911521.154	0.981	1.372	209.53908	0.80	ppb
|	Pb	208	2915644.431	3.395	2.092	207.88655	3.65	ppb
⌊>	Bi	209	1393620.673	0.531	1393620.673			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	316698.388		ppb
⌊	Be	9	35546.399	109.487500	ppb
⌈>	Sc	45	1023728.563		ppb
|	V	51	964414.580	104.459232	ppb
|	Cr	52	809445.824	102.586283	ppb
|	Mn	55	1262948.250	100.045399	ppb
|	Co	59	1053916.976	104.371656	ppb
|	Ni	60	226258.797	109.977238	ppb
|	Cu	63	526487.294	109.005415	ppb
|	Cu	65	259772.491	114.749531	ppb
|	Zn	66	268064.863	220.990210	ppb
|	As	75	295648.206	227.411111	ppb
⌊	Se	82	29070.527	218.472142	ppb
⌈	Ag	107	823421.722	111.437042	ppb
|	Ag	109	780267.289	108.746090	ppb

	Cd	111	172247.518	109.648610	ppb
	In	113	252925.282		ppb
>	In	115	1930822.982		ppb
	Sb	121	1066588.194	222.317036	ppb
	Ba	135	150845.874	113.944297	ppb
	Ba	137	249599.944	108.633528	ppb
>	Tb	159	2607229.051		ppb
	Tl	205	3218335.304	209.597560	ppb
	Pb	206	1025653.268	202.442958	ppb
	Pb	207	1889893.569	207.864560	ppb
	Pb	208	2853906.532	204.154345	ppb
>	Bi	209	1388954.120		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	317998.691		ppb
	Be	9	34502.753	105.838111	ppb
>	Sc	45	1034835.001		ppb
	V	51	950872.277	101.881799	ppb
	Cr	52	818279.838	102.592892	ppb
	Mn	55	1278477.419	100.188740	ppb
	Co	59	1048733.870	102.743668	ppb
	Ni	60	231052.671	111.102089	ppb
	Cu	63	522187.049	106.954379	ppb
	Cu	65	249886.411	109.196803	ppb
	Zn	66	258589.642	210.887456	ppb
	As	75	294107.861	223.800081	ppb
	Se	82	30041.724	223.353760	ppb
	Ag	107	819682.465	111.554680	ppb
	Ag	109	802382.566	112.457165	ppb
	Cd	111	169359.408	108.416242	ppb
	In	113	257985.445		ppb
>	In	115	1920028.087		ppb
	Sb	121	1060344.468	214.064403	ppb
	Ba	135	145404.493	106.379408	ppb
	Ba	137	251458.991	106.000702	ppb
>	Tb	159	2691884.247		ppb
	Tl	205	3285995.767	213.880762	ppb
	Pb	206	1019806.570	201.172955	ppb
	Pb	207	1921610.548	211.231327	ppb
	Pb	208	3029810.380	216.613074	ppb
>	Bi	209	1389754.753		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	322499.437		ppb
	Be	9	36105.061	109.207843	ppb
>	Sc	45	1069302.202		ppb
	V	51	958558.884	99.389648	ppb
	Cr	52	814390.792	98.786373	ppb
	Mn	55	1319220.010	100.049096	ppb
	Co	59	1046919.371	99.259801	ppb
	Ni	60	224986.116	104.697540	ppb
	Cu	63	521508.536	103.371765	ppb
	Cu	65	254013.459	107.422000	ppb
	Zn	66	272715.895	215.240464	ppb
	As	75	297876.351	219.363663	ppb
	Se	82	29032.639	208.876601	ppb
	Ag	107	842735.482	103.393048	ppb
	Ag	109	821663.321	103.814361	ppb
	Cd	111	164517.617	94.941569	ppb
	In	113	257357.061		ppb
>	In	115	2129847.106		ppb
	Sb	121	1063759.341	221.498827	ppb

|	Ba	135	143924.987	108.604049	ppb
|	Ba	137	250167.190	108.768209	ppb
|>	Tb	159	2609918.764		ppb
⌈	Tl	205	3312319.440	213.687762	ppb
|	Pb	206	1027283.558	200.856010	ppb
|	Pb	207	1923059.346	209.521357	ppb
|	Pb	208	2863216.380	202.892240	ppb
|>	Bi	209	1402153.146		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		96.325			
	Be	9	98.343				
>	Sc	45		96.675			
	V	51	92.646				
	Cr	52	92.111				
	Mn	55	90.995				
	Co	59	92.841				
	Ni	60	98.720				
	Cu	63	96.767				
	Cu	65	100.415				
	Zn	66	98.048				
	As	75	101.602				
	Se	82	98.591				
	Ag	107	98.904				
	Ag	109	98.490				
	Cd	111	94.850				
	In	113					
>	In	115		98.342			
	Sb	121	99.679				
	Ba	135	99.675				
	Ba	137	98.001				
>	Tb	159		98.711			
	Tl	205	96.540				
	Pb	206	91.587				
	Pb	207	95.245				
	Pb	208	94.494				
>	Bi	209		97.628			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: ICB

Sample Date/Time: Tuesday, March 25, 2014 18:39:02
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\ICB.6682

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	314761.167	2.830	314761.167			ppb
⌊	Be	9	2.778	124.900	0.000	0.00062	1787.20	ppb
⌈>	Sc	45	1029773.755	3.010	1029773.755			ppb
|	V	51	1999.929	1.219	0.000	0.00302	290.03	ppb
|	Cr	52	5686.616	0.664	-0.000	-0.03066	68.06	ppb
|	Mn	55	497.236	47.703	-0.001	-0.05423	33.78	ppb
|	Co	59	59.445	25.286	0.000	0.00411	33.55	ppb
|	Ni	60	13.889	20.000	0.000	0.00204	75.81	ppb
|	Cu	63	117.593	19.811	0.000	0.00575	97.24	ppb
|	Cu	65	69.445	34.176	0.000	0.00857	112.10	ppb
|	Zn	66	117.593	6.819	0.000	0.01967	40.35	ppb
|	As	75	-91.000	14.630	0.000	0.04289	19.88	ppb
⌊	Se	82	41.111	10.554	0.000	0.04228	91.78	ppb
⌈	Ag	107	143.520	21.320	0.000	0.01591	28.00	ppb
|	Ag	109	111.112	26.339	0.000	0.01202	36.72	ppb
|	Cd	111	11.314	55.566	0.000	0.00702	55.67	ppb
|	In	113	87186.808	1.377	0.003			ppb
⌊>	In	115	1880374.013	2.172	1880374.013			ppb
⌈	Sb	121	173.613	6.928	0.000	0.01844	10.53	ppb
|	Ba	135	17.778	43.301	0.000	0.00503	111.75	ppb
|	Ba	137	28.889	17.625	0.000	0.00603	36.08	ppb
⌊>	Tb	159	2643799.718	2.512	2643799.718			ppb
⌈	Tl	205	129.168	22.581	0.000	0.00698	28.35	ppb
|	Pb	206	50.000	44.096	0.000	0.00614	72.40	ppb
|	Pb	207	106.945	23.806	0.000	0.00818	35.92	ppb
|	Pb	208	163.890	24.030	0.000	0.00676	42.79	ppb
⌊>	Bi	209	1394390.165	1.472	1394390.165			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	321131.454		ppb
⌊	Be	9	1.667	-0.003118	ppb
⌈>	Sc	45	1039468.070		ppb
|	V	51	1975.941	-0.001726	ppb
|	Cr	52	5651.597	-0.042202	ppb
|	Mn	55	770.863	-0.033161	ppb
|	Co	59	75.000	0.005592	ppb
|	Ni	60	13.889	0.001949	ppb
|	Cu	63	102.778	0.002396	ppb
|	Cu	65	72.222	0.009680	ppb
|	Zn	66	108.334	0.011156	ppb
|	As	75	-85.099	0.047893	ppb
⌊	Se	82	43.889	0.059380	ppb
⌈	Ag	107	113.890	0.011878	ppb
|	Ag	109	138.890	0.016081	ppb

	Cd	111	8.029	0.004963	ppb
	In	113	85808.247		ppb
>	In	115	1867505.392		ppb
	Sb	121	187.502	0.020553	ppb
	Ba	135	13.333	0.001545	ppb
	Ba	137	33.333	0.007655	ppb
>	Tb	159	2696367.103		ppb
	Tl	205	162.501	0.009233	ppb
	Pb	206	66.667	0.009497	ppb
	Pb	207	129.167	0.010718	ppb
	Pb	208	208.335	0.010056	ppb
>	Bi	209	1381317.762		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	304580.553		ppb
	Be	9	6.667	0.013172	ppb
>	Sc	45	995093.053		ppb
	V	51	2024.696	0.013136	ppb
	Cr	52	5681.614	-0.006571	ppb
	Mn	55	370.840	-0.063107	ppb
	Co	59	45.000	0.002861	ppb
	Ni	60	16.667	0.003635	ppb
	Cu	63	144.445	0.012208	ppb
	Cu	65	44.445	-0.001545	ppb
	Zn	66	122.223	0.026863	ppb
	As	75	-81.656	0.047742	ppb
	Se	82	43.333	0.069583	ppb
	Ag	107	175.002	0.020694	ppb
	Ag	109	113.890	0.012656	ppb
	Cd	111	7.350	0.004568	ppb
	In	113	88002.190		ppb
>	In	115	1847510.353		ppb
	Sb	121	166.668	0.018017	ppb
	Ba	135	13.333	0.002028	ppb
	Ba	137	30.000	0.006878	ppb
>	Tb	159	2569148.369		ppb
	Tl	205	116.667	0.006218	ppb
	Pb	206	58.334	0.007823	ppb
	Pb	207	112.500	0.008853	ppb
	Pb	208	133.334	0.004643	ppb
>	Bi	209	1383799.099		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	318571.496		ppb
	Be	9	0.000	-0.008181	ppb
>	Sc	45	1054760.141		ppb
	V	51	1999.150	-0.002344	ppb
	Cr	52	5726.639	-0.043206	ppb
	Mn	55	350.006	-0.066422	ppb
	Co	59	58.334	0.003884	ppb
	Ni	60	11.111	0.000543	ppb
	Cu	63	105.556	0.002651	ppb
	Cu	65	91.667	0.017562	ppb
	Zn	66	122.223	0.020997	ppb
	As	75	-106.244	0.033049	ppb
	Se	82	36.111	-0.002137	ppb
	Ag	107	141.668	0.015162	ppb
	Ag	109	80.556	0.007322	ppb
	Cd	111	18.562	0.011524	ppb
	In	113	87749.988		ppb
>	In	115	1926106.294		ppb
	Sb	121	166.668	0.016738	ppb

|	Ba	135	26.667	0.011507	ppb
|	Ba	137	23.333	0.003559	ppb
|>	Tb	159	2665883.682		ppb
⌈	Tl	205	108.334	0.005502	ppb
|	Pb	206	25.000	0.001099	ppb
|	Pb	207	79.167	0.004961	ppb
|	Pb	208	150.001	0.005580	ppb
|>	Bi	209	1418053.634		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		95.026			
	Be	9					
>	Sc	45		95.484			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		92.758			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		98.991			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		97.682			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: ICSA

Sample Date/Time: Tuesday, March 25, 2014 18:40:47
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\ICSA.6683

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	324064.978	0.244	324064.978			ppb
	Be	9	2.222	43.301	-0.000	-0.00150	192.36	ppb
>	Sc	45	1039050.243	2.522	1039050.243			ppb
	V	51	1987.388	4.262	-0.000	-0.00040	2002.23	ppb
	Cr	52	6384.816	2.110	0.000	0.05068	55.02	ppb
	Mn	55	1386.208	11.543	0.000	0.01515	98.34	ppb
	Co	59	60.556	6.356	0.000	0.00419	10.04	ppb
	Ni	60	171.298	6.554	0.000	0.07736	7.16	ppb
	Cu	63	411.120	10.402	0.000	0.06549	16.42	ppb
	Cu	65	166.668	9.280	0.000	0.05089	15.14	ppb
	Zn	66	252.781	6.684	0.000	0.12842	6.84	ppb
	As	75	-130.615	16.021	0.000	0.01356	101.29	ppb
	Se	82	35.185	17.321	-0.000	-0.00416	1232.53	ppb
	Ag	107	67.593	27.973	0.000	0.00501	49.51	ppb
	Ag	109	67.593	19.421	0.000	0.00542	34.20	ppb
	Cd	111	0.712	3701.583	0.000	0.00001	122013.28	ppb
	In	113	89020.892	0.937	0.002			ppb
>	In	115	1945843.130	1.160	1945843.130			ppb
	Sb	121	143.057	12.126	0.000	0.01118	29.89	ppb
	Ba	135	27.778	15.100	0.000	0.01182	26.41	ppb
	Ba	137	45.000	33.945	0.000	0.01227	50.92	ppb
>	Tb	159	2735171.334	0.653	2735171.334			ppb
	Tl	205	44.445	14.321	0.000	0.00149	28.46	ppb
	Pb	206	47.222	43.526	0.000	0.00557	71.15	ppb
	Pb	207	79.167	36.464	0.000	0.00513	60.26	ppb
	Pb	208	122.223	3.937	0.000	0.00382	10.87	ppb
>	Bi	209	1387643.855	0.906	1387643.855			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	323865.884		ppb
	Be	9	1.667	-0.003161	ppb
>	Sc	45	1015343.171		ppb
	V	51	1897.383	-0.005305	ppb
	Cr	52	6492.107	0.082873	ppb
	Mn	55	1570.957	0.032232	ppb
	Co	59	58.334	0.004101	ppb
	Ni	60	177.779	0.082431	ppb
	Cu	63	458.344	0.077132	ppb
	Cu	65	163.890	0.051261	ppb
	Zn	66	241.670	0.124113	ppb
	As	75	-124.244	0.016018	ppb
	Se	82	40.000	0.037605	ppb
	Ag	107	61.111	0.004259	ppb
	Ag	109	72.222	0.006189	ppb

	Cd	111	-27.830	-0.018137	ppb
	In	113	88666.351		ppb
>	In	115	1920008.013		ppb
	Sb	121	162.501	0.014956	ppb
	Ba	135	23.333	0.008560	ppb
	Ba	137	58.334	0.017759	ppb
>	Tb	159	2743035.994		ppb
	Tl	205	37.500	0.001038	ppb
	Pb	206	37.500	0.003681	ppb
	Pb	207	62.500	0.003319	ppb
	Pb	208	125.001	0.004028	ppb
>	Bi	209	1386495.408		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	323394.318		ppb
	Be	9	1.667	-0.003153	ppb
>	Sc	45	1067184.568		ppb
	V	51	1999.229	-0.004787	ppb
	Cr	52	6428.732	0.034517	ppb
	Mn	55	1291.750	0.004895	ppb
	Co	59	58.334	0.003818	ppb
	Ni	60	177.779	0.078198	ppb
	Cu	63	375.007	0.055929	ppb
	Cu	65	152.779	0.043005	ppb
	Zn	66	272.226	0.138525	ppb
	As	75	-153.986	-0.001238	ppb
	Se	82	28.333	-0.061347	ppb
	Ag	107	52.778	0.002994	ppb
	Ag	109	77.778	0.006769	ppb
	Cd	111	24.158	0.014861	ppb
	In	113	89973.785		ppb
>	In	115	1955757.618		ppb
	Sb	121	129.168	0.008619	ppb
	Ba	135	31.667	0.014781	ppb
	Ba	137	28.333	0.005470	ppb
>	Tb	159	2714723.219		ppb
	Tl	205	50.000	0.001880	ppb
	Pb	206	33.333	0.002909	ppb
	Pb	207	62.500	0.003373	ppb
	Pb	208	125.001	0.004098	ppb
>	Bi	209	1375680.932		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	324934.732		ppb
	Be	9	3.333	0.001827	ppb
>	Sc	45	1034622.989		ppb
	V	51	2065.554	0.008886	ppb
	Cr	52	6233.609	0.034647	ppb
	Mn	55	1295.917	0.008314	ppb
	Co	59	65.000	0.004646	ppb
	Ni	60	158.335	0.071455	ppb
	Cu	63	400.008	0.063396	ppb
	Cu	65	183.335	0.058401	ppb
	Zn	66	244.447	0.122635	ppb
	As	75	-113.616	0.025898	ppb
	Se	82	37.222	0.011269	ppb
	Ag	107	88.889	0.007782	ppb
	Ag	109	52.778	0.003307	ppb
	Cd	111	5.808	0.003318	ppb
	In	113	88422.540		ppb
>	In	115	1961763.760		ppb
	Sb	121	137.501	0.009956	ppb

|	Ba	135	28.333	0.012115	ppb
|	Ba	137	48.333	0.013588	ppb
|>	Tb	159	2747754.789		ppb
⌈	Tl	205	45.833	0.001552	ppb
|	Pb	206	70.834	0.010129	ppb
|	Pb	207	112.500	0.008702	ppb
|	Pb	208	116.667	0.003345	ppb
|>	Bi	209	1400755.224		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		97.835			
	Be	9					
>	Sc	45		96.344			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		95.988			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		102.412			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		97.209			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Mn	55	ICSA is out of control

EPA 6020 & EPA 6020A - Summary Report

Sample ID: ICSAB

Sample Date/Time: Tuesday, March 25, 2014 18:42:32
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\ICSAB.6684

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	319039.570	2.381	319039.570			ppb
	Be	9	7.778	121.848	0.000	0.01537	187.35	ppb
>	Sc	45	1028709.355	4.094	1028709.355			ppb
	V	51	442741.606	4.330	0.428	47.60554	1.07	ppb
	Cr	52	391298.789	1.037	0.375	49.00977	3.73	ppb
	Mn	55	585273.534	5.012	0.568	46.08259	2.09	ppb
	Co	59	474017.515	3.383	0.461	46.72410	0.79	ppb
	Ni	60	104423.333	3.332	0.102	50.52766	2.31	ppb
	Cu	63	235702.011	4.021	0.229	48.55718	1.13	ppb
	Cu	65	116499.987	2.620	0.113	51.22216	1.63	ppb
	Zn	66	31571.058	1.053	0.031	25.85526	3.16	ppb
	As	75	32780.761	1.940	0.032	25.20803	2.28	ppb
	Se	82	3383.165	2.232	0.003	25.09717	4.94	ppb
	Ag	107	90810.769	3.340	0.047	12.31254	1.86	ppb
	Ag	109	87475.719	3.679	0.045	12.21327	1.92	ppb
	Cd	111	38621.543	2.257	0.020	24.64376	2.06	ppb
	In	113	124384.294	2.109	0.021			ppb
>	In	115	1926418.362	1.871	1926418.362			ppb
	Sb	121	250.004	78.228	0.000	0.03323	117.37	ppb
	Ba	135	58.889	83.495	0.000	0.03484	102.08	ppb
	Ba	137	98.334	96.893	0.000	0.03502	113.52	ppb
>	Tb	159	2680763.618	1.122	2680763.618			ppb
	Tl	205	368.073	153.598	0.000	0.02279	163.25	ppb
	Pb	206	154.169	107.703	0.000	0.02694	123.10	ppb
	Pb	207	250.003	108.334	0.000	0.02415	124.81	ppb
	Pb	208	372.230	113.301	0.000	0.02191	139.28	ppb
>	Bi	209	1382833.769	0.511	1382833.769			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	325199.809		ppb
	Be	9	5.000	0.006818	ppb
>	Sc	45	1041377.211		ppb
	V	51	453644.186	48.188645	ppb
	Cr	52	395771.447	48.917644	ppb
	Mn	55	579695.729	45.091560	ppb
	Co	59	480489.347	46.776515	ppb
	Ni	60	103129.052	49.275637	ppb
	Cu	63	235521.800	47.926289	ppb
	Cu	65	116783.516	50.700486	ppb
	Zn	66	31778.190	25.685788	ppb
	As	75	32814.910	24.913364	ppb
	Se	82	3297.766	24.127294	ppb
	Ag	107	93630.738	12.572514	ppb
	Ag	109	89891.102	12.430427	ppb

	Cd	111	39626.548	25.035304	ppb
	In	113	126870.567		ppb
>	In	115	1945457.176		ppb
	Sb	121	120.834	0.007223	ppb
	Ba	135	38.333	0.019931	ppb
	Ba	137	41.667	0.011240	ppb
>	Tb	159	2684475.738		ppb
	Tl	205	41.667	0.001305	ppb
	Pb	206	62.500	0.008602	ppb
	Pb	207	104.167	0.007890	ppb
	Pb	208	154.167	0.006098	ppb
>	Bi	209	1388997.010		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	310551.721		ppb
	Be	9	0.000	-0.008181	ppb
>	Sc	45	981712.471		ppb
	V	51	420606.061	47.391068	ppb
	Cr	52	387856.890	50.882756	ppb
	Mn	55	559131.274	46.137392	ppb
	Co	59	455759.434	47.065603	ppb
	Ni	60	101776.411	51.585064	ppb
	Cu	63	226315.616	48.852204	ppb
	Cu	65	113316.189	52.185709	ppb
	Zn	66	31187.446	26.743517	ppb
	As	75	32128.415	25.870300	ppb
	Se	82	3410.582	26.495016	ppb
	Ag	107	87601.472	12.140994	ppb
	Ag	109	83822.063	11.963725	ppb
	Cd	111	38071.270	24.826075	ppb
	In	113	121643.720		ppb
>	In	115	1884853.338		ppb
	Sb	121	154.168	0.014390	ppb
	Ba	135	23.333	0.009155	ppb
	Ba	137	45.000	0.012904	ppb
>	Tb	159	2648990.393		ppb
	Tl	205	41.667	0.001314	ppb
	Pb	206	54.167	0.006993	ppb
	Pb	207	83.334	0.005629	ppb
	Pb	208	104.167	0.002546	ppb
>	Bi	209	1384375.462		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	321367.181		ppb
	Be	9	18.333	0.047472	ppb
>	Sc	45	1063038.383		ppb
	V	51	453974.571	47.236915	ppb
	Cr	52	390268.031	47.228906	ppb
	Mn	55	616993.600	47.018820	ppb
	Co	59	485803.765	46.330175	ppb
	Ni	60	108364.535	50.722272	ppb
	Cu	63	245268.617	48.893050	ppb
	Cu	65	119400.257	50.780299	ppb
	Zn	66	31747.538	25.136488	ppb
	As	75	33398.960	24.840423	ppb
	Se	82	3441.148	24.669207	ppb
	Ag	107	91200.096	12.224108	ppb
	Ag	109	88713.993	12.245643	ppb
	Cd	111	38166.812	24.069911	ppb
	In	113	124638.595		ppb
>	In	115	1948944.572		ppb
	Sb	121	475.011	0.078064	ppb

|	Ba	135	115.001	0.075422	ppb
|	Ba	137	208.336	0.080905	ppb
|>	Tb	159	2708824.724		ppb
⌈	Tl	205	1020.885	0.065747	ppb
|	Pb	206	345.839	0.065215	ppb
|	Pb	207	562.508	0.058925	ppb
|	Pb	208	858.356	0.057091	ppb
|>	Bi	209	1375128.835		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		96.317			
	Be	9					
>	Sc	45		95.385			
	V	51	95.211				
	Cr	52	98.020				
	Mn	55	92.165				
	Co	59	93.448				
	Ni	60	101.055				
	Cu	63	97.114				
	Cu	65	102.444				
	Zn	66	103.421				
	As	75	100.832				
	Se	82	100.389				
	Ag	107	98.500				
	Ag	109	97.706				
	Cd	111	98.575				
	In	113					
>	In	115		95.030			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		100.375			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		96.872			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: LLCCV

Sample Date/Time: Tuesday, March 25, 2014 18:44:17
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\LLCCV.6685

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	322340.930	2.119	322340.930			ppb
⌊	Be	9	306.671	11.957	0.001	0.92002	12.12	ppb
⌈>	Sc	45	1040665.649	2.423	1040665.649			ppb
|	V	51	44446.808	2.884	0.041	4.53220	0.51	ppb
|	Cr	52	20198.166	2.839	0.014	1.78369	0.61	ppb
|	Mn	55	12573.181	2.701	0.011	0.88732	1.06	ppb
|	Co	59	9471.151	2.149	0.009	0.92104	0.99	ppb
|	Ni	60	2045.580	7.270	0.002	0.97273	5.10	ppb
|	Cu	63	9356.228	2.046	0.009	1.88796	2.76	ppb
|	Cu	65	4601.985	2.750	0.004	1.97829	0.47	ppb
|	Zn	66	2462.341	4.638	0.002	1.92225	6.39	ppb
|	As	75	1263.519	4.243	0.001	1.06773	2.20	ppb
⌊	Se	82	694.839	2.038	0.001	4.87833	2.16	ppb
⌈	Ag	107	7118.275	3.125	0.004	0.94833	2.42	ppb
|	Ag	109	6819.918	1.333	0.003	0.93590	1.55	ppb
|	Cd	111	1488.336	13.108	0.001	0.93592	12.51	ppb
|	In	113	90450.527	3.037	0.003			ppb
⌊>	In	115	1952873.463	0.721	1952873.463			ppb
⌈	Sb	121	8995.714	3.332	0.003	1.82269	2.94	ppb
|	Ba	135	12695.279	2.375	0.005	9.40277	2.48	ppb
|	Ba	137	22743.613	0.826	0.009	9.70758	0.68	ppb
⌊>	Tb	159	2656980.888	0.540	2656980.888			ppb
⌈	Tl	205	14173.934	3.247	0.010	0.91058	3.66	ppb
|	Pb	206	4845.618	1.294	0.003	0.94114	1.62	ppb
|	Pb	207	8753.326	1.790	0.006	0.94758	2.17	ppb
|	Pb	208	13246.794	2.880	0.009	0.93119	2.80	ppb
⌊>	Bi	209	1406016.829	0.469	1406016.829			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	330168.717		ppb
⌊	Be	9	306.671	0.897937	ppb
⌈>	Sc	45	1054543.110		ppb
|	V	51	45086.661	4.537527	ppb
|	Cr	52	20492.643	1.786979	ppb
|	Mn	55	12870.778	0.897342	ppb
|	Co	59	9657.995	0.926796	ppb
|	Ni	60	2169.680	1.019140	ppb
|	Cu	63	9571.245	1.905515	ppb
|	Cu	65	4687.209	1.988619	ppb
|	Zn	66	2536.433	1.953785	ppb
|	As	75	1316.329	1.094769	ppb
⌊	Se	82	687.801	4.758204	ppb
⌈	Ag	107	7344.363	0.971766	ppb
|	Ag	109	6760.618	0.921119	ppb

	Cd	111	1614.764	1.008826	ppb
	In	113	92719.529		ppb
>	In	115	1966745.925		ppb
	Sb	121	9170.870	1.848141	ppb
	Ba	135	12823.216	9.444048	ppb
	Ba	137	22932.933	9.733469	ppb
>	Tb	159	2671970.929		ppb
	Tl	205	14652.393	0.944048	ppb
	Pb	206	4917.876	0.958017	ppb
	Pb	207	8927.012	0.969251	ppb
	Pb	208	13530.334	0.954057	ppb
>	Bi	209	1401885.952		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	317580.718		ppb
	Be	9	270.004	0.821217	ppb
>	Sc	45	1055896.166		ppb
	V	51	45282.959	4.552096	ppb
	Cr	52	20564.456	1.792613	ppb
	Mn	55	12645.490	0.878754	ppb
	Co	59	9501.178	0.910549	ppb
	Ni	60	2086.329	0.978547	ppb
	Cu	63	9204.234	1.829365	ppb
	Cu	65	4662.198	1.975329	ppb
	Zn	66	2330.827	1.786790	ppb
	As	75	1265.087	1.055315	ppb
	Se	82	711.136	4.921998	ppb
	Ag	107	7110.861	0.947260	ppb
	Ag	109	6924.619	0.950098	ppb
	Cd	111	1586.589	0.998060	ppb
	In	113	91235.136		ppb
>	In	115	1953267.661		ppb
	Sb	121	8649.572	1.761140	ppb
	Ba	135	12911.664	9.612203	ppb
	Ba	137	22740.828	9.756363	ppb
>	Tb	159	2643375.026		ppb
	Tl	205	13734.425	0.877463	ppb
	Pb	206	4805.321	0.928208	ppb
	Pb	207	8622.716	0.928294	ppb
	Pb	208	13396.981	0.936727	ppb
>	Bi	209	1413615.357		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	319273.356		ppb
	Be	9	343.339	1.040898	ppb
>	Sc	45	1011557.670		ppb
	V	51	42970.805	4.506988	ppb
	Cr	52	19537.400	1.771485	ppb
	Mn	55	12203.275	0.885879	ppb
	Co	59	9254.280	0.925790	ppb
	Ni	60	1880.732	0.920504	ppb
	Cu	63	9293.205	1.929009	ppb
	Cu	65	4456.548	1.970912	ppb
	Zn	66	2519.762	2.026161	ppb
	As	75	1209.142	1.053119	ppb
	Se	82	685.579	4.954774	ppb
	Ag	107	6899.602	0.925978	ppb
	Ag	109	6774.516	0.936476	ppb
	Cd	111	1263.656	0.800863	ppb
	In	113	87396.916		ppb
>	In	115	1938606.802		ppb
	Sb	121	9166.699	1.858789	ppb

	Ba	135	12350.956	9.152071	ppb
	Ba	137	22557.079	9.632911	ppb
>	Tb	159	2655596.708		ppb
	Tl	205	14134.983	0.910231	ppb
	Pb	206	4813.658	0.937191	ppb
	Pb	207	8710.251	0.945181	ppb
	Pb	208	12813.066	0.902790	ppb
>	Bi	209	1402549.177		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		97.314			
	Be	9	92.002				
>	Sc	45		96.494			
	V	51	90.644				
	Cr	52	89.185				
	Mn	55	88.732				
	Co	59	92.104				
	Ni	60	97.273				
	Cu	63	94.398				
	Cu	65	98.914				
	Zn	66	96.112				
	As	75	106.773				
	Se	82	97.567				
	Ag	107	94.833				
	Ag	109	93.590				
	Cd	111	93.592				
	In	113					
>	In	115		96.335			
	Sb	121	91.134				
	Ba	135	94.028				
	Ba	137	97.076				
>	Tb	159		99.484			
	Tl	205	91.058				
	Pb	206	94.114				
	Pb	207	94.758				
	Pb	208	93.119				
>	Bi	209		98.496			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCV

Sample Date/Time: Tuesday, March 25, 2014 18:46:03
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCV.6686

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	323872.310	1.416	323872.310			ppb
	Be	9	97314.564	0.738	0.300	293.14255	1.14	ppb
>	Sc	45	1035315.555	2.671	1035315.555			ppb
	V	51	2882325.344	0.890	2.783	309.22171	1.93	ppb
	Cr	52	2460883.284	0.852	2.372	310.00622	1.87	ppb
	Mn	55	3750590.897	1.097	3.623	294.11305	3.09	ppb
	Co	59	3039366.415	2.973	2.936	297.68954	2.74	ppb
	Ni	60	634682.291	1.394	0.613	305.19335	2.90	ppb
	Cu	63	1398956.940	1.776	1.351	286.50625	1.91	ppb
	Cu	65	699221.592	0.781	0.676	305.55893	2.10	ppb
	Zn	66	378544.810	1.529	0.366	308.71838	2.45	ppb
	As	75	404748.512	1.276	0.391	307.96557	3.16	ppb
	Se	82	40303.091	0.328	0.039	299.74912	2.88	ppb
	Ag	107	2288956.043	1.960	1.184	309.34822	2.23	ppb
	Ag	109	2166994.215	3.007	1.121	301.60458	3.27	ppb
	Cd	111	466145.086	1.029	0.241	296.31793	1.30	ppb
	In	113	547369.901	0.925	0.239			ppb
>	In	115	1933601.076	0.275	1933601.076			ppb
	Sb	121	1439689.871	1.098	0.529	287.68425	2.00	ppb
	Ba	135	412121.088	1.308	0.152	298.46645	2.55	ppb
	Ba	137	715519.784	0.842	0.263	298.52035	0.53	ppb
>	Tb	159	2720071.187	1.283	2720071.187			ppb
	Tl	205	4563852.013	0.117	3.273	296.10690	0.69	ppb
	Pb	206	1445492.698	0.636	1.037	284.24614	1.33	ppb
	Pb	207	2660136.032	1.105	1.908	291.49629	1.80	ppb
	Pb	208	4180134.954	0.421	2.998	297.90676	1.05	ppb
>	Bi	209	1394249.717	0.704	1394249.717			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	320942.187		ppb
	Be	9	97595.599	296.646128	ppb
>	Sc	45	1003687.460		ppb
	V	51	2854099.696	315.740378	ppb
	Cr	52	2437847.770	316.693091	ppb
	Mn	55	3764489.996	304.351825	ppb
	Co	59	2996967.903	302.725698	ppb
	Ni	60	634889.701	314.770492	ppb
	Cu	63	1381655.876	291.804994	ppb
	Cu	65	694519.574	312.954132	ppb
	Zn	66	376434.823	316.559118	ppb
	As	75	406406.359	318.802507	ppb
	Se	82	40389.178	309.706286	ppb
	Ag	107	2243091.006	302.440146	ppb
	Ag	109	2136531.377	296.663952	ppb

	Cd	111	461587.991	292.739116	ppb
	In	113	544625.173		ppb
>	In	115	1938059.733		ppb
	Sb	121	1454057.700	289.489348	ppb
	Ba	135	412947.116	297.947705	ppb
	Ba	137	719045.853	298.923024	ppb
>	Tb	159	2729681.802		ppb
	Tl	205	4563987.267	293.750344	ppb
	Pb	206	1434887.065	279.898284	ppb
	Pb	207	2626247.700	285.469034	ppb
	Pb	208	4167796.220	294.650221	ppb
>	Bi	209	1405431.584		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	329156.144		ppb
	Be	9	97849.731	289.996432	ppb
>	Sc	45	1054930.999		ppb
	V	51	2888654.254	304.032297	ppb
	Cr	52	2478814.395	306.348447	ppb
	Mn	55	3782988.154	290.986655	ppb
	Co	59	3143138.066	302.068260	ppb
	Ni	60	643426.946	303.507326	ppb
	Cu	63	1427426.719	286.827388	ppb
	Cu	65	705210.855	302.335102	ppb
	Zn	66	385091.363	308.106150	ppb
	As	75	408882.099	305.169140	ppb
	Se	82	40369.097	294.502684	ppb
	Ag	107	2332763.097	316.218208	ppb
	Ag	109	2241811.900	312.952489	ppb
	Cd	111	471146.252	300.403817	ppb
	In	113	544273.444		ppb
>	In	115	1927718.967		ppb
	Sb	121	1422751.900	281.248182	ppb
	Ba	135	406365.562	291.120363	ppb
	Ba	137	718947.477	296.763332	ppb
>	Tb	159	2749170.428		ppb
	Tl	205	4558458.788	297.281048	ppb
	Pb	206	1450371.326	286.666579	ppb
	Pb	207	2678812.572	295.040089	ppb
	Pb	208	4200288.523	300.881007	ppb
>	Bi	209	1387057.622		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	321518.600		ppb
	Be	9	96498.361	292.785075	ppb
>	Sc	45	1047328.206		ppb
	V	51	2904222.082	307.892455	ppb
	Cr	52	2465987.687	306.977123	ppb
	Mn	55	3704294.540	287.000678	ppb
	Co	59	2977993.277	288.274670	ppb
	Ni	60	625730.226	297.302240	ppb
	Cu	63	1387788.226	280.886363	ppb
	Cu	65	697934.346	301.387552	ppb
	Zn	66	374108.244	301.489884	ppb
	As	75	398957.079	299.925051	ppb
	Se	82	40150.999	295.038402	ppb
	Ag	107	2291014.025	309.386320	ppb
	Ag	109	2122639.368	295.197294	ppb
	Cd	111	465701.016	295.810871	ppb
	In	113	553211.086		ppb
>	In	115	1935024.530		ppb
	Sb	121	1442260.014	292.315230	ppb

|	Ba	135	417050.585	306.331284	ppb
|	Ba	137	708566.021	299.874692	ppb
|>	Tb	159	2681361.333		ppb
⌈	Tl	205	4569109.985	297.289311	ppb
|	Pb	206	1451219.703	286.173561	ppb
|	Pb	207	2675347.822	293.979759	ppb
|	Pb	208	4172320.118	298.189057	ppb
|>	Bi	209	1390259.945		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		97.776			
	Be	9	97.714				
>	Sc	45		95.998			
	V	51	103.074				
	Cr	52	103.335				
	Mn	55	98.038				
	Co	59	99.230				
	Ni	60	101.731				
	Cu	63	95.502				
	Cu	65	101.853				
	Zn	66	102.906				
	As	75	102.655				
	Se	82	99.916				
	Ag	107	103.116				
	Ag	109	100.535				
	Cd	111	98.773				
	In	113					
>	In	115		95.384			
	Sb	121	95.895				
	Ba	135	99.489				
	Ba	137	99.507				
>	Tb	159		101.846			
	Tl	205	98.702				
	Pb	206	94.749				
	Pb	207	97.165				
	Pb	208	99.302				
>	Bi	209		97.672			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: CCV

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCB

Sample Date/Time: Tuesday, March 25, 2014 18:47:47
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCB.6687

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	325878.379	1.005	325878.379			ppb
	Be	9	3.333	50.000	0.000	0.00177	277.77	ppb
>	Sc	45	1045996.222	3.125	1045996.222			ppb
	V	51	2117.099	3.197	0.000	0.01208	78.86	ppb
	Cr	52	5939.542	3.131	-0.000	-0.00988	419.11	ppb
	Mn	55	483.345	9.083	-0.001	-0.05583	6.46	ppb
	Co	59	72.223	43.440	0.000	0.00522	53.17	ppb
	Ni	60	22.222	45.069	0.000	0.00579	75.84	ppb
	Cu	63	160.186	17.370	0.000	0.01400	45.55	ppb
	Cu	65	85.186	32.825	0.000	0.01492	74.96	ppb
	Zn	66	84.260	5.036	-0.000	-0.00877	50.63	ppb
	As	75	-129.719	25.997	0.000	0.01505	154.36	ppb
	Se	82	35.370	8.060	-0.000	-0.00552	298.43	ppb
	Ag	107	199.076	4.485	0.000	0.02161	5.48	ppb
	Ag	109	217.595	3.213	0.000	0.02496	3.94	ppb
	Cd	111	14.521	30.160	0.000	0.00839	24.14	ppb
	In	113	88021.832	1.011	-0.000			ppb
>	In	115	2029706.221	6.402	2029706.221			ppb
	Sb	121	458.344	16.084	0.000	0.07548	18.06	ppb
	Ba	135	21.111	52.566	0.000	0.00738	113.47	ppb
	Ba	137	23.889	24.502	0.000	0.00372	65.74	ppb
>	Tb	159	2683044.370	1.361	2683044.370			ppb
	Tl	205	177.779	16.462	0.000	0.00986	18.76	ppb
	Pb	206	54.167	55.470	0.000	0.00673	88.64	ppb
	Pb	207	88.889	60.273	0.000	0.00601	98.61	ppb
	Pb	208	154.168	38.318	0.000	0.00584	73.62	ppb
>	Bi	209	1427239.657	1.476	1427239.657			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	322112.253		ppb
	Be	9	1.667	-0.003133	ppb
>	Sc	45	1025994.042		ppb
	V	51	2046.838	0.008725	ppb
	Cr	52	5870.056	-0.005042	ppb
	Mn	55	525.014	-0.051821	ppb
	Co	59	51.667	0.003382	ppb
	Ni	60	19.444	0.004731	ppb
	Cu	63	191.669	0.021038	ppb
	Cu	65	88.889	0.017440	ppb
	Zn	66	88.889	-0.003689	ppb
	As	75	-92.487	0.041379	ppb
	Se	82	36.111	0.005257	ppb
	Ag	107	202.780	0.022906	ppb
	Ag	109	216.669	0.025737	ppb

	Cd	111	12.500	0.007497	ppb
	In	113	87027.045		ppb
>	In	115	1965156.524		ppb
	Sb	121	445.843	0.073217	ppb
	Ba	135	18.333	0.005286	ppb
	Ba	137	30.000	0.006336	ppb
>	Tb	159	2678718.807		ppb
	Tl	205	208.336	0.011704	ppb
	Pb	206	45.833	0.005009	ppb
	Pb	207	66.667	0.003519	ppb
	Pb	208	133.334	0.004288	ppb
>	Bi	209	1437213.305		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	328054.138		ppb
	Be	9	5.000	0.006688	ppb
>	Sc	45	1028278.435		ppb
	V	51	2181.895	0.022826	ppb
	Cr	52	6150.224	0.028907	ppb
	Mn	55	437.510	-0.058821	ppb
	Co	59	56.667	0.003864	ppb
	Ni	60	13.889	0.002022	ppb
	Cu	63	150.001	0.012360	ppb
	Cu	65	55.556	0.002691	ppb
	Zn	66	80.556	-0.010693	ppb
	As	75	-138.457	0.006351	ppb
	Se	82	32.222	-0.024477	ppb
	Ag	107	188.891	0.021324	ppb
	Ag	109	211.113	0.025281	ppb
	Cd	111	11.517	0.006957	ppb
	In	113	88296.433		ppb
>	In	115	1944681.190		ppb
	Sb	121	391.674	0.063121	ppb
	Ba	135	33.333	0.016591	ppb
	Ba	137	18.333	0.001481	ppb
>	Tb	159	2648896.018		ppb
	Tl	205	150.001	0.008005	ppb
	Pb	206	29.167	0.001813	ppb
	Pb	207	50.000	0.001732	ppb
	Pb	208	108.334	0.002537	ppb
>	Bi	209	1441460.235		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	327468.746		ppb
	Be	9	3.333	0.001749	ppb
>	Sc	45	1083716.189		ppb
	V	51	2122.562	0.004682	ppb
	Cr	52	5798.347	-0.053518	ppb
	Mn	55	487.512	-0.056842	ppb
	Co	59	108.334	0.008411	ppb
	Ni	60	33.333	0.010607	ppb
	Cu	63	138.890	0.008604	ppb
	Cu	65	111.112	0.024627	ppb
	Zn	66	83.334	-0.011913	ppb
	As	75	-158.214	-0.002577	ppb
	Se	82	37.778	0.002663	ppb
	Ag	107	205.558	0.020590	ppb
	Ag	109	225.003	0.023851	ppb
	Cd	111	19.546	0.010702	ppb
	In	113	88742.018		ppb
>	In	115	2179280.947		ppb
	Sb	121	537.514	0.090101	ppb

|	Ba	135	11.667	0.000249	ppb
|	Ba	137	23.333	0.003356	ppb
|>	Tb	159	2721518.285		ppb
⌈	Tl	205	175.002	0.009875	ppb
|	Pb	206	87.500	0.013363	ppb
|	Pb	207	150.001	0.012765	ppb
|	Pb	208	220.835	0.010709	ppb
|>	Bi	209	1403045.430		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		98.382			
	Be	9					
>	Sc	45		96.988			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		100.125			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		100.460			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		99.983			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: CCB
Page 4

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4030705-BLK1

Sample Date/Time: Tuesday, March 25, 2014 19:00:27
Sample Type: Sample
Sample Description: PBW01
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4030705-BLK1.6688

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	319737.520	3.315	319737.520			ppb
⌊	Be	9	12.222	87.670	0.000	0.02985	111.81	ppb
⌈>	Sc	45	1017543.812	2.151	1017543.812			ppb
|	V	51	2167.075	8.266	0.000	0.02397	98.21	ppb
|	Cr	52	6130.212	1.320	0.000	0.03484	58.87	ppb
|	Mn	55	2522.544	13.934	0.001	0.10759	22.64	ppb
|	Co	59	246.671	86.519	0.000	0.02313	93.58	ppb
|	Ni	60	66.667	62.222	0.000	0.02812	74.18	ppb
|	Cu	63	343.525	20.748	0.000	0.05319	30.24	ppb
|	Cu	65	146.297	23.588	0.000	0.04342	37.44	ppb
|	Zn	66	148.149	8.455	0.000	0.04625	27.49	ppb
|	As	75	-124.383	14.449	0.000	0.01621	79.31	ppb
⌊	Se	82	38.148	8.281	0.000	0.02328	124.32	ppb
⌈	Ag	107	168.521	94.120	0.000	0.01875	112.56	ppb
|	Ag	109	179.632	73.845	0.000	0.02118	85.81	ppb
|	Cd	111	39.950	83.784	0.000	0.02524	84.12	ppb
|	In	113	86042.246	1.526	0.001			ppb
⌊>	In	115	1913255.683	1.799	1913255.683			ppb
⌈	Sb	121	255.559	40.740	0.000	0.03576	61.49	ppb
|	Ba	135	46.111	48.133	0.000	0.02648	63.89	ppb
|	Ba	137	77.223	57.198	0.000	0.02711	71.28	ppb
⌊>	Tb	159	2628463.632	1.144	2628463.632			ppb
⌈	Tl	205	454.181	78.058	0.000	0.02839	81.97	ppb
|	Pb	206	165.280	82.708	0.000	0.02915	93.30	ppb
|	Pb	207	302.781	82.400	0.000	0.03002	92.38	ppb
|	Pb	208	476.398	69.270	0.000	0.02942	81.45	ppb
⌊>	Bi	209	1385136.980	1.103	1385136.980			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	314755.123		ppb
⌊	Be	9	16.667	0.043475	ppb
⌈>	Sc	45	1002855.732		ppb
|	V	51	2369.524	0.049591	ppb
|	Cr	52	6210.261	0.056548	ppb
|	Mn	55	2154.399	0.081020	ppb
|	Co	59	463.344	0.045118	ppb
|	Ni	60	113.890	0.051813	ppb
|	Cu	63	422.231	0.070690	ppb
|	Cu	65	186.113	0.062193	ppb
|	Zn	66	161.112	0.058799	ppb
|	As	75	-103.647	0.030984	ppb
⌊	Se	82	41.667	0.054185	ppb
⌈	Ag	107	347.228	0.042465	ppb
|	Ag	109	319.450	0.040144	ppb

|	Cd	111	67.954	0.042504	ppb
|	In	113	87422.135		ppb
|>	In	115	1950341.381		ppb
⌈	Sb	121	279.171	0.040861	ppb
|	Ba	135	51.667	0.030774	ppb
|	Ba	137	108.334	0.040704	ppb
|>	Tb	159	2611381.591		ppb
⌈	Tl	205	600.018	0.038197	ppb
|	Pb	206	229.169	0.042111	ppb
|	Pb	207	475.006	0.049384	ppb
|	Pb	208	745.849	0.049146	ppb
|>	Bi	209	1370446.676		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	312545.756		ppb
|	Be	9	20.000	0.054245	ppb
⌈>	Sc	45	1007070.192		ppb
|	V	51	2102.538	0.019036	ppb
|	Cr	52	6048.495	0.032167	ppb
|	Mn	55	2558.661	0.112874	ppb
|	Co	59	240.003	0.022438	ppb
|	Ni	60	50.000	0.020007	ppb
|	Cu	63	325.005	0.049850	ppb
|	Cu	65	125.001	0.034395	ppb
|	Zn	66	147.223	0.046588	ppb
|	As	75	-134.057	0.007558	ppb
|	Se	82	37.222	0.018851	ppb
⌈	Ag	107	113.890	0.011753	ppb
|	Ag	109	163.890	0.019498	ppb
|	Cd	111	49.017	0.031685	ppb
|	In	113	84808.102		ppb
|>	In	115	1882315.237		ppb
⌈	Sb	121	345.839	0.054752	ppb
|	Ba	135	65.000	0.040841	ppb
|	Ba	137	96.667	0.035644	ppb
|>	Tb	159	2610815.336		ppb
⌈	Tl	205	712.525	0.045162	ppb
|	Pb	206	258.337	0.047439	ppb
|	Pb	207	416.671	0.042425	ppb
|	Pb	208	575.010	0.036351	ppb
|>	Bi	209	1384018.208		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	331911.681		ppb
|	Be	9	0.000	-0.008181	ppb
⌈>	Sc	45	1042705.513		ppb
|	V	51	2029.165	0.003289	ppb
|	Cr	52	6131.879	0.015792	ppb
|	Mn	55	2854.574	0.128862	ppb
|	Co	59	36.667	0.001842	ppb
|	Ni	60	36.111	0.012534	ppb
|	Cu	63	283.337	0.039040	ppb
|	Cu	65	127.779	0.033681	ppb
|	Zn	66	136.112	0.033374	ppb
|	As	75	-135.447	0.010089	ppb
|	Se	82	35.556	-0.003192	ppb
⌈	Ag	107	44.445	0.002032	ppb
|	Ag	109	55.556	0.003906	ppb
|	Cd	111	2.879	0.001534	ppb
|	In	113	85896.499		ppb
|>	In	115	1907110.430		ppb
⌈	Sb	121	141.668	0.011670	ppb

|	Ba	135	21.667	0.007830	ppb
|	Ba	137	26.667	0.004989	ppb
|>	Tb	159	2663193.969		ppb
⌈	Tl	205	50.000	0.001820	ppb
|	Pb	206	8.333	-0.002104	ppb
|	Pb	207	16.667	-0.001750	ppb
|	Pb	208	108.334	0.002753	ppb
|>	Bi	209	1400946.056		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		96.528			
	Be	9					
>	Sc	45		94.350			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		94.380			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		98.416			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		97.034			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4030705-BS1

Sample Date/Time: Tuesday, March 25, 2014 19:02:11
Sample Type: Sample
Sample Description: MLCS01
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4030705-BS1.6689

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	311953.477	1.598	311953.477			ppb
	Be	9	34479.360	2.284	0.111	107.81092	1.09	ppb
>	Sc	45	995783.503	1.722	995783.503			ppb
	V	51	940673.795	2.290	0.943	104.76786	2.85	ppb
	Cr	52	817121.616	1.158	0.815	106.50503	1.24	ppb
	Mn	55	1261643.284	1.336	1.266	102.76175	1.57	ppb
	Co	59	1032001.401	0.895	1.036	105.08049	0.99	ppb
	Ni	60	224789.549	1.512	0.226	112.37134	3.25	ppb
	Cu	63	513751.112	3.434	0.516	109.41860	5.18	ppb
	Cu	65	251967.008	1.789	0.253	114.46023	3.06	ppb
	Zn	66	259099.896	0.595	0.260	219.64870	2.22	ppb
	As	75	289964.323	0.501	0.291	229.35037	2.06	ppb
	Se	82	28667.143	0.389	0.029	221.52824	1.53	ppb
	Ag	107	829040.116	2.700	0.440	115.06381	2.79	ppb
	Ag	109	800712.389	3.460	0.425	114.44742	3.56	ppb
	Cd	111	165473.157	0.275	0.088	108.02562	0.32	ppb
	In	113	244572.765	0.508	0.086			ppb
>	In	115	1882755.869	0.129	1882755.869			ppb
	Sb	121	1049657.105	1.614	0.401	217.93691	1.99	ppb
	Ba	135	146720.276	1.229	0.056	110.38699	0.44	ppb
	Ba	137	254090.534	0.861	0.097	110.16049	1.65	ppb
>	Tb	159	2617578.943	0.805	2617578.943			ppb
	Tl	205	3255851.188	0.696	2.363	213.71915	0.63	ppb
	Pb	206	1007446.004	1.423	0.731	200.41462	0.83	ppb
	Pb	207	1891006.450	0.890	1.372	209.62885	0.29	ppb
	Pb	208	3022051.982	0.460	2.193	217.90123	1.05	ppb
>	Bi	209	1378060.025	0.611	1378060.025			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	317596.198		ppb
	Be	9	35360.742	108.607695	ppb
>	Sc	45	977370.661		ppb
	V	51	949057.683	107.678154	ppb
	Cr	52	812775.298	107.933006	ppb
	Mn	55	1258602.260	104.434168	ppb
	Co	59	1024622.724	106.283491	ppb
	Ni	60	228523.314	116.346784	ppb
	Cu	63	533066.936	115.603683	ppb
	Cu	65	252936.676	117.029862	ppb
	Zn	66	259977.722	224.490079	ppb
	As	75	291343.404	234.725600	ppb
	Se	82	28630.371	225.378162	ppb
	Ag	107	821660.311	113.882178	ppb
	Ag	109	787958.921	112.468320	ppb

|	Cd	111	165610.714	107.967844	ppb
|	In	113	245758.197		ppb
|>	In	115	1885326.618		ppb
⌈	Sb	121	1030121.048	213.463464	ppb
|	Ba	135	146950.176	110.354226	ppb
|	Ba	137	254224.272	110.001206	ppb
|>	Tb	159	2622517.949		ppb
⌈	Tl	205	3250897.536	212.308879	ppb
|	Pb	206	1017721.880	201.437853	ppb
|	Pb	207	1903796.177	209.977874	ppb
|	Pb	208	3007249.218	215.724152	ppb
|>	Bi	209	1385090.003		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	308142.211		ppb
⌊	Be	9	34231.824	108.366063	ppb
⌈>	Sc	45	998679.708		ppb
|	V	51	916198.876	101.720297	ppb
|	Cr	52	810613.274	105.331013	ppb
|	Mn	55	1246515.350	101.221436	ppb
|	Co	59	1029020.048	104.462066	ppb
|	Ni	60	223966.383	111.593535	ppb
|	Cu	63	509694.391	108.175288	ppb
|	Cu	65	255910.928	115.879333	ppb
|	Zn	66	260003.377	219.720133	ppb
|	As	75	288448.392	227.438050	ppb
⌊	Se	82	28578.556	220.163895	ppb
⌈	Ag	107	811278.557	112.615236	ppb
|	Ag	109	781682.794	111.743162	ppb
|	Cd	111	164965.676	107.711844	ppb
|	In	113	244678.022		ppb
|>	In	115	1882446.865		ppb
⌈	Sb	121	1058478.077	218.240517	ppb
|	Ba	135	148397.988	110.882876	ppb
|	Ba	137	251840.070	108.423233	ppb
|>	Tb	159	2635730.577		ppb
⌈	Tl	205	3236087.300	213.867853	ppb
|	Pb	206	991066.989	198.506736	ppb
|	Pb	207	1871935.111	208.931644	ppb
|	Pb	208	3034823.956	220.304538	ppb
|>	Bi	209	1368729.447		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	310122.023		ppb
⌊	Be	9	33845.513	106.458992	ppb
⌈>	Sc	45	1011300.140		ppb
|	V	51	956764.825	104.905140	ppb
|	Cr	52	827976.277	106.251064	ppb
|	Mn	55	1279812.241	102.629632	ppb
|	Co	59	1042361.430	104.495905	ppb
|	Ni	60	221878.950	109.173706	ppb
|	Cu	63	498492.009	104.476816	ppb
|	Cu	65	247053.421	110.471487	ppb
|	Zn	66	257318.589	214.735902	ppb
|	As	75	290101.172	225.887457	ppb
⌊	Se	82	28792.502	219.042656	ppb
⌈	Ag	107	854181.481	118.694024	ppb
|	Ag	109	832495.452	119.130775	ppb
|	Cd	111	165843.081	108.397179	ppb
|	In	113	243282.077		ppb
|>	In	115	1880494.125		ppb
⌈	Sb	121	1060372.189	222.106740	ppb

|	Ba	135	144812.665	109.923875	ppb
|	Ba	137	256207.262	112.057023	ppb
|>	Tb	159	2594488.302		ppb
⌈	Tl	205	3280568.728	214.980706	ppb
|	Pb	206	1013549.142	201.299275	ppb
|	Pb	207	1897288.063	209.977031	ppb
|	Pb	208	3024082.773	217.674996	ppb
|>	Bi	209	1380360.624		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		94.178			
	Be	9					
>	Sc	45		92.332			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		92.876			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		98.009			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		96.538			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: 4030705-BS1

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403006-01

Sample Date/Time: Tuesday, March 25, 2014 19:03:56
Sample Type: Sample
Sample Description: MW-3
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403006-01.6690

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	285380.625	1.762	285380.625			ppb
	Be	9	80.556	17.596	0.000	0.26776	19.92	ppb
>	Sc	45	987790.193	0.665	987790.193			ppb
	V	51	124677.019	1.849	0.124	13.81203	2.25	ppb
	Cr	52	82204.837	0.491	0.077	10.12399	0.51	ppb
	Mn	55	537564.493	2.375	0.543	44.07737	1.71	ppb
	Co	59	16461.318	1.775	0.017	1.68780	1.54	ppb
	Ni	60	9422.960	3.478	0.010	4.74199	3.09	ppb
	Cu	63	29228.777	2.068	0.030	6.25396	1.52	ppb
	Cu	65	14772.020	3.025	0.015	6.74181	2.64	ppb
	Zn	66	17528.316	2.087	0.018	14.90345	1.49	ppb
	As	75	609.287	6.143	0.001	0.59783	5.09	ppb
	Se	82	82.963	7.034	0.000	0.38125	12.67	ppb
	Ag	107	1120.434	11.159	0.001	0.16349	10.38	ppb
	Ag	109	1196.368	6.627	0.001	0.18039	6.22	ppb
	Cd	111	179.081	9.849	0.000	0.12570	9.55	ppb
	In	113	78750.534	0.198	0.001			ppb
>	In	115	1746439.093	1.630	1746439.093			ppb
	Sb	121	226.391	11.246	0.000	0.03264	15.80	ppb
	Ba	135	237511.571	2.038	0.096	189.74969	2.30	ppb
	Ba	137	407100.946	0.695	0.165	187.39696	1.40	ppb
>	Tb	159	2465413.508	1.167	2465413.508			ppb
	Tl	205	536.126	10.723	0.000	0.03871	10.68	ppb
	Pb	206	12541.193	0.988	0.010	2.84217	2.09	ppb
	Pb	207	22351.559	1.003	0.018	2.82267	1.72	ppb
	Pb	208	34074.490	0.506	0.028	2.79730	1.34	ppb
>	Bi	209	1208372.326	1.564	1208372.326			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	289665.408		ppb
	Be	9	75.000	0.244407	ppb
>	Sc	45	995047.137		ppb
	V	51	122882.167	13.508433	ppb
	Cr	52	82614.857	10.098363	ppb
	Mn	55	551446.693	44.890982	ppb
	Co	59	16713.956	1.701234	ppb
	Ni	60	9585.147	4.788835	ppb
	Cu	63	29721.882	6.313591	ppb
	Cu	65	15208.779	6.891397	ppb
	Zn	66	17949.428	15.152326	ppb
	As	75	591.683	0.580334	ppb
	Se	82	77.223	0.331943	ppb
	Ag	107	1261.191	0.181907	ppb
	Ag	109	1277.859	0.190109	ppb

	Cd	111	171.177	0.118399	ppb
	In	113	78809.327		ppb
>	In	115	1772206.518		ppb
	Sb	121	254.170	0.038099	ppb
	Ba	135	239949.663	189.318161	ppb
	Ba	137	408144.176	185.542800	ppb
>	Tb	159	2496195.786		ppb
	Tl	205	579.183	0.042302	ppb
	Pb	206	12683.038	2.897262	ppb
	Pb	207	22562.916	2.872238	ppb
	Pb	208	34171.847	2.827841	ppb
>	Bi	209	1198599.744		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	286629.792		ppb
	Be	9	70.000	0.230065	ppb
>	Sc	45	982258.189		ppb
	V	51	123872.215	13.799076	ppb
	Cr	52	82191.389	10.183299	ppb
	Mn	55	526324.905	43.400680	ppb
	Co	59	16528.649	1.704280	ppb
	Ni	60	9045.756	4.577985	ppb
	Cu	63	28554.599	6.144112	ppb
	Cu	65	14791.487	6.789257	ppb
	Zn	66	17345.586	14.831609	ppb
	As	75	583.907	0.580197	ppb
	Se	82	82.778	0.383294	ppb
	Ag	107	1022.274	0.148485	ppb
	Ag	109	1119.507	0.168101	ppb
	Cd	111	199.289	0.139552	ppb
	In	113	78868.121		ppb
>	In	115	1751222.393		ppb
	Sb	121	204.169	0.027851	ppb
	Ba	135	231937.243	185.624543	ppb
	Ba	137	403898.573	186.249891	ppb
>	Tb	159	2460852.005		ppb
	Tl	205	470.844	0.034193	ppb
	Pb	206	12453.583	2.850116	ppb
	Pb	207	22116.583	2.820632	ppb
	Pb	208	33875.610	2.808546	ppb
>	Bi	209	1196357.759		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	279846.674		ppb
	Be	9	96.667	0.328800	ppb
>	Sc	45	986065.253		ppb
	V	51	127276.674	14.128592	ppb
	Cr	52	81808.266	10.090296	ppb
	Mn	55	534921.881	43.940443	ppb
	Co	59	16141.350	1.657872	ppb
	Ni	60	9637.976	4.859158	ppb
	Cu	63	29409.850	6.304187	ppb
	Cu	65	14315.795	6.544765	ppb
	Zn	66	17289.934	14.726402	ppb
	As	75	652.271	0.632958	ppb
	Se	82	88.889	0.428527	ppb
	Ag	107	1077.836	0.160087	ppb
	Ag	109	1191.738	0.182971	ppb
	Cd	111	166.777	0.119144	ppb
	In	113	78574.154		ppb
>	In	115	1715888.367		ppb
	Sb	121	220.836	0.031965	ppb

|	Ba	135	240647.809	194.306378	ppb
|	Ba	137	409260.089	190.398186	ppb
|>	Tb	159	2439192.733		ppb
⌈	Tl	205	558.349	0.039649	ppb
|	Pb	206	12486.958	2.779138	ppb
|	Pb	207	22375.178	2.775145	ppb
|	Pb	208	34176.012	2.755503	ppb
|>	Bi	209	1230159.476		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		86.156			
	Be	9					
>	Sc	45		91.591			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		86.151			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		92.311			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		84.651			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4030705-DUP1

Sample Date/Time: Tuesday, March 25, 2014 19:05:40
Sample Type: Sample
Sample Description: MW-3D
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4030705-DUP1.6691

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	289117.916	1.723	289117.916			ppb
⌊	Be	9	80.000	7.217	0.000	0.26199	8.88	ppb
⌈>	Sc	45	974831.724	2.150	974831.724			ppb
|	V	51	114008.019	1.585	0.115	12.78271	0.81	ppb
|	Cr	52	82008.252	1.050	0.078	10.24532	2.48	ppb
|	Mn	55	508028.251	1.427	0.520	42.21363	1.02	ppb
|	Co	59	15667.820	0.612	0.016	1.62826	2.27	ppb
|	Ni	60	8842.804	5.232	0.009	4.50826	4.05	ppb
|	Cu	63	52433.415	1.305	0.054	11.38545	1.12	ppb
|	Cu	65	25685.723	0.219	0.026	11.89984	2.37	ppb
|	Zn	66	21651.193	0.979	0.022	18.68228	3.10	ppb
|	As	75	584.890	6.783	0.001	0.58491	6.53	ppb
⌊	Se	82	86.111	5.512	0.000	0.41449	7.61	ppb
⌈	Ag	107	1067.650	8.917	0.001	0.15505	8.60	ppb
|	Ag	109	1026.906	16.819	0.001	0.15360	16.53	ppb
|	Cd	111	156.691	47.596	0.000	0.10932	47.02	ppb
|	In	113	78362.832	1.566	0.001			ppb
⌊>	In	115	1752991.774	0.698	1752991.774			ppb
⌈	Sb	121	330.562	58.994	0.000	0.05453	78.34	ppb
|	Ba	135	219733.484	0.388	0.088	172.56920	0.81	ppb
|	Ba	137	388781.213	0.092	0.155	175.92600	0.64	ppb
⌊>	Tb	159	2507804.023	0.544	2507804.023			ppb
⌈	Tl	205	679.201	85.548	0.001	0.04962	88.27	ppb
|	Pb	206	13157.261	0.787	0.011	2.98746	1.07	ppb
|	Pb	207	23320.764	2.034	0.019	2.95083	2.27	ppb
|	Pb	208	35015.185	2.601	0.029	2.88015	2.74	ppb
⌊>	Bi	209	1205945.700	0.298	1205945.700			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	293765.789		ppb
⌊	Be	9	73.334	0.235347	ppb
⌈>	Sc	45	975541.863		ppb
|	V	51	113453.005	12.708844	ppb
|	Cr	52	83001.371	10.367106	ppb
|	Mn	55	511685.358	42.482023	ppb
|	Co	59	15557.092	1.615056	ppb
|	Ni	60	9232.037	4.704557	ppb
|	Cu	63	52800.137	11.455257	ppb
|	Cu	65	25663.444	11.876800	ppb
|	Zn	66	21726.354	18.725420	ppb
|	As	75	543.506	0.550823	ppb
⌊	Se	82	81.667	0.378990	ppb
⌈	Ag	107	1044.499	0.152669	ppb
|	Ag	109	908.375	0.136433	ppb

	Cd	111	111.232	0.078183	ppb
	In	113	79712.274		ppb
>	In	115	1741523.733		ppb
	Sb	121	241.670	0.034856	ppb
	Ba	135	218857.336	170.966007	ppb
	Ba	137	388414.589	174.825052	ppb
>	Tb	159	2521158.215		ppb
	Tl	205	337.506	0.023892	ppb
	Pb	206	13187.857	2.992431	ppb
	Pb	207	22880.052	2.893036	ppb
	Pb	208	33988.341	2.793669	ppb
>	Bi	209	1206719.791		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	283859.085		ppb
	Be	9	83.334	0.278214	ppb
>	Sc	45	995423.654		ppb
	V	51	116027.231	12.738091	ppb
	Cr	52	81544.458	9.953718	ppb
	Mn	55	512719.702	41.716002	ppb
	Co	59	15724.019	1.599765	ppb
	Ni	60	8965.128	4.477067	ppb
	Cu	63	52855.986	11.237982	ppb
	Cu	65	25643.950	11.630290	ppb
	Zn	66	21411.788	18.083087	ppb
	As	75	588.563	0.577690	ppb
	Se	82	91.112	0.439195	ppb
	Ag	107	986.160	0.143065	ppb
	Ag	109	947.267	0.141603	ppb
	Cd	111	116.078	0.081132	ppb
	In	113	78061.831		ppb
>	In	115	1751582.806		ppb
	Sb	121	195.835	0.025191	ppb
	Ba	135	220559.119	173.173884	ppb
	Ba	137	388800.839	175.891105	ppb
>	Tb	159	2508370.279		ppb
	Tl	205	350.006	0.024777	ppb
	Pb	206	13041.832	2.953435	ppb
	Pb	207	23259.550	2.935295	ppb
	Pb	208	35332.549	2.898636	ppb
>	Bi	209	1209095.167		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	289728.874		ppb
	Be	9	83.334	0.272412	ppb
>	Sc	45	953529.655		ppb
	V	51	112543.822	12.901201	ppb
	Cr	52	81478.927	10.415135	ppb
	Mn	55	499679.693	42.442869	ppb
	Co	59	15722.350	1.669950	ppb
	Ni	60	8331.247	4.343170	ppb
	Cu	63	51644.123	11.463121	ppb
	Cu	65	25749.777	12.192429	ppb
	Zn	66	21815.436	19.238342	ppb
	As	75	622.601	0.626232	ppb
	Se	82	85.556	0.425292	ppb
	Ag	107	1172.291	0.169419	ppb
	Ag	109	1225.075	0.182762	ppb
	Cd	111	242.762	0.168651	ppb
	In	113	77314.392		ppb
>	In	115	1765868.782		ppb
	Sb	121	554.182	0.103531	ppb

|	Ba	135	219783.997	173.567723	ppb
|	Ba	137	389128.211	177.061841	ppb
|>	Tb	159	2493883.576		ppb
⌈	Tl	205	1350.091	0.100192	ppb
|	Pb	206	13242.095	3.016511	ppb
|	Pb	207	23822.690	3.024160	ppb
|	Pb	208	35724.666	2.948134	ppb
|>	Bi	209	1202022.143		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		87.284			
	Be	9					
>	Sc	45		90.390			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		86.474			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		93.899			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		84.481			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4030705-MS1

Sample Date/Time: Tuesday, March 25, 2014 19:07:25
Sample Type: Sample
Sample Description: MW-3S
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4030705-MS1.6692

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	289818.729	0.562	289818.729			ppb
	Be	9	32088.083	2.221	0.111	108.01111	2.67	ppb
>	Sc	45	986994.173	0.838	986994.173			ppb
	V	51	1008672.873	0.910	1.020	113.34026	0.95	ppb
	Cr	52	821361.560	2.736	0.826	108.01569	2.88	ppb
	Mn	55	1648770.486	5.832	1.670	135.51796	6.03	ppb
	Co	59	950062.266	2.963	0.963	97.59699	3.26	ppb
	Ni	60	203069.931	2.750	0.206	102.39775	3.51	ppb
	Cu	63	469460.875	2.952	0.476	100.81878	3.02	ppb
	Cu	65	230959.397	2.892	0.234	105.83443	3.54	ppb
	Zn	66	243834.644	1.554	0.247	208.50674	1.95	ppb
	As	75	251892.511	1.169	0.255	200.98873	1.46	ppb
	Se	82	25810.681	1.725	0.026	201.16995	1.40	ppb
	Ag	107	364227.789	2.741	0.208	54.28038	0.75	ppb
	Ag	109	349873.782	1.624	0.200	53.70872	1.64	ppb
	Cd	111	149830.982	1.106	0.085	105.05893	1.18	ppb
	In	113	228388.462	0.850	0.087			ppb
>	In	115	1753160.921	2.011	1753160.921			ppb
	Sb	121	772509.493	1.778	0.310	168.43876	1.50	ppb
	Ba	135	355830.439	1.495	0.143	281.18959	1.30	ppb
	Ba	137	622075.458	1.271	0.250	283.27658	2.19	ppb
>	Tb	159	2492908.358	2.805	2492908.358			ppb
	Tl	205	2980018.995	2.039	2.436	220.34831	0.61	ppb
	Pb	206	906889.603	2.109	0.741	203.23141	0.76	ppb
	Pb	207	1689383.578	2.102	1.381	210.96543	0.97	ppb
	Pb	208	2574031.236	1.051	2.104	209.09196	1.43	ppb
>	Bi	209	1223358.183	1.976	1223358.183			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	289066.788		ppb
	Be	9	32823.782	110.765772	ppb
>	Sc	45	990791.602		ppb
	V	51	1019271.582	114.090654	ppb
	Cr	52	844950.050	110.704971	ppb
	Mn	55	1739637.496	142.427328	ppb
	Co	59	975674.772	99.835140	ppb
	Ni	60	203763.372	102.335089	ppb
	Cu	63	484367.085	103.617584	ppb
	Cu	65	233775.989	106.697430	ppb
	Zn	66	247247.007	210.600425	ppb
	As	75	254952.638	202.639770	ppb
	Se	82	26312.349	204.300147	ppb
	Ag	107	375722.666	54.744634	ppb
	Ag	109	354703.322	53.223374	ppb

|	Cd	111	151308.239	103.704105	ppb
|	In	113	226537.217		ppb
|>	In	115	1793325.716		ppb
⌈	Sb	121	788147.984	166.679711	ppb
|	Ba	135	361587.864	277.141546	ppb
|	Ba	137	625399.939	276.186809	ppb
|>	Tb	159	2569620.248		ppb
⌈	Tl	205	2984364.007	221.866577	ppb
|	Pb	206	909693.647	204.966254	ppb
|	Pb	207	1698962.573	213.310435	ppb
|	Pb	208	2590549.797	211.541797	ppb
|>	Bi	209	1216754.340		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	288701.459		ppb
|	Be	9	32039.578	108.256062	ppb
⌈>	Sc	45	977508.178		ppb
|	V	51	1003266.631	113.824709	ppb
|	Cr	52	818928.153	108.740372	ppb
|	Mn	55	1658592.449	137.634167	ppb
|	Co	59	954588.003	99.004784	ppb
|	Ni	60	208274.334	106.022201	ppb
|	Cu	63	467043.725	101.268993	ppb
|	Cu	65	235769.195	109.069911	ppb
|	Zn	66	244500.139	211.090940	ppb
|	As	75	251646.180	202.729676	ppb
|	Se	82	25462.932	200.386456	ppb
⌈	Ag	107	357707.541	54.109647	ppb
|	Ag	109	351305.939	54.726332	ppb
|	Cd	111	148038.481	105.336971	ppb
|	In	113	228220.686		ppb
|>	In	115	1727373.926		ppb
⌈	Sb	121	762381.679	167.301487	ppb
|	Ba	135	354801.146	282.179360	ppb
|	Ba	137	627775.403	287.674922	ppb
|>	Tb	159	2476376.843		ppb
⌈	Tl	205	3038482.232	219.856293	ppb
|	Pb	206	924460.084	202.729717	ppb
|	Pb	207	1719128.331	210.077050	ppb
|	Pb	208	2588718.108	205.745742	ppb
|>	Bi	209	1250146.095		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	291687.941		ppb
|	Be	9	31400.890	105.011506	ppb
⌈>	Sc	45	992682.738		ppb
|	V	51	1003480.406	112.105410	ppb
|	Cr	52	800206.477	104.601733	ppb
|	Mn	55	1548081.514	126.492391	ppb
|	Co	59	919924.022	93.951061	ppb
|	Ni	60	197172.087	98.835970	ppb
|	Cu	63	456971.814	97.569769	ppb
|	Cu	65	223333.008	101.735963	ppb
|	Zn	66	239756.786	203.828868	ppb
|	As	75	249078.715	197.596744	ppb
|	Se	82	25656.760	198.823250	ppb
⌈	Ag	107	359253.160	53.986860	ppb
|	Ag	109	343612.085	53.176446	ppb
|	Cd	111	150146.227	106.135723	ppb
|	In	113	230407.483		ppb
|>	In	115	1738783.120		ppb
⌈	Sb	121	766998.816	171.335075	ppb

|	Ba	135	351102.305	284.247848	ppb
|	Ba	137	613051.033	285.968017	ppb
|>	Tb	159	2432727.982		ppb
⌈	Tl	205	2917210.745	219.322045	ppb
|	Pb	206	886515.078	201.998264	ppb
|	Pb	207	1650059.831	209.508802	ppb
|	Pb	208	2542825.805	209.988351	ppb
|>	Bi	209	1203174.115		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		87.496			
	Be	9					
>	Sc	45		91.517			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		86.483			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		93.341			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		85.700			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4030705-MSD1

Sample Date/Time: Tuesday, March 25, 2014 19:09:09
Sample Type: Sample
Sample Description: MW-3SD
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4030705-MSD1.6693

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	293877.422	1.531	293877.422			ppb
	Be	9	33161.580	2.346	0.113	110.09070	2.81	ppb
>	Sc	45	1018145.577	1.959	1018145.577			ppb
	V	51	1032175.444	0.841	1.012	112.44624	1.33	ppb
	Cr	52	844900.074	0.918	0.824	107.71891	1.06	ppb
	Mn	55	1718391.330	3.076	1.687	136.96574	4.40	ppb
	Co	59	992411.809	1.555	0.975	98.83234	1.58	ppb
	Ni	60	215093.546	1.339	0.211	105.16836	3.29	ppb
	Cu	63	494401.308	1.339	0.486	102.96553	3.23	ppb
	Cu	65	236517.353	1.162	0.232	105.09009	3.09	ppb
	Zn	66	248752.841	1.814	0.244	206.26155	3.15	ppb
	As	75	259274.939	0.720	0.255	200.60967	2.67	ppb
	Se	82	26338.349	1.478	0.026	199.07073	3.00	ppb
	Ag	107	390993.877	2.546	0.217	56.72566	1.60	ppb
	Ag	109	375505.792	1.666	0.208	56.10847	1.24	ppb
	Cd	111	155052.619	2.672	0.086	105.82839	2.66	ppb
	In	113	230673.815	1.832	0.084			ppb
>	In	115	1800877.468	1.055	1800877.468			ppb
	Sb	121	778266.614	2.849	0.309	168.12786	2.93	ppb
	Ba	135	368708.543	0.962	0.147	288.67052	1.02	ppb
	Ba	137	640050.278	1.502	0.254	288.72982	1.56	ppb
>	Tb	159	2515590.036	0.090	2515590.036			ppb
	Tl	205	3073766.436	0.962	2.507	226.81651	1.10	ppb
	Pb	206	927267.987	0.645	0.756	207.37188	0.50	ppb
	Pb	207	1719193.285	0.677	1.402	214.24466	0.52	ppb
	Pb	208	2607885.368	0.121	2.127	211.37480	0.27	ppb
>	Bi	209	1225867.665	0.155	1225867.665			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	299067.858		ppb
	Be	9	33210.054	108.321403	ppb
>	Sc	45	999492.731		ppb
	V	51	1028374.429	114.107508	ppb
	Cr	52	838385.556	108.876283	ppb
	Mn	55	1773239.872	143.915534	ppb
	Co	59	975330.128	98.931046	ppb
	Ni	60	217943.818	108.504267	ppb
	Cu	63	498637.908	105.742207	ppb
	Cu	65	239532.051	108.373159	ppb
	Zn	66	247753.765	209.194410	ppb
	As	75	261160.327	205.764948	ppb
	Se	82	26745.719	205.859200	ppb
	Ag	107	400400.358	57.419805	ppb
	Ag	109	378805.193	55.943062	ppb

	Cd	111	154827.354	104.441396	ppb
	In	113	228706.600		ppb
>	In	115	1822080.580		ppb
	Sb	121	784916.386	169.523711	ppb
	Ba	135	371198.893	290.553684	ppb
	Ba	137	646260.648	291.463829	ppb
>	Tb	159	2516156.292		ppb
	Tl	205	3058060.147	225.307353	ppb
	Pb	206	931618.365	208.024540	ppb
	Pb	207	1730927.135	215.375528	ppb
	Pb	208	2604244.090	210.753650	ppb
>	Bi	209	1227760.604		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	291072.047		ppb
	Be	9	33914.078	113.656816	ppb
>	Sc	45	1039177.579		ppb
	V	51	1042109.168	111.210288	ppb
	Cr	52	853480.837	106.588201	ppb
	Mn	55	1714161.116	133.801325	ppb
	Co	59	996572.572	97.225376	ppb
	Ni	60	212183.006	101.601812	ppb
	Cu	63	486771.379	99.282573	ppb
	Cu	65	234148.442	101.890501	ppb
	Zn	66	244824.600	198.822908	ppb
	As	75	257425.627	195.082733	ppb
	Se	82	26298.981	194.676092	ppb
	Ag	107	392010.920	57.060411	ppb
	Ag	109	379419.504	56.874832	ppb
	Cd	111	159303.384	109.073613	ppb
	In	113	235524.644		ppb
>	In	115	1795138.299		ppb
	Sb	121	796357.518	172.204922	ppb
	Ba	135	370280.779	290.188768	ppb
	Ba	137	644910.888	291.210069	ppb
>	Tb	159	2513089.075		ppb
	Tl	205	3107867.174	229.687273	ppb
	Pb	206	920451.943	206.168668	ppb
	Pb	207	1707668.151	213.140540	ppb
	Pb	208	2609703.008	211.850574	ppb
>	Bi	209	1223963.889		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	291492.361		ppb
	Be	9	32360.609	108.293886	ppb
>	Sc	45	1015766.422		ppb
	V	51	1026042.736	112.020916	ppb
	Cr	52	842833.830	107.692252	ppb
	Mn	55	1667773.002	133.180370	ppb
	Co	59	1005332.729	100.340596	ppb
	Ni	60	215153.813	105.399013	ppb
	Cu	63	497794.637	103.871812	ppb
	Cu	65	235871.567	105.006622	ppb
	Zn	66	253680.157	210.767327	ppb
	As	75	259238.863	200.981338	ppb
	Se	82	25970.346	196.676909	ppb
	Ag	107	380570.353	55.696771	ppb
	Ag	109	368292.679	55.507531	ppb
	Cd	111	151027.119	103.970149	ppb
	In	113	227790.202		ppb
>	In	115	1785413.524		ppb
	Sb	121	753525.938	162.654942	ppb

|	Ba	135	364645.956	285.269115	ppb
|	Ba	137	628979.298	283.515565	ppb
|>	Tb	159	2517524.743		ppb
⌈	Tl	205	3055371.988	225.454912	ppb
|	Pb	206	929733.652	207.922429	ppb
|	Pb	207	1718984.570	214.217908	ppb
|	Pb	208	2609709.007	211.520178	ppb
|>	Bi	209	1225878.503		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		88.721			
	Be	9					
>	Sc	45		94.406			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		88.837			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		94.190			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		85.876			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: SDI403006-01

Sample Date/Time: Tuesday, March 25, 2014 19:10:54
Sample Type: Sample
Sample Description: MW-3L 5X
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\SDI403006-01.6694

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	293232.808	0.610	293232.808			ppb
	Be	9	21.111	16.434	0.000	0.06207	18.88	ppb
>	Sc	45	964631.044	4.077	964631.044			ppb
	V	51	25544.721	2.208	0.025	2.73098	2.25	ppb
	Cr	52	21059.378	1.698	0.016	2.10235	3.25	ppb
	Mn	55	108976.779	1.513	0.112	9.08374	2.96	ppb
	Co	59	3386.685	1.720	0.003	0.35450	3.20	ppb
	Ni	60	2001.127	5.698	0.002	1.02745	3.44	ppb
	Cu	63	8908.606	5.999	0.009	1.93937	4.62	ppb
	Cu	65	4256.462	3.457	0.004	1.97459	1.98	ppb
	Zn	66	4284.251	3.188	0.004	3.67752	5.68	ppb
	As	75	53.443	60.243	0.000	0.15539	16.36	ppb
	Se	82	51.482	2.716	0.000	0.14600	19.06	ppb
	Ag	107	344.450	2.134	0.000	0.04837	3.17	ppb
	Ag	109	290.745	9.665	0.000	0.04170	12.73	ppb
	Cd	111	42.477	9.941	0.000	0.03005	7.74	ppb
	In	113	78033.919	2.023	0.002			ppb
>	In	115	1717295.851	2.360	1717295.851			ppb
	Sb	121	158.335	20.553	0.000	0.01841	39.40	ppb
	Ba	135	45613.816	1.761	0.019	37.23628	3.17	ppb
	Ba	137	80707.729	0.903	0.033	37.96157	2.54	ppb
>	Tb	159	2412924.769	1.659	2412924.769			ppb
	Tl	205	379.174	6.684	0.000	0.02588	6.98	ppb
	Pb	206	2683.694	2.613	0.002	0.58168	2.40	ppb
	Pb	207	4814.476	1.779	0.004	0.58167	1.70	ppb
	Pb	208	7373.824	0.996	0.006	0.57806	1.11	ppb
>	Bi	209	1256771.812	0.361	1256771.812			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	292825.472		ppb
	Be	9	25.000	0.075106	ppb
>	Sc	45	926567.367		ppb
	V	51	25124.613	2.799893	ppb
	Cr	52	20683.034	2.164623	ppb
	Mn	55	108169.384	9.382725	ppb
	Co	59	3322.218	0.361789	ppb
	Ni	60	1869.619	0.999400	ppb
	Cu	63	8826.116	2.000785	ppb
	Cu	65	4086.946	1.973272	ppb
	Zn	66	4228.672	3.776140	ppb
	As	75	16.311	0.126183	ppb
	Se	82	52.778	0.172907	ppb
	Ag	107	338.895	0.048711	ppb
	Ag	109	305.560	0.045064	ppb

|	Cd	111	38.037	0.027536	ppb
|	In	113	76705.563		ppb
|>	In	115	1678226.983		ppb
⌈	Sb	121	120.834	0.010132	ppb
|	Ba	135	45195.234	37.094023	ppb
|	Ba	137	81065.588	38.337700	ppb
|>	Tb	159	2399177.344		ppb
⌈	Tl	205	362.507	0.024784	ppb
|	Pb	206	2658.687	0.578470	ppb
|	Pb	207	4821.421	0.584767	ppb
|	Pb	208	7351.580	0.578526	ppb
|>	Bi	209	1251957.228		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	295190.158		ppb
|	Be	9	18.333	0.052407	ppb
⌈>	Sc	45	962213.645		ppb
|	V	51	25323.670	2.711265	ppb
|	Cr	52	21100.572	2.113258	ppb
|	Mn	55	107887.193	9.007868	ppb
|	Co	59	3435.590	0.360268	ppb
|	Ni	60	2072.437	1.067092	ppb
|	Cu	63	8420.210	1.836548	ppb
|	Cu	65	4331.493	2.014316	ppb
|	Zn	66	4439.874	3.818712	ppb
|	As	75	73.586	0.172519	ppb
|	Se	82	51.667	0.147758	ppb
⌈	Ag	107	352.784	0.049711	ppb
|	Ag	109	308.338	0.044463	ppb
|	Cd	111	42.954	0.030472	ppb
|	In	113	77616.720		ppb
|>	In	115	1714507.272		ppb
⌈	Sb	121	175.002	0.021453	ppb
|	Ba	135	45106.501	36.134721	ppb
|	Ba	137	79869.354	36.867494	ppb
|>	Tb	159	2458020.728		ppb
⌈	Tl	205	366.673	0.024896	ppb
|	Pb	206	2762.882	0.596967	ppb
|	Pb	207	4896.443	0.589655	ppb
|	Pb	208	7314.069	0.571404	ppb
|>	Bi	209	1260961.022		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	291682.794		ppb
|	Be	9	20.000	0.058710	ppb
⌈>	Sc	45	1005112.119		ppb
|	V	51	26185.881	2.681773	ppb
|	Cr	52	21394.529	2.029157	ppb
|	Mn	55	110873.761	8.860615	ppb
|	Co	59	3402.245	0.341454	ppb
|	Ni	60	2061.324	1.015846	ppb
|	Cu	63	9479.491	1.980788	ppb
|	Cu	65	4350.946	1.936170	ppb
|	Zn	66	4184.209	3.437702	ppb
|	As	75	70.433	0.167480	ppb
|	Se	82	50.000	0.117331	ppb
⌈	Ag	107	341.673	0.046696	ppb
|	Ag	109	258.337	0.035586	ppb
|	Cd	111	46.441	0.032127	ppb
|	In	113	79779.474		ppb
|>	In	115	1759153.298		ppb
⌈	Sb	121	179.168	0.023646	ppb

	Ba	135	46539.712	38.480111	ppb
	Ba	137	81188.244	38.679528	ppb
>	Tb	159	2381576.236		ppb
	Tl	205	408.342	0.027968	ppb
	Pb	206	2629.512	0.569590	ppb
	Pb	207	4725.565	0.570575	ppb
	Pb	208	7455.822	0.584239	ppb
>	Bi	209	1257397.187		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		88.526			
	Be	9					
>	Sc	45		89.444			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		84.714			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		90.346			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		88.041			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4030705-PS1

Sample Date/Time: Tuesday, March 25, 2014 19:12:38
Sample Type: Sample
Sample Description: MW-3A
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4030705-PS1.6695

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	284234.464	1.385	284234.464			ppb
⌊	Be	9	3053.800	2.190	0.011	10.47547	3.16	ppb
⌈>	Sc	45	953819.163	2.503	953819.163			ppb
|	V	51	505792.399	1.355	0.529	58.74167	3.70	ppb
|	Cr	52	210873.380	1.713	0.215	28.16196	4.32	ppb
|	Mn	55	601760.406	0.367	0.630	51.13569	2.18	ppb
|	Co	59	99890.793	3.808	0.105	10.62678	6.29	ppb
|	Ni	60	26367.145	3.119	0.028	13.75771	4.12	ppb
|	Cu	63	105594.626	2.495	0.111	23.45186	1.29	ppb
|	Cu	65	51735.356	1.581	0.054	24.51494	1.00	ppb
|	Zn	66	36356.733	2.231	0.038	32.12006	3.81	ppb
|	As	75	12900.102	2.697	0.014	10.76307	4.16	ppb
⌊	Se	82	6004.024	0.894	0.006	48.24385	2.85	ppb
⌈	Ag	107	61444.744	2.330	0.036	9.33049	0.95	ppb
|	Ag	109	60342.642	1.175	0.035	9.43838	1.60	ppb
|	Cd	111	13439.139	0.761	0.008	9.60551	2.19	ppb
|	In	113	90499.514	2.616	0.009			ppb
⌊>	In	115	1720294.977	2.786	1720294.977			ppb
⌈	Sb	121	85934.342	0.899	0.035	19.23357	2.27	ppb
|	Ba	135	336084.761	1.119	0.139	272.79492	1.12	ppb
|	Ba	137	589467.146	1.575	0.243	275.66347	0.86	ppb
⌊>	Tb	159	2426813.758	2.149	2426813.758			ppb
⌈	Tl	205	130532.623	1.327	0.109	9.82761	3.70	ppb
|	Pb	206	55366.746	0.797	0.046	12.62862	2.24	ppb
|	Pb	207	99744.165	0.623	0.083	12.67832	2.49	ppb
|	Pb	208	150775.377	1.782	0.125	12.46307	2.88	ppb
⌊>	Bi	209	1202010.159	2.368	1202010.159			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	287324.302		ppb
⌊	Be	9	3075.473	10.433893	ppb
⌈>	Sc	45	972664.099		ppb
|	V	51	505480.163	57.529287	ppb
|	Cr	52	209205.697	27.357941	ppb
|	Mn	55	603851.675	50.299484	ppb
|	Co	59	98258.712	10.240078	ppb
|	Ni	60	27028.143	13.823131	ppb
|	Cu	63	108507.742	23.630654	ppb
|	Cu	65	52492.970	24.387993	ppb
|	Zn	66	36856.685	31.913762	ppb
|	As	75	12533.742	10.254349	ppb
⌊	Se	82	5951.215	46.864300	ppb
⌈	Ag	107	63000.608	9.267639	ppb
|	Ag	109	61158.671	9.265121	ppb

|	Cd	111	13535.143	9.368948	ppb
|	In	113	92698.502		ppb
|>	In	115	1775624.074		ppb
⌈	Sb	121	85135.870	18.882399	ppb
|	Ba	135	336509.924	270.711319	ppb
|	Ba	137	589685.151	273.329331	ppb
|>	Tb	159	2448205.633		ppb
⌈	Tl	205	129115.696	9.503312	ppb
|	Pb	206	55214.512	12.314991	ppb
|	Pb	207	99282.231	12.339540	ppb
|	Pb	208	149066.072	12.048498	ppb
|>	Bi	209	1228812.098		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	285575.257		ppb
⌊	Be	9	2978.777	10.167527	ppb
⌈>	Sc	45	926968.803		ppb
|	V	51	512795.452	61.252549	ppb
|	Cr	52	215018.731	29.563267	ppb
|	Mn	55	599452.655	52.398414	ppb
|	Co	59	104238.803	11.399001	ppb
|	Ni	60	26627.070	14.289471	ppb
|	Cu	63	103378.834	23.623504	ppb
|	Cu	65	50867.938	24.798375	ppb
|	Zn	66	36792.560	33.432350	ppb
|	As	75	12940.665	11.099809	ppb
⌊	Se	82	6002.356	49.612577	ppb
⌈	Ag	107	60183.336	9.291978	ppb
|	Ag	109	59993.311	9.539118	ppb
|	Cd	111	13450.759	9.771976	ppb
|	In	113	90806.259		ppb
|>	In	115	1691780.432		ppb
⌈	Sb	121	86678.201	19.094751	ppb
|	Ba	135	339613.924	271.362085	ppb
|	Ba	137	598642.910	275.606263	ppb
|>	Tb	159	2464862.982		ppb
⌈	Tl	205	130018.954	9.758291	ppb
|	Pb	206	55863.938	12.705330	ppb
|	Pb	207	100450.615	12.730733	ppb
|	Pb	208	153872.266	12.682148	ppb
|>	Bi	209	1205080.295		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	279803.833		ppb
⌊	Be	9	3107.149	10.824993	ppb
⌈>	Sc	45	961824.587		ppb
|	V	51	499101.583	57.443175	ppb
|	Cr	52	208395.713	27.564679	ppb
|	Mn	55	601976.888	50.709180	ppb
|	Co	59	97174.865	10.241254	ppb
|	Ni	60	25446.223	13.160522	ppb
|	Cu	63	104897.302	23.101413	ppb
|	Cu	65	51845.160	24.358451	ppb
|	Zn	66	35420.955	31.014069	ppb
|	As	75	13225.900	10.935038	ppb
⌊	Se	82	6058.501	48.254668	ppb
⌈	Ag	107	61150.287	9.431853	ppb
|	Ag	109	59875.944	9.510887	ppb
|	Cd	111	13331.514	9.675619	ppb
|	In	113	87993.783		ppb
|>	In	115	1693480.427		ppb
⌈	Sb	121	85988.956	19.723565	ppb

|	Ba	135	332130.434	276.311361	ppb
|	Ba	137	580073.378	278.054813	ppb
|>	Tb	159	2367372.661		ppb
⌈	Tl	205	132463.219	10.221213	ppb
|	Pb	206	55021.788	12.865536	ppb
|	Pb	207	99499.649	12.964678	ppb
|	Pb	208	149387.794	12.658565	ppb
|>	Bi	209	1172138.084		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		85.810			
	Be	9					
>	Sc	45		88.441			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		84.862			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		90.866			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		84.205			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403006-02

Sample Date/Time: Tuesday, March 25, 2014 19:14:23
Sample Type: Sample
Sample Description: MW-2
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403006-02.6696

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	301160.420	1.992	301160.420			ppb
	Be	9	1.111	173.205	-0.000	-0.00465	131.73	ppb
>	Sc	45	954943.742	2.237	954943.742			ppb
	V	51	11365.044	2.106	0.010	1.10954	1.82	ppb
	Cr	52	7222.608	1.561	0.002	0.23621	14.94	ppb
	Mn	55	299093.825	1.636	0.312	25.33634	2.30	ppb
	Co	59	1222.297	1.705	0.001	0.12809	3.05	ppb
	Ni	60	1550.121	6.811	0.002	0.80254	4.70	ppb
	Cu	63	1458.440	3.338	0.001	0.30515	1.42	ppb
	Cu	65	744.472	5.420	0.001	0.33071	3.56	ppb
	Zn	66	13857.752	3.650	0.014	12.17473	2.95	ppb
	As	75	155.770	21.652	0.000	0.24115	12.69	ppb
	Se	82	67.778	6.709	0.000	0.28160	17.52	ppb
	Ag	107	24.074	24.019	-0.000	-0.00041	213.49	ppb
	Ag	109	22.222	33.072	-0.000	-0.00047	240.49	ppb
	Cd	111	33.232	15.873	0.000	0.02334	15.53	ppb
	In	113	76476.131	2.189	0.001			ppb
>	In	115	1724948.247	1.450	1724948.247			ppb
	Sb	121	186.113	12.731	0.000	0.02378	22.52	ppb
	Ba	135	296264.311	1.749	0.120	236.58076	1.36	ppb
	Ba	137	515339.373	1.316	0.209	237.11370	0.95	ppb
>	Tb	159	2466262.891	0.389	2466262.891			ppb
	Tl	205	125.001	11.547	0.000	0.00798	14.97	ppb
	Pb	206	176.390	10.911	0.000	0.03644	13.84	ppb
	Pb	207	345.836	7.329	0.000	0.04025	7.50	ppb
	Pb	208	545.842	2.644	0.000	0.04005	0.40	ppb
>	Bi	209	1205714.154	2.545	1205714.154			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	306705.714		ppb
	Be	9	3.333	0.002421	ppb
>	Sc	45	972741.989		ppb
	V	51	11386.912	1.087714	ppb
	Cr	52	7092.514	0.200141	ppb
	Mn	55	304173.438	25.288599	ppb
	Co	59	1236.743	0.127176	ppb
	Ni	60	1655.693	0.842299	ppb
	Cu	63	1508.447	0.310174	ppb
	Cu	65	786.142	0.343788	ppb
	Zn	66	14432.630	12.449293	ppb
	As	75	120.626	0.209928	ppb
	Se	82	63.889	0.240067	ppb
	Ag	107	19.444	-0.001150	ppb
	Ag	109	19.444	-0.000938	ppb

	Cd	111	31.742	0.022011	ppb
	In	113	75655.946		ppb
>	In	115	1746939.793		ppb
	Sb	121	166.668	0.019327	ppb
	Ba	135	302237.721	240.300298	ppb
	Ba	137	523113.644	239.640071	ppb
>	Tb	159	2477131.851		ppb
	Tl	205	133.334	0.008419	ppb
	Pb	206	154.168	0.030703	ppb
	Pb	207	329.169	0.037406	ppb
	Pb	208	554.175	0.039934	ppb
>	Bi	209	1227328.771		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	294793.717		ppb
	Be	9	0.000	-0.008181	ppb
>	Sc	45	931257.825		ppb
	V	51	11115.457	1.113265	ppb
	Cr	52	7292.658	0.270680	ppb
	Mn	55	298695.301	25.941783	ppb
	Co	59	1231.743	0.132373	ppb
	Ni	60	1444.549	0.767204	ppb
	Cu	63	1411.211	0.302684	ppb
	Cu	65	705.580	0.320944	ppb
	Zn	66	13659.322	12.306233	ppb
	As	75	187.875	0.271111	ppb
	Se	82	72.778	0.336129	ppb
	Ag	107	30.556	0.000557	ppb
	Ag	109	30.556	0.000819	ppb
	Cd	111	39.092	0.027449	ppb
	In	113	78401.977		ppb
>	In	115	1730157.365		ppb
	Sb	121	179.168	0.022300	ppb
	Ba	135	293558.157	234.767736	ppb
	Ba	137	510655.499	235.304459	ppb
>	Tb	159	2462692.336		ppb
	Tl	205	133.334	0.008895	ppb
	Pb	206	187.502	0.040179	ppb
	Pb	207	333.336	0.039935	ppb
	Pb	208	529.175	0.039986	ppb
>	Bi	209	1170597.304		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	301981.829		ppb
	Be	9	0.000	-0.008181	ppb
>	Sc	45	960831.411		ppb
	V	51	11592.764	1.127641	ppb
	Cr	52	7282.651	0.237817	ppb
	Mn	55	294412.737	24.778652	ppb
	Co	59	1198.405	0.124728	ppb
	Ni	60	1550.120	0.798122	ppb
	Cu	63	1455.661	0.302603	ppb
	Cu	65	741.694	0.327396	ppb
	Zn	66	13481.303	11.768674	ppb
	As	75	158.809	0.242415	ppb
	Se	82	66.667	0.268608	ppb
	Ag	107	22.222	-0.000638	ppb
	Ag	109	16.667	-0.001292	ppb
	Cd	111	28.862	0.020574	ppb
	In	113	75370.469		ppb
>	In	115	1697747.583		ppb
	Sb	121	212.502	0.029727	ppb

|	Ba	135	292997.056	234.674235	ppb
|	Ba	137	512248.975	236.396585	ppb
|>	Tb	159	2458964.487		ppb
⌈	Tl	205	108.334	0.006629	ppb
|	Pb	206	187.502	0.038428	ppb
|	Pb	207	375.004	0.043421	ppb
|	Pb	208	554.175	0.040233	ppb
|>	Bi	209	1219216.388		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		90.920			
	Be	9					
>	Sc	45		88.546			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		85.091			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		92.343			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		84.464			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403006-03

Sample Date/Time: Tuesday, March 25, 2014 19:16:07
Sample Type: Sample
Sample Description: MW-8
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403006-03.6697

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	316279.598	2.466	316279.598			ppb
⌊	Be	9	26.111	35.155	0.000	0.07252	39.36	ppb
⌈>	Sc	45	980859.783	1.754	980859.783			ppb
|	V	51	34921.878	2.058	0.034	3.74284	0.65	ppb
|	Cr	52	26853.799	2.366	0.022	2.82602	3.59	ppb
|	Mn	55	627070.741	2.736	0.638	51.79526	1.29	ppb
|	Co	59	10806.394	2.725	0.011	1.11513	1.04	ppb
|	Ni	60	4891.939	4.568	0.005	2.47718	4.30	ppb
|	Cu	63	38603.079	1.361	0.039	8.32572	1.63	ppb
|	Cu	65	18881.699	0.678	0.019	8.68736	2.30	ppb
|	Zn	66	128084.729	2.024	0.131	110.21201	3.60	ppb
|	As	75	677.991	4.336	0.001	0.65667	4.72	ppb
⌊	Se	82	44.259	7.247	0.000	0.08170	29.62	ppb
⌈	Ag	107	77.778	16.366	0.000	0.00722	22.73	ppb
|	Ag	109	103.704	20.104	0.000	0.01162	28.96	ppb
|	Cd	111	1533.305	6.493	0.001	1.04833	7.86	ppb
|	In	113	82701.705	1.032	0.002			ppb
⌊>	In	115	1798530.960	1.934	1798530.960			ppb
⌈	Sb	121	923.654	4.094	0.000	0.18366	3.30	ppb
|	Ba	135	78436.986	0.828	0.031	61.83795	1.74	ppb
|	Ba	137	137145.249	1.287	0.055	62.29168	0.62	ppb
⌊>	Tb	159	2498397.890	1.856	2498397.890			ppb
⌈	Tl	205	211.113	8.900	0.000	0.01376	9.19	ppb
|	Pb	206	3000.450	1.930	0.002	0.64990	2.21	ppb
|	Pb	207	5410.463	1.421	0.004	0.65329	2.48	ppb
|	Pb	208	8097.742	0.627	0.006	0.63440	0.81	ppb
⌊>	Bi	209	1258591.309	1.259	1258591.309			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	322508.041		ppb
⌊	Be	9	16.667	0.042234	ppb
⌈>	Sc	45	1000282.848		ppb
|	V	51	35654.034	3.747455	ppb
|	Cr	52	26750.732	2.742423	ppb
|	Mn	55	646573.250	52.374867	ppb
|	Co	59	11146.208	1.128001	ppb
|	Ni	60	5034.600	2.499926	ppb
|	Cu	63	39003.694	8.247559	ppb
|	Cu	65	18750.897	8.456853	ppb
|	Zn	66	126044.947	106.306000	ppb
|	As	75	648.902	0.622907	ppb
⌊	Se	82	46.111	0.089234	ppb
⌈	Ag	107	63.889	0.005424	ppb
|	Ag	109	125.001	0.015172	ppb

	Cd	111	1628.116	1.136235	ppb
	In	113	82942.553		ppb
>	In	115	1760711.068		ppb
	Sb	121	929.210	0.187421	ppb
	Ba	135	77714.139	62.022006	ppb
	Ba	137	135702.892	62.402556	ppb
>	Tb	159	2467552.695		ppb
	Tl	205	229.169	0.014853	ppb
	Pb	206	3037.961	0.649597	ppb
	Pb	207	5325.723	0.634653	ppb
	Pb	208	8156.150	0.630775	ppb
>	Bi	209	1274813.413		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	318796.843		ppb
	Be	9	35.000	0.098922	ppb
>	Sc	45	974749.024		ppb
	V	51	34893.947	3.764557	ppb
	Cr	52	27534.522	2.939073	ppb
	Mn	55	614293.049	51.061191	ppb
	Co	59	10645.663	1.105533	ppb
	Ni	60	4634.407	2.361231	ppb
	Cu	63	38008.205	8.247590	ppb
	Cu	65	19006.935	8.797758	ppb
	Zn	66	127206.742	110.098977	ppb
	As	75	707.684	0.683745	ppb
	Se	82	40.556	0.054633	ppb
	Ag	107	88.889	0.008641	ppb
	Ag	109	102.778	0.011188	ppb
	Cd	111	1542.194	1.035978	ppb
	In	113	83408.908		ppb
>	In	115	1829142.561		ppb
	Sb	121	958.379	0.186882	ppb
	Ba	135	78626.227	60.679589	ppb
	Ba	137	139114.288	61.860770	ppb
>	Tb	159	2551736.012		ppb
	Tl	205	212.502	0.014055	ppb
	Pb	206	3029.626	0.664405	ppb
	Pb	207	5429.914	0.663718	ppb
	Pb	208	8072.730	0.640304	ppb
>	Bi	209	1243139.683		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	307533.909		ppb
	Be	9	26.667	0.076410	ppb
>	Sc	45	967547.478		ppb
	V	51	34217.653	3.716499	ppb
	Cr	52	26276.143	2.796571	ppb
	Mn	55	620345.923	51.949736	ppb
	Co	59	10627.311	1.111851	ppb
	Ni	60	5006.809	2.570373	ppb
	Cu	63	38797.338	8.482016	ppb
	Cu	65	18887.264	8.807460	ppb
	Zn	66	131002.499	114.231062	ppb
	As	75	677.386	0.663352	ppb
	Se	82	46.111	0.101248	ppb
	Ag	107	80.556	0.007599	ppb
	Ag	109	83.334	0.008486	ppb
	Cd	111	1429.606	0.972774	ppb
	In	113	81753.656		ppb
>	In	115	1805739.250		ppb
	Sb	121	883.372	0.176669	ppb

	Ba	135	78970.591	62.812249	ppb
	Ba	137	136618.567	62.611717	ppb
>	Tb	159	2475904.964		ppb
	Tl	205	191.669	0.012376	ppb
	Pb	206	2933.764	0.635712	ppb
	Pb	207	5475.753	0.661497	ppb
	Pb	208	8064.347	0.632111	ppb
>	Bi	209	1257820.830		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		95.484			
	Be	9					
>	Sc	45		90.949			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		88.721			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		93.546			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		88.169			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCV

Sample Date/Time: Tuesday, March 25, 2014 19:17:53
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCV.6698

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	312588.438	1.627	312588.438			ppb
⌊	Be	9	95769.875	2.107	0.306	298.87126	1.12	ppb
⌈>	Sc	45	978806.842	2.337	978806.842			ppb
|	V	51	2672097.890	0.728	2.729	303.22219	2.44	ppb
|	Cr	52	2274304.715	0.417	2.318	303.01560	1.92	ppb
|	Mn	55	3572832.762	2.076	3.650	296.27432	2.59	ppb
|	Co	59	2878820.082	0.438	2.942	298.28723	2.27	ppb
|	Ni	60	601589.325	1.304	0.615	305.89189	1.07	ppb
|	Cu	63	1342205.673	0.492	1.372	290.79007	2.51	ppb
|	Cu	65	662769.089	0.425	0.677	306.33561	2.06	ppb
|	Zn	66	351923.250	3.020	0.360	303.56707	3.69	ppb
|	As	75	372848.137	0.373	0.381	300.01100	1.96	ppb
⌊	Se	82	38387.058	0.610	0.039	301.91397	1.82	ppb
⌈	Ag	107	2147914.312	0.355	1.182	308.87800	1.15	ppb
|	Ag	109	2013194.864	4.013	1.108	298.12909	4.02	ppb
|	Cd	111	441907.336	1.375	0.243	298.88167	0.81	ppb
|	In	113	514868.555	2.117	0.240			ppb
⌊>	In	115	1817301.945	1.168	1817301.945			ppb
⌈	Sb	121	1353867.156	0.993	0.534	290.07924	2.55	ppb
|	Ba	135	387470.286	1.248	0.153	300.81495	1.39	ppb
|	Ba	137	683842.206	2.067	0.270	305.85412	0.71	ppb
⌊>	Tb	159	2537123.475	1.659	2537123.475			ppb
⌈	Tl	205	4353634.576	0.435	3.337	301.84143	1.00	ppb
|	Pb	206	1384253.373	1.045	1.061	290.85283	0.81	ppb
|	Pb	207	2509573.951	0.552	1.923	293.83341	0.25	ppb
|	Pb	208	3956034.890	0.193	3.032	301.26276	0.54	ppb
⌊>	Bi	209	1304767.747	0.571	1304767.747			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	317155.883		ppb
⌊	Be	9	98081.990	301.683776	ppb
⌈>	Sc	45	1003126.841		ppb
|	V	51	2662724.627	294.719595	ppb
|	Cr	52	2284094.051	296.838175	ppb
|	Mn	55	3564679.304	288.353672	ppb
|	Co	59	2875750.892	290.643761	ppb
|	Ni	60	609152.152	302.178729	ppb
|	Cu	63	1343271.393	283.856256	ppb
|	Cu	65	663795.738	299.276026	ppb
|	Zn	66	347708.424	292.559531	ppb
|	As	75	374133.633	293.659286	ppb
⌊	Se	82	38550.274	295.758724	ppb
⌈	Ag	107	2143768.376	312.287303	ppb
|	Ag	109	1975788.175	296.400968	ppb

|	Cd	111	435275.429	298.245676	ppb
|	In	113	505082.911		ppb
|>	In	115	1793838.827		ppb
⌈	Sb	121	1369376.348	297.894991	ppb
|	Ba	135	387555.538	305.540336	ppb
|	Ba	137	668389.894	303.613794	ppb
|>	Tb	159	2498177.680		ppb
⌈	Tl	205	4338638.367	299.915758	ppb
|	Pb	206	1400526.230	293.417396	ppb
|	Pb	207	2522108.659	294.441559	ppb
|	Pb	208	3949917.619	299.916452	ppb
|>	Bi	209	1308572.772		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	313501.657		ppb
⌊	Be	9	94861.141	295.177808	ppb
⌈>	Sc	45	975560.195		ppb
|	V	51	2694461.533	306.668197	ppb
|	Cr	52	2273662.874	303.849812	ppb
|	Mn	55	3650749.250	303.665808	ppb
|	Co	59	2892679.392	300.615873	ppb
|	Ni	60	602125.739	307.133499	ppb
|	Cu	63	1335138.128	290.110398	ppb
|	Cu	65	664925.551	308.257171	ppb
|	Zn	66	364012.378	314.938004	ppb
|	As	75	373040.960	301.072573	ppb
⌊	Se	82	38492.274	303.665597	ppb
⌈	Ag	107	2143258.876	305.176798	ppb
|	Ag	109	1957887.212	287.096081	ppb
|	Cd	111	443235.217	296.855299	ppb
|	In	113	512903.792		ppb
|>	In	115	1835197.780		ppb
⌈	Sb	121	1346777.059	289.133369	ppb
|	Ba	135	382591.432	297.668191	ppb
|	Ba	137	687012.228	307.977587	ppb
|>	Tb	159	2531398.002		ppb
⌈	Tl	205	4347362.204	300.295208	ppb
|	Pb	206	1379394.050	288.775014	ppb
|	Pb	207	2511898.153	293.031332	ppb
|	Pb	208	3964611.902	300.808217	ppb
|>	Bi	209	1309547.143		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	307107.775		ppb
⌊	Be	9	94366.494	299.752208	ppb
⌈>	Sc	45	957733.491		ppb
|	V	51	2659107.509	308.278772	ppb
|	Cr	52	2265157.220	308.358799	ppb
|	Mn	55	3503069.733	296.803476	ppb
|	Co	59	2868029.962	303.602058	ppb
|	Ni	60	593490.083	308.363443	ppb
|	Cu	63	1348207.499	298.403563	ppb
|	Cu	65	659585.976	311.473637	ppb
|	Zn	66	344048.949	303.203669	ppb
|	As	75	371369.818	305.301144	ppb
⌊	Se	82	38118.624	306.317587	ppb
⌈	Ag	107	2156715.684	309.169906	ppb
|	Ag	109	2105909.205	310.890215	ppb
|	Cd	111	447211.362	301.544036	ppb
|	In	113	526618.962		ppb
|>	In	115	1822869.228		ppb
⌈	Sb	121	1345448.061	283.209374	ppb

|	Ba	135	392263.889	299.236317	ppb
|	Ba	137	696124.495	305.970970	ppb
|>	Tb	159	2581794.741		ppb
⌈	Tl	205	4374903.157	305.313327	ppb
|	Pb	206	1372839.840	290.366077	ppb
|	Pb	207	2494715.040	294.027332	ppb
|	Pb	208	3953575.149	303.063597	ppb
|>	Bi	209	1296183.325		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		94.370			
	Be	9	99.624				
>	Sc	45		90.758			
	V	51	101.074				
	Cr	52	101.005				
	Mn	55	98.758				
	Co	59	99.429				
	Ni	60	101.964				
	Cu	63	96.930				
	Cu	65	102.112				
	Zn	66	101.189				
	As	75	100.004				
	Se	82	100.638				
	Ag	107	102.959				
	Ag	109	99.376				
	Cd	111	99.627				
	In	113					
>	In	115		89.647			
	Sb	121	96.693				
	Ba	135	100.272				
	Ba	137	101.951				
>	Tb	159		94.996			
	Tl	205	100.614				
	Pb	206	96.951				
	Pb	207	97.944				
	Pb	208	100.421				
>	Bi	209		91.403			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: CCV

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCB

Sample Date/Time: Tuesday, March 25, 2014 19:19:38
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCB.6699

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	310261.409	0.724	310261.409			ppb
	Be	9	6.667	25.000	0.000	0.01277	40.53	ppb
>	Sc	45	993995.400	2.295	993995.400			ppb
	V	51	1968.358	3.406	0.000	0.00723	156.67	ppb
	Cr	52	5699.958	1.731	-0.000	-0.00310	637.16	ppb
	Mn	55	498.624	31.605	-0.001	-0.05275	23.01	ppb
	Co	59	88.334	61.343	0.000	0.00725	74.08	ppb
	Ni	60	25.926	53.927	0.000	0.00824	82.74	ppb
	Cu	63	212.039	10.670	0.000	0.02666	17.89	ppb
	Cu	65	109.260	12.015	0.000	0.02796	20.67	ppb
	Zn	66	95.371	30.316	0.000	0.00446	587.76	ppb
	As	75	-98.636	31.396	0.000	0.03426	71.27	ppb
	Se	82	39.815	10.473	0.000	0.04238	63.75	ppb
	Ag	107	216.669	17.949	0.000	0.02601	21.26	ppb
	Ag	109	186.113	16.952	0.000	0.02266	20.50	ppb
	Cd	111	23.891	19.504	0.000	0.01528	20.45	ppb
	In	113	84991.642	1.401	0.001			ppb
>	In	115	1884318.792	0.603	1884318.792			ppb
	Sb	121	387.508	7.051	0.000	0.06327	8.31	ppb
	Ba	135	23.333	43.448	0.000	0.00941	82.47	ppb
	Ba	137	55.000	29.845	0.000	0.01751	41.24	ppb
>	Tb	159	2615156.628	0.564	2615156.628			ppb
	Tl	205	183.335	23.728	0.000	0.01072	25.25	ppb
	Pb	206	62.500	26.667	0.000	0.00884	38.89	ppb
	Pb	207	119.445	26.414	0.000	0.00981	36.14	ppb
	Pb	208	191.668	34.986	0.000	0.00900	52.43	ppb
>	Bi	209	1364494.955	1.352	1364494.955			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	307930.848		ppb
	Be	9	5.000	0.007659	ppb
>	Sc	45	1017487.206		ppb
	V	51	1956.841	0.000751	ppb
	Cr	52	5663.270	-0.025352	ppb
	Mn	55	666.689	-0.040171	ppb
	Co	59	141.668	0.012392	ppb
	Ni	60	38.889	0.014320	ppb
	Cu	63	227.780	0.028893	ppb
	Cu	65	119.445	0.031350	ppb
	Zn	66	86.111	-0.005382	ppb
	As	75	-87.619	0.044552	ppb
	Se	82	42.222	0.053789	ppb
	Ag	107	261.115	0.032303	ppb
	Ag	109	200.002	0.024748	ppb

	Cd	111	27.200	0.017494	ppb
	In	113	86073.007		ppb
>	In	115	1876549.813		ppb
	Sb	121	358.340	0.057717	ppb
	Ba	135	35.000	0.018338	ppb
	Ba	137	68.334	0.023473	ppb
>	Tb	159	2598168.963		ppb
	Tl	205	233.336	0.013837	ppb
	Pb	206	62.500	0.008642	ppb
	Pb	207	133.334	0.011145	ppb
	Pb	208	262.502	0.013908	ppb
>	Bi	209	1384527.893		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	310439.998		ppb
	Be	9	8.333	0.018006	ppb
>	Sc	45	971940.199		ppb
	V	51	2040.408	0.020318	ppb
	Cr	52	5624.915	0.003580	ppb
	Mn	55	475.011	-0.053687	ppb
	Co	59	90.000	0.007665	ppb
	Ni	60	27.778	0.009522	ppb
	Cu	63	222.225	0.029905	ppb
	Cu	65	113.890	0.031253	ppb
	Zn	66	127.779	0.034159	ppb
	As	75	-74.684	0.051850	ppb
	Se	82	35.000	0.011529	ppb
	Ag	107	200.002	0.023756	ppb
	Ag	109	208.336	0.025903	ppb
	Cd	111	25.912	0.016628	ppb
	In	113	85186.296		ppb
>	In	115	1879058.087		ppb
	Sb	121	391.674	0.063925	ppb
	Ba	135	16.667	0.004322	ppb
	Ba	137	60.000	0.019588	ppb
>	Tb	159	2622659.513		ppb
	Tl	205	154.168	0.008936	ppb
	Pb	206	79.167	0.012364	ppb
	Pb	207	141.667	0.012486	ppb
	Pb	208	183.334	0.008581	ppb
>	Bi	209	1348196.422		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	312413.381		ppb
	Be	9	6.667	0.012636	ppb
>	Sc	45	992558.794		ppb
	V	51	1907.825	0.000630	ppb
	Cr	52	5811.688	0.012462	ppb
	Mn	55	354.173	-0.064393	ppb
	Co	59	33.333	0.001681	ppb
	Ni	60	11.111	0.000871	ppb
	Cu	63	186.113	0.021186	ppb
	Cu	65	94.445	0.021291	ppb
	Zn	66	72.222	-0.015401	ppb
	As	75	-133.607	0.006383	ppb
	Se	82	42.222	0.061817	ppb
	Ag	107	188.891	0.021957	ppb
	Ag	109	150.001	0.017342	ppb
	Cd	111	18.562	0.011703	ppb
	In	113	83715.621		ppb
>	In	115	1897348.478		ppb
	Sb	121	412.509	0.068178	ppb

|	Ba	135	18.333	0.005564	ppb
|	Ba	137	36.667	0.009480	ppb
|>	Tb	159	2624641.407		ppb
⌈	Tl	205	162.501	0.009394	ppb
|	Pb	206	45.833	0.005500	ppb
|	Pb	207	83.334	0.005788	ppb
|	Pb	208	129.167	0.004501	ppb
|>	Bi	209	1360760.550		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		93.667			
	Be	9					
>	Sc	45		92.167			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		92.953			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		97.918			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		95.588			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: CCB
Page 4

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403006-04

Sample Date/Time: Tuesday, March 25, 2014 19:21:24
Sample Type: Sample
Sample Description: MW-9
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403006-04.6700

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	308012.776	1.378	308012.776			ppb
⌊	Be	9	7.222	66.617	0.000	0.01463	103.59	ppb
⌈>	Sc	45	984472.038	3.309	984472.038			ppb
|	V	51	3100.293	4.814	0.001	0.13710	12.08	ppb
|	Cr	52	8923.983	3.165	0.003	0.43240	8.96	ppb
|	Mn	55	5099516.902	2.261	5.181	420.54583	2.57	ppb
|	Co	59	38811.861	2.106	0.039	3.99703	2.61	ppb
|	Ni	60	3555.262	0.632	0.004	1.79371	3.42	ppb
|	Cu	63	1688.106	3.150	0.002	0.34511	3.66	ppb
|	Cu	65	922.265	5.329	0.001	0.40185	3.23	ppb
|	Zn	66	6589.211	4.806	0.007	5.57310	2.85	ppb
|	As	75	84.110	52.475	0.000	0.17913	18.68	ppb
⌊	Se	82	38.333	23.946	0.000	0.03316	193.93	ppb
⌈	Ag	107	151.853	71.910	0.000	0.01852	87.60	ppb
|	Ag	109	153.705	66.876	0.000	0.01961	80.23	ppb
|	Cd	111	82.732	8.204	0.000	0.05756	8.53	ppb
|	In	113	81821.145	3.527	0.003			ppb
⌊>	In	115	1757049.148	0.549	1757049.148			ppb
⌈	Sb	121	294.449	26.259	0.000	0.04720	35.30	ppb
|	Ba	135	470056.414	1.397	0.189	373.05032	1.01	ppb
|	Ba	137	831245.607	2.175	0.335	380.09663	1.78	ppb
⌊>	Tb	159	2481598.977	0.408	2481598.977			ppb
⌈	Tl	205	380.564	39.513	0.000	0.02670	42.64	ppb
|	Pb	206	512.513	11.177	0.000	0.11079	12.59	ppb
|	Pb	207	920.855	9.631	0.001	0.11109	10.93	ppb
|	Pb	208	1488.956	4.238	0.001	0.11560	5.36	ppb
⌊>	Bi	209	1227851.372	0.998	1227851.372			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	305300.343		ppb
⌊	Be	9	10.000	0.023773	ppb
⌈>	Sc	45	947476.167		ppb
|	V	51	3068.484	0.146902	ppb
|	Cr	52	8817.219	0.463460	ppb
|	Mn	55	5033907.041	431.165824	ppb
|	Co	59	38361.774	4.103138	ppb
|	Ni	60	3558.967	1.864503	ppb
|	Cu	63	1672.362	0.355616	ppb
|	Cu	65	869.482	0.393320	ppb
|	Zn	66	6335.340	5.568253	ppb
|	As	75	59.606	0.161841	ppb
⌊	Se	82	32.222	-0.003892	ppb
⌈	Ag	107	94.445	0.010069	ppb
|	Ag	109	100.001	0.011471	ppb

	Cd	111	83.638	0.058523	ppb
	In	113	81690.644		ppb
>	In	115	1746973.228		ppb
	Sb	121	287.504	0.045742	ppb
	Ba	135	471782.463	374.534133	ppb
	Ba	137	833429.182	381.219443	ppb
>	Tb	159	2480906.887		ppb
	Tl	205	295.838	0.020177	ppb
	Pb	206	462.511	0.098540	ppb
	Pb	207	825.017	0.098092	ppb
	Pb	208	1416.729	0.108610	ppb
>	Bi	209	1239802.682		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	305834.636		ppb
	Be	9	1.667	-0.002865	ppb
>	Sc	45	997058.443		ppb
	V	51	2969.508	0.117978	ppb
	Cr	52	8710.459	0.388983	ppb
	Mn	55	5031996.074	409.564355	ppb
	Co	59	38318.274	3.894586	ppb
	Ni	60	3531.179	1.757681	ppb
	Cu	63	1644.580	0.331101	ppb
	Cu	65	966.713	0.416787	ppb
	Zn	66	6488.215	5.416977	ppb
	As	75	57.663	0.157845	ppb
	Se	82	33.889	-0.004043	ppb
	Ag	107	83.334	0.008271	ppb
	Ag	109	88.889	0.009610	ppb
	Cd	111	75.537	0.052245	ppb
	In	113	79002.509		ppb
>	In	115	1766202.228		ppb
	Sb	121	220.836	0.031315	ppb
	Ba	135	462800.334	368.750008	ppb
	Ba	137	812170.680	372.857084	ppb
>	Tb	159	2471846.799		ppb
	Tl	205	291.671	0.020070	ppb
	Pb	206	500.013	0.107857	ppb
	Pb	207	937.522	0.113025	ppb
	Pb	208	1516.734	0.117751	ppb
>	Bi	209	1228427.164		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	312903.349		ppb
	Be	9	10.000	0.022996	ppb
>	Sc	45	1008881.505		ppb
	V	51	3262.889	0.146410	ppb
	Cr	52	9244.271	0.444755	ppb
	Mn	55	5232647.591	420.907309	ppb
	Co	59	39755.535	3.993358	ppb
	Ni	60	3575.639	1.758958	ppb
	Cu	63	1747.375	0.348603	ppb
	Cu	65	930.599	0.395457	ppb
	Zn	66	6944.077	5.734066	ppb
	As	75	135.062	0.217694	ppb
	Se	82	48.889	0.107416	ppb
	Ag	107	277.782	0.037233	ppb
	Ag	109	272.226	0.037739	ppb
	Cd	111	89.021	0.061919	ppb
	In	113	84770.284		ppb
>	In	115	1757971.989		ppb
	Sb	121	375.007	0.064544	ppb

|	Ba	135	475586.446	375.866831	ppb
|	Ba	137	848136.958	386.213377	ppb
⌊>	Tb	159	2492043.245		ppb
⌈	Tl	205	554.182	0.039840	ppb
|	Pb	206	575.017	0.125979	ppb
|	Pb	207	1000.026	0.122139	ppb
|	Pb	208	1533.404	0.120436	ppb
⌊>	Bi	209	1215324.271		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		92.988			
	Be	9					
>	Sc	45		91.284			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		86.675			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		92.917			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		86.015			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403006-05

Sample Date/Time: Tuesday, March 25, 2014 19:23:09
Sample Type: Sample
Sample Description: MW-12
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403006-05.6701

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	301610.870	2.389	301610.870			ppb
⌊	Be	9	1.667	0.000	-0.000	-0.00279	4.62	ppb
⌈>	Sc	45	937194.575	4.202	937194.575			ppb
|	V	51	7647.758	3.457	0.006	0.69398	1.83	ppb
|	Cr	52	7629.577	2.027	0.002	0.31185	7.76	ppb
|	Mn	55	87259.817	2.839	0.092	7.47246	4.77	ppb
|	Co	59	12774.828	3.508	0.014	1.38091	3.06	ppb
|	Ni	60	5943.433	1.431	0.006	3.15577	5.41	ppb
|	Cu	63	6127.803	0.233	0.006	1.36926	4.51	ppb
|	Cu	65	2910.609	4.052	0.003	1.38316	1.94	ppb
|	Zn	66	9289.499	2.339	0.010	8.29747	3.11	ppb
|	As	75	46.774	35.771	0.000	0.15126	8.32	ppb
⌊	Se	82	77.223	2.492	0.000	0.37003	11.52	ppb
⌈	Ag	107	101.852	21.184	0.000	0.01141	28.35	ppb
|	Ag	109	96.297	14.230	0.000	0.01113	19.56	ppb
|	Cd	111	33.185	76.602	0.000	0.02313	76.81	ppb
|	In	113	76858.430	3.995	0.001			ppb
⌊>	In	115	1720651.134	2.170	1720651.134			ppb
⌈	Sb	121	138.890	14.799	0.000	0.01396	33.38	ppb
|	Ba	135	365788.463	2.905	0.151	297.73203	2.26	ppb
|	Ba	137	635383.970	0.587	0.263	298.01284	0.44	ppb
⌊>	Tb	159	2419468.166	0.646	2419468.166			ppb
⌈	Tl	205	68.056	27.608	0.000	0.00384	36.27	ppb
|	Pb	206	381.952	7.264	0.000	0.08575	9.90	ppb
|	Pb	207	683.345	6.926	0.001	0.08544	4.38	ppb
|	Pb	208	938.914	7.391	0.001	0.07462	5.54	ppb
⌊>	Bi	209	1172025.992	2.812	1172025.992			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	301440.869		ppb
⌊	Be	9	1.667	-0.002787	ppb
⌈>	Sc	45	944729.477		ppb
|	V	51	7791.068	0.703372	ppb
|	Cr	52	7696.294	0.311925	ppb
|	Mn	55	90116.730	7.649467	ppb
|	Co	59	13205.380	1.415413	ppb
|	Ni	60	5862.829	3.083465	ppb
|	Cu	63	6115.758	1.353776	ppb
|	Cu	65	2992.114	1.410757	ppb
|	Zn	66	9498.954	8.411791	ppb
|	As	75	50.415	0.154328	ppb
⌊	Se	82	76.111	0.354724	ppb
⌈	Ag	107	119.445	0.013729	ppb
|	Ag	109	105.556	0.012254	ppb

	Cd	111	55.383	0.038470	ppb
	In	113	79346.886		ppb
>	In	115	1754808.622		ppb
	Sb	121	125.001	0.010648	ppb
	Ba	135	377117.618	304.902021	ppb
	Ba	137	637169.158	296.821300	ppb
>	Tb	159	2435983.951		ppb
	Tl	205	50.000	0.002415	ppb
	Pb	206	395.841	0.088002	ppb
	Pb	207	704.179	0.087371	ppb
	Pb	208	916.690	0.072065	ppb
>	Bi	209	1182976.566		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	308900.062		ppb
	Be	9	1.667	-0.002917	ppb
>	Sc	45	972265.490		ppb
	V	51	7809.517	0.679529	ppb
	Cr	52	7739.661	0.287600	ppb
	Mn	55	85707.387	7.062058	ppb
	Co	59	12808.197	1.333861	ppb
	Ni	60	5935.094	3.032990	ppb
	Cu	63	6124.097	1.316727	ppb
	Cu	65	2964.328	1.357260	ppb
	Zn	66	9304.327	8.002380	ppb
	As	75	61.385	0.162019	ppb
	Se	82	76.111	0.337148	ppb
	Ag	107	77.778	0.007715	ppb
	Ag	109	80.556	0.008624	ppb
	Cd	111	38.716	0.027243	ppb
	In	113	77801.481		ppb
>	In	115	1726351.677		ppb
	Sb	121	162.501	0.019292	ppb
	Ba	135	364200.143	296.711021	ppb
	Ba	137	637886.103	299.429059	ppb
>	Tb	159	2417486.272		ppb
	Tl	205	87.500	0.005198	ppb
	Pb	206	350.006	0.076355	ppb
	Pb	207	716.680	0.087816	ppb
	Pb	208	1016.695	0.079386	ppb
>	Bi	209	1198108.245		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	294491.678		ppb
	Be	9	1.667	-0.002660	ppb
>	Sc	45	894588.759		ppb
	V	51	7342.687	0.699040	ppb
	Cr	52	7452.776	0.336024	ppb
	Mn	55	85955.335	7.705857	ppb
	Co	59	12310.907	1.393471	ppb
	Ni	60	6032.374	3.350865	ppb
	Cu	63	6143.553	1.437280	ppb
	Cu	65	2775.385	1.381470	ppb
	Zn	66	9065.218	8.478242	ppb
	As	75	28.522	0.137421	ppb
	Se	82	79.445	0.418209	ppb
	Ag	107	108.334	0.012785	ppb
	Ag	109	102.778	0.012522	ppb
	Cd	111	5.454	0.003667	ppb
	In	113	73426.923		ppb
>	In	115	1680793.103		ppb
	Sb	121	129.168	0.011950	ppb

|	Ba	135	356047.629	291.583039	ppb
|	Ba	137	631096.650	297.788165	ppb
|>	Tb	159	2404934.275		ppb
⌈	Tl	205	66.667	0.003905	ppb
|	Pb	206	400.008	0.092887	ppb
|	Pb	207	629.177	0.081120	ppb
|	Pb	208	883.357	0.072402	ppb
|>	Bi	209	1134993.164		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		91.056			
	Be	9					
>	Sc	45		86.900			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		84.879			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		90.591			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		82.104			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403006-06

Sample Date/Time: Tuesday, March 25, 2014 19:24:53
Sample Type: Sample
Sample Description: MW-17
Number of Replicates: 3
Batch ID: 1403006
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403006-06.6702

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	302483.640	2.211	302483.640			ppb
|	Be	9	3.333	132.288	0.000	0.00278	526.70	ppb
⌈>	Sc	45	957404.258	2.411	957404.258			ppb
|	V	51	3113.945	3.407	0.001	0.14839	3.01	ppb
|	Cr	52	8443.563	1.148	0.003	0.40012	4.79	ppb
|	Mn	55	162345.287	2.640	0.168	13.67228	2.14	ppb
|	Co	59	11789.168	1.332	0.012	1.24690	1.10	ppb
|	Ni	60	3030.089	3.210	0.003	1.57017	1.83	ppb
|	Cu	63	5335.684	4.063	0.005	1.16270	2.51	ppb
|	Cu	65	2632.755	6.760	0.003	1.22125	4.77	ppb
|	Zn	66	15056.699	1.581	0.016	13.20415	2.33	ppb
|	As	75	-71.935	31.925	0.000	0.05336	33.55	ppb
|	Se	82	46.482	12.267	0.000	0.10899	50.79	ppb
⌈	Ag	107	28.704	62.965	0.000	0.00033	805.60	ppb
|	Ag	109	32.407	13.093	0.000	0.00122	51.66	ppb
|	Cd	111	57.654	15.270	0.000	0.04159	16.13	ppb
|	In	113	76044.999	0.627	0.001			ppb
⌊>	In	115	1692060.627	2.392	1692060.627			ppb
⌈	Sb	121	113.890	20.803	0.000	0.00903	58.62	ppb
|	Ba	135	282434.423	2.841	0.120	236.37336	1.94	ppb
|	Ba	137	493352.858	2.232	0.210	237.91159	1.40	ppb
⌊>	Tb	159	2353216.273	1.899	2353216.273			ppb
⌈	Tl	205	327.783	5.292	0.000	0.02416	6.87	ppb
|	Pb	206	290.282	11.602	0.000	0.06488	12.44	ppb
|	Pb	207	529.174	7.087	0.000	0.06616	8.91	ppb
|	Pb	208	806.964	7.417	0.001	0.06415	6.96	ppb
⌊>	Bi	209	1160219.727	1.522	1160219.727			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	305893.049		ppb
⌊	Be	9	0.000	-0.008181	ppb
⌈>	Sc	45	969182.510		ppb
|	V	51	3138.470	0.146866	ppb
|	Cr	52	8543.648	0.399328	ppb
|	Mn	55	167156.315	13.906341	ppb
|	Co	59	11867.037	1.239657	ppb
|	Ni	60	3128.267	1.601498	ppb
|	Cu	63	5554.320	1.196346	ppb
|	Cu	65	2789.278	1.279955	ppb
|	Zn	66	15331.188	13.278022	ppb
|	As	75	-60.681	0.063050	ppb
⌊	Se	82	45.000	0.091798	ppb
⌈	Ag	107	47.222	0.003050	ppb
|	Ag	109	33.333	0.001234	ppb

	Cd	111	59.621	0.041892	ppb
	In	113	76520.823		ppb
	In	115	1735951.019		ppb
	Sb	121	120.834	0.010089	ppb
	Ba	135	287350.026	235.520693	ppb
	Ba	137	500851.170	236.529013	ppb
	Tb	159	2402905.193		ppb
	Tl	205	308.338	0.022407	ppb
	Pb	206	320.838	0.071369	ppb
	Pb	207	529.174	0.065459	ppb
	Pb	208	875.024	0.069305	ppb
	Bi	209	1171180.906		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
	Li	6	306781.314		ppb
	Be	9	1.667	-0.002881	ppb
	Sc	45	972219.674		ppb
	V	51	3205.641	0.153419	ppb
	Cr	52	8436.891	0.381378	ppb
	Mn	55	160947.363	13.344218	ppb
	Co	59	11892.067	1.238389	ppb
	Ni	60	3028.236	1.545280	ppb
	Cu	63	5331.977	1.144069	ppb
	Cu	65	2669.801	1.220305	ppb
	Zn	66	14905.545	12.866687	ppb
	As	75	-98.356	0.032704	ppb
	Se	82	41.667	0.064270	ppb
	Ag	107	27.778	0.000252	ppb
	Ag	109	36.111	0.001837	ppb
	Cd	111	48.033	0.034737	ppb
	In	113	76046.391		ppb
	In	115	1684002.604		ppb
	Sb	121	133.334	0.013722	ppb
	Ba	135	286777.265	241.330913	ppb
	Ba	137	498497.844	241.707044	ppb
	Tb	159	2340381.149		ppb
	Tl	205	333.339	0.024372	ppb
	Pb	206	254.170	0.055842	ppb
	Pb	207	491.673	0.060652	ppb
	Pb	208	783.351	0.061616	ppb
	Bi	209	1169626.261		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
	Li	6	294776.556		ppb
	Be	9	8.333	0.019398	ppb
	Sc	45	930810.589		ppb
	V	51	2997.723	0.144898	ppb
	Cr	52	8350.151	0.419655	ppb
	Mn	55	158932.181	13.766284	ppb
	Co	59	11608.401	1.262661	ppb
	Ni	60	2933.764	1.563728	ppb
	Cu	63	5120.755	1.147685	ppb
	Cu	65	2439.186	1.163500	ppb
	Zn	66	14933.364	13.467739	ppb
	As	75	-56.768	0.064327	ppb
	Se	82	52.778	0.170907	ppb
	Ag	107	11.111	-0.002305	ppb
	Ag	109	27.778	0.000580	ppb
	Cd	111	65.308	0.048145	ppb
	In	113	75567.783		ppb
	In	115	1656228.257		ppb
	Sb	121	87.500	0.003290	ppb

|	Ba	135	273175.978	232.268460	ppb
|	Ba	137	480709.561	235.498720	ppb
|>	Tb	159	2316362.478		ppb
⌈	Tl	205	341.673	0.025707	ppb
|	Pb	206	295.838	0.067420	ppb
|	Pb	207	566.675	0.072382	ppb
|	Pb	208	762.516	0.061538	ppb
|>	Bi	209	1139852.012		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		91.319			
	Be	9					
>	Sc	45		88.774			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		83.469			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		88.110			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		81.277			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: LLCCV

Sample Date/Time: Tuesday, March 25, 2014 19:26:38
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\LLCCV.6703

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	322463.127	4.436	322463.127			ppb
	Be	9	300.005	6.759	0.001	0.90025	7.47	ppb
>	Sc	45	963117.604	5.541	963117.604			ppb
	V	51	41473.347	2.500	0.041	4.57728	3.39	ppb
	Cr	52	19323.671	3.906	0.014	1.87132	3.26	ppb
	Mn	55	11947.416	3.530	0.011	0.91439	2.65	ppb
	Co	59	8965.134	4.668	0.009	0.94248	2.36	ppb
	Ni	60	1861.284	1.470	0.002	0.95864	4.77	ppb
	Cu	63	8966.058	3.448	0.009	1.95654	2.20	ppb
	Cu	65	4263.873	3.532	0.004	1.98247	2.91	ppb
	Zn	66	2271.554	1.962	0.002	1.91871	6.45	ppb
	As	75	1044.147	4.343	0.001	0.96883	9.01	ppb
	Se	82	628.723	1.329	0.001	4.77536	7.26	ppb
	Ag	107	6668.891	3.217	0.004	0.95023	2.94	ppb
	Ag	109	6232.497	1.139	0.003	0.91463	1.88	ppb
	Cd	111	1409.589	3.539	0.001	0.94841	3.24	ppb
	In	113	82269.111	2.529	0.001			ppb
>	In	115	1826267.876	1.902	1826267.876			ppb
	Sb	121	8534.196	0.748	0.003	1.88625	2.74	ppb
	Ba	135	11785.276	2.180	0.005	9.51462	1.27	ppb
	Ba	137	20651.877	3.593	0.008	9.60540	0.72	ppb
>	Tb	159	2438186.056	3.390	2438186.056			ppb
	Tl	205	12534.245	3.329	0.010	0.89331	2.73	ppb
	Pb	206	4175.873	3.768	0.003	0.89953	2.39	ppb
	Pb	207	7690.379	1.845	0.006	0.92355	0.15	ppb
	Pb	208	11785.983	1.158	0.009	0.91938	2.01	ppb
>	Bi	209	1267232.617	1.904	1267232.617			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	337773.126		ppb
	Be	9	313.338	0.896792	ppb
>	Sc	45	995042.546		ppb
	V	51	42286.806	4.508949	ppb
	Cr	52	20001.650	1.874359	ppb
	Mn	55	12303.397	0.910299	ppb
	Co	59	9015.729	0.916879	ppb
	Ni	60	1891.846	0.941417	ppb
	Cu	63	9134.726	1.927570	ppb
	Cu	65	4278.693	1.923141	ppb
	Zn	66	2225.248	1.811184	ppb
	As	75	1014.961	0.915141	ppb
	Se	82	629.464	4.607021	ppb
	Ag	107	6891.263	0.982056	ppb
	Ag	109	6310.324	0.925981	ppb

	Cd	111	1461.944	0.983661	ppb
	In	113	83711.420		ppb
>	In	115	1826152.776		ppb
	Sb	121	8582.848	1.860984	ppb
	Ba	135	11895.404	9.425374	ppb
	Ba	137	21202.453	9.681699	ppb
>	Tb	159	2483549.413		ppb
	Tl	205	13004.283	0.919431	ppb
	Pb	206	4321.767	0.923759	ppb
	Pb	207	7739.017	0.921931	ppb
	Pb	208	11941.716	0.923898	ppb
>	Bi	209	1277463.443		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	320176.555		ppb
	Be	9	276.670	0.834805	ppb
>	Sc	45	992802.093		ppb
	V	51	41827.168	4.468165	ppb
	Cr	52	19458.914	1.808841	ppb
	Mn	55	12057.265	0.892440	ppb
	Co	59	9356.041	0.953704	ppb
	Ni	60	1852.949	0.924056	ppb
	Cu	63	9154.188	1.936117	ppb
	Cu	65	4406.526	1.985768	ppb
	Zn	66	2314.157	1.891050	ppb
	As	75	1021.089	0.921811	ppb
	Se	82	620.019	4.544736	ppb
	Ag	107	6652.212	0.929996	ppb
	Ag	109	6215.820	0.894875	ppb
	Cd	111	1404.211	0.927077	ppb
	In	113	83211.439		ppb
>	In	115	1861057.080		ppb
	Sb	121	8557.827	1.851992	ppb
	Ba	135	11968.825	9.465779	ppb
	Ba	137	20945.246	9.546204	ppb
>	Tb	159	2488221.021		ppb
	Tl	205	12391.005	0.871155	ppb
	Pb	206	4196.714	0.891943	ppb
	Pb	207	7801.530	0.924251	ppb
	Pb	208	11687.248	0.899081	ppb
>	Bi	209	1284563.304		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	309439.701		ppb
	Be	9	310.005	0.969145	ppb
>	Sc	45	901508.174		ppb
	V	51	40306.067	4.754737	ppb
	Cr	52	18510.449	1.930749	ppb
	Mn	55	11481.588	0.940436	ppb
	Co	59	8523.631	0.956845	ppb
	Ni	60	1839.058	1.010442	ppb
	Cu	63	8609.260	2.005923	ppb
	Cu	65	4106.399	2.038487	ppb
	Zn	66	2275.259	2.053906	ppb
	As	75	1096.389	1.069525	ppb
	Se	82	636.687	5.174312	ppb
	Ag	107	6463.199	0.938642	ppb
	Ag	109	6171.348	0.923044	ppb
	Cd	111	1362.611	0.934495	ppb
	In	113	79884.474		ppb
>	In	115	1791593.772		ppb
	Sb	121	8461.912	1.945778	ppb

|	Ba	135	11491.599	9.652695	ppb
|	Ba	137	19807.932	9.588301	ppb
|>	Tb	159	2342787.735		ppb
⌈	Tl	205	12207.447	0.889359	ppb
|	Pb	206	4009.137	0.882896	ppb
|	Pb	207	7530.590	0.924460	ppb
|	Pb	208	11728.987	0.935164	ppb
|>	Bi	209	1239671.104		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		97.351			
	Be	9	90.025				
>	Sc	45		89.304			
	V	51	91.546				
	Cr	52	93.566				
	Mn	55	91.439				
	Co	59	94.248				
	Ni	60	95.864				
	Cu	63	97.827				
	Cu	65	99.123				
	Zn	66	95.936				
	As	75	96.883				
	Se	82	95.507				
	Ag	107	95.023				
	Ag	109	91.463				
	Cd	111	94.841				
	In	113					
>	In	115		90.089			
	Sb	121	94.313				
	Ba	135	95.146				
	Ba	137	96.054				
>	Tb	159		91.292			
	Tl	205	89.331				
	Pb	206	89.953				
	Pb	207	92.355				
	Pb	208	91.938				
>	Bi	209		88.774			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCV

Sample Date/Time: Tuesday, March 25, 2014 19:28:24
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCV.6704

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	320064.441	1.601	320064.441			ppb
	Be	9	99789.983	1.818	0.312	304.14317	0.52	ppb
>	Sc	45	983733.900	2.031	983733.900			ppb
	V	51	2692602.787	3.248	2.735	303.85835	1.22	ppb
	Cr	52	2332484.803	2.715	2.365	309.10623	0.75	ppb
	Mn	55	3605077.143	0.143	3.665	297.45522	2.04	ppb
	Co	59	2925603.912	1.075	2.975	301.58720	2.15	ppb
	Ni	60	599443.380	1.962	0.609	303.26238	1.85	ppb
	Cu	63	1356688.025	2.827	1.379	292.38372	2.82	ppb
	Cu	65	655229.879	1.708	0.666	301.30253	2.27	ppb
	Zn	66	357774.724	0.261	0.364	307.04178	1.79	ppb
	As	75	378873.685	0.483	0.385	303.30220	1.55	ppb
	Se	82	38518.121	1.219	0.039	301.37923	1.00	ppb
	Ag	107	2139632.431	0.631	1.147	299.65279	1.18	ppb
	Ag	109	1973838.225	1.132	1.058	284.66931	1.18	ppb
	Cd	111	447152.269	1.428	0.240	294.58555	2.46	ppb
	In	113	517097.458	1.713	0.233			ppb
>	In	115	1866030.591	1.284	1866030.591			ppb
	Sb	121	1374708.373	0.893	0.540	293.74981	1.68	ppb
	Ba	135	390403.198	1.116	0.153	302.30006	0.88	ppb
	Ba	137	675028.508	1.964	0.265	301.16673	1.90	ppb
>	Tb	159	2543541.037	0.939	2543541.037			ppb
	Tl	205	4265922.813	1.718	3.328	301.05627	1.64	ppb
	Pb	206	1350239.730	1.909	1.053	288.80612	2.05	ppb
	Pb	207	2472536.036	1.374	1.929	294.69900	1.56	ppb
	Pb	208	3911019.101	0.869	3.051	303.18027	1.08	ppb
>	Bi	209	1281757.654	0.227	1281757.654			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	325905.570		ppb
	Be	9	101691.105	304.387453	ppb
>	Sc	45	985028.494		ppb
	V	51	2694568.419	303.730449	ppb
	Cr	52	2326834.582	307.976850	ppb
	Mn	55	3599153.145	296.494243	ppb
	Co	59	2890265.602	297.477835	ppb
	Ni	60	588808.467	297.453514	ppb
	Cu	63	1398972.701	301.059700	ppb
	Cu	65	667897.459	306.658549	ppb
	Zn	66	358216.965	306.942898	ppb
	As	75	379021.886	302.958563	ppb
	Se	82	38747.144	302.737233	ppb
	Ag	107	2144487.671	303.655883	ppb
	Ag	109	1978203.117	288.464117	ppb

	Cd	111	454438.972	302.668634	ppb
	In	113	509156.911		ppb
>	In	115	1845447.017		ppb
	Sb	121	1373158.652	295.403214	ppb
	Ba	135	385373.596	300.448954	ppb
	Ba	137	660715.921	296.797693	ppb
>	Tb	159	2526207.327		ppb
	Tl	205	4254138.869	299.560058	ppb
	Pb	206	1322477.823	282.233918	ppb
	Pb	207	2433428.403	289.387795	ppb
	Pb	208	3872143.525	299.495362	ppb
>	Bi	209	1284610.495		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	316318.304		ppb
	Be	9	98076.941	302.467053	ppb
>	Sc	45	963142.864		ppb
	V	51	2604192.517	300.211081	ppb
	Cr	52	2272177.038	307.575281	ppb
	Mn	55	3607599.619	303.945491	ppb
	Co	59	2936063.669	309.058366	ppb
	Ni	60	597446.088	308.675465	ppb
	Cu	63	1324137.102	291.429517	ppb
	Cu	65	646691.662	303.668906	ppb
	Zn	66	356700.281	312.589895	ppb
	As	75	376975.214	308.167687	ppb
	Se	82	37978.091	303.471755	ppb
	Ag	107	2124377.386	298.405817	ppb
	Ag	109	1949633.517	282.027420	ppb
	Cd	111	442546.517	292.393915	ppb
	In	113	515481.388		ppb
>	In	115	1860304.385		ppb
	Sb	121	1363284.658	288.191469	ppb
	Ba	135	393028.032	301.101557	ppb
	Ba	137	677483.978	299.051204	ppb
>	Tb	159	2570799.947		ppb
	Tl	205	4199259.844	297.041855	ppb
	Pb	206	1354840.030	290.456877	ppb
	Pb	207	2489349.293	297.385846	ppb
	Pb	208	3935161.660	305.755342	ppb
>	Bi	209	1278788.705		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	317969.449		ppb
	Be	9	99601.902	305.575018	ppb
>	Sc	45	1003030.343		ppb
	V	51	2779047.425	307.633521	ppb
	Cr	52	2398442.788	311.766553	ppb
	Mn	55	3608478.664	291.925924	ppb
	Co	59	2950482.466	298.225396	ppb
	Ni	60	612075.584	303.658174	ppb
	Cu	63	1346954.271	284.661948	ppb
	Cu	65	651100.517	293.580142	ppb
	Zn	66	358406.926	301.592562	ppb
	As	75	380623.956	298.780354	ppb
	Se	82	38829.128	297.928704	ppb
	Ag	107	2150032.236	296.896660	ppb
	Ag	109	1993678.039	283.516386	ppb
	Cd	111	444471.318	288.694091	ppb
	In	113	526654.074		ppb
>	In	115	1892340.371		ppb
	Sb	121	1387681.809	297.654746	ppb

|	Ba	135	392807.966	305.349662	ppb
|	Ba	137	686885.626	307.651284	ppb
|>	Tb	159	2533615.836		ppb
⌈	Tl	205	4344369.725	306.566909	ppb
|	Pb	206	1373401.336	293.727565	ppb
|	Pb	207	2494830.412	297.323350	ppb
|	Pb	208	3925752.119	304.290118	ppb
|>	Bi	209	1281873.763		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		96.627			
	Be	9	101.381				
>	Sc	45		91.215			
	V	51	101.286				
	Cr	52	103.035				
	Mn	55	99.152				
	Co	59	100.529				
	Ni	60	101.087				
	Cu	63	97.461				
	Cu	65	100.434				
	Zn	66	102.347				
	As	75	101.101				
	Se	82	100.460				
	Ag	107	99.884				
	Ag	109	94.890				
	Cd	111	98.195				
	In	113					
>	In	115		92.051			
	Sb	121	97.917				
	Ba	135	100.767				
	Ba	137	100.389				
>	Tb	159		95.237			
	Tl	205	100.352				
	Pb	206	96.269				
	Pb	207	98.233				
	Pb	208	101.060				
>	Bi	209		89.792			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCB

Sample Date/Time: Tuesday, March 25, 2014 19:30:08
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCB.6705

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	327095.448	0.929	327095.448			ppb
	Be	9	3.333	100.000	0.000	0.00174	566.53	ppb
>	Sc	45	1030104.608	1.023	1030104.608			ppb
	V	51	2008.752	0.784	0.000	0.00374	26.20	ppb
	Cr	52	5756.101	2.268	-0.000	-0.02254	44.04	ppb
	Mn	55	838.926	29.194	-0.000	-0.02726	70.69	ppb
	Co	59	115.556	26.175	0.000	0.00965	30.98	ppb
	Ni	60	27.778	69.282	0.000	0.00872	106.61	ppb
	Cu	63	179.631	12.876	0.000	0.01841	26.32	ppb
	Cu	65	100.001	12.108	0.000	0.02214	22.29	ppb
	Zn	66	87.963	17.392	-0.000	-0.00481	245.62	ppb
	As	75	-119.997	34.286	0.000	0.02063	152.75	ppb
	Se	82	40.185	12.544	0.000	0.03476	111.61	ppb
	Ag	107	231.484	18.331	0.000	0.02829	21.61	ppb
	Ag	109	225.003	14.238	0.000	0.02843	16.57	ppb
	Cd	111	27.098	21.566	0.000	0.01747	21.74	ppb
	In	113	84149.819	0.946	0.001			ppb
>	In	115	1871529.198	0.551	1871529.198			ppb
	Sb	121	390.286	22.807	0.000	0.06494	27.23	ppb
	Ba	135	22.222	18.875	0.000	0.00885	40.16	ppb
	Ba	137	57.222	10.229	0.000	0.01886	15.23	ppb
>	Tb	159	2575440.096	2.117	2575440.096			ppb
	Tl	205	211.113	10.870	0.000	0.01290	13.56	ppb
	Pb	206	61.111	30.745	0.000	0.00884	45.50	ppb
	Pb	207	138.889	18.330	0.000	0.01235	25.54	ppb
	Pb	208	230.557	14.496	0.000	0.01223	20.57	ppb
>	Bi	209	1335790.506	1.482	1335790.506			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	329764.020		ppb
	Be	9	6.667	0.011541	ppb
>	Sc	45	1030139.476		ppb
	V	51	2016.453	0.004556	ppb
	Cr	52	5701.625	-0.029420	ppb
	Mn	55	1120.896	-0.005035	ppb
	Co	59	150.001	0.013039	ppb
	Ni	60	50.000	0.019454	ppb
	Cu	63	205.558	0.023737	ppb
	Cu	65	91.667	0.018502	ppb
	Zn	66	80.556	-0.010813	ppb
	As	75	-72.519	0.056921	ppb
	Se	82	45.556	0.074788	ppb
	Ag	107	222.225	0.026946	ppb
	Ag	109	250.003	0.031987	ppb

|	Cd	111	33.333	0.021553	ppb
|	In	113	85068.634		ppb
|>	In	115	1872975.451		ppb
⌈	Sb	121	287.504	0.044575	ppb
|	Ba	135	26.667	0.012584	ppb
|	Ba	137	63.334	0.022059	ppb
|>	Tb	159	2527764.530		ppb
⌈	Tl	205	233.336	0.014667	ppb
|	Pb	206	79.167	0.012796	ppb
|	Pb	207	166.667	0.015825	ppb
|	Pb	208	233.335	0.012727	ppb
|>	Bi	209	1312995.999		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	323790.157		ppb
⌊	Be	9	3.333	0.001862	ppb
⌈>	Sc	45	1040630.114		ppb
|	V	51	2019.160	0.002652	ppb
|	Cr	52	5905.076	-0.011160	ppb
|	Mn	55	716.692	-0.037454	ppb
|	Co	59	93.334	0.007370	ppb
|	Ni	60	16.667	0.003270	ppb
|	Cu	63	161.112	0.014256	ppb
|	Cu	65	113.890	0.027755	ppb
|	Zn	66	105.556	0.008804	ppb
|	As	75	-142.334	0.004676	ppb
⌊	Se	82	35.556	-0.002668	ppb
⌈	Ag	107	194.446	0.022954	ppb
|	Ag	109	188.891	0.023090	ppb
|	Cd	111	26.216	0.016809	ppb
|	In	113	83698.815		ppb
|>	In	115	1881043.024		ppb
⌈	Sb	121	441.676	0.076393	ppb
|	Ba	135	21.667	0.008452	ppb
|	Ba	137	51.667	0.016497	ppb
|>	Tb	159	2563674.566		ppb
⌈	Tl	205	187.502	0.011168	ppb
|	Pb	206	62.500	0.008971	ppb
|	Pb	207	133.334	0.011536	ppb
|	Pb	208	195.834	0.009497	ppb
|>	Bi	209	1348661.672		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	327732.168		ppb
⌊	Be	9	0.000	-0.008181	ppb
⌈>	Sc	45	1019544.235		ppb
|	V	51	1990.644	0.004003	ppb
|	Cr	52	5661.602	-0.027033	ppb
|	Mn	55	679.190	-0.039283	ppb
|	Co	59	103.334	0.008552	ppb
|	Ni	60	16.667	0.003435	ppb
|	Cu	63	172.224	0.017245	ppb
|	Cu	65	94.445	0.020152	ppb
|	Zn	66	77.778	-0.012427	ppb
|	As	75	-145.139	0.000284	ppb
⌊	Se	82	39.445	0.032157	ppb
⌈	Ag	107	277.782	0.034956	ppb
|	Ag	109	236.114	0.030218	ppb
|	Cd	111	21.746	0.014044	ppb
|	In	113	83682.008		ppb
|>	In	115	1860569.120		ppb
⌈	Sb	121	441.676	0.073862	ppb

	Ba	135	18.333	0.005510	ppb
	Ba	137	56.667	0.018032	ppb
>	Tb	159	2634881.194		ppb
	Tl	205	212.502	0.012876	ppb
	Pb	206	41.667	0.004754	ppb
	Pb	207	116.667	0.009677	ppb
	Pb	208	262.502	0.014451	ppb
>	Bi	209	1345713.847		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		98.749			
	Be	9					
>	Sc	45		95.515			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		92.322			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		96.431			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		93.577			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4031305-BLK1

Sample Date/Time: Tuesday, March 25, 2014 19:43:20
Sample Type: Sample
Sample Description: PBW01
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4031305-BLK1.6706

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	330059.726	1.351	330059.726			ppb
	Be	9	3.333	86.603	0.000	0.00174	494.33	ppb
>	Sc	45	1034979.485	1.511	1034979.485			ppb
	V	51	2117.638	2.478	0.000	0.01441	35.63	ppb
	Cr	52	6116.872	4.047	0.000	0.01982	180.40	ppb
	Mn	55	751.417	12.650	-0.000	-0.03437	23.53	ppb
	Co	59	40.000	12.500	0.000	0.00219	20.86	ppb
	Ni	60	24.074	54.529	0.000	0.00682	89.65	ppb
	Cu	63	194.446	23.604	0.000	0.02121	42.40	ppb
	Cu	65	119.445	6.153	0.000	0.03043	8.27	ppb
	Zn	66	154.631	4.521	0.000	0.04934	13.51	ppb
	As	75	-121.181	16.353	0.000	0.02029	69.30	ppb
	Se	82	40.000	6.365	0.000	0.03208	72.76	ppb
	Ag	107	56.482	36.251	0.000	0.00370	75.63	ppb
	Ag	109	68.519	6.193	0.000	0.00578	12.43	ppb
	Cd	111	4.167	100.000	0.000	0.00237	114.45	ppb
	In	113	86204.720	1.104	0.002			ppb
>	In	115	1900352.702	1.339	1900352.702			ppb
	Sb	121	141.668	2.941	0.000	0.01235	9.12	ppb
	Ba	135	14.444	37.091	0.000	0.00275	148.23	ppb
	Ba	137	36.667	27.649	0.000	0.00956	43.46	ppb
>	Tb	159	2602919.217	1.962	2602919.217			ppb
	Tl	205	43.056	14.783	0.000	0.00140	30.16	ppb
	Pb	206	31.945	45.807	0.000	0.00257	110.23	ppb
	Pb	207	51.389	33.757	0.000	0.00208	88.27	ppb
	Pb	208	81.945	5.871	0.000	0.00095	40.84	ppb
>	Bi	209	1385958.395	1.134	1385958.395			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	334459.495		ppb
	Be	9	0.000	-0.008181	ppb
>	Sc	45	1019852.594		ppb
	V	51	2124.365	0.018506	ppb
	Cr	52	6316.995	0.056737	ppb
	Mn	55	854.203	-0.025370	ppb
	Co	59	40.000	0.002253	ppb
	Ni	60	13.889	0.002077	ppb
	Cu	63	191.669	0.021277	ppb
	Cu	65	111.112	0.027531	ppb
	Zn	66	161.112	0.056539	ppb
	As	75	-98.306	0.036461	ppb
	Se	82	42.222	0.053047	ppb
	Ag	107	63.889	0.004594	ppb
	Ag	109	63.889	0.004976	ppb

	Cd	111	4.167	0.002332	ppb
	In	113	86930.376		ppb
>	In	115	1929694.248		ppb
	Sb	121	137.501	0.011049	ppb
	Ba	135	18.333	0.005475	ppb
	Ba	137	43.333	0.012242	ppb
>	Tb	159	2641581.884		ppb
	Tl	205	41.667	0.001276	ppb
	Pb	206	45.833	0.005215	ppb
	Pb	207	70.833	0.004140	ppb
	Pb	208	79.167	0.000672	ppb
>	Bi	209	1404080.956		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	330179.050		ppb
	Be	9	5.000	0.006592	ppb
>	Sc	45	1051080.447		ppb
	V	51	2166.421	0.016076	ppb
	Cr	52	6193.584	0.017340	ppb
	Mn	55	733.360	-0.036722	ppb
	Co	59	45.000	0.002617	ppb
	Ni	60	38.889	0.013712	ppb
	Cu	63	241.670	0.030178	ppb
	Cu	65	125.001	0.032044	ppb
	Zn	66	155.557	0.048114	ppb
	As	75	-132.108	0.013404	ppb
	Se	82	37.222	0.006929	ppb
	Ag	107	72.222	0.005944	ppb
	Ag	109	72.222	0.006367	ppb
	Cd	111	0.000	-0.000322	ppb
	In	113	86556.319		ppb
>	In	115	1886950.888		ppb
	Sb	121	145.834	0.012986	ppb
	Ba	135	8.333	-0.001935	ppb
	Ba	137	41.667	0.011659	ppb
>	Tb	159	2622140.445		ppb
	Tl	205	37.500	0.001057	ppb
	Pb	206	16.667	-0.000414	ppb
	Pb	207	37.500	0.000596	ppb
	Pb	208	87.500	0.001388	ppb
>	Bi	209	1375966.511		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	325540.634		ppb
	Be	9	5.000	0.006802	ppb
>	Sc	45	1034005.414		ppb
	V	51	2062.130	0.008651	ppb
	Cr	52	5840.038	-0.014629	ppb
	Mn	55	666.689	-0.041021	ppb
	Co	59	35.000	0.001708	ppb
	Ni	60	19.444	0.004658	ppb
	Cu	63	150.001	0.012189	ppb
	Cu	65	122.223	0.031717	ppb
	Zn	66	147.223	0.043373	ppb
	As	75	-133.128	0.010994	ppb
	Se	82	40.556	0.036266	ppb
	Ag	107	33.333	0.000564	ppb
	Ag	109	69.445	0.005984	ppb
	Cd	111	8.333	0.005114	ppb
	In	113	85127.465		ppb
>	In	115	1884412.971		ppb
	Sb	121	141.668	0.013012	ppb

|	Ba	135	16.667	0.004704	ppb
|	Ba	137	25.000	0.004774	ppb
|>	Tb	159	2545035.322		ppb
⌈	Tl	205	50.000	0.001874	ppb
|	Pb	206	33.333	0.002898	ppb
|	Pb	207	45.833	0.001515	ppb
|	Pb	208	79.167	0.000779	ppb
|>	Bi	209	1377827.719		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		99.644			
	Be	9					
>	Sc	45		95.967			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		93.744			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		97.460			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		97.091			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4031305-BS1

Sample Date/Time: Tuesday, March 25, 2014 19:45:04
Sample Type: Sample
Sample Description: MLCS01
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4031305-BS1.6707

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	314179.610	1.263	314179.610			ppb
	Be	9	35026.808	1.978	0.111	108.74850	1.16	ppb
>	Sc	45	988099.587	0.763	988099.587			ppb
	V	51	913727.889	1.031	0.923	102.53265	0.35	ppb
	Cr	52	796217.710	2.088	0.800	104.55757	1.51	ppb
	Mn	55	1214785.778	1.874	1.228	99.70259	1.95	ppb
	Co	59	983908.784	0.488	0.996	100.95825	1.23	ppb
	Ni	60	214130.492	0.998	0.217	107.84248	1.58	ppb
	Cu	63	491428.368	2.018	0.497	105.42368	2.44	ppb
	Cu	65	239271.190	2.122	0.242	109.51713	2.77	ppb
	Zn	66	250045.310	1.359	0.253	213.58582	2.03	ppb
	As	75	277802.734	1.122	0.281	221.38845	0.36	ppb
	Se	82	27908.149	0.533	0.028	217.30374	0.72	ppb
	Ag	107	786161.052	1.135	0.425	110.97795	2.50	ppb
	Ag	109	769943.688	0.706	0.416	111.91825	1.48	ppb
	Cd	111	160866.727	1.855	0.087	106.81692	2.96	ppb
	In	113	242475.701	1.377	0.087			ppb
>	In	115	1851671.136	2.167	1851671.136			ppb
	Sb	121	1014853.749	0.627	0.403	219.20406	0.57	ppb
	Ba	135	139832.581	0.836	0.056	109.45305	0.27	ppb
	Ba	137	243639.820	1.257	0.097	109.88135	0.75	ppb
>	Tb	159	2516014.728	0.568	2516014.728			ppb
	Tl	205	3154174.522	1.905	2.369	214.26017	1.28	ppb
	Pb	206	973064.819	0.835	0.731	200.35362	1.53	ppb
	Pb	207	1812379.859	0.688	1.361	207.94436	1.49	ppb
	Pb	208	2743952.924	0.816	2.061	204.76202	1.53	ppb
>	Bi	209	1331581.413	0.805	1331581.413			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	317216.081		ppb
	Be	9	35800.636	110.090670	ppb
>	Sc	45	995373.145		ppb
	V	51	921101.117	102.606132	ppb
	Cr	52	815417.980	106.314290	ppb
	Mn	55	1231572.764	100.339453	ppb
	Co	59	980721.078	99.889598	ppb
	Ni	60	211797.177	105.880427	ppb
	Cu	63	481590.464	102.549206	ppb
	Cu	65	237447.091	107.874369	ppb
	Zn	66	246122.551	208.676981	ppb
	As	75	280847.518	222.183076	ppb
	Se	82	28055.968	216.851977	ppb
	Ag	107	776363.654	108.664122	ppb
	Ag	109	771955.091	111.269663	ppb

	Cd	111	157551.633	103.725879	ppb
	In	113	242343.017		ppb
>	In	115	1866931.274		ppb
	Sb	121	1008982.653	217.856367	ppb
	Ba	135	139962.671	109.516963	ppb
	Ba	137	242582.043	109.367805	ppb
>	Tb	159	2516911.299		ppb
	Tl	205	3216154.345	217.397568	ppb
	Pb	206	964008.074	197.490105	ppb
	Pb	207	1802469.622	205.766061	ppb
	Pb	208	2746956.156	203.954533	ppb
>	Bi	209	1338212.671		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	315632.126		ppb
	Be	9	34815.501	107.598362	ppb
>	Sc	45	980318.494		ppb
	V	51	903110.873	102.146090	ppb
	Cr	52	786597.772	104.116206	ppb
	Mn	55	1223907.582	101.247106	ppb
	Co	59	989427.625	102.324042	ppb
	Ni	60	214603.282	108.930912	ppb
	Cu	63	491272.568	106.218063	ppb
	Cu	65	245009.605	113.020503	ppb
	Zn	66	251965.390	216.914618	ppb
	As	75	274617.585	220.591633	ppb
	Se	82	27910.005	219.039316	ppb
	Ag	107	793827.468	110.223248	ppb
	Ag	109	774088.710	110.688184	ppb
	Cd	111	163340.833	106.680462	ppb
	In	113	245877.749		ppb
>	In	115	1881925.640		ppb
	Sb	121	1021610.873	219.455784	ppb
	Ba	135	140931.130	109.711179	ppb
	Ba	137	247090.430	110.831146	ppb
>	Tb	159	2529840.800		ppb
	Tl	205	3096150.857	212.298904	ppb
	Pb	206	979699.518	203.594348	ppb
	Pb	207	1826383.234	211.497780	ppb
	Pb	208	2764677.087	208.225623	ppb
>	Bi	209	1319220.010		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	309690.625		ppb
	Be	9	34464.287	108.556479	ppb
>	Sc	45	988607.122		ppb
	V	51	916971.678	102.845716	ppb
	Cr	52	786637.379	103.242205	ppb
	Mn	55	1188876.987	97.521212	ppb
	Co	59	981577.650	100.661097	ppb
	Ni	60	215991.017	108.716108	ppb
	Cu	63	501422.073	107.503766	ppb
	Cu	65	235356.874	107.656513	ppb
	Zn	66	252047.988	215.165867	ppb
	As	75	277943.097	221.390636	ppb
	Se	82	27758.473	216.019936	ppb
	Ag	107	788292.034	114.046468	ppb
	Ag	109	763787.263	113.796903	ppb
	Cd	111	161707.715	110.044410	ppb
	In	113	239206.336		ppb
>	In	115	1806156.494		ppb
	Sb	121	1013967.722	220.300037	ppb

|	Ba	135	138603.942	109.131001	ppb
|	Ba	137	241246.989	109.445086	ppb
|>	Tb	159	2501292.085		ppb
⌈	Tl	205	3150218.363	213.084049	ppb
|	Pb	206	975486.866	199.976396	ppb
|	Pb	207	1808286.721	206.569240	ppb
|	Pb	208	2720225.528	202.105899	ppb
|>	Bi	209	1337311.557		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		94.850			
	Be	9					
>	Sc	45		91.620			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		91.342			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		94.206			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		93.282			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: 4031305-BS1

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4031305-BSD1

Sample Date/Time: Tuesday, March 25, 2014 19:46:49
Sample Type: Sample
Sample Description: MLCSD01
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4031305-BSD1.6708

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	323910.183	0.601	323910.183			ppb
	Be	9	4.444	21.651	0.000	0.00522	56.79	ppb
>	Sc	45	996893.534	2.233	996893.534			ppb
	V	51	2007.185	3.183	0.000	0.01075	22.57	ppb
	Cr	52	5871.168	1.411	0.000	0.01703	37.58	ppb
	Mn	55	587.518	21.360	-0.001	-0.04536	24.57	ppb
	Co	59	75.000	82.761	0.000	0.00595	108.02	ppb
	Ni	60	25.926	44.607	0.000	0.00826	71.40	ppb
	Cu	63	221.299	4.035	0.000	0.02854	10.15	ppb
	Cu	65	92.593	6.245	0.000	0.02025	10.64	ppb
	Zn	66	159.261	11.214	0.000	0.05794	23.11	ppb
	As	75	-78.329	63.069	0.000	0.05031	79.23	ppb
	Se	82	38.333	16.333	0.000	0.03007	152.36	ppb
	Ag	107	162.038	35.397	0.000	0.01849	41.23	ppb
	Ag	109	160.187	19.336	0.000	0.01904	21.01	ppb
	Cd	111	11.337	109.446	0.000	0.00710	112.87	ppb
	In	113	84866.988	1.542	0.002			ppb
>	In	115	1872032.479	2.169	1872032.479			ppb
	Sb	121	154.168	47.510	0.000	0.01536	95.45	ppb
	Ba	135	15.556	44.607	0.000	0.00373	134.61	ppb
	Ba	137	38.889	45.826	0.000	0.01086	71.55	ppb
>	Tb	159	2552569.666	2.336	2552569.666			ppb
	Tl	205	268.060	69.955	0.000	0.01632	74.91	ppb
	Pb	206	70.834	50.259	0.000	0.01048	66.70	ppb
	Pb	207	122.223	61.016	0.000	0.01009	81.19	ppb
	Pb	208	230.558	55.713	0.000	0.01184	77.36	ppb
>	Bi	209	1360171.593	1.410	1360171.593			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	325948.606		ppb
	Be	9	3.333	0.001795	ppb
>	Sc	45	982753.488		ppb
	V	51	1955.297	0.008128	ppb
	Cr	52	5826.697	0.022093	ppb
	Mn	55	695.858	-0.035882	ppb
	Co	59	40.000	0.002403	ppb
	Ni	60	16.667	0.003740	ppb
	Cu	63	225.003	0.029971	ppb
	Cu	65	94.445	0.021721	ppb
	Zn	66	138.890	0.042483	ppb
	As	75	-132.611	0.006123	ppb
	Se	82	31.111	-0.022004	ppb
	Ag	107	136.112	0.014767	ppb
	Ag	109	172.224	0.020597	ppb

	Cd	111	-0.304	-0.000520	ppb
	In	113	85039.219		ppb
>	In	115	1889379.616		ppb
	Sb	121	125.001	0.009742	ppb
	Ba	135	13.333	0.002236	ppb
	Ba	137	48.333	0.015411	ppb
>	Tb	159	2517807.870		ppb
	Tl	205	204.169	0.012113	ppb
	Pb	206	66.667	0.009647	ppb
	Pb	207	104.167	0.008083	ppb
	Pb	208	187.501	0.008709	ppb
>	Bi	209	1365890.202		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	323710.988		ppb
	Be	9	5.000	0.006887	ppb
>	Sc	45	985372.540		ppb
	V	51	1987.704	0.011195	ppb
	Cr	52	5820.026	0.019148	ppb
	Mn	55	616.686	-0.042557	ppb
	Co	59	146.668	0.013367	ppb
	Ni	60	38.889	0.014940	ppb
	Cu	63	227.780	0.030440	ppb
	Cu	65	86.111	0.017780	ppb
	Zn	66	166.668	0.065966	ppb
	As	75	-36.004	0.083569	ppb
	Se	82	42.222	0.064206	ppb
	Ag	107	227.780	0.027252	ppb
	Ag	109	183.335	0.022019	ppb
	Cd	111	24.392	0.015448	ppb
	In	113	86081.413		ppb
>	In	115	1901083.364		ppb
	Sb	121	237.503	0.031999	ppb
	Ba	135	23.333	0.009337	ppb
	Ba	137	50.000	0.015271	ppb
>	Tb	159	2621432.626		ppb
	Tl	205	479.178	0.030097	ppb
	Pb	206	108.334	0.017853	ppb
	Pb	207	204.168	0.019103	ppb
	Pb	208	375.004	0.022152	ppb
>	Bi	209	1375838.000		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	322070.955		ppb
	Be	9	5.000	0.006964	ppb
>	Sc	45	1022554.573		ppb
	V	51	2078.554	0.012917	ppb
	Cr	52	5966.780	0.009836	ppb
	Mn	55	450.010	-0.057635	ppb
	Co	59	38.333	0.002077	ppb
	Ni	60	22.222	0.006115	ppb
	Cu	63	211.113	0.025202	ppb
	Cu	65	97.223	0.021258	ppb
	Zn	66	172.224	0.065360	ppb
	As	75	-66.371	0.061242	ppb
	Se	82	41.667	0.048020	ppb
	Ag	107	122.223	0.013436	ppb
	Ag	109	125.001	0.014492	ppb
	Cd	111	9.925	0.006360	ppb
	In	113	83480.333		ppb
>	In	115	1825634.457		ppb
	Sb	121	100.001	0.004340	ppb

|	Ba	135	10.000	-0.000373	ppb
|	Ba	137	18.333	0.001887	ppb
|>	Tb	159	2518468.502		ppb
⌈	Tl	205	120.834	0.006756	ppb
|	Pb	206	37.500	0.003945	ppb
|	Pb	207	58.333	0.003089	ppb
|	Pb	208	129.167	0.004656	ppb
|>	Bi	209	1338786.579		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		97.788			
	Be	9					
>	Sc	45		92.435			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		92.347			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		95.575			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		95.285			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: 4031305-BSD1

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403023-01

Sample Date/Time: Tuesday, March 25, 2014 19:48:33
Sample Type: Sample
Sample Description: MW-4
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403023-01.6709

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	310551.029	2.248	310551.029			ppb
⌊	Be	9	7.222	35.251	0.000	0.01444	52.47	ppb
⌈>	Sc	45	1011543.599	0.623	1011543.599			ppb
|	V	51	9505.514	1.068	0.007	0.83115	0.63	ppb
|	Cr	52	10551.676	1.842	0.005	0.61064	5.20	ppb
|	Mn	55	55926202.347	0.033	55.288	4487.80373	0.59	ppb
|	Co	59	71177.465	1.760	0.070	7.13194	1.33	ppb
|	Ni	60	8806.655	1.897	0.009	4.32769	1.81	ppb
|	Cu	63	5560.806	3.673	0.005	1.14696	4.12	ppb
|	Cu	65	1628.836	1.621	0.002	0.70659	1.81	ppb
|	Zn	66	5407.945	4.620	0.005	4.43673	4.70	ppb
|	As	75	690.145	6.029	0.001	0.64946	5.48	ppb
⌊	Se	82	144.445	3.419	0.000	0.83398	3.70	ppb
⌈	Ag	107	37.037	30.311	0.000	0.00134	123.91	ppb
|	Ag	109	50.000	14.699	0.000	0.00355	28.89	ppb
|	Cd	111	50.477	28.247	0.000	0.03422	28.28	ppb
|	In	113	81673.858	0.876	0.002			ppb
⌊>	In	115	1795682.203	0.999	1795682.203			ppb
⌈	Sb	121	276.393	10.038	0.000	0.04093	13.65	ppb
|	Ba	135	269440.997	1.373	0.104	205.54516	0.50	ppb
|	Ba	137	473401.634	1.095	0.183	208.08393	0.15	ppb
⌊>	Tb	159	2581653.178	0.947	2581653.178			ppb
⌈	Tl	205	1243.133	3.186	0.001	0.09014	3.42	ppb
|	Pb	206	606.963	6.945	0.000	0.13176	7.70	ppb
|	Pb	207	1051.417	2.639	0.001	0.12719	2.52	ppb
|	Pb	208	1607.022	2.891	0.001	0.12506	3.41	ppb
⌊>	Bi	209	1228461.516	0.987	1228461.516			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	303622.056		ppb
⌊	Be	9	6.667	0.013239	ppb
⌈>	Sc	45	1018817.096		ppb
|	V	51	9617.929	0.835972	ppb
|	Cr	52	10390.395	0.580104	ppb
|	Mn	55	55943324.609	4457.018210	ppb
|	Co	59	72320.571	7.194983	ppb
|	Ni	60	8867.819	4.326631	ppb
|	Cu	63	5429.251	1.111134	ppb
|	Cu	65	1627.910	0.700956	ppb
|	Zn	66	5434.810	4.426739	ppb
|	As	75	642.107	0.608369	ppb
⌊	Se	82	150.001	0.868251	ppb
⌈	Ag	107	38.889	0.001658	ppb
|	Ag	109	44.445	0.002794	ppb

	Cd	111	55.829	0.038274	ppb
	In	113	81795.664		ppb
>	In	115	1777929.697		ppb
	Sb	121	262.503	0.038632	ppb
	Ba	135	265303.217	204.630296	ppb
	Ba	137	467414.341	207.724635	ppb
>	Tb	159	2553434.779		ppb
	Tl	205	1241.744	0.091078	ppb
	Pb	206	629.186	0.138295	ppb
	Pb	207	1037.528	0.126941	ppb
	Pb	208	1625.082	0.128021	ppb
>	Bi	209	1214503.826		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	317582.438		ppb
	Be	9	10.000	0.022537	ppb
>	Sc	45	1007879.268		ppb
	V	51	9478.190	0.831950	ppb
	Cr	52	10767.460	0.643464	ppb
	Mn	55	55906634.046	4502.433280	ppb
	Co	59	71373.805	7.177848	ppb
	Ni	60	8617.600	4.250095	ppb
	Cu	63	5457.044	1.129240	ppb
	Cu	65	1602.906	0.697578	ppb
	Zn	66	5145.768	4.233499	ppb
	As	75	713.529	0.669526	ppb
	Se	82	142.779	0.825360	ppb
	Ag	107	25.000	-0.000456	ppb
	Ag	109	58.334	0.004722	ppb
	Cd	111	61.284	0.041207	ppb
	In	113	80905.130		ppb
>	In	115	1813787.145		ppb
	Sb	121	308.338	0.047302	ppb
	Ba	135	272429.352	206.651565	ppb
	Ba	137	476416.245	208.223517	ppb
>	Tb	159	2596375.820		ppb
	Tl	205	1204.239	0.086694	ppb
	Pb	206	558.349	0.120068	ppb
	Pb	207	1033.360	0.124111	ppb
	Pb	208	1641.746	0.127001	ppb
>	Bi	209	1236443.241		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	310448.592		ppb
	Be	9	5.000	0.007531	ppb
>	Sc	45	1007934.434		ppb
	V	51	9420.423	0.825525	ppb
	Cr	52	10497.173	0.608340	ppb
	Mn	55	55928648.384	4503.959708	ppb
	Co	59	69838.019	7.022977	ppb
	Ni	60	8934.545	4.406339	ppb
	Cu	63	5796.124	1.200493	ppb
	Cu	65	1655.693	0.721226	ppb
	Zn	66	5643.259	4.649961	ppb
	As	75	714.799	0.670487	ppb
	Se	82	140.557	0.808317	ppb
	Ag	107	47.222	0.002815	ppb
	Ag	109	47.222	0.003145	ppb
	Cd	111	34.317	0.023172	ppb
	In	113	82320.780		ppb
>	In	115	1795329.767		ppb
	Sb	121	258.337	0.036861	ppb

|	Ba	135	270590.422	205.353628	ppb
|	Ba	137	476374.317	208.303626	ppb
|>	Tb	159	2595148.933		ppb
⌈	Tl	205	1283.416	0.092639	ppb
|	Pb	206	633.353	0.136927	ppb
|	Pb	207	1083.364	0.130506	ppb
|	Pb	208	1554.238	0.120172	ppb
|>	Bi	209	1234437.480		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6		93.755			
⌊	Be	9					
⌈>	Sc	45		93.794			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115		88.580			
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159		96.664			
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209		86.058			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	LDR exceeded

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4031305-DUP1

Sample Date/Time: Tuesday, March 25, 2014 19:50:18
Sample Type: Sample
Sample Description: MW-4D
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4031305-DUP1.6710

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	316992.301	1.705	316992.301			ppb
	Be	9	7.778	44.607	0.000	0.01585	69.39	ppb
>	Sc	45	1050611.245	1.492	1050611.245			ppb
	V	51	9621.672	0.995	0.007	0.80485	2.94	ppb
	Cr	52	10578.372	2.603	0.004	0.56367	9.52	ppb
	Mn	55	57348165.504	2.343	54.589	4431.08617	2.45	ppb
	Co	59	72755.532	2.996	0.069	7.02110	3.89	ppb
	Ni	60	8871.535	5.815	0.008	4.19979	7.07	ppb
	Cu	63	3799.798	7.075	0.004	0.74838	7.70	ppb
	Cu	65	809.292	2.576	0.001	0.32663	1.23	ppb
	Zn	66	6172.276	3.787	0.006	4.88446	4.63	ppb
	As	75	767.016	9.185	0.001	0.68736	8.59	ppb
	Se	82	148.520	5.425	0.000	0.82362	8.66	ppb
	Ag	107	27.778	26.458	-0.000	-0.00020	515.43	ppb
	Ag	109	30.556	18.182	0.000	0.00043	184.99	ppb
	Cd	111	35.580	54.219	0.000	0.02292	55.09	ppb
	In	113	85168.180	1.972	0.001			ppb
>	In	115	1883629.998	0.537	1883629.998			ppb
	Sb	121	265.281	16.348	0.000	0.03669	23.49	ppb
	Ba	135	273473.985	2.659	0.102	201.74339	5.07	ppb
	Ba	137	473001.310	0.822	0.177	200.97077	2.80	ppb
>	Tb	159	2672018.117	2.577	2672018.117			ppb
	Tl	205	1104.228	10.485	0.001	0.07767	11.65	ppb
	Pb	206	290.282	5.434	0.000	0.05922	5.59	ppb
	Pb	207	512.507	2.439	0.000	0.05837	1.92	ppb
	Pb	208	747.239	9.236	0.001	0.05378	9.17	ppb
>	Bi	209	1264030.915	0.908	1264030.915			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	314356.198		ppb
	Be	9	6.667	0.012508	ppb
>	Sc	45	1053541.129		ppb
	V	51	9532.511	0.792392	ppb
	Cr	52	10433.774	0.541553	ppb
	Mn	55	55926202.347	4308.795500	ppb
	Co	59	70326.424	6.765885	ppb
	Ni	60	8411.870	3.968513	ppb
	Cu	63	3489.498	0.683586	ppb
	Cu	65	808.366	0.325295	ppb
	Zn	66	5907.300	4.656930	ppb
	As	75	696.738	0.632832	ppb
	Se	82	140.557	0.761818	ppb
	Ag	107	19.444	-0.001374	ppb
	Ag	109	25.000	-0.000380	ppb

|	Cd	111	14.162	0.008873	ppb
|	In	113	83803.856		ppb
|>	In	115	1893185.236		ppb
⌈	Sb	121	216.669	0.027535	ppb
|	Ba	135	274943.439	205.897963	ppb
|	Ba	137	469652.291	202.648432	ppb
|>	Tb	159	2629926.458		ppb
⌈	Tl	205	1029.220	0.071773	ppb
|	Pb	206	279.171	0.056427	ppb
|	Pb	207	512.507	0.057977	ppb
|	Pb	208	812.519	0.058529	ppb
|>	Bi	209	1272192.325		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	313410.533		ppb
|	Be	9	11.667	0.028134	ppb
⌈>	Sc	45	1064619.010		ppb
|	V	51	9609.708	0.789988	ppb
|	Cr	52	10405.411	0.524603	ppb
|	Mn	55	58597275.342	4467.613429	ppb
|	Co	59	73400.060	6.988167	ppb
|	Ni	60	8773.291	4.096105	ppb
|	Cu	63	3948.001	0.767579	ppb
|	Cu	65	830.590	0.331126	ppb
|	Zn	66	6260.292	4.887597	ppb
|	As	75	766.674	0.679119	ppb
|	Se	82	148.334	0.807400	ppb
⌈	Ag	107	33.333	0.000592	ppb
|	Ag	109	30.556	0.000457	ppb
|	Cd	111	40.987	0.026575	ppb
|	In	113	84656.829		ppb
|>	In	115	1873047.621		ppb
⌈	Sb	121	279.171	0.037903	ppb
|	Ba	135	265580.432	190.099140	ppb
|	Ba	137	472089.803	194.700780	ppb
|>	Tb	159	2751482.638		ppb
⌈	Tl	205	1237.577	0.088086	ppb
|	Pb	206	283.337	0.058364	ppb
|	Pb	207	500.006	0.057497	ppb
|	Pb	208	675.013	0.048687	ppb
|>	Bi	209	1250903.440		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	323210.173		ppb
|	Be	9	5.000	0.006911	ppb
⌈>	Sc	45	1033673.597		ppb
|	V	51	9722.796	0.832168	ppb
|	Cr	52	10895.933	0.624866	ppb
|	Mn	55	57521018.824	4516.849573	ppb
|	Co	59	74540.113	7.309243	ppb
|	Ni	60	9429.444	4.534752	ppb
|	Cu	63	3961.896	0.793964	ppb
|	Cu	65	788.920	0.323457	ppb
|	Zn	66	6349.237	5.108864	ppb
|	As	75	837.635	0.750119	ppb
|	Se	82	156.668	0.901632	ppb
⌈	Ag	107	30.556	0.000179	ppb
|	Ag	109	36.111	0.001223	ppb
|	Cd	111	51.592	0.033325	ppb
|	In	113	87043.857		ppb
|>	In	115	1884657.138		ppb
⌈	Sb	121	300.005	0.044646	ppb

	Ba	135	279898.083	209.233079	ppb
	Ba	137	477261.835	205.563101	ppb
>	Tb	159	2634645.254		ppb
	Tl	205	1045.888	0.073146	ppb
	Pb	206	308.338	0.062879	ppb
	Pb	207	525.007	0.059636	ppb
	Pb	208	754.183	0.054121	ppb
>	Bi	209	1268996.981		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		95.699			
	Be	9					
>	Sc	45		97.416			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		92.919			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		100.047			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		88.550			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	LDR exceeded

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4031305-MS1

Sample Date/Time: Tuesday, March 25, 2014 19:52:02
Sample Type: Sample
Sample Description: MW-4S
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4031305-MS1.6711

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	324751.833	1.424	324751.833			ppb
⌊	Be	9	33449.190	1.480	0.103	100.47485	0.97	ppb
⌈>	Sc	45	1095960.341	1.827	1095960.341			ppb
|	V	51	997390.539	2.736	0.908	100.92564	3.28	ppb
|	Cr	52	855874.784	1.536	0.775	101.35248	3.31	ppb
|	Mn	55	60145617.106	2.946	54.909	4457.00695	4.68	ppb
|	Co	59	1142379.670	2.327	1.043	105.72650	4.07	ppb
|	Ni	60	230019.632	1.807	0.210	104.47677	3.38	ppb
|	Cu	63	500192.122	1.817	0.456	96.76776	3.26	ppb
|	Cu	65	243426.585	1.284	0.222	100.46066	2.17	ppb
|	Zn	66	254009.324	1.698	0.232	195.67329	3.46	ppb
|	As	75	283707.948	0.613	0.259	203.91576	2.42	ppb
⌊	Se	82	28691.658	0.659	0.026	201.44405	2.18	ppb
⌈	Ag	107	189847.721	2.112	0.094	24.63483	7.24	ppb
|	Ag	109	184722.001	0.449	0.092	24.66343	4.83	ppb
|	Cd	111	164030.176	1.388	0.081	100.03071	4.61	ppb
|	In	113	251920.264	1.460	0.081			ppb
⌊>	In	115	2018696.284	5.342	2018696.284			ppb
⌈	Sb	121	1023378.201	2.118	0.365	198.18433	1.84	ppb
|	Ba	135	428621.433	0.157	0.153	300.83793	0.50	ppb
|	Ba	137	744671.221	1.696	0.265	301.13105	1.18	ppb
⌊>	Tb	159	2806126.293	0.584	2806126.293			ppb
⌈	Tl	205	3289698.326	0.523	2.472	223.64506	0.36	ppb
|	Pb	206	1008838.767	1.001	0.758	207.85611	0.46	ppb
|	Pb	207	1873221.770	0.774	1.408	215.06754	0.24	ppb
|	Pb	208	2841456.463	0.132	2.135	212.18505	0.56	ppb
⌊>	Bi	209	1330584.255	0.567	1330584.255			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	326452.998		ppb
⌊	Be	9	33250.187	99.353897	ppb
⌈>	Sc	45	1075680.794		ppb
|	V	51	1011736.412	104.291864	ppb
|	Cr	52	865232.507	104.373420	ppb
|	Mn	55	61468923.415	4638.364865	ppb
|	Co	59	1173067.329	110.560736	ppb
|	Ni	60	231695.058	107.180314	ppb
|	Cu	63	509615.520	100.414841	ppb
|	Cu	65	244898.602	102.952297	ppb
|	Zn	66	258982.960	203.185406	ppb
|	As	75	285178.816	208.772966	ppb
⌊	Se	82	28861.032	206.407551	ppb
⌈	Ag	107	192425.401	25.896475	ppb
|	Ag	109	184582.399	25.581895	ppb

	Cd	111	164796.698	104.333032	ppb
	In	113	247684.013		ppb
>	In	115	1941418.804		ppb
	Sb	121	1019742.136	198.681175	ppb
	Ba	135	428437.099	302.524177	ppb
	Ba	137	730130.753	297.050709	ppb
>	Tb	159	2789233.004		ppb
	Tl	205	3307602.481	224.229054	ppb
	Pb	206	1011640.449	207.850922	ppb
	Pb	207	1877631.231	214.969627	ppb
	Pb	208	2837891.011	211.318930	ppb
>	Bi	209	1334333.677		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	319519.362		ppb
	Be	9	33084.639	101.004630	ppb
>	Sc	45	1096476.163		ppb
	V	51	965920.026	97.667128	ppb
	Cr	52	861545.314	101.940135	ppb
	Mn	55	60835399.692	4503.494379	ppb
	Co	59	1127837.414	104.281746	ppb
	Ni	60	233076.612	105.774485	ppb
	Cu	63	491485.432	95.004802	ppb
	Cu	65	239836.440	98.911179	ppb
	Zn	66	251760.321	193.769245	ppb
	As	75	284155.430	204.080990	ppb
	Se	82	28487.742	199.865429	ppb
	Ag	107	185227.497	22.594052	ppb
	Ag	109	185612.312	23.316485	ppb
	Cd	111	165824.750	95.157475	ppb
	In	113	254305.464		ppb
>	In	115	2141898.381		ppb
	Sb	121	1003751.795	194.316101	ppb
	Ba	135	428061.517	300.328164	ppb
	Ba	137	750963.536	303.574959	ppb
>	Tb	159	2807164.428		ppb
	Tl	205	3273265.050	223.987621	ppb
	Pb	206	997632.517	206.900052	ppb
	Pb	207	1857035.577	214.610657	ppb
	Pb	208	2841108.786	213.547715	ppb
>	Bi	209	1321904.792		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	328283.138		ppb
	Be	9	34012.745	101.066026	ppb
>	Sc	45	1115724.066		ppb
	V	51	1014515.180	100.817917	ppb
	Cr	52	840846.531	97.743875	ppb
	Mn	55	58132528.209	4229.161601	ppb
	Co	59	1126234.267	102.337026	ppb
	Ni	60	225287.227	100.475498	ppb
	Cu	63	499475.413	94.883634	ppb
	Cu	65	245544.715	99.518490	ppb
	Zn	66	251284.691	190.065212	ppb
	As	75	281789.599	198.893314	ppb
	Se	82	28726.201	198.059178	ppb
	Ag	107	191890.264	25.413958	ppb
	Ag	109	183971.292	25.091902	ppb
	Cd	111	161469.080	100.601638	ppb
	In	113	253771.316		ppb
>	In	115	1972771.668		ppb
	Sb	121	1046640.671	201.555726	ppb

|	Ba	135	429365.681	299.661449	ppb
|	Ba	137	752919.374	302.767491	ppb
|>	Tb	159	2821981.447		ppb
|	Tl	205	3288227.446	222.718510	ppb
|	Pb	206	1017243.335	208.817342	ppb
|	Pb	207	1884998.501	215.622332	ppb
|	Pb	208	2845369.593	211.688517	ppb
|>	Bi	209	1335514.297		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		98.042			
	Be	9					
>	Sc	45		101.621			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		99.582			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		105.068			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		93.212			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	LDR exceeded

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4031305-MSD1

Sample Date/Time: Tuesday, March 25, 2014 19:53:47
Sample Type: Sample
Sample Description: MW-4SD
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4031305-MSD1.6712

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	321722.151	1.223	321722.151			ppb
⌊	Be	9	33689.435	0.979	0.105	102.15363	1.21	ppb
⌈>	Sc	45	1109420.280	2.678	1109420.280			ppb
|	V	51	1033410.049	0.084	0.930	103.33500	2.75	ppb
|	Cr	52	868533.323	0.128	0.777	101.61560	2.78	ppb
|	Mn	55	61469738.761	1.756	55.423	4498.71715	2.21	ppb
|	Co	59	1135714.776	1.041	1.024	103.82621	2.40	ppb
|	Ni	60	234069.889	0.775	0.211	105.05064	3.46	ppb
|	Cu	63	504585.579	1.087	0.455	96.46099	3.65	ppb
|	Cu	65	246860.206	1.353	0.223	100.69144	3.98	ppb
|	Zn	66	263000.722	0.686	0.237	200.13744	2.16	ppb
|	As	75	290816.319	1.009	0.262	206.50328	2.23	ppb
⌊	Se	82	29138.697	1.818	0.026	202.20332	4.37	ppb
⌈	Ag	107	179698.616	1.592	0.088	22.95193	7.85	ppb
|	Ag	109	175968.192	1.102	0.086	23.14191	7.44	ppb
|	Cd	111	165377.110	2.583	0.081	99.27233	6.16	ppb
|	In	113	252794.262	0.207	0.080			ppb
⌊>	In	115	2052854.307	6.829	2052854.307			ppb
⌈	Sb	121	1028507.336	1.526	0.362	196.56898	1.90	ppb
|	Ba	135	433331.831	0.876	0.152	300.12940	0.44	ppb
|	Ba	137	754065.059	1.174	0.265	300.92167	0.88	ppb
⌊>	Tb	159	2843577.803	0.500	2843577.803			ppb
⌈	Tl	205	3307331.974	1.367	2.557	231.32625	2.45	ppb
|	Pb	206	1017697.145	1.656	0.787	215.73552	2.74	ppb
|	Pb	207	1898265.390	0.866	1.468	224.22519	2.08	ppb
|	Pb	208	2925792.245	3.996	2.262	224.77201	4.38	ppb
⌊>	Bi	209	1293533.447	1.233	1293533.447			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	326232.646		ppb
⌊	Be	9	33890.665	101.336254	ppb
⌈>	Sc	45	1078026.903		ppb
|	V	51	1034261.183	106.386007	ppb
|	Cr	52	869565.217	104.669915	ppb
|	Mn	55	60417127.273	4549.074156	ppb
|	Co	59	1125375.140	105.834878	ppb
|	Ni	60	235791.945	108.838194	ppb
|	Cu	63	510760.671	100.421459	ppb
|	Cu	65	249581.720	104.693049	ppb
|	Zn	66	260966.881	204.296735	ppb
|	As	75	289984.834	211.827689	ppb
⌊	Se	82	29742.498	212.256195	ppb
⌈	Ag	107	182672.811	24.134425	ppb
|	Ag	109	177989.485	24.217135	ppb

	Cd	111	168596.531	104.788041	ppb
	In	113	252207.491		ppb
>	In	115	1977559.099		ppb
	Sb	121	1015347.771	194.078239	ppb
	Ba	135	431699.680	299.055069	ppb
	Ba	137	746834.163	298.092275	ppb
>	Tb	159	2843074.464		ppb
	Tl	205	3279605.048	226.290749	ppb
	Pb	206	1007102.370	210.603771	ppb
	Pb	207	1882567.175	219.373459	ppb
	Pb	208	2860241.264	216.776534	ppb
>	Bi	209	1310985.214		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	319942.576		ppb
	Be	9	33308.715	101.554246	ppb
>	Sc	45	1137105.837		ppb
	V	51	1033444.648	100.767817	ppb
	Cr	52	868674.216	99.090213	ppb
	Mn	55	61417556.627	4384.134356	ppb
	Co	59	1133171.207	101.031174	ppb
	Ni	60	232175.453	101.600545	ppb
	Cu	63	502706.428	93.701485	ppb
	Cu	65	243134.098	96.687914	ppb
	Zn	66	263626.973	195.653387	ppb
	As	75	294075.835	203.659528	ppb
	Se	82	28921.763	195.654709	ppb
	Ag	107	179457.032	23.843948	ppb
	Ag	109	175792.804	24.053848	ppb
	Cd	111	160530.522	100.340481	ppb
	In	113	252959.464		ppb
>	In	115	1966409.388		ppb
	Sb	121	1045874.745	200.864050	ppb
	Ba	135	430624.791	299.728272	ppb
	Ba	137	751424.650	301.350070	ppb
>	Tb	159	2829625.896		ppb
	Tl	205	3359489.027	237.469019	ppb
	Pb	206	1037135.145	222.185968	ppb
	Pb	207	1915355.747	228.650253	ppb
	Pb	208	2856348.244	221.773335	ppb
>	Bi	209	1279703.751		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	318991.230		ppb
	Be	9	33868.925	103.570387	ppb
>	Sc	45	1113128.099		ppb
	V	51	1032524.315	102.851163	ppb
	Cr	52	867360.535	101.086674	ppb
	Mn	55	62574532.384	4562.942944	ppb
	Co	59	1148597.980	104.612581	ppb
	Ni	60	234242.268	104.713178	ppb
	Cu	63	500289.638	95.260025	ppb
	Cu	65	247864.799	100.693353	ppb
	Zn	66	264408.311	200.462186	ppb
	As	75	288388.289	204.022625	ppb
	Se	82	28751.830	198.699054	ppb
	Ag	107	176966.004	20.877417	ppb
	Ag	109	174122.289	21.154747	ppb
	Cd	111	167004.276	92.688482	ppb
	In	113	253215.831		ppb
>	In	115	2214594.433		ppb
	Sb	121	1024299.491	194.764636	ppb

|	Ba	135	437671.022	301.604852	ppb
|	Ba	137	763936.365	303.322675	ppb
|>	Tb	159	2858033.047		ppb
⌈	Tl	205	3282901.847	230.218977	ppb
|	Pb	206	1008853.919	214.416828	ppb
|	Pb	207	1896873.247	224.651850	ppb
|	Pb	208	3060787.227	235.766152	ppb
|>	Bi	209	1289911.376		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		97.127			
	Be	9					
>	Sc	45		102.869			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		101.267			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		106.471			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		90.616			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	LDR exceeded

EPA 6020 & EPA 6020A - Summary Report

Sample ID: SDI1403023-01

Sample Date/Time: Tuesday, March 25, 2014 19:55:31
Sample Type: Sample
Sample Description: MW-4L 5X
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\SDI1403023-01.6713

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	344247.427	2.202	344247.427			ppb
|	Be	9	7.222	26.647	0.000	0.01229	44.64	ppb
⌈>	Sc	45	1112582.150	0.323	1112582.150			ppb
|	V	51	3944.785	0.460	0.002	0.18101	0.54	ppb
|	Cr	52	7431.094	1.243	0.001	0.12013	7.56	ppb
|	Mn	55	12378313.116	1.775	11.124	902.96804	1.45	ppb
|	Co	59	15803.594	2.458	0.014	1.43831	2.17	ppb
|	Ni	60	1947.412	0.999	0.002	0.86634	1.32	ppb
|	Cu	63	1254.708	2.368	0.001	0.22050	2.28	ppb
|	Cu	65	329.635	9.983	0.000	0.11229	12.22	ppb
|	Zn	66	1476.961	5.847	0.001	1.04402	6.53	ppb
|	As	75	49.630	36.548	0.000	0.14745	8.75	ppb
|	Se	82	60.371	18.687	0.000	0.15227	52.16	ppb
⌈	Ag	107	23.148	18.330	-0.000	-0.00134	35.49	ppb
|	Ag	109	40.741	20.830	0.000	0.00100	102.35	ppb
|	Cd	111	19.015	48.182	0.000	0.01022	50.24	ppb
|	In	113	91212.721	0.621	-0.003			ppb
⌊>	In	115	2222483.981	0.835	2222483.981			ppb
⌈	Sb	121	175.002	10.911	0.000	0.01620	22.69	ppb
|	Ba	135	59553.479	0.846	0.021	41.23717	0.98	ppb
|	Ba	137	101432.961	0.636	0.036	40.47103	1.19	ppb
⌊>	Tb	159	2843892.389	0.741	2843892.389			ppb
⌈	Tl	205	433.343	28.895	0.000	0.02614	29.64	ppb
|	Pb	206	138.890	27.875	0.000	0.02303	31.42	ppb
|	Pb	207	244.446	17.742	0.000	0.02269	19.54	ppb
|	Pb	208	348.615	7.958	0.000	0.01944	8.73	ppb
⌊>	Bi	209	1420549.727	1.116	1420549.727			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	351787.430		ppb
⌊	Be	9	8.333	0.014928	ppb
⌈>	Sc	45	1108806.000		ppb
|	V	51	3923.995	0.180274	ppb
|	Cr	52	7394.400	0.118787	ppb
|	Mn	55	12153061.086	889.582019	ppb
|	Co	59	15355.113	1.402272	ppb
|	Ni	60	1969.638	0.879258	ppb
|	Cu	63	1236.188	0.217781	ppb
|	Cu	65	350.006	0.121027	ppb
|	Zn	66	1516.782	1.078047	ppb
|	As	75	66.317	0.159401	ppb
⌊	Se	82	73.334	0.243595	ppb
⌈	Ag	107	27.778	-0.000821	ppb
|	Ag	109	38.889	0.000734	ppb

	Cd	111	8.637	0.004413	ppb
	In	113	91794.386		ppb
>	In	115	2242024.932		ppb
	Sb	121	154.168	0.012300	ppb
	Ba	135	58973.382	40.942583	ppb
	Ba	137	102160.857	40.867437	ppb
>	Tb	159	2836373.774		ppb
	Tl	205	479.178	0.029232	ppb
	Pb	206	150.001	0.025335	ppb
	Pb	207	258.335	0.024330	ppb
	Pb	208	325.003	0.017896	ppb
>	Bi	209	1414675.790		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	336627.104		ppb
	Be	9	8.333	0.015969	ppb
>	Sc	45	1115951.650		ppb
	V	51	3953.016	0.180645	ppb
	Cr	52	7536.172	0.129810	ppb
	Mn	55	12592086.605	915.818709	ppb
	Co	59	16036.181	1.455156	ppb
	Ni	60	1933.520	0.857493	ppb
	Cu	63	1288.972	0.226295	ppb
	Cu	65	291.671	0.096469	ppb
	Zn	66	1377.873	0.965564	ppb
	As	75	52.249	0.149178	ppb
	Se	82	55.000	0.113785	ppb
	Ag	107	19.444	-0.001754	ppb
	Ag	109	33.333	0.000135	ppb
	Cd	111	25.983	0.014161	ppb
	In	113	90663.304		ppb
>	In	115	2205118.848		ppb
	Sb	121	191.669	0.019600	ppb
	Ba	135	59878.738	41.700321	ppb
	Ba	137	101204.540	40.610508	ppb
>	Tb	159	2827596.814		ppb
	Tl	205	529.181	0.031869	ppb
	Pb	206	170.835	0.028824	ppb
	Pb	207	279.169	0.026081	ppb
	Pb	208	379.171	0.021260	ppb
>	Bi	209	1438496.304		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	344327.747		ppb
	Be	9	5.000	0.005985	ppb
>	Sc	45	1112988.799		ppb
	V	51	3957.343	0.182125	ppb
	Cr	52	7362.709	0.111790	ppb
	Mn	55	12389791.657	903.503407	ppb
	Co	59	16019.488	1.457514	ppb
	Ni	60	1939.077	0.862272	ppb
	Cu	63	1238.966	0.217422	ppb
	Cu	65	347.228	0.119361	ppb
	Zn	66	1536.229	1.088458	ppb
	As	75	30.324	0.133772	ppb
	Se	82	52.778	0.099416	ppb
	Ag	107	22.222	-0.001443	ppb
	Ag	109	50.000	0.002127	ppb
	Cd	111	22.425	0.012092	ppb
	In	113	91180.474		ppb
>	In	115	2220308.163		ppb
	Sb	121	179.168	0.016715	ppb

|	Ba	135	59808.319	41.068592	ppb
|	Ba	137	100933.487	39.935150	ppb
|>	Tb	159	2867706.578		ppb
⌈	Tl	205	291.671	0.017324	ppb
|	Pb	206	95.834	0.014919	ppb
|	Pb	207	195.834	0.017674	ppb
¦	Pb	208	341.670	0.019173	ppb
|>	Bi	209	1408477.088		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		103.928			
	Be	9					
>	Sc	45		103.162			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		109.634			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		106.483			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		99.514			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	LDR exceeded

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4031305-PS1

Sample Date/Time: Tuesday, March 25, 2014 19:57:16
Sample Type: Sample
Sample Description: MW-4A
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4031305-PS1.6714

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	313200.014	2.882	313200.014			ppb
|	Be	9	2729.261	0.433	0.009	8.49683	2.45	ppb
⌈>	Sc	45	1069916.622	3.300	1069916.622			ppb
|	V	51	429555.614	1.897	0.400	44.41411	2.19	ppb
|	Cr	52	155331.269	1.913	0.139	18.22873	2.01	ppb
|	Mn	55	58376316.617	0.858	54.598	4431.75708	3.21	ppb
|	Co	59	161194.440	2.762	0.151	15.27605	1.70	ppb
|	Ni	60	27974.296	3.800	0.026	13.01245	4.15	ppb
|	Cu	63	89320.286	0.473	0.083	17.69046	2.89	ppb
|	Cu	65	41753.676	1.990	0.039	17.63775	2.70	ppb
|	Zn	66	26874.043	2.760	0.025	21.14743	4.79	ppb
|	As	75	13139.044	0.970	0.012	9.78671	4.19	ppb
⌊	Se	82	6130.212	1.536	0.006	43.91571	4.87	ppb
⌈	Ag	107	62573.974	2.855	0.033	8.58213	1.98	ppb
|	Ag	109	61423.298	1.981	0.032	8.67640	1.41	ppb
|	Cd	111	13647.568	2.477	0.007	8.80814	1.61	ppb
|	In	113	99923.363	2.600	0.009			ppb
⌊>	In	115	1904182.538	0.881	1904182.538			ppb
⌈	Sb	121	86975.310	2.023	0.032	17.30467	0.48	ppb
|	Ba	135	406537.488	1.163	0.149	293.45074	1.44	ppb
|	Ba	137	693768.750	1.599	0.254	288.54739	2.01	ppb
⌊>	Tb	159	2729036.899	2.291	2729036.899			ppb
⌈	Tl	205	131504.884	0.634	0.102	9.24738	1.34	ppb
|	Pb	206	42785.782	0.509	0.033	9.11610	1.05	ppb
|	Pb	207	78425.569	0.578	0.061	9.31141	0.96	ppb
|	Pb	208	122040.697	1.435	0.095	9.42271	1.53	ppb
⌊>	Bi	209	1286343.840	1.541	1286343.840			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	322439.208		ppb
⌊	Be	9	2742.043	8.287911	ppb
⌈>	Sc	45	1091090.442		ppb
|	V	51	438366.446	44.427540	ppb
|	Cr	52	158348.870	18.214955	ppb
|	Mn	55	58937274.560	4384.514465	ppb
|	Co	59	165757.485	15.400399	ppb
|	Ni	60	29170.261	13.299240	ppb
|	Cu	63	89596.812	17.389511	ppb
|	Cu	65	42710.459	17.683353	ppb
|	Zn	66	26061.694	20.088753	ppb
|	As	75	13009.473	9.496708	ppb
⌊	Se	82	6114.091	42.898699	ppb
⌈	Ag	107	64099.224	8.729688	ppb
|	Ag	109	62821.710	8.811028	ppb

	Cd	111	13887.582	8.899940	ppb
	In	113	102733.344		ppb
>	In	115	1917863.759		ppb
	Sb	121	88876.538	17.290835	ppb
	Ba	135	411997.458	290.753320	ppb
	Ba	137	705178.702	286.738764	ppb
>	Tb	159	2790790.207		ppb
	Tl	205	131901.703	9.112545	ppb
	Pb	206	43034.064	9.008263	ppb
	Pb	207	78948.441	9.209254	ppb
	Pb	208	123159.980	9.342614	ppb
>	Bi	209	1309149.816		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	312755.496		ppb
	Be	9	2727.038	8.497979	ppb
>	Sc	45	1089496.574		ppb
	V	51	428005.649	43.436225	ppb
	Cr	52	155237.317	17.869442	ppb
	Mn	55	57973535.769	4319.127151	ppb
	Co	59	160963.452	14.976820	ppb
	Ni	60	27136.770	12.389914	ppb
	Cu	63	89529.546	17.401890	ppb
	Cu	65	41338.043	17.139504	ppb
	Zn	66	27515.581	21.244864	ppb
	As	75	13143.352	9.607152	ppb
	Se	82	6045.160	42.474494	ppb
	Ag	107	60608.112	8.395878	ppb
	Ag	109	60608.112	8.646520	ppb
	Cd	111	13260.963	8.644353	ppb
	In	113	99429.365		ppb
>	In	115	1885473.019		ppb
	Sb	121	86644.578	17.228549	ppb
	Ba	135	403806.636	291.261894	ppb
	Ba	137	683027.688	283.860840	ppb
>	Tb	159	2730531.185		ppb
	Tl	205	132066.355	9.356106	ppb
	Pb	206	42628.165	9.150398	ppb
	Pb	207	78178.745	9.351560	ppb
	Pb	208	120022.522	9.336267	ppb
>	Bi	209	1276666.478		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	304405.337		ppb
	Be	9	2718.703	8.704598	ppb
>	Sc	45	1029162.849		ppb
	V	51	422294.748	45.378560	ppb
	Cr	52	152407.621	18.601804	ppb
	Mn	55	58218139.523	4591.629623	ppb
	Co	59	156862.383	15.450923	ppb
	Ni	60	27615.857	13.348186	ppb
	Cu	63	88834.500	18.279979	ppb
	Cu	65	41212.527	18.090404	ppb
	Zn	66	27044.855	22.108682	ppb
	As	75	13264.308	10.256279	ppb
	Se	82	6231.385	46.373941	ppb
	Ag	107	63014.585	8.620815	ppb
	Ag	109	60840.070	8.571661	ppb
	Cd	111	13794.159	8.880133	ppb
	In	113	97607.380		ppb
>	In	115	1909210.836		ppb
	Sb	121	85404.815	17.394628	ppb

|	Ba	135	403808.371	298.337017	ppb
|	Ba	137	693099.860	295.042564	ppb
|>	Tb	159	2665789.306		ppb
⌈	Tl	205	130546.595	9.273497	ppb
|	Pb	206	42695.116	9.189628	ppb
|	Pb	207	78149.522	9.373412	ppb
|	Pb	208	122939.589	9.589235	ppb
|>	Bi	209	1273215.227		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		94.554			
	Be	9					
>	Sc	45		99.206			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		93.933			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		102.182			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		90.113			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	LDR exceeded

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403023-02

Sample Date/Time: Tuesday, March 25, 2014 19:59:00
Sample Type: Sample
Sample Description: MW-2
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403023-02.6715

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	343030.220	1.018	343030.220			ppb
	Be	9	9.444	20.377	0.000	0.01864	27.73	ppb
>	Sc	45	1109176.538	2.140	1109176.538			ppb
	V	51	5015.545	8.082	0.003	0.28949	13.69	ppb
	Cr	52	18459.807	2.350	0.011	1.42256	3.05	ppb
	Mn	55	640393.373	1.994	0.576	46.77254	0.21	ppb
	Co	59	274647.405	3.214	0.248	25.09848	1.07	ppb
	Ni	60	3367.234	3.868	0.003	1.50576	2.50	ppb
	Cu	63	7853.083	2.147	0.007	1.48251	1.80	ppb
	Cu	65	3696.980	3.751	0.003	1.48641	4.71	ppb
	Zn	66	6718.924	1.642	0.006	5.03772	0.94	ppb
	As	75	-105.154	12.904	0.000	0.03776	23.99	ppb
	Se	82	36.482	25.543	-0.000	-0.01330	442.21	ppb
	Ag	107	90.741	28.278	0.000	0.00750	39.09	ppb
	Ag	109	73.148	20.915	0.000	0.00571	33.18	ppb
	Cd	111	136.696	14.067	0.000	0.08182	9.34	ppb
	In	113	89330.855	3.359	0.000			ppb
>	In	115	2041179.502	7.449	2041179.502			ppb
	Sb	121	100.001	33.072	0.000	0.00222	298.03	ppb
	Ba	135	37520.259	0.735	0.013	26.41221	2.40	ppb
	Ba	137	65513.366	1.246	0.023	26.56938	1.36	ppb
>	Tb	159	2797789.754	1.718	2797789.754			ppb
	Tl	205	115.278	11.619	0.000	0.00608	15.26	ppb
	Pb	206	756.973	6.927	0.001	0.14510	6.21	ppb
	Pb	207	1441.719	4.487	0.001	0.15448	5.14	ppb
	Pb	208	2222.364	6.614	0.002	0.15356	7.67	ppb
>	Bi	209	1393843.055	0.888	1393843.055			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	347058.074		ppb
	Be	9	11.667	0.024613	ppb
>	Sc	45	1135886.578		ppb
	V	51	5030.587	0.279144	ppb
	Cr	52	18669.077	1.395279	ppb
	Mn	55	654960.181	46.710472	ppb
	Co	59	284659.701	25.405616	ppb
	Ni	60	3467.268	1.514284	ppb
	Cu	63	7944.821	1.464186	ppb
	Cu	65	3631.215	1.424166	ppb
	Zn	66	6844.008	5.009966	ppb
	As	75	-109.683	0.036328	ppb
	Se	82	47.222	0.054378	ppb
	Ag	107	105.556	0.008399	ppb
	Ag	109	83.334	0.006195	ppb

	Cd	111	152.738	0.084464	ppb
	In	113	92656.448		ppb
>	In	115	2214192.372		ppb
	Sb	121	87.500	-0.000574	ppb
	Ba	135	37214.116	25.680076	ppb
	Ba	137	66122.891	26.292278	ppb
>	Tb	159	2853267.063		ppb
	Tl	205	120.834	0.006428	ppb
	Pb	206	750.028	0.143691	ppb
	Pb	207	1375.048	0.147042	ppb
	Pb	208	2129.299	0.146757	ppb
>	Bi	209	1394774.371		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	340822.344		ppb
	Be	9	8.333	0.015672	ppb
>	Sc	45	1090511.247		ppb
	V	51	4602.876	0.256040	ppb
	Cr	52	17961.116	1.399811	ppb
	Mn	55	631132.120	46.884326	ppb
	Co	59	267993.545	24.913360	ppb
	Ni	60	3219.963	1.464637	ppb
	Cu	63	7658.487	1.470220	ppb
	Cu	65	3603.427	1.472804	ppb
	Zn	66	6677.229	5.092507	ppb
	As	75	-89.899	0.047445	ppb
	Se	82	31.667	-0.042176	ppb
	Ag	107	105.556	0.009869	ppb
	Ag	109	55.556	0.003615	ppb
	Cd	111	141.971	0.087786	ppb
	In	113	88510.816		ppb
>	In	115	1980536.024		ppb
	Sb	121	137.501	0.009754	ppb
	Ba	135	37597.212	26.740806	ppb
	Ba	137	65830.975	26.979513	ppb
>	Tb	159	2768328.739		ppb
	Tl	205	125.001	0.006779	ppb
	Pb	206	708.358	0.136887	ppb
	Pb	207	1504.223	0.162831	ppb
	Pb	208	2391.826	0.167156	ppb
>	Bi	209	1381022.516		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	341210.241		ppb
	Be	9	8.333	0.015645	ppb
>	Sc	45	1101131.790		ppb
	V	51	5413.173	0.333280	ppb
	Cr	52	18749.227	1.472592	ppb
	Mn	55	635087.817	46.722819	ppb
	Co	59	271288.971	24.976469	ppb
	Ni	60	3414.472	1.538368	ppb
	Cu	63	7955.941	1.513127	ppb
	Cu	65	3856.299	1.562258	ppb
	Zn	66	6635.534	5.010681	ppb
	As	75	-115.879	0.029500	ppb
	Se	82	30.556	-0.052107	ppb
	Ag	107	61.111	0.004221	ppb
	Ag	109	80.556	0.007306	ppb
	Cd	111	115.380	0.073203	ppb
	In	113	86825.302		ppb
>	In	115	1928810.111		ppb
	Sb	121	75.000	-0.002535	ppb

|	Ba	135	37749.450	26.815740	ppb
|	Ba	137	64586.231	26.436356	ppb
|>	Tb	159	2771773.460		ppb
⌈	Tl	205	100.001	0.005027	ppb
|	Pb	206	812.533	0.154732	ppb
|	Pb	207	1445.886	0.153567	ppb
|	Pb	208	2145.968	0.146753	ppb
|>	Bi	209	1405732.277		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		103.560			
	Be	9					
>	Sc	45		102.847			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		100.691			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		104.756			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		97.644			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCV

Sample Date/Time: Tuesday, March 25, 2014 20:00:46
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCV.6716

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	334863.928	2.241	334863.928			ppb
	Be	9	101641.205	1.186	0.304	296.17084	1.93	ppb
>	Sc	45	1080306.628	1.233	1080306.628			ppb
	V	51	2965138.029	1.409	2.743	304.77580	1.67	ppb
	Cr	52	2530257.682	0.843	2.337	305.38236	1.24	ppb
	Mn	55	3951280.633	3.329	3.656	296.78416	2.94	ppb
	Co	59	3148674.330	3.001	2.914	295.45213	1.85	ppb
	Ni	60	659850.141	3.178	0.611	303.89668	2.01	ppb
	Cu	63	1452358.543	2.320	1.344	284.95663	1.09	ppb
	Cu	65	719722.680	2.685	0.666	301.27518	1.54	ppb
	Zn	66	387795.946	0.714	0.359	302.99842	0.86	ppb
	As	75	411614.075	0.918	0.381	300.00283	0.46	ppb
	Se	82	41505.781	1.164	0.038	295.68831	0.56	ppb
	Ag	107	2365351.150	1.413	1.134	296.42057	4.86	ppb
	Ag	109	2258532.104	1.260	1.083	291.48483	4.92	ppb
	Cd	111	471863.482	1.360	0.226	278.16152	5.09	ppb
	In	113	557076.789	1.205	0.223			ppb
>	In	115	2089250.308	6.010	2089250.308			ppb
	Sb	121	1485551.207	1.741	0.535	290.87695	2.20	ppb
	Ba	135	424009.687	1.322	0.153	300.87508	1.79	ppb
	Ba	137	731467.794	2.122	0.263	299.00477	0.37	ppb
>	Tb	159	2776099.023	2.143	2776099.023			ppb
	Tl	205	4676365.850	1.269	3.296	298.10793	0.45	ppb
	Pb	206	1480120.599	0.107	1.043	286.00151	1.61	ppb
	Pb	207	2690430.962	0.769	1.896	289.69195	1.82	ppb
	Pb	208	4276031.028	1.681	3.013	299.41155	1.07	ppb
>	Bi	209	1419057.654	1.695	1419057.654			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	343365.494		ppb
	Be	9	102085.089	290.028479	ppb
>	Sc	45	1094302.077		ppb
	V	51	2954203.488	299.741615	ppb
	Cr	52	2527968.281	301.170077	ppb
	Mn	55	3964147.810	293.951828	ppb
	Co	59	3231968.731	299.430196	ppb
	Ni	60	678884.920	308.711665	ppb
	Cu	63	1487322.629	288.110401	ppb
	Cu	65	736744.864	304.490504	ppb
	Zn	66	390835.679	301.449960	ppb
	As	75	415948.096	299.275825	ppb
	Se	82	41855.188	294.358212	ppb
	Ag	107	2394562.513	289.358588	ppb
	Ag	109	2274107.089	282.998447	ppb

|	Cd	111	478451.793	271.945778	ppb
|	In	113	555099.013		ppb
|>	In	115	2162465.776		ppb
⌈	Sb	121	1479268.255	283.694373	ppb
|	Ba	135	429984.782	298.849198	ppb
|	Ba	137	744558.508	298.163826	ppb
|>	Tb	159	2833731.249		ppb
⌈	Tl	205	4710415.868	296.913660	ppb
|	Pb	206	1481570.491	283.036109	ppb
|	Pb	207	2671794.469	284.422070	ppb
|	Pb	208	4272955.372	295.845949	ppb
|>	Bi	209	1435068.934		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	329157.865		ppb
|	Be	9	100276.932	297.188554	ppb
⌈>	Sc	45	1067776.353		ppb
|	V	51	2929899.359	304.664074	ppb
|	Cr	52	2510153.409	306.489912	ppb
|	Mn	55	3813792.940	289.826705	ppb
|	Co	59	3045995.013	289.210775	ppb
|	Ni	60	637367.910	297.032340	ppb
|	Cu	63	1420108.573	281.923716	ppb
|	Cu	65	698716.809	295.946942	ppb
|	Zn	66	387131.812	306.012004	ppb
|	As	75	409000.009	301.586216	ppb
|	Se	82	40954.247	295.177886	ppb
⌈	Ag	107	2328896.887	313.007388	ppb
|	Ag	109	2225679.243	308.056145	ppb
|	Cd	111	465630.854	294.360542	ppb
|	In	113	551574.283		ppb
|>	In	115	1944265.512		ppb
⌈	Sb	121	1463411.144	292.936765	ppb
|	Ba	135	423181.945	306.993629	ppb
|	Ba	137	714317.711	298.572951	ppb
|>	Tb	159	2714911.971		ppb
⌈	Tl	205	4607860.055	299.565139	ppb
|	Pb	206	1478427.269	291.300143	ppb
|	Pb	207	2686786.809	294.995027	ppb
|	Pb	208	4205748.400	300.332072	ppb
|>	Bi	209	1391399.098		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	332068.425		ppb
|	Be	9	102561.594	301.295485	ppb
⌈>	Sc	45	1078841.454		ppb
|	V	51	3011311.240	309.921715	ppb
|	Cr	52	2552651.355	308.487084	ppb
|	Mn	55	4075901.150	306.573946	ppb
|	Co	59	3168059.248	297.715416	ppb
|	Ni	60	663297.593	305.946040	ppb
|	Cu	63	1449644.427	284.835764	ppb
|	Cu	65	723706.366	303.388080	ppb
|	Zn	66	385420.347	301.533310	ppb
|	As	75	409894.120	299.146450	ppb
|	Se	82	41707.908	297.528820	ppb
⌈	Ag	107	2372594.049	286.895748	ppb
|	Ag	109	2275809.980	283.399889	ppb
|	Cd	111	471507.799	268.178241	ppb
|	In	113	564557.072		ppb
|>	In	115	2161019.637		ppb
⌈	Sb	121	1513974.223	295.999723	ppb

|	Ba	135	418862.332	296.782422	ppb
|	Ba	137	735527.164	300.277539	ppb
|>	Tb	159	2779653.849		ppb
⌈	Tl	205	4710821.628	297.844979	ppb
|	Pb	206	1480364.038	283.668266	ppb
|	Pb	207	2712711.608	289.658755	ppb
|	Pb	208	4349389.313	302.056642	ppb
|>	Bi	209	1430704.932		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		101.095			
	Be	9	98.724				
>	Sc	45		100.170			
	V	51	101.592				
	Cr	52	101.794				
	Mn	55	98.928				
	Co	59	98.484				
	Ni	60	101.299				
	Cu	63	94.986				
	Cu	65	100.425				
	Zn	66	100.999				
	As	75	100.001				
	Se	82	98.563				
	Ag	107	98.807				
	Ag	109	97.162				
	Cd	111	92.721				
	In	113					
>	In	115		103.062			
	Sb	121	96.959				
	Ba	135	100.292				
	Ba	137	99.668				
>	Tb	159		103.944			
	Tl	205	99.369				
	Pb	206	95.334				
	Pb	207	96.564				
	Pb	208	99.804				
>	Bi	209		99.410			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCB

Sample Date/Time: Tuesday, March 25, 2014 20:02:31
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCB.6717

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	336672.765	1.962	336672.765			ppb
⌊	Be	9	8.333	69.282	0.000	0.01604	105.61	ppb
⌈>	Sc	45	1083916.900	1.827	1083916.900			ppb
|	V	51	2259.064	3.498	0.000	0.01864	38.72	ppb
|	Cr	52	6437.627	0.873	0.000	0.02356	48.42	ppb
|	Mn	55	6027.263	60.789	0.004	0.35704	75.70	ppb
|	Co	59	160.001	42.658	0.000	0.01330	49.26	ppb
|	Ni	60	70.371	19.868	0.000	0.02768	25.14	ppb
|	Cu	63	251.855	25.757	0.000	0.03086	44.30	ppb
|	Cu	65	125.927	34.622	0.000	0.03104	62.27	ppb
|	Zn	66	100.001	26.788	0.000	0.00121	1788.40	ppb
|	As	75	-115.425	23.356	0.000	0.02859	66.29	ppb
⌊	Se	82	42.407	4.002	0.000	0.03545	21.28	ppb
⌈	Ag	107	312.968	22.035	0.000	0.03544	22.83	ppb
|	Ag	109	286.115	29.624	0.000	0.03302	27.18	ppb
|	Cd	111	44.647	70.820	0.000	0.02643	75.23	ppb
|	In	113	91253.387	1.052	0.001			ppb
⌊>	In	115	2067041.122	6.857	2067041.122			ppb
⌈	Sb	121	445.844	25.816	0.000	0.07089	35.34	ppb
|	Ba	135	45.556	34.772	0.000	0.02447	49.73	ppb
|	Ba	137	70.000	21.162	0.000	0.02246	29.25	ppb
⌊>	Tb	159	2761974.094	2.887	2761974.094			ppb
⌈	Tl	205	325.005	19.145	0.000	0.01878	20.00	ppb
|	Pb	206	105.556	43.301	0.000	0.01613	53.11	ppb
|	Pb	207	190.279	47.288	0.000	0.01639	57.53	ppb
|	Pb	208	315.281	45.289	0.000	0.01657	58.61	ppb
⌊>	Bi	209	1455309.322	0.716	1455309.322			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	344143.222		ppb
⌊	Be	9	5.000	0.005993	ppb
⌈>	Sc	45	1092893.101		ppb
|	V	51	2199.796	0.010707	ppb
|	Cr	52	6500.445	0.024573	ppb
|	Mn	55	10242.743	0.667390	ppb
|	Co	59	191.669	0.016057	ppb
|	Ni	60	72.222	0.028185	ppb
|	Cu	63	238.892	0.027774	ppb
|	Cu	65	111.112	0.024238	ppb
|	Zn	66	69.445	-0.023187	ppb
|	As	75	-146.547	0.006790	ppb
⌊	Se	82	43.889	0.043481	ppb
⌈	Ag	107	352.784	0.037270	ppb
|	Ag	109	369.451	0.040638	ppb

	Cd	111	40.379	0.021928	ppb
	In	113	92303.204		ppb
>	In	115	2230648.656		ppb
	Sb	121	433.343	0.066083	ppb
	Ba	135	45.000	0.023163	ppb
	Ba	137	75.000	0.023738	ppb
>	Tb	159	2826511.491		ppb
	Tl	205	370.840	0.021462	ppb
	Pb	206	120.834	0.018851	ppb
	Pb	207	200.001	0.017263	ppb
	Pb	208	350.004	0.018779	ppb
>	Bi	209	1466785.181		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	334278.595		ppb
	Be	9	15.000	0.035594	ppb
>	Sc	45	1097639.877		ppb
	V	51	2348.784	0.024821	ppb
	Cr	52	6420.394	0.011679	ppb
	Mn	55	3608.984	0.173529	ppb
	Co	59	81.667	0.005820	ppb
	Ni	60	55.556	0.020487	ppb
	Cu	63	194.446	0.018990	ppb
	Cu	65	91.667	0.016027	ppb
	Zn	66	111.112	0.008629	ppb
	As	75	-99.272	0.041145	ppb
	Se	82	42.778	0.034346	ppb
	Ag	107	233.336	0.026598	ppb
	Ag	109	200.002	0.023127	ppb
	Cd	111	15.379	0.009182	ppb
	In	113	90419.444		ppb
>	In	115	1988994.065		ppb
	Sb	121	337.506	0.048585	ppb
	Ba	135	30.000	0.013010	ppb
	Ba	137	53.333	0.015346	ppb
>	Tb	159	2786590.479		ppb
	Tl	205	254.170	0.014487	ppb
	Pb	206	54.167	0.006532	ppb
	Pb	207	95.834	0.006554	ppb
	Pb	208	158.334	0.005946	ppb
>	Bi	209	1446461.032		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	331596.478		ppb
	Be	9	5.000	0.006529	ppb
>	Sc	45	1061217.720		ppb
	V	51	2228.612	0.020399	ppb
	Cr	52	6392.042	0.034425	ppb
	Mn	55	4230.061	0.230195	ppb
	Co	59	206.669	0.018021	ppb
	Ni	60	83.334	0.034377	ppb
	Cu	63	322.227	0.045804	ppb
	Cu	65	175.002	0.052841	ppb
	Zn	66	119.445	0.018192	ppb
	As	75	-100.456	0.037824	ppb
	Se	82	40.556	0.028519	ppb
	Ag	107	352.784	0.042467	ppb
	Ag	109	288.893	0.035302	ppb
	Cd	111	78.184	0.048176	ppb
	In	113	91037.514		ppb
>	In	115	1981480.646		ppb
	Sb	121	566.683	0.097988	ppb

|	Ba	135	61.667	0.037247	ppb
|	Ba	137	81.667	0.028300	ppb
|>	Tb	159	2672820.312		ppb
⌈	Tl	205	350.006	0.020387	ppb
|	Pb	206	141.668	0.023002	ppb
|	Pb	207	275.002	0.025353	ppb
|	Pb	208	437.506	0.024994	ppb
|>	Bi	209	1452681.753		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		101.641			
	Be	9					
>	Sc	45		100.504			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		101.966			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		103.415			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		101.949			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: CCB

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403023-03

Sample Date/Time: Tuesday, March 25, 2014 20:04:18
Sample Type: Sample
Sample Description: MW-3
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403023-03.6718

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	303113.270	0.812	303113.270			ppb
⌊	Be	9	5.000	57.735	0.000	0.00787	116.08	ppb
⌈>	Sc	45	1049055.299	1.099	1049055.299			ppb
|	V	51	3656.977	0.541	0.002	0.17443	3.18	ppb
|	Cr	52	7990.414	1.055	0.002	0.24270	2.73	ppb
|	Mn	55	24479128.369	0.984	23.335	1894.10885	1.28	ppb
|	Co	59	300809.753	0.922	0.287	29.07154	1.36	ppb
|	Ni	60	3116.226	1.571	0.003	1.47376	2.58	ppb
|	Cu	63	4836.354	0.289	0.005	0.95882	0.92	ppb
|	Cu	65	1135.250	4.198	0.001	0.46764	3.61	ppb
|	Zn	66	8417.433	3.232	0.008	6.69941	4.41	ppb
|	As	75	272.393	4.537	0.000	0.31672	3.11	ppb
⌊	Se	82	118.704	2.402	0.000	0.60587	4.19	ppb
⌈	Ag	107	79.630	30.478	0.000	0.00705	47.99	ppb
|	Ag	109	73.148	15.347	0.000	0.00657	23.12	ppb
|	Cd	111	166.012	14.275	0.000	0.10876	15.34	ppb
|	In	113	84200.248	1.087	0.001			ppb
⌊>	In	115	1872675.924	1.171	1872675.924			ppb
⌈	Sb	121	331.950	17.767	0.000	0.04993	23.74	ppb
|	Ba	135	123990.630	0.565	0.046	90.91980	0.69	ppb
|	Ba	137	216920.281	0.420	0.081	91.65045	0.65	ppb
⌊>	Tb	159	2685812.730	0.935	2685812.730			ppb
⌈	Tl	205	325.005	10.013	0.000	0.02183	9.98	ppb
|	Pb	206	484.734	6.565	0.000	0.10132	6.21	ppb
|	Pb	207	816.684	3.535	0.001	0.09507	3.22	ppb
|	Pb	208	1183.375	6.690	0.001	0.08804	7.07	ppb
⌊>	Bi	209	1264752.686	0.649	1264752.686			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	305753.889		ppb
⌊	Be	9	8.333	0.018408	ppb
⌈>	Sc	45	1054921.763		ppb
|	V	51	3670.751	0.173686	ppb
|	Cr	52	8076.594	0.247825	ppb
|	Mn	55	24751453.881	1904.410774	ppb
|	Co	59	303814.435	29.196493	ppb
|	Ni	60	3122.710	1.468332	ppb
|	Cu	63	4851.176	0.956303	ppb
|	Cu	65	1186.181	0.486830	ppb
|	Zn	66	8261.745	6.534979	ppb
|	As	75	283.914	0.324151	ppb
⌊	Se	82	121.112	0.618489	ppb
⌈	Ag	107	100.001	0.009995	ppb
|	Ag	109	75.000	0.006921	ppb

	Cd	111	187.126	0.123368	ppb
	In	113	83879.486		ppb
>	In	115	1859498.649		ppb
	Sb	121	400.008	0.063567	ppb
	Ba	135	123496.219	90.402158	ppb
	Ba	137	217688.911	91.817433	ppb
>	Tb	159	2690327.045		ppb
	Tl	205	362.507	0.024335	ppb
	Pb	206	512.513	0.106571	ppb
	Pb	207	833.352	0.096378	ppb
	Pb	208	1162.541	0.085752	ppb
>	Bi	209	1273809.215		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	302703.153		ppb
	Be	9	3.333	0.002562	ppb
>	Sc	45	1056473.462		ppb
	V	51	3634.327	0.169287	ppb
	Cr	52	7986.521	0.235212	ppb
	Mn	55	24294044.861	1866.469819	ppb
	Co	59	298345.076	28.628745	ppb
	Ni	60	3064.358	1.438684	ppb
	Cu	63	4834.502	0.951525	ppb
	Cu	65	1127.841	0.461106	ppb
	Zn	66	8258.965	6.523046	ppb
	As	75	259.340	0.305533	ppb
	Se	82	115.556	0.576683	ppb
	Ag	107	86.111	0.007798	ppb
	Ag	109	83.334	0.007882	ppb
	Cd	111	140.380	0.090587	ppb
	In	113	85232.521		ppb
>	In	115	1897991.587		ppb
	Sb	121	300.005	0.044084	ppb
	Ba	135	123683.513	91.614388	ppb
	Ba	137	215912.686	92.149574	ppb
>	Tb	159	2658758.301		ppb
	Tl	205	304.171	0.020383	ppb
	Pb	206	491.679	0.103024	ppb
	Pb	207	833.351	0.097262	ppb
	Pb	208	1270.882	0.095080	ppb
>	Bi	209	1262637.426		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	300882.767		ppb
	Be	9	3.333	0.002627	ppb
>	Sc	45	1035770.671		ppb
	V	51	3665.853	0.180309	ppb
	Cr	52	7908.126	0.245068	ppb
	Mn	55	24391886.363	1911.445963	ppb
	Co	59	300269.748	29.389397	ppb
	Ni	60	3161.611	1.514258	ppb
	Cu	63	4823.385	0.968640	ppb
	Cu	65	1091.726	0.454987	ppb
	Zn	66	8731.588	7.040194	ppb
	As	75	273.925	0.320476	ppb
	Se	82	119.445	0.622446	ppb
	Ag	107	52.778	0.003355	ppb
	Ag	109	61.111	0.004906	ppb
	Cd	111	170.531	0.112335	ppb
	In	113	83488.736		ppb
>	In	115	1860537.536		ppb
	Sb	121	295.838	0.042125	ppb

	Ba	135	124792.159	90.742850	ppb
	Ba	137	217159.247	90.984356	ppb
>	Tb	159	2708352.845		ppb
	Tl	205	308.338	0.020766	ppb
	Pb	206	450.010	0.094351	ppb
	Pb	207	783.349	0.091576	ppb
	Pb	208	1116.703	0.083284	ppb
>	Bi	209	1257811.415		ppb

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6		91.509			
Be	9					
Sc	45		97.272			
V	51					
Cr	52					
Mn	55					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
As	75					
Se	82					
Ag	107					
Ag	109					
Cd	111					
In	113					
In	115		92.378			
Sb	121					
Ba	135					
Ba	137					
Tb	159		100.564			
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		88.600			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	LDR exceeded

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403023-04

Sample Date/Time: Tuesday, March 25, 2014 20:06:02
Sample Type: Sample
Sample Description: MW-5
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403023-04.6719

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	337251.790	1.512	337251.790			ppb
|	Be	9	28.889	13.323	0.000	0.07544	15.56	ppb
⌈>	Sc	45	1087062.200	2.083	1087062.200			ppb
|	V	51	2431.401	32.147	0.000	0.03460	214.61	ppb
|	Cr	52	49664.380	5.498	0.040	5.21606	4.38	ppb
|	Mn	55	68786.449	6.605	0.062	5.04001	4.75	ppb
|	Co	59	10565.584	3.806	0.010	0.98387	4.09	ppb
|	Ni	60	11243.355	1.140	0.010	5.14430	3.06	ppb
|	Cu	63	1920.556	9.101	0.002	0.35565	7.58	ppb
|	Cu	65	914.857	5.953	0.001	0.35904	6.96	ppb
|	Zn	66	9343.261	5.672	0.009	7.17886	5.16	ppb
|	As	75	-162.357	11.880	-0.000	-0.00520	261.19	ppb
|	Se	82	36.111	4.070	-0.000	-0.00999	81.31	ppb
⌈	Ag	107	340.747	22.450	0.000	0.04144	24.77	ppb
|	Ag	109	372.229	17.454	0.000	0.04711	16.98	ppb
|	Cd	111	49.064	49.735	0.000	0.03058	51.10	ppb
|	In	113	88403.435	4.442	0.001			ppb
⌊>	In	115	1958469.967	2.036	1958469.967			ppb
⌈	Sb	121	104.167	16.000	0.000	0.00351	105.10	ppb
|	Ba	135	43796.830	1.787	0.016	31.54202	0.41	ppb
|	Ba	137	76589.421	1.036	0.028	31.78623	1.01	ppb
⌊>	Tb	159	2734164.658	2.006	2734164.658			ppb
⌈	Tl	205	316.672	11.395	0.000	0.01933	13.31	ppb
|	Pb	206	187.502	13.878	0.000	0.03348	16.48	ppb
|	Pb	207	347.225	3.666	0.000	0.03481	4.78	ppb
|	Pb	208	468.062	3.126	0.000	0.02872	4.65	ppb
⌊>	Bi	209	1382467.979	0.975	1382467.979			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	343112.013		ppb
⌊	Be	9	26.667	0.067638	ppb
⌈>	Sc	45	1113202.393		ppb
|	V	51	3294.907	0.115931	ppb
|	Cr	52	52415.343	5.401040	ppb
|	Mn	55	73745.924	5.283956	ppb
|	Co	59	10638.990	0.967211	ppb
|	Ni	60	11120.068	4.966189	ppb
|	Cu	63	2105.777	0.382447	ppb
|	Cu	65	908.375	0.347330	ppb
|	Zn	66	9632.415	7.228332	ppb
|	As	75	-169.278	-0.007356	ppb
⌊	Se	82	37.222	-0.008293	ppb
⌈	Ag	107	266.670	0.030976	ppb
|	Ag	109	411.120	0.051689	ppb

	Cd	111	59.317	0.036333	ppb
	In	113	91823.821		ppb
>	In	115	1989038.928		ppb
	Sb	121	87.500	-0.000006	ppb
	Ba	135	43996.572	31.395953	ppb
	Ba	137	77102.767	31.703362	ppb
>	Tb	159	2759315.839		ppb
	Tl	205	295.838	0.017883	ppb
	Pb	206	166.668	0.029204	ppb
	Pb	207	333.336	0.033142	ppb
	Pb	208	454.172	0.027600	ppb
>	Bi	209	1387224.386		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	334812.691		ppb
	Be	9	33.333	0.088943	ppb
>	Sc	45	1073899.580		ppb
	V	51	2227.040	0.017481	ppb
	Cr	52	49622.816	5.286403	ppb
	Mn	55	67787.313	5.030373	ppb
	Co	59	10925.966	1.029765	ppb
	Ni	60	11234.084	5.200948	ppb
	Cu	63	1897.402	0.355990	ppb
	Cu	65	972.269	0.387748	ppb
	Zn	66	9665.780	7.521918	ppb
	As	75	-177.229	-0.017563	ppb
	Se	82	36.667	-0.002852	ppb
	Ag	107	419.453	0.051496	ppb
	Ag	109	408.342	0.051763	ppb
	Cd	111	21.208	0.012890	ppb
	In	113	89271.701		ppb
>	In	115	1973008.907		ppb
	Sb	121	104.167	0.003183	ppb
	Ba	135	44460.283	31.582698	ppb
	Ba	137	76990.238	31.513163	ppb
>	Tb	159	2771915.024		ppb
	Tl	205	295.838	0.017804	ppb
	Pb	206	179.168	0.031530	ppb
	Pb	207	350.003	0.034820	ppb
	Pb	208	466.673	0.028359	ppb
>	Bi	209	1392924.513		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	333830.665		ppb
	Be	9	26.667	0.069746	ppb
>	Sc	45	1074084.627		ppb
	V	51	1772.256	-0.029604	ppb
	Cr	52	46954.980	4.960737	ppb
	Mn	55	64826.109	4.805705	ppb
	Co	59	10131.797	0.954625	ppb
	Ni	60	11375.911	5.265759	ppb
	Cu	63	1758.488	0.328508	ppb
	Cu	65	863.926	0.342054	ppb
	Zn	66	8731.588	6.786321	ppb
	As	75	-140.563	0.009327	ppb
	Se	82	34.445	-0.018834	ppb
	Ag	107	336.117	0.041847	ppb
	Ag	109	297.227	0.037871	ppb
	Cd	111	66.667	0.042504	ppb
	In	113	84114.783		ppb
>	In	115	1913362.068		ppb
	Sb	121	120.834	0.007344	ppb

|	Ba	135	42933.634	31.647407	ppb
|	Ba	137	75675.258	32.142170	ppb
|>	Tb	159	2671263.110		ppb
⌈	Tl	205	358.340	0.022300	ppb
|	Pb	206	216.669	0.039711	ppb
|	Pb	207	358.337	0.036471	ppb
|	Pb	208	483.340	0.030195	ppb
|>	Bi	209	1367255.038		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		101.816			
	Be	9					
>	Sc	45		100.796			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		96.611			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		102.374			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		96.847			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403023-05

Sample Date/Time: Tuesday, March 25, 2014 20:07:47
Sample Type: Sample
Sample Description: MW-7
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403023-05.6720

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	331552.284	1.795	331552.284			ppb
⌊	Be	9	14.444	65.611	0.000	0.03443	81.30	ppb
⌈>	Sc	45	1096101.010	0.308	1096101.010			ppb
|	V	51	4863.857	7.234	0.003	0.28007	12.48	ppb
|	Cr	52	13348.904	0.419	0.006	0.83890	1.11	ppb
|	Mn	55	10995613.957	0.492	10.030	814.18543	0.58	ppb
|	Co	59	7694.075	5.035	0.007	0.70987	4.73	ppb
|	Ni	60	2429.925	5.520	0.002	1.09840	5.35	ppb
|	Cu	63	7594.550	2.289	0.007	1.45030	2.47	ppb
|	Cu	65	3557.115	4.111	0.003	1.44612	4.28	ppb
|	Zn	66	9964.222	1.559	0.009	7.59790	1.58	ppb
|	As	75	-100.248	48.277	0.000	0.04030	86.51	ppb
⌊	Se	82	39.445	15.493	0.000	0.01128	374.88	ppb
⌈	Ag	107	135.187	96.823	0.000	0.01440	123.26	ppb
|	Ag	109	121.298	97.868	0.000	0.01313	126.25	ppb
|	Cd	111	212.103	12.554	0.000	0.13664	12.67	ppb
|	In	113	87073.325	1.375	0.002			ppb
⌊>	In	115	1903739.092	1.240	1903739.092			ppb
⌈	Sb	121	302.783	42.513	0.000	0.04410	60.73	ppb
|	Ba	135	215976.839	0.282	0.080	158.06075	1.18	ppb
|	Ba	137	378930.744	0.904	0.141	159.78663	1.55	ppb
⌊>	Tb	159	2691333.721	1.127	2691333.721			ppb
⌈	Tl	205	436.125	79.951	0.000	0.02781	85.99	ppb
|	Pb	206	283.338	49.675	0.000	0.05356	55.41	ppb
|	Pb	207	470.840	41.386	0.000	0.04942	46.66	ppb
|	Pb	208	706.962	40.512	0.000	0.04681	47.12	ppb
⌊>	Bi	209	1364956.527	2.272	1364956.527			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	337686.954		ppb
⌊	Be	9	6.667	0.011078	ppb
⌈>	Sc	45	1095057.626		ppb
|	V	51	5141.694	0.308764	ppb
|	Cr	52	13293.830	0.833831	ppb
|	Mn	55	10935393.022	810.492234	ppb
|	Co	59	7547.847	0.697079	ppb
|	Ni	60	2514.205	1.137822	ppb
|	Cu	63	7441.657	1.422063	ppb
|	Cu	65	3725.694	1.517100	ppb
|	Zn	66	10132.909	7.735237	ppb
|	As	75	-150.855	0.003902	ppb
⌊	Se	82	33.333	-0.031381	ppb
⌈	Ag	107	52.778	0.003291	ppb
|	Ag	109	55.556	0.004033	ppb

	Cd	111	218.189	0.142580	ppb
	In	113	86152.857		ppb
>	In	115	1876674.328		ppb
	Sb	121	187.502	0.020355	ppb
	Ba	135	216552.977	157.346810	ppb
	Ba	137	375335.758	157.135104	ppb
>	Tb	159	2710523.491		ppb
	Tl	205	208.336	0.012080	ppb
	Pb	206	200.002	0.035511	ppb
	Pb	207	358.337	0.035615	ppb
	Pb	208	550.009	0.034185	ppb
>	Bi	209	1397153.911		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	325802.285		ppb
	Be	9	11.667	0.026752	ppb
>	Sc	45	1093365.829		ppb
	V	51	4468.227	0.241132	ppb
	Cr	52	13405.646	0.849652	ppb
	Mn	55	11040228.662	819.529439	ppb
	Co	59	7401.071	0.684550	ppb
	Ni	60	2275.259	1.030838	ppb
	Cu	63	7783.584	1.490588	ppb
	Cu	65	3481.161	1.418324	ppb
	Zn	66	9827.048	7.511154	ppb
	As	75	-95.474	0.043600	ppb
	Se	82	39.445	0.012036	ppb
	Ag	107	66.667	0.005042	ppb
	Ag	109	50.000	0.003095	ppb
	Cd	111	182.960	0.117145	ppb
	In	113	86640.375		ppb
>	In	115	1914408.185		ppb
	Sb	121	279.171	0.038806	ppb
	Ba	135	215338.843	156.660956	ppb
	Ba	137	382158.681	160.192453	ppb
>	Tb	159	2707125.958		ppb
	Tl	205	262.503	0.016021	ppb
	Pb	206	204.169	0.037349	ppb
	Pb	207	358.337	0.036613	ppb
	Pb	208	533.342	0.033966	ppb
>	Bi	209	1362433.715		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	331167.612		ppb
	Be	9	25.000	0.065463	ppb
>	Sc	45	1099879.577		ppb
	V	51	4981.650	0.290309	ppb
	Cr	52	13347.235	0.833221	ppb
	Mn	55	11011220.186	812.534613	ppb
	Co	59	8133.306	0.747981	ppb
	Ni	60	2500.313	1.126528	ppb
	Cu	63	7558.411	1.438250	ppb
	Cu	65	3464.489	1.402939	ppb
	Zn	66	9932.708	7.547319	ppb
	As	75	-54.415	0.073389	ppb
	Se	82	45.556	0.053189	ppb
	Ag	107	286.115	0.034880	ppb
	Ag	109	258.337	0.032273	ppb
	Cd	111	235.160	0.150209	ppb
	In	113	88426.743		ppb
>	In	115	1920134.762		ppb
	Sb	121	441.676	0.073126	ppb

|	Ba	135	216038.698	160.174483	ppb
|	Ba	137	379297.792	162.032346	ppb
|>	Tb	159	2656351.715		ppb
⌈	Tl	205	837.535	0.055330	ppb
|	Pb	206	445.843	0.087805	ppb
|	Pb	207	695.846	0.076045	ppb
|	Pb	208	1037.534	0.072275	ppb
|>	Bi	209	1335281.956		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		100.095			
	Be	9					
>	Sc	45		101.634			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		93.911			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		100.770			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		95.620			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	LDR exceeded

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403023-06

Sample Date/Time: Tuesday, March 25, 2014 20:09:31
Sample Type: Sample
Sample Description: MW-10
Number of Replicates: 3
Batch ID: 1403023
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403023-06.6721

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	313339.536	0.459	313339.536			ppb
⌊	Be	9	17.222	73.276	0.000	0.04540	86.37	ppb
⌈>	Sc	45	1050429.734	1.342	1050429.734			ppb
|	V	51	3011.270	3.914	0.001	0.10551	7.85	ppb
|	Cr	52	10034.481	3.614	0.004	0.49593	10.26	ppb
|	Mn	55	8459582.618	3.951	8.053	653.68629	4.13	ppb
|	Co	59	21593.876	4.465	0.021	2.08224	3.88	ppb
|	Ni	60	12662.647	3.014	0.012	5.99379	2.46	ppb
|	Cu	63	6224.162	4.825	0.006	1.23764	4.89	ppb
|	Cu	65	2133.561	1.479	0.002	0.89694	0.88	ppb
|	Zn	66	12602.385	2.955	0.012	10.05526	4.16	ppb
|	As	75	651.783	1.696	0.001	0.60070	1.11	ppb
⌊	Se	82	250.929	5.942	0.000	1.57362	5.63	ppb
⌈	Ag	107	84.260	90.545	0.000	0.00791	135.98	ppb
|	Ag	109	121.298	139.720	0.000	0.01376	179.32	ppb
|	Cd	111	79.447	39.452	0.000	0.05290	39.16	ppb
|	In	113	82263.463	2.078	0.001			ppb
⌊>	In	115	1833056.560	0.940	1833056.560			ppb
⌈	Sb	121	475.015	73.267	0.000	0.08131	87.10	ppb
|	Ba	135	103793.367	2.779	0.040	78.53389	2.68	ppb
|	Ba	137	179974.679	1.129	0.069	78.47338	2.16	ppb
⌊>	Tb	159	2602872.029	1.338	2602872.029			ppb
⌈	Tl	205	1179.259	70.388	0.001	0.08849	71.85	ppb
|	Pb	206	293.063	100.622	0.000	0.06402	106.78	ppb
|	Pb	207	538.900	90.852	0.000	0.06585	96.09	ppb
|	Pb	208	859.756	87.590	0.001	0.06709	94.36	ppb
⌊>	Bi	209	1188289.724	0.312	1188289.724			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	311751.533		ppb
⌊	Be	9	8.333	0.017896	ppb
⌈>	Sc	45	1034885.701		ppb
|	V	51	2889.282	0.097269	ppb
|	Cr	52	10225.225	0.538548	ppb
|	Mn	55	8561360.711	671.415687	ppb
|	Co	59	21294.315	2.084397	ppb
|	Ni	60	12521.724	6.016353	ppb
|	Cu	63	6282.528	1.268383	ppb
|	Cu	65	2111.334	0.901015	ppb
|	Zn	66	13005.674	10.533022	ppb
|	As	75	647.285	0.604605	ppb
⌊	Se	82	239.447	1.516414	ppb
⌈	Ag	107	36.111	0.001076	ppb
|	Ag	109	33.333	0.000947	ppb

|	Cd	111	50.608	0.033523	ppb
|	In	113	83173.627		ppb
|>	In	115	1837914.989		ppb
⌈	Sb	121	308.338	0.047559	ppb
|	Ba	135	106194.216	80.869172	ppb
|	Ba	137	182296.594	79.987952	ppb
|>	Tb	159	2586088.846		ppb
⌈	Tl	205	700.025	0.051812	ppb
|	Pb	206	133.334	0.026988	ppb
|	Pb	207	262.502	0.030137	ppb
|	Pb	208	433.339	0.031258	ppb
|>	Bi	209	1189817.057		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	313711.417		ppb
|	Be	9	31.667	0.090293	ppb
⌈>	Sc	45	1062386.790		ppb
|	V	51	3124.492	0.113838	ppb
|	Cr	52	10261.929	0.509636	ppb
|	Mn	55	8731092.785	667.001202	ppb
|	Co	59	22672.339	2.161901	ppb
|	Ni	60	13094.679	6.128865	ppb
|	Cu	63	6490.995	1.276667	ppb
|	Cu	65	2169.680	0.901969	ppb
|	Zn	66	12530.067	9.880424	ppb
|	As	75	664.378	0.604525	ppb
|	Se	82	267.781	1.675716	ppb
⌈	Ag	107	172.224	0.020304	ppb
|	Ag	109	316.672	0.042198	ppb
|	Cd	111	112.805	0.074733	ppb
|	In	113	83324.878		ppb
|>	In	115	1847330.390		ppb
⌈	Sb	121	875.038	0.162702	ppb
|	Ba	135	104592.467	77.936891	ppb
|	Ba	137	178519.361	76.646447	ppb
|>	Tb	159	2642903.147		ppb
⌈	Tl	205	2137.728	0.161906	ppb
|	Pb	206	633.353	0.142912	ppb
|	Pb	207	1104.198	0.138899	ppb
|	Pb	208	1729.257	0.140181	ppb
|>	Bi	209	1184061.024		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	314555.658		ppb
|	Be	9	11.667	0.028001	ppb
⌈>	Sc	45	1054016.712		ppb
|	V	51	3020.037	0.105422	ppb
|	Cr	52	9616.288	0.439603	ppb
|	Mn	55	8086294.357	622.641975	ppb
|	Co	59	20814.974	2.000426	ppb
|	Ni	60	12371.537	5.836161	ppb
|	Cu	63	5898.962	1.167879	ppb
|	Cu	65	2119.669	0.887843	ppb
|	Zn	66	12271.414	9.752319	ppb
|	As	75	643.687	0.592983	ppb
|	Se	82	245.559	1.528727	ppb
⌈	Ag	107	44.445	0.002345	ppb
|	Ag	109	13.889	-0.001873	ppb
|	Cd	111	74.929	0.050450	ppb
|	In	113	80291.884		ppb
|>	In	115	1813924.302		ppb
⌈	Sb	121	241.670	0.033675	ppb

|	Ba	135	100593.420	76.795609	ppb
|	Ba	137	179108.082	78.785753	ppb
\└>	Tb	159	2579624.095		ppb
\┌	Tl	205	700.025	0.051760	ppb
|	Pb	206	112.501	0.022162	ppb
|	Pb	207	250.002	0.028501	ppb
|	Pb	208	416.672	0.029831	ppb
\└>	Bi	209	1190991.092		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		94.597			
	Be	9					
>	Sc	45		97.399			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		90.424			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		97.458			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		83.244			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	LDR exceeded

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1403024-01

Sample Date/Time: Tuesday, March 25, 2014 20:11:16
Sample Type: Sample
Sample Description: MW-16
Number of Replicates: 3
Batch ID: 1403024
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\1403024-01.6722

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	284102.886	1.174	284102.886			ppb
⌊	Be	9	10.000	16.667	0.000	0.02612	20.56	ppb
⌈>	Sc	45	905455.828	1.690	905455.828			ppb
|	V	51	3610.042	2.935	0.002	0.23009	5.57	ppb
|	Cr	52	7569.531	2.105	0.003	0.34028	12.18	ppb
|	Mn	55	4542941.443	0.744	5.017	407.21451	1.12	ppb
|	Co	59	59919.110	3.330	0.066	6.70661	2.19	ppb
|	Ni	60	29603.944	1.200	0.033	16.26715	1.51	ppb
|	Cu	63	5052.203	3.969	0.005	1.16428	3.63	ppb
|	Cu	65	2255.810	5.621	0.002	1.10599	7.38	ppb
|	Zn	66	13765.952	1.664	0.015	12.76336	3.37	ppb
|	As	75	-25.476	83.506	0.000	0.09038	19.96	ppb
⌊	Se	82	64.074	4.449	0.000	0.27953	11.28	ppb
⌈	Ag	107	11.111	0.000	-0.000	-0.00222	0.87	ppb
|	Ag	109	12.963	24.744	-0.000	-0.00173	30.00	ppb
|	Cd	111	167.026	13.486	0.000	0.12948	13.66	ppb
|	In	113	72158.015	0.153	0.002			ppb
⌊>	In	115	1581796.924	1.061	1581796.924			ppb
⌈	Sb	121	831.979	5.975	0.000	0.18010	8.39	ppb
|	Ba	135	94863.966	0.828	0.041	81.47597	1.39	ppb
|	Ba	137	167140.012	1.975	0.073	82.69992	0.69	ppb
⌊>	Tb	159	2293350.484	1.937	2293350.484			ppb
⌈	Tl	205	602.796	8.588	0.001	0.04974	8.35	ppb
|	Pb	206	1390.375	5.570	0.001	0.35385	5.13	ppb
|	Pb	207	2536.274	1.757	0.002	0.35998	1.75	ppb
|	Pb	208	3935.178	5.721	0.004	0.36214	7.13	ppb
⌊>	Bi	209	1065869.010	1.354	1065869.010			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	285667.846		ppb
⌊	Be	9	10.000	0.025969	ppb
⌈>	Sc	45	905313.303		ppb
|	V	51	3726.283	0.244393	ppb
|	Cr	52	7574.534	0.340703	ppb
|	Mn	55	4522952.730	405.438152	ppb
|	Co	59	61220.157	6.854164	ppb
|	Ni	60	29961.484	16.464221	ppb
|	Cu	63	5259.716	1.213071	ppb
|	Cu	65	2294.708	1.124699	ppb
|	Zn	66	13790.057	12.783024	ppb
|	As	75	-18.686	0.096082	ppb
⌊	Se	82	61.667	0.258840	ppb
⌈	Ag	107	11.111	-0.002214	ppb
|	Ag	109	11.111	-0.002035	ppb

	Cd	111	191.597	0.149217	ppb
	In	113	72104.855		ppb
>	In	115	1574817.711		ppb
	Sb	121	775.030	0.163280	ppb
	Ba	135	95051.267	80.223798	ppb
	Ba	137	169090.935	82.230100	ppb
>	Tb	159	2333350.143		ppb
	Tl	205	662.522	0.054510	ppb
	Pb	206	1479.276	0.374668	ppb
	Pb	207	2587.671	0.365287	ppb
	Pb	208	3929.626	0.359383	ppb
>	Bi	209	1071748.646		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	280273.378		ppb
	Be	9	8.333	0.020825	ppb
>	Sc	45	920830.348		ppb
	V	51	3585.007	0.219639	ppb
	Cr	52	7407.743	0.298604	ppb
	Mn	55	4581963.386	403.806266	ppb
	Co	59	60914.968	6.705033	ppb
	Ni	60	29599.297	15.990972	ppb
	Cu	63	5037.380	1.141131	ppb
	Cu	65	2114.112	1.016675	ppb
	Zn	66	13525.808	12.324048	ppb
	As	75	-49.317	0.070175	ppb
	Se	82	63.334	0.263941	ppb
	Ag	107	11.111	-0.002208	ppb
	Ag	109	11.111	-0.002028	ppb
	Cd	111	147.355	0.115066	ppb
	In	113	72285.317		ppb
>	In	115	1569636.127		ppb
	Sb	121	854.203	0.184504	ppb
	Ba	135	95539.217	81.763489	ppb
	Ba	137	169001.102	83.335889	ppb
>	Tb	159	2301167.956		ppb
	Tl	205	570.850	0.047797	ppb
	Pb	206	1337.589	0.345702	ppb
	Pb	207	2508.491	0.361605	ppb
	Pb	208	4163.016	0.389230	ppb
>	Bi	209	1049428.004		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	286367.434		ppb
	Be	9	11.667	0.031563	ppb
>	Sc	45	890223.832		ppb
	V	51	3518.835	0.226253	ppb
	Cr	52	7726.317	0.381522	ppb
	Mn	55	4523908.213	412.399113	ppb
	Co	59	57622.206	6.560618	ppb
	Ni	60	29251.052	16.346250	ppb
	Cu	63	4859.514	1.138646	ppb
	Cu	65	2358.611	1.176600	ppb
	Zn	66	13981.990	13.183021	ppb
	As	75	-8.426	0.104878	ppb
	Se	82	67.222	0.315805	ppb
	Ag	107	11.111	-0.002245	ppb
	Ag	109	16.667	-0.001132	ppb
	Cd	111	162.126	0.124150	ppb
	In	113	72083.871		ppb
>	In	115	1600936.933		ppb
	Sb	121	866.704	0.192528	ppb

|	Ba	135	94001.413	82.440627	ppb
|	Ba	137	163327.998	82.533765	ppb
|>	Tb	159	2245533.353		ppb
⌈	Tl	205	575.017	0.046913	ppb
|	Pb	206	1354.258	0.341182	ppb
|	Pb	207	2512.659	0.353036	ppb
|	Pb	208	3712.893	0.337793	ppb
|>	Bi	209	1076430.382		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		85.770			
	Be	9					
>	Sc	45		83.957			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		78.030			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		85.869			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		74.668			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: SDI1403024-01

Sample Date/Time: Tuesday, March 25, 2014 20:13:00
Sample Type: Sample
Sample Description: MW-16L 5X
Number of Replicates: 3
Batch ID: 1403024
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\SDI1403024-01.6723

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	334105.693	3.295	334105.693			ppb
	Be	9	2.222	43.301	-0.000	-0.00163	188.40	ppb
>	Sc	45	1019243.933	1.229	1019243.933			ppb
	V	51	2284.803	3.444	0.000	0.03620	29.65	ppb
	Cr	52	6216.933	3.000	0.000	0.04431	37.80	ppb
	Mn	55	862237.099	3.343	0.845	68.56281	2.20	ppb
	Co	59	11887.619	1.831	0.012	1.18068	0.75	ppb
	Ni	60	5915.639	3.418	0.006	2.88299	2.26	ppb
	Cu	63	1213.963	0.998	0.001	0.23393	0.66	ppb
	Cu	65	504.642	4.809	0.000	0.20230	6.65	ppb
	Zn	66	3052.318	4.735	0.003	2.45227	5.70	ppb
	As	75	-111.409	7.529	0.000	0.02632	22.73	ppb
	Se	82	39.445	2.440	0.000	0.03232	32.47	ppb
	Ag	107	13.889	34.641	-0.000	-0.00210	30.25	ppb
	Ag	109	8.333	57.735	-0.000	-0.00270	28.15	ppb
	Cd	111	48.260	55.360	0.000	0.03153	53.81	ppb
	In	113	82748.018	2.327	0.001			ppb
>	In	115	1851224.349	3.684	1851224.349			ppb
	Sb	121	176.390	18.042	0.000	0.02001	29.24	ppb
	Ba	135	19160.563	1.203	0.007	14.70106	1.69	ppb
	Ba	137	33394.575	2.286	0.013	14.76174	0.75	ppb
>	Tb	159	2566411.467	2.854	2566411.467			ppb
	Tl	205	108.334	26.923	0.000	0.00623	34.38	ppb
	Pb	206	291.671	7.143	0.000	0.05846	9.01	ppb
	Pb	207	537.507	2.051	0.000	0.06027	3.46	ppb
	Pb	208	883.357	5.911	0.001	0.06333	8.04	ppb
>	Bi	209	1286773.988	1.673	1286773.988			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	343787.978		ppb
	Be	9	1.667	-0.003452	ppb
>	Sc	45	1032480.065		ppb
	V	51	2265.865	0.030903	ppb
	Cr	52	6333.672	0.048947	ppb
	Mn	55	887646.654	69.691293	ppb
	Co	59	12137.361	1.190097	ppb
	Ni	60	6099.082	2.934868	ppb
	Cu	63	1222.297	0.232401	ppb
	Cu	65	477.789	0.187559	ppb
	Zn	66	2905.978	2.299349	ppb
	As	75	-113.196	0.026039	ppb
	Se	82	38.889	0.024278	ppb
	Ag	107	11.111	-0.002522	ppb
	Ag	109	5.556	-0.003142	ppb

	Cd	111	32.046	0.020522	ppb
	In	113	81875.480		ppb
>	In	115	1889689.652		ppb
	Sb	121	183.335	0.020873	ppb
	Ba	135	19291.924	14.526180	ppb
	Ba	137	34021.107	14.761696	ppb
>	Tb	159	2614260.056		ppb
	Tl	205	79.167	0.004052	ppb
	Pb	206	270.837	0.052883	ppb
	Pb	207	529.174	0.058076	ppb
	Pb	208	829.186	0.057892	ppb
>	Bi	209	1311453.574		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	336399.639		ppb
	Be	9	1.667	-0.003348	ppb
>	Sc	45	1017689.670		ppb
	V	51	2217.304	0.029145	ppb
	Cr	52	6315.327	0.058243	ppb
	Mn	55	868154.349	69.150785	ppb
	Co	59	11786.943	1.172509	ppb
	Ni	60	5948.991	2.904200	ppb
	Cu	63	1219.519	0.235469	ppb
	Cu	65	511.124	0.205416	ppb
	Zn	66	3194.955	2.573610	ppb
	As	75	-118.760	0.020481	ppb
	Se	82	38.889	0.028495	ppb
	Ag	107	19.444	-0.001372	ppb
	Ag	109	5.556	-0.003143	ppb
	Cd	111	79.096	0.051076	ppb
	In	113	84955.176		ppb
>	In	115	1891501.212		ppb
	Sb	121	204.169	0.025390	ppb
	Ba	135	19295.264	14.592210	ppb
	Ba	137	33618.081	14.650507	ppb
>	Tb	159	2602887.759		ppb
	Tl	205	108.334	0.006297	ppb
	Pb	206	291.671	0.059137	ppb
	Pb	207	533.341	0.060495	ppb
	Pb	208	933.360	0.067987	ppb
>	Bi	209	1271852.951		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	322129.461		ppb
	Be	9	3.333	0.001914	ppb
>	Sc	45	1007562.066		ppb
	V	51	2371.240	0.048554	ppb
	Cr	52	6001.801	0.025727	ppb
	Mn	55	830910.293	66.846347	ppb
	Co	59	11738.552	1.179442	ppb
	Ni	60	5698.846	2.809895	ppb
	Cu	63	1200.072	0.233931	ppb
	Cu	65	525.014	0.213935	ppb
	Zn	66	3056.022	2.483838	ppb
	As	75	-102.272	0.032437	ppb
	Se	82	40.556	0.044195	ppb
	Ag	107	11.111	-0.002420	ppb
	Ag	109	13.889	-0.001825	ppb
	Cd	111	33.637	0.023004	ppb
	In	113	81413.397		ppb
>	In	115	1772482.184		ppb
	Sb	121	141.668	0.013779	ppb

|	Ba	135	18894.500	14.984789	ppb
|	Ba	137	32544.538	14.873021	ppb
|>	Tb	159	2482086.586		ppb
⌈	Tl	205	137.501	0.008332	ppb
|	Pb	206	312.505	0.063356	ppb
|	Pb	207	550.008	0.062230	ppb
|	Pb	208	887.524	0.064126	ppb
|>	Bi	209	1277015.438		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		100.866			
	Be	9					
>	Sc	45		94.508			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		91.320			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		96.093			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		90.143			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 4031305-PS2

Sample Date/Time: Tuesday, March 25, 2014 20:14:45
Sample Type: Sample
Sample Description: MW-16A
Number of Replicates: 3
Batch ID: 1403024
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\4031305-PS2.6724

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	310880.618	2.701	310880.618			ppb
⌊	Be	9	3008.231	4.175	0.010	9.42936	1.63	ppb
⌈>	Sc	45	989230.947	2.792	989230.947			ppb
|	V	51	417322.445	3.303	0.420	46.65727	1.09	ppb
|	Cr	52	146775.467	4.945	0.143	18.63133	2.26	ppb
|	Mn	55	4324186.700	2.979	4.370	354.71575	0.42	ppb
|	Co	59	143806.402	2.195	0.145	14.73882	1.25	ppb
|	Ni	60	46102.344	1.714	0.047	23.20547	4.39	ppb
|	Cu	63	87890.253	2.451	0.089	18.81776	0.76	ppb
|	Cu	65	42265.101	2.805	0.043	19.30313	0.75	ppb
|	Zn	66	33415.945	2.429	0.034	28.44607	1.73	ppb
|	As	75	12221.166	1.178	0.013	9.83881	1.69	ppb
⌊	Se	82	5921.012	1.626	0.006	45.85463	2.15	ppb
⌈	Ag	107	61725.134	1.683	0.035	9.24392	2.65	ppb
|	Ag	109	60455.459	3.129	0.035	9.32170	2.58	ppb
|	Cd	111	13806.058	3.633	0.008	9.72461	1.94	ppb
|	In	113	90779.782	2.359	0.008			ppb
⌊>	In	115	1745241.218	3.818	1745241.218			ppb
⌈	Sb	121	86694.165	4.710	0.035	19.02250	4.54	ppb
|	Ba	135	214503.212	2.505	0.087	170.69631	1.32	ppb
|	Ba	137	373849.485	1.218	0.151	171.45440	2.03	ppb
⌊>	Tb	159	2474725.265	1.516	2474725.265			ppb
⌈	Tl	205	129303.049	2.065	0.111	10.02333	0.79	ppb
|	Pb	206	43869.682	2.908	0.038	10.30561	2.90	ppb
|	Pb	207	79726.914	2.019	0.068	10.43793	2.72	ppb
|	Pb	208	120278.762	0.524	0.103	10.24092	2.26	ppb
⌊>	Bi	209	1166905.713	2.724	1166905.713			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	319521.082		ppb
⌊	Be	9	3148.829	9.605657	ppb
⌈>	Sc	45	1019806.570		ppb
|	V	51	430491.690	46.689914	ppb
|	Cr	52	154567.054	19.056121	ppb
|	Mn	55	4460273.018	354.920328	ppb
|	Co	59	146490.167	14.561544	ppb
|	Ni	60	45190.769	22.046521	ppb
|	Cu	63	90375.998	18.768298	ppb
|	Cu	65	43633.877	19.330478	ppb
|	Zn	66	33960.345	28.037205	ppb
|	As	75	12387.355	9.672538	ppb
⌊	Se	82	6014.586	45.164284	ppb
⌈	Ag	107	62749.034	9.227078	ppb
|	Ag	109	62458.334	9.458469	ppb

	Cd	111	13740.221	9.507263	ppb
	In	113	92870.924		ppb
>	In	115	1776304.445		ppb
	Sb	121	89814.025	19.398862	ppb
	Ba	135	220705.632	172.898595	ppb
	Ba	137	375692.105	169.577749	ppb
>	Tb	159	2514032.834		ppb
	Tl	205	131973.474	9.933265	ppb
	Pb	206	44101.198	10.057925	ppb
	Pb	207	79789.769	10.140377	ppb
	Pb	208	120753.003	9.979802	ppb
>	Bi	209	1201652.227		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	310372.964		ppb
	Be	9	2968.774	9.323083	ppb
>	Sc	45	981781.257		ppb
	V	51	418479.719	47.147091	ppb
	Cr	52	145553.301	18.623419	ppb
	Mn	55	4308160.058	356.094041	ppb
	Co	59	144601.306	14.930540	ppb
	Ni	60	46597.201	23.613447	ppb
	Cu	63	86716.027	18.705649	ppb
	Cu	65	41605.817	19.145697	ppb
	Zn	66	33804.262	28.991871	ppb
	As	75	12134.049	9.839748	ppb
	Se	82	5822.250	45.414792	ppb
	Ag	107	61753.980	9.007807	ppb
	Ag	109	60208.487	9.044436	ppb
	Cd	111	14337.355	9.840858	ppb
	In	113	90877.737		ppb
>	In	115	1790670.973		ppb
	Sb	121	88195.549	19.633213	ppb
	Ba	135	211552.637	170.806449	ppb
	Ba	137	377192.013	175.472013	ppb
>	Tb	159	2439287.109		ppb
	Tl	205	129301.406	10.083526	ppb
	Pb	206	45013.584	10.636855	ppb
	Pb	207	81304.315	10.706104	ppb
	Pb	208	120518.964	10.320228	ppb
>	Bi	209	1159780.811		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	302747.808		ppb
	Be	9	2907.089	9.359338	ppb
>	Sc	45	966105.015		ppb
	V	51	402995.927	46.134807	ppb
	Cr	52	140206.044	18.214439	ppb
	Mn	55	4204127.024	353.132876	ppb
	Co	59	140327.733	14.724363	ppb
	Ni	60	46519.061	23.956432	ppb
	Cu	63	86578.734	18.979347	ppb
	Cu	65	41555.609	19.433207	ppb
	Zn	66	32483.228	28.309140	ppb
	As	75	12142.095	10.004143	ppb
	Se	82	5926.200	46.984828	ppb
	Ag	107	60672.389	9.496865	ppb
	Ag	109	58699.556	9.462195	ppb
	Cd	111	13340.598	9.825715	ppb
	In	113	88590.685		ppb
>	In	115	1668748.236		ppb
	Sb	121	82072.922	18.035424	ppb

|	Ba	135	211251.368	168.383899	ppb
|	Ba	137	368664.338	169.313441	ppb
|>	Tb	159	2470855.852		ppb
⌈	Tl	205	126634.267	10.053195	ppb
|	Pb	206	42494.263	10.222042	ppb
|	Pb	207	78086.658	10.467314	ppb
|	Pb	208	119564.319	10.422729	ppb
|>	Bi	209	1139284.101		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		93.854			
	Be	9					
>	Sc	45		91.725			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		86.092			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		92.660			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		81.746			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: 4031305-PS2

EPA 6020 & EPA 6020A - Summary Report

Sample ID: LLCCV

Sample Date/Time: Tuesday, March 25, 2014 20:16:30
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\LLCCV.6725

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li	6	326008.971	0.575	326008.971			ppb
	Be	9	302.782	7.494	0.001	0.89762	6.97	ppb
>	Sc	45	960333.926	0.991	960333.926			ppb
	V	51	40716.048	1.739	0.040	4.49860	2.70	ppb
	Cr	52	19142.751	1.152	0.014	1.85277	2.92	ppb
	Mn	55	13571.746	8.352	0.013	1.05338	8.33	ppb
	Co	59	8684.325	1.138	0.009	0.91522	2.11	ppb
	Ni	60	1851.097	2.736	0.002	0.95470	3.59	ppb
	Cu	63	8990.153	3.272	0.009	1.96654	4.27	ppb
	Cu	65	4276.841	2.270	0.004	1.99241	1.38	ppb
	Zn	66	2169.680	1.793	0.002	1.83092	2.88	ppb
	As	75	1123.167	1.234	0.001	1.03287	1.17	ppb
	Se	82	626.872	3.457	0.001	4.76171	2.83	ppb
	Ag	107	6614.225	2.972	0.004	0.95225	3.68	ppb
	Ag	109	6476.173	4.027	0.004	0.96026	4.28	ppb
	Cd	111	1447.929	4.941	0.001	0.98438	5.43	ppb
	In	113	83537.867	2.207	0.002			ppb
>	In	115	1807666.925	0.725	1807666.925			ppb
	Sb	121	8321.518	2.849	0.003	1.78103	3.08	ppb
	Ba	135	11859.252	2.203	0.005	9.27792	1.49	ppb
	Ba	137	20825.553	1.024	0.008	9.39120	2.14	ppb
>	Tb	159	2515275.450	1.443	2515275.450			ppb
	Tl	205	12759.531	3.569	0.010	0.89587	3.82	ppb
	Pb	206	4357.896	5.570	0.003	0.92471	4.63	ppb
	Pb	207	7752.916	2.951	0.006	0.91700	2.06	ppb
	Pb	208	11603.947	2.165	0.009	0.89129	1.71	ppb
>	Bi	209	1286636.284	2.250	1286636.284			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	325337.515		ppb
	Be	9	295.004	0.876408	ppb
>	Sc	45	971317.136		ppb
	V	51	40097.337	4.373831	ppb
	Cr	52	18917.877	1.792703	ppb
	Mn	55	14518.866	1.119957	ppb
	Co	59	8573.674	0.893176	ppb
	Ni	60	1805.719	0.920403	ppb
	Cu	63	8653.743	1.870131	ppb
	Cu	65	4381.515	2.018526	ppb
	Zn	66	2125.226	1.770364	ppb
	As	75	1127.837	1.026213	ppb
	Se	82	648.354	4.875852	ppb
	Ag	107	6427.065	0.917591	ppb
	Ag	109	6327.001	0.930425	ppb

|	Cd	111	1378.904	0.929747	ppb
|	In	113	83471.930		ppb
|>	In	115	1822269.540		ppb
⌈	Sb	121	8578.678	1.823248	ppb
|	Ba	135	12139.030	9.429753	ppb
|	Ba	137	20579.487	9.212600	ppb
|>	Tb	159	2533238.333		ppb
⌈	Tl	205	12624.631	0.909784	ppb
|	Pb	206	4180.040	0.910640	ppb
|	Pb	207	7551.442	0.916912	ppb
|	Pb	208	11387.113	0.897838	ppb
|>	Bi	209	1253298.136		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	328128.175		ppb
|	Be	9	328.339	0.967990	ppb
⌈>	Sc	45	954485.548		ppb
|	V	51	41488.424	4.616649	ppb
|	Cr	52	19358.720	1.897955	ppb
|	Mn	55	12315.913	0.954009	ppb
|	Co	59	8763.839	0.929155	ppb
|	Ni	60	1905.737	0.988861	ppb
|	Cu	63	9118.044	2.006558	ppb
|	Cu	65	4189.766	1.963642	ppb
|	Zn	66	2197.464	1.866832	ppb
|	As	75	1107.572	1.025619	ppb
|	Se	82	627.242	4.796139	ppb
⌈	Ag	107	6596.619	0.951579	ppb
|	Ag	109	6777.296	1.007159	ppb
|	Cd	111	1521.734	1.036583	ppb
|	In	113	85413.220		ppb
|>	In	115	1803823.793		ppb
⌈	Sb	121	8111.622	1.719034	ppb
|	Ba	135	11816.978	9.158188	ppb
|	Ba	137	20940.235	9.352586	ppb
|>	Tb	159	2539089.639		ppb
⌈	Tl	205	13267.128	0.920938	ppb
|	Pb	206	4634.407	0.972746	ppb
|	Pb	207	8001.640	0.935915	ppb
|	Pb	208	11879.188	0.902211	ppb
|>	Bi	209	1301154.389		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	324561.224		ppb
|	Be	9	285.004	0.848466	ppb
⌈>	Sc	45	955199.094		ppb
|	V	51	40562.383	4.505323	ppb
|	Cr	52	19151.655	1.867643	ppb
|	Mn	55	13880.460	1.086180	ppb
|	Co	59	8715.463	0.923326	ppb
|	Ni	60	1841.836	0.954829	ppb
|	Cu	63	9198.673	2.022939	ppb
|	Cu	65	4259.240	1.995055	ppb
|	Zn	66	2186.350	1.855558	ppb
|	As	75	1134.092	1.046789	ppb
|	Se	82	605.018	4.613142	ppb
⌈	Ag	107	6818.991	0.987595	ppb
|	Ag	109	6324.221	0.943197	ppb
|	Cd	111	1443.150	0.986820	ppb
|	In	113	81728.451		ppb
|>	In	115	1796907.440		ppb
⌈	Sb	121	8274.255	1.800811	ppb

|	Ba	135	11621.749	9.245805	ppb
|	Ba	137	20956.937	9.608426	ppb
|>	Tb	159	2473498.378		ppb
⌈	Tl	205	12386.834	0.856901	ppb
|	Pb	206	4259.240	0.890740	ppb
|	Pb	207	7705.667	0.898183	ppb
|	Pb	208	11545.539	0.873827	ppb
|>	Bi	209	1305456.327		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		98.421			
	Be	9	89.762				
>	Sc	45		89.045			
	V	51	89.972				
	Cr	52	92.638				
	Mn	55	105.338				
	Co	59	91.522				
	Ni	60	95.470				
	Cu	63	98.327				
	Cu	65	99.620				
	Zn	66	91.546				
	As	75	103.287				
	Se	82	95.234				
	Ag	107	95.225				
	Ag	109	96.026				
	Cd	111	98.438				
	In	113					
>	In	115		89.172			
	Sb	121	89.052				
	Ba	135	92.779				
	Ba	137	93.912				
>	Tb	159		94.178			
	Tl	205	89.587				
	Pb	206	92.471				
	Pb	207	91.700				
	Pb	208	89.129				
>	Bi	209		90.133			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCV

Sample Date/Time: Tuesday, March 25, 2014 20:18:16
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCV.6726

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	322404.789	2.245	322404.789			ppb
⌊	Be	9	98315.138	3.175	0.305	297.43679	0.98	ppb
⌈>	Sc	45	979322.045	4.006	979322.045			ppb
|	V	51	2731322.411	1.974	2.789	309.84136	2.07	ppb
|	Cr	52	2324373.350	3.783	2.368	309.49235	1.68	ppb
|	Mn	55	3606351.121	3.749	3.683	298.93035	3.05	ppb
|	Co	59	2857815.315	4.862	2.918	295.85782	2.95	ppb
|	Ni	60	588972.647	2.155	0.602	299.42049	1.91	ppb
|	Cu	63	1339770.959	3.491	1.368	290.04188	0.82	ppb
|	Cu	65	662583.309	3.265	0.677	306.05206	0.75	ppb
|	Zn	66	351256.787	2.545	0.359	302.88560	2.38	ppb
|	As	75	373287.851	1.383	0.382	300.33515	2.80	ppb
⌊	Se	82	38230.730	1.602	0.039	300.64979	2.70	ppb
⌈	Ag	107	2099411.462	6.844	1.147	299.62827	2.56	ppb
|	Ag	109	1955385.797	2.656	1.069	287.75678	1.88	ppb
|	Cd	111	446858.520	3.398	0.244	300.29790	1.56	ppb
|	In	113	526087.042	2.354	0.244			ppb
⌊>	In	115	1829587.604	4.338	1829587.604			ppb
⌈	Sb	121	1355009.469	2.829	0.526	285.71182	1.80	ppb
|	Ba	135	385655.959	2.235	0.150	294.71848	1.42	ppb
|	Ba	137	678468.197	1.154	0.263	298.76358	0.80	ppb
⌊>	Tb	159	2577107.404	1.340	2577107.404			ppb
⌈	Tl	205	4296304.085	1.040	3.327	300.98612	3.42	ppb
|	Pb	206	1353093.666	0.747	1.048	287.28961	3.26	ppb
|	Pb	207	2484508.252	1.662	1.924	293.90381	2.84	ppb
|	Pb	208	3923468.153	1.397	3.038	301.85460	2.51	ppb
⌊>	Bi	209	1292296.413	3.849	1292296.413			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	315157.503		ppb
⌊	Be	9	95012.569	294.095624	ppb
⌈>	Sc	45	939895.955		ppb
|	V	51	2673056.521	315.782372	ppb
|	Cr	52	2223129.283	308.381051	ppb
|	Mn	55	3457550.503	298.506922	ppb
|	Co	59	2698904.817	291.120900	ppb
|	Ni	60	577275.457	305.630962	ppb
|	Cu	63	1288831.790	290.675000	ppb
|	Cu	65	641059.712	308.470021	ppb
|	Zn	66	340988.419	306.210319	ppb
|	As	75	367343.663	307.721624	ppb
⌊	Se	82	37523.603	307.259478	ppb
⌈	Ag	107	1938648.265	291.022810	ppb
|	Ag	109	1895416.240	293.018959	ppb

|	Cd	111	429391.264	303.190207	ppb
|	In	113	512496.170		ppb
|>	In	115	1740730.209		ppb
⌈	Sb	121	1310885.867	280.376998	ppb
|	Ba	135	375932.560	291.395389	ppb
|	Ba	137	669623.456	299.061728	ppb
|>	Tb	159	2540882.782		ppb
⌈	Tl	205	4267224.626	312.582669	ppb
|	Pb	206	1342648.214	298.078335	ppb
|	Pb	207	2448674.336	302.928384	ppb
|	Pb	208	3860234.643	310.598731	ppb
|>	Bi	209	1234878.997		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	322420.278		ppb
⌊	Be	9	98716.521	298.677724	ppb
⌈>	Sc	45	979713.273		ppb
|	V	51	2741448.392	310.696109	ppb
|	Cr	52	2368210.571	315.171439	ppb
|	Mn	55	3721646.119	308.252090	ppb
|	Co	59	2956349.095	305.930266	ppb
|	Ni	60	587171.876	298.236039	ppb
|	Cu	63	1349704.603	292.032434	ppb
|	Cu	65	662363.634	305.767609	ppb
|	Zn	66	357319.015	307.834778	ppb
|	As	75	375884.548	302.081192	ppb
⌊	Se	82	38585.409	303.109482	ppb
⌈	Ag	107	2215278.272	305.729363	ppb
|	Ag	109	1985783.443	282.230113	ppb
|	Cd	111	454289.073	294.900023	ppb
|	In	113	529024.405		ppb
|>	In	115	1893437.186		ppb
⌈	Sb	121	1373972.379	286.128288	ppb
|	Ba	135	388669.201	293.330821	ppb
|	Ba	137	681270.344	296.247253	ppb
|>	Tb	159	2609635.637		ppb
⌈	Tl	205	4347767.964	297.450688	ppb
|	Pb	206	1362818.771	282.576025	ppb
|	Pb	207	2529658.447	292.280586	ppb
|	Pb	208	3957703.682	297.411852	ppb
|>	Bi	209	1322193.672		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	329636.587		ppb
⌊	Be	9	101216.325	299.537036	ppb
⌈>	Sc	45	1018356.907		ppb
|	V	51	2779462.321	303.045612	ppb
|	Cr	52	2381780.197	304.924572	ppb
|	Mn	55	3639856.739	290.032031	ppb
|	Co	59	2918192.032	290.522281	ppb
|	Ni	60	602470.608	294.394458	ppb
|	Cu	63	1380776.484	287.418207	ppb
|	Cu	65	684326.581	303.918542	ppb
|	Zn	66	355462.926	294.611693	ppb
|	As	75	376635.342	291.202632	ppb
⌊	Se	82	38583.179	291.580411	ppb
⌈	Ag	107	2144307.847	302.132643	ppb
|	Ag	109	1984957.709	288.021272	ppb
|	Cd	111	456895.223	302.803482	ppb
|	In	113	536740.550		ppb
|>	In	115	1854595.418		ppb
⌈	Sb	121	1380170.159	290.630185	ppb

|	Ba	135	392366.118	299.429234	ppb
|	Ba	137	684510.792	300.981762	ppb
|>	Tb	159	2580803.794		ppb
⌈	Tl	205	4273919.664	292.925001	ppb
|	Pb	206	1353814.014	281.214481	ppb
|	Pb	207	2475191.972	286.502464	ppb
|	Pb	208	3952466.133	297.553221	ppb
|>	Bi	209	1319816.570		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		97.333			
	Be	9	99.146				
>	Sc	45		90.806			
	V	51	103.280				
	Cr	52	103.164				
	Mn	55	99.643				
	Co	59	98.619				
	Ni	60	99.807				
	Cu	63	96.681				
	Cu	65	102.017				
	Zn	66	100.962				
	As	75	100.112				
	Se	82	100.217				
	Ag	107	99.876				
	Ag	109	95.919				
	Cd	111	100.099				
	In	113					
>	In	115		90.253			
	Sb	121	95.237				
	Ba	135	98.239				
	Ba	137	99.588				
>	Tb	159		96.493			
	Tl	205	100.329				
	Pb	206	95.763				
	Pb	207	97.968				
	Pb	208	100.618				
>	Bi	209		90.530			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCB

Sample Date/Time: Tuesday, March 25, 2014 20:20:01
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\Default\CCB.6727

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	341678.108	2.167	341678.108			ppb
⌊	Be	9	6.111	41.660	0.000	0.00921	76.26	ppb
⌈>	Sc	45	1039070.288	3.085	1039070.288			ppb
|	V	51	2015.469	5.256	0.000	0.00260	375.96	ppb
|	Cr	52	5879.507	3.119	-0.000	-0.01324	54.34	ppb
|	Mn	55	2071.090	54.169	0.001	0.06675	124.70	ppb
|	Co	59	71.667	0.000	0.000	0.00527	4.14	ppb
|	Ni	60	20.370	7.873	0.000	0.00506	14.80	ppb
|	Cu	63	160.186	13.470	0.000	0.01422	37.33	ppb
|	Cu	65	91.667	3.030	0.000	0.01819	10.69	ppb
|	Zn	66	70.371	29.627	-0.000	-0.01985	80.65	ppb
|	As	75	-99.991	22.923	0.000	0.03640	49.71	ppb
⌊	Se	82	37.593	22.623	0.000	0.01225	468.64	ppb
⌈	Ag	107	211.113	19.113	0.000	0.02480	22.94	ppb
|	Ag	109	175.002	20.817	0.000	0.02070	25.44	ppb
|	Cd	111	7.046	286.858	0.000	0.00426	306.41	ppb
|	In	113	85221.383	1.680	0.001			ppb
⌊>	In	115	1913410.179	0.692	1913410.179			ppb
⌈	Sb	121	369.451	19.184	0.000	0.05974	24.75	ppb
|	Ba	135	29.444	34.119	0.000	0.01402	53.71	ppb
|	Ba	137	38.889	25.833	0.000	0.01056	42.40	ppb
⌊>	Tb	159	2608518.855	0.662	2608518.855			ppb
⌈	Tl	205	166.668	31.918	0.000	0.00968	37.46	ppb
|	Pb	206	59.722	26.414	0.000	0.00829	38.56	ppb
|	Pb	207	108.334	25.221	0.000	0.00860	36.66	ppb
|	Pb	208	180.557	19.215	0.000	0.00825	31.17	ppb
⌊>	Bi	209	1361896.918	0.939	1361896.918			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	350066.939		ppb
⌊	Be	9	8.333	0.015042	ppb
⌈>	Sc	45	1066186.007		ppb
|	V	51	2132.325	0.009278	ppb
|	Cr	52	6071.843	-0.008494	ppb
|	Mn	55	3167.168	0.147766	ppb
|	Co	59	71.667	0.005091	ppb
|	Ni	60	19.444	0.004376	ppb
|	Cu	63	136.112	0.008499	ppb
|	Cu	65	88.889	0.015963	ppb
|	Zn	66	69.445	-0.021843	ppb
|	As	75	-75.776	0.056390	ppb
⌊	Se	82	47.222	0.075313	ppb
⌈	Ag	107	213.891	0.025038	ppb
|	Ag	109	136.112	0.015135	ppb

	Cd	111	-4.775	-0.003377	ppb
	In	113	85762.019		ppb
>	In	115	1920975.201		ppb
	Sb	121	341.673	0.054447	ppb
	Ba	135	20.000	0.007013	ppb
	Ba	137	48.333	0.014801	ppb
>	Tb	159	2590335.762		ppb
	Tl	205	179.168	0.010494	ppb
	Pb	206	41.667	0.004654	ppb
	Pb	207	83.334	0.005782	ppb
	Pb	208	141.667	0.005407	ppb
>	Bi	209	1361725.440		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	338907.211		ppb
	Be	9	3.333	0.001414	ppb
>	Sc	45	1047328.206		ppb
	V	51	1925.736	-0.008638	ppb
	Cr	52	5860.050	-0.021522	ppb
	Mn	55	2121.058	0.071031	ppb
	Co	59	71.667	0.005214	ppb
	Ni	60	22.222	0.005859	ppb
	Cu	63	166.668	0.015171	ppb
	Cu	65	94.445	0.019041	ppb
	Zn	66	91.667	-0.002940	ppb
	As	75	-121.350	0.021134	ppb
	Se	82	31.111	-0.037040	ppb
	Ag	107	250.003	0.030360	ppb
	Ag	109	208.336	0.025604	ppb
	Cd	111	30.383	0.019353	ppb
	In	113	86304.154		ppb
>	In	115	1898116.760		ppb
	Sb	121	450.010	0.076447	ppb
	Ba	135	40.000	0.021985	ppb
	Ba	137	40.000	0.011015	ppb
>	Tb	159	2610532.208		ppb
	Tl	205	212.502	0.012839	ppb
	Pb	206	70.834	0.010659	ppb
	Pb	207	137.500	0.012002	ppb
	Pb	208	208.335	0.010412	ppb
>	Bi	209	1349188.664		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	336060.173		ppb
	Be	9	6.667	0.011172	ppb
>	Sc	45	1003696.651		ppb
	V	51	1988.346	0.007174	ppb
	Cr	52	5706.628	-0.009711	ppb
	Mn	55	925.043	-0.018547	ppb
	Co	59	71.667	0.005516	ppb
	Ni	60	19.444	0.004941	ppb
	Cu	63	177.779	0.018984	ppb
	Cu	65	91.667	0.019562	ppb
	Zn	66	50.000	-0.034775	ppb
	As	75	-102.846	0.031680	ppb
	Se	82	34.445	-0.001511	ppb
	Ag	107	169.446	0.018990	ppb
	Ag	109	180.557	0.021359	ppb
	Cd	111	-4.471	-0.003182	ppb
	In	113	83597.977		ppb
>	In	115	1921138.575		ppb
	Sb	121	316.672	0.048332	ppb

	Ba	135	28.333	0.013067	ppb
	Ba	137	28.333	0.005877	ppb
>	Tb	159	2624688.595		ppb
	Tl	205	108.334	0.005720	ppb
	Pb	206	66.667	0.009560	ppb
	Pb	207	104.167	0.008008	ppb
	Pb	208	191.668	0.008922	ppb
>	Bi	209	1374776.650		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		103.152			
	Be	9					
>	Sc	45		96.346			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		94.388			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		97.670			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		95.406			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: CCB
Page 4

T. Digestion and Distillation Logs

The following logs shall be submitted, as appropriate, for each preparation procedure. The logs shall include: (1) date; (2) sample weights and volumes, with initial sample weight/volume and final volume clearly indicated; (3) sufficient information to unequivocally identify which QC samples (i.e., LCS, PB) correspond to each batch digested; (4) comments describing any significant sample changes or reactions which occur during preparation shall be entered in the log and noted in the SDG Narrative; (5) indication of pH less than 2 or greater than 12, as applicable; (6) identification of the sample preparer(s) [signature (s)].

METALS/MERCURY PREPARATION LOG

Metals Method: 3010A / 6010C
Mercury Method: 7470A
Prepared By: SAB

CompuChem — A Division Of Liberty Analytical Corp.

Preparation Date: 3-7-14
Preparation Time: 0915
Batch Number: 4030704
Blue Water

COMPUCHEM SAMPLE ID	CLIENT SAMPLE ID	SAMPLE TYPE	ICP Initial (mL)	ICP Final (mL)	HG Initial (mL)	HG Final (mL)	*Description Before	*Description After ICP	pH
4030704-BLK1	PBW01	MB	50	50			CS/CL	CS/CL	N/A
4030704-BS1	MLCS01	LCS	50	50			CS/CL	CS/CL	N/A
4030704-DUP1	MW-3D	DUP	50	50			BR/CY	BR/CY	L2
4030704-MS1	MW-3S	MS	50	50			BR/CY	BR/CY	L2
4030704-MSD1	MW-3SD	MSD	50	50			BR/CY	BR/CY	L2
1403006-01	MW-3	SAMPLE	50	50			BR/CY	BR/CY	L2
1403006-02	MW-2	SAMPLE	50	50			CS/CL	CS/CL	L2
1403006-03	MW-8	SAMPLE	50	50			CS/CL	CS/CL	L2
1403006-04	MW-9	SAMPLE	50	50			CS/CL	CS/CL	L2
1403006-05	MW-12	SAMPLE	50	50			CS/CL	CS/CL	L2
1403006-06	MW-17	SAMPLE	50	50			CS/CL	CS/CL	L2

Mercury Standards and QC S0 S0.2 S0.5S1 S5 S10 ICV ICB CRI CCV CCB

NOTE: All standards and QC for mercury were prepared at the same day as the associated samples. Refer to the attached. Standard QC Preparation Log, with date matching the above preparation date, for preparation method and instruction.

Record of Tempature/Time		
Hot Block Temp In:	92	C
Hot Block Temp Out:	95	C
Hot Block Identifier	HOTBLOCK#1	
Time Hg in water bath:		
Time Hg out water bath:		
Water Bath Temp In:		C
Water Bath Temp Out:		C
Water Bath Identifier		

MS Reference
ICAP: 0.5 mL ICCV-6
Ref #: 3I18011
ICAP: 0.5 mL ICCV-4
Ref#: 3C13004
HG: 1.0mL 100ppb Hg
Ref#

LCS Reference
ICAP: 0.5mL ICCV-6
REF: 3I18011
ICAP: 0.5mL ICCV-4
REF: 3C13004
HG: 0.4 mL of HGMS-1PPM
Ref#

* R=red, BL=blue, Y=yellow, G=green, O=orange, V=violet, W=white, CS=colorless, BR=brown, BK=black
GY= grey, F=fine, M=medium, C=coarse, CL=clear, CY=cloudy, OP=opaque

Shading has been applied to unused portions of this worksheet as a substitute for 'Z-out'.

"The presence of the Chemist's/analyst's employee ID number, or signature, on this log attests that strict compliance with the method's SOP has occurred. Any SOP deviations requires documentation by the chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation."

Sample Verification Signature: S. Bolton
This signature corroborates that the sample idenification numbers appearing on the digestion cups are the same as those appearing on the field sample containers.

Reviewed By: [illegible]
Date: 030714

JCF 111711

Standards/QC Preparation Log for ICP Metals/Mercury Page 1 of 3 **Case/SDG:** 4030704

COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

REAGENTS	REF#[1]	MANUFACTURER	LOT#	EXPIRATION DATE
SULFURIC ACID (H_2SO_4)	3L05001	EMD	51342	12/18
NITRIC ACID (HNO_3)	3J18033	VERITAS	C252558	10/18
POTASSIUM PERMANGANATE ($KMnO_4$)	3F20004	JT BAKER	0000044809	02/17
HYDROCHLORIC ACID (HCL)	3L05003	EMD	53077	11/18
POTASSIUM PERSULFATE ($K_2S_2O_8$)	0F30016	JT BAKER	H44465	06/15
HYDROGEN PEROXIDE (H_2O_2)	3I23032	EMD	53012324	01/31/15
STANDARDS				
ERA PPT (540)	3I23031	ERA	D071-540	04/30/14
EPA LCS (0405)	0E20016	EPA	0405	05/17/15
TCLP-MIX	3K04012	INORGANIC VENTURES	F2-MEB42908	10/01/14
ILM 05.3 Matrix Spike	3E20009	HIGH PURITY	1312616	05/09/14
ICCV-4	3C13004	Inorganic Ventures	G2-MEB46211	04/01/14
ICCV-6	3I18011	Inorganic Ventures	G2-MEB48711	09/01/14
ARSENIC (As) 1000ppm				
MERCURY (Hg) 20ppm	3G29001	HIGH PURITY	1320014	07/23/14
MSHG-1PPM	4A24021	Inorganic Ventures	4A24021	02/01/2015

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log
[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: S. Bolton DATE: 3-7-14

ENTERED BY: S. Bolton DATE: 3-7-14

REVIEWED BY: [illegible] DATE: 030714

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

12/03/07:RM

Standards/QC Preparation Log for ICP Metals/Mercury Page 2 of 3 **Case/SDG:** 4030704

COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

STANDARD LOT NUMBER[2]	PREPARATION INSTRUCTIONS
Hg 100ppb- 4C04001	Place in a 100mL volumetric flask: 0.5mL of 20ppm Hg stock solution 2.5mL of concentrated HNO_3 Baker instra-analyzed Trace Metals grade or equivalent Dilute to 100mL volume with reagent water **(PREPARE DAILY)**
4C06015 Potassium Persulfate	Place in a 1000mL volumetric flask: 50.0g of $K_2S_2O_8$ Baker instra-analyzed Trace Metals grade or equivalent Dilute to 1000mL with reagent water **(PREPARE AS NEEDED)**
4B24011 Potassium Permanganate	Place in a 2000mL volumetric flask: 100.0g of $KmnO_4$ Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREARE AS NEEDED)**
4B07010 Nitric Acid	Place in a 2000mL volumetric flask: 500mL of Deionized water 1000mL of concentrated HNO_3 Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
4B28011 Hydrochloric Acid	Place in a 2000mL volumetric flask: 500mL of Deionized water 1000mL of concentrated HCl Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
Aqua Regia- 3L10002	Place in a 1000mL container: 600mL of Concentrated HCL 200mL of Concentrated HNO3 **(PREPARE AS NEEDED)**

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log

[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: S. Bolton DATE: 3-7-14

ENTERED BY: S. Bolton DATE: 3-7-14

REVIEWED BY: [signature] DATE: 030714

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12/03/07:RM

Standards/QC Preparation Log for ICP Metals/Mercury Page 3 of 3 **Case/SDG:** 4030704

COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

STANDARD LOT NUMBER[2]	PREPARATION INSTRUCTIONS	Resultant Analyte Concentration
ICV- 4C04002	Pipet into a 300mL BOD Bottle 0.4mL of MSHG-1PPM and 99.6mL of reagent water. Digest according to sample preparation instructions	4.0µg/L
S0/ICB/CCB- 4C04003	Pipet into a 300mL BOD Bottle 100mL of reagent water Digest according to sample preparation instructions	0.0µg/L
S0.2/CRI- 4C04004	Pipet into a 300mL BOD Bottle 0.2mL of Hg 100ppb and 99.8mL of reagent water Digest according to sample preparation instructions	0.2µg/L
S0.5- 4C04005	Pipet into a 300mL BOD Bottle 0.5mL of Hg 100ppb and 99.5mL of reagent water Digest according to sample preparation instructions	0.5µg/L
S1.0- 4C04006	Pipet into a 300mL BOD Bottle 1.0mL of Hg 100ppb and 99mL of reagent water Digest according to sample preparation instructions	1.0µg/L
S5.0/CCV- 4C04007	Pipet into a 300mL BOD Bottle 5.0mL of Hg 100ppb and 95mL of reagent water Digest according to sample preparation instructions	5.0µg/L
S10.0- 4C04008	Pipet into a 300mL BOD Bottle 10mL of Hg 100ppb and 90mL of reagent water Digest according to sample preparation instructions	10.0µg/L

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log

[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: S. Bolton DATE: 3-7-14

ENTERED BY: S. Bolton DATE: 3-7-14

REVIEWED BY: [illegible] DATE: 030714

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12/03/07:RM

METALS/MERCURY PREPARATION LOG

Metals Method: 3005A / 6020A
Mercury Method: 7470A
Prepared By: SAB

CompuChem — A Division Of Liberty Analytical Corp.

Preparation Date: 3-7-14
Preparation Time: 0910
Batch Number: 4030705
Purple Water

COMPUCHEM SAMPLE ID	CLIENT SAMPLE ID	SAMPLE TYPE	ICP Initial (mL)	ICP Final (mL)	HG Initial (mL)	HG Final (mL)	*Description Before	*Description After ICP	pH
4030705-BLK1	PBW01	MB	50	50			CS / CL	CS / CL	N/A
4030705-BS1	MLCS01	LCS	50	50			CS / CL	CS / CL	N/A
4030705-DUP1	MW-3D	DUP	50	50			BR / CY	BR / CY	<2
4030705-MS1	MW-3S	MS	50	50			BR / CY	BR / CY	<2
4030705-MSD1	MW-3SD	MSD	50	50			BR / CY	BR / CY	<2
1403006-01	MW-3	SAMPLE	50	50			BR / CY	BR / CY	<2
1403006-02	MW-2	SAMPLE	50	50			CS / CL	CS / CL	<2
1403006-03	MW-8	SAMPLE	50	50			BR / CY	BR / CY	<2
1403006-04	MW-9	SAMPLE	50	50			CS / CL	CS / CL	<2
1403006-05	MW-12	SAMPLE	50	50			CS / CL	CS / CL	<2
1403006-06	MW-17	SAMPLE	50	50			CS / CL	CS / CL	<2

Mercury Standards and QC S0 S0.2 S0.5S1 S5 S10 ICV ICB CRI CCV CCB

NOTE: All standards and QC for mercury were prepared at the same day as the associated samples. Refer to the attached. Standard/QC Preparation Log, with date matching the above preparation date, for preparation method and instruction.

Record of Tempature/Time	
Hot Block Temp In:	92 C
Hot Block Temp Out:	95 C
Hot Block Identifier	HotBlock#1
Time Hg in water bath:	
Time Hg out water bath:	
Water Bath Temp In:	C
Water Bath Temp Out:	C
Water Bath Identifier	

MS Reference
ICAP: 0.2 mL of ICCV-6
0.1 mL for 50 ml prep
Ref #: 3I18011
ICAP: 0.2 mL of ICCV-4
0.1 mL for 50 ml prep
Ref #: 3C13004
HG: 1.0mL 100ppb Hg
Ref#

LCS Reference
ICAP: 0.2 mL of ICCV-6
0.1 mL for 50 ml prep
Ref #: 3I18011
ICAP: 0.2 mL of ICCV-4
0.1 mL for 50 ml prep
Ref #: 3C13004
HG: 1.0 mL of ICCV-5
Ref#

* R=red, BL=blue, Y=yellow, G=green, O=orange, V=violet, W=white, CS=colorless, BR=brown, BK=black
GY= grey, F=fine, M=medium, C=coarse, CL=clear, CY=cloudy, OP=opaque

Shading has been applied to unused portions of this worksheet as a substitute for 'Z-out'.

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Sample Verification Signature: S. Bolton
This signature corroborates that the sample idenification numbers appearing on the digestion cups are the same as those appearing on the field sample containers.

Reviewed By: [illegible]
Date: 3/7/14

111611 JCF

Standards/QC Preparation Log for ICP/MS Metals

COMPUCHEM a division of Liberty Analytical Corp. WORKSHEET 1 YYY

Case/SDG: 4030705

REAGENTS	REF # [1]	MANUFACTURER	LOT #	EXPIRATION
Hydrochloric Acid - Distilled (HCl)	HCL-D-022414-SAB	EMD	51122/3J18034	10/18
Nitric Acid – Distilled (HNO_3)	HNO3-D-020414-SAB	VERITAS	C359970/3L05002	10/18
STANDARDS				
ICCV-6	3I18011	Inorganic Ventures	G2-MEB448711	09/01/14
ICCV-4	3C13004	Inorganic Ventures	G2-MEB462119	04/01/14
ERA PPT (540)	3I23031	ERA	540	04/30/14

STANDARD LOT NUMBER [2]	PREPARATION INSTRUCTIONS
HNO_3– 020714-SAB Nitric Acid	Place in a 100 mL volumetric flask: 25 mL of Deionized water 50 mL of **Distilled** concentrated HNO_3, Baker Instra-analyzed or equivalent Dilute to 100 mL with DI water. Prepare as needed.
HCl– 08 16 13 SAB Hydrochloric Acid	Place in a 100 mL volumetric flask: 25 mL of Deionized water 50 mL of **Distilled** concentrated HCl, Baker Instra-analyzed or equivalent Dilute to 100 mL with DI water. Prepare as needed.

Standard Solutions Prepared By: S. Bolton Date: 3-7-14

Entered By: S. Bolton Date: 3-7-14

Reviewed By: [signature] Date: 3/7/14

[1]Ref# = Logbook ID, Page number, and item number from Materials Receipt Log

[2]Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

[3]Raw Material sub-boiled from specified lot # in accordance with SOP SPP.9.10

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10/06/11:jcf

U. Standard Preparation Information / Internal CoC Documents

Standard Logs

Analytical Standard Parent/Mix Relationships

SDG: 1403006 **Client:** DRAPER

Case No: **Project:** WATAUGA COUNTY LANDFILL 2014+/6520-39

Received: 03/06/2014 **PM:** JANET FRAZIER

Work Order: 1403006 **COC:** **Bol Num:**

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
3B02006				ICPAES CCV STANDARD	2/2/13	3/30/13		-	CompuChem
	2D09008	STOCK	X	High Purity ILM AES CCV (SM-770-040 Sol. A	4/9/12	3/30/13	HNO3/HCL	1208725	High-Purity
	2D09009	STOCK	X	High Purity ILM AES CCV Stock (SM-770-040	4/9/12	3/30/13	HNO3/HCL	1208726	High-Purity
3C13004			X	Inorganic Venture Custom 2nd Source (ICCV-4	3/12/13	4/1/14		G2-MEB462119	Inorganic Ventures
3G19001				ICPAES CCV STANDARD	7/19/13	4/10/14		-	CompuChem
	3D12016	STOCK	X	High Purity ILM AES CCV (SM-770-040 Sol. A	4/11/13	4/10/14	HNO3/HCL	1309901	High-Purity
	3D12017	STOCK	X	High Purity ILM AES CCV Stock (SM-770-040	4/11/13	4/10/14	HNO3/HCL	1309215	High-Purity
3H08038				ICPAES LLICV/LLCCV/LRS STANDARD	8/8/13	11/30/13		-	CompuChem
	1G20022	STOCK		Caledon Hydrochloric Acid	7/20/11	7/20/16	regeant water	77690	Caledon
	2H31012	STOCK		EMD NITRIC ACID, CONCENTRATED	8/31/12	8/31/17	regeant water	51332	EMD
	3A21001	STOCK	X	High Purity LRS 6010C (SM-770-045 Sol. A)	1/21/13	11/30/13	regeant water	1232019	High-Purity
	3A21002	STOCK	X	High Purity LRS 6010C (SM-770-045 Sol. B)	1/21/13	11/30/13	regeant water	1232016	High-Purity
3I18011			X	INORGANIC VENTURES ICCV-6 2ND SOUR(	9/18/13	9/1/14		G2-MEB487118	Inorganic Ventures
3I23031			X	ERA PPT (540)	9/20/13	4/30/14		D071-540	ERA
3J22026			X	High Purity CRI-MS (SM-770-032)	10/22/13	9/25/14		1326612	High-Purity
3K20010				ICPMS Internal Standard Solution	11/20/13	9/8/14		-	CompuChem
	3C19011	STOCK	X	High Purity Bismuth 209 1000 PPM (10006-1)	3/12/13	9/8/14	2% Distilled HN03	1226103	High-Purity
	3C19012	STOCK	X	High Purity Lithium 6 1000 PPM (100029-6I)	3/12/13	9/8/14	2% Distilled HN03	1231246	High-Purity

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
	3E16008	STOCK	X	High Purity Indium 115 1000 PPM (100024-1)	5/14/13	11/9/14	2% Distilled HN03	1307214	High-Purity
	3E16009	STOCK	X	High Purity Scandium 1000 PPM (100048-1)	5/14/13	11/9/14	2% Distilled HN03	1222829	High-Purity
	3E16010	STOCK	X	High Purity Terbium 159 1000 PPM (100057-1	5/14/13	11/9/14	2% Distilled HN03	1229013	High-Purity
3K25003				ICPMS TUNE SOLUTION	11/20/13	5/20/14		-	CompuChem
	3K25002	STOCK	X	High Purity ICP-MSTune Soultion 3 (ICP-MS-T	11/18/13	11/11/14	2% DISTILLED HNO	1304204	High-Purity
3L09047			X	High Purity LRS 6010C (SM-770-045 Sol. A)	12/9/13	12/4/14		1333611	High-Purity
3L09048			X	High Purity LRS 6010C (SM-770-045 Sol. B)	12/9/13	12/4/14		1333612	High-Purity
3L09051				ICPAES LLICV/LLCCV/LRS STANDARD	12/9/13	12/4/14		-	CompuChem
	1G20022	STOCK		Caledon Hydrochloric Acid	7/20/11	7/20/16	regeant water	77690	Caledon
	2H31012	STOCK		EMD NITRIC ACID, CONCENTRATED	8/31/12	8/31/17	regeant water	51332	EMD
	3L09047	STOCK	X	High Purity LRS 6010C (SM-770-045 Sol. A)	12/9/13	12/4/14	regeant water	1333611	High-Purity
	3L09048	STOCK	X	High Purity LRS 6010C (SM-770-045 Sol. B)	12/9/13	12/4/14	regeant water	1333612	High-Purity
4B04003				ICPAES LLICV/LLCCV/LRS STANDARD	2/4/14	12/4/14		-	CompuChem
	1G20022	STOCK		Caledon Hydrochloric Acid	7/20/11	7/20/16	regeant water	77690	Caledon
	2H31012	STOCK		EMD NITRIC ACID, CONCENTRATED	8/31/12	8/31/17	regeant water	51332	EMD
	3L09047	STOCK	X	High Purity LRS 6010C (SM-770-045 Sol. A)	12/9/13	12/4/14	regeant water	1333611	High-Purity
	3L09048	STOCK	X	High Purity LRS 6010C (SM-770-045 Sol. B)	12/9/13	12/4/14	regeant water	1333612	High-Purity
4B04004				ICPAES ICV STANDARD	2/4/14	4/1/14		-	CompuChem
	3C13004	STOCK	X	Inorganic Venture Custom 2nd Source (ICCV-4	3/12/13	4/1/14	regeant water	G2-MEB462119	Inorganic Ventures
	3I18011	STOCK	X	INORGANIC VENTURES ICCV-6 2ND SOUR(	9/18/13	9/1/14	regeant water	G2-MEB487118	Inorganic Ventures
4B04005				ICPAES CCV STANDARD	2/4/14	4/10/14		-	CompuChem
	3D12016	STOCK	X	High Purity ILM AES CCV (SM-770-040 Sol. A	4/11/13	4/10/14	HNO3/HCL	1309901	High-Purity
	3D12017	STOCK	X	High Purity ILM AES CCV Stock (SM-770-040	4/11/13	4/10/14	HNO3/HCL	1309215	High-Purity

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
4B05028				DOD HRS	1/28/14	3/29/14		-	CompuChem
	3D03002	STOCK	X	High Purity ILM RSTD-3A (ICP-AM-15)	4/2/13	3/29/14	-	1209622	High-Purity
	3E15014	STOCK	X	High Purity RSTD-4 (SM-770-030)	5/14/13	5/10/14	-	1312826	High-Purity
	3E15015	STOCK	X	High Purity RSTD-1 (SM-770-027)	5/14/13	5/10/14	-	1312825	High-Purity
	3E16001	STOCK	X	High Purity -Aluminum 10,000 ppm-10M1-1	5/14/13	11/9/14	-	1308703	High-Purity
	3J05001	STOCK	X	High Purity RSTD-2A (SM-770-208 Sol. A)	10/5/13	9/25/14	-	1326610	High-Purity
	3J05002	STOCK	X	High Purity ILM RSTD-2B (SM-770-028 Sol. B	10/5/13	9/25/14	-	1326611	High-Purity
4B24001				ICPAES ICSAB STANDARD	2/24/14	2/24/15		-	CompuChem
	3E16033	STOCK	X	High Purity SPEX (SM-770-026)	5/14/13	5/9/14	regeant water	1312610	High-Purity
	3G10029	STOCK	X	Inorganic Venture CLPP-ICS-B4 (CLPP-ICS-B	7/10/13	8/1/14	regeant water	F2-MEB427129	Inorganic Ventures
	3L30007	STOCK	X	INORGANIC VENTURES CLPP-ICS-A (CLPP	12/30/13	1/1/15	regeant water	G2-MEB491156	Inorganic Ventures
4B24002				ICPAES ICSA STANDARD	2/24/14	2/24/15		-	CompuChem
	1G20022	STOCK		Caledon Hydrochloric Acid	7/20/11	7/20/16	regeant water	77690	Caledon
	3L30007	STOCK	X	INORGANIC VENTURES CLPP-ICS-A (CLPP	12/30/13	1/1/15	regeant water	G2-MEB491156	Inorganic Ventures
4C18008				ICPAES S0/ICB/CCB STANDARD	3/17/14	3/17/15		-	CompuChem
	0F25007	STOCK		ICPAES S0/ICB/CCB STOCK STANDARD	6/25/10	6/25/15	regeant water	NA	CompuChem
	1G20022	STOCK		Caledon Hydrochloric Acid	7/20/11	7/20/16	regeant water	77690	Caledon
	2H31012	STOCK		EMD NITRIC ACID, CONCENTRATED	8/31/12	8/31/17	regeant water	51332	EMD
4C18010				ICPAES RSTD-1 STANDARD	3/17/14	5/10/14		-	CompuChem
	2H31012	STOCK		EMD NITRIC ACID, CONCENTRATED	8/31/12	8/31/17	regeant water	51332	EMD
	3E15015	STOCK	X	High Purity RSTD-1 (SM-770-027)	5/14/13	5/10/14	regeant water	1312825	High-Purity
4C18011				ICPAES RSTD-2 STANDARD	3/17/14	9/25/14		-	CompuChem
	1G20022	STOCK		Caledon Hydrochloric Acid	7/20/11	7/20/16	regeant water	77690	Caledon

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
	2H31012	STOCK		EMD NITRIC ACID, CONCENTRATED	8/31/12	8/31/17	regeant water	51332	EMD
	3J05001	STOCK	X	High Purity RSTD-2A (SM-770-208 Sol. A)	10/5/13	9/25/14	regeant water	1326610	High-Purity
	3J05002	STOCK	X	High Purity ILM RSTD-2B (SM-770-028 Sol. B	10/5/13	9/25/14	regeant water	1326611	High-Purity
4C18012				ICPAES RSTD-3 STANDARD	3/17/14	3/29/14		-	CompuChem
	1G20022	STOCK		Caledon Hydrochloric Acid	7/20/11	7/20/16	regeant water	77690	Caledon
	3D03002	STOCK	X	High Purity ILM RSTD-3A (ICP-AM-15)	4/2/13	3/29/14	regeant water	1209622	High-Purity
	3E16001	STOCK	X	High Purity -Aluminum 10,000 ppm-10M1-1	5/14/13	11/9/14	regeant water	1308703	High-Purity
4C18014				ICPAES RSTD-4 STANDARD	3/17/14	5/10/14		-	CompuChem
	1G20022	STOCK		Caledon Hydrochloric Acid	7/20/11	7/20/16	regeant water	77690	Caledon
	2H31012	STOCK		EMD NITRIC ACID, CONCENTRATED	8/31/12	8/31/17	regeant water	51332	EMD
	3E15014	STOCK	X	High Purity RSTD-4 (SM-770-030)	5/14/13	5/10/14	regeant water	1312826	High-Purity
4C25017				ICPMS CAL1 S0/ICB/CCB	3/25/14	3/26/14		NA	CompuChem
4C25018				ICPMS CAL2 S 6020-MS1/LLICV/LLCCV	3/25/14	3/26/14		-	CompuChem
	3J22026	STOCK	X	High Purity CRI-MS (SM-770-032)	10/22/13	9/25/14	2% Distilled HNO3	1326612	High-Purity
4C25019				ICPMS CAL3 S 6020-MS2	3/25/14	3/26/14		-	CompuChem
	3J22026	STOCK	X	High Purity CRI-MS (SM-770-032)	10/22/13	9/25/14	2% Distilled HNO3	1326612	High-Purity
4C25020				ICPMS CAL4 S 6020-MS3	3/25/14	3/26/14		-	CompuChem
	3H26022	STOCK	X	NSI ICPMS CAL STD (Q-6042-M)	8/22/13	8/31/15	2% Distilled HNO3	081913	NSI
4C25021				ICPMS CAL5 S 6020-MS4	3/25/14	3/26/14		-	CompuChem
	3H26022	STOCK	X	NSI ICPMS CAL STD (Q-6042-M)	8/22/13	8/31/15	2% Distilled HNO3	081913	NSI
4C25022				ICPMS CAL6 S 6020-MS5	3/25/14	3/26/14		-	CompuChem
	3H26022	STOCK	X	NSI ICPMS CAL STD (Q-6042-M)	8/22/13	8/31/15	2% Distilled HNO3	081913	NSI
4C25023				ICPMS ICV	3/25/14	3/26/14		-	CompuChem

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
	3C13004	STOCK	X	Inorganic Venture Custom 2nd Source (ICCV-4	3/12/13	4/1/14	2% Distilled HNO3	G2-MEB462119	Inorganic Ventures
	3I18011	STOCK	X	INORGANIC VENTURES ICCV-6 2ND SOUR(	9/18/13	9/1/14	2% Distilled HNO3	G2-MEB487118	Inorganic Ventures
4C25025				ICPMS ICSA	3/25/14	3/26/14		-	CompuChem
	3L02016	STOCK	X	Inorganic Ventures 6020ICS-9A (6020ICS-9A)	12/2/13	1/1/15	-	G2-MEB454073MC	Inorganic Ventures
4C25026				ICPMS ICSAB	3/25/14	3/26/14		-	CompuChem
	3L02016	STOCK	X	Inorganic Ventures 6020ICS-9A (6020ICS-9A)	12/2/13	1/1/15	-	G2-MEB454073MC	Inorganic Ventures
	3L02017	STOCK	X	Inorganic Ventures 6020ICS-9B (6020-ICS-9B	12/2/13	1/1/15	-	F2-MEB429070	Inorganic Ventures
4C25027				ICPMS CCV	3/25/14	3/26/14		-	CompuChem
	3H26022	STOCK	X	NSI ICPMS CAL STD (Q-6042-M)	8/22/13	8/31/15	2% Distilled HNO3	081913	NSI

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Certificate of Analysis

rec: 4-9-12 JR

2009008

Product Description:

Name:	ILM05.4 ICPAES CCV
Part Number:	**SM-770-040**
	Solution A
Lot Number:	**1208725**
Matrix:	5% HNO_3
Purity:	99.997% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	5000 ± 25	3101a	060502	Fe	2500.0 ± 12.5	3126a	051031
As	100 ± 1	3103a	100818	Pb	100.0 ± 0.6	3128	101026
Ba	100.0 ± 0.6	3104a	070222	Mg	5000 ± 25	3131a	050302
Be	100 ± 1	3105a	090514	Mn	100 ± 1	3132	050429
Bi	100.0 ± 0.5	3106	991212	Ni	100.0 ± 0.5	3136	000612
B	100.0 ± 0.5	3107	070514	K	5000 ± 25	3141a	051220
Cd	100.0 ± 0.5	3108	060531	Se	100 ± 1	3149	100901
Ca	5000 ± 25	3109a	050825	Na	5000 ± 25	3152a	010728
Cr	100.0 ± 0.5	3112a	030730	Tl	100.0 ± 0.5	3158	993012
Co	100.0 ± 0.5	3113	000630	V	100.0 ± 0.6	3165	992706
Cu	100.0 ± 0.5	3114	011017	Zn	110.0 ± 0.6	3168a	080123

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

Custom standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties.

a. **Analytical Balance Calibration**: All balances are calibrated weekly by an in-house method using NBS weights Inventory No 20231A. The balances are calibrated yearly and the calibration weights are checked biennially by a qualified metrology company with weights traceable to the primary standards developed by NIST.

b. **Volumetric Device Calibration**: The calibration of all volumetric vessels is checked using the NBS 602 method where all vessels are weighed to five significant figures.

c. **Calibration Standards**: The Calibration Standards are directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions. The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Refer to attached Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

Preparation Date: March 27, 2012

Shipped Date: MAR 30 2012

Expiration Date: MAR 30 2013

Vanny T. Yib, Inorganic Laboratory Manager

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Connie Hayes, Chief Executive Officer

March 30, 2012

Certificate Issue Date

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

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Shipped Date: MAR 30 2012

Expiration Date: MAR 30 2013

Vanny T. Yib, Inorganic Laboratory Manager

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Certificate of Analysis

exp: 4-9-12 JRK

Product Description:

Name:	ILM05.4 ICPAES CCV
Part Number:	**SM-770-040**
	Solution B
Lot Number:	**1208726**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.98% - 99.9999%

2009009

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Sb	100.0 ± 0.6	3102a	061229	Sn	100.0 ± 0.6	3161a	070330
Mo	100.0 ± 0.6	3134	891307	Ti	100.0 ± 0.6	3162a	060808
Ag	10.0 ± 0.1	3151	992212				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

Custom standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties.

a. **Analytical Balance Calibration**: All balances are calibrated weekly by an in-house method using NBS weights Inventory No 20231A. The balances are calibrated yearly and the calibration weights are checked biennially by a qualified metrology company with weights traceable to the primary standards developed by NIST.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

b. **Volumetric Device Calibration**: The calibration of all volumetric vessels is checked using the NBS 602 method where all vessels are weighed to five significant figures.

c. **Calibration Standards**: The Calibration Standards are directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions. The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Refer to attached Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

Preparation Date: March 27, 2012

Shipped Date: MAR 30 2012

Expiration Date: MAR 30 2013

Vanny T. Yib, Inorganic Laboratory Manager

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Connie Hayes, Chief Executive Officer

March 30, 2012

Certificate Issue Date

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c. **Calibration Standards:** The Calibration Standards are directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions. The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Refer to attached Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

Preparation Date: March 27, 2012

Shipped Date: MAR 30 2012

Expiration Date: MAR 30 2013

Vanny T. Yib, Inorganic Laboratory Manager

Connie Hayes, Chief Executive Officer

March 30, 2012

Certificate Issue Date

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

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High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

INORGANIC VENTURES™
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CERTIFICATE OF ANALYSIS

tel 800.669.6792 • 540.585.3030
fax 540.585.3017
info@inorganicventures.com

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 **DESCRIPTION OF CRM** **Custom Second Source Solution**

Catalog No.: ICCV-4

Lot Number: **G2-MEB462119**

Matrix: 5% HNO3(v/v), tr. HF

3C13004
Rec'd
03/12/13
JG

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

110,000 µg/L ea:
Mo, Sb, Sn, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Antimony, Sb	110,000.00 ± 500.00 µg/L	Molybdenum, Mo	110,000.00 ± 700.00 µg/L	Tin, Sn	110,000.00 ± 700.00 µg/L
Titanium, Ti	110,000.00 ± 500.00 µg/L				

Certified Density: 1.026 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = $2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808

4.2 **BALANCE CALIBRATION -** All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION -** All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION -** An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4ºC. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: March 08, 2013

Expiration Date: EXPIRES 01 APR 2014

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Christy Shortridge
Product Documentation Technician

Christy Shortridge

Certificate Approved By: Brian Alexander
PhD., Technical Process Director

Brian Alexander

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

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Phone (843) 767-7900
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Certificate of Analysis

Product Description:

Name:	ILM05.4 ICPAES CCV
Part Number:	**SM-770-040**
	Solution A
Lot Number:	**1309901**
Matrix:	5% HNO_3
Purity:	99.99% - 99.9999%

3D12016
Rec'd
04/11/13

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	5000 ± 25	3101a	060502	Fe	2500.0 ± 12.5	3126a	051031
As	100 ± 1	3103a	100818	Pb	100.0 ± 0.6	3128	101026
Ba	100.0 ± 0.6	3104a	070222	Mg	5000 ± 25	3131a	050302
Be	100 ± 1	3105a	090514	Mn	100 ± 1	3132	050429
Bi	100.0 ± 0.5	3106	991212	Ni	100.0 ± 0.5	3136	000612
B	100.0 ± 0.5	3107	070514	K	5000 ± 25	3141a	051220
Cd	100.0 ± 0.5	3108	060531	Se	100 ± 1	3149	100901
Ca	5000 ± 25	3109a	050825	Na	5000 ± 25	3152a	010728
Cr	100.0 ± 0.5	3112a	030730	Tl	100.0 ± 0.5	3158	993012
Co	100.0 ± 0.5	3113	000630	V	100.0 ± 0.6	3165	992706
Cu	100.0 ± 0.5	3114	011017	Zn	110.0 ± 0.6	3168a	080123

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2
* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. *For this reason,* standards from the same lot may have different expiration dates.

Preparation Date:	**April 9, 2013**
Shipped Date:	**April 10, 2013**
Expiration Date:	**April 10, 2014**
Certificate Issue Date:	**April 9, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

Angel Sellers
Quality Manager

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Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Name:	ILM05.4 ICPAES CCV
Part Number:	**SM-770-040**
	Solution B
Lot Number:	**1309215**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.97% - 99.999%

3D12017
Rec'd
04/11/13

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Sb	100.0 ± 0.6	3102a	061229	Sn	100.0 ± 0.6	3161a	070330
Mo	100.0 ± 0.6	3134	891307	Ti	100.0 ± 0.6	3162a	060808
Ag	10.0 ± 0.1	3151	992212				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

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The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**April 2, 2013**
Shipped Date:	**April 10, 2013**
Expiration Date:	**April 10, 2014**
Certificate Issue Date:	**April 5, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

Angel Sellers
Quality Manager

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Fax (843) 767-7906

Certificate of Analysis

Product Description:

3A21001
Rec'd
12/17/12
JCF

Part Number:	**SM-770-045**
	Solution A
Lot Number:	**1232019**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.97% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	200 ± 2	3101a	060502	Pb	10.00 ± 0.06	3128	101026
Sb	30.00 ± 0.18	3102a	061229	Mn	10.0 ± 0.1	3132	050429
As	10.0 ± 0.1	3103a	100818	Mo	50.0 ± 0.3	3134	891307
Ba	200.0 ± 1.2	3104a	070222	Ni	10.00 ± 0.05	3136	000612
Be	5.00 ± 0.05	3105a	090514	Se	10.0 ± 0.1	3149	100901
Bi	20.0 ± 0.1	3106	991212	Ag	5.00 ± 0.03	3151	992212
B	50.00 ± 0.25	3107	070514	Tl	30.00 ± 0.15	3158	993012
Cd	5.00 ± 0.03	3108	060531	Sn	50.0 ± 0.3	3161a	070330
Cr	10.00 ± 0.05	3112a	030730	Ti	50.0 ± 0.3	3162a	060808
Co	20.0 ± 0.1	3113	000630	V	20.00 ± 0.12	3165	992706
Cu	5.00 ± 0.03	3114	011017	Zn	30.00 ± 0.15	3168a	080123
Fe	200 ± 1	3126a	051031				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**November 15, 2012**
Shipped Date:	NOV 1 6 2012
Expiration Date:	NOV 1 6 2013
Certificate Issue Date:	**November 16, 2012**

Quality Information:

ACLASS ACCREDITED TESTING

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Part Number:	**SM-770-045**
	Solution B
Lot Number:	**1232016**
Matrix:	5% HNO_3
Purity:	99.98% - 99.999%

3A21002
Rec'd
12/17/12
JLF

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Ca	5000 ± 25	3109a	050825	K	5000 ± 25	3141a	051220
Mg	5000 ± 25	3131a	050302	Na	5000 ± 25	3152a	010728

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

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b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

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c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

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Preparation Date:	**November 15, 2012**
Shipped Date:	NOV 1 6 2012
Expiration Date:	NOV 1 6 2013
Certificate Issue Date:	**November 16, 2012**

Quality Information:

ACLASS ACCREDITED TESTING

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

Angel Sellers
Quality Manager

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INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 DESCRIPTION OF CRM

Custom Solution

Catalog No.: ICCV-6

Lot Number: **G2-MEB487118**

Matrix: 5% HNO3(v/v)

Rec'd 091813

3I18011

1,100,000 µg/L ea:
Ca, K, Na,

600,000 µg/L ea:
Mg,

510,000 µg/L ea:
Fe,

260,000 µg/L ea:
Al,

110,000 µg/L ea:
As, B, Pb, Se, Tl, Zn,

55,000 µg/L ea:
Ag, Ba, Be, Cd, Co, Cr3, Cu, Mn, Ni, V

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	260,000.00 ± 1,600.00 µg/L	Arsenic, As	110,000.00 ± 700.00 µg/L	Barium, Ba	55,000.0 ± 360.0 µg/L
Beryllium, Be	55,000.0 ± 310.0 µg/L	Boron, B	110,000.00 ± 700.00 µg/L	Cadmium, Cd	54,990.0 ± 360.0 µg/L
Calcium, Ca	1,100,000.000 ± 8,000.000 µg/L	Chromium+3, Cr3	54,990.0 ± 360.0 µg/L	Cobalt, Co	55,000.0 ± 370.0 µg/L
Copper, Cu	54,990.0 ± 390.0 µg/L	Iron, Fe	510,000.00 ± 3,300.00 µg/L	Lead, Pb	110,000.00 ± 700.00 µg/L
Magnesium, Mg	599,900.00 ± 2,700.00 µg/L	Manganese, Mn	55,010.0 ± 370.0 µg/L	Nickel, Ni	55,000.0 ± 390.0 µg/L
Potassium, K	1,100,000.000 ± 5,000.000 µg/L	Selenium, Se	110,000.00 ± 700.00 µg/L	Silver, Ag	55,000.0 ± 350.0 µg/L
Sodium, Na	1,100,000.000 ± 5,000.000 µg/L	Thallium, Tl	110,000.00 ± 700.00 µg/L	Vanadium, V	54,980.0 ± 380.0 µg/L
Zinc, Zn	110,000.00 ± 600.00 µg/L				

Certified Density: 1.044 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
B	ICP Assay	3107	070514
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	00630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	992106
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 **ISO 9001 Quality Management System Registration**
- SAI Global File Number 010105

10.2 **ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 **ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 **10CFR50 Appendix B - Nuclear Regulatory Commission**
- Domestic Licensing of Production and Utilization Facilities

10.5 **10CFR21 - Nuclear Regulatory Commission**
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: August 08, 2013

Expiration Date: EXPIRES 01 SEP 2014

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Donna Senn
Product Documentation Technician

Certificate Approved By: Brian Alexander
PhD., Technical Process Director

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

ERA
A Waters Company

3I23031

Certificate of Analysis

Lot No. D071-540

Metals in Soil

Catalog No. 540
Issue Date: October 3, 2010
Revision Date: Original

Certification

Parameter	Total Concentration [1] (mg/kg)	Certified Value [2] (mg/kg)	Uncertainty [3]	QC PALs™ [4] (mg/kg)	PT PALs™ [5] (mg/kg)
aluminum	48500*	8980	0.5%	4130 - 13800	3800 - 14200
antimony	245	122	7.5%	DL - 269	24.4 - 308
arsenic	111	92.6	2.0%	76.8 - 108	64.0 - 121
barium	630	169	1.7%	140 - 198	123 - 215
beryllium	67.1	62.4	4.5%	52.3 - 72.4	45.8 - 79.0
boron	127	106	1.9%	75.5 - 137	62.4 - 150
cadmium	68.2	61.8	1.7%	51.5 - 72.0	45.2 - 78.4
calcium	11400*	6150	0.5%	5110 - 7190	4540 - 7760
chromium	135	71.3	2.3%	58.3 - 84.3	48.8 - 93.8
cobalt	107	103	2.1%	87.7 - 119	76.9 - 130
copper	100	81.2	7.5%	68.1 - 94.3	59.9 - 102
iron	29800*	12800	0.3%	6490 - 19200	4080 - 21600
lead	109	92.4	6.8%	77.0 - 108	65.0 - 120
magnesium	4650	2650	3.2%	1940 - 3360	1700 - 3600
manganese	537	286	2.2%	236 - 336	213 - 360
mercury	3.78	3.77	8.1%	2.70 - 4.84	1.92 - 5.62
molybdenum	52.3	42.6	6.9%	34.0 - 51.2	27.8 - 60.3
nickel	72.3	59.1	3.0%	49.5 - 68.7	41.5 - 76.8
potassium	18800*	2540	2.0%	1720 - 3360	1550 - 3530
selenium	99.4	89.5	1.7%	70.7 - 108	57.5 - 121
silver	37.3	34.4	6.5%	22.8 - 46.0	22.6 - 46.2
sodium	9500*	221	3.8%	146 - 296	61.1 - 380
strontium	209	72.4	3.4%	58.7 - 86.1	50.4 - 93.7
thallium	136	123	1.7%	99.5 - 146	83.1 - 162
tin	119	107	1.7%	82.9 - 131	61.3 - 152
titanium	2340*	202	1.1%	51.2 - 352	0.00 - 427
vanadium	95.2	59.2	3.8%	43.5 - 74.8	32.4 - 85.9
zinc	158	141	3.0%	114 - 168	94.9 - 186

Please see footnotes on back

DL = Detection Limit

ERA

A Waters Company

1. The **Total Concentrations** are equal to the background concentrations in the soil matrix (measured using neutron activation, XRF, and total digestion techniques) plus the amount of each analyte spiked onto the soil. For Trace Metals, the values listed are only "theoretical values" based upon the methodologies listed.

2. The **Certified Values** are equal to the mean recoveries for the parameters as determined in an interlaboratory round robin study based on all applicable digestion techniques reported in the study. The certified values are based on an "as received" basis, assuming 100% solids content.

3. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA using a 3050 digestion procedure followed by ICP and/or ICP-MS analysis for the metals and a BrCl leach followed by CVAA analysis for Hg, multiplied by a coverage factor which is equal to the Student t factor at a 95% confidence interval at n-1 degrees of freedom.

4. The **QC Performance Acceptance Limits (QC PALs™)** are based on actual historical data collected in ERA's Proficiency Testing program. The **QC PALs™** reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the **QC PALs™** to realistically evaluate your performance against your peers.

5. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the **PT PALs™** when analyzing this QC standard alongside USEPA and NELAC compliant PT standards. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and, therefore, the acceptance limits of this QC standard and any PT standard may differ relative to their difference in concentrations.

6. This standard **expires 4/2014. The certified values are monitored and purchasers will be notified of any significant** changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com.

Certifying Officer: Tom Widera

* These parameters are native matrix elements and are present at high concentrations in the unspiked soil. As methods 3050 and 3051 do not normally dissolve elements bound in silicate structures, the recoveries of these elements will be low relative to the recoveries of the elements that are primarily spiked onto the soil

NOTE: For laboratories that use internal standards in their analysis procedures, the following elements have been measured in this standard at the listed concentrations. (Note: these concentrations are for informational use only and do not represent "Certified Values". Ce - 37.8 mg/Kg; La - 21.0 mg/Kg; Li - 8.03 mg/Kg; Sc - 2.40 mg/Kg; Y - 7.24 mg/Kg.)

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

CRI-MS

3J22026

Part Number:	**SM-770-032**
Lot Number:	**1326612**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.97% - 99.9999%

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Al	30.00 ± 0.15	3101a	060502	Mn	1.00 ± 0.01	3132	050429
Sb	2.00 ± 0.02	3102a	061229	Mo	1.00 ± 0.01	3134	891307
As	1.00 ± 0.01	3103a	100818	Ni	1.00 ± 0.01	3136	120619
Ba	10.00 ± 0.06	3104a	070222	Se	5.00 ± 0.05	3149	100901
Be	1.00 ± 0.01	3105a	090514	Ag	1.00 ± 0.01	3151	992212
Cd	1.00 ± 0.01	3108	060531	Tl	1.00 ± 0.01	3158	993012
Cr	2.00 ± 0.01	3112a	030730	Sn	1.00 ± 0.01	3161a	070330
Co	1.00 ± 0.01	3113	000630	V	5.00 ± 0.03	3165	992706
Cu	2.00 ± 0.01	3114	011017	Zn	2.00 ± 0.01	3168a	120629
Pb	1.00 ± 0.01	3128	101026				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**September 23, 2013**
Shipped Date:	**September 25, 2013**
Expiration Date:	**September 25, 2014**
Certificate Issue Date:	**September 23, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers
Quality Manager

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HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

JGF
~~3C1900~~ 031913
3C19011

Product Description:

Name:	Bismuth	Source Material:	Bismuth Metal
Part Number:	**10006-1**	Material Purity:	99.9998%
Lot Number:	**1226103**	Matrix:	2% (v/v) HNO_3

Certified Value: 1000 µg/mL ± 3 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3106 (lot number 991212) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.011 g/mL ± 0.002 g/mL @ 22.3°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 1000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag	<	0.1	Cu	<	0.1	Li	<	0.02	Rb	<	0.02	Th	<	0.02
Al	<	0.1	Dy	<	0.02	Lu	<	0.02	Re	<	0.02	Ti	<	0.4
As	<	0.05	Er	<	0.02	Mg	<	0.5	Rh	<	0.02	Tl	<	0.02
Au	<	0.02	Eu	<	0.02	Mn	<	0.5	Ru	<	0.02	Tm	<	0.02
B	<	1	Fe	<	1	Mo	<	0.02	Sb	<	4	U	<	0.1
Ba	<	0.02	Ga	<	0.02	Na	<	3	Sc	<	0.02	V	<	0.05
Be	<	0.1	Gd	<	0.02	Nb	<	0.02	Se	<	0.1	W	<	0.02
Bi		M	Ge	<	0.02	Nd	<	0.02	Si	<	5	Y	<	0.02
Ca	<	1	Hf	<	0.02	Ni	<	1	Sm	<	0.02	Yb	<	0.02
Cd	<	0.1	Ho	<	0.02	Os	<	0.02	Sn	<	1	Zn	<	0.1
Ce	<	1	In	<	0.02	Pb	<	2	Sr	<	0.02	Zr	<	0.02
Co	<	1	Ir	<	0.02	Pd	<	0.02	Ta	<	0.02			
Cr	<	0.1	K	<	1	Pr	<	0.02	Tb	<	0.02			
Cs	<	0.02	La	<	0.02	Pt	<	0.02	Te	<	0.02			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of bismuth, calibration of instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.
b. **Volumetric Device**
   The calibration of volumetric vessels is checked annually using the NBS 602 method.
c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.
d. **Calibration Standards:**
   The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**September 17, 2012**
Shipped Date:	March 8, 2013
Expiration Date:	September 8, 2014
Certificate Issue Date:	**September 19, 2012**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

HIGH-PURITY STANDARDS
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P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

3C19012

Product Description:

Name:	^{6}Lithium	Source Material:	^{6}Lithium Carbonate
Part Number:	**100029-6I**	Material Purity:	94.38%
Lot Number:	**1231246**	Matrix:	1% HNO_3

Certified Value: 1000 µg/mL ± 5 µg/mL

The Certified value is based on gravimetric preparation and verified using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval.

Density: 1.006 g/mL ± 0.002 g/mL @ 22.1°C

Preparation Information:

The highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines. This standard was prepared using methods developed at National Institute of Standards and Technology (NIST) for the preparation of SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	November 12, 2012
Shipped Date:	March 8, 2013
Expiration Date:	September 8, 2014
Certificate Issue Date:	December 5, 2012

Vanny T. Yib,
Inorganic Laboratory Manager

Angel Sellers
Quality Manager

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High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

3E16008
Rec 051413 JCF

Product Description:

Name:	Indium	Source Material:	Indium Metal
Part Number:	**100024-1**	Material Purity:	99.999%
Lot Number:	**1307214**	Matrix:	2% (v/v) HNO_3

Certified Value: 1000 µg/mL ± 3 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3124a (lot number 110516) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.008 g/mL ± 0.002 g/mL @ 21.8°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 1000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag	<	0.02	Cu	<	0.1	Li	<	0.02	Rb	<	0.02	Th	<	0.02
Al	<	0.1	Dy	<	0.02	Lu	<	0.02	Re	<	0.02	Ti	<	0.02
As	<	0.05	Er	<	0.02	Mg	<	0.5	Rh	<	0.02	Tl	<	0.02
Au	<	0.02	Eu	<	0.02	Mn	<	0.1	Ru	<	0.02	Tm	<	0.02
B	<	1	Fe	<	1	Mo	<	0.02	Sb	<	0.02	U	<	0.1
Ba	<	0.02	Ga	<	0.1	Na	<	5	Sc	<	0.02	V	<	0.05
Be	<	0.02	Gd	<	0.02	Nb	<	0.02	Se	<	0.5	W	<	0.02
Bi	<	0.02	Ge	<	0.02	Nd	<	0.02	Si	<	5	Y	<	0.02
Ca	<	1	Hf	<	0.02	Ni	<	1	Sm	<	0.02	Yb	<	0.02
Cd	<	1	Ho	<	0.02	Os	<	0.02	Sn	<	1	Zn	<	1
Ce	<	0.02	In		M	Pb	<	0.3	Sr	<	0.02	Zr	<	0.02
Co	<	0.05	Ir	<	0.02	Pd	<	0.02	Ta	<	0.02			
Cr	<	0.1	K	<	1	Pr	<	0.02	Tb	<	0.02			
Cs	<	0.02	La	<	0.02	Pt	<	0.02	Te	<	0.02			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of indium, calibration of instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**March 13, 2013**
Shipped Date:	**May 9, 2013**
Expiration Date:	**November 9, 2014**
Certificate Issue Date:	**April 11, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

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High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Section 1. Product and Company Identification

Product Identification: 1000 µg/mL Indium in 2% HNO_3
SDS Number: 100024-1
Recommended Use: For Laboratory Use.
Company Identification: High-Purity Standards
P.O. Box 41727
Charleston, SC 29423
Telephone: (843) 767-7900
FAX: (843) 767-7906

In case of emergency call INFOTRAC: 800-535-5053

Section 2. Hazard Identification

Classification:
Skin Corrosion/Irritation, Category 1B
Serious Eye Damage/ Eye Irritation, Category 1
Labeling:

Symbol:
Signal Word: Danger.
Hazard Statement: Causes severe skin burns and eye damage. Causes serious eye damage.
Precautionary Statement: Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling.

Section 3. Composition

Component	CAS/EINECS Registry #	Percent Concentration
Indium	7440-74-6/231-180-0	0.1
Nitric Acid	7697-37-2/ 231-714-2	2.0
Water, deionized	7732-18-5/ 231-791-2	Balance

Section 4. First Aid Measures

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Call a physician if irritation develops.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician. May cause nausea, vomiting, and diarrhea.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Target Organs: Eyes, skin.

Section 5. Fire Fighting Measures

Fire & Explosion hazards: While nitric acid is not combustible, it is a strong oxidizing agent that can react with combustible materials; however, it is present in limited quantities in this solution. NO_x compounds can be released in case of fire.

Extinguishing Media: Use any extinguishing media that is suitable for the surrounding area. Use a water spray to dilute nitric acid and to absorb liberated nitrogen oxides.

Specific Methods: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Do not allow to enter drainage systems or water ways. Dike area and dilute spill with water and neutralize with soda ash, limestone, etc. Place the neutralized material into containers suitable for eventual disposal, reclamation, or destruction. Always dispose of in accordance with local regulations.

Section 7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Keep out of direct sunlight and away from heat, water, and incompatible materials. When diluting, the acid should always be added slowly to water and in small amounts. Refer to Section 8 for personal handling instructions.

Section 8. Exposure Controls and Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep any buildup of airborne contaminants below their respective threshold limit value. Ensure the availability of eyewash stations and safety showers.

Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron.

Exposure Limits:

Component	ACGIH TLV	OSHA PEL
Indium	0.05 mg/m^3	0.05 mg/m^3
Nitric Acid	2 mg/kg	5 mg/m^3

Section 9. Physical and Chemical Properties

Physical State: Liquid
Color: Clear, colorless liquid
Odor: Odorless to a faint pungent odor
Odor threshold: None
pH: <2
Melting point: N/A
Freezing Point: N/A
Boiling Point: Approximately 100°C
Flash point: N/A
Evaporation rate: N/A
Flammability: N/A
Explosion limits: N/A
Vapor Pressure (mm): N/A

Vapor Density (air+1): N/A
Relative density: (H_2O = 1): Approximately 1.0
Solubility in H_2O: Complete
Auto ignition temperature: N/A
Decomposition temperature: N/A
Molecular Weight: 114.82 (In)

Section 10. Stability and Reactivity

Stability Indicator: Decomposes slowly to release oxygen.
Conditions to Avoid: Metals, chlorine, organic materials, strong alkali, cyanides, excess heat, combustible materials, and light.
Incompatibles: Strong reducing agents.
Hazardous Decomposition Products: NO_x compounds including nitric oxide (NO), nitrogen dioxide (NO_2), nitrous oxide (N_2O) and nitric acid mist or vapor. Irritating and toxic fumes and gases, oxygen, hydrogen gas.
Hazardous Polymerization: Does not polymerize.

Section 11. Toxicological Information

May affect skin, mucous membranes and eyes. Swallowing may lead to a negative effect on mouth and throat and to the risk of perforation or the corrosion of esophagus and stomach.
RTECS#
HNO_3: QU5775000
In: NL1050000
LD_{LO} Oral, Human: (Nitric Acid) 430 mg/kg.
LD_{LO} Subcutaneous, Mouse: (Indium) 10mg/kg.

Section 12. Ecological Information

Ecotoxicological information: Do not allow material to reach ground water, water bodies, or sewage system.

Section 13. Disposal Considerations

General: Follow Federal, state and local regulations for waste.

Section 14. Transport Information

D.O.T. Classification: Hazardous by IATA and 49CFR regulations (based on concentration of acid).
D.O.T. Shipping Name: Corrosive liquid, Acidic, Inorganic, n.o.s. (Nitric Acid Solution)
D.O.T. Hazard Class: 8
U.N./N.A. Number: 3264
Packing Group: II
D.O.T. Label: Corrosive (8)

Section 15. Regulations (Not meant to be all inclusive-selected regulation listed)

TSCA Status: Components of this solution are listed on the TSCA Inventory.
RCRA Status: No.

SARA: Subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372
Risk Phrases: R36/38 Irritating to eyes and skin.
Safety Phrases: S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
WHMIS Information (Canada): E: Corrosive

Section 16. Other Information

HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel only. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The SDS was prepared carefully and represents the best data currently available to us; however, HPS does not certify the data on the SDS. Certified values for this material are given only on the Certificate of Analysis.

Theodore C. Rains, Ph.D.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

3E16009

Product Description:

Name:	Scandium	Source Material:	Scandium oxide
Part Number:	**100048-1**	Material Purity:	99.999%
Lot Number:	**1222829**	Matrix:	2% (v/v) HNO_3

Rec 051413 JCF

Certified Value: 1000 µg/mL ± 4 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3148a (lot number 100701) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.011 g/mL ± 0.002 g/mL @ 23.8°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 1000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag	<	0.02	Cu	<	2	Nb	<	0.02	Sn	<	1	REE	<	10
Al	<	5	Fe	<	1	Ni	<	0.02	Sr	<	0.02			
As	<	0.05	Ga	<	0.02	Os	<	0.02	Ta	<	0.02	REE = Rare Earth Elements		
Au	<	0.02	Ge	<	0.02	Pb	<	5	Te	<	0.02			
B	<	1	Hf	<	2	Pd	<	0.02	Th	<	2			
Ba	<	0.5	In	<	0.02	Pt	<	0.1	Ti	<	2			
Be	<	0.02	Ir	<	0.02	Rb	<	1	Tl	<	0.02			
Bi	<	0.02	K	<	1	Re	<	0.02	U	<	0.1			
Ca		40	Li	<	0.02	Rh	<	0.02	V	<	0.05			
Cd	<	0.02	Mg	<	0.5	Ru	<	0.02	W	<	0.02			
Co	<	0.05	Mn	<	0.1	Sb	<	0.02	Zn	<	5			
Cr	<	0.1	Mo	<	0.02	Se	<	0.5	Zr	<	5			
Cs	<	0.02	Na		20	Si	<	5	S		M			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of scandium, calibration of instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**August 15, 2012**
Shipped Date:	**May 9, 2013**
Expiration Date:	**November 9, 2014**

Certificate Issue Date: **September 5, 2012**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

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High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Section 1. Product and Company Identification

Product Identification: 1000 µg/mL Scandium in 2% HNO_3
SDS Number: 100048-1
Recommended Use: For Laboratory Use.
Company Identification: High-Purity Standards
P.O. Box 41727
Charleston, SC 29423
Telephone: (843) 767-7900
FAX: (843) 767-7906
In case of emergency call INFOTRAC: 800-535-5053

Section 2. Hazard Identification

Classification:
Skin Corrosion/Irritation, Category 1B
Serious Eye Damage/ Eye Irritation, Category 1
Labeling:

Symbol:
Signal Word: Danger.
Hazard Statement: Causes severe skin burns and eye damage. Causes serious eye damage.
Precautionary Statement: Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling.

Section 3. Composition

Component	CAS/EINECS Registry #	Percent Concentration
Scandium Oxide (Sc_2O_3)	12060-08-1/235-042-0	0.1 (as Sc)
Nitric Acid	7697-37-2/ 231-714-2	2
Water, deionized	7732-18-5/ 231-791-2	Balance

Section 4. First Aid Measures

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Call a physician if irritation develops.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician. May cause nausea, vomiting, and diarrhea.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Target Organs: Eyes, skin.

Section 5. Fire Fighting Measures

Fire & Explosion hazards: While nitric acid is not combustible, it is a strong oxidizing agent that can react with combustible materials; however, it is present in limited quantities in this solution. NO_x compounds can be released in case of fire.

Extinguishing Media: Use any extinguishing media that is suitable for the surrounding area. Use a water spray to dilute nitric acid and to absorb liberated nitrogen oxides.

Specific Methods: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Do not allow to enter drainage systems or water ways. Dike area and dilute spill with water and neutralize with soda ash, limestone, etc. Place the neutralized material into containers suitable for eventual disposal, reclamation, or destruction. Always dispose of in accordance with local regulations.

Section 7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Keep out of direct sunlight and away from heat, water, and incompatible materials. When diluting, the acid should always be added slowly to water and in small amounts. Refer to Section 8 for personal handling instructions.

Section 8. Exposure Controls and Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep any buildup of airborne contaminants below their respective threshold limit value. Ensure the availability of eyewash stations and safety showers.

Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron.

Exposure Limits:

Component	ACGIH TLV	OSHA PEL
Scandium Oxide	Not Available	Not Available
Nitric Acid	2 mg/kg	5 mg/m^3

Section 9. Physical and Chemical Properties

Physical State: Liquid
Color: Clear, colorless liquid
Odor: Odorless to a faint pungent odor
Odor threshold: None
pH: <2
Melting point: N/A
Freezing Point: N/A
Boiling Point: Approximately 100°C
Flash point: N/A
Evaporation rate: N/A
Flammability: N/A
Explosion limits: N/A
Vapor Pressure (mm): N/A

Vapor Density (air+1): N/A
Relative density: (H_2O = 1): Approximately 1.0
Solubility in H_2O: Complete
Auto ignition temperature: N/A
Decomposition temperature: N/A
Molecular Weight: 44.96 (Sc)

Section 10. Stability and Reactivity

Stability Indicator: Decomposes slowly to release oxygen.
Conditions to Avoid: Metals, chlorine, organic materials, strong alkali, cyanides, excess heat, combustible materials, and light.
Incompatibles: Strong reducing agents.
Hazardous Decomposition Products: NO_x compounds including nitric oxide (NO), nitrogen dioxide (NO_2), nitrous oxide (N_2O) and nitric acid mist or vapor. Irritating and toxic fumes and gases, oxygen, hydrogen gas.
Hazardous Polymerization: Has not been reported.

Section 11. Toxicological Information

May affect skin, mucous membranes and eyes. Swallowing may lead to a negative effect on mouth and throat and to the risk of perforation or the corrosion of esophagus and stomach.
RTECS#
HNO_3; QU5775000
LD_{LO} Oral, Human: (Nitric Acid) 430 mg/kg.

Section 12. Ecological Information

Ecotoxicological information: Do not allow material to reach ground water, water bodies, or sewage system.

Section 13. Disposal Considerations

General: Follow Federal, state and local regulations for waste.

Section 14. Transport Information

D.O.T. Classification: Hazardous by IATA and 49CFR regulations (based on concentration of acid).
D.O.T. Shipping Name: Corrosive liquid, Acidic, Inorganic, n.o.s. (Nitric Acid Solution)
D.O.T. Hazard Class: 8
U.N./N.A. Number: 3264
Packing Group: II
D.O.T. Label: Corrosive (8)

Section 15. Regulations (Not meant to be all inclusive-selected regulation listed)

TSCA Status: Components of this solution are listed on the TSCA Inventory.
RCRA Status: No.
SARA: Subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372

Risk Phrases: R36/38 Irritating to eyes and skin.
Safety Phrases: S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
WHMIS Information (Canada): E: Corrosive

Section 16. Other Information

HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel only. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The SDS was prepared carefully and represents the best data currently available to us; however, HPS does not certify the data on the SDS. Certified values for this material are given only on the Certificate of Analysis.

Theodore C. Rains, Ph.D.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
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Certificate of Analysis

3E16010

Product Description:

Name:	Terbium	Source Material:	Tebium Oxide
Part Number:	**100057-1**	Material Purity:	99.99%
Lot Number:	**1229013**	Matrix:	2% (v/v) HNO_3

Rcd 051413

Certified Value: 1000 µg/mL ± 3 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3157a (lot number 891603) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.010 g/mL ± 0.002 g/mL @ 23.0°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 1000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag	<	0.02	Cu	<	0.1	Nb	<	0.02	Sn	<	1	REE	<	50
Al	<	0.1	Fe	<	5	Ni	<	0.5	Sr	<	0.02			
As	<	0.05	Ga	<	0.02	Os	<	0.02	Ta	<	0.02	REE = Rare Earth Element		
Au	<	0.02	Ge	<	0.02	Pb	<	1	Te	<	0.02			
B	<	1	Hf	<	1	Pd	<	0.02	Th	<	0.02			
Ba	<	0.5	In	<	0.02	Pt	<	0.02	Ti	<	1			
Be	<	5	Ir	<	0.02	Rb	<	0.02	Tl	<	0.02			
Bi	<	0.02	K	<	1	Re	<	0.02	U	<	0.1			
Ca	<	5	Li	<	0.02	Rh	<	0.02	V	<	0.05			
Cd	<	0.5	Mg	<	0.5	Ru	<	0.02	W	<	0.02			
Co	<	0.05	Mn	<	0.5	Sb	<	0.02	Zn	<	2			
Cr	<	5	Mo	<	0.02	Se	<	0.1	Zr	<	0.02			
Cs	<	0.02	Na		20	Si	<	25	Tb		M			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of terbium, calibration of instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.
b. **Volumetric Device**
   The calibration of volumetric vessels is checked annually using the NBS 602 method.
c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.
d. **Calibration Standards:**
   The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**October 16, 2012**
Shipped Date:	**May 9, 2013**
Expiration Date:	**November 9, 2014**
Certificate Issue Date:	**October 29, 2012**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Section 1. Product and Company Identification

Product Identification:	1000 µg/mL Terbium in 2% HNO_3
SDS Number:	100057-1
Recommended Use:	For Laboratory Use.
Company Identification:	High-Purity Standards P.O. Box 41727 Charleston, SC 29423 Telephone: (843) 767-7900 FAX: (843) 767-7906

In case of emergency call INFOTRAC: 800-535-5053

Section 2. Hazard Identification

Classification:
Skin Corrosion/Irritation, Category 1B
Serious Eye Damage/ Eye Irritation, Category 1
Labeling:

Symbol:
Signal Word: Danger.
Hazard Statement: Causes severe skin burns and eye damage. Causes serious eye damage.
Precautionary Statement: Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling.

Section 3. Composition

Component	CAS/EINECS Registry #	Percent Concentration
Terbium Oxide (Tb_4O_7)	12037-01-3/234-856-3	0.1 (as Tb)
Nitric Acid	7697-37-2/ 231-714-2	2.0
Water, deionized	7732-18-5/ 231-791-2	Balance

Section 4. First Aid Measures

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Call a physician if irritation develops.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician. May cause nausea, vomiting, and diarrhea.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Target Organs: Eyes, skin.

Section 5. Fire Fighting Measures

Fire & Explosion hazards: While nitric acid is not combustible, it is a strong oxidizing agent that can react with combustible materials; however, it is present in limited quantities in this solution. NO_x compounds can be released in case of fire.

Extinguishing Media: Use any extinguishing media that is suitable for the surrounding area. Use a water spray to dilute nitric acid and to absorb liberated nitrogen oxides.

Specific Methods: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Do not allow to enter drainage systems or water ways. Dike area and dilute spill with water and neutralize with soda ash, limestone, etc. Place the neutralized material into containers suitable for eventual disposal, reclamation, or destruction. Always dispose of in accordance with local regulations.

Section 7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Keep out of direct sunlight and away from heat, water, and incompatible materials. When diluting, the acid should always be added slowly to water and in small amounts. Refer to Section 8 for personal handling instructions.

Section 8. Exposure Controls and Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep any buildup of airborne contaminants below their respective threshold limit value. Ensure the availability of eyewash stations and safety showers.

Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron.

Exposure Limits:

Component	ACGIH TLV	OSHA PEL
Terbium Oxide	Not Available	Not Available
Nitric Acid	2 mg/kg	5 mg/m^3

Section 9. Physical and Chemical Properties

Physical State: Liquid
Color: Clear, colorless liquid
Odor: Odorless to a faint pungent odor
Odor threshold: None
pH: <2
Melting point: N/A
Freezing Point: N/A
Boiling Point: Approximately 100°C
Flash point: N/A
Evaporation rate: N/A
Flammability: N/A
Explosion limits: N/A

Vapor Pressure (mm): N/A
Vapor Density (air+1): N/A
Relative density: (H_2O = 1): Approximately 1.0
Solubility in H_2O: Complete
Auto ignition temperature: N/A
Decomposition temperature: N/A
Molecular Weight: 747.69 (Tb)

Section 10. Stability and Reactivity

Stability Indicator: Decomposes slowly to release oxygen.
Conditions to Avoid: Metals, chlorine, organic materials, strong alkali, cyanides, excess heat, combustible materials, and light.
Incompatibles: Strong reducing agents.
Hazardous Decomposition Products: NO_x compounds including nitric oxide (NO), nitrogen dioxide (NO_2), nitrous oxide (N_2O) and nitric acid mist or vapor. Irritating and toxic fumes and gases, oxygen, hydrogen gas.
Hazardous Polymerization: Will not occur.

Section 11. Toxicological Information

May affect skin, mucous membranes and eyes. Swallowing may lead to a negative effect on mouth and throat and to the risk of perforation or the corrosion of esophagus and stomach.
RTECS#
HNO_3; QU5775000
LD_{LO} Oral, Human: (Nitric Acid) 430 mg/kg.

Section 12. Ecological Information

Ecotoxicological information: Do not allow material to reach ground water, water bodies, or sewage system.

Section 13. Disposal Considerations

General: Follow Federal, state and local regulations for waste.

Section 14. Transport Information

D.O.T. Classification: Hazardous by IATA and 49CFR regulations (based on concentration of acid).
D.O.T. Shipping Name: Corrosive liquid, Acidic, Inorganic, n.o.s. (Nitric Acid Solution)
D.O.T. Hazard Class: 8
U.N./N.A. Number: 3264
Packing Group: II
D.O.T. Label: Corrosive (8)

Section 15. Regulations (Not meant to be all inclusive-selected regulation listed)

TSCA Status: Components of this solution are listed on the TSCA Inventory.
RCRA Status: No.

SARA: Subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372
Risk Phrases: R36/38 Irritating to eyes and skin.
Safety Phrases: S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
WHMIS Information (Canada): E: Corrosive

Section 16: Other Information

HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel only. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The SDS was prepared carefully and represents the best data currently available to us; however, HPS does not certify the data on the SDS. Certified values for this material are given only on the Certificate of Analysis.

Theodore C. Rains, Ph.D.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

3K25002

Name:	ICP-MS Tuning Solution 3
Part Number:	**ICP-MS-TS-3**
Lot Number:	**1304204**
Matrix:	2% HNO_3
Purity:	99.98% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Be	10.0 ± 0.1	3105a	090514	Pb	10.00 ± 0.06	3128	101026
Co	10.00 ± 0.05	3113	000630	Mg	10.00 ± 0.05	3131a	050302
In	10.00 ± 0.05	3124a	110516				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**February 11, 2013**
Shipped Date:	**November 11, 2013**
Expiration Date:	**November 11, 2014**
Certificate Issue Date:	**February 13, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

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Certificate of Analysis

Product Description:

Part Number:	**SM-770-045**
	Solution A
Lot Number:	**1333611**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.97% - 99.9999%

3L09047

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	200 ± 2	3101a	060502	Pb	10.00 ± 0.06	3128	101026
Sb	30.00 ± 0.18	3102a	061229	Mn	10.0 ± 0.1	3132	050429
As	10.0 ± 0.1	3103a	100818	Mo	50.0 ± 0.3	3134	891307
Ba	200.0 ± 1.2	3104a	070222	Ni	10.00 ± 0.05	3136	120619
Be	5.00 ± 0.05	3105a	090514	Se	10.0 ± 0.1	3149	100901
Bi	20.0 ± 0.1	3106	991212	Ag	5.00 ± 0.03	3151	992212
B	50.00 ± 0.25	3107	070514	Tl	30.00 ± 0.15	3158	993012
Cd	5.00 ± 0.03	3108	060531	Sn	50.0 ± 0.3	3161a	070330
Cr	10.00 ± 0.05	3112a	030730	Ti	50.0 ± 0.3	3162a	060808
Co	20.0 ± 0.1	3113	000630	V	20.00 ± 0.12	3165	992706
Cu	5.00 ± 0.03	3114	011017	Zn	30.00 ± 0.15	3168a	120629
Fe	200 ± 1	3126a	051031				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**December 2, 2013**
Shipped Date:	**December 4, 2013**
Expiration Date:	**December 4, 2014**
Certificate Issue Date:	**December 3, 2013**

Quality Information:

ACLASS ACCREDITED TESTING

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

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Fax (843) 767-7906

Certificate of Analysis

3L09048

Product Description:

Part Number:	**SM-770-045**
	Solution B
Lot Number:	**1333612**
Matrix:	5% HNO_3
Purity:	99.98% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Ca	5000 ± 25	3109a	050825	K	5000 ± 25	3141a	051220
Mg	5000 ± 25	3131a	050302	Na	5000 ± 25	3152a	120715

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**December 2, 2013**
Shipped Date:	**December 4, 2013**
Expiration Date:	**December 4, 2014**
Certificate Issue Date:	**December 3, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers
Quality Manager

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HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

3 D03002
Rec'd
04/02/13

Product Description:

Name:	ICP Analytical Mixture 15
Part Number:	**ICP-AM-15**
Lot Number:	**1209622**
Matrix:	5% HNO_3
Purity:	99.98% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Ca	10,000 ± 50	3109a	050825	K	10,000 ± 50	3141a	051220
Mg	10,000 ± 50	3131a	050302	Na	10,000 ± 50	3152a	010728

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval.

Preparation Information:

The highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. This standard was prepared using methods developed at NIST for the preparation of SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties.

a. **Analytical Balance Calibration**: All balances are calibrated weekly by an in-house method using NBS weights Inventory No 20231A. The balances are calibrated yearly and the calibration weights are checked biennially by a qualified metrology company with weights traceable to the primary standards developed by NIST.

b. **Volumetric Device Calibration**: The calibration of all volumetric vessels is checked using the NBS 602 method where all vessels are weighed to five significant figures.

c. **Calibration Standards**: The Calibration Standards are directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions. The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Expiration Information:

Preparation Date: April 5, 2012

***Shipped* Date:** **March 29, 2013**

Expiration Date: **March 29, 2014**

Vanny T. Yib, Inorganic Laboratory Manager

Kim-Phuong Tran

Kim-Phuong Tran, Quality Manager

Theodore Rains, *PhD, President*

April 6, 2012

Certificate Issue Date

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

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Certificate of Analysis

RSTD-4

3E15014

Rec'd 051413 JK

Product Description:

Part Number: **SM-770-030**
Lot Number: **1312826**
Matrix: 5% HNO_3 + 0.5% HF
Purity: 99% - 99.998%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Sb	1000 ± 6	3102a	061229	Sn	1000 ± 6	3161a	070330
Bi	1000 ± 6	3106	991212	Ti	1000 ± 6	3162a	060808
B	1000 ± 5	3107	070514				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2
* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**May 8, 2013**
Shipped Date:	**May 10, 2013**
Expiration Date:	**May 10, 2014**
Certificate Issue Date:	**May 9, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

Angel Sellers
Quality Manager

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MATERIAL SAFETY DATA SHEET

SM-770-030

Issue Date: 6/7/11

SECTION I - Product Identification/Hazardous Ingredients

Formula: N/A Concentration: N/A Molecular Weight: N/A

TSCA: YES CAS NO: 7697-37-2/7664-39-3

Component: 0.5% Multielements in 5% HNO_3 + 0.5% HF + balance H_2O

TLV/TWA: 8 h Not Estab.; 2.5 mg/m^3 STEL: N/A PEL: N/A Toxicity: N/A

SECTION II - Physical/Chemical Characteristics

Boiling Point: 100°C Vapor Pressure (mm): N/A Vapor Density (air+1): N/A

Freezing Point: N/A Specific Gravity (H_2O = 1): N/A Solubility in H_2O: Complete

SECTION III - Fire and Explosion Hazard Data

Flash Point: N/A Auto Ignition Temperature: N/A Lower Explosion Level: N/A

NFPA - Rating: N/A Extinguishing Media: Use appropriate

Special Fire-Fighting Procedures: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Unusual Fires Explosion Hazards: N/A

Toxic Gases Produced: NO_X, HF

SECTION IV - Reacting Data

Unstable : ( ) Stable: (X)

Conditions to Avoid: Metals, hydroxides, carbonates, cyanides

Incompatibles: Strong reducing agents

Hazardous Decomposition: NO_X, HF

SECTION V - Health Hazard Data

Routes of Entry: Inhalation, eye contact, skin contact

Signs and Symptoms of Exposure: Liquid may cause burns to skin and eyes

Medical Conditions Generally Aggravated by Exposure: None identified

Carcinogenicity: NTP: No IARC: No OSHA reg.: No

Emergency First Aid Procedures: CALL A PHYSICIAN; If swallowed, do not induce vomiting, if conscious give water, milk. In case of contact, flush eyes or skin with plenty of water.

SECTION VI - Precautions for Safe Handling and Use

Special Precautions: Keep container tightly closed

In Case of Spill or Discharge: Remove source of ignition if hydrogen is a hazard. Provide optimum ventilation. Flush to holding area for neutralization.

Disposal Procedures: Follow Federal, State and Local regulations for waste.

SECTION VII - Protective Equipment

Respiratory Protection: NIOSH approved respirator

Ventilation: Local Exhaust(X) Mechanical ( )

Protective Gloves: Proper gloves

Eye Protection: Safety glasses with side shields

Other: Lab coat/apron; vent hood

SECTION VIII – Transport Information

D.O.T. Classification: Hazardous by IATA regulations (based on concentration of acid).
D.O.T. Shipping Name: Corrosive liquid, Acidic, Inorganic, n.o.s. (Nitric Acid Solution)
D.O.T. Hazard Class: 8
U.N./N.A. Number: 3264
Packing Group: II
D.O.T. Label: Corrosive (8)

NOTICE

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Prepared by: Theodore C Rains, Ph.D 6/7/11

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Certificate of Analysis

3E15015

Product Description:

Part Number: **SM-770-027**
Lot Number: **1312825**
Matrix: 5% HNO_3
Purity: 99.99% - 99.9995%

Rcd
051413
JCK

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Cd	1000 ± 5	3108	060531	Se	1000 ± 10	3149	100901
Cr	1000 ± 5	3112a	030730	Ag	100.0 ± 0.5	3151	992212
Cu	1000 ± 5	3114	011017	Tl	1000 ± 5	3158	993012
Pb	1000 ± 6	3128	101026	Zn	1000 ± 5	*	
Ni	1000 ± 5	3136	000612				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**May 8, 2013**
Shipped Date:	**May 10, 2013**
Expiration Date:	**May 10, 2014**
Certificate Issue Date:	**May 9, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

Angel Sellers
Quality Manager

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MATERIAL SAFETY DATA SHEET

SM-770-027

Issue Date: 6/7/11

SECTION I - Product Identification/Hazardous Ingredients

Formula: N/A Concentration: N/A Molecular Weight: N/A

TSCA: YES CAS NO: 7697-37-2

Component: 0.81% Multielements including (0.1% Cd, Ni, Pb) in 5% HNO_3 + balance H_2O

TLV/TWA: 8 h Not Estab.; 5 mg/m^3 STEL: N/A PEL: N/A Toxicity: N/A

SECTION II - Physical/Chemical Characteristics

Boiling Point: 100°C Vapor Pressure (mm): N/A Vapor Density (air+1): N/A

Freezing Point: N/A Specific Gravity (H_2O = 1): N/A Solubility in H_2O: Complete

SECTION III - Fire and Explosion Hazard Data

Flash Point: N/A Auto Ignition Temperature: N/A Lower Explosion Level: N/A

NFPA - Rating: N/A Extinguishing Media: Use appropriate

Special Fire-Fighting Procedures: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Unusual Fires Explosion Hazards: N/A

Toxic Gases Produced: NO_X

SECTION IV - Reacting Data

Unstable : ( ) Stable: (X)

Conditions to Avoid: Metals, hydroxides, carbonates, cyanides

Incompatibles: Strong reducing agents

Hazardous Decomposition: NO_X

SECTION V - Health Hazard Data

Routes of Entry: Inhalation, eye contact, skin contact

Signs and Symptoms of Exposure: Liquid may cause burns to skin and eyes

Medical Conditions Generally Aggravated by Exposure: None identified

Carcinogenicity: NTP: Yes (Cd, Ni) IARC: Yes (Cd, Ni) OSHA reg.: Yes (Cd, Ni, Pb)

Emergency First Aid Procedures: CALL A PHYSICIAN; If swallowed, do not induce vomiting, if conscious give water, milk. In case of contact, flush eyes or skin with plenty of water.

SECTION VI - Precautions for Safe Handling and Use

Special Precautions: Keep container tightly closed

In Case of Spill or Discharge: Remove source of ignition if hydrogen is a hazard. Provide optimum ventilation. Flush to holding area for neutralization.

Disposal Procedures: Follow Federal, State and Local regulations for waste.

SECTION VII - Protective Equipment

Respiratory Protection: NIOSH approved respirator

Ventilation: Local Exhaust(X) Mechanical ( )

Protective Gloves: Proper gloves

Eye Protection: Safety glasses with side shields

Other: Lab coat/apron; vent hood

SECTION VIII – Transport Information

D.O.T. Classification: Hazardous by IATA regulations (based on concentration of acid).
D.O.T. Shipping Name: Corrosive liquid, Acidic, Inorganic, n.o.s. (Nitric Acid Solution)
D.O.T. Hazard Class: 8
U.N./N.A. Number: 3264
Packing Group: II
D.O.T. Label: Corrosive (8)

NOTICE

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Prepared by: Theodore C Rains, Ph.D 6/7/11

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Certificate of Analysis

Product Description:

Name:	Aluminum	Source Material:	Aluminum Metal
Part Number:	**10M1-1**	Material Purity:	99.9995%
Lot Number:	**1308703**	Matrix:	10% (v/v) HNO_3

3E16001

Rec'd 051413

Certified Value: 10,000 µg/mL ± 30 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3101a (lot number 060502) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.103 g/mL ± 0.002 g/mL @ 23.1°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 10,000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag	<	0.1	Cu	<	0.5	Li	<	0.1	Rb	<	0.1	Th	<	0.1
Al		M	Dy	<	0.1	Lu	<	0.1	Re	<	0.1	Ti	<	5
As	<	0.3	Er	<	0.1	Mg	<	3	Rh	<	0.1	Tl	<	0.1
Au	<	0.1	Eu	<	0.1	Mn	<	10	Ru	<	0.1	Tm	<	0.1
B	<	10	Fe		50	Mo	<	0.1	Sb	<	0.1	U	<	0.5
Ba	<	0.1	Ga	<	0.1	Na	<	10	Sc	<	0.1	V	<	0.3
Be	<	0.1	Gd	<	0.1	Nb	<	0.1	Se	<	0.5	W	<	0.1
Bi	<	0.1	Ge	<	0.1	Nd	<	0.1	Si	<	10	Y	<	0.1
Ca		40	Hf	<	0.1	Ni	<	0.1	Sm	<	0.1	Yb	<	0.1
Cd	<	0.1	Ho	<	0.1	Os	<	0.1	Sn	<	5	Zn	<	20
Ce	<	0.1	In	<	0.1	Pb	<	0.3	Sr	<	0.1	Zr	<	0.1
Co	<	0.3	Ir	<	0.1	Pd	<	0.1	Ta	<	0.1			
Cr	<	5	K	<	10	Pr	<	0.1	Tb	<	0.1			
Cs	<	0.1	La	<	0.1	Pt	<	0.1	Te	<	0.1			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of aluminum, calibration of instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.
b. **Volumetric Device**
   The calibration of volumetric vessels is checked annually using the NBS 602 method.
c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.
d. **Calibration Standards:**
   The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**March 27, 2013**
Shipped Date:	**May 9, 2013**
Expiration Date:	**November 9, 2014**
Certificate Issue Date:	**April 1, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

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High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Section 1. Product and Company Identification

Product Identification: 10,000 µg/mL Aluminum in 10% HNO_3
MSDS Number: 10M1-1
Recommended Use: For Laboratory Use.
Company Identification: High-Purity Standards
P.O. Box 41727
Charleston, SC 29423
Telephone: (843) 767-7900
FAX: (843) 767-7906
In case of emergency call INFOTRAC: 800-535-5053

Section 2. Hazard Identification

Classification:
Skin Corrosion/Irritation, Category 1B
Serious Eye Damage/ Eye Irritation, Category 1
Labeling:

Symbol:
Signal Word: Danger.
Hazard Statement: Causes severe skin burns and eye damage. Causes serious eye damage.
Precautionary Statement: Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling.

Section 3. Composition

Component	CAS/EINECS Registry #	Percent Concentration
Aluminum	7429-90-5/231-072-3	1
Nitric Acid	7697-37-2/ 231-714-2	10
Water, deionized	7732-18-5/ 231-791-2	Balance

Section 4. First Aid Measures

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Call a physician if irritation develops.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician. May cause nausea, vomiting, and diarrhea.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Target Organs: Eyes, skin.

Section 5. Fire Fighting Measures

Fire & Explosion hazards: While nitric acid is not combustible, it is a strong oxidizing agent that can react with combustible materials; however, it is present in limited quantities in this solution. NO_x compounds can be released in case of fire.

Extinguishing Media: Use any extinguishing media that is suitable for the surrounding area. Use a water spray to dilute nitric acid and to absorb liberated nitrogen oxides.

Specific Methods: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Do not allow to enter drainage systems or water ways. Dike area and dilute spill with water and neutralize with soda ash, limestone, etc. Place the neutralized material into containers suitable for eventual disposal, reclamation, or destruction. Always dispose of in accordance with local regulations.

Section 7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Keep out of direct sunlight and away from heat, water, and incompatible materials. When diluting, the acid should always be added slowly to water and in small amounts. Refer to Section 8 for personal handling instructions.

Section 8. Exposure Controls and Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep any buildup of airborne contaminants below their respective threshold limit value. Ensure the availability of eyewash stations and safety showers.

Respiratory Protection: Provide approved respiratory apparatus for non-routine or emergency use. Use an approved vapor respirator when the vapor or mist concentrations are high. If necessary, refer to the NIOSH document Guide to the Selection and Use of Particulate Respirators Certified under 42 CFR 84 for selection and use of respirators certified by NIOSH.

Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron.

Exposure Limits:

Component	ACGIH TLV	OSHA PEL
Aluminum	10 mg/m^3	15 mg/m^3
Nitric Acid	2 mg/kg	5 mg/m^3

Section 9. Physical and Chemical Properties

Physical State: Liquid
Color: Clear, colorless liquid
Odor: Odorless to a faint pungent odor
Odor threshold: None
pH: <2
Melting point: N/A
Freezing Point: N/A
Boiling Point: Approximately 100°C

Flash point: N/A
Evaporation rate: N/A
Flammability: N/A
Explosion limits: N/A
Vapor Pressure (mm): N/A
Vapor Density (air+1): N/A
Relative density: (H_2O = 1): Approximately 1.0
Solubility in H_2O: Complete
Auto ignition temperature: N/A
Decomposition temperature: N/A
Molecular Weight: 26.98 (Al)

Section 10. Stability and Reactivity

Stability Indicator: YES
Conditions to Avoid: Metals, chlorine, organic materials, strong alkali, cyanides.
Incompatibles: Strong reducing agents.
Hazardous Decomposition Products: NO_x compounds including nitric oxide (NO), nitrogen dioxide (NO_2), nitrous oxide (N_2O) and nitric acid mist or vapor.
Hazardous Polymerization: Will not occur.

Section 11. Toxicological Information

May affect skin, mucous membranes and eyes. Swallowing may lead to a negative effect on mouth and throat and to the risk of perforation or the corrosion of esophagus and stomach.
RTECS#
HNO_3; QU5775000
Al; BD0330000

LD_{LO} Oral, Human: (Nitric Acid) 430 mg/kg.
LD_{50} Oral, Rat: (Aluminum) >5000 mg/kg

Section 12. Ecological Information

Ecotoxicological information: Do not allow material to reach ground water, water bodies, or sewage system.

Section 13. Disposal Considerations

General: Follow Federal, state and local regulations for waste.

Section 14. Transport Information

D.O.T. Classification: Hazardous by IATA and 49CFR regulations (based on concentration of acid).
D.O.T. Shipping Name: Corrosive liquid, Acidic, Inorganic, n.o.s. (Nitric Acid Solution)
D.O.T. Hazard Class: 8
U.N./N.A. Number: 3264
Packing Group: II
D.O.T. Label: Corrosive (8)

Section 15. Regulations (Not meant to be all inclusive-selected regulation listed)

TSCA Status: Components of this solution are listed on the TSCA Inventory.
RCRA Status: No.
SARA: Subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372
Risk Phrases: R36/38 Irritating to eyes and skin.
Safety Phrases: S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
WHMIS Information (Canada): E: Corrosive

Section 16. Other Information

HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel only. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The SDS was prepared carefully and represents the best data currently available to us; however, HPS does not certify the data on the SDS. Certified values for this material are given only on the Certificate of Analysis.

Theodore C. Rains, Ph.D.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

3J 05001

Part Number:	**SM-770-028**
	Solution A
Lot Number:	**1326610**
Matrix:	2% HNO_3
Purity:	99.995% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
As	1000 ± 10	3103a	100818	Mn	1000 ± 10	3132	050429
Ba	1000 ± 6	3104a	070222	Mo	1000 ± 6	3134	891307
Be	1000 ± 10	3105a	090514	V	1000 ± 6	3165	992706
Co	1000 ± 5	3113	000630				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**September 23, 2013**
Shipped Date:	**September 25, 2013**
Expiration Date:	**September 25, 2014**
Certificate Issue Date:	**September 23, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

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Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Part Number:	**SM-770-028**
	Solution B
Lot Number:	**1326611**
Matrix:	20% HNO_3
Purity:	99.99%

3J05002

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#
Fe	25000 ± 125	3126a	051031

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**September 23, 2013**
Shipped Date:	**September 25, 2013**
Expiration Date:	**September 25, 2014**
Certificate Issue Date:	**September 23, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers
Quality Manager

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Charleston, SC 29423
Phone (843) 767-7900
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Certificate of Analysis

Product Description:

3E16033

Name:	Compuchem Spex - Revised
Part Number:	**SM-770-026**
	Solution A
Lot Number:	**1312610**
Matrix:	2% HNO_3 + 1% HF
Purity:	99.98% - 99.9999%

Rec'd 051413

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Bi	1000 ± 5	3106	991212	Sn	1000 ± 6	3161a	070330
B	1000 ± 5	3107	070514	Ti	1000 ± 6	3162a	060808
Mo	1000 ± 6	3134	891307				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**May 6, 2013**
Shipped Date:	**May 9, 2013**
Expiration Date:	**May 9, 2014**
Certificate Issue Date:	**May 6, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Vanny T. Yib,
Inorganic Laboratory Manager

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

INORGANIC VENTURES™
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CERTIFICATE OF ANALYSIS

tel: 800.669.6799 • 540.585.3030
fax: 540.585.3015
info@inorganicventures.com

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 **DESCRIPTION OF CRM** Stock Solution

3610029

Catalog No.: CLPP-ICS-B4

Lot Number: **F2-MEB427129**

Matrix: 5% HNO3(v/v)

100 µg/mL ea:
Cd, Ni, Zn,

60 µg/mL ea:
Sb,

50 µg/mL ea:
Ba, Be, Co, Cr3, Cu, Mn, V,

20 µg/mL ea:
Ag,

10 µg/mL ea:
As, Tl,

5 µg/mL ea:
Pb, Se

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Antimony, Sb	60.02 ± 0.45 µg/mL	Arsenic, As	10.01 ± 0.06 µg/mL	Barium, Ba	50.04 ± 0.34 µg/mL
Beryllium, Be	50.04 ± 0.34 µg/mL	Cadmium, Cd	100.1 ± 0.6 µg/mL	Chromium+3, Cr3	50.03 ± 0.35 µg/mL
Cobalt, Co	50.05 ± 0.32 µg/mL	Copper, Cu	50.04 ± 0.33 µg/mL	Lead, Pb	5.002 ± 0.038 µg/mL
Manganese, Mn	50.04 ± 0.32 µg/mL	Nickel, Ni	100.1 ± 0.7 µg/mL	Selenium, Se	5.006 ± 0.034 µg/mL
Silver, Ag	20.01 ± 0.13 µg/mL	Thallium, Tl	10.01 ± 0.06 µg/mL	Vanadium, V	50.04 ± 0.35 µg/mL
Zinc, Zn	100.1 ± 0.6 µg/mL				

Certified Density: 1.027 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#	ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212	Ag	Volhard	999b	999b
As	Calculated		See Sec. 4.2	As	ICP Assay	3103a	010713
Ba	Gravimetric		See Sec. 4.2	Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2	Be	ICP Assay	3105a	892707
Cd	ICP Assay	3108	060531	Cd	EDTA	928	928
Co	ICP Assay	3181	000630	Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2	Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017	Cu	EDTA	928	928
Mn	ICP Assay	3132	050429	Mn	EDTA	928	928
Ni	ICP Assay	3136	000612	Ni	EDTA	928	928
Pb	ICP Assay	3128	030721	Pb	EDTA	928	928
Sb	Calculated		See Sec. 4.2	Sb	ICP Assay	3102A	061229
Se	Calculated		See Sec. 4.2	Se	ICP Assay	3149	992106
Tl	Calculated		See Sec. 4.2	Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706	V	EDTA	928	928
Zn	ICP Assay	3168a	080123	Zn	EDTA	928	928

4.2 BALANCE CALIBRATION - All analytical balances are calibrated yearly by an A2LA accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 THERMOMETER CALIBRATION - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 GLASSWARE CALIBRATION - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- QMI File Number 010105

***10.2 ISO/IEC 17025* "General Requirements for the Competence of Testing and Calibration"**
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: July 19, 2012

Expiration Date: EXPIRES 01 2014

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:	Stephan Blaakman Product Documentation Technician	
Certificate Approved By:	Brian Alexander PhD., Quality Control Supervisor	
Certifying Officer:	Paul Gaines PhD., Senior Technical Director	

INORGANIC VENTURES™
300 Technology Drive
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CERTIFICATE OF ANALYSIS

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1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 DESCRIPTION OF CRM

Stock Solution

Catalog No.: CLPP-ICS-A

Lot Number: **G2-MEB491156**

Matrix: 2% HNO3(v/v)

3L30007

5,000 µg/mL ea:
Al, Ca, Mg,

2,000 µg/mL ea:
Fe

3.0 *CERTIFIED* VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	4,996 ± 31 µg/mL	Calcium, Ca	4,996 ± 31 µg/mL	Iron, Fe	1,998 ± 10 µg/mL
Magnesium, Mg	4,996 ± 32 µg/mL				

Certified Density: 1.084 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements
2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL

Custom-Grade solutions are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Al		M	Dy	< 0.000300	O	Li	0.010000	M	Pr	< 0.000300	M	Te	< 0.030004
M	Sb	< 0.003000	M	Er	< 0.000300	M	Lu	< 0.000100	M	Re	< 0.001000	M	Tb	< 0.000300
M	As	< 0.010001	M	Eu	< 0.000300	s	Mg		M	Rh	< 0.001000	M	*Tl*	*< 0.001000*
O	Ba	< 0.000900	M	Gd	< 0.000600	O	Mn	0.010000	M	Rb	< 0.001000	M	Th	< 0.000100
O	Be	< 0.000300	M	Ga	< 0.002000	O	Hg	< 0.005000	M	Ru	< 0.002000	M	Tm	< 0.000300
M	Bi	< 0.002000	i	Ge		M	Mo	< 0.009001	M	Sm	< 0.000600	M	Sn	< 0.002000
O	B	< 0.005000	O	Au	< 0.008000	M	Nd	< 0.002000	O	Sc	< 0.000300	O	Ti	< 0.005000
M	Cd	< 0.000900	M	Hf	< 0.001000	O	Ni	< 0.002300	M	Se	< 0.008001	M	W	< 0.010001
s	Ca		M	Ho	< 0.000100	M	Nb	< 0.003000	O	Si	< 0.003400	M	U	< 0.000100
M	Ce	< 0.000100	M	In	< 0.006001	n	Os		M	Ag	< 0.002000	O	V	< 0.002700
M	Cs	< 0.000300	M	Ir	< 0.005001	M	Pd	< 0.005001	O	Na	0.040000	M	Yb	< 0.000100
O	Cr	< 0.003000	s	Fe		O	P	< 0.005000	O	Sr	0.100000	O	Y	< 0.000700
O	Co	< 0.003000	M	La	< 0.002000	M	Pt	< 0.002000	n	S		O	Zn	< 0.005000
O	Cu	< 0.004000	M	Pb	< 0.004001	O	K	< 0.002000	M	Ta	< 0.003000	M	Zr	< 0.005001

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4ºC. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105

10.2 *ISO/IEC 17025* "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: October 29, 2013

Expiration Date: EXPIRES 01 JAN 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:	Zach Saunders Product Documentation Technician	Zachary Saunders
Certificate Approved By:	Brian Alexander PhD., Technical Process Director	Brian Alexander
Certifying Officer:	Paul Gaines PhD., Senior Technical Director	Paul R Gaines

Certificate of Analysis

NSI Solutions, Inc. ▪ 7212 ACC Blvd. ▪ Raleigh, NC 27617 ▪ 1-800-234-7837

Custom 28 Element Blend

3H26022

Catalog Number: Q-6042-M
Lot Number: 081913
Manufacture Date: 08/19/13

Expiration: 08/31/2015
Matrix: 5% HNO3 in Water
Hazards: Irritant, Corrosive

Analyte	Gravimetric Concentration (mg/L)
Aluminum (Al)	1000 ± 0.339
Iron (Fe)	1000 ± 0.380
Magnesium (Mg)	1000 ± 0.339
Sodium (Na)	1000 ± 0.339
Potassium (K)	1000 ± 8.05
Calcium (Ca)	1000 ± 0.339
Antimony (Sb)	100 ± 0.805
Arsenic (As)	100 ± 0.805
Barium (Ba)	100 ± 0.034
Beryllium (Be)	100 ± 0.805
Boron (B)	100 ± 0.805
Cadmium (Cd)	100 ± 0.034
Copper (Cu)	100 ± 0.805
Cobalt (Co)	100 ± 0.805
Chromium (Cr)	100 ± 0.805
Nickel (Ni)	100 ± 0.805
Lead (Pb)	100 ± 0.805
Manganese (Mn)	100 ± 0.034
Molybdenum (Mo)	100 ± 0.805
Selenium (Se)	100 ± 0.805
Silicon (Si)	100 ± 0.034
Silver (Ag)	100 ± 0.805
Strontium (Sr)	100 ± 0.805
Thallium (Tl)	100 ± 0.034
Tin (Sn)	100 ± 0.034
Titanium (Ti)	100 ± 0.034
Vanadium (V)	100 ± 0.805
Zinc (Zn)	100 ± 0.034

Packaging, Storage, Instructions For Use

Store tightly capped at room temperature (20-30°C).

This product is packaged in HDPE as a whole volume ready to use sample. No secondary preparative steps are necessary. Small aliquots should be poured out of the bottle rather than directly pipetted out of bottle in order to prevent contamination or premature degradation.

Catalog Number: Q-6042-M
Lot Number: 081913

Traceability Information

Analyte Source Materials: The highest purity analyte source materials are used in the manufacture of this standard.

Method: This standard was verified gravimetrically.

Balance: All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.

All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

Thermometer: All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

Glassware: All glassware used in the manufacture of our standards is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

Intended Uses

- Calibration of analytical instruments
- Validation of analytical methods
- Preparation of working level reference materials, i.e. "check standards"
- Detection limit studies

Uncertainty

The ± uncertainty associated with the concentration is the expanded manufacturing uncertainty at 95% confidence interval (CI) with K=2.

Homogeneity

This product was thoroughly mixed in production and is guaranteed homogeneous.

Ewart Morris

Ewart Morris, Inorganics/Microbiologics Dept. Manager

Cynthia K. Loftus

Cynthia K. Loftus, Quality Manager

Mark Hammersla

Mark Hammersla, President

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 DESCRIPTION OF CRM

	Stock Solution
Catalog No.:	6020ICS-9A
Lot Number:	**G2-MEB454073MCA**
Matrix:	2% HNO3(v/v)

3L02016

21,215 µg/mL ea:
Chloride,

3,000 µg/mL ea:
Ca,

2,500 µg/mL ea:
Fe, Na,

2,000 µg/mL ea:
C,

1,000 µg/mL ea:
Al, K, Mg, P, S,

20 µg/mL ea:
Mo, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	1,000 ± 6 µg/mL	Calcium, Ca	3,000 ± 21 µg/mL	Carbon, C	2,000 ± 13 µg/mL
Chloride, Chloride	21,220.0 ± 100.0 µg/mL	Iron, Fe	2,500 ± 12 µg/mL	Magnesium, Mg	1,000 ± 7 µg/mL
Molybdenum, Mo	20.00 ± 0.14 µg/mL	Phosphorus, P	1,000 ± 7 µg/mL	Potassium, K	1,000 ± 7 µg/mL
Sodium, Na	2,500 ± 17 µg/mL	Sulfur, S	1,000 ± 7 µg/mL	Titanium, Ti	20.00 ± 0.13 µg/mL

Certified Density: 1.056 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

Uncertainty (±) = $2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. *In rare cases where no* NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Gravimetric		See Sec. 4.2
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	010728
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	ICP Assay	3154	892205
S	Acidimetric	84L	84L
Ti	ICP Assay	3162a	060808

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL

Custom-Grade solutions are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Al		M	Dy	< 0.000300	O	Li	0.003000	M	Pr	< 0.000300	M	Te	< 0.030025
M	Sb	< 0.003003	M	Er	< 0.000300	M	Lu	< 0.000901	M	Re	< 0.010008	M	Tb	< 0.000601
M	As	0.016014	M	Eu	< 0.000300	s	Mg		M	Rh	< 0.001001	M	Tl	< 0.001001
O	Ba	< 0.003000	M	Gd	< 0.000300	O	Mn	< 0.007000	M	Rb	< 0.020017	M	Th	< 0.001001
O	Be	< 0.000030	M	Ga	< 0.003003	O	Hg	< 0.020000	M	Ru	< 0.002002	M	Tm	< 0.000601
M	Bi	< 0.000901	O	Ge	< 0.030000	s	Mo		M	Sm	< 0.000300	M	Sn	< 0.020017
O	B	< 0.020000	M	Au	< 0.003003	M	Nd	< 0.000300	M	Sc	< 0.000601	s	Ti	
O	Cd	< 0.007000	M	Hf	< 0.003003	O	Ni	< 0.005000	M	Se	< 0.060051	M	W	< 0.030025
s	Ca		M	Ho	< 0.000300	M	Nb	< 0.010008	n	Si		M	U	< 0.000300
M	Ce	< 0.001001	M	In	< 0.005004	n	Os		M	Ag	< 0.005004	O	V	< 0.010000
n	Cs		M	Ir	< 0.005004	M	Pd	< 0.005004	s	Na		M	Yb	< 0.000300
O	Cr	< 0.020000	s	Fe		s	P		O	Sr	0.060000	M	Y	< 0.001201
M	Co	< 0.003003	M	La	< 0.000300	M	Pt	< 0.002002	s	S		O	Zn	< 0.006000
O	Cu	< 0.010000	M	Pb	< 0.003003	s	K		M	Ta	< 0.001201	M	Zr	< 0.005004

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: January 24, 2013

Expiration Date: EXPIRES 01 JAN 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Zach Saunders
Product Documentation Technician

Zachary Saunders

Certificate Approved By: Elizabeth Day
Quality Assurance Specialist

Elizabeth A. Day

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

Revised 4.19.2013bf

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 **DESCRIPTION OF CRM** **Stock Solution**

Catalog No.: 6020ICS-9B

Lot Number: **F2-MEB429070**

Matrix: 3% HNO3(v/v)

3L02017

20 µg/mL ea:
Co, Cr3, Cu, Mn, Ni, V,

10 µg/mL ea:
As, Cd, Se, Zn,

5 µg/mL ea:
Ag

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Arsenic, As	10.00 ± 0.06 µg/mL	Cadmium, Cd	10.00 ± 0.06 µg/mL	Chromium+3, Cr3	20.00 ± 0.14 µg/mL
Cobalt, Co	20.01 ± 0.13 µg/mL	Copper, Cu	20.00 ± 0.13 µg/mL	Manganese, Mn	20.01 ± 0.13 µg/mL
Nickel, Ni	20.01 ± 0.15 µg/mL	Selenium, Se	10.00 ± 0.07 µg/mL	Silver, Ag	5.002 ± 0.032 µg/mL
Vanadium, V	20.00 ± 0.14 µg/mL	Zinc, Zn	10.00 ± 0.06 µg/mL		

Certified Density: 1.015 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = $2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	010713
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3181	000630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	992106
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	080123
Zn	EDTA	928	928

4.2 BALANCE CALIBRATION - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 THERMOMETER CALIBRATION - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 GLASSWARE CALIBRATION - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4ºC. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- *Reporting Defects and Non-Compliance*

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL *low density* polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: July 17, 2012

Expiration Date:

EXPIRES
01 JAN 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:	Stephan Blaakman Manufacturing Tech	
Certificate Approved By:	Brian Alexander PhD., Technical Process Director	
Certifying Officer:	Paul Gaines PhD., Senior Technical Director	

Internal Chain of Custody

7/31/2013

Metals Internal Chain of Custody Sheet

Dept: PM

Batch: 4030704 / 05 **Status:** Batched

Analysis: 6010C METALS / 6020A ICP-MS

Lab Id	Client_Id	Received	Container	Preparation	Preservative	Matrix		
1403006-01 L	MW-3	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-02 D	MW-2	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-03 D	MW-8	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-04 D	MW-9	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-05 D	MW-12	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-06 D	MW-17	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		

Relinquished By	Date/Time	Received By	Date/Time
Ambient Stg.	3-7-14 / 0850	S. Bolton	3-7-14 / 0850
S. Bolton	3-7-14 / 0935	Ambient Stg.	3-7-14 / 0935

INTERNAL DIGESTION CHAIN OF CUSTODY

4030704

COMPUCHEM

Printed: 3/7/2014 8:47:19AM

Matrix: Water

Prepared using: METALS - EPA 3010A

Lab Number	Client ID	Sample Type	
1403006-01	MW-3	Sample	
1403006-02	MW-2	Sample	
1403006-03	MW-8	Sample	
1403006-04	MW-9	Sample	
1403006-05	MW-12	Sample	
1403006-06	MW-17	Sample	
4030704-BLK1	PBW01	Blank	
4030704-BS1	MLCS01	LCS	
4030704-DUP1	MW-3D	Duplicate	
4030704-MS1	MW-3S	Matrix Spike	
4030704-MSD1	MW-3SD	Matrix Spike Dup	

S. Bolton	3-7-14 / 1215	ICP Storage	3-7-14 / 1215
Relinquished By	Date	Received By	Date
FAPSL	031714/1621	[illegible]	031714/1621
Relinquished By	Date	Received By	Date
[illegible]	03/8/14/0859	FAPSL	03/8/14/0859
Relinquished By	Date	Received By	Date
Relinquished By	Date	Received By	Date

7/31/2013

Metals Internal Chain of Custody Sheet

Dept: PM

Batch: 4030704 / 05 **Status:** Batched

Analysis: 6010C METALS / 6020A ICP-MS

Lab Id	Client_Id	Received	Container	Preparation	Preservative	Matrix		
1403006-01 L	MW-3	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-02 D	MW-2	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-03 D	MW-8	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-04 D	MW-9	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-05 D	MW-12	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		
1403006-06 D	MW-17	03/06/14	3n_500mL Plastic, HNO3	EPA 3010A	Add HNO3 to pH<2	Water		

Relinquished By	Date/Time	Received By	Date/Time
Ambient Stg.	3-7-14/0850	S. Bolton	3-7-14/0850
S. Bolton	3-7-14/0935	Ambient Stg.	3-7-14/0935

INTERNAL DIGESTION CHAIN OF CUSTODY

4030705

COMPUCHEM

Printed: 3/7/2014 8:47:14AM

Matrix: Water **Prepared using: METALS - EPA 3005A**

Lab Number	Client ID	Sample Type	
1403006-01	MW-3	Sample	
1403006-02	MW-2	Sample	
1403006-03	MW-8	Sample	
1403006-04	MW-9	Sample	
1403006-05	MW-12	Sample	
1403006-06	MW-17	Sample	
4030705-BLK1	PBW01	Blank	
4030705-BS1	MLCS01	LCS	
4030705-DUP1	MW-3D	Duplicate	
4030705-MS1	MW-3S	Matrix Spike	
4030705-MSD1	MW-3SD	Matrix Spike Dup	

S. Bolton	3-7-14/1300	ICP storage	3-7-14/1300
Relinquished By	Date	Received By	Date
ICP Sh	032514/1045		032514/1045
Relinquished By	Date	Received By	Date
	032614/1412	ICPSh	032614/1412
Relinquished By	Date	Received By	Date
Relinquished By	Date	Received By	Date

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: Watauga County, NC
Groundwater and Water Samples
Collected on 03/04/14

SDG# WAT19

GROUP	SAMPLE NUMBERS
1457482	7384704-7384709

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date: 03/19/2014**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number WAT19
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.

Project: Watauga County, NC

Lab Sample Number	Lab Sample Code	Client Sample Description
7384704	HGPWA	H&G Produce Grab Groundwater 2014- 1st Semiannual Assess. Monitoring
7384705	R15WA	RES-15 Grab Groundwater 2014- 1st Semiannual Assess. Monitoring
7384706	R16WA	RES-16 Grab Groundwater 2014- 1st Semiannual Assess. Monitoring
7384707	BREWA	BREMCO Grab Groundwater 2014- 1st Semiannual Assess. Monitoring
7384708	RE2WA	RES-2 Grab Groundwater 2014- 1st Semiannual Assess. Monitoring
7384709	TBLWA	TRIP BLANK Water 2014- 1st Semiannual Assess. Monitoring

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Sample pH Log

SDG: WAT19

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
7384704	039A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7384705	039A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7384706	039A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7384707	039A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7384707	039B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7384708	039A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7384709	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key

PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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03648 EPA 524.2 Master

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: USEPA Method 524.2, Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

March 18, 2014

Project: Watauga County, NC

Submittal Date: 03/06/2014
Group Number: 1457482
SDG: WAT19
State of Sample Origin: NC

Client Sample Description	Lancaster Labs (LL) #
H&G Produce Grab Groundwater	7384704
RES-15 Grab Groundwater	7384705
RES-16 Grab Groundwater	7384706
BREMCO Grab Groundwater	7384707
RES-2 Grab Groundwater	7384708
TRIP BLANK Water	7384709

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Draper Aden Associates, Inc. Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

Project Name: Watauga County, NC
LLI Group #: 1457482

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: H&G Produce Grab Groundwater
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384704
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 13:20

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

HGPWA SDG#: WAT19-01

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l		ug/l	ug/l	
03648	Benzene	71-43-2	N.D.		0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.		0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.		0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.		0.1	0.5	1
03648	Bromoform	75-25-2	N.D.		0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.		0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.		0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.		0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.		0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.		0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.		0.1	0.5	1
03648	Chloroethane	75-00-3	N.D.		0.2	0.5	1
03648	Chloroform	67-66-3	0.1	J	0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.		0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.		0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.		0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.		0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.		0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.		0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.		0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.		0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	N.D.		0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.		0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	0.1	J	0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.		0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	N.D.		0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.		0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.		0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.		0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.		0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.		0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.		0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.		0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.		0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.		0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.		0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.		0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.		0.1	0.5	1
03648	Styrene	100-42-5	N.D.		0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.		0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.1	0.5	1
03648	Tetrachloroethene	127-18-4	0.3	J	0.1	0.5	1
03648	Toluene	108-88-3	N.D.		0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.		0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.		0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	0.5	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: H&G Produce Grab Groundwater
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384704
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 13:20

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

HGPWA SDG#: WAT19-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S140693AA	03/11/2014 03:21	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: RES-15 Grab Groundwater
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384705
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 13:45

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R15WA SDG#: WAT19-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l	ug/l	ug/l	
03648	Benzene	71-43-2	N.D.	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
03648	Bromoform	75-25-2	N.D.	0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.	0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.	0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
03648	Chloroethane	75-00-3	N.D.	0.2	0.5	1
03648	Chloroform	67-66-3	N.D.	0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.	0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.	0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.	0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.	0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.	0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.	0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.	0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
03648	Styrene	100-42-5	N.D.	0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
03648	Tetrachloroethene	127-18-4	0.2 J	0.1	0.5	1
03648	Toluene	108-88-3	N.D.	0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: **RES-15 Grab Groundwater**
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384705
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 13:45

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R15WA SDG#: WAT19-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S140693AA	03/11/2014 03:48	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

Sample Description: RES-16 Grab Groundwater
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384706
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 13:50

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R16WA SDG#: WAT19-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l	ug/l	ug/l	
03648	Benzene	71-43-2	N.D.	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
03648	Bromoform	75-25-2	N.D.	0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.	0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.	0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
03648	Chloroethane	75-00-3	N.D.	0.2	0.5	1
03648	Chloroform	67-66-3	N.D.	0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.	0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.	0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.	0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.	0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.	0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.	0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.	0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
03648	Styrene	100-42-5	N.D.	0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
03648	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
03648	Toluene	108-88-3	N.D.	0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: RES-16 Grab Groundwater
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384706
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 13:50

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R16WA SDG#: WAT19-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S140693AA	03/11/2014 04:15	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

Sample Description: BREMCO Grab Groundwater
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384707
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 13:00

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

BREWA SDG#: WAT19-04

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l		ug/l	ug/l	
03648	Benzene	71-43-2	0.4	J	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.		0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.		0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.		0.1	0.5	1
03648	Bromoform	75-25-2	N.D.		0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.		0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.		0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	0.2	J	0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.		0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.		0.1	0.5	1
03648	Chlorobenzene	108-90-7	0.6		0.1	0.5	1
03648	Chloroethane	75-00-3	12		0.2	0.5	1
03648	Chloroform	67-66-3	N.D.		0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.		0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.		0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.		0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.		0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.		0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.		0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	0.1	J	0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.		0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	4.3		0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.		0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	27		1.0	5.0	10
03648	1,2-Dichloroethane	107-06-2	0.2	J	0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	1.0		0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	5.3		0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	0.2	J	0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	0.3	J	0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.		0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.		0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.		0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.		0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.		0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.		0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.		0.1	0.5	1
03648	Methylene Chloride	75-09-2	1.3		0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.		0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.		0.1	0.5	1
03648	Styrene	100-42-5	N.D.		0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.		0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.1	0.5	1
03648	Tetrachloroethene	127-18-4	0.2	J	0.1	0.5	1
03648	Toluene	108-88-3	N.D.		0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.		0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.		0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	0.5	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **BREMCO Grab Groundwater**
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384707
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 13:00

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

BREWA SDG#: WAT19-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	0.6	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	0.3 J	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S140693AA	03/11/2014 04:42	Sara E Johnson	1
03648	EPA 524.2 Master	EPA 524.2	1	S140702AA	03/11/2014 20:32	Sara E Johnson	10

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: RES-2 Grab Groundwater
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384708
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 12:45

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

RE2WA SDG#: WAT19-05

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l		ug/l	ug/l	
03648	Benzene	71-43-2	0.1	J	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.		0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.		0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.		0.1	0.5	1
03648	Bromoform	75-25-2	N.D.		0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.		0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.		0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.		0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.		0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.		0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.		0.1	0.5	1
03648	Chloroethane	75-00-3	1.4		0.2	0.5	1
03648	Chloroform	67-66-3	N.D.		0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.		0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.		0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.		0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.		0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.		0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.		0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.		0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.		0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	0.4	J	0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.		0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	9.0		0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.		0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	0.2	J	0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	1.4		0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.		0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.		0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.		0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.		0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.		0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.		0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.		0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.		0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.		0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.		0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.		0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.		0.1	0.5	1
03648	Styrene	100-42-5	N.D.		0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.		0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.1	0.5	1
03648	Tetrachloroethene	127-18-4	N.D.		0.1	0.5	1
03648	Toluene	108-88-3	N.D.		0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.		0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.		0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	0.5	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **RES-2 Grab Groundwater**
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384708
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/04/2014 12:45

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

RE2WA SDG#: WAT19-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	0.1 J	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S140693AA	03/11/2014 05:09	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

eurofins | Lancaster Laboratories Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: TRIP BLANK Water
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384709
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/03/2014

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

TBLWA SDG#: WAT19-06TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l	ug/l	ug/l	
03648	Benzene	71-43-2	N.D.	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
03648	Bromoform	75-25-2	N.D.	0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.	0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.	0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
03648	Chloroethane	75-00-3	N.D.	0.2	0.5	1
03648	Chloroform	67-66-3	N.D.	0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.	0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.	0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.	0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.	0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.	0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.	0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.	0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
03648	Styrene	100-42-5	N.D.	0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
03648	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
03648	Toluene	108-88-3	N.D.	0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **TRIP BLANK Water**
2014- 1st Semiannual Assess. Monitoring
Watauga County, NC

LL Sample # PW 7384709
LL Group # 1457482
Account # 11200

Project Name: Watauga County, NC

Collected: 03/03/2014

Submitted: 03/06/2014 09:30
Reported: 03/18/2014 13:35

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

TBLWA SDG#: WAT19-06TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S140693AA	03/11/2014 02:54	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1457482
Reported: 03/18/14 at 01:35 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: S140693AA	Sample number(s): 7384704-7384709								
Benzene	N.D.	0.1	0.5	ug/l	96		70-130		
Bromobenzene	N.D.	0.1	0.5	ug/l	110		70-130		
Bromochloromethane	N.D.	0.1	0.5	ug/l	115		70-130		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	104		70-130		
Bromoform	N.D.	0.2	0.5	ug/l	117		70-130		
Bromomethane	N.D.	0.1	0.5	ug/l	94		70-130		
n-Butylbenzene	N.D.	0.2	0.5	ug/l	98		70-130		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	99		70-130		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	101		70-130		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	103		70-130		
Chlorobenzene	N.D.	0.1	0.5	ug/l	98		70-130		
Chloroethane	N.D.	0.2	0.5	ug/l	93		70-130		
Chloroform	N.D.	0.1	0.5	ug/l	105		70-130		
Chloromethane	N.D.	0.2	0.5	ug/l	86		70-130		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	104		70-130		
4-Chlorotoluene	N.D.	0.2	0.5	ug/l	108		70-130		
1,2-Dibromo-3-chloropropane	N.D.	0.4	0.5	ug/l	101		70-130		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	111		70-130		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	106		70-130		
Dibromomethane	N.D.	0.1	0.5	ug/l	111		70-130		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	110		70-130		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	110		70-130		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	110		70-130		
Dichlorodifluoromethane	N.D.	0.2	0.5	ug/l	74		70-130		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	94		70-130		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	108		70-130		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	94		70-130		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	101		70-130		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	94		70-130		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	106		70-130		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	100		70-130		
2,2-Dichloropropane	N.D.	0.2	0.5	ug/l	88		70-130		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	96		70-130		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	96		70-130		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	95		70-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	100		70-130		
Hexachlorobutadiene	N.D.	0.2	0.5	ug/l	94		70-130		
Isopropylbenzene	N.D.	0.1	0.5	ug/l	98		70-130		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	98		70-130		
Methylene Chloride	N.D.	0.3	0.5	ug/l	97		70-130		
Naphthalene	N.D.	0.2	0.5	ug/l	86		70-130		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	103		70-130		
Styrene	N.D.	0.1	0.5	ug/l	108		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1457482
Reported: 03/18/14 at 01:35 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	109		70-130		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	106		70-130		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	93		70-130		
Toluene	N.D.	0.1	0.5	ug/l	101		70-130		
1,2,3-Trichlorobenzene	N.D.	0.2	0.5	ug/l	91		70-130		
1,2,4-Trichlorobenzene	N.D.	0.2	0.5	ug/l	93		70-130		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	101		70-130		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	109		70-130		
Trichloroethene	N.D.	0.1	0.5	ug/l	100		70-130		
Trichlorofluoromethane	N.D.	0.2	0.5	ug/l	86		70-130		
1,2,3-Trichloropropane	N.D.	0.2	0.5	ug/l	119		70-130		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	103		70-130		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	101		70-130		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	88		70-130		
m+p-Xylene	N.D.	0.2	0.5	ug/l	102		70-130		
o-Xylene	N.D.	0.1	0.5	ug/l	103		70-130		
Xylene (Total)	N.D.	0.1	0.5	ug/l	102		70-130		
Batch number: S140702AA	Sample number(s): 7384707								
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	94		70-130		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA 524.2 Master
Batch number: S140693AA

	4-Bromofluorobenzene	1,2-Dichlorobenzene-d4
7384704	90	91
7384705	93	96
7384706	94	96
7384707	100	108
7384708	91	95
7384709	91	93
Blank	86	94
LCS	108	115
Limits:	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

11200 / 1457482 / 7384704-09

CHAIN OF CUSTODY RECORD

2-13-14

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barbara Weyandt, Manager/ (717) 656-2300

Client:	Watauga County, NC	**Consultant:**	Draper Aden Associates	**Sample Site:**	Watauga County Landfill
Attn:	Mr. J.V. Potter	**Attn:**	Janet C. Frazier	**Location:**	Watauga County, NC
Address:	842 West King Street?/Courthouse, Suite 1 Boone, NC 28607	**Address:**	2206 South Main Street Blacksburg, Virginia 24060	**Event:**	2014 - 1st Semiannual Assess. Monitoring Event
Phone:	(828) 264-5305	**Phone:**	(540) 552-0444	**DAA JN:**	6520-39
Fax:	0	**Fax:**	(540) 552-0291	**Lab JN:**	
Fax:	0				

Project Specific (PS) or Batch (B) QC:
Sample Collection for Project Complete? *YES*

Carrier: UPS
Tracking Number: 1Z75Y02X Y041708142

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: *YES*
Bill: *CLIENT* *OTHER* _____
Preserved and shipped on ice: *YES*

Box 4 - Sample Type					G							
Box 3 - Filtered/Unfiltered					U							
Required pH of Sample					<2							
Box 2 - Preservative					A							
Box 5 - Sample Container Type					3-40ml V							
Sample ID	**Date: 2014**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**Volatiles - 524.2**							
RES-1			GW	3	X				~~2239 Hwy 421 S. (Bolick)~~	No Samples Collected		**Well reference # 1**
H & G Produce	3/4	1320	GW	3	X				230 Cabbage Row (Hollar & Greene)			**Well reference # 6**
RES-15	3/4	1345	GW	3	X				2711 Hwy 421 S (Greer)			**Well reference # 15**
RES-16	3/4	1350	GW	3	X				2737 Hwy 421 S (Williamson)			**Well reference # 16**
BREMCO	3/4	1300	GW	3	X				2491 Hwy 421 S. (Bremco)			**Well reference # 5. (Use Hydrasleeve for collection)**
RES-2	3/4	1245	GW	3	X				2347 Hwy. 421 S. (Bolick Rental)			**Well Reference # 2**
TRIP BLANK	3/3		T	2	X							

GENERAL NOTES:
1. Level 1 Deliverables.
2. Report quantitation limit, and estimated results "J" flag.
3. NC Drinking Water certification okay through 6/30/2014.
4. Note NC Certification (DW) on lab results.
5. Hydrasleeve collection depth, for BREMCO well #5:

Clients Special Instructions:

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.2 °C Received on Ice ✓ Yes ____ No
Describe problems, if any:

Sampler Name (Print): Dale Slaughter	Date: 3/3/14	#1 Relinquished by (Signature): Dale Slaughter	Date: 3/5/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Dale Slaughter	Time: 0730	Company Name: DAA	Time: 0900	Company Name:	Time:	
Sampler Name (Print): Tyler Emery	Date: 3/3/14	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 3/6/14	30 DYS ORG/6 MTHS INORG
Sampler Signature: Tyler Emery	Time: 0730	Company Name:	Time:	Company Name: ELLE	Time: 0830	

\\draperaden.net\DAA\Projects\ADMIN\DIVISIONS\ENVR\Templates\BBURG ETEAM TEMP\Field Events\Watauga\2005-CompuChemCOC - CoreMW's,Surf,& Res,.XLS

2/17/14

2-13-14

JLK 2/21/2014

1/3

145-7482

M/N

* This is Same list as previous events.
JLR
2/21/2014

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
524.2	Volatile Organics					
	Dichlorodifluoromethane	ND	0.5	ug/L	08/16/01	jdn
	Chloromethane	ND	0.5	ug/L	08/16/01	jdn
	Vinyl chloride	ND	0.5	ug/L	08/16/01	jdn
	Bromomethane	ND	0.5	ug/L	08/16/01	jdn
	Chloroethane	ND	0.5	ug/L	08/16/01	jdn
	Trichlorofluoromethane	ND	0.5	ug/L	08/16/01	jdn
	1,1-Dichloroethene	ND	0.5	ug/L	08/16/01	jdn
	Methylene chloride	ND	0.5	ug/L	08/16/01	jdn
	trans-1,2-Dichloroethene	ND	0.5	ug/L	08/16/01	jdn
	1,1-Dichloroethane	ND	0.5	ug/L	08/16/01	jdn
	2,2-Dichloropropane	ND	0.5	ug/L	08/16/01	jdn
	cis-1,2-Dichloroethene	ND	0.5	ug/L	08/16/01	jdn
	Bromochloromethane	ND	0.5	ug/L	08/16/01	jdn
	Chloroform	ND	0.5	ug/L	08/16/01	jdn
	1,1,1-Trichloroethane	ND	0.5	ug/L	08/16/01	jdn
	1,1-Dichloropropene	ND	0.5	ug/L	08/16/01	jdn
	Carbon tetrachloride	ND	0.5	ug/L	08/16/01	jdn
	Benzene	ND	0.5	ug/L	08/16/01	jdn
	1,2-Dichloroethane	ND	0.5	ug/L	08/16/01	jdn
	Trichloroethene	ND	0.5	ug/L	08/16/01	jdn
	1,2-Dichloropropane	ND	0.5	ug/L	08/16/01	jdn
	Dibromomethane	ND	0.5	ug/L	08/16/01	jdn
	Bromodichloromethane	ND	0.5	ug/L	08/16/01	jdn
	cis-1,3-Dichloropropene	ND	0.5	ug/L	08/16/01	jdn
	Toluene	ND	0.5	ug/L	08/16/01	jdn
	trans-1,3-Dichloropropene	ND	0.5	ug/L	08/16/01	jdn
	1,1,2-Trichloroethane	ND	0.5	ug/L	08/16/01	jdn
	Tetrachloroethene	ND	0.5	ug/L	08/16/01	jdn
	1,3-Dichloropropane	ND	0.5	ug/L	08/16/01	jdn
	Dibromochloromethane	ND	0.5	ug/L	08/16/01	jdn
	1,2-Dibromoethane (EDB)	ND	0.5	ug/L	08/16/01	jdn
	Chlorobenzene	ND	0.5	ug/L	08/16/01	jdn
	1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	08/16/01	jdn
	Ethylbenzene	ND	0.5	ug/L	08/16/01	jdn
	m&p-Xylenes	ND	0.5	ug/L	08/16/01	jdn
	Xylenes (total)	ND	0.5	ug/L	08/16/01	jdn
	o-Xylene	ND	0.5	ug/L	08/16/01	jdn
	Styrene	ND	0.5	ug/L	08/16/01	jdn
	Bromoform	ND	0.5	ug/L	08/16/01	jdn
	Isopropylbenzene	ND	0.5	ug/L	08/16/01	jdn
	1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	08/16/01	jdn
	Bromobenzene	ND	0.5	ug/L	08/16/01	jdn
	1,2,3-Trichloropropane	ND	0.5	ug/L	08/16/01	jdn
	n-Propylbenzene	ND	0.5	ug/L	08/16/01	jdn
	2-Chlorotoluene	ND	0.5	ug/L	08/16/01	jdn
	1,3,5-Trimethylbenzene	ND	0.5	ug/L	08/16/01	jdn
	4-Chlorotoluene	ND	0.5	ug/L	08/16/01	jdn
	tert-Butylbenzene	ND	0.5	ug/L	08/16/01	jdn

' In Description = Dry Wgt.

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To JLR
Lancaster
Sangelo 524.2
JLR 3-15-01

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	1,2,4-Trimethylbenzene	ND	0.5	ug/L	08/16/01	jdn
	sec-Butylbenzene	ND	0.5	ug/L	08/16/01	jdn
	1,3-Dichlorobenzene	ND	0.5	ug/L	08/16/01	jdn
	p-Isopropyltoluene	ND	0.5	ug/L	08/16/01	jdn
	1,4-Dichlorobenzene	ND	0.5	ug/L	08/16/01	jdn
	n-Butylbenzene	ND	0.5	ug/L	08/16/01	jdn
	1,2-Dichlorobenzene	ND	0.5	ug/L	08/16/01	jdn
	1,2-Dibromo-3-chloropropane	ND	0.5	ug/L	08/16/01	jdn
	1,2,4-Trichlorobenzene	ND	0.5	ug/L	08/16/01	jdn
	Hexachlorobutadiene	ND	0.5	ug/L	08/16/01	jdn
	Naphthalene	ND	0.5	ug/L	08/16/01	jdn
	1,2,3-Trichlorobenzene	ND	0.5	ug/L	08/16/01	jdn

* In Description = Dry Wgt.

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Sample Administration Receipt Documentation Log

Doc Log ID: 8290

Group Number(s): 1457482

Client: DARPER ADEN

WATAUGA COUNTY NC

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	03/06/2014 9:30
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NC		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Total Trip Blank Qty:	2
Custody Seal Present:	Yes	Trip Blank Type:	HCL
Custody Seal Intact:	Yes	Air Quality Samples Present:	No
Samples Chilled:	Yes	Air Quality Flow Controllers Present:	N/A
Paperwork Enclosed:	Yes	Flow Controller Quantity:	0
Samples Intact:	Yes	Air Quality Returns:	N/A
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		
Sample IDs on COC match Containers:	Yes		
Sample Date/Times match COC:	Yes		
VOA Vial Headspace ≥ 6mm:	No		
VOA IDs (≥ 6mm):	N/A		

Unpacked by Corey Eshleman (3647) at 11:32 on 03/06/2014

Samples Chilled Details: WATAUGA COUNTY NC

Thermometer Types: DT = Digital IR = Infrared

Cooler #	Thermometer ID	Raw Temp (°C)	Corrected Temp (°C)	Thermometer Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	0.2	0.2	DT	Wet	Y	Bagged	N

General Comments:

2425 New Holland Pike
Lancaster, PA 17601-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: WAT19

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7384704	H&G Produce	X		1	
7384705	RES-15	X		1	
7384706	RES-16	X		1	
7384707	BREMCO	X		1; 10	
7384708	RES-2	X		1	
7384709	TRIP BLANK	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: WAT19

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: WAT19

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
EPA 524.2 Master	S140693AA	VBLKS71	03/10/2014 19:33:00
		LFBS71	03/10/2014 20:00:00
		7384704	03/11/2014 03:21:00
		7384705	03/11/2014 03:48:00
		7384706	03/11/2014 04:15:00
		7384707	03/11/2014 04:42:00
		7384708	03/11/2014 05:09:00
		7384709	03/11/2014 02:54:00
EPA 524.2 Master	S140702AA	VBLKS73	03/11/2014 17:25:00
		LFBS73	03/11/2014 17:52:00
		7384707	03/11/2014 20:32:00

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Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: WAT19
Matrix: LIQUID

Fraction: Volatiles by GC/MS

S140693AA / VBLKS71 **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**MDL**	**LOQ**
Dichlorodifluoromethane	03/10/14	N.D.	ug/l	0.2	0.5
Chloromethane	03/10/14	N.D.	ug/l	0.2	0.5
Vinyl Chloride	03/10/14	N.D.	ug/l	0.1	0.5
Bromomethane	03/10/14	N.D.	ug/l	0.1	0.5
Chloroethane	03/10/14	N.D.	ug/l	0.2	0.5
Trichlorofluoromethane	03/10/14	N.D.	ug/l	0.2	0.5
Benzene	03/10/14	N.D.	ug/l	0.1	0.5
Bromobenzene	03/10/14	N.D.	ug/l	0.1	0.5
Bromochloromethane	03/10/14	N.D.	ug/l	0.1	0.5
Bromodichloromethane	03/10/14	N.D.	ug/l	0.1	0.5
Bromoform	03/10/14	N.D.	ug/l	0.2	0.5
n-Butylbenzene	03/10/14	N.D.	ug/l	0.2	0.5
sec-Butylbenzene	03/10/14	N.D.	ug/l	0.1	0.5
tert-Butylbenzene	03/10/14	N.D.	ug/l	0.1	0.5
Carbon Tetrachloride	03/10/14	N.D.	ug/l	0.1	0.5
Chlorobenzene	03/10/14	N.D.	ug/l	0.1	0.5
Chloroform	03/10/14	N.D.	ug/l	0.1	0.5
2-Chlorotoluene	03/10/14	N.D.	ug/l	0.1	0.5
4-Chlorotoluene	03/10/14	N.D.	ug/l	0.2	0.5
1,2-Dibromo-3-chloropropane	03/10/14	N.D.	ug/l	0.4	0.5
Dibromochloromethane	03/10/14	N.D.	ug/l	0.1	0.5
1,2-Dibromoethane	03/10/14	N.D.	ug/l	0.1	0.5
Dibromomethane	03/10/14	N.D.	ug/l	0.1	0.5
1,2-Dichlorobenzene	03/10/14	N.D.	ug/l	0.1	0.5
1,3-Dichlorobenzene	03/10/14	N.D.	ug/l	0.1	0.5
1,4-Dichlorobenzene	03/10/14	N.D.	ug/l	0.1	0.5
1,1-Dichloroethane	03/10/14	N.D.	ug/l	0.1	0.5
1,2-Dichloroethane	03/10/14	N.D.	ug/l	0.1	0.5
1,1-Dichloroethene	03/10/14	N.D.	ug/l	0.1	0.5
cis-1,2-Dichloroethene	03/10/14	N.D.	ug/l	0.1	0.5
trans-1,2-Dichloroethene	03/10/14	N.D.	ug/l	0.1	0.5
1,2-Dichloropropane	03/10/14	N.D.	ug/l	0.1	0.5
1,3-Dichloropropane	03/10/14	N.D.	ug/l	0.1	0.5
2,2-Dichloropropane	03/10/14	N.D.	ug/l	0.2	0.5
1,1-Dichloropropene	03/10/14	N.D.	ug/l	0.1	0.5
cis-1,3-Dichloropropene	03/10/14	N.D.	ug/l	0.1	0.5
trans-1,3-Dichloropropene	03/10/14	N.D.	ug/l	0.1	0.5
Ethylbenzene	03/10/14	N.D.	ug/l	0.1	0.5
Hexachlorobutadiene	03/10/14	N.D.	ug/l	0.2	0.5
Isopropylbenzene	03/10/14	N.D.	ug/l	0.1	0.5
p-Isopropyltoluene	03/10/14	N.D.	ug/l	0.1	0.5
Methylene Chloride	03/10/14	N.D.	ug/l	0.3	0.5
Naphthalene	03/10/14	N.D.	ug/l	0.2	0.5
n-Propylbenzene	03/10/14	N.D.	ug/l	0.1	0.5
Styrene	03/10/14	N.D.	ug/l	0.1	0.5

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Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: WAT19
Matrix: LIQUID

Fraction: Volatiles by GC/MS

S140693AA / VBLKS71 **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**MDL**	**LOQ**
1,1,1,2-Tetrachloroethane	03/10/14	N.D.	ug/l	0.1	0.5
1,1,2,2-Tetrachloroethane	03/10/14	N.D.	ug/l	0.1	0.5
Tetrachloroethene	03/10/14	N.D.	ug/l	0.1	0.5
Toluene	03/10/14	N.D.	ug/l	0.1	0.5
1,2,3-Trichlorobenzene	03/10/14	N.D.	ug/l	0.2	0.5
1,2,4-Trichlorobenzene	03/10/14	N.D.	ug/l	0.2	0.5
1,1,1-Trichloroethane	03/10/14	N.D.	ug/l	0.1	0.5
1,1,2-Trichloroethane	03/10/14	N.D.	ug/l	0.1	0.5
Trichloroethene	03/10/14	N.D.	ug/l	0.1	0.5
1,2,3-Trichloropropane	03/10/14	N.D.	ug/l	0.2	0.5
1,2,4-Trimethylbenzene	03/10/14	N.D.	ug/l	0.1	0.5
1,3,5-Trimethylbenzene	03/10/14	N.D.	ug/l	0.1	0.5
m+p-Xylene	03/10/14	N.D.	ug/l	0.2	0.5
o-Xylene	03/10/14	N.D.	ug/l	0.1	0.5
Xylene (Total)	03/10/14	N.D.	ug/l	0.1	0.5

S140702AA / VBLKS73 **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**MDL**	**LOQ**
1,1-Dichloroethane	03/11/14	N.D.	ug/l	0.1	0.5

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: WAT19
Matrix: LIQUID

Fraction: Volatiles by GC/MS

S140693AA	**4-Bromofluorobenzene**		**1,2-Dichlorobenzene-d4**	
	Spike Added	5 ug/l	**Spike Added**	5 ug/l
Sample	**% Recovery**	**Limits**	**% Recovery**	**Limits**
VBLKS71	86	80 - 120	94	80 - 120
LFBS71	108	80 - 120	115	80 - 120
7384704	90	80 - 120	91	80 - 120
7384705	93	80 - 120	96	80 - 120
7384706	94	80 - 120	96	80 - 120
7384707	100	80 - 120	108	80 - 120
7384708	91	80 - 120	95	80 - 120
7384709	91	80 - 120	93	80 - 120

S140702AA	**4-Bromofluorobenzene**		**1,2-Dichlorobenzene-d4**	
	Spike Added	5 ug/l	**Spike Added**	5 ug/l
Sample	**% Recovery**	**Limits**	**% Recovery**	**Limits**
VBLKS73	89	80 - 120	91	80 - 120
LFBS73	104	80 - 120	111	80 - 120

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: WAT19
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LFBS71	Batch: **S140693AA** (Sample number(s): 7384704-7384709)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	2	1.48	NA	74	NA	70-130	NA	NA
Chloromethane	2	1.71	NA	86	NA	70-130	NA	NA
Vinyl Chloride	2	1.76	NA	88	NA	70-130	NA	NA
Bromomethane	2	1.88	NA	94	NA	70-130	NA	NA
Chloroethane	2	1.86	NA	93	NA	70-130	NA	NA
Trichlorofluoromethane	2	1.71	NA	86	NA	70-130	NA	NA
1,1,1,2-Tetrachloroethane	5	5.44	NA	109	NA	70-130	NA	NA
1,1,1-Trichloroethane	5	5.03	NA	101	NA	70-130	NA	NA
1,1,2,2-Tetrachloroethane	5	5.32	NA	106	NA	70-130	NA	NA
1,1,2-Trichloroethane	5	5.44	NA	109	NA	70-130	NA	NA
1,1-Dichloroethane	5	4.69	NA	94	NA	70-130	NA	NA
1,1-Dichloroethene	5	4.7	NA	94	NA	70-130	NA	NA
1,1-Dichloropropene	5	4.82	NA	96	NA	70-130	NA	NA
1,2,3-Trichlorobenzene	5	4.56	NA	91	NA	70-130	NA	NA
1,2,3-Trichloropropane	5	5.96	NA	119	NA	70-130	NA	NA
1,2,4-Trichlorobenzene	5	4.63	NA	93	NA	70-130	NA	NA
1,2,4-Trimethylbenzene	5	5.13	NA	103	NA	70-130	NA	NA
1,2-Dibromo-3-chloropropane	5	5.06	NA	101	NA	70-130	NA	NA
1,2-Dibromoethane	5	5.28	NA	106	NA	70-130	NA	NA
1,2-Dichlorobenzene	5	5.51	NA	110	NA	70-130	NA	NA
1,2-Dichloroethane	5	5.41	NA	108	NA	70-130	NA	NA
1,2-Dichloropropane	5	5.31	NA	106	NA	70-130	NA	NA
1,3,5-Trimethylbenzene	5	5.07	NA	101	NA	70-130	NA	NA
1,3-Dichlorobenzene	5	5.49	NA	110	NA	70-130	NA	NA
1,3-Dichloropropane	5	5.02	NA	100	NA	70-130	NA	NA
1,4-Dichlorobenzene	5	5.48	NA	110	NA	70-130	NA	NA
2,2-Dichloropropane	5	4.41	NA	88	NA	70-130	NA	NA
2-Chlorotoluene	5	5.2	NA	104	NA	70-130	NA	NA
4-Chlorotoluene	5	5.41	NA	108	NA	70-130	NA	NA
Benzene	5	4.82	NA	96	NA	70-130	NA	NA
Bromobenzene	5	5.5	NA	110	NA	70-130	NA	NA
Bromochloromethane	5	5.76	NA	115	NA	70-130	NA	NA
Bromodichloromethane	5	5.2	NA	104	NA	70-130	NA	NA
Bromoform	5	5.85	NA	117	NA	70-130	NA	NA
Carbon Tetrachloride	5	5.17	NA	103	NA	70-130	NA	NA
Chlorobenzene	5	4.89	NA	98	NA	70-130	NA	NA
Chloroform	5	5.24	NA	105	NA	70-130	NA	NA
cis-1,2-Dichloroethene	5	5.04	NA	101	NA	70-130	NA	NA
cis-1,3-Dichloropropene	5	4.78	NA	96	NA	70-130	NA	NA
Dibromochloromethane	5	5.54	NA	111	NA	70-130	NA	NA
Dibromomethane	5	5.53	NA	111	NA	70-130	NA	NA
Ethylbenzene	5	5	NA	100	NA	70-130	NA	NA

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: WAT19
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LFBS71	Batch: **S140693AA** (Sample number(s): 7384704-7384709)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Hexachlorobutadiene	5	4.69	NA	94	NA	70-130	NA	NA
Isopropylbenzene	5	4.89	NA	98	NA	70-130	NA	NA
m+p-Xylene	10	10.22	NA	102	NA	70-130	NA	NA
Methylene Chloride	5	4.87	NA	97	NA	70-130	NA	NA
Naphthalene	5	4.3	NA	86	NA	70-130	NA	NA
n-Butylbenzene	5	4.88	NA	98	NA	70-130	NA	NA
n-Propylbenzene	5	5.14	NA	103	NA	70-130	NA	NA
o-Xylene	5	5.13	NA	103	NA	70-130	NA	NA
p-Isopropyltoluene	5	4.89	NA	98	NA	70-130	NA	NA
sec-Butylbenzene	5	4.96	NA	99	NA	70-130	NA	NA
Styrene	5	5.39	NA	108	NA	70-130	NA	NA
tert-Butylbenzene	5	5.04	NA	101	NA	70-130	NA	NA
Tetrachloroethene	5	4.64	NA	93	NA	70-130	NA	NA
Toluene	5	5.06	NA	101	NA	70-130	NA	NA
trans-1,2-Dichloroethene	5	4.72	NA	94	NA	70-130	NA	NA
trans-1,3-Dichloropropene	5	4.76	NA	95	NA	70-130	NA	NA
Trichloroethene	5	5.01	NA	100	NA	70-130	NA	NA
Xylene (Total)	15	15.35	NA	102	NA	70-130	NA	NA

LCS: LFBS73	Batch: **S140702AA** (Sample number(s): 7384707)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,1-Dichloroethane	5	4.68	NA	94	NA	70-130	NA	NA

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TRRP-13 Laboratory Data Package Signature Page	SDG #: TXA62
Department or Fraction: GC/MS Volatiles	Project Name: CPL-Angelina Co. MP-83.4
LLI Sample #(s): 738434-36	Batch #(s): L140703AA

This Data Package consists of:

Signature Page (this page)
Quality Control Reference List
Laboratory Review Check List (LRC) including:
a) Reportable Data,
b) Supporting Data, and
c) Exception Report (for every "No" or "Not Reviewed (NR)" item in laboratory review checklist).

R4 Surrogate Summary Forms including:
a) Calculated recovery (%R), and
b) Surrogate QC limits.

R5 Summary Forms for Blank Samples;

R6 Summary Forms for Laboratory Control Samples (LCSs) including:
a) LCS spiking amounts,
b) Calculated %R for each analyte, and
c) LCS QC limits.

R7 Summary Forms for Matrix Spike/Matrix Spike Duplicates (MS/MSDs) including:
a) MS/MSD spiking amounts,
b) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
c) Calculated %Rs and relative percent differences (RPDs), and
d) MS/MSD QC limits

R8 Laboratory Analytical Duplicate (if applicable) Recovery and Precision:
a) The amount of analyte measured in the duplicate,
b) The calculated RPD, and
c) The laboratory's QC limits for analytical duplicates.

R9 List of Method Quantitation Limits (MQLs) and detectability check samples (DCS) results for each analyte for each method and matrix.

R10 Other problems or anomalies

Release Statement:

I am responsible for the release of this section of the laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for the methods, analytes, and matrices reported in this section of the data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory for this section of the data package have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Judi Brown	Judi Brown	Specialist	3/19/14
Name (printed)	Signature	Official Title (printed)	Date

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TRRP-13 Laboratory Review Checklist: Reportable Data	SDG #: TXA62
Department or Fraction: GC/MS Volatiles	Project Name: CPL-Angelina Co. MP- 83.4
Reviewer Name: Judi Brown	LLI Sample #(s): 7387434-36
LRC Date: 3/19/14	Batch #(s): L140703AA

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER #[5]
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**ANALYSIS REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results <MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample detection limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?	X				
		7) Were % moisture (or solids) reported for all soil and sediment samples?	X				
		8) If required for the project, TIC's reported?	X				
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	**SUMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?		X			1
		4) Were blank concentrations <MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS)**					
		1) Were all Chemicals of Concern (COC) included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCS's analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COC's at the MDL used to calculate the SDL's?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX DUPLICATE (MSD) DATA**					
		1) Were the project/method-specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS)**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Was applicable and available technology used to lower the SDL and minimize the matrix interference affects on the sample results?	X				

[1]Items identified by the letter "R" must be included in the laboratory data package.

[2]O = Organic analysis; I = Inorganic analysis (and general chemistry, when applicable);

[3]NA = Not applicable;

[4]NR = Not reviewed;

[5]ER# = Exception report identification number (an exception report should be completed for an item if "NR" or "No" is checked).

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TRRP-13 Laboratory Review Checklist: Supporting Data	SDG #: TXA62
Department or Fraction: GC/MS Volatiles	Project Name: CPL-Angelina Co., MP-83.4
Reviewer Name: Judi Brown	LLI Sample #(s): 7387434-36
LRC Date: 3/19/14	Batch #(s): L140703AA

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER #[5]
S1	OI	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factor (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV AND CCV)**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB<MDL?			X		
S3	O	**MASS SPECTRAL TUNING**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Was ion abundance data within the method-required QC limits?	X				
S4	OI	**INTERNAL STANDARDS (IS)**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**RAW DATA (NELAC Section 5.5.10)**					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**DUAL COLUMN CONFIRMATION**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**TENTATIVELY IDENTIFIED COMPOUNDS (TICS)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**INTERFERENCE CHECK SAMPLE (ICS) RESULTS**					
		Were percent recoveries within method QC limits?			X		
S9	I	**SERIAL DILUTIONS, POST DIGESTION SPIKES, AND MSA**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**PROFICIENCY TEST REPORTS**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**STANDARDS DOCUMENTATION**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**COMPOUND/ANALYTE IDENTIFICATION PROCEDURES**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**DEMONSTRATION OF ANALYST COMPETENCY (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated where applicable?	X				
S16	OI	**LABORATORY STANDARD OPERATING PROCEDURES (SOPS)**					
		Are laboratory SOPs current and on file for each method performed?	X				

[1]Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

[2]O = Organic analysis; I = Inorganic analysis (and general chemistry, when applicable);

[3]NA = Not applicable;

[4]NR = Not reviewed;

[5]ER# = Exception report identification number (an exception report should be completed for an item if "NR" or "No" is checked).

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TRRP-13 Laboratory Review Checklist: Exception Reports	SDG #: TXA62
Department or Fraction: 4021	Project Name: CPL-Angelina Co. MP-83.4
Reviewer Name: Judi Brown	LLI Sample #(s): 7387434-36
LRC Date: 3/19/14	Batch #(s): L140703AA

ER # [1]	DESCRIPTION
1	For noncompliant preparation/method blanks, corrective action is not required if the sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

[1]ER#=Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC).

Issued by Dept. 4038 Management

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08359 Calibration Date(s): 02/04/14 02/04/14

Heated Purge: (Y/N) N Calibration Time(s): 09:10 10:31

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 0.5 sf04i04.d RRF 5 = sf04i03.d
RRF 10= sf04i02.d RRF 25= sf04i01.d RRF =

COMPOUND	RRF 0.5	RRF 5	RRF 10	RRF 25	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
Dichlorodifluoromethane	0.4541	0.3968	0.4021	0.4214		0.4186	6	AVG
Chloromethane	1.3836	1.1173	1.1121	1.0693		1.1706	12	AVG
Vinyl Chloride	0.8352	0.6924	0.6893	0.6339		0.7127	12	AVG
Bromomethane	0.5728	0.4720	0.4581	0.4324		0.4839	13	AVG
Chloroethane	0.3817	0.3234	0.3244	0.3106		0.3350	9	AVG
Dichlorofluoromethane	0.8179	0.6662	0.6654	0.6452		0.6987	11	AVG
Trichlorofluoromethane	0.4582	0.3997	0.3987	0.4087		0.4163	7	AVG
Ethyl Ether	0.2258	0.2035	0.1943	0.1865		0.2025	8	AVG
Acrolein	0.0405	0.0340	0.0329	0.0294		0.0342	14	AVG
1,1-Dichloroethene	0.4259	0.3488	0.3476	0.3337		0.3640	11	AVG
Freon 113	0.3859	0.3445	0.3468	0.3343		0.3529	6	AVG
Acetone	0.0126	0.0107	0.0107	0.0099		0.0110	11	AVG
Acetone(2)	0.0433	0.0348	0.0335	0.0325		0.0360	14	AVG
Methyl Iodide	0.9727	0.8734	0.8787	0.8285		0.8883	7	AVG
Carbon Disulfide	1.5057	1.2523	1.2345	1.1544		1.2867	12	AVG
Allyl Chloride	0.7002	0.5548	0.5520	0.5481		0.5888	13	AVG
Methylene Chloride	0.3654	0.3108	0.3046	0.2966		0.3193	10	AVG
t-Butyl Alcohol	0.0105	0.0084	0.0081	0.0074		0.0086	16	AVG
Acrylonitrile	0.0659	0.0565	0.0541	0.0516		0.0570	11	AVG
trans-1,2-Dichloroethene	0.4951	0.4052	0.4017	0.3863		0.4221	12	AVG
Methyl Tertiary Butyl Ether	0.3365	0.2884	0.2838	0.2645		0.2933	10	AVG
1,1-Dichloroethane	0.8292	0.6980	0.6955	0.6585		0.7203	10	AVG
di-Isopropyl Ether	0.2490	0.2107	0.2119	0.1975		0.2173	10	AVG
Ethyl t-Butyl Ether	0.8317	0.7403	0.7404	0.6822		0.7486	8	AVG
cis-1,2-Dichloroethene	0.4164	0.3725	0.3780	0.3623		0.3823	6	AVG
2,2-Dichloropropane	0.4264	0.3513	0.3483	0.3363		0.3656	11	AVG
2-Butanone	0.0925	0.0820	0.0797	0.0772		0.0828	8	AVG
Propionitrile	0.0249	0.0212	0.0206	0.0196		0.0216	11	AVG
Methyl Acrylate	0.1643	0.1569	0.1543	0.1478		0.1558	4	AVG
Methacrylonitrile	0.0462	0.0438	0.0433	0.0413		0.0436	5	AVG
Bromochloromethane	0.1554	0.1558	0.1563	0.1528		0.1551	1	AVG
Tetrahydrofuran	0.0115	0.0105	0.0102	0.0098		0.0105	7	AVG
Chloroform	0.6464	0.5412	0.5368	0.5247		0.5623	10	AVG
1,1,1-Trichloroethane	0.3838	0.3570	0.3488	0.3420		0.3579	5	AVG
1-Chlorobutane	1.1147	1.0762	0.9938	0.9857		1.0426	6	AVG
Carbon Tetrachloride	0.3815	0.3313	0.3274	0.3197		0.3400	8	AVG
1,1-Dichloropropene	0.4962	0.4646	0.4568	0.4440		0.4654	5	AVG
Benzene	1.5936	1.4272	1.4135	1.2719		1.4266	9	AVG
1,2-Dichloroethane	0.2450	0.2167	0.2087	0.2017		0.2180	9	AVG
t-Amyl Methyl Ether	0.4070	0.4022	0.4036	0.3874		0.4001	2	AVG
Trichloroethene	0.4125	0.3674	0.3785	0.3694		0.3819	5	AVG
1,2-Dichloropropane	0.4070	0.3681	0.3645	0.3475		0.3718	7	AVG
Methyl Methacrylate	0.0693	0.0720	0.0719	0.0706		0.0709	2	AVG
Dibromomethane	0.1448	0.1387	0.1362	0.1330		0.1382	4	AVG
Bromodichloromethane	0.3856	0.3358	0.3360	0.3314		0.3472	7	AVG
2-Nitropropane	0.0015	0.0014	0.0013	0.0013		0.0014	8	AVG
Chloroacetonitrile	0.0068	0.0061	0.0061	0.0058		0.0062	7	AVG
cis-1,3-Dichloropropene	0.4114	0.4019	0.4061	0.3866		0.4015	3	AVG
4-Methyl-2-pentanone	0.0549	0.0566	0.0567	0.0537		0.0555	3	AVG
1,1-Dichloropropanone	0.0023	0.0022	0.0021	0.0020		0.0021	5	AVG
Toluene	0.8428	0.8273	0.8465	0.8295		0.8365	1	AVG
trans-1,3-Dichloropropene	0.2729	0.2611	0.2628	0.2562		0.2632	3	AVG

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08359 Calibration Date(s): 02/04/14 02/04/14

Heated Purge: (Y/N) N Calibration Time(s): 09:10 10:31

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 0.5 sf04i04.d RRF 5 = sf04i03.d
RRF 10= sf04i02.d RRF 25= sf04i01.d RRF =

COMPOUND	RRF 0.5	RRF 5	RRF 10	RRF 25	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
Ethyl Methacrylate	0.1435	0.1563	0.1575	0.1534		0.1527	4	AVG
1,1,2-Trichloroethane	0.1671	0.1556	0.1518	0.1459		0.1551	6	AVG
Tetrachloroethene	0.5099	0.4545	0.4619	0.4587		0.4713	6	AVG
1,3-Dichloropropane	0.2874	0.2590	0.2542	0.2452		0.2615	7	AVG
2-Hexanone	0.0501	0.0519	0.0522	0.0502		0.0511	2	AVG
Dibromochloromethane	0.2622	0.2365	0.2352	0.2287		0.2407	6	AVG
1,2-Dibromoethane	0.1885	0.1687	0.1690	0.1595		0.1714	7	AVG
Chlorobenzene	0.9303	0.8542	0.8650	0.8231		0.8682	5	AVG
1,1,1,2-Tetrachloroethane	0.3318	0.2890	0.2935	0.2804		0.2987	8	AVG
Ethylbenzene	0.4587	0.4659	0.4673	0.4496		0.4604	2	AVG
m+p-Xylene	0.5925	0.5823	0.5778	0.5388		0.5728	4	AVG
o-Xylene	0.5099	0.5193	0.5275	0.4984		0.5138	2	AVG
Styrene	0.8041	0.7981	0.8069	0.7669		0.7940	2	AVG
Xylene (Total)	0.5650	0.5613	0.5610	0.5253		0.5531	3	AVG
Bromoform	0.1129	0.1067	0.1089	0.1053		0.1085	3	AVG
Isopropylbenzene	0.3875	0.3904	0.4001	0.3821		0.3900	2	AVG
1,1,2,2-Tetrachloroethane	0.2200	0.1829	0.1816	0.1670		0.1879	12	AVG
Bromobenzene	0.3412	0.3312	0.3300	0.3178		0.3300	3	AVG
1,2,3-Trichloropropane	0.0381	0.0308	0.0306	0.0292		0.0322	12	AVG
trans-1,4-Dichloro-2-butene	0.0473	0.0448	0.0444	0.0412		0.0444	6	AVG
n-Propylbenzene	0.4209	0.4117	0.4189	0.4011		0.4131	2	AVG
2-Chlorotoluene	0.4046	0.3767	0.3802	0.3684		0.3825	4	AVG
1,3,5-Trimethylbenzene	1.1242	1.0624	1.0685	0.9586		1.0534	7	AVG
4-Chlorotoluene	0.4029	0.3881	0.3913	0.3782		0.3901	3	AVG
tert-Butylbenzene	0.2445	0.2482	0.2501	0.2453		0.2470	1	AVG
Pentachloroethane	0.1911	0.1846	0.1856	0.1786		0.1850	3	AVG
1,2,4-Trimethylbenzene	1.0937	1.0421	1.0455	0.9308		1.0280	7	AVG
sec-Butylbenzene	0.2879	0.2842	0.2895	0.2826		0.2861	1	AVG
p-Isopropyltoluene	1.2330	1.1974	1.2197	1.0717		1.1804	6	AVG
1,3-Dichlorobenzene	0.6744	0.6190	0.6187	0.5761		0.6220	6	AVG
1,4-Dichlorobenzene	0.6905	0.5974	0.5944	0.5550		0.6093	9	AVG
n-Butylbenzene	0.7768	0.7188	0.7305	0.6774		0.7259	6	AVG
1,2-Dichlorobenzene	0.5556	0.4636	0.4602	0.4298		0.4773	11	AVG
Hexachloroethane	0.2198	0.2187	0.2099	0.2019		0.2126	4	AVG
1,2-Dibromo-3-chloropropane	0.0273	0.0215	0.0209	0.0215		0.0228	13	AVG
Nitrobenzene	0.0017	0.0022	0.0025	0.0026		0.0022	18	AVG
1,2,4-Trichlorobenzene	0.2860	0.2609	0.2741	0.2661		0.2718	4	AVG
Hexachlorobutadiene	0.2266	0.1879	0.1899	0.1801		0.1961	11	AVG
Naphthalene	0.3195	0.2919	0.3049	0.2987		0.3037	4	AVG
1,2,3-Trichlorobenzene	0.2263	0.1927	0.2034	0.1908		0.2033	8	AVG
4-Bromofluorobenzene	0.2430	0.2532	0.2551	0.2462		0.2494	2	AVG
1,2-Dichlorobenzene-d4	0.2411	0.2390	0.2392	0.2261		0.2364	3	AVG
						Average %RSD	7	

EPA Method 524
Internal/Surrogate Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/SH08359.i/14feb04a.b/sf04i01.d VSTD025
/chem/SH08359.i/14feb04a.b/sf04i02.d VSTD010
/chem/SH08359.i/14feb04a.b/sf04i03.d VSTD005
/chem/SH08359.i/14feb04a.b/sf04i04.d VSTD0.5

Area Summary

File ID:

Internal/Surrogate Standard Name	sf04i01.d	sf04i02.d	sf04i03.d	sf04i04.d	Avg. Area	%RSD	In Spec
Fluorobenzene	1093355	1061958	1073641	1021743	1062674	3	Yes
4-Bromofluorobenzene	269209	270878	271882	248328	265074	4	Yes
1,2-Dichlorobenzene-d4	247182	254040	256609	246392	251056	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal/Surrogate Standard Name	sf04i01.d	sf04i02.d	sf04i03.d	sf04i04.d	Avg. RT
Fluorobenzene	7.905	7.912	7.905	7.905	7.907
4-Bromofluorobenzene	12.158	12.158	12.158	12.158	12.158
1,2-Dichlorobenzene-d4	13.434	13.441	13.434	13.434	13.436

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 02/04/2014 at 11:32

Lancaster Laboratories, Inc.
GC/MS Initial Calibration Verification

File: sf04s01.d
Inst: SH08359
Dilution Factor: 1.0

Injected: 02/04/14 at 11:52
Sample: LFBS43

Method: EPA 524.2 REV 4
Matrix/Level: WL
Batch: S140351AA

COMPOUND NAME	SPIKE LEVEL	ICV CONC UG/L	ICV REC %	Range LOWER-UPPER	INSPEC
Dichlorodifluoromethane	2.00	2.24	112	70-130	YES
Chloromethane	2.00	2.27	114	70-130	YES
Vinyl Chloride	2.00	2.12	106	70-130	YES
Bromomethane	2.00	2.20	110	70-130	YES
Chloroethane	2.00	2.11	106	70-130	YES
Dichlorofluoromethane	2.00	2.21	110	70-130	YES
Trichlorofluoromethane	2.00	2.12	106	70-130	YES
Ethyl Ether	5.00	4.69	94	70-130	YES
Acrolein	37.50	36.13	96	70-130	YES
1,1-Dichloroethene	5.00	5.06	101	70-130	YES
Freon 113	5.00	4.91	98	70-130	YES
Acetone	37.50	38.57	103	70-130	YES
Methyl Iodide	5.00	5.26	105	70-130	YES
Carbon Disulfide	5.00	5.38	108	70-130	YES
Allyl Chloride	5.00	4.66	93	70-130	YES
Methylene Chloride	5.00	5.41	108	70-130	YES
t-Butyl Alcohol	50.00	48.06	96	70-130	YES
Acrylonitrile	112.50	111.87	99	70-130	YES
trans-1,2-Dichloroethene	5.00	4.98	100	70-130	YES
Methyl Tertiary Butyl Ether	5.00	4.97	99	70-130	YES
1,1-Dichloroethane	5.00	5.04	101	70-130	YES
di-Isopropyl Ether	5.00	5.05	101	70-130	YES
Ethyl t-Butyl Ether	5.00	4.88	98	70-130	YES
cis-1,2-Dichloroethene	5.00	4.99	100	70-130	YES
2,2-Dichloropropane	5.00	4.92	98	70-130	YES
2-Butanone	37.50	36.42	97	70-130	YES
Propionitrile	100.00	95.62	96	70-130	YES
Methyl Acrylate	25.00	24.48	98	70-130	YES
Methacrylonitrile	37.50	37.35	100	70-130	YES
Bromochloromethane	5.00	4.93	99	70-130	YES
Tetrahydrofuran	45.00	43.10	96	70-130	YES
Chloroform	5.00	5.15	103	70-130	YES
1,1,1-Trichloroethane	5.00	5.14	103	70-130	YES
1-Chlorobutane	5.00	4.92	98	70-130	YES
Carbon Tetrachloride	5.00	5.32	106	70-130	YES
1,1-Dichloropropene	5.00	5.30	106	70-130	YES
Benzene	5.00	5.05	101	70-130	YES
1,2-Dichloroethane	5.00	5.11	102	70-130	YES
t-Amyl Methyl Ether	5.00	5.01	100	70-130	YES
Trichloroethene	5.00	5.05	101	70-130	YES
1,2-Dichloropropane	5.00	5.27	105	70-130	YES
Methyl Methacrylate	5.00	4.93	99	70-130	YES
Dibromomethane	5.00	5.12	102	70-130	YES
Bromodichloromethane	5.00	5.05	101	70-130	YES
2-Nitropropane	500.00	515.06	103	70-130	YES
Chloroacetonitrile	250.00	236.34	95	70-130	YES
cis-1,3-Dichloropropene	5.00	5.19	104	70-130	YES
4-Methyl-2-pentanone	25.00	24.79	99	70-130	YES
1,1-Dichloropropanone	500.00	498.32	100	70-130	YES
Toluene	5.00	5.06	101	70-130	YES
trans-1,3-Dichloropropene	5.00	4.97	99	70-130	YES
Ethyl Methacrylate	5.00	5.06	101	70-130	YES
1,1,2-Trichloroethane	5.00	5.16	103	70-130	YES
Tetrachloroethene	5.00	4.72	94	70-130	YES
1,3-Dichloropropane	5.00	5.06	101	70-130	YES
2-Hexanone	25.00	24.10	96	70-130	YES
Dibromochloromethane	5.00	5.05	101	70-130	YES
1,2-Dibromoethane	5.00	5.12	102	70-130	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by _____

_____ Ver. by _____

Lancaster Laboratories, Inc.
GC/MS Initial Calibration Verification

File: sf04s01.d
Inst: SH08359
Dilution Factor: 1.0

Injected: 02/04/14 at 11:52
Sample: LFBS43

Method: EPA 524.2 REV 4
Matrix/Level: WL
Batch: S140351AA

COMPOUND NAME	SPIKE LEVEL	ICV CONC UG/L	ICV REC %	Range LOWER-UPPER	INSPEC
Chlorobenzene	5.00	5.08	102	70-130	YES
1,1,1,2-Tetrachloroethane	5.00	5.05	101	70-130	YES
Ethylbenzene	5.00	5.22	104	70-130	YES
m+p-Xylene	10.00	10.43	104	70-130	YES
o-Xylene	5.00	5.25	105	70-130	YES
Styrene	5.00	5.25	105	70-130	YES
Xylene (Total)	15.00	15.68	105	70-130	YES
Bromoform	5.00	5.23	105	70-130	YES
Isopropylbenzene	5.00	5.14	103	70-130	YES
1,1,2,2-Tetrachloroethane	5.00	5.18	104	70-130	YES
Bromobenzene	5.00	5.16	103	70-130	YES
1,2,3-Trichloropropane	5.00	5.24	105	70-130	YES
trans-1,4-Dichloro-2-butene	25.00	27.38	110	70-130	YES
n-Propylbenzene	5.00	5.21	104	70-130	YES
2-Chlorotoluene	5.00	5.03	101	70-130	YES
1,3,5-Trimethylbenzene	5.00	5.23	105	70-130	YES
4-Chlorotoluene	5.00	5.09	102	70-130	YES
tert-Butylbenzene	5.00	5.28	106	70-130	YES
Pentachloroethane	5.00	5.10	102	70-130	YES
1,2,4-Trimethylbenzene	5.00	5.24	105	70-130	YES
sec-Butylbenzene	5.00	5.15	103	70-130	YES
p-Isopropyltoluene	5.00	5.12	102	70-130	YES
1,3-Dichlorobenzene	5.00	5.27	105	70-130	YES
1,4-Dichlorobenzene	5.00	5.19	104	70-130	YES
n-Butylbenzene	5.00	5.14	103	70-130	YES
1,2-Dichlorobenzene	5.00	5.16	103	70-130	YES
Hexachloroethane	5.00	5.12	102	70-130	YES
1,2-Dibromo-3-chloropropane	5.00	4.89	98	70-130	YES
Nitrobenzene	250.00	260.44	104	70-130	YES
1,2,4-Trichlorobenzene	5.00	4.92	98	70-130	YES
Hexachlorobutadiene	5.00	4.84	97	70-130	YES
Naphthalene	5.00	4.82	96	70-130	YES
1,2,3-Trichlorobenzene	5.00	4.69	94	70-130	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by _____

_____ Ver. by _____

EPA Method 524
Continuing Calibration Internal/Surrogate Standard Check

Initial Calibration Standards:

/chem/SH08359.i/14feb04a.b/sf04i01.d VSTD025
** /chem/SH08359.i/14feb04a.b/sf04i02.d VSTD010
/chem/SH08359.i/14feb04a.b/sf04i03.d VSTD005
/chem/SH08359.i/14feb04a.b/sf04i04.d VSTD0.5

** File is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/SH08359.i/14mar10b.b/sm10c51.d

RT Summary

Internal/Surrogate Standard Name	File ID: sm10c51.d	ICAL RT	In Spec
Fluorobenzene	7.963	7.912	Yes
4-Bromofluorobenzene	12.195	12.158	Yes
1,2-Dichlorobenzene-d4	13.471	13.441	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal/Surrogate Standard Name	File ID: sm10c51.d	ICAL Area	Low Limit	High Limit	In Spec
Fluorobenzene	1355231	1061958	530979	2123916	Yes
4-Bromofluorobenzene	350216	270878	135439	541756	Yes
1,2-Dichlorobenzene-d4	364758	254040	127020	508080	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

_____

report generated on 03/10/2014 at 19:54

EPA Method 524
Continuing Calibration Internal/Surrogate Standard Check

Current Continuing Calibration Standard:

/chem/SH08359.i/14mar10b.b/sm10c51.d

Previous Continuing Calibration Standard:

/chem/SH08359.i/14mar10a.b/sm10c01.d

RT Summary

Internal/Surrogate Standard Name	File ID: sm10c51.d	Previous CCAL RT	In Spec
Fluorobenzene	7.963	7.949	Yes
4-Bromofluorobenzene	12.195	12.180	Yes
1,2-Dichlorobenzene-d4	13.471	13.456	Yes

A "No" indicates the retention time is greater than 30 seconds from the average RT.

Area Summary

Internal/Surrogate Standard Name	File ID: sm10c51.d	Previous CCAL Area	Low Limit	In Spec
Fluorobenzene	1355231	1532179	1072525	Yes
4-Bromofluorobenzene	350216	392800	274960	Yes
1,2-Dichlorobenzene-d4	364758	394316	276021	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

_____

report generated on 03/10/2014 at 19:54

Lancaster Laboratories
GC/MS Volatiles Method 524.2 Check Sample Summary

File: sm10c51.d Injected: 03/10/14 Method: EPA 524.2 REV 4
Inst: SH08359 Sample: VSTD010 Matrix/level: W/L

COMPOUND NAME	CONCENTRATION SPIKED (UG/L)	CONCENTRATION MEASURED (UG/L)	% RECOVERY	IN SPEC
Dichlorodifluoromethane	10.000	8.698	87	YES
Chloromethane	10.000	8.660	87	YES
Vinyl Chloride	10.000	8.874	89	YES
Bromomethane	10.000	8.981	90	YES
Chloroethane	10.000	9.369	94	YES
Dichlorofluoromethane	10.000	9.263	93	YES
Trichlorofluoromethane	10.000	8.580	86	YES
Ethyl Ether	10.000	9.006	90	YES
Acrolein	500.000	404.460	81	YES
1,1-Dichloroethene	10.000	8.716	87	YES
Freon 113	10.000	8.198	82	YES
Acetone	100.000	90.774	91	YES
Acetone(2)	100.000	89.780	90	YES
Methyl Iodide	10.000	9.134	91	YES
Carbon Disulfide	10.000	8.639	86	YES
Allyl Chloride	10.000	8.327	83	YES
Methylene Chloride	10.000	8.921	89	YES
t-Butyl Alcohol	200.000	166.123	83	YES
Acrylonitrile	124.800	108.509	87	YES
trans-1,2-Dichloroethene	10.000	8.584	86	YES
Methyl Tertiary Butyl Ether	10.000	8.362	84	YES
1,1-Dichloroethane	10.000	8.816	88	YES
di-Isopropyl Ether	10.000	8.376	84	YES
Ethyl t-Butyl Ether	10.000	9.298	93	YES
cis-1,2-Dichloroethene	10.000	9.862	99	YES
2,2-Dichloropropane	10.000	8.870	89	YES
2-Butanone	100.000	92.700	93	YES
Propionitrile	200.000	197.314	99	YES
Methyl Acrylate	50.000	49.993	100	YES
Methacrylonitrile	100.000	99.073	99	YES
Bromochloromethane	10.000	11.103	111	YES
Tetrahydrofuran	140.000	135.848	97	YES
Chloroform	10.000	9.713	97	YES
1,1,1-Trichloroethane	10.000	9.582	96	YES
1-Chlorobutane	10.000	9.569	96	YES
Carbon Tetrachloride	10.000	9.765	98	YES
1,1-Dichloropropene	10.000	9.205	92	YES
Benzene	10.000	9.636	96	YES
1,2-Dichloroethane	10.000	9.889	99	YES

Lancaster Laboratories
GC/MS Volatiles Method 524.2 Check Sample Summary

File: sm10c51.d Injected: 03/10/14 Method: EPA 524.2 REV 4
Inst: SH08359 Sample: VSTD010 Matrix/level: W/L

COMPOUND NAME	CONCENTRATION SPIKED (UG/L)	CONCENTRATION MEASURED (UG/L)	% RECOVERY	IN SPEC
t-Amyl Methyl Ether	10.000	9.115	91	YES
Trichloroethene	10.000	9.603	96	YES
1,2-Dichloropropane	10.000	9.900	99	YES
Methyl Methacrylate	10.000	9.751	98	YES
Dibromomethane	10.000	10.455	105	YES
Bromodichloromethane	10.000	9.847	98	YES
2-Nitropropane	1050.00	1054.04	100	YES
Chloroacetonitrile	500.000	497.680	100	YES
cis-1,3-Dichloropropene	10.000	9.288	93	YES
4-Methyl-2-pentanone	100.000	104.197	104	YES
1,1-Dichloropropanone	1000.00	1077.56	108	YES
Toluene	10.000	9.987	100	YES
trans-1,3-Dichloropropene	10.000	9.387	94	YES
Ethyl Methacrylate	10.000	9.649	96	YES
1,1,2-Trichloroethane	10.000	9.972	100	YES
Tetrachloroethene	10.000	9.475	95	YES
1,3-Dichloropropane	10.000	9.709	97	YES
2-Hexanone	100.000	106.186	106	YES
Dibromochloromethane	10.000	10.492	105	YES
1,2-Dibromoethane	10.000	9.953	100	YES
Chlorobenzene	10.000	9.647	96	YES
1,1,1,2-Tetrachloroethane	10.000	10.210	102	YES
Ethylbenzene	10.000	9.883	99	YES
m+p-Xylene	20.000	20.096	100	YES
o-Xylene	10.000	10.064	101	YES
Styrene	10.000	10.371	104	YES
Xylene (Total)	30.000	30.159	101	YES
Bromoform	10.000	10.978	110	YES
Isopropylbenzene	10.000	9.960	100	YES
1,1,2,2-Tetrachloroethane	10.000	9.958	100	YES
Bromobenzene	10.000	10.865	109	YES
1,2,3-Trichloropropane	10.000	10.794	108	YES
trans-1,4-Dichloro-2-butene	100.000	96.876	97	YES
n-Propylbenzene	10.000	10.195	102	YES
2-Chlorotoluene	10.000	10.394	104	YES
1,3,5-Trimethylbenzene	10.000	10.026	100	YES
4-Chlorotoluene	10.000	10.432	104	YES
tert-Butylbenzene	10.000	10.466	105	YES
Pentachloroethane	10.000	10.430	104	YES

Lancaster Laboratories

GC/MS Volatiles Method 524.2 Check Sample Summary

File: sm10c51.d Injected: 03/10/14 Method: EPA 524.2 REV 4

Inst: SH08359 Sample: VSTD010 Matrix/level: W/L

COMPOUND NAME	CONCENTRATION SPIKED (UG/L)	CONCENTRATION MEASURED (UG/L)	% RECOVERY	IN SPEC
1,2,4-Trimethylbenzene	10.000	10.032	100	YES
sec-Butylbenzene	10.000	10.444	104	YES
p-Isopropyltoluene	10.000	10.103	101	YES
1,3-Dichlorobenzene	10.000	10.433	104	YES
1,4-Dichlorobenzene	10.000	10.418	104	YES
n-Butylbenzene	10.000	9.835	98	YES
1,2-Dichlorobenzene	10.000	10.489	105	YES
Hexachloroethane	10.000	10.625	106	YES
1,2-Dibromo-3-chloropropane	10.000	9.685	97	YES
Nitrobenzene	200.000	217.586	109	YES
1,2,4-Trichlorobenzene	10.000	9.604	96	YES
Hexachlorobutadiene	10.000	9.278	93	YES
Naphthalene	10.000	9.275	93	YES
1,2,3-Trichlorobenzene	10.000	9.317	93	YES
4-Bromofluorobenzene	5.000	5.181	104	YES
1,2-Dichlorobenzene-d4	5.000	5.694	114	YES

CALIBRATION CHECK REPORT

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08359 Calibration Date: 03/10/14 Time: 19:06

Lab File ID: sm10c51.d Init. Calib. Date(s): 02/04/2014 02/04/2014

COMPOUND	RRF	RRF10	%D	CALIB METH
Dichlorodifluoromethane	0.4186	0.3641	-13	AVG
Chloromethane	1.1706	1.0137	-13	AVG
Vinyl Chloride	0.7127	0.6324	-11	AVG
Bromomethane	0.4839	0.4346	-10	AVG
Chloroethane	0.3350	0.3139	-6	AVG
Dichlorofluoromethane	0.6987	0.6472	-7	AVG
Trichlorofluoromethane	0.4163	0.3572	-14	AVG
Ethyl Ether	0.2025	0.1824	-10	AVG
Acrolein	0.0342	0.0277	-19	AVG
1,1-Dichloroethene	0.3640	0.3173	-13	AVG
Freon 113	0.3529	0.2893	-18	AVG
Acetone	0.0110	0.0100	-9	AVG
Acetone(2)	0.0360	0.0323	-10	AVG
Methyl Iodide	0.8883	0.8114	-9	AVG
Carbon Disulfide	1.2867	1.1116	-14	AVG
Allyl Chloride	0.5888	0.4903	-17	AVG
Methylene Chloride	0.3193	0.2849	-11	AVG
t-Butyl Alcohol	0.0086	0.0071	-17	AVG
Acrylonitrile	0.0570	0.0496	-13	AVG
trans-1,2-Dichloroethene	0.4221	0.3623	-14	AVG
Methyl Tertiary Butyl Ether	0.2933	0.2452	-16	AVG
1,1-Dichloroethane	0.7203	0.6350	-12	AVG
di-Isopropyl Ether	0.2173	0.1820	-16	AVG
Ethyl t-Butyl Ether	0.7486	0.6961	-7	AVG
cis-1,2-Dichloroethene	0.3823	0.3770	-1	AVG
2,2-Dichloropropane	0.3656	0.3243	-11	AVG
2-Butanone	0.0828	0.0768	-7	AVG
Propionitrile	0.0216	0.0213	-1	AVG
Methyl Acrylate	0.1558	0.1558	0	AVG
Methacrylonitrile	0.0436	0.0432	-1	AVG
Bromochloromethane	0.1551	0.1722	11	AVG
Tetrahydrofuran	0.0105	0.0102	-3	AVG
Chloroform	0.5623	0.5461	-3	AVG
1,1,1-Trichloroethane	0.3579	0.3430	-4	AVG
1-Chlorobutane	1.0426	0.9977	-4	AVG
Carbon Tetrachloride	0.3400	0.3320	-2	AVG
1,1-Dichloropropene	0.4654	0.4284	-8	AVG
Benzene	1.4266	1.3746	-4	AVG
1,2-Dichloroethane	0.2180	0.2156	-1	AVG
t-Amyl Methyl Ether	0.4001	0.3647	-9	AVG

CALIBRATION CHECK REPORT

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08359 Calibration Date: 03/10/14 Time: 19:06

Lab File ID: sm10c51.d Init. Calib. Date(s): 02/04/2014 02/04/2014

COMPOUND	RRF	RRF10	%D	CALIB METH
Trichloroethene	0.3819	0.3668	-4	AVG
1,2-Dichloropropane	0.3718	0.3681	-1	AVG
Methyl Methacrylate	0.0709	0.0692	-2	AVG
Dibromomethane	0.1382	0.1445	5	AVG
Bromodichloromethane	0.3472	0.3419	-2	AVG
2-Nitropropane	0.0014	0.0014	-1	AVG
Chloroacetonitrile	0.0062	0.0062	0	AVG
cis-1,3-Dichloropropene	0.4015	0.3729	-7	AVG
4-Methyl-2-pentanone	0.0555	0.0578	4	AVG
1,1-Dichloropropanone	0.0021	0.0023	10	AVG
Toluene	0.8365	0.8354	0	AVG
trans-1,3-Dichloropropene	0.2632	0.2471	-6	AVG
Ethyl Methacrylate	0.1527	0.1473	-4	AVG
1,1,2-Trichloroethane	0.1551	0.1546	0	AVG
Tetrachloroethene	0.4713	0.4465	-5	AVG
1,3-Dichloropropane	0.2615	0.2539	-3	AVG
2-Hexanone	0.0511	0.0542	6	AVG
Dibromochloromethane	0.2407	0.2525	5	AVG
1,2-Dibromoethane	0.1714	0.1706	0	AVG
Chlorobenzene	0.8682	0.8376	-4	AVG
1,1,1,2-Tetrachloroethane	0.2987	0.3049	2	AVG
Ethylbenzene	0.4604	0.4550	-1	AVG
m+p-Xylene	0.5728	0.5756	0	AVG
o-Xylene	0.5138	0.5171	1	AVG
Styrene	0.7940	0.8234	4	AVG
Xylene (Total)	0.5531	0.5561	1	AVG
Bromoform	0.1085	0.1191	10	AVG
Isopropylbenzene	0.3900	0.3885	0	AVG
1,1,2,2-Tetrachloroethane	0.1879	0.1871	0	AVG
Bromobenzene	0.3300	0.3586	9	AVG
1,2,3-Trichloropropane	0.0322	0.0347	8	AVG
trans-1,4-Dichloro-2-butene	0.0444	0.0430	-3	AVG
n-Propylbenzene	0.4131	0.4212	2	AVG
2-Chlorotoluene	0.3825	0.3976	4	AVG
1,3,5-Trimethylbenzene	1.0534	1.0562	0	AVG
4-Chlorotoluene	0.3901	0.4070	4	AVG
tert-Butylbenzene	0.2470	0.2585	5	AVG
Pentachloroethane	0.1850	0.1929	4	AVG
1,2,4-Trimethylbenzene	1.0280	1.0313	0	AVG
sec-Butylbenzene	0.2861	0.2988	4	AVG

CALIBRATION CHECK REPORT

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08359 Calibration Date: 03/10/14 Time: 19:06

Lab File ID: sm10c51.d Init. Calib. Date(s): 02/04/2014 02/04/2014

COMPOUND	RRF	RRF10	%D	CALIB METH
p-Isopropyltoluene	1.1804	1.1926	1	AVG
1,3-Dichlorobenzene	0.6220	0.6490	4	AVG
1,4-Dichlorobenzene	0.6093	0.6348	4	AVG
n-Butylbenzene	0.7259	0.7139	-2	AVG
1,2-Dichlorobenzene	0.4773	0.5006	5	AVG
Hexachloroethane	0.2126	0.2259	6	AVG
1,2-Dibromo-3-chloropropane	0.0228	0.0221	-3	AVG
Nitrobenzene	0.0022	0.0024	10	AVG
1,2,4-Trichlorobenzene	0.2718	0.2610	-4	AVG
Hexachlorobutadiene	0.1961	0.1820	-7	AVG
Naphthalene	0.3037	0.2817	-7	AVG
1,2,3-Trichlorobenzene	0.2033	0.1894	-7	AVG
4-Bromofluorobenzene	0.2494	0.2584	4	AVG
1,2-Dichlorobenzene-d4	0.2364	0.2691	14	AVG

Average %Difference 6

EPA Method 524
Continuing Calibration Internal/Surrogate Standard Check

Initial Calibration Standards:

/chem/SH08359.i/14feb04a.b/sf04i01.d VSTD025
** /chem/SH08359.i/14feb04a.b/sf04i02.d VSTD010
/chem/SH08359.i/14feb04a.b/sf04i03.d VSTD005
/chem/SH08359.i/14feb04a.b/sf04i04.d VSTD0.5

** File is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/SH08359.i/14mar11a.b/sm11c01.d

RT Summary

Internal/Surrogate Standard Name	File ID: sm11c01.d	ICAL RT	In Spec
Fluorobenzene	7.963	7.912	Yes
4-Bromofluorobenzene	12.187	12.158	Yes
1,2-Dichlorobenzene-d4	13.471	13.441	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal/Surrogate Standard Name	File ID: sm11c01.d	ICAL Area	Low Limit	High Limit	In Spec
Fluorobenzene	1401737	1061958	530979	2123916	Yes
4-Bromofluorobenzene	366238	270878	135439	541756	Yes
1,2-Dichlorobenzene-d4	372480	254040	127020	508080	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

_____

report generated on 03/11/2014 at 17:36

EPA Method 524
Continuing Calibration Internal/Surrogate Standard Check

Curent Continuing Calibration Standard:

/chem/SH08359.i/14mar11a.b/sm11c01.d

Prvious Continuing Calibration Standard:

/chem/SH08359.i/14mar10b.b/sm10c51.d

RT Summary

Internal/Surrogate Standard Name	File ID: sm11c01.d	Previous CCAL RT	In Spec
Fluorobenzene	7.963	7.963	Yes
4-Bromofluorobenzene	12.187	12.195	Yes
1,2-Dichlorobenzene-d4	13.471	13.471	Yes

A "No" indicates the retention time is greater than 30 seconds from the average RT.

Area Summary

Internal/Surrogate Standard Name	File ID: sm11c01.d	Previous CCAL Area	Low Limit	In Spec
Fluorobenzene	1401737	1355231	948662	Yes
4-Bromofluorobenzene	366238	350216	245151	Yes
1,2-Dichlorobenzene-d4	372480	364758	255331	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

_____

report generated on 03/11/2014 at 17:37

Lancaster Laboratories
GC/MS Volatiles Method 524.2 Check Sample Summary

File: sm11c01.d Injected: 03/11/14 Method: EPA 524.2 REV 4
Inst: SH08359 Sample: VSTD010 Matrix/level: W/L

COMPOUND NAME	CONCENTRATION SPIKED (UG/L)	CONCENTRATION MEASURED (UG/L)	% RECOVERY	IN SPEC
Dichlorodifluoromethane	10.000	8.788	88	YES
Chloromethane	10.000	8.137	81	YES
Vinyl Chloride	10.000	8.527	85	YES
Bromomethane	10.000	8.782	88	YES
Chloroethane	10.000	8.931	89	YES
Dichlorofluoromethane	10.000	8.848	88	YES
Trichlorofluoromethane	10.000	8.821	88	YES
Ethyl Ether	10.000	9.058	91	YES
Acrolein	500.000	409.697	82	YES
1,1-Dichloroethene	10.000	8.600	86	YES
Freon 113	10.000	8.774	88	YES
Acetone	100.000	89.006	89	YES
Acetone(2)	100.000	89.204	89	YES
Methyl Iodide	10.000	8.988	90	YES
Carbon Disulfide	10.000	8.245	82	YES
Allyl Chloride	10.000	8.309	83	YES
Methylene Chloride	10.000	8.496	85	YES
t-Butyl Alcohol	200.000	169.166	85	YES
Acrylonitrile	124.800	105.252	84	YES
trans-1,2-Dichloroethene	10.000	8.592	86	YES
Methyl Tertiary Butyl Ether	10.000	8.352	84	YES
1,1-Dichloroethane	10.000	8.694	87	YES
di-Isopropyl Ether	10.000	8.096	81	YES
Ethyl t-Butyl Ether	10.000	9.216	92	YES
cis-1,2-Dichloroethene	10.000	9.730	97	YES
2,2-Dichloropropane	10.000	9.135	91	YES
2-Butanone	100.000	92.790	93	YES
Propionitrile	200.000	191.589	96	YES
Methyl Acrylate	50.000	49.825	100	YES
Methacrylonitrile	100.000	98.762	99	YES
Bromochloromethane	10.000	10.909	109	YES
Tetrahydrofuran	140.000	136.808	98	YES
Chloroform	10.000	9.543	95	YES
1,1,1-Trichloroethane	10.000	9.701	97	YES
1-Chlorobutane	10.000	9.233	92	YES
Carbon Tetrachloride	10.000	9.842	98	YES
1,1-Dichloropropene	10.000	9.100	91	YES
Benzene	10.000	9.433	94	YES
1,2-Dichloroethane	10.000	9.911	99	YES

Lancaster Laboratories
GC/MS Volatiles Method 524.2 Check Sample Summary

File: sm11c01.d Injected: 03/11/14 Method: EPA 524.2 REV 4
Inst: SH08359 Sample: VSTD010 Matrix/level: W/L

COMPOUND NAME	CONCENTRATION SPIKED (UG/L)	CONCENTRATION MEASURED (UG/L)	% RECOVERY	IN SPEC
t-Amyl Methyl Ether	10.000	8.989	90	YES
Trichloroethene	10.000	9.580	96	YES
1,2-Dichloropropane	10.000	9.836	98	YES
Methyl Methacrylate	10.000	9.499	95	YES
Dibromomethane	10.000	10.640	106	YES
Bromodichloromethane	10.000	9.751	98	YES
2-Nitropropane	1050.00	1056.65	101	YES
Chloroacetonitrile	500.000	493.750	99	YES
cis-1,3-Dichloropropene	10.000	9.133	91	YES
4-Methyl-2-pentanone	100.000	104.883	105	YES
1,1-Dichloropropanone	1000.00	1090.68	109	YES
Toluene	10.000	9.739	97	YES
trans-1,3-Dichloropropene	10.000	9.272	93	YES
Ethyl Methacrylate	10.000	9.667	97	YES
1,1,2-Trichloroethane	10.000	9.819	98	YES
Tetrachloroethene	10.000	9.617	96	YES
1,3-Dichloropropane	10.000	9.501	95	YES
2-Hexanone	100.000	107.160	107	YES
Dibromochloromethane	10.000	10.375	104	YES
1,2-Dibromoethane	10.000	9.793	98	YES
Chlorobenzene	10.000	9.460	95	YES
1,1,1,2-Tetrachloroethane	10.000	10.068	101	YES
Ethylbenzene	10.000	9.787	98	YES
m+p-Xylene	20.000	19.632	98	YES
o-Xylene	10.000	9.924	99	YES
Styrene	10.000	10.068	101	YES
Xylene (Total)	30.000	29.549	98	YES
Bromoform	10.000	10.932	109	YES
Isopropylbenzene	10.000	9.926	99	YES
1,1,2,2-Tetrachloroethane	10.000	9.653	97	YES
Bromobenzene	10.000	10.353	104	YES
1,2,3-Trichloropropane	10.000	10.702	107	YES
trans-1,4-Dichloro-2-butene	100.000	91.479	91	YES
n-Propylbenzene	10.000	9.987	100	YES
2-Chlorotoluene	10.000	10.080	101	YES
1,3,5-Trimethylbenzene	10.000	9.947	99	YES
4-Chlorotoluene	10.000	10.357	104	YES
tert-Butylbenzene	10.000	10.061	101	YES
Pentachloroethane	10.000	10.529	105	YES

Lancaster Laboratories

GC/MS Volatiles Method 524.2 Check Sample Summary

File: sm11c01.d Injected: 03/11/14 Method: EPA 524.2 REV 4

Inst: SH08359 Sample: VSTD010 Matrix/level: W/L

COMPOUND NAME	CONCENTRATION SPIKED (UG/L)	CONCENTRATION MEASURED (UG/L)	% RECOVERY	IN SPEC
1,2,4-Trimethylbenzene	10.000	9.961	100	YES
sec-Butylbenzene	10.000	10.314	103	YES
p-Isopropyltoluene	10.000	9.863	99	YES
1,3-Dichlorobenzene	10.000	10.272	103	YES
1,4-Dichlorobenzene	10.000	10.127	101	YES
n-Butylbenzene	10.000	9.940	99	YES
1,2-Dichlorobenzene	10.000	10.380	104	YES
Hexachloroethane	10.000	10.407	104	YES
1,2-Dibromo-3-chloropropane	10.000	9.614	96	YES
Nitrobenzene	200.000	266.361	133	NO
1,2,4-Trichlorobenzene	10.000	9.590	96	YES
Hexachlorobutadiene	10.000	9.265	93	YES
Naphthalene	10.000	9.111	91	YES
1,2,3-Trichlorobenzene	10.000	9.240	92	YES
4-Bromofluorobenzene	5.000	5.238	105	YES
1,2-Dichlorobenzene-d4	5.000	5.621	112	YES

CALIBRATION CHECK REPORT

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08359 Calibration Date: 03/11/14 Time: 16:57

Lab File ID: sm11c01.d Init. Calib. Date(s): 02/04/2014 02/04/2014

COMPOUND	RRF	RRF10	%D	CALIB METH
Dichlorodifluoromethane	0.4186	0.3679	-12	AVG
Chloromethane	1.1706	0.9525	-19	AVG
Vinyl Chloride	0.7127	0.6077	-15	AVG
Bromomethane	0.4839	0.4249	-12	AVG
Chloroethane	0.3350	0.2992	-11	AVG
Dichlorofluoromethane	0.6987	0.6182	-12	AVG
Trichlorofluoromethane	0.4163	0.3673	-12	AVG
Ethyl Ether	0.2025	0.1834	-9	AVG
Acrolein	0.0342	0.0280	-18	AVG
1,1-Dichloroethene	0.3640	0.3131	-14	AVG
Freon 113	0.3529	0.3096	-12	AVG
Acetone	0.0110	0.0098	-11	AVG
Acetone(2)	0.0360	0.0321	-11	AVG
Methyl Iodide	0.8883	0.7984	-10	AVG
Carbon Disulfide	1.2867	1.0608	-18	AVG
Allyl Chloride	0.5888	0.4892	-17	AVG
Methylene Chloride	0.3193	0.2713	-15	AVG
t-Butyl Alcohol	0.0086	0.0073	-15	AVG
Acrylonitrile	0.0570	0.0481	-16	AVG
trans-1,2-Dichloroethene	0.4221	0.3627	-14	AVG
Methyl Tertiary Butyl Ether	0.2933	0.2449	-16	AVG
1,1-Dichloroethane	0.7203	0.6262	-13	AVG
di-Isopropyl Ether	0.2173	0.1759	-19	AVG
Ethyl t-Butyl Ether	0.7486	0.6900	-8	AVG
cis-1,2-Dichloroethene	0.3823	0.3720	-3	AVG
2,2-Dichloropropane	0.3656	0.3340	-9	AVG
2-Butanone	0.0828	0.0769	-7	AVG
Propionitrile	0.0216	0.0207	-4	AVG
Methyl Acrylate	0.1558	0.1553	0	AVG
Methacrylonitrile	0.0436	0.0431	-1	AVG
Bromochloromethane	0.1551	0.1692	9	AVG
Tetrahydrofuran	0.0105	0.0103	-2	AVG
Chloroform	0.5623	0.5366	-5	AVG
1,1,1-Trichloroethane	0.3579	0.3472	-3	AVG
1-Chlorobutane	1.0426	0.9627	-8	AVG
Carbon Tetrachloride	0.3400	0.3346	-2	AVG
1,1-Dichloropropene	0.4654	0.4235	-9	AVG
Benzene	1.4266	1.3457	-6	AVG
1,2-Dichloroethane	0.2180	0.2161	-1	AVG
t-Amyl Methyl Ether	0.4001	0.3596	-10	AVG

CALIBRATION CHECK REPORT

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08359 Calibration Date: 03/11/14 Time: 16:57

Lab File ID: sm11c01.d Init. Calib. Date(s): 02/04/2014 02/04/2014

COMPOUND	RRF	RRF10	%D	CALIB METH
Trichloroethene	0.3819	0.3659	-4	AVG
1,2-Dichloropropane	0.3718	0.3657	-2	AVG
Methyl Methacrylate	0.0709	0.0674	-5	AVG
Dibromomethane	0.1382	0.1470	6	AVG
Bromodichloromethane	0.3472	0.3386	-2	AVG
2-Nitropropane	0.0014	0.0014	-1	AVG
Chloroacetonitrile	0.0062	0.0061	-1	AVG
cis-1,3-Dichloropropene	0.4015	0.3667	-9	AVG
4-Methyl-2-pentanone	0.0555	0.0582	5	AVG
1,1-Dichloropropanone	0.0021	0.0023	11	AVG
Toluene	0.8365	0.8147	-3	AVG
trans-1,3-Dichloropropene	0.2632	0.2441	-7	AVG
Ethyl Methacrylate	0.1527	0.1476	-3	AVG
1,1,2-Trichloroethane	0.1551	0.1523	-2	AVG
Tetrachloroethene	0.4713	0.4532	-4	AVG
1,3-Dichloropropane	0.2615	0.2484	-5	AVG
2-Hexanone	0.0511	0.0547	7	AVG
Dibromochloromethane	0.2407	0.2497	4	AVG
1,2-Dibromoethane	0.1714	0.1678	-2	AVG
Chlorobenzene	0.8682	0.8213	-5	AVG
1,1,1,2-Tetrachloroethane	0.2987	0.3007	1	AVG
Ethylbenzene	0.4604	0.4506	-2	AVG
m+p-Xylene	0.5728	0.5623	-2	AVG
o-Xylene	0.5138	0.5099	-1	AVG
Styrene	0.7940	0.7994	1	AVG
Xylene (Total)	0.5531	0.5448	-1	AVG
Bromoform	0.1085	0.1186	9	AVG
Isopropylbenzene	0.3900	0.3871	-1	AVG
1,1,2,2-Tetrachloroethane	0.1879	0.1813	-3	AVG
Bromobenzene	0.3300	0.3417	4	AVG
1,2,3-Trichloropropane	0.0322	0.0344	7	AVG
trans-1,4-Dichloro-2-butene	0.0444	0.0406	-8	AVG
n-Propylbenzene	0.4131	0.4126	0	AVG
2-Chlorotoluene	0.3825	0.3856	1	AVG
1,3,5-Trimethylbenzene	1.0534	1.0478	-1	AVG
4-Chlorotoluene	0.3901	0.4040	4	AVG
tert-Butylbenzene	0.2470	0.2485	1	AVG
Pentachloroethane	0.1850	0.1948	5	AVG
1,2,4-Trimethylbenzene	1.0280	1.0240	0	AVG
sec-Butylbenzene	0.2861	0.2950	3	AVG

CALIBRATION CHECK REPORT

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08359 Calibration Date: 03/11/14 Time: 16:57

Lab File ID: sml1c01.d Init. Calib. Date(s): 02/04/2014 02/04/2014

COMPOUND	RRF	RRF10	%D	CALIB METH
p-Isopropyltoluene	1.1804	1.1643	-1	AVG
1,3-Dichlorobenzene	0.6220	0.6390	3	AVG
1,4-Dichlorobenzene	0.6093	0.6171	1	AVG
n-Butylbenzene	0.7259	0.7215	-1	AVG
1,2-Dichlorobenzene	0.4773	0.4954	4	AVG
Hexachloroethane	0.2126	0.2212	4	AVG
1,2-Dibromo-3-chloropropane	0.0228	0.0219	-4	AVG
Nitrobenzene	0.0022	0.0030	35	AVG
1,2,4-Trichlorobenzene	0.2718	0.2606	-4	AVG
Hexachlorobutadiene	0.1961	0.1817	-7	AVG
Naphthalene	0.3037	0.2767	-9	AVG
1,2,3-Trichlorobenzene	0.2033	0.1879	-8	AVG
4-Bromofluorobenzene	0.2494	0.2613	5	AVG
1,2-Dichlorobenzene-d4	0.2364	0.2657	12	AVG

Average %Difference 7

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Chevron Pipeline Company
SDG: TXA62

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
BTEX/MTBE 8260 TRRP-13	L140703AA	VBLKL94	03/11/2014 20:27:00
		LCSL94	03/11/2014 20:50:00
		7387434	03/11/2014 23:49:00
		7387435	03/12/2014 03:11:00
		7387436	03/12/2014 00:11:00
		P384438 UNSPK	03/11/2014 22:41:00
		P384439 MS	03/11/2014 23:04:00
		P384440 MSD	03/11/2014 23:26:00

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: TXA62
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L140703AA	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL94	107	80 - 116	102	77 - 113	98	80 - 113	98	78 - 113
LCSL94	107	80 - 116	104	77 - 113	100	80 - 113	101	78 - 113
7387434	106	80 - 116	99	77 - 113	99	80 - 113	100	78 - 113
7387435	105	80 - 116	100	77 - 113	100	80 - 113	102	78 - 113
7387436	105	80 - 116	102	77 - 113	99	80 - 113	101	78 - 113
P384438 UNSPK	107	80 - 116	102	77 - 113	98	80 - 113	98	78 - 113
P384439 MS	106	80 - 116	100	77 - 113	100	80 - 113	102	78 - 113
P384440 MSD	106	80 - 116	104	77 - 113	100	80 - 113	102	78 - 113

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Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: TXA62
Matrix: LIQUID

GC/MS Volatiles

Fractiou: Volatiles by GC/MS

UNSPK: P384438 MS: P384439 MSD: P384440 **Analyte**	Batch: **L140703AA** (Sample number(s): 7387434-7387436)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Methyl Tertiary Butyl Ether	20	N.D.	20.58	22.2	103	111	72-126	8	30
Benzene	20	N.D.	20.48	22.18	102	111	72-134	8	30
Toluene	20	N.D.	20.55	22.23	103	111	80-125	8	30
Ethylbenzene	20	N.D.	20.56	22.39	103	112	71-134	9	30
Xylene (Total)	60	N.D.	62.6	67.22	104	112	79-125	7	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: TXA62
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL94	Batch: **L140703AA** (Sample number(s): 7387434-7387436)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Methyl Tertiary Butyl Ether	20	21.33	NA	107	NA	75-120	NA	NA
Benzene	20	20.65	NA	103	NA	78-120	NA	NA
Toluene	20	20.58	NA	103	NA	80-120	NA	NA
Ethylbenzene	20	20.44	NA	102	NA	79-120	NA	NA
Xylene (Total)	60	62.41	NA	104	NA	80-120	NA	NA

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Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: TXA62
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L140703AA / VBLKL94 **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**MDL**	**LOQ**
Methyl Tertiary Butyl Ether	03/11/14	N.D.	ug/l	0.05	4.0
Benzene	03/11/14	N.D.	ug/l	0.07	4.0
Toluene	03/11/14	N.D.	ug/l	0.02	4.0
Ethylbenzene	03/11/14	0.02	ug/l	0.01	4.0
Xylene (Total)	03/11/14	N.D.	ug/l	0.08	4.0

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LOQ/MDL Summary
GC/MS Volatiles

SDG: TXA62

Fraction: Volatiles by GC/MS

06191: BTEX/MTBE 8260 TRRP-13 Analyte Name	Default MDL	Default LOQ	Units
Methyl Tertiary Butyl Ether	0.05	4.0	ug/l
Benzene	0.07	4.0	ug/l
Toluene	0.02	4.0	ug/l
Ethylbenzene	0.01	4.0	ug/l
Xylene (Total)	0.08	4.0	ug/l

HP23 Water DCS Q1

Batch #: __L133581AA_____

Date: ___12/24/13_____ Expiration Date: _____3/24/14_____

Compounds	MDL(ppb)	Spike Level(ppb)	Detected at Level	New MDL (if No)
DCDFM	0.06	0.5	Y	---
Chloromethane	0.05	0.1	Y	---
Vinyl chloride	0.08	0.2	Y	---
Bromomethane	0.07	0.2	Y	---
Chloroethane	0.07	0.2	Y	---
TCFM	0.05	0.1	Y	---
Acrolein	0.9	2	Y	---
1,1-DCE	0.08	0.2	Y	---
Freon 113	0.12	0.2	Y	---
Acetone	0.4	0.4	Y	---
2-POH	1.31	2	Y	---
Methyl iodide	0.04	0.05	Y	---
CS2	0.05	0.1	Y	---
Methyl acetate	0.2	0.5	Y	---
MeCl2	0.06	0.1	Y	---
tBA	1.42	2	Y	---
Acrylonitrile	0.1	0.2	Y	---
t-1,2-CDE	0.08	0.2	Y	---
MtBE	0.05	0.1	Y	---
1,1-DCA	0.06	0.1	Y	---
MEK	0.8	2	Y	---
c-1,2-DCE	0.07	0.1	Y	---
2,2-DCPa	0.1	0.2	Y	---
BCM	0.2	0.5	Y	---
CHCl3	0.04	0.1	Y	---
1,1,1-TCA	0.06	0.1	Y	---
Cyclohexane	0.2	0.5	Y	---
1,1-DCPe	0.06	0.1	Y	---
CCl4	0.04	0.1	Y	---
Benzene	0.07	0.2	Y	---
EDC	0.05	0.1	Y	---
TCE	0.07	0.2	Y	---
Methylcyclohexane	0.07	0.2	Y	---
1,2-DCPa	0.04	0.1	Y	---
DBM	0.12	0.2	Y	---
BDCM	0.11	0.2	Y	---
2CEVE	0.4	1	Y	---
c-1,3-DCPe	0.06	0.1	Y	---
MIBK	0.07	0.1	Y	---
Toluene	0.01	0.025	Y	---
t-1,3-DCPe	0.04	0.05	Y	---
1,1,2-TCA	0.06	0.1	Y	---
Tetrachloroethane	0.07	0.2	Y	---
1,3-DCPa	0.05	0.1	Y	---

2-Hexanone	0.2	0.2	Y	---
DBCM	0.07	0.1	Y	---
EDB	0.05	0.1	Y	---
Chlorobenzene	0.05	0.1	Y	---
1,1,1,2-PCA	0.04	0.1	Y	---
Ethylbenzene	0.01	0.025	Y	---
M+P-Xylene	0.08	0.2	Y	---
Xylene(Total)	0.08	0.2	Y	---
O-Xylene	0.08	0.2	Y	---
Styrene	0.02	0.025	Y	---
Bromoform	0.2	0.5	Y	---
IPB	0.1	0.2	Y	---
1,1,2,2-PCA	0.05	0.1	Y	---
Bromobenzene	0.05	0.1	Y	---
1,2,3-TCPa	0.08	0.2	Y	---
n-Propylbenzene	0.05	0.1	Y	---
2-CT	0.06	0.1	Y	---
1,3,5-TMB	0.06	0.1	Y	---
4-CT	0.07	0.2	Y	---
t-Butylbenzene	0.05	0.1	Y	---
1,2,4-TMB	0.01	0.025	Y	---
s-Butylbenzene	0.07	0.2	Y	---
1,3-DCB	0.05	0.1	Y	---
p-Isopropyltoluene	0.06	0.1	Y	---
1,4-DCB	0.05	0.1	Y	---
1,2,3-TMB	0.03	0.05	Y	---
Benzyl chloride	0.06	0.1	Y	---
n-Butylbenzene	0.06	0.1	Y	---
1,2-DCB	0.05	0.1	Y	---
1,2-Dibromo-3-chloropropane	0.2	0.5	Y	---
1,2,4-TCB	0.05	0.1	Y	---
Hexachlorobutadiene	0.07	0.2	Y	---
Naphthalene	0.06	0.1	Y	---
1,2,3-TCB	0.03	0.05	Y	---
Acetonitrile	4.79	10	Y	---

Auditor _____ 12/26/13

Sample Data

Volatiles by GC/MS

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LOQ/MDL Summary
GC/MS Volatiles

SDG: WAT19

Fraction: Volatiles by GC/MS

03648: EPA 524.2 Master Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.2	0.5	ug/l
Chloromethane	0.2	0.5	ug/l
Vinyl Chloride	0.1	0.5	ug/l
Bromomethane	0.1	0.5	ug/l
Chloroethane	0.2	0.5	ug/l
Trichlorofluoromethane	0.2	0.5	ug/l
1,1-Dichloroethene	0.1	0.5	ug/l
Methylene Chloride	0.3	0.5	ug/l
trans-1,2-Dichloroethene	0.1	0.5	ug/l
1,1-Dichloroethane	0.1	0.5	ug/l
cis-1,2-Dichloroethene	0.1	0.5	ug/l
2,2-Dichloropropane	0.2	0.5	ug/l
Bromochloromethane	0.1	0.5	ug/l
Chloroform	0.1	0.5	ug/l
1,1,1-Trichloroethane	0.1	0.5	ug/l
1,1-Dichloropropene	0.1	0.5	ug/l
Carbon Tetrachloride	0.1	0.5	ug/l
Benzene	0.1	0.5	ug/l
1,2-Dichloroethane	0.1	0.5	ug/l
Trichloroethene	0.1	0.5	ug/l
1,2-Dichloropropane	0.1	0.5	ug/l
Dibromomethane	0.1	0.5	ug/l
Bromodichloromethane	0.1	0.5	ug/l
cis-1,3-Dichloropropene	0.1	0.5	ug/l
Toluene	0.1	0.5	ug/l
trans-1,3-Dichloropropene	0.1	0.5	ug/l
1,1,2-Trichloroethane	0.1	0.5	ug/l
Tetrachloroethene	0.1	0.5	ug/l
1,3-Dichloropropane	0.1	0.5	ug/l
Dibromochloromethane	0.1	0.5	ug/l
1,2-Dibromoethane	0.1	0.5	ug/l
Chlorobenzene	0.1	0.5	ug/l
1,1,1,2-Tetrachloroethane	0.1	0.5	ug/l
Ethylbenzene	0.1	0.5	ug/l
m+p-Xylene	0.2	0.5	ug/l
o-Xylene	0.1	0.5	ug/l
Xylene (Total)	0.1	0.5	ug/l
Styrene	0.1	0.5	ug/l
Bromoform	0.2	0.5	ug/l
Isopropylbenzene	0.1	0.5	ug/l
1,1,2,2-Tetrachloroethane	0.1	0.5	ug/l
Bromobenzene	0.1	0.5	ug/l
1,2,3-Trichloropropane	0.2	0.5	ug/l
n-Propylbenzene	0.1	0.5	ug/l
2-Chlorotoluene	0.1	0.5	ug/l
1,3,5-Trimethylbenzene	0.1	0.5	ug/l
4-Chlorotoluene	0.2	0.5	ug/l

Fraction: Volatiles by GC/MS

03648: EPA 524.2 Master Analyte Name	Default MDL	Default LOQ	Units
tert-Butylbenzene	0.1	0.5	ug/l
1,2,4-Trimethylbenzene	0.1	0.5	ug/l
sec-Butylbenzene	0.1	0.5	ug/l
p-Isopropyltoluene	0.1	0.5	ug/l
1,3-Dichlorobenzene	0.1	0.5	ug/l
1,4-Dichlorobenzene	0.1	0.5	ug/l
n-Butylbenzene	0.2	0.5	ug/l
1,2-Dichlorobenzene	0.1	0.5	ug/l
1,2-Dibromo-3-chloropropane	0.4	0.5	ug/l
1,2,4-Trichlorobenzene	0.2	0.5	ug/l
Hexachlorobutadiene	0.2	0.5	ug/l
Naphthalene	0.2	0.5	ug/l
1,2,3-Trichlorobenzene	0.2	0.5	ug/l

HGPWA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384704

Data file: /chem/SH08359.i/14mar10b.b/sm10s67.d Injection date and time: **11-MAR-2014 03:21**
Data file Sample Info. Line: HGPWA;7384704;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.971(-0.007)	897	96	1036220 (-24)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.202	(0.000)	174	233255	4.513	90%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.478	(0.001)	152	223458	4.562	91%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)				Not Detected					0.2	0.5
2) Chloromethane	(1)				Not Detected					0.2	0.5
3) Vinyl Chloride	(1)				Not Detected					0.1	0.5
4) Bromomethane	(1)				Not Detected					0.1	0.5
5) Chloroethane	(1)				Not Detected					0.2	0.5
7) Trichlorofluoromethane	(1)				Not Detected					0.2	0.5
10) 1,1-Dichloroethene	(1)				Not Detected					0.1	0.5
16) Methylene Chloride	(1)				Not Detected					0.3	0.5
20) trans-1,2-Dichloroethene	(1)				Not Detected					0.1	0.5
22) 1,1-Dichloroethane	(1)	5.514	(-0.000)	63	19912	0.133	0.13		J	0.1	0.5
26) cis-1,2-Dichloroethene	(1)				Not Detected					0.1	0.5
27) 2,2-Dichloropropane	(1)				Not Detected					0.2	0.5
32) Bromochloromethane	(1)				Not Detected					0.1	0.5
34) Chloroform	(1)	6.841	(-0.000)	83	14549	0.125	0.12		J	0.1	0.5
35) 1,1,1-Trichloroethane	(1)				Not Detected					0.1	0.5
38) Carbon Tetrachloride	(1)				Not Detected					0.1	0.5
37) 1,1-Dichloropropene	(1)				Not Detected					0.1	0.5
39) Benzene	(1)				Not Detected					0.1	0.5
40) 1,2-Dichloroethane	(1)				Not Detected					0.1	0.5
43) Trichloroethene	(1)				Not Detected					0.1	0.5
44) 1,2-Dichloropropane	(1)				Not Detected					0.1	0.5
45) Dibromomethane	(1)				Not Detected					0.1	0.5
47) Bromodichloromethane	(1)				Not Detected					0.1	0.5
50) cis-1,3-Dichloropropene	(1)				Not Detected					0.1	0.5
53) Toluene	(1)				Not Detected					0.1	0.5
54) trans-1,3-Dichloropropene	(1)				Not Detected					0.1	0.5
56) 1,1,2-Trichloroethane	(1)				Not Detected					0.1	0.5
58) Tetrachloroethene	(1)	10.325	(0.000)	166	28735	0.294	0.29		J	0.1	0.5
59) 1,3-Dichloropropane	(1)				Not Detected					0.1	0.5
61) Dibromochloromethane	(1)				Not Detected					0.1	0.5
62) 1,2-Dibromoethane	(1)				Not Detected					0.1	0.5
63) Chlorobenzene	(1)				Not Detected					0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
65) Ethylbenzene	(1)				Not Detected					0.1	0.5
67) m+p-Xylene	(1)				Not Detected					0.2	0.5
68) o-Xylene	(1)				Not Detected					0.1	0.5

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HGPWA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384704

Data file: /chem/SH08359.i/14mar10b.b/sm10s67.d Injection date and time: **11-MAR-2014 03:21**
Data file Sample Info. Line: HGPWA;7384704;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

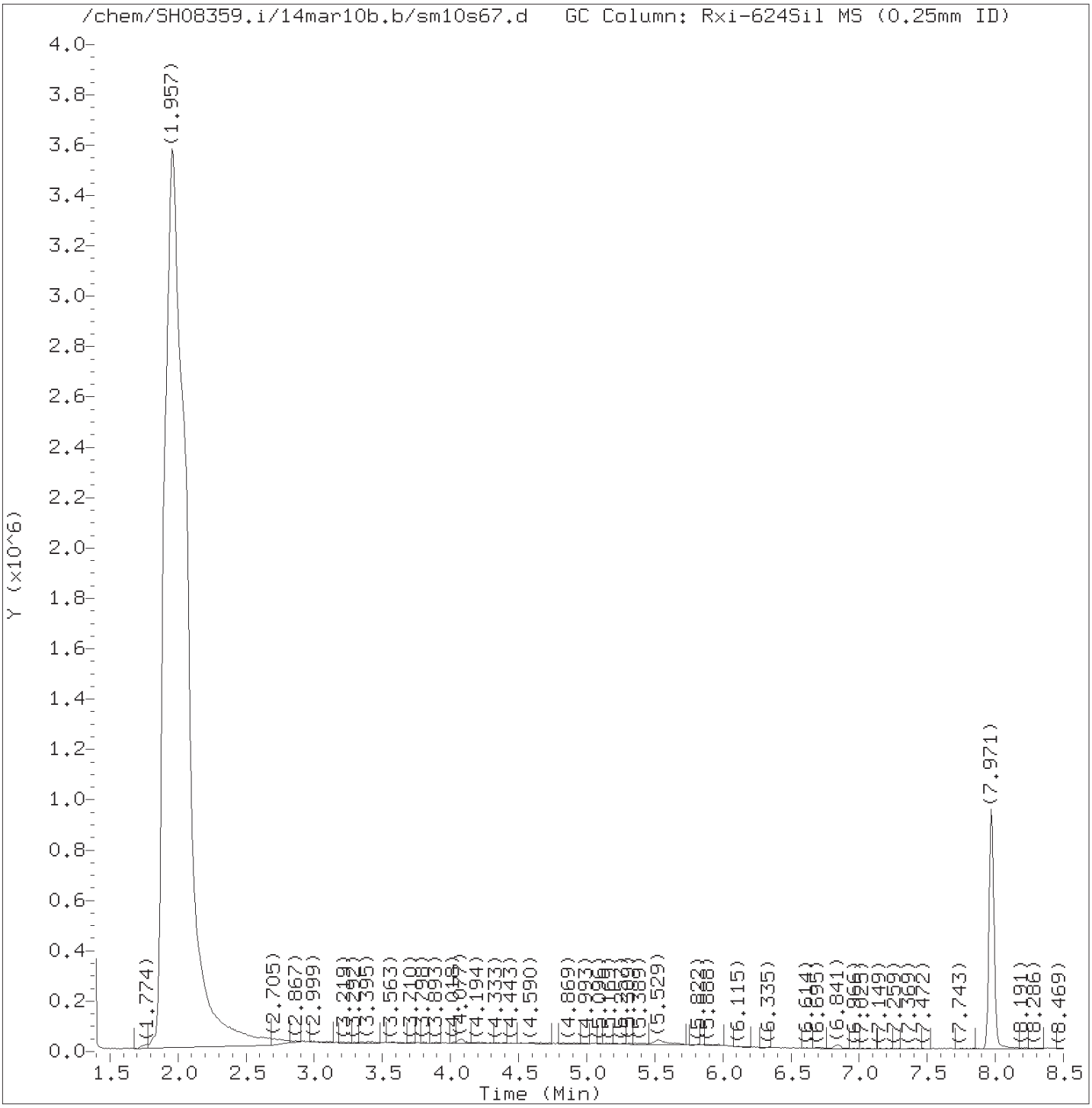
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)				Not Detected					0.1	0.5
71) Xylene (Total)	(1)				Not Detected					0.1	0.5
70) Bromoform	(1)				Not Detected					0.2	0.5
72) Isopropylbenzene	(1)				Not Detected					0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
75) Bromobenzene	(1)				Not Detected					0.1	0.5
76) 1,2,3-Trichloropropane	(1)				Not Detected					0.2	0.5
78) n-Propylbenzene	(1)				Not Detected					0.1	0.5
79) 2-Chlorotoluene	(1)				Not Detected					0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)				Not Detected					0.1	0.5
81) 4-Chlorotoluene	(1)				Not Detected					0.2	0.5
82) tert-Butylbenzene	(1)				Not Detected					0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)				Not Detected					0.1	0.5
85) sec-Butylbenzene	(1)				Not Detected					0.1	0.5
87) p-Isopropyltoluene	(1)				Not Detected					0.1	0.5
86) 1,3-Dichlorobenzene	(1)				Not Detected					0.1	0.5
88) 1,4-Dichlorobenzene	(1)				Not Detected					0.1	0.5
89) n-Butylbenzene	(1)				Not Detected					0.2	0.5
91) 1,2-Dichlorobenzene	(1)				Not Detected					0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)				Not Detected					0.2	0.5
96) Hexachlorobutadiene	(1)				Not Detected					0.2	0.5
97) Naphthalene	(1)				Not Detected					0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)				Not Detected					0.2	0.5

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:11. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

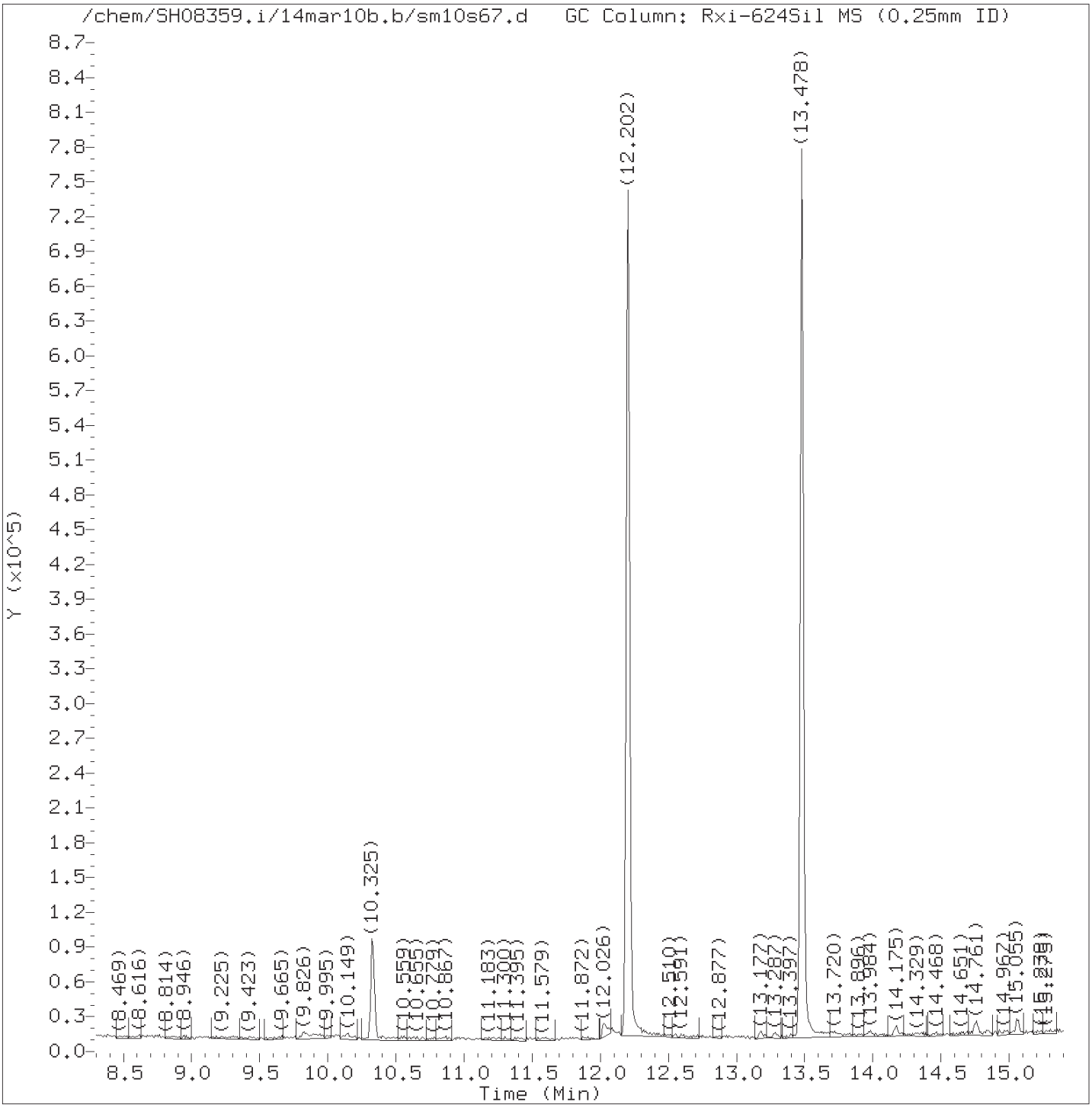
Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s67.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:21 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: HGPWA Lab Sample ID: 7384704

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:11.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s67.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:21 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: HGPWA Lab Sample ID: 7384704

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:11.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s67.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:21 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: HGPWA Lab Sample ID: 7384704

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
22) 1,1-Dichloroethane	(1)	5.514	63	19912	0.133
34) Chloroform	(1)	6.841	83	14549	0.125
42)*Fluorobenzene	(1)	7.971	96	1036220	5.000
58) Tetrachloroethene	(1)	10.325	166	28735	0.294
73)$4-Bromofluorobenzene	(1)	12.202	174	233255	4.513
90)$1,2-Dichlorobenzene-d4	(1)	13.478	152	223458	4.562

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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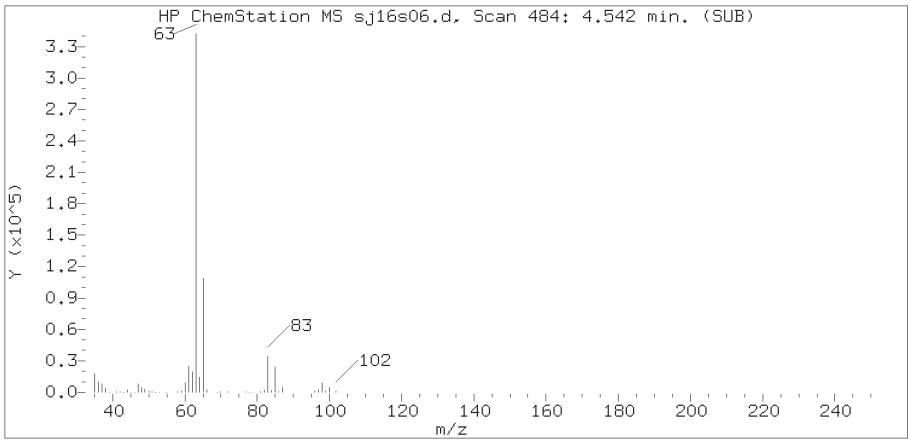
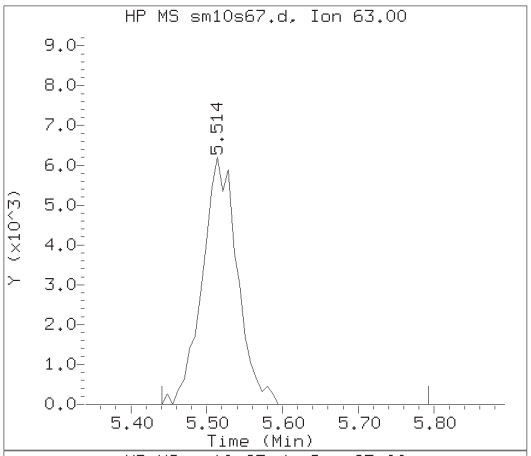
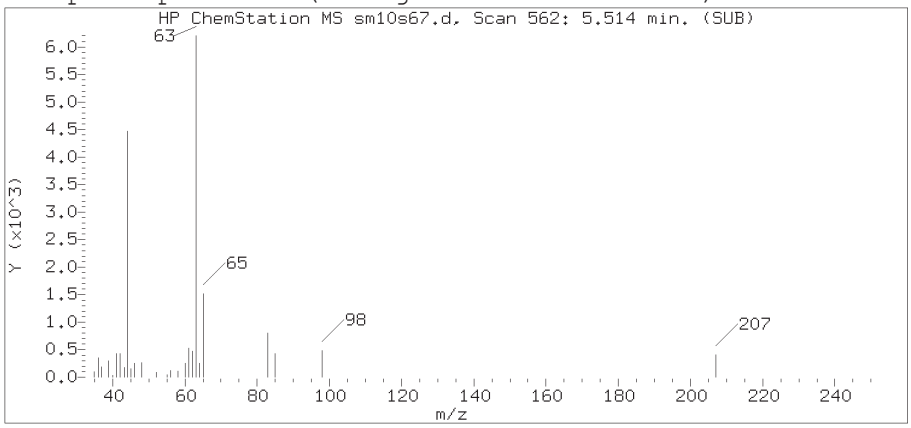
on 03/11/2014 at 16:11.
Target 3.5 esignature user ID: sej02002

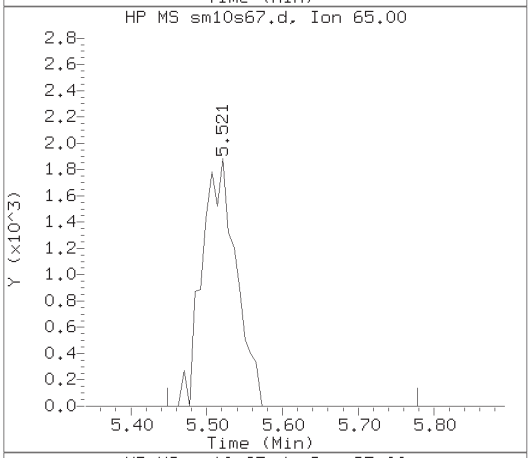
Reference Standard Spectrum for 1,1-Dichloroethane



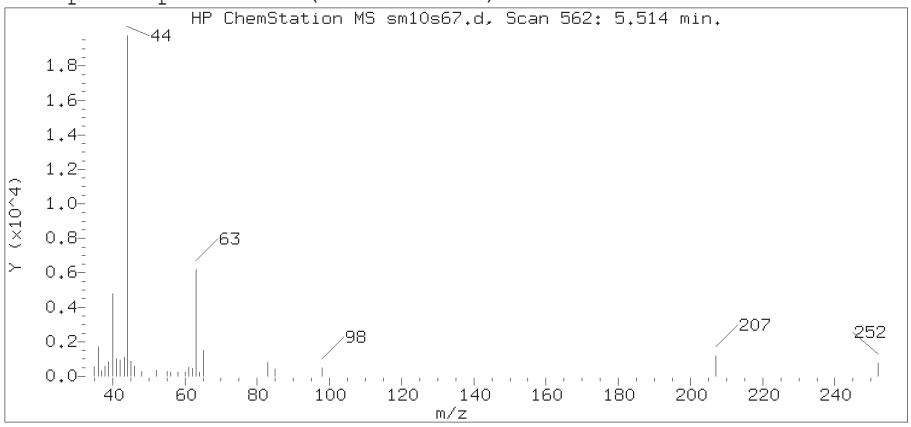


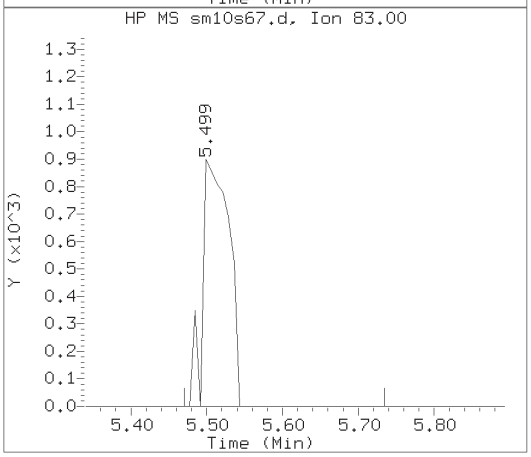
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s67.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:21 Analyst ID: sej02002

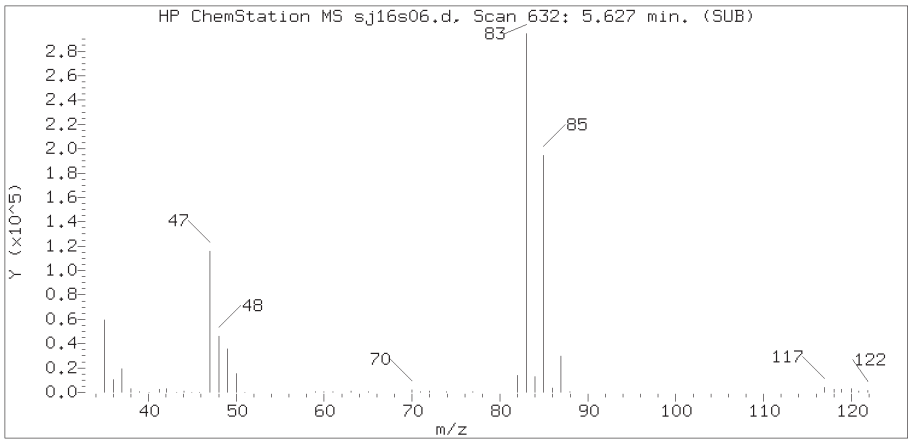
Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

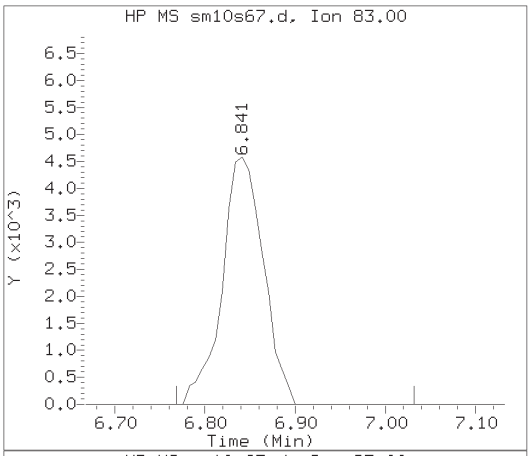
Sample Name: HGPWA Lab Sample ID: 7384704

Compound Number : 22
Compound Name : 1,1-Dichloroethane
Scan Number : 562
Retention Time (minutes): 5.514
Relative Retention Time :-0.00028
Quant Ion : 63.00
Area (flag) : 19912
On-Column Amount (ng) : 0.1334

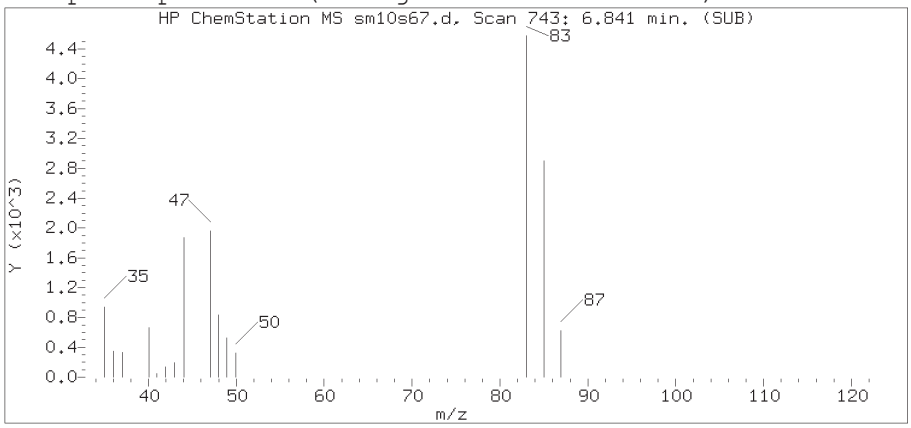
Digitally signed by Sara E. Johnson on 03/11/2014 at 16:11.
Target 3.5 esignature [illegible]

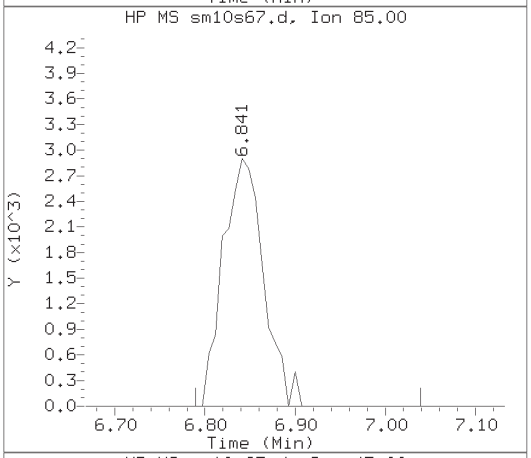
Reference Standard Spectrum for Chloroform



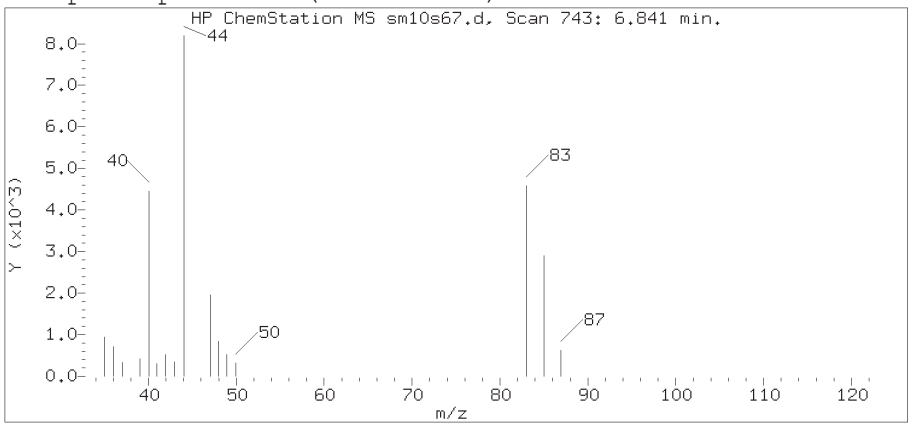


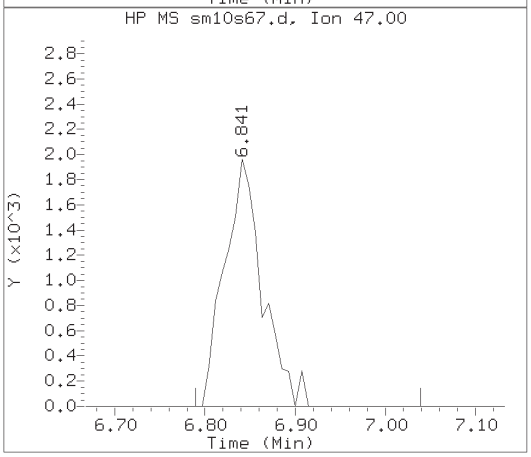
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s67.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:21 Analyst ID: sej02002

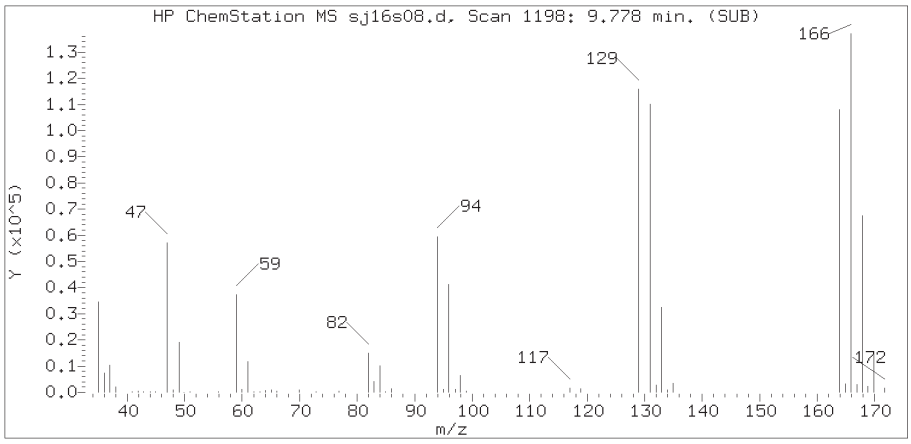
Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

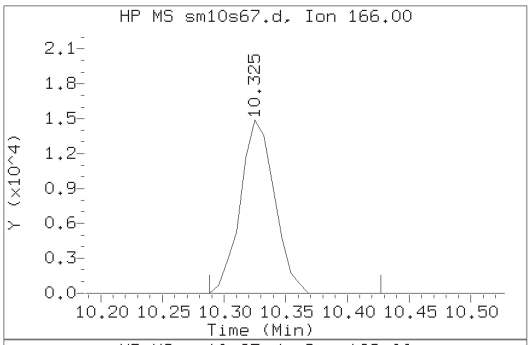
Sample Name: HGPWA Lab Sample ID: 7384704

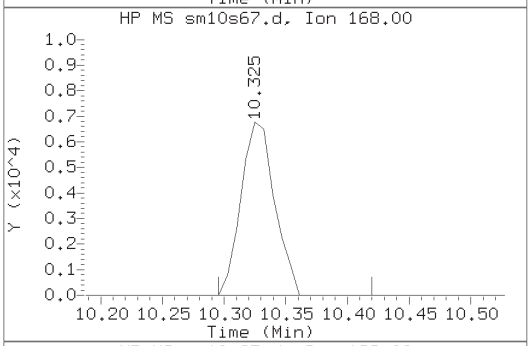
Compound Number : 34
Compound Name : Chloroform
Scan Number : 743
Retention Time (minutes): 6.841
Relative Retention Time :-0.00013
Quant Ion : 83.00
Area (flag) : 14549
On-Column Amount (ng) : 0.1249

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:11.
Target 3.5 esignature [illegible]

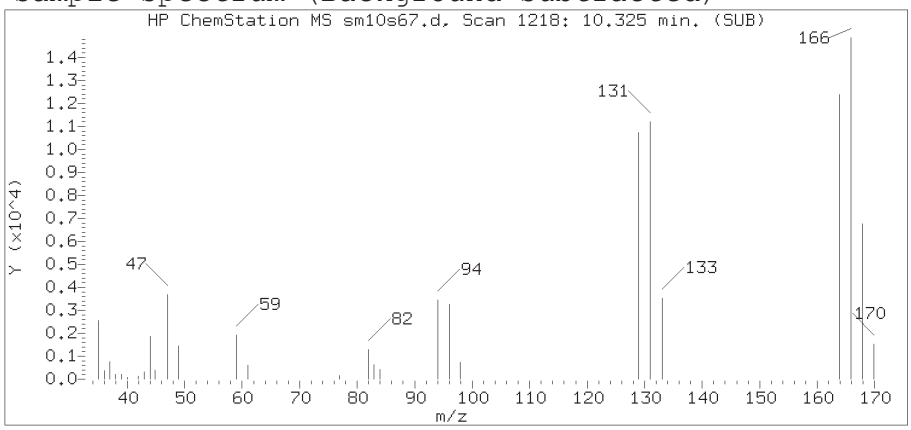
Reference Standard Spectrum for Tetrachloroethene

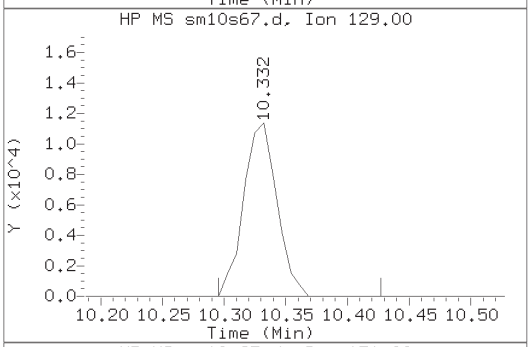




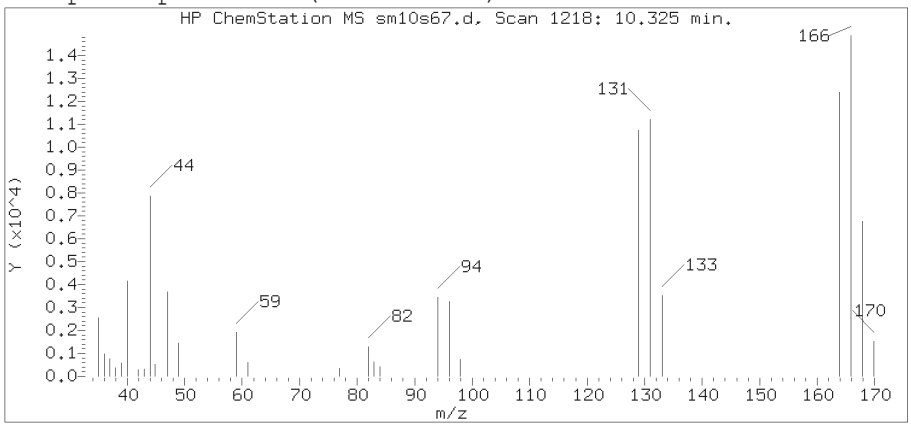


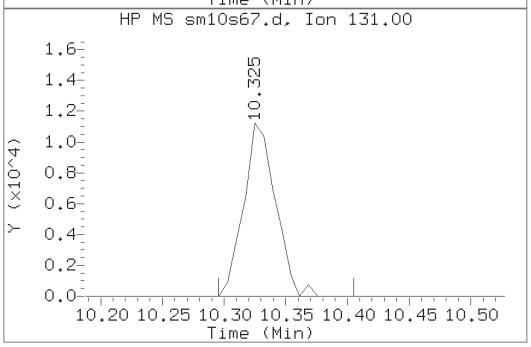
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s67.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:21 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: HGPWA Lab Sample ID: 7384704

Compound Number : 58
Compound Name : Tetrachloroethene
Scan Number : 1218
Retention Time (minutes): 10.325
Relative Retention Time : 0.00027
Quant Ion : 166.00
Area (flag) : 28735
On-Column Amount (ng) : 0.2942

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:11.
Target 3.5 esignature WAT19 ID: sej02002

R15WA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384705

Data file: /chem/SH08359.i/14mar10b.b/sm10s68.d Injection date and time: **11-MAR-2014 03:48**
Data file Sample Info. Line: R15WA;7384705;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.971(-0.007)	897	96	1020970 (-25)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.202(0.000)	174	235599	4.626	93%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.478(0.001)	152	231115	4.789	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)			Not Detected					0.2	0.5
2) Chloromethane	(1)			Not Detected					0.2	0.5
3) Vinyl Chloride	(1)			Not Detected					0.1	0.5
4) Bromomethane	(1)			Not Detected					0.1	0.5
5) Chloroethane	(1)			Not Detected					0.2	0.5
7) Trichlorofluoromethane	(1)			Not Detected					0.2	0.5
10) 1,1-Dichloroethene	(1)			Not Detected					0.1	0.5
16) Methylene Chloride	(1)			Not Detected					0.3	0.5
20) trans-1,2-Dichloroethene	(1)			Not Detected					0.1	0.5
22) 1,1-Dichloroethane	(1)			Not Detected					0.1	0.5
26) cis-1,2-Dichloroethene	(1)			Not Detected					0.1	0.5
27) 2,2-Dichloropropane	(1)			Not Detected					0.2	0.5
32) Bromochloromethane	(1)			Not Detected					0.1	0.5
34) Chloroform	(1)			Not Detected					0.1	0.5
35) 1,1,1-Trichloroethane	(1)			Not Detected					0.1	0.5
38) Carbon Tetrachloride	(1)			Not Detected					0.1	0.5
37) 1,1-Dichloropropene	(1)			Not Detected					0.1	0.5
39) Benzene	(1)			Not Detected					0.1	0.5
40) 1,2-Dichloroethane	(1)			Not Detected					0.1	0.5
43) Trichloroethene	(1)			Not Detected					0.1	0.5
44) 1,2-Dichloropropane	(1)			Not Detected					0.1	0.5
45) Dibromomethane	(1)			Not Detected					0.1	0.5
47) Bromodichloromethane	(1)			Not Detected					0.1	0.5
50) cis-1,3-Dichloropropene	(1)			Not Detected					0.1	0.5
53) Toluene	(1)			Not Detected					0.1	0.5
54) trans-1,3-Dichloropropene	(1)			Not Detected					0.1	0.5
56) 1,1,2-Trichloroethane	(1)			Not Detected					0.1	0.5
58) Tetrachloroethene	(1)	10.325(0.000)	166	17813	0.185	0.19		J	0.1	0.5
59) 1,3-Dichloropropane	(1)			Not Detected					0.1	0.5
61) Dibromochloromethane	(1)			Not Detected					0.1	0.5
62) 1,2-Dibromoethane	(1)			Not Detected					0.1	0.5
63) Chlorobenzene	(1)			Not Detected					0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)			Not Detected					0.1	0.5
65) Ethylbenzene	(1)			Not Detected					0.1	0.5
67) m+p-Xylene	(1)			Not Detected					0.2	0.5
68) o-Xylene	(1)			Not Detected					0.1	0.5

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:12. Target 3.5 esignature user ID: sej02002

R15WA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384705

Data file: /chem/SH08359.i/14mar10b.b/sm10s68.d Injection date and time: **11-MAR-2014 03:48**
Data file Sample Info. Line: R15WA;7384705;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

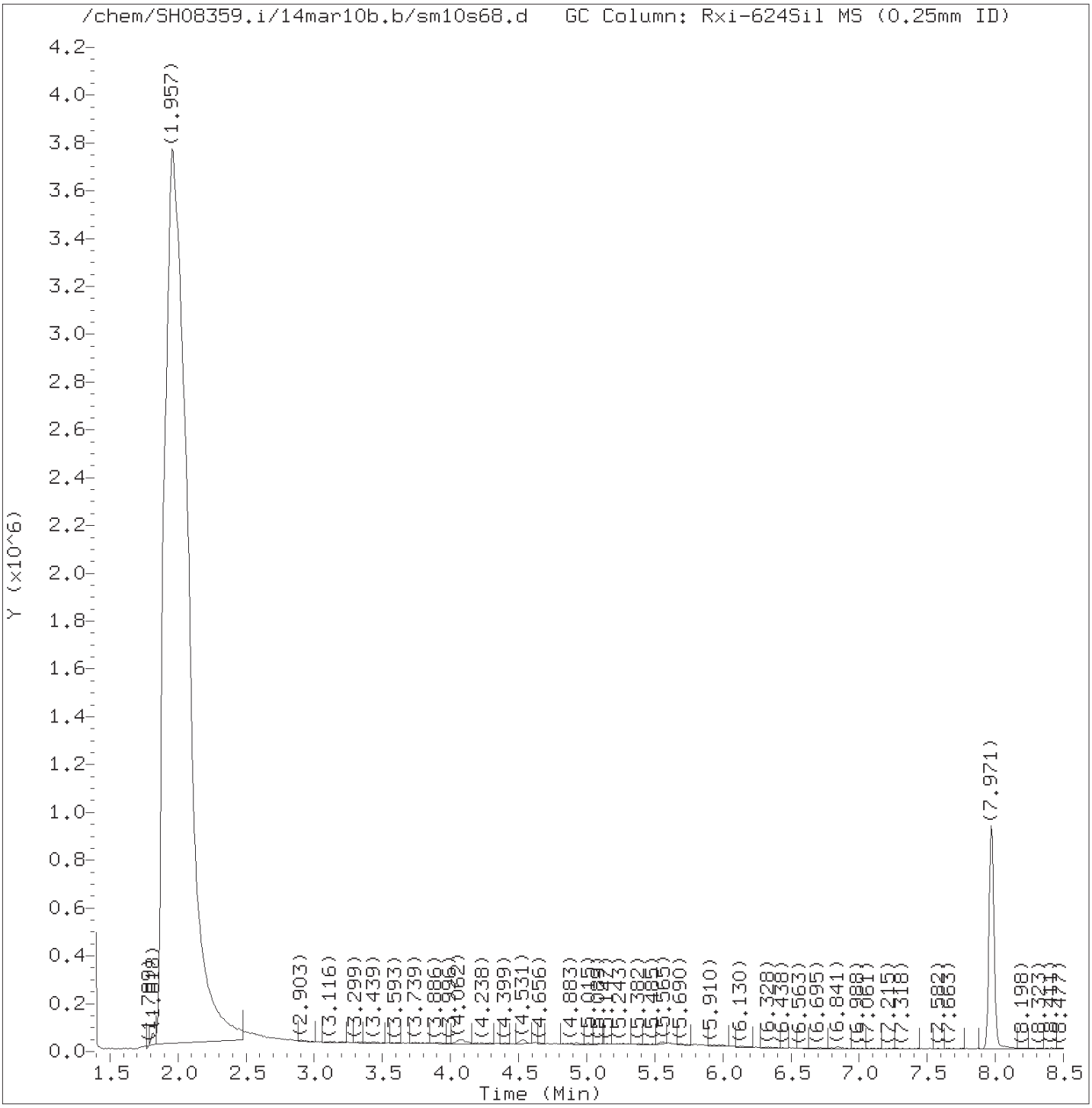
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)				Not Detected					0.1	0.5
71) Xylene (Total)	(1)				Not Detected					0.1	0.5
70) Bromoform	(1)				Not Detected					0.2	0.5
72) Isopropylbenzene	(1)				Not Detected					0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
75) Bromobenzene	(1)				Not Detected					0.1	0.5
76) 1,2,3-Trichloropropane	(1)				Not Detected					0.2	0.5
78) n-Propylbenzene	(1)				Not Detected					0.1	0.5
79) 2-Chlorotoluene	(1)				Not Detected					0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)				Not Detected					0.1	0.5
81) 4-Chlorotoluene	(1)				Not Detected					0.2	0.5
82) tert-Butylbenzene	(1)				Not Detected					0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)				Not Detected					0.1	0.5
85) sec-Butylbenzene	(1)				Not Detected					0.1	0.5
87) p-Isopropyltoluene	(1)				Not Detected					0.1	0.5
86) 1,3-Dichlorobenzene	(1)				Not Detected					0.1	0.5
88) 1,4-Dichlorobenzene	(1)				Not Detected					0.1	0.5
89) n-Butylbenzene	(1)				Not Detected					0.2	0.5
91) 1,2-Dichlorobenzene	(1)				Not Detected					0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)				Not Detected					0.2	0.5
96) Hexachlorobutadiene	(1)				Not Detected					0.2	0.5
97) Naphthalene	(1)				Not Detected					0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)				Not Detected					0.2	0.5

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:12. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

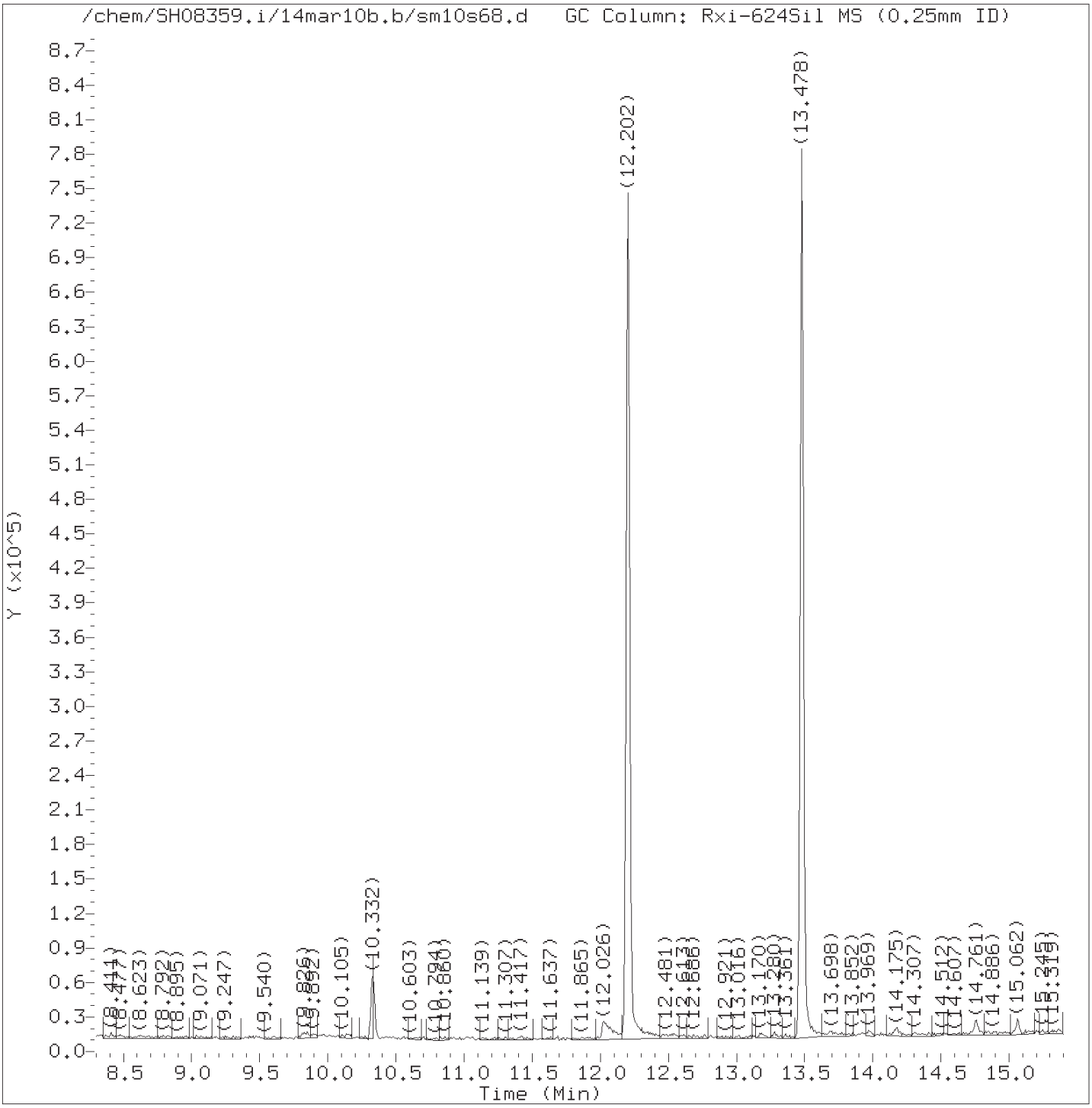
Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s68.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:48 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: R15WA Lab Sample ID: 7384705

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:12.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s68.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:48 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: R15WA Lab Sample ID: 7384705

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:12.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s68.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:48 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: R15WA Lab Sample ID: 7384705

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
42)*Fluorobenzene	(1)	7.971	96	1020970	5.000
58) Tetrachloroethene	(1)	10.325	166	17813	0.185
73)$4-Bromofluorobenzene	(1)	12.202	174	235599	4.626
90)$1,2-Dichlorobenzene-d4	(1)	13.478	152	231115	4.789

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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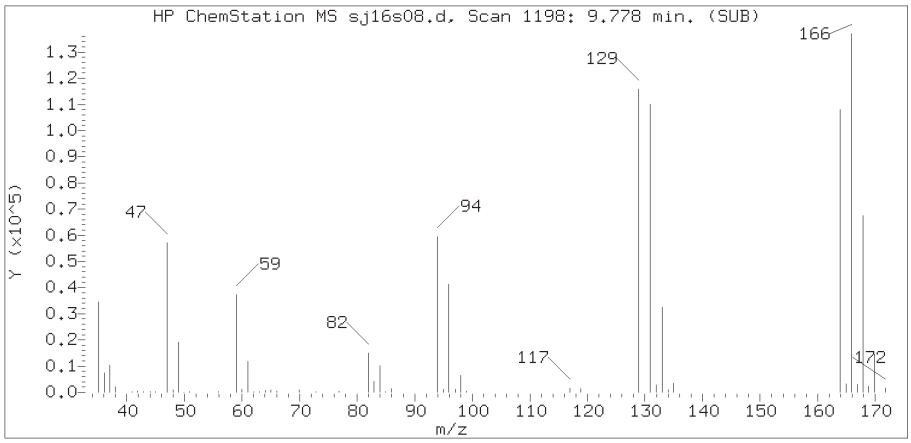
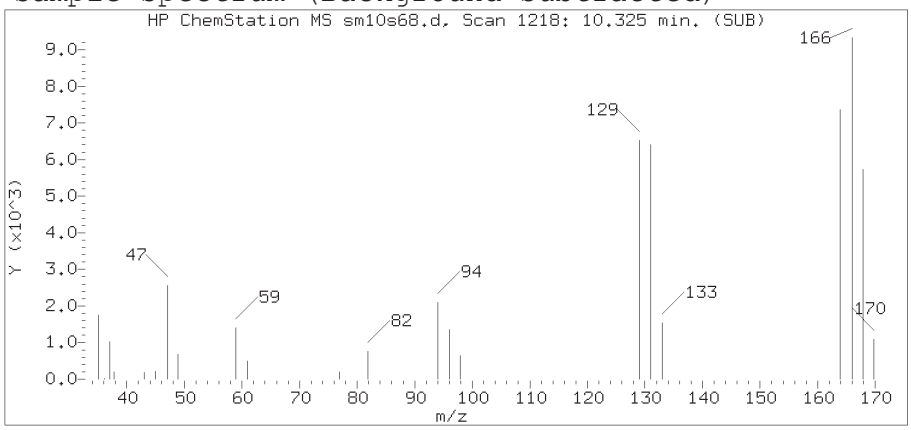
on 03/11/2014 at 16:12.
Target 3.5 esignature user ID: sej02002

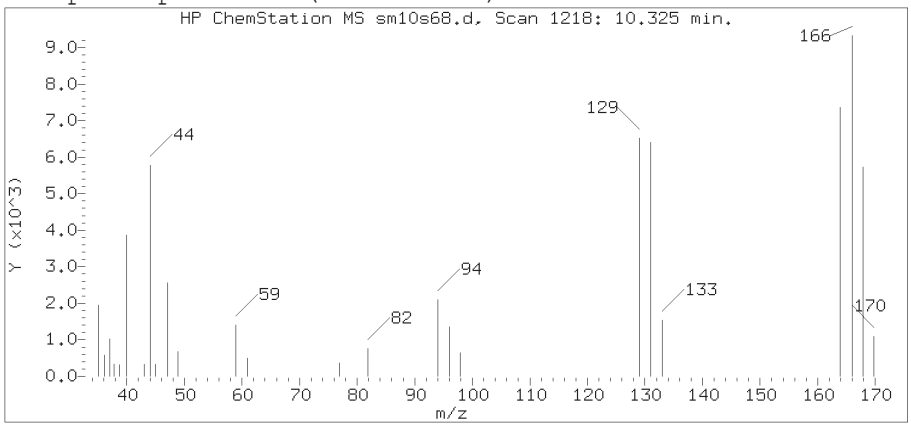
Reference Standard Spectrum for Tetrachloroethene

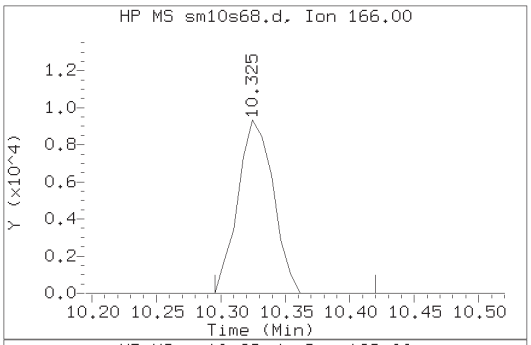


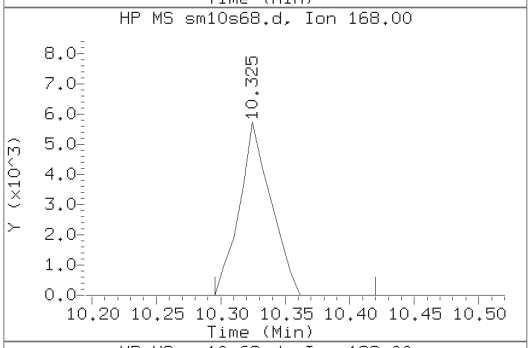
Sample Spectrum (Background Subtracted)

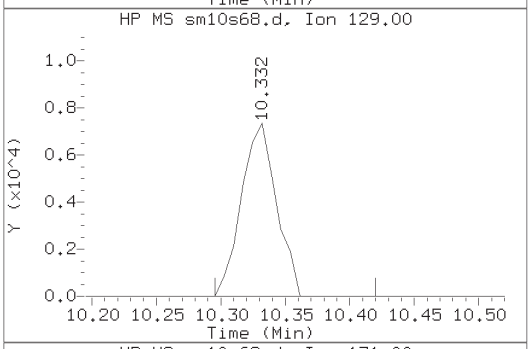


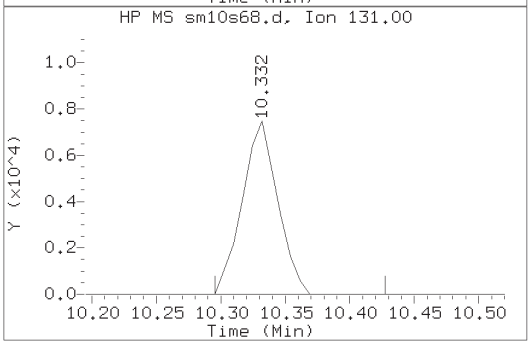
Sample Spectrum (Unaltered)











Data File: /chem/SH08359.i/14mar10b.b/sm10s68.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 03:48 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: R15WA Lab Sample ID: 7384705

Compound Number : 58
Compound Name : Tetrachloroethene
Scan Number : 1218
Retention Time (minutes): 10.325
Relative Retention Time : 0.00027
Quant Ion : 166.00
Area (flag) : 17813
On-Column Amount (ng) : 0.1851

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:12.
Target 3.5 esignature WAT19 Page 88 of 260 sej02002

R16WA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384706

Data file: /chem/SH08359.i/14mar10b.b/sm10s69.d Injection date and time: **11-MAR-2014 04:15**
Data file Sample Info. Line: R16WA;7384706;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.963(0.000)	896	96	1003915 (-26)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.195(0.000)	174	235948	4.712	94%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.471(0.000)	152	226942	4.782	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)			Not Detected					0.2	0.5
2) Chloromethane	(1)			Not Detected					0.2	0.5
3) Vinyl Chloride	(1)			Not Detected					0.1	0.5
4) Bromomethane	(1)			Not Detected					0.1	0.5
5) Chloroethane	(1)			Not Detected					0.2	0.5
7) Trichlorofluoromethane	(1)			Not Detected					0.2	0.5
10) 1,1-Dichloroethene	(1)			Not Detected					0.1	0.5
16) Methylene Chloride	(1)			Not Detected					0.3	0.5
20) trans-1,2-Dichloroethene	(1)			Not Detected					0.1	0.5
22) 1,1-Dichloroethane	(1)			Not Detected					0.1	0.5
26) cis-1,2-Dichloroethene	(1)			Not Detected					0.1	0.5
27) 2,2-Dichloropropane	(1)			Not Detected					0.2	0.5
32) Bromochloromethane	(1)			Not Detected					0.1	0.5
34) Chloroform	(1)			Not Detected					0.1	0.5
35) 1,1,1-Trichloroethane	(1)			Not Detected					0.1	0.5
38) Carbon Tetrachloride	(1)			Not Detected					0.1	0.5
37) 1,1-Dichloropropene	(1)			Not Detected					0.1	0.5
39) Benzene	(1)			Not Detected					0.1	0.5
40) 1,2-Dichloroethane	(1)			Not Detected					0.1	0.5
43) Trichloroethene	(1)			Not Detected					0.1	0.5
44) 1,2-Dichloropropane	(1)			Not Detected					0.1	0.5
45) Dibromomethane	(1)			Not Detected					0.1	0.5
47) Bromodichloromethane	(1)			Not Detected					0.1	0.5
50) cis-1,3-Dichloropropene	(1)			Not Detected					0.1	0.5
53) Toluene	(1)			Not Detected					0.1	0.5
54) trans-1,3-Dichloropropene	(1)			Not Detected					0.1	0.5
56) 1,1,2-Trichloroethane	(1)			Not Detected					0.1	0.5
58) Tetrachloroethene	(1)			Not Detected					0.1	0.5
59) 1,3-Dichloropropane	(1)			Not Detected					0.1	0.5
61) Dibromochloromethane	(1)			Not Detected					0.1	0.5
62) 1,2-Dibromoethane	(1)			Not Detected					0.1	0.5
63) Chlorobenzene	(1)			Not Detected					0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)			Not Detected					0.1	0.5
65) Ethylbenzene	(1)			Not Detected					0.1	0.5
67) m+p-Xylene	(1)			Not Detected					0.2	0.5
68) o-Xylene	(1)			Not Detected					0.1	0.5

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:12. Target 3.5 esignature user ID: sej02002

R16WA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384706

Data file: /chem/SH08359.i/14mar10b.b/sm10s69.d Injection date and time: **11-MAR-2014 04:15**
Data file Sample Info. Line: R16WA;7384706;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

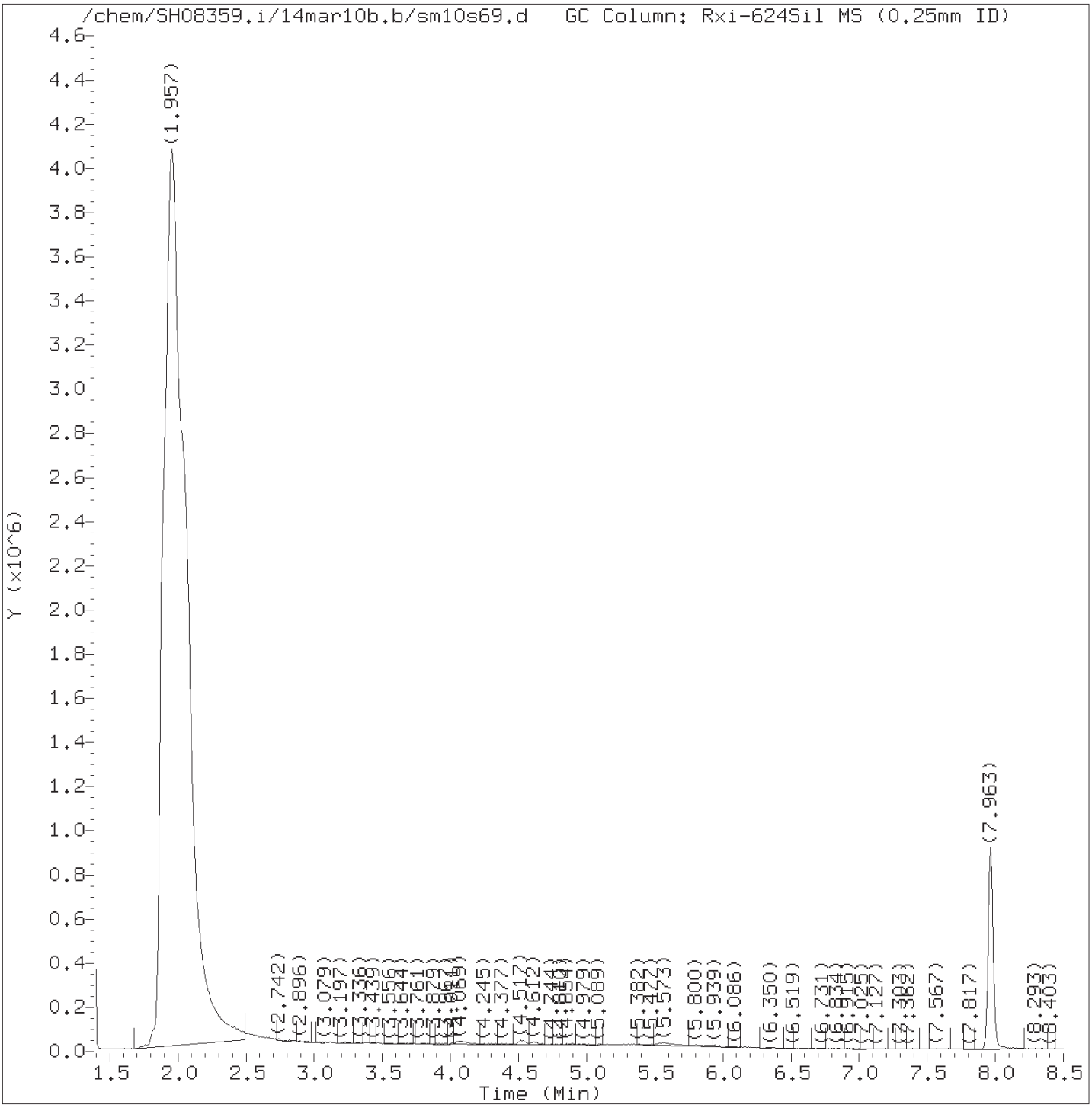
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)				Not Detected					0.1	0.5
71) Xylene (Total)	(1)				Not Detected					0.1	0.5
70) Bromoform	(1)				Not Detected					0.2	0.5
72) Isopropylbenzene	(1)				Not Detected					0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
75) Bromobenzene	(1)				Not Detected					0.1	0.5
76) 1,2,3-Trichloropropane	(1)				Not Detected					0.2	0.5
78) n-Propylbenzene	(1)				Not Detected					0.1	0.5
79) 2-Chlorotoluene	(1)				Not Detected					0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)				Not Detected					0.1	0.5
81) 4-Chlorotoluene	(1)				Not Detected					0.2	0.5
82) tert-Butylbenzene	(1)				Not Detected					0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)				Not Detected					0.1	0.5
85) sec-Butylbenzene	(1)				Not Detected					0.1	0.5
87) p-Isopropyltoluene	(1)				Not Detected					0.1	0.5
86) 1,3-Dichlorobenzene	(1)				Not Detected					0.1	0.5
88) 1,4-Dichlorobenzene	(1)				Not Detected					0.1	0.5
89) n-Butylbenzene	(1)				Not Detected					0.2	0.5
91) 1,2-Dichlorobenzene	(1)				Not Detected					0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)				Not Detected					0.2	0.5
96) Hexachlorobutadiene	(1)				Not Detected					0.2	0.5
97) Naphthalene	(1)				Not Detected					0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)				Not Detected					0.2	0.5

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:12. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

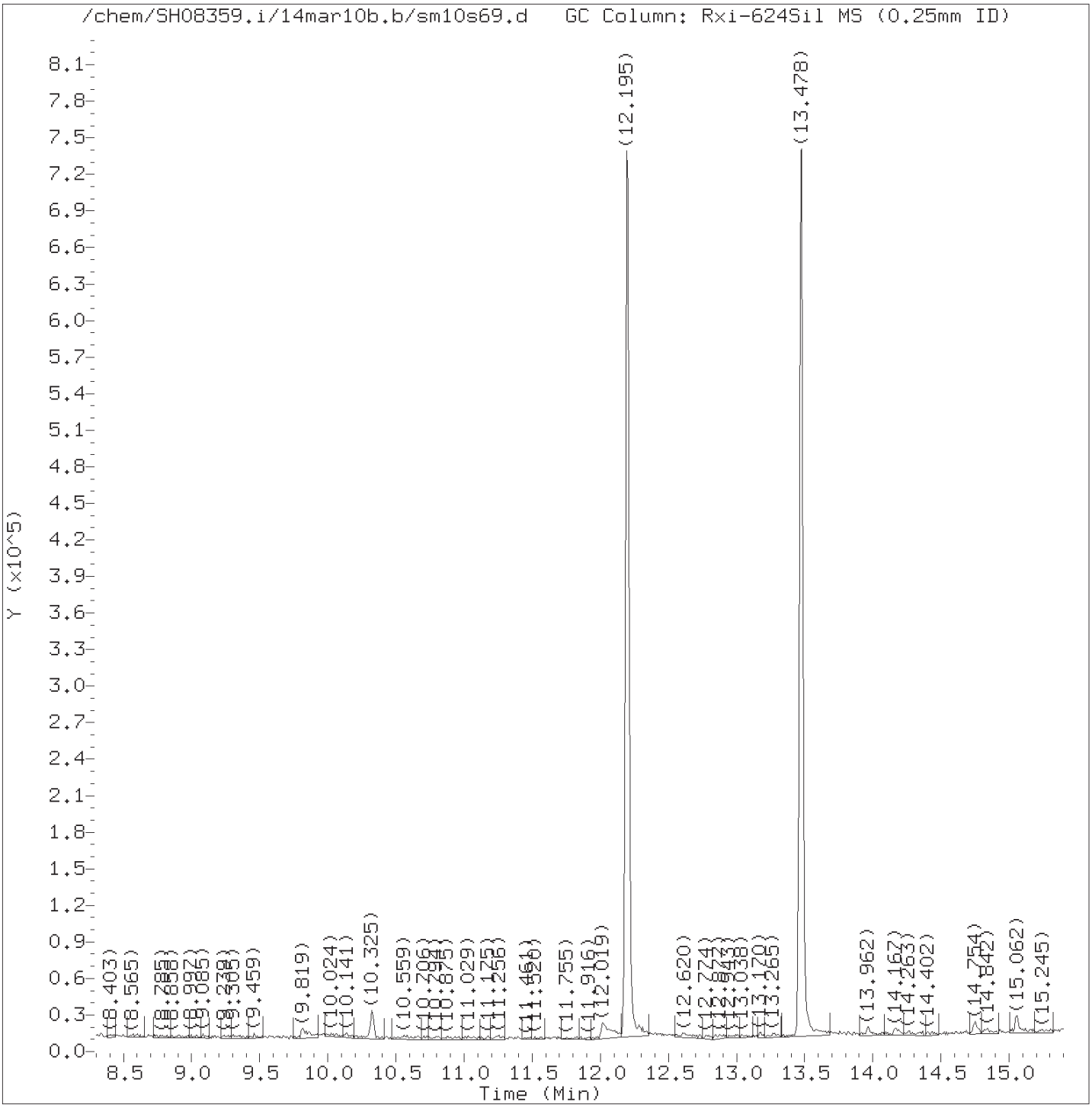
Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s69.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:15 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: R16WA Lab Sample ID: 7384706

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:12.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s69.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:15 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: R16WA Lab Sample ID: 7384706

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:12.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s69.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:15 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: R16WA Lab Sample ID: 7384706

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
42)*Fluorobenzene	(1)	7.963	96	1003915	5.000
73)$4-Bromofluorobenzene	(1)	12.195	174	235948	4.712
90)$1,2-Dichlorobenzene-d4	(1)	13.471	152	226942	4.782

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:12.
Target 3.5 esignature user ID: sej02002

BREWA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384707

Data file: /chem/SH08359.i/14mar10b.b/sm10s70.d Injection date and time: **11-MAR-2014 04:42**
Data file Sample Info. Line: BREWA;7384707;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.971(-0.007)	897	96	1045546 (-23)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.202(0.000)	174	261624	5.017	100%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.478(0.001)	152	267612	5.414	108%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)			Not Detected					0.2	0.5
2) Chloromethane	(1)			Not Detected					0.2	0.5
3) Vinyl Chloride	(1)	2.478(-0.001)	62	38873	0.261	0.26		J	0.1	0.5
4) Bromomethane	(1)			Not Detected					0.1	0.5
5) Chloroethane	(1)	2.947(-0.000)	64	841801	12.016	12.02			0.2	0.5
7) Trichlorofluoromethane	(1)			Not Detected					0.2	0.5
10) 1,1-Dichloroethene	(1)	3.879(-0.000)	96	78458	1.031	1.03			0.1	0.5
16) Methylene Chloride	(1)	4.531(-0.001)	84	88334	1.323	1.32			0.3	0.5
20) trans-1,2-Dichloroethene	(1)	4.905(-0.000)	96	19585	0.222	0.22		J	0.1	0.5
22) 1,1-Dichloroethane	(1)	5.514(-0.000)	63	4568211	30.330	30.33		E	0.1	0.5
26) cis-1,2-Dichloroethene	(1)	6.335(-0.000)	96	427579	5.348	5.35			0.1	0.5
27) 2,2-Dichloropropane	(1)			Not Detected					0.2	0.5
32) Bromochloromethane	(1)			Not Detected					0.1	0.5
34) Chloroform	(1)			Not Detected					0.1	0.5
35) 1,1,1-Trichloroethane	(1)			Not Detected					0.1	0.5
38) Carbon Tetrachloride	(1)			Not Detected					0.1	0.5
37) 1,1-Dichloropropene	(1)			Not Detected					0.1	0.5
39) Benzene	(1)	7.582(-0.000)	78	117754	0.395	0.39		J	0.1	0.5
40) 1,2-Dichloroethane	(1)	7.655(0.000)	62	9151	0.201	0.20		J	0.1	0.5
43) Trichloroethene	(1)	8.411(0.000)	95	51825	0.649	0.65			0.1	0.5
44) 1,2-Dichloropropane	(1)	8.719(0.000)	63	21908	0.282	0.28		J	0.1	0.5
45) Dibromomethane	(1)			Not Detected					0.1	0.5
47) Bromodichloromethane	(1)			Not Detected					0.1	0.5
50) cis-1,3-Dichloropropene	(1)			Not Detected					0.1	0.5
53) Toluene	(1)			Not Detected					0.1	0.5
54) trans-1,3-Dichloropropene	(1)			Not Detected					0.1	0.5
56) 1,1,2-Trichloroethane	(1)			Not Detected					0.1	0.5
58) Tetrachloroethene	(1)	10.325(0.000)	166	21946	0.223	0.22		J	0.1	0.5
59) 1,3-Dichloropropane	(1)			Not Detected					0.1	0.5
61) Dibromochloromethane	(1)			Not Detected					0.1	0.5
62) 1,2-Dibromoethane	(1)			Not Detected					0.1	0.5
63) Chlorobenzene	(1)	11.183(0.000)	112	104180	0.574	0.57			0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)			Not Detected					0.1	0.5
65) Ethylbenzene	(1)			Not Detected					0.1	0.5
67) m+p-Xylene	(1)			Not Detected					0.2	0.5
68) o-Xylene	(1)			Not Detected					0.1	0.5

E = Compound concentration above calibration range.

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:17. Target 3.5 esignature user ID: sej02002

BREWA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384707

Data file: /chem/SH08359.i/14mar10b.b/sm10s70.d Injection date and time: **11-MAR-2014 04:42**
Data file Sample Info. Line: BREWA;7384707;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

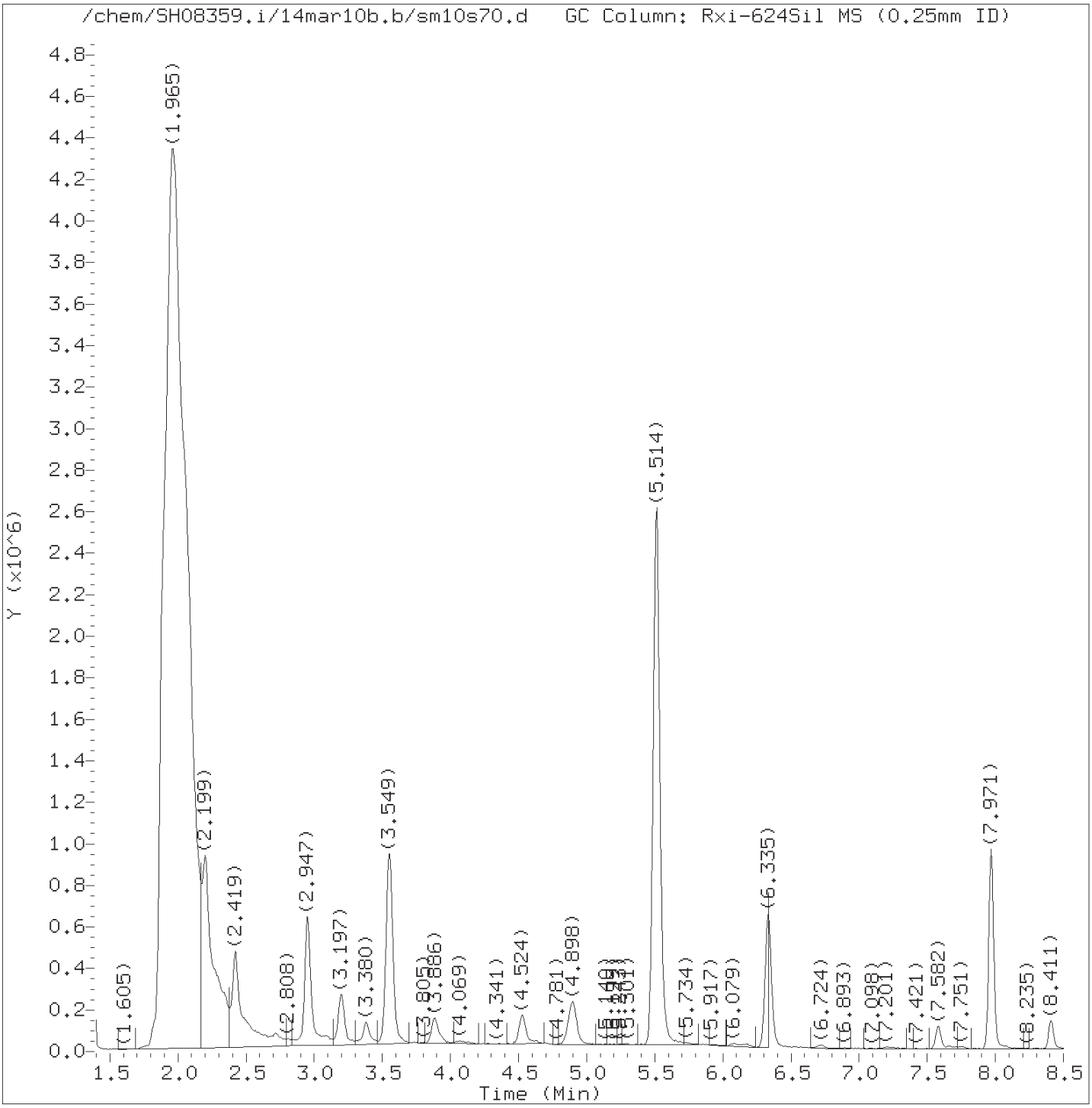
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)			Not Detected					0.1	0.5
71) Xylene (Total)	(1)			Not Detected					0.1	0.5
70) Bromoform	(1)			Not Detected					0.2	0.5
72) Isopropylbenzene	(1)			Not Detected					0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)			Not Detected					0.1	0.5
75) Bromobenzene	(1)			Not Detected					0.1	0.5
76) 1,2,3-Trichloropropane	(1)			Not Detected					0.2	0.5
78) n-Propylbenzene	(1)			Not Detected					0.1	0.5
79) 2-Chlorotoluene	(1)			Not Detected					0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)			Not Detected					0.1	0.5
81) 4-Chlorotoluene	(1)			Not Detected					0.2	0.5
82) tert-Butylbenzene	(1)			Not Detected					0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)			Not Detected					0.1	0.5
85) sec-Butylbenzene	(1)	12.987(0.001)	134	9939	0.166	0.17		J	0.1	0.5
87) p-Isopropyltoluene	(1)			Not Detected					0.1	0.5
86) 1,3-Dichlorobenzene	(1)			Not Detected					0.1	0.5
88) 1,4-Dichlorobenzene	(1)	13.199(0.000)	146	552724	4.338	4.34			0.1	0.5
89) n-Butylbenzene	(1)			Not Detected					0.2	0.5
91) 1,2-Dichlorobenzene	(1)	13.493(0.000)	146	10365	0.104	0.10		J	0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)			Not Detected					0.2	0.5
96) Hexachlorobutadiene	(1)			Not Detected					0.2	0.5
97) Naphthalene	(1)			Not Detected					0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)			Not Detected					0.2	0.5

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:17. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

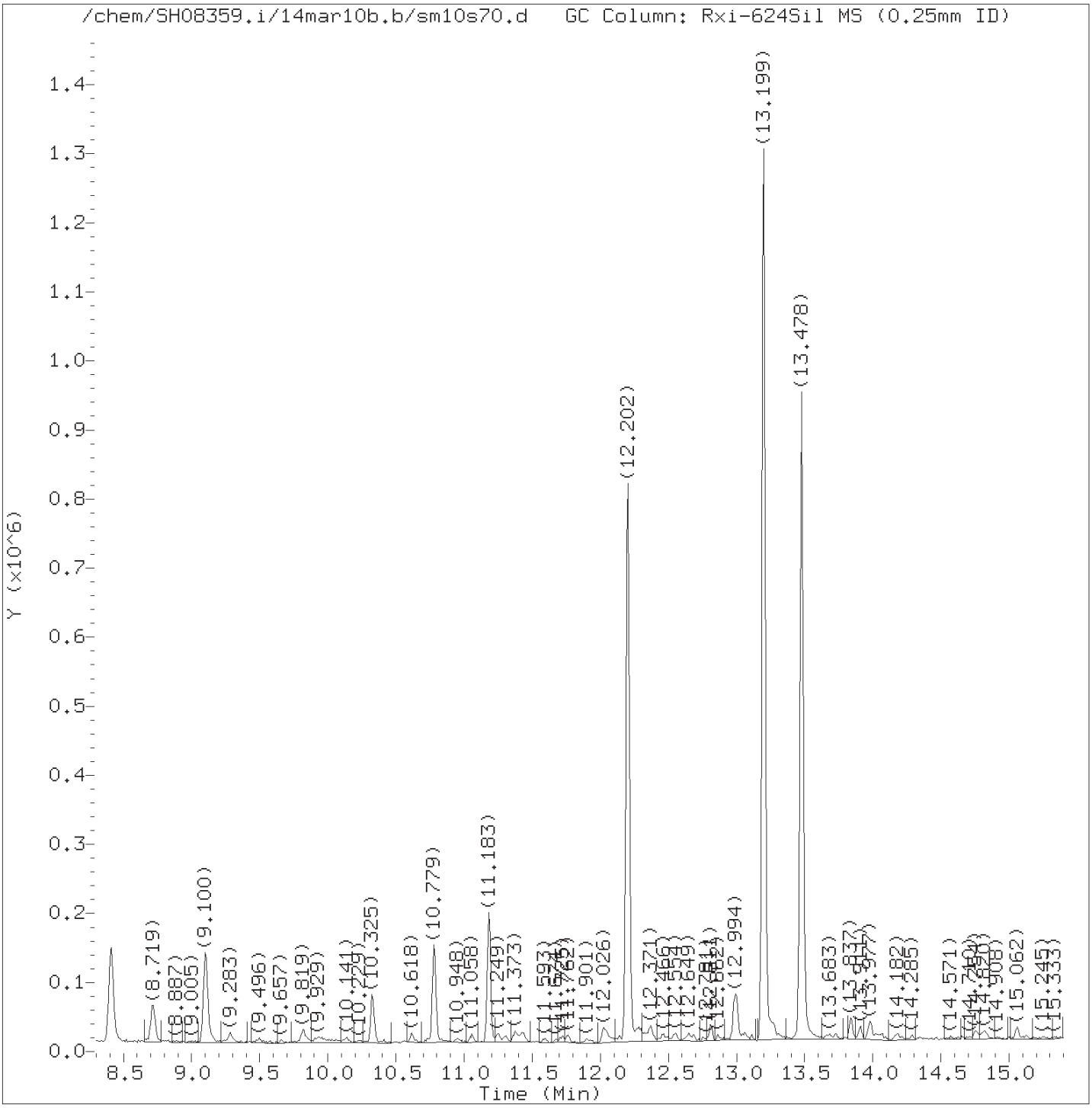
Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:17.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:17.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

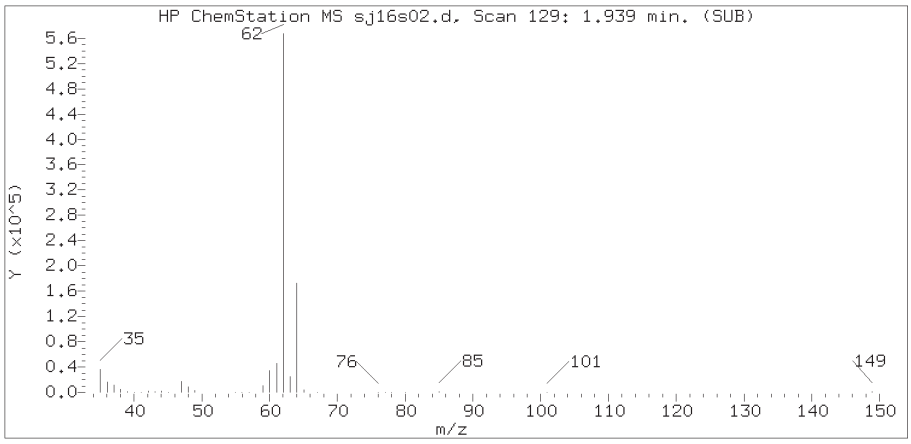
Sample Name: BREWA Lab Sample ID: 7384707

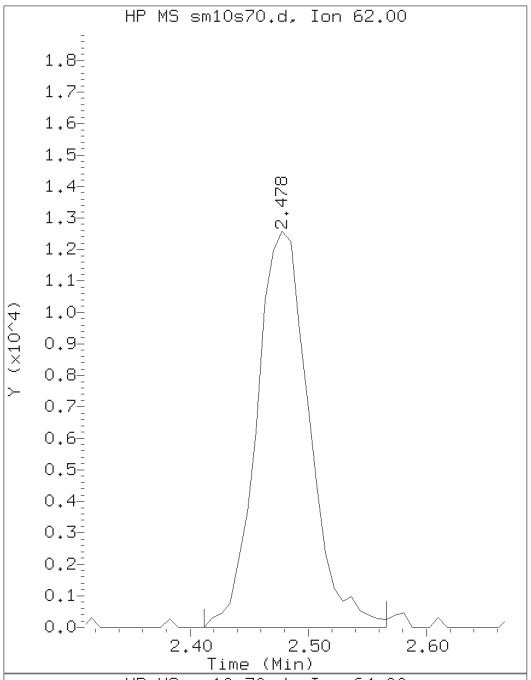
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Vinyl Chloride	(1)	2.478	62	38873	0.261
5) Chloroethane	(1)	2.947	64	841801	12.016
10) 1,1-Dichloroethene	(1)	3.879	96	78458	1.031
16) Methylene Chloride	(1)	4.531	84	88334	1.323
20) trans-1,2-Dichloroethene	(1)	4.905	96	19585	0.222
22) 1,1-Dichloroethane	(1)	5.514	63	4568211	30.330
26) cis-1,2-Dichloroethene	(1)	6.335	96	427579	5.348
39) Benzene	(1)	7.582	78	117754	0.395
40) 1,2-Dichloroethane	(1)	7.655	62	9151	0.201
42)*Fluorobenzene	(1)	7.971	96	1045546	5.000
43) Trichloroethene	(1)	8.411	95	51825	0.649
44) 1,2-Dichloropropane	(1)	8.719	63	21908	0.282
58) Tetrachloroethene	(1)	10.325	166	21946	0.223
63) Chlorobenzene	(1)	11.183	112	104180	0.574
73)$4-Bromofluorobenzene	(1)	12.202	174	261624	5.017
85) sec-Butylbenzene	(1)	12.987	134	9939	0.166
88) 1,4-Dichlorobenzene	(1)	13.199	146	552724	4.338
90)$1,2-Dichlorobenzene-d4	(1)	13.478	152	267612	5.414
91) 1,2-Dichlorobenzene	(1)	13.493	146	10365	0.104

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

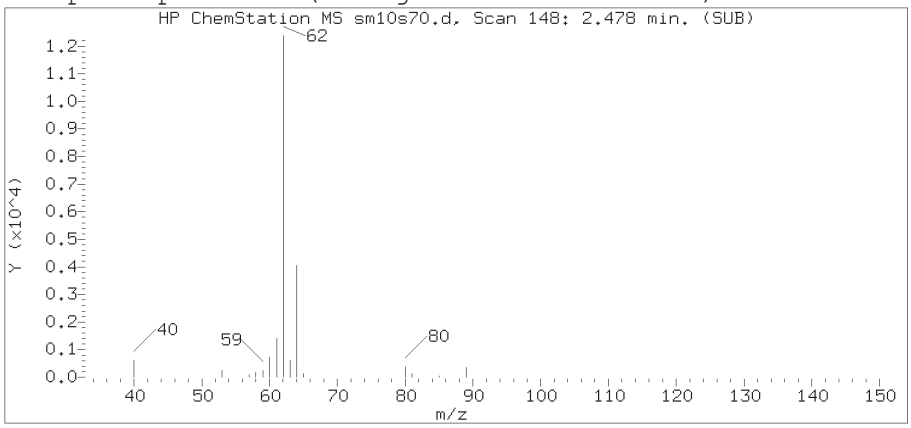
Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:17.
Target 3.5 esignature user ID: sej02002

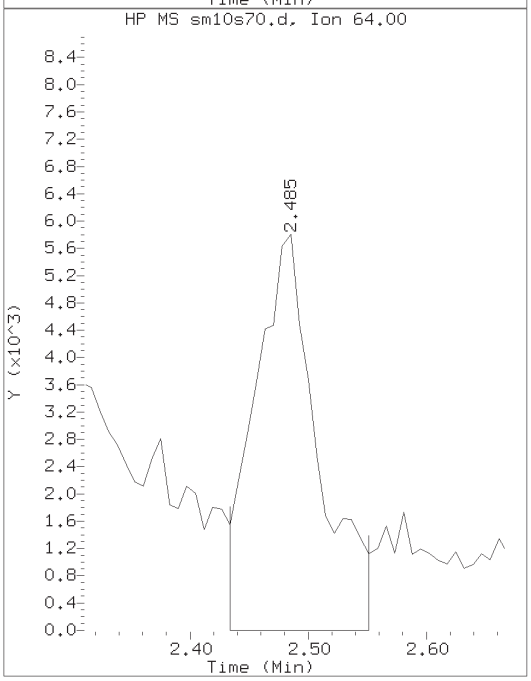
Reference Standard Spectrum for Vinyl Chloride



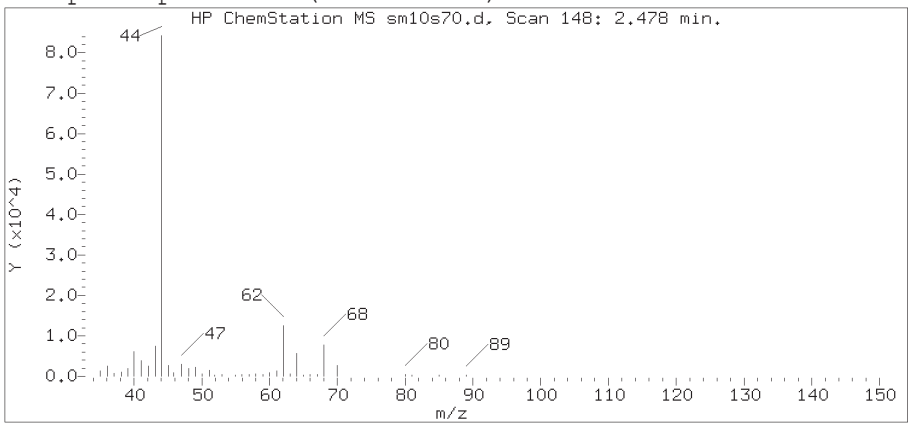


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 3
Compound Name : Vinyl Chloride
Scan Number : 148
Retention Time (minutes): 2.478
Relative Retention Time :-0.00156
Quant Ion : 62.00
Area (flag) : 38873
On-Column Amount (ng) : 0.2608

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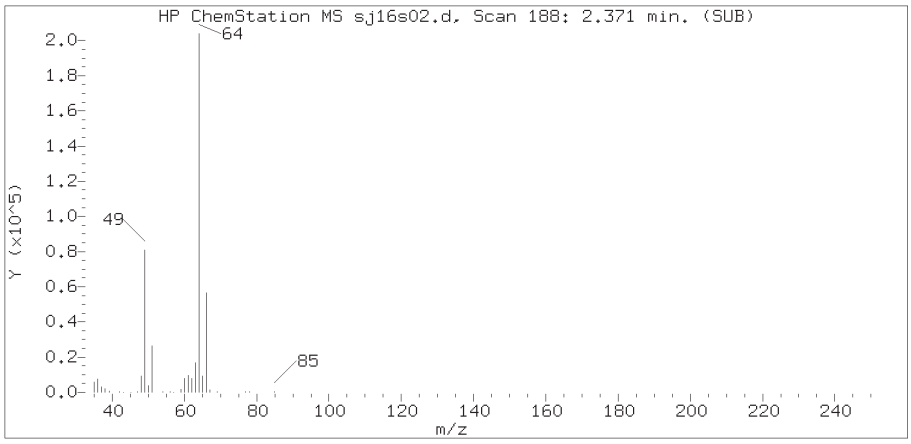
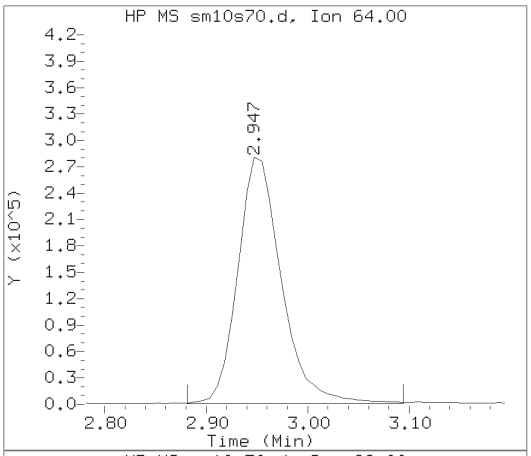
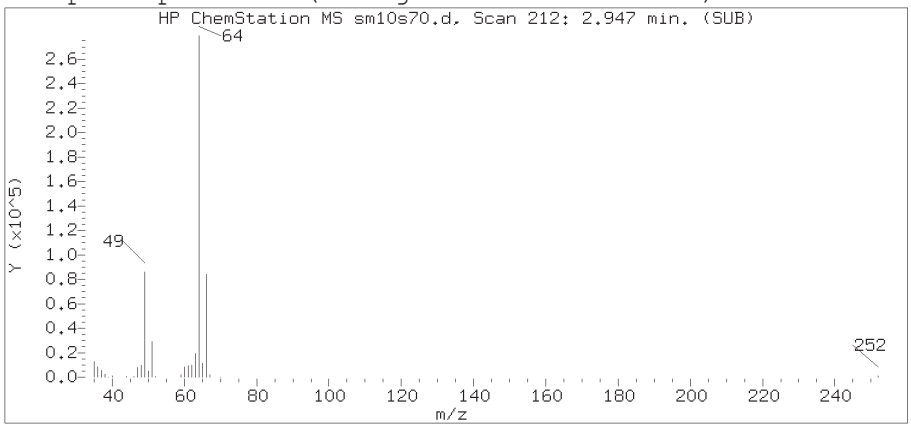
Target 3.5 esignature [illegible]

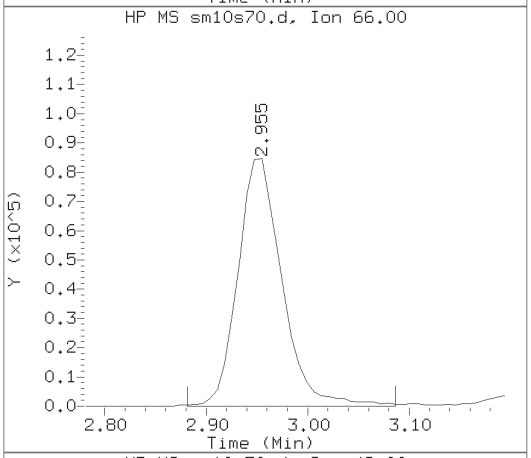
Reference Standard Spectrum for Chloroethane



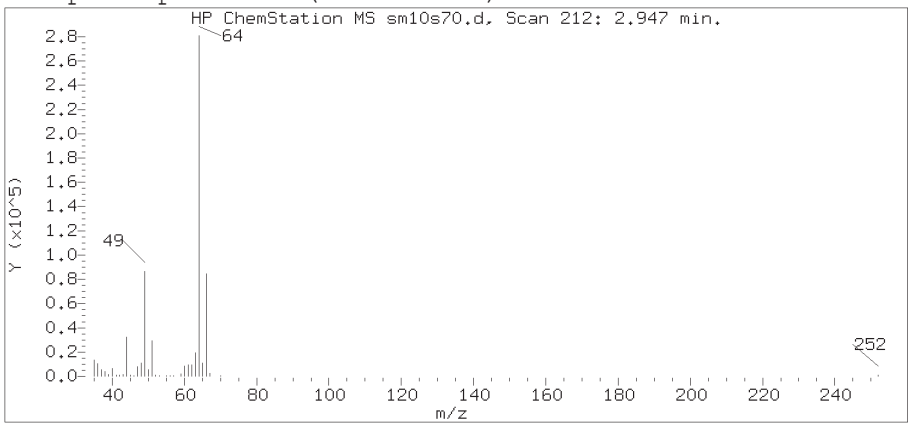


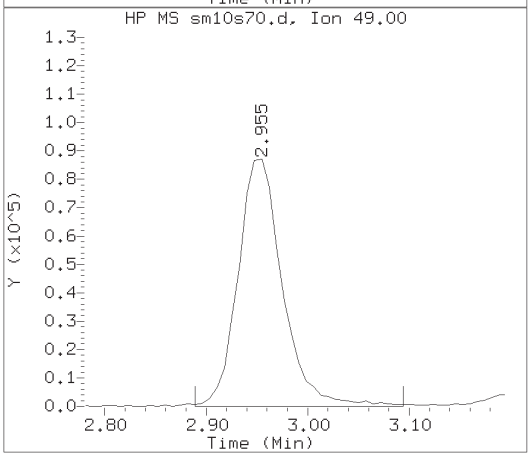
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 5
Compound Name : Chloroethane
Scan Number : 212
Retention Time (minutes): 2.947
Relative Retention Time :-0.00058
Quant Ion : 64.00
Area (flag) : 841801
On-Column Amount (ng) : 12.0159

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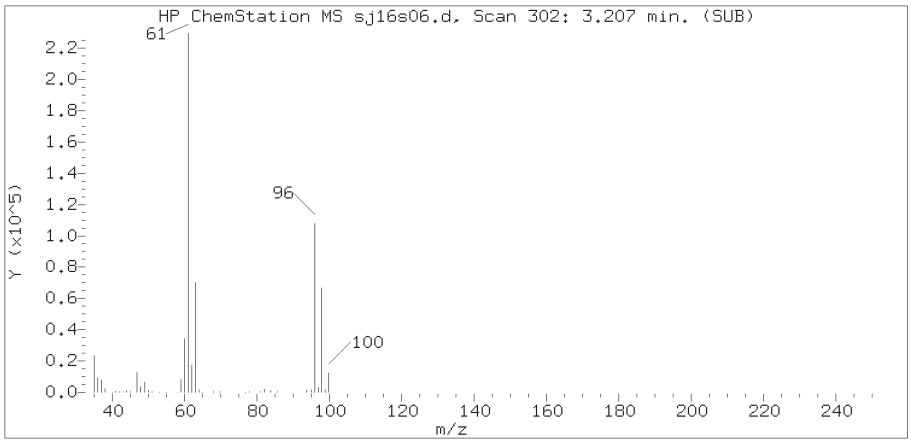
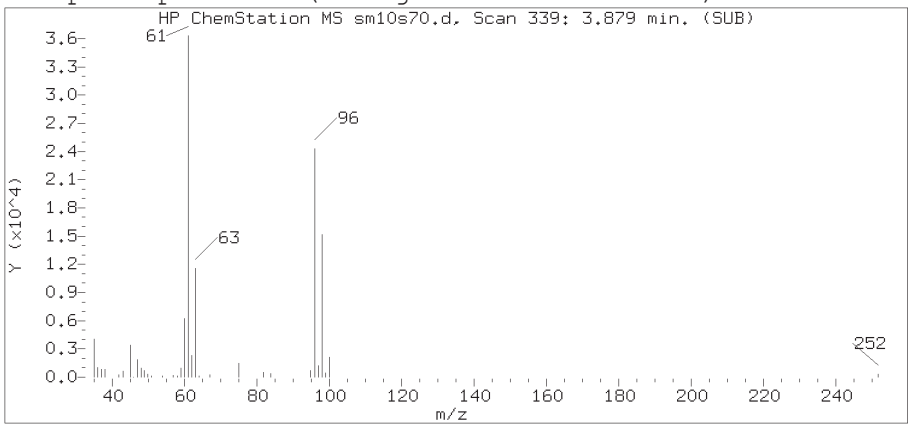
Target 3.5 esignature meaning: sej02002

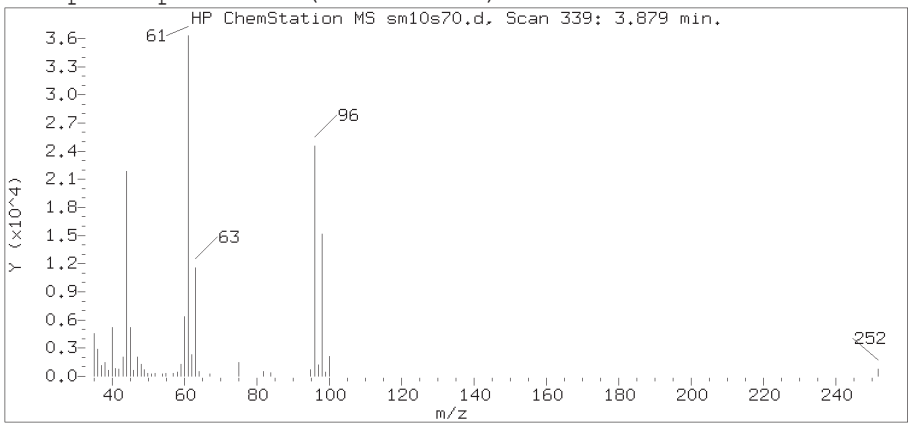
Reference Standard Spectrum for 1,1-Dichloroethene

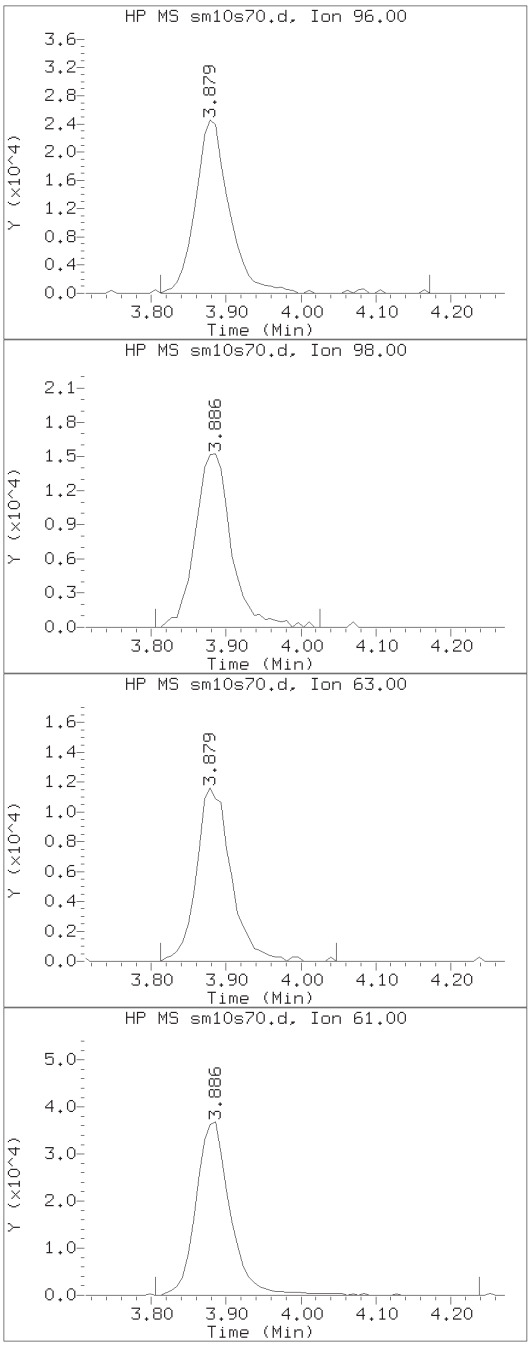


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 10
Compound Name : 1,1-Dichloroethene
Scan Number : 339
Retention Time (minutes): 3.879
Relative Retention Time :-0.00047
Quant Ion : 96.00
Area (flag) : 78458
On-Column Amount (ng) : 1.0308

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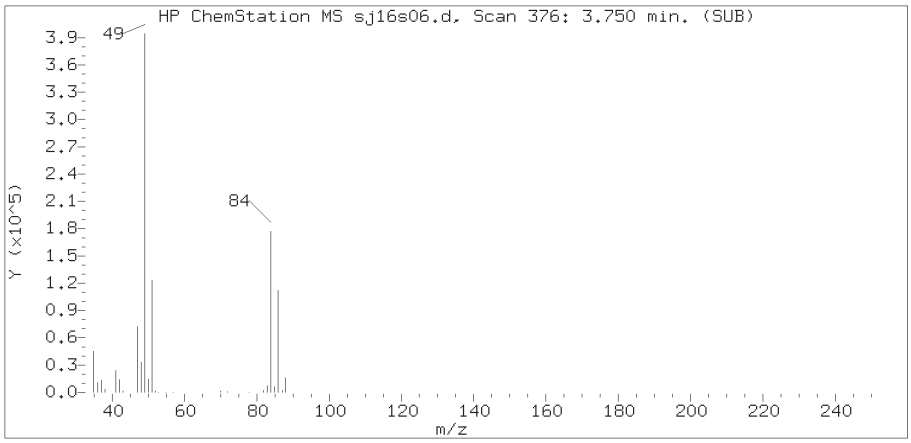
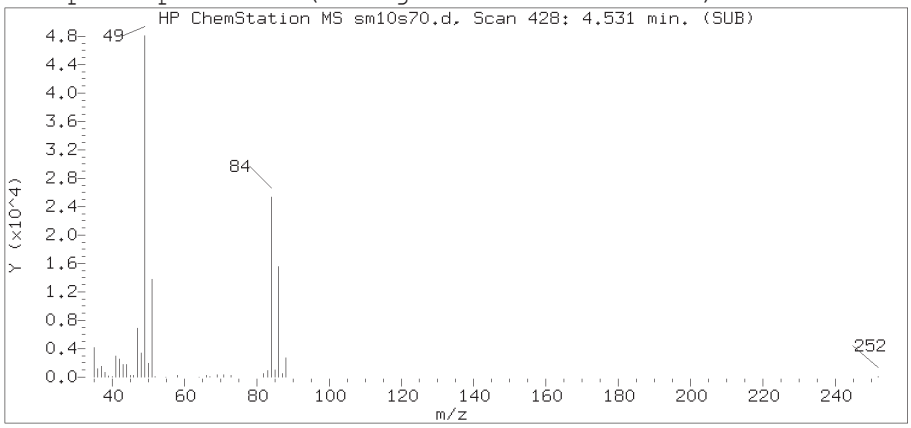
Target 3.5 esignature [illegible]

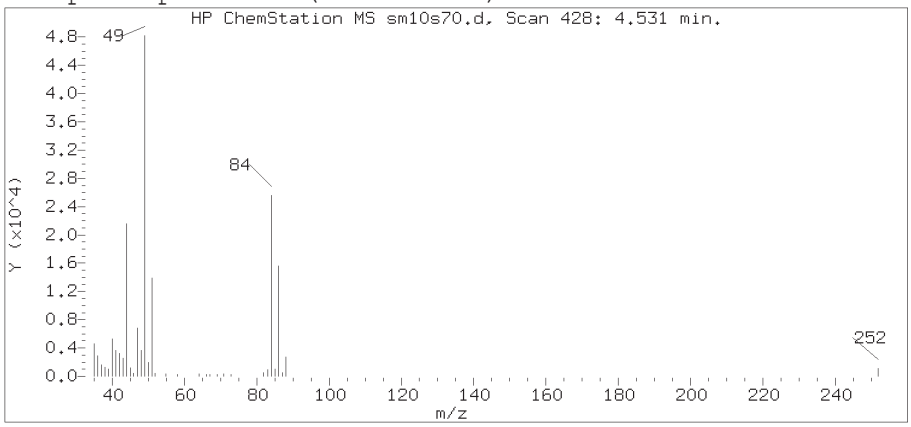
Reference Standard Spectrum for Methylene Chloride

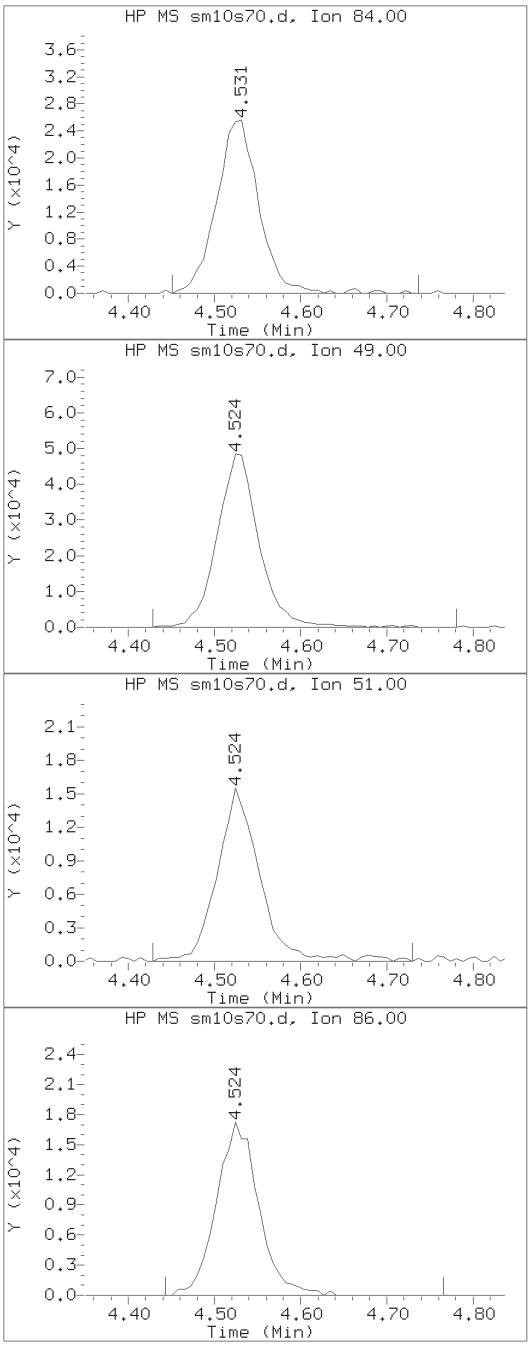


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 16
Compound Name : Methylene Chloride
Scan Number : 428
Retention Time (minutes): 4.531
Relative Retention Time :-0.00132
Quant Ion : 84.00
Area (flag) : 88334
On-Column Amount (ng) : 1.3229

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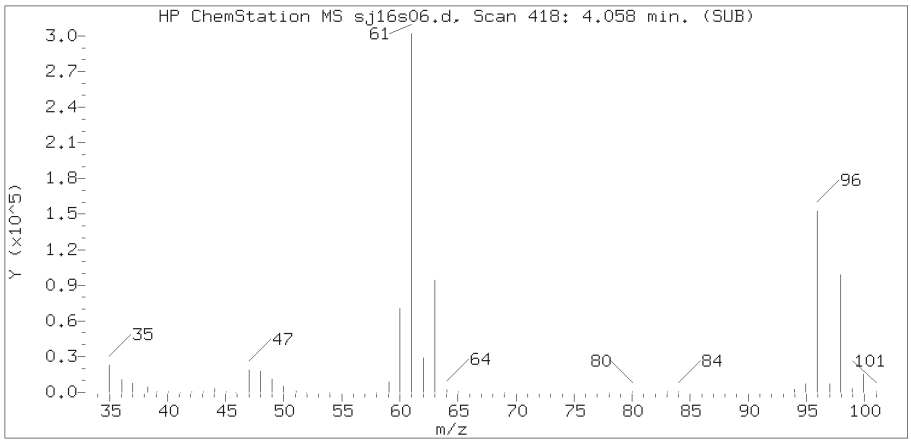
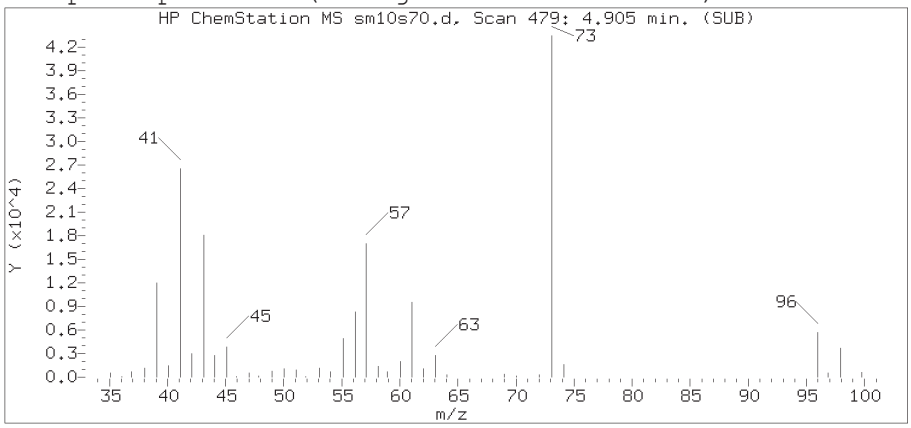
Target 3.5 esignature [illegible]

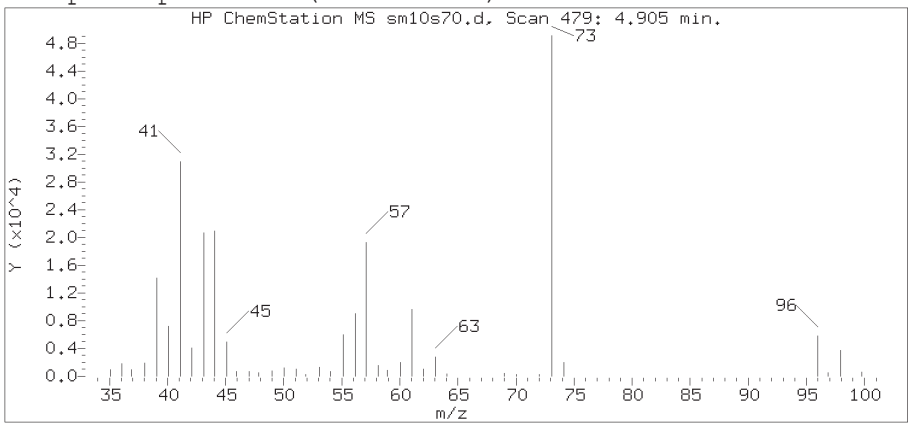
Reference Standard Spectrum for trans-1,2-Dichloroethene

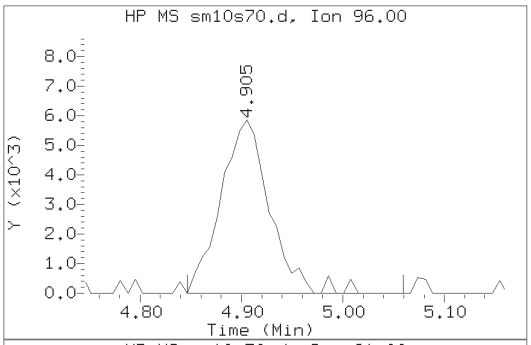


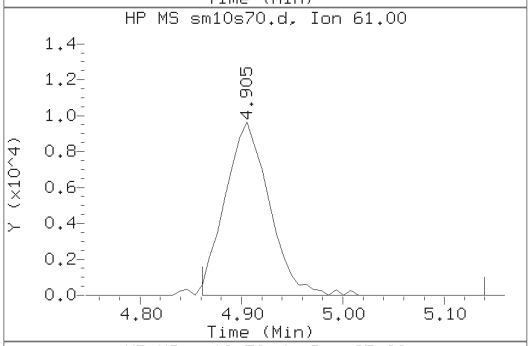
Sample Spectrum (Background Subtracted)

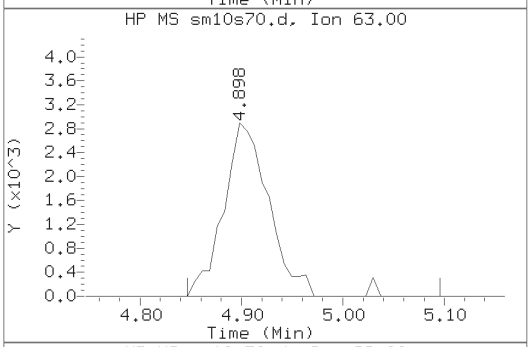


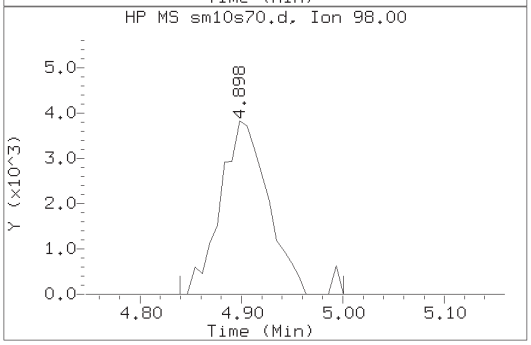
Sample Spectrum (Unaltered)











Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 20
Compound Name : trans-1,2-Dichloroethene
Scan Number : 479
Retention Time (minutes): 4.905
Relative Retention Time :-0.00035
Quant Ion : 96.00
Area (flag) : 19585
On-Column Amount (ng) : 0.2219

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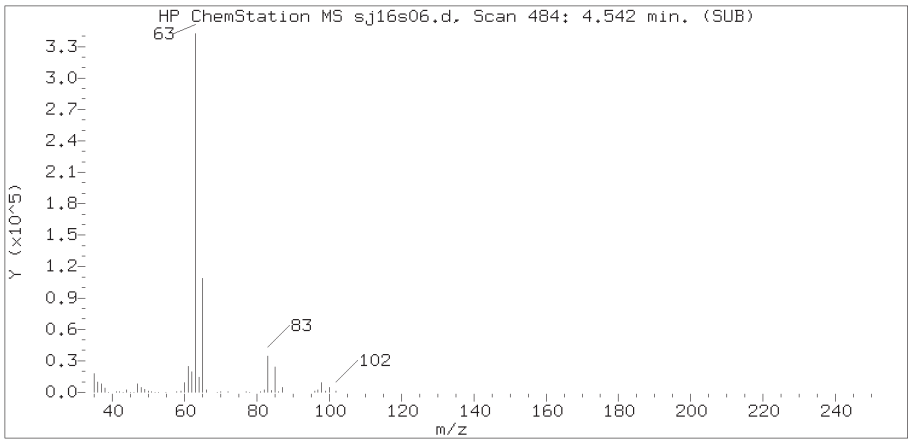
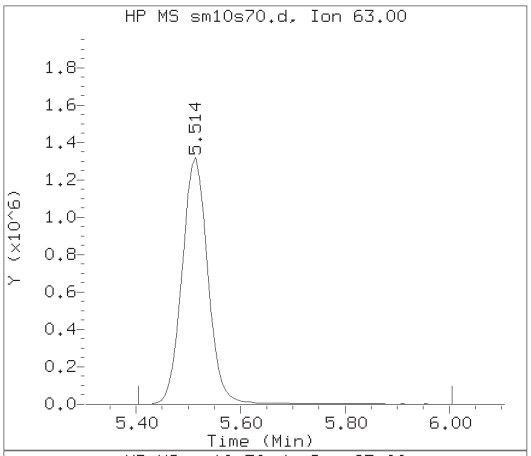
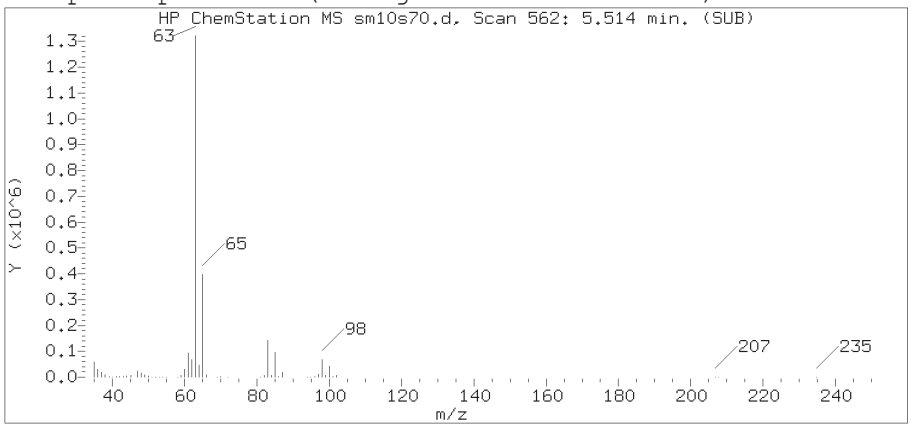
Target 3.5 esignature [illegible]

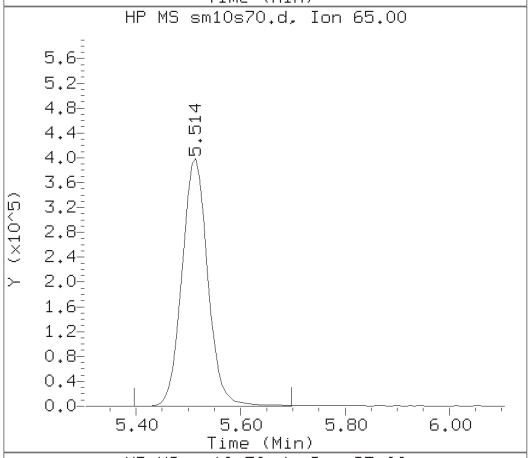
Reference Standard Spectrum for 1,1-Dichloroethane



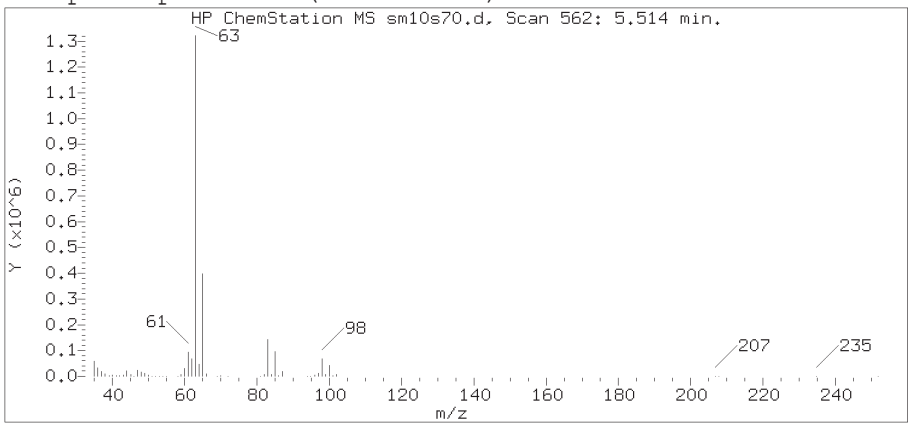


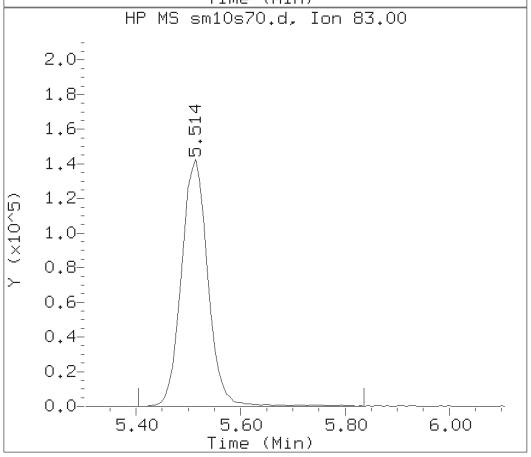
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 22
Compound Name : 1,1-Dichloroethane
Scan Number : 562
Retention Time (minutes): 5.514
Relative Retention Time :-0.00028
Quant Ion : 63.00
Area (flag) : 4568211
On-Column Amount (ng) : 30.3295

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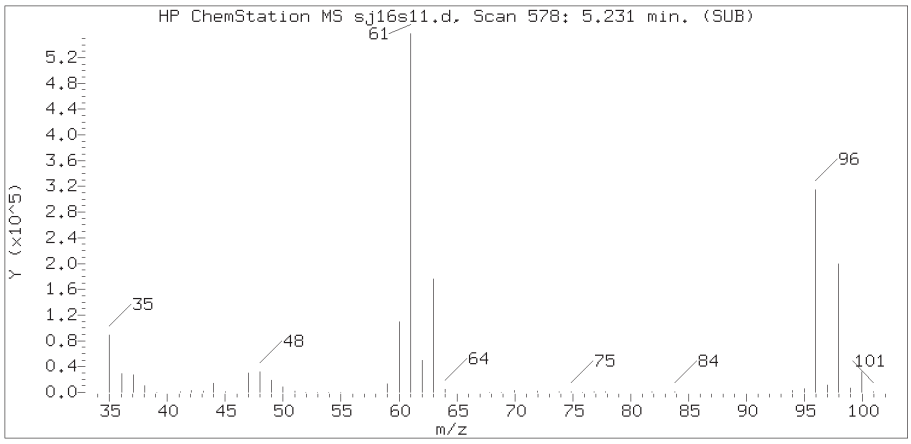
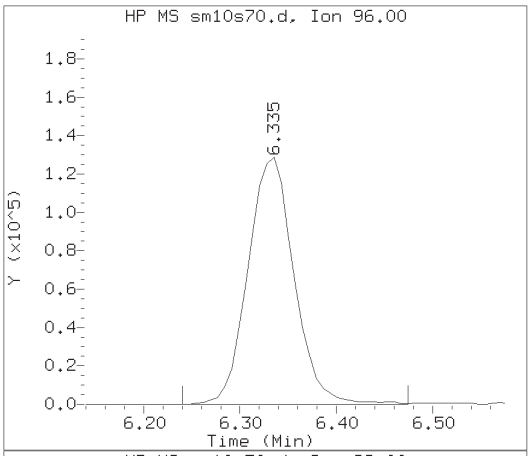
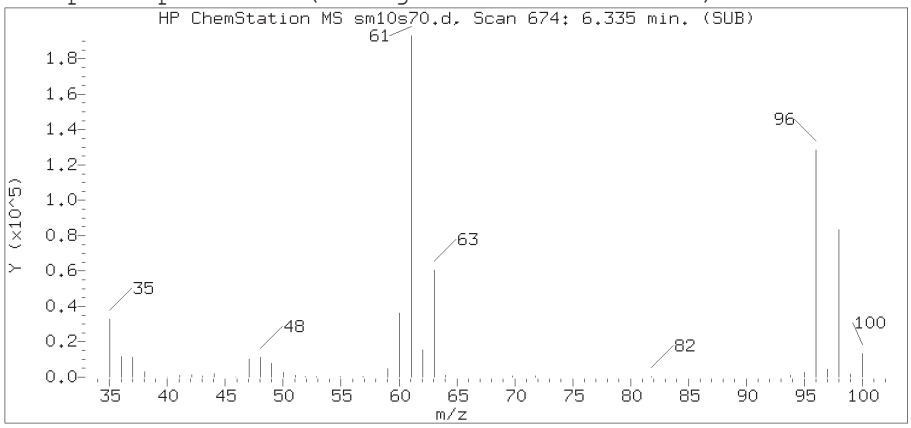
Target 3.5 esignature [illegible]

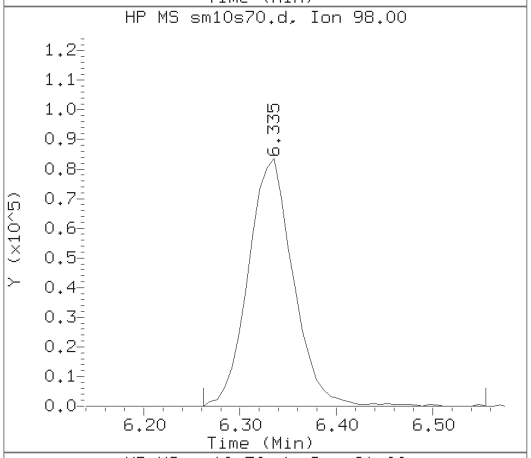
Reference Standard Spectrum for cis-1,2-Dichloroethene



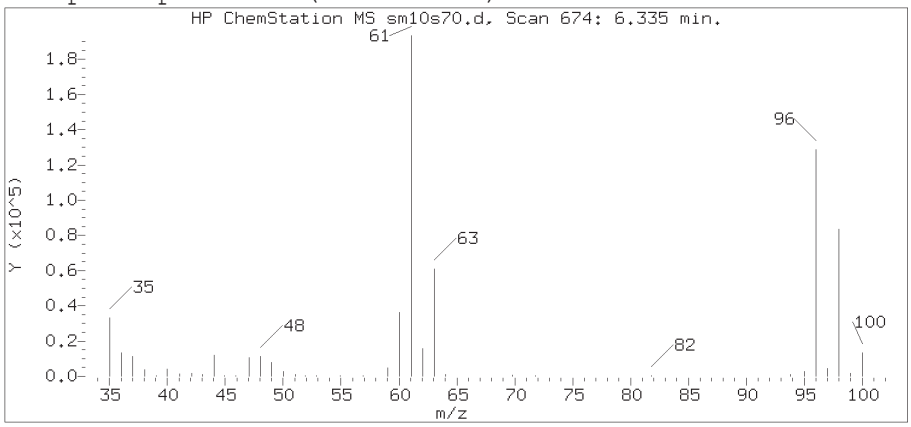


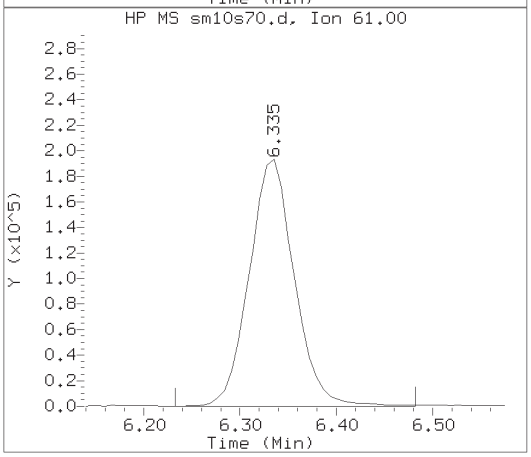
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 26
Compound Name : cis-1,2-Dichloroethene
Scan Number : 674
Retention Time (minutes): 6.335
Relative Retention Time :-0.00019
Quant Ion : 96.00
Area (flag) : 427579
On-Column Amount (ng) : 5.3484

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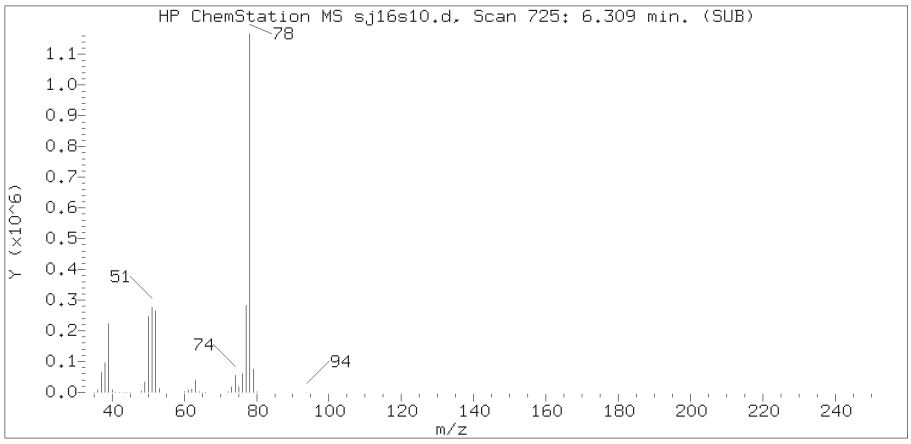
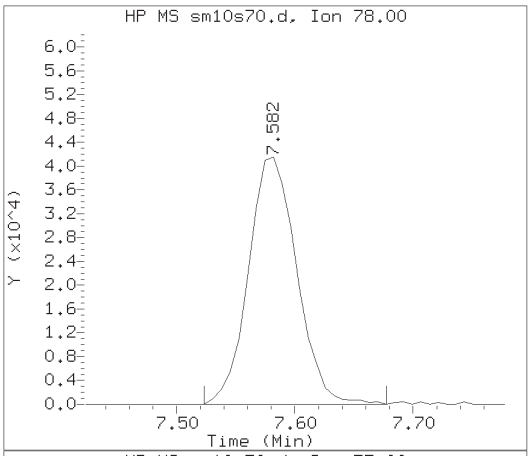
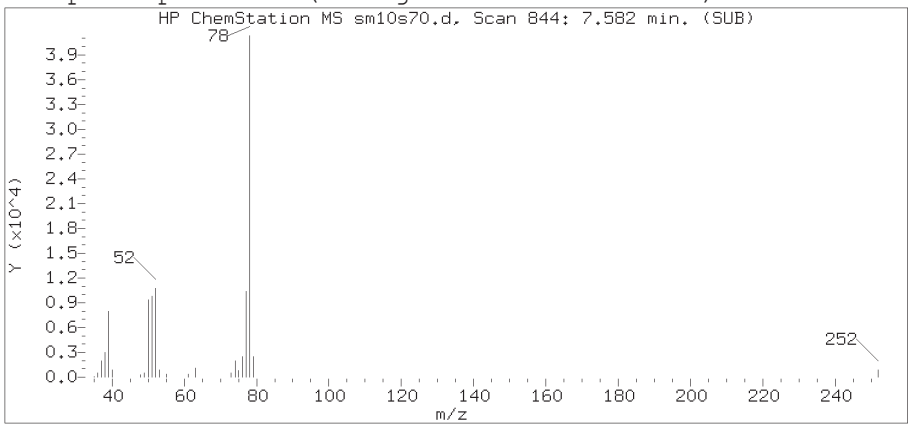
Target 3.5 esignature meaning: sej02002

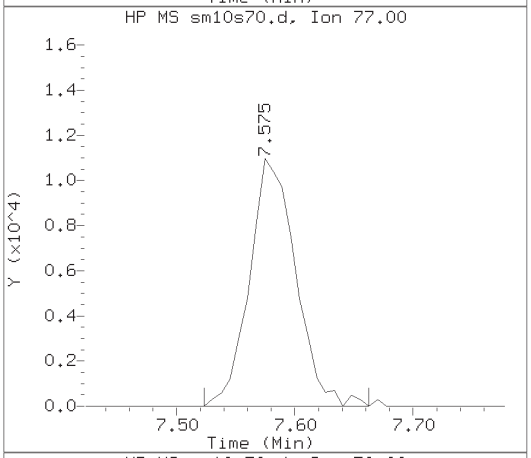
Reference Standard Spectrum for Benzene



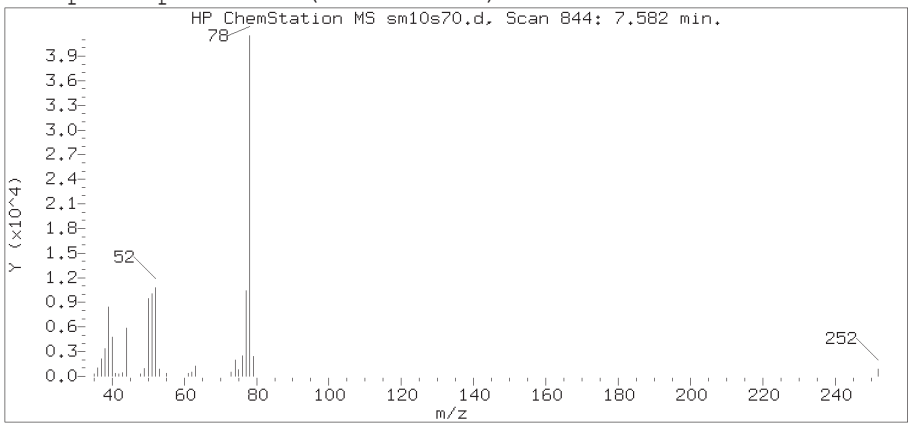


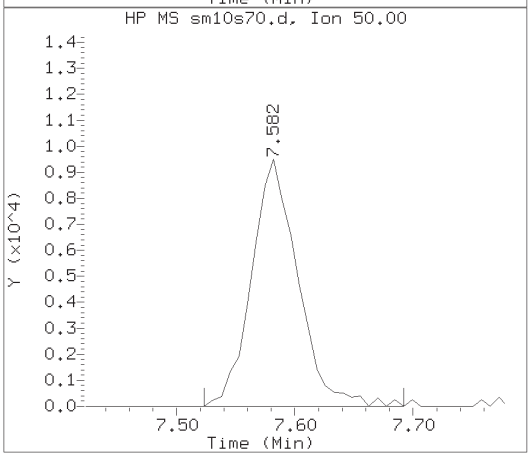
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 39
Compound Name : Benzene
Scan Number : 844
Retention Time (minutes): 7.582
Relative Retention Time :-0.00004
Quant Ion : 78.00
Area (flag) : 117754
On-Column Amount (ng) : 0.3947

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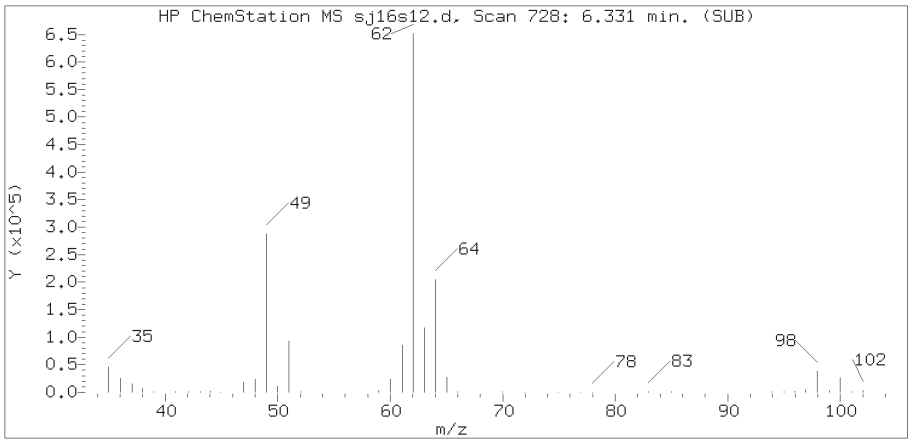
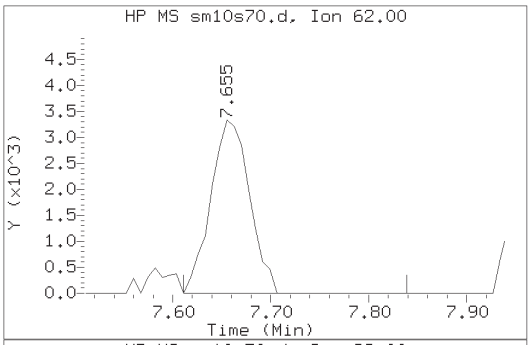
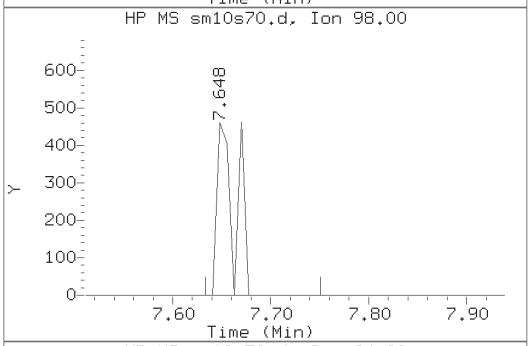
Target 3.5 esignature [illegible]

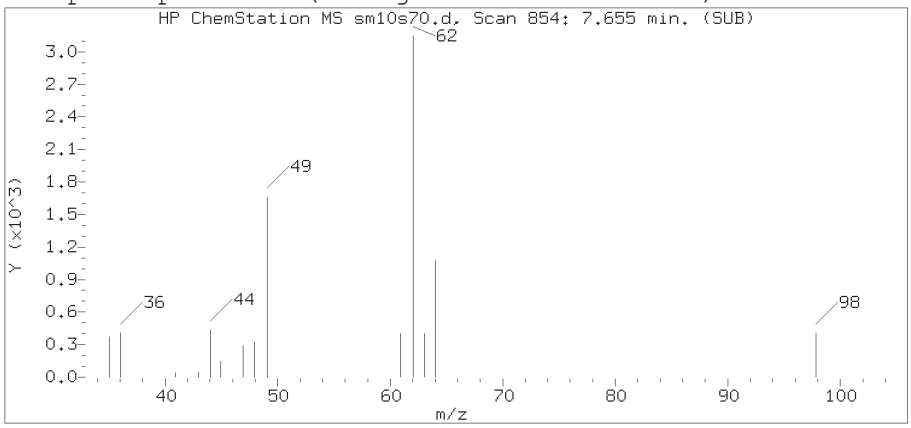
Reference Standard Spectrum for 1,2-Dichloroethane

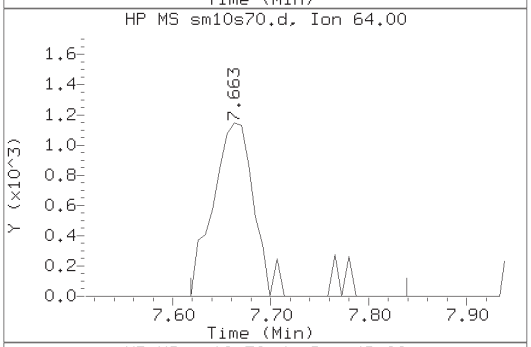




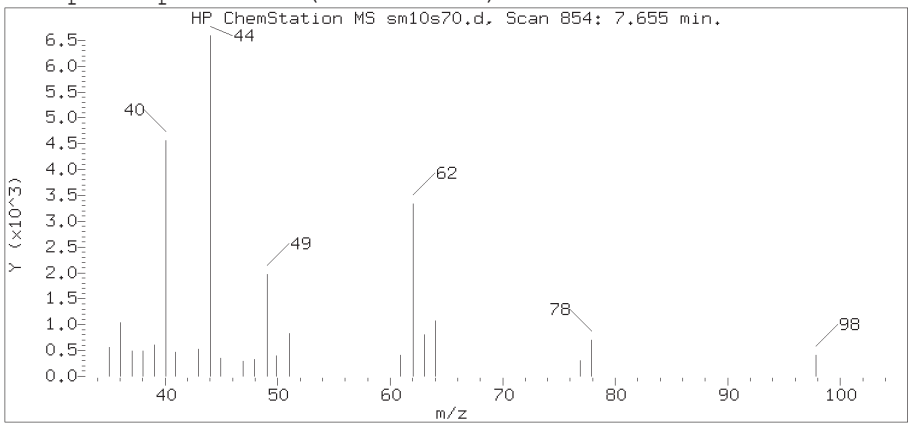


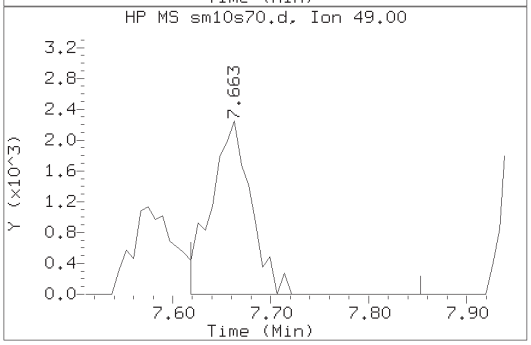
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 40
Compound Name : 1,2-Dichloroethane
Scan Number : 854
Retention Time (minutes): 7.655
Relative Retention Time : 0.00088
Quant Ion : 62.00
Area (flag) : 9151
On-Column Amount (ng) : 0.2007

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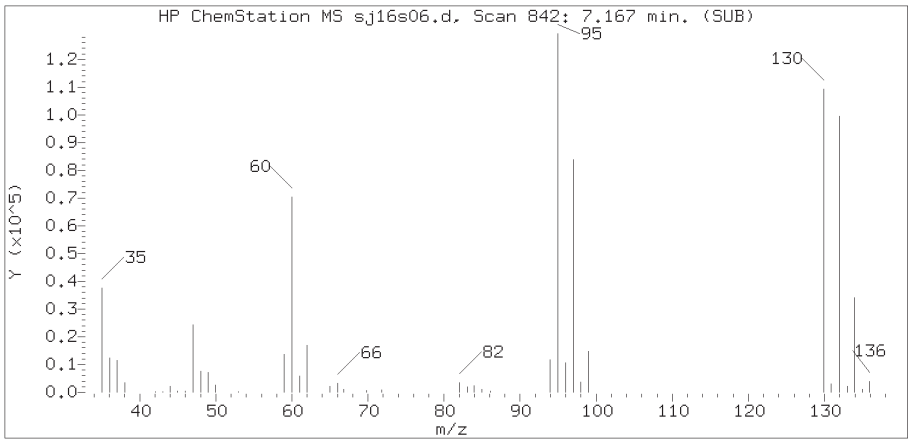
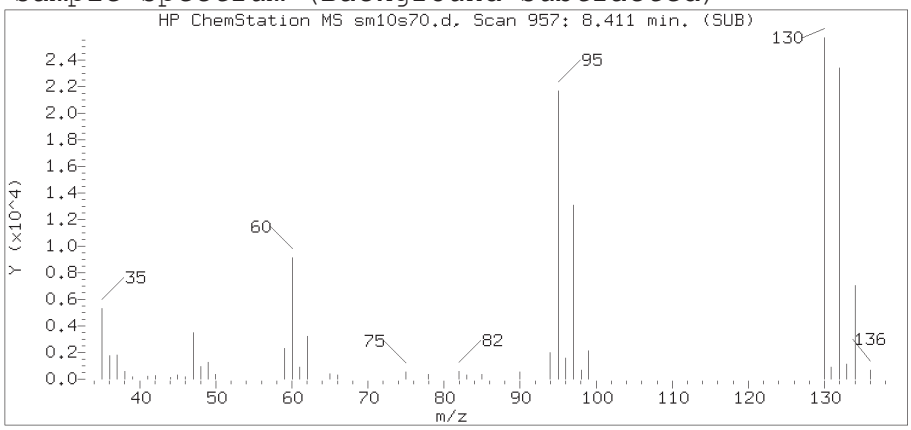
Target 3.5 esignature [illegible]

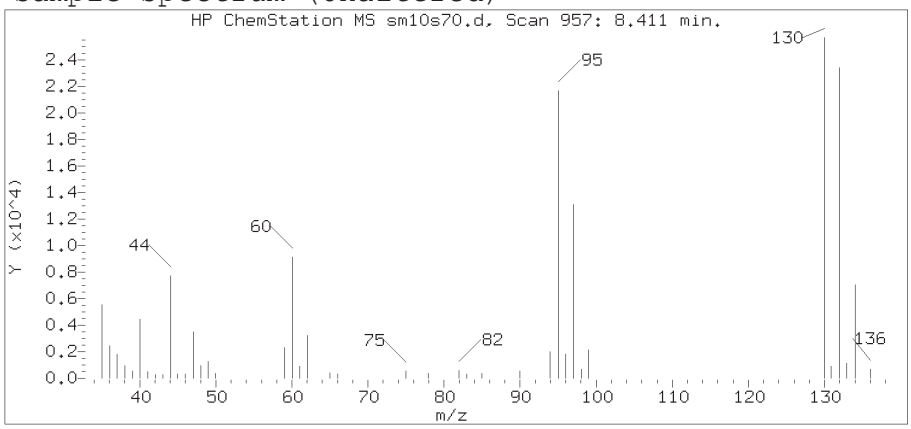
Reference Standard Spectrum for Trichloroethene

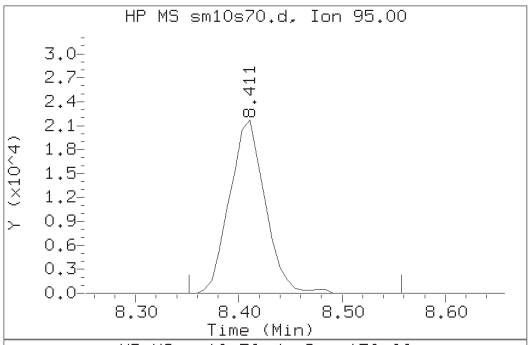


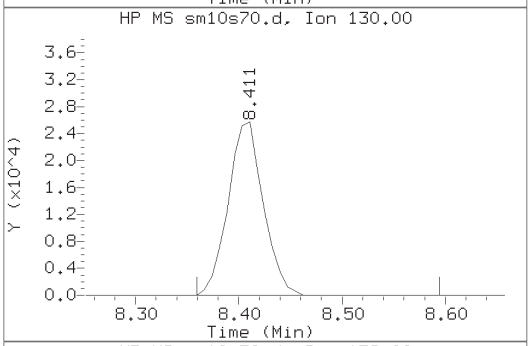
Sample Spectrum (Background Subtracted)

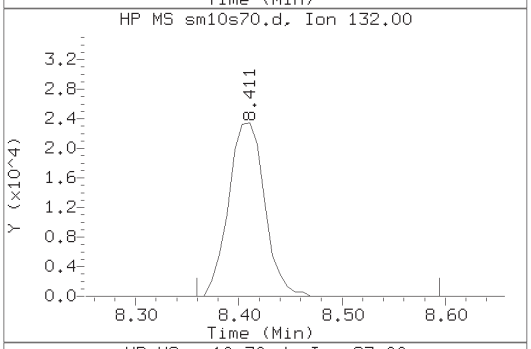


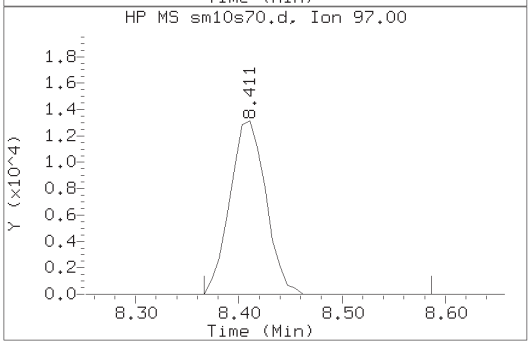
Sample Spectrum (Unaltered)











Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 43
Compound Name : Trichloroethene
Scan Number : 957
Retention Time (minutes): 8.411
Relative Retention Time : 0.00005
Quant Ion : 95.00
Area (flag) : 51825
On-Column Amount (ng) : 0.6489

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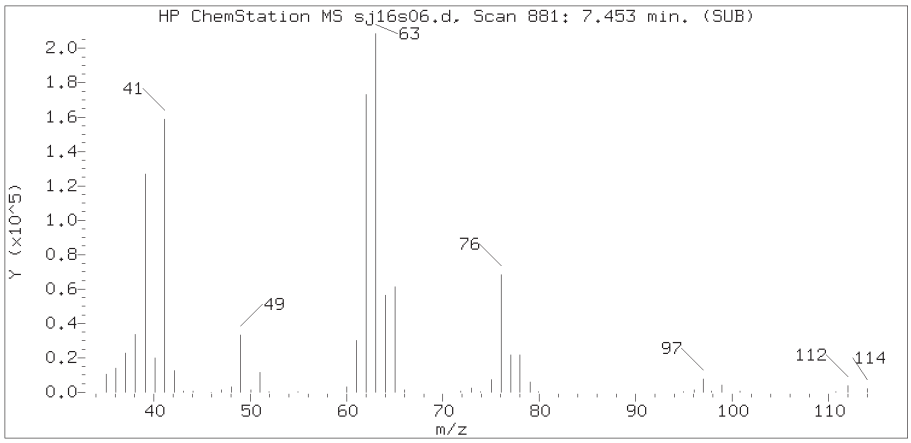
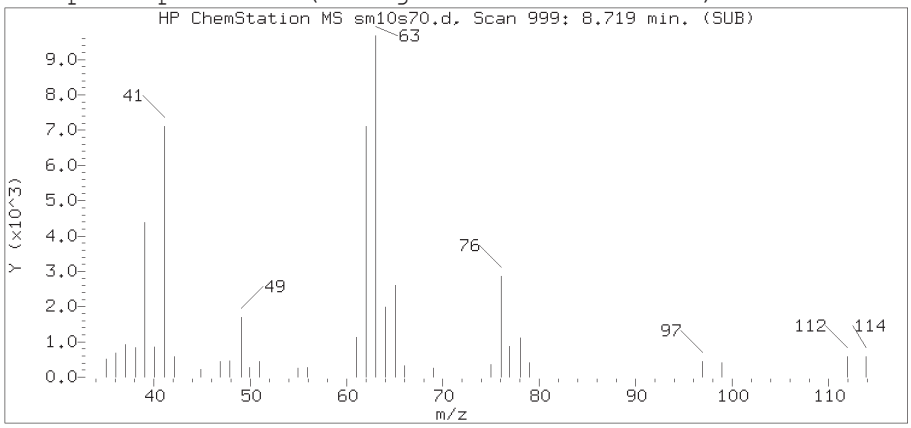
Target 3.5 esignature [illegible]

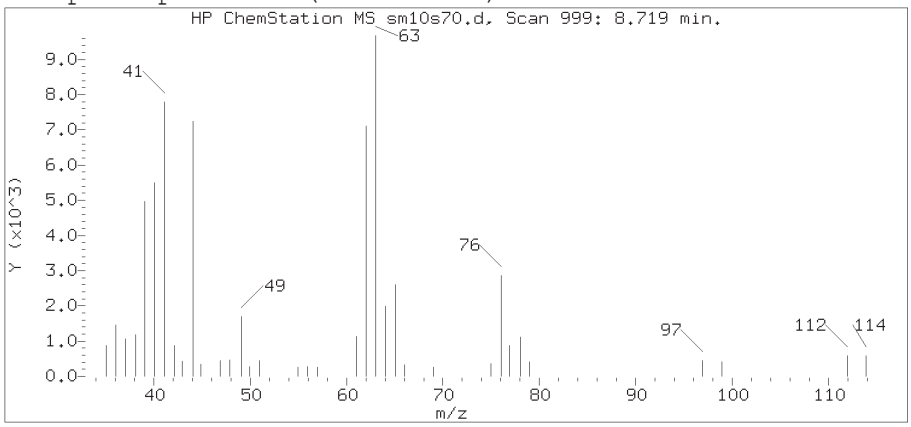
Reference Standard Spectrum for 1,2-Dichloropropane

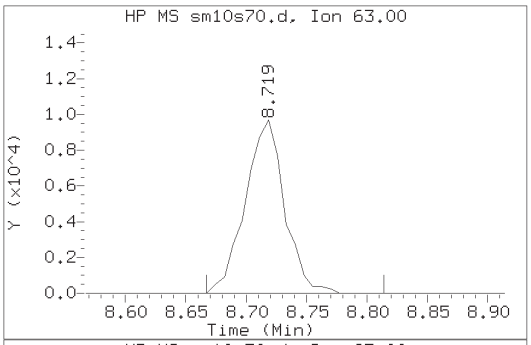


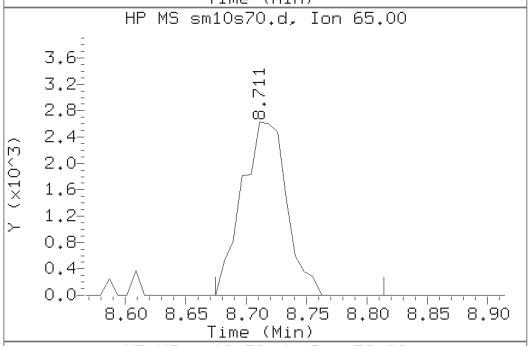
Sample Spectrum (Background Subtracted)

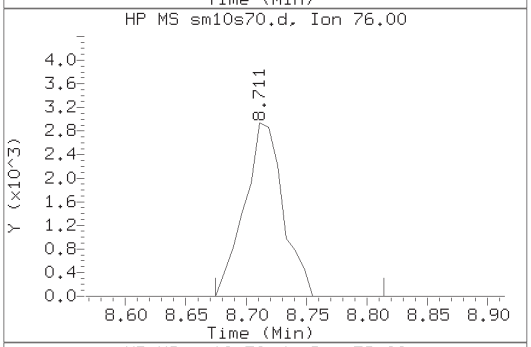


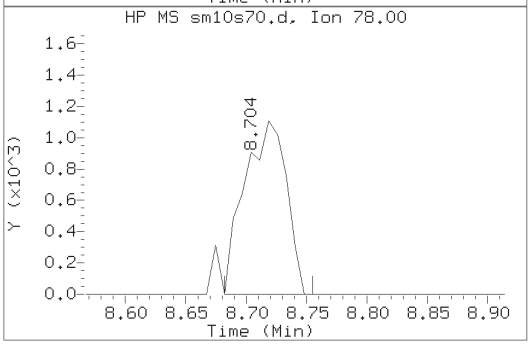
Sample Spectrum (Unaltered)











Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 44
Compound Name : 1,2-Dichloropropane
Scan Number : 999
Retention Time (minutes): 8.719
Relative Retention Time : 0.00009
Quant Ion : 63.00
Area (flag) : 21908
On-Column Amount (ng) : 0.2818

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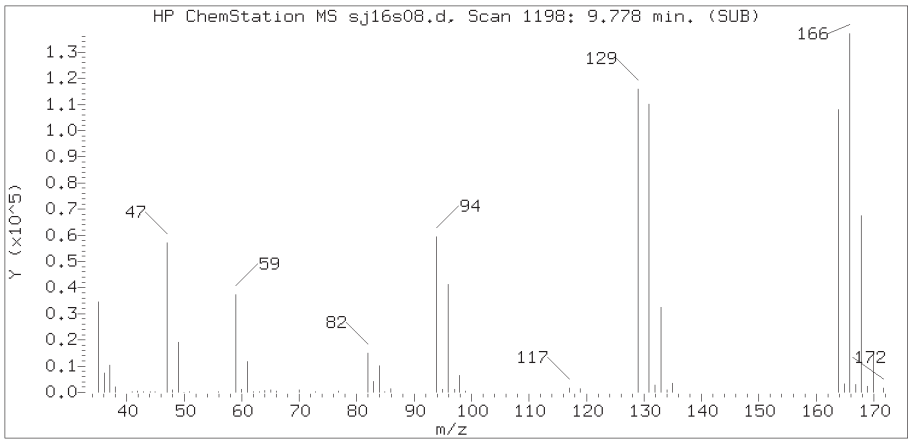
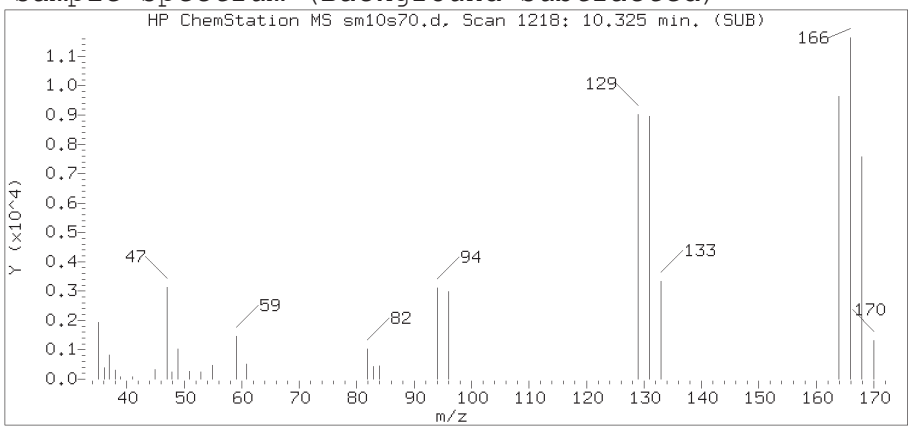
Target 3.5 esignature [illegible]

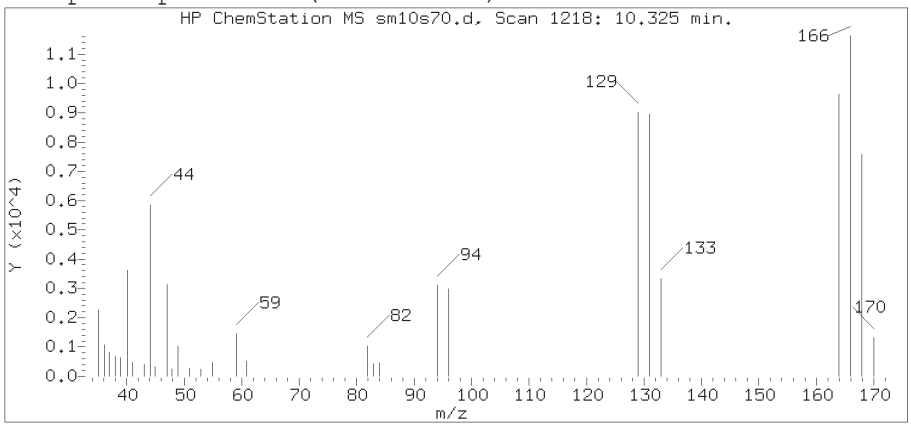
Reference Standard Spectrum for Tetrachloroethene

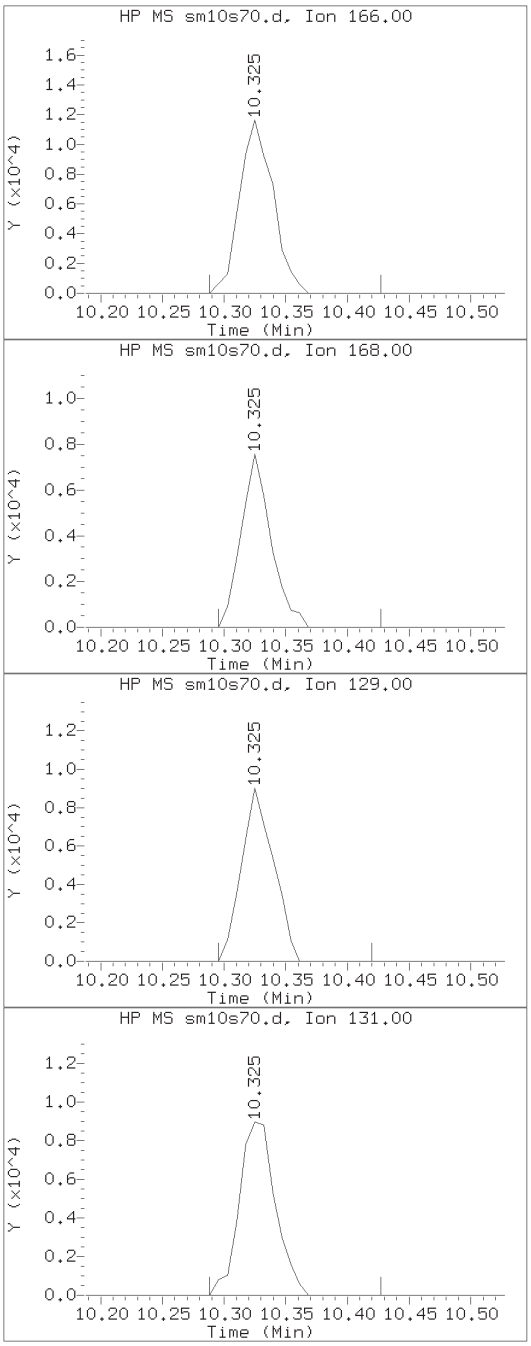


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 58
Compound Name : Tetrachloroethene
Scan Number : 1218
Retention Time (minutes): 10.325
Relative Retention Time : 0.00027
Quant Ion : 166.00
Area (flag) : 21946
On-Column Amount (ng) : 0.2227

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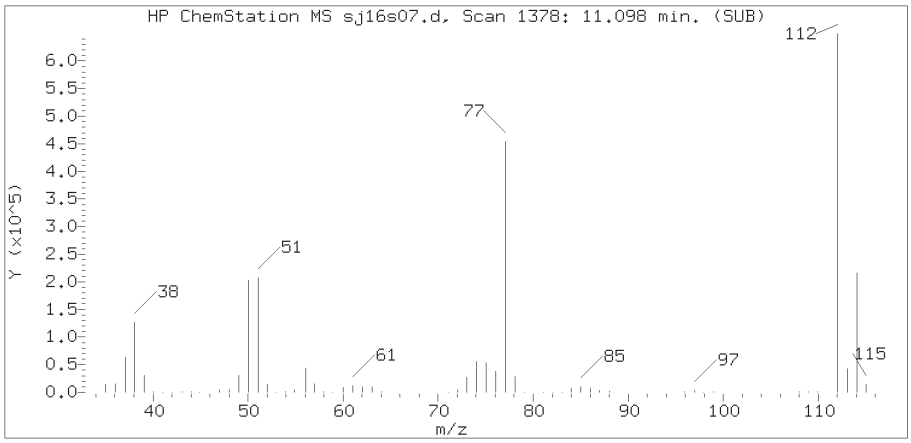
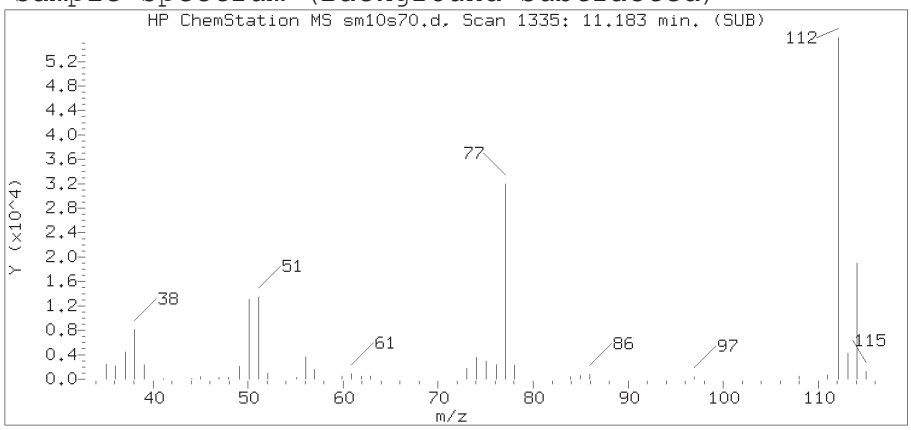
Target 3.5 esignature [illegible]

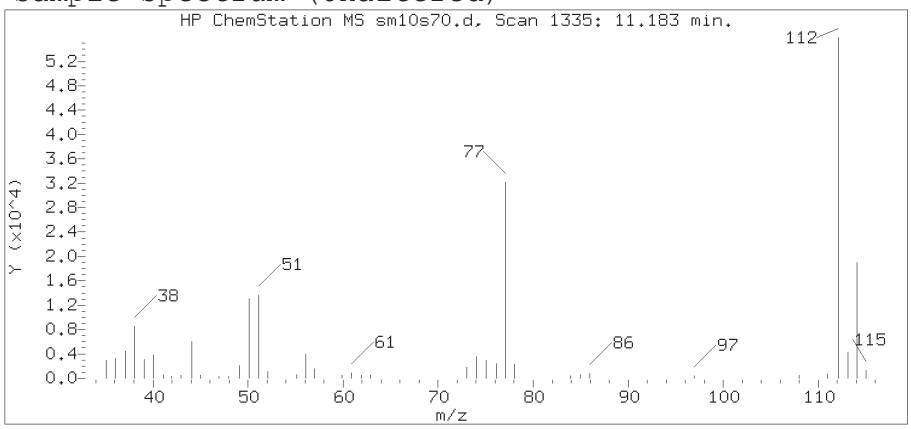
Reference Standard Spectrum for Chlorobenzene

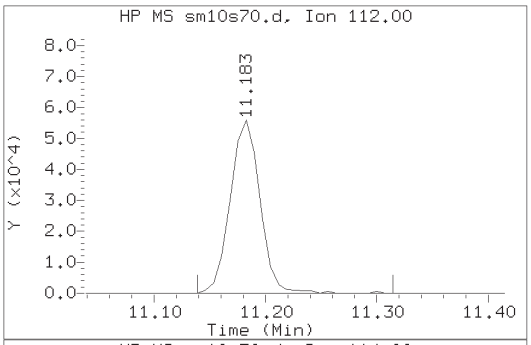


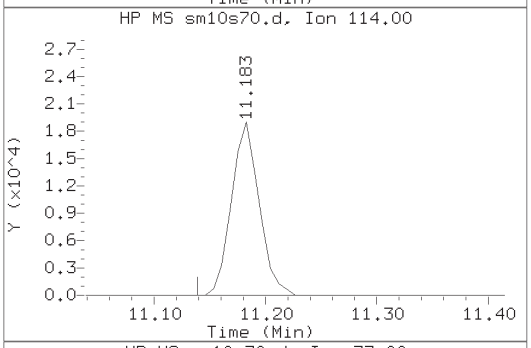
Sample Spectrum (Background Subtracted)

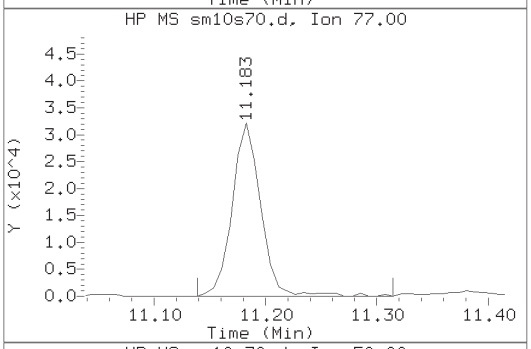


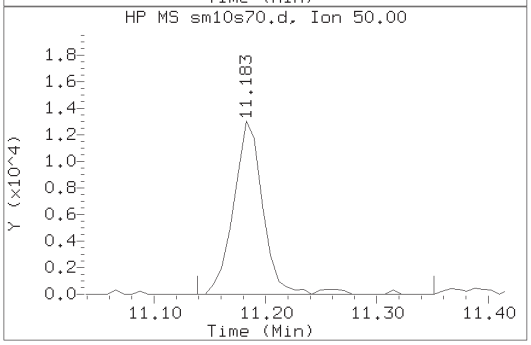
Sample Spectrum (Unaltered)











Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 63
Compound Name : Chlorobenzene
Scan Number : 1335
Retention Time (minutes): 11.183
Relative Retention Time : 0.00037
Quant Ion : 112.00
Area (flag) : 104180
On-Column Amount (ng) : 0.5739

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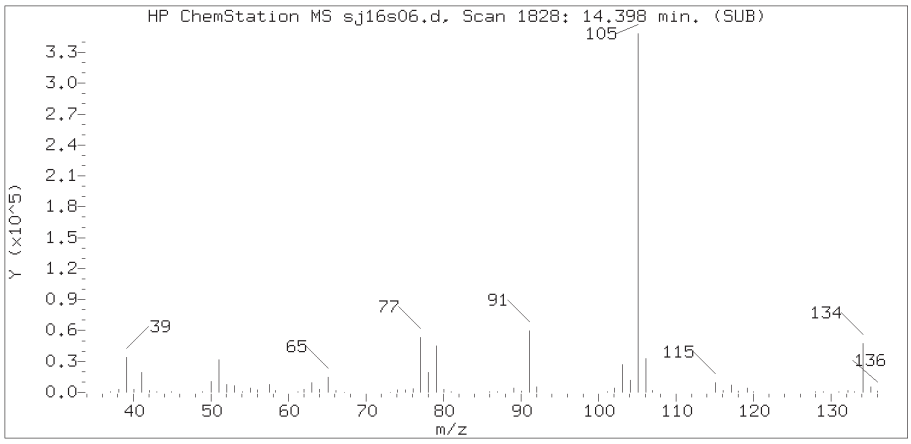
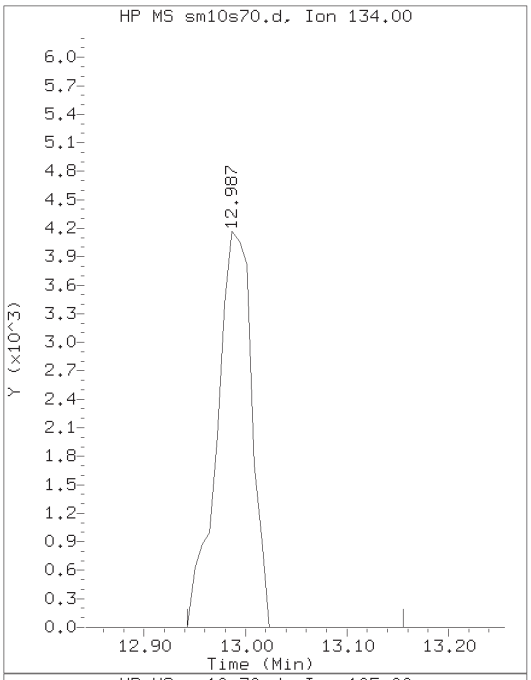
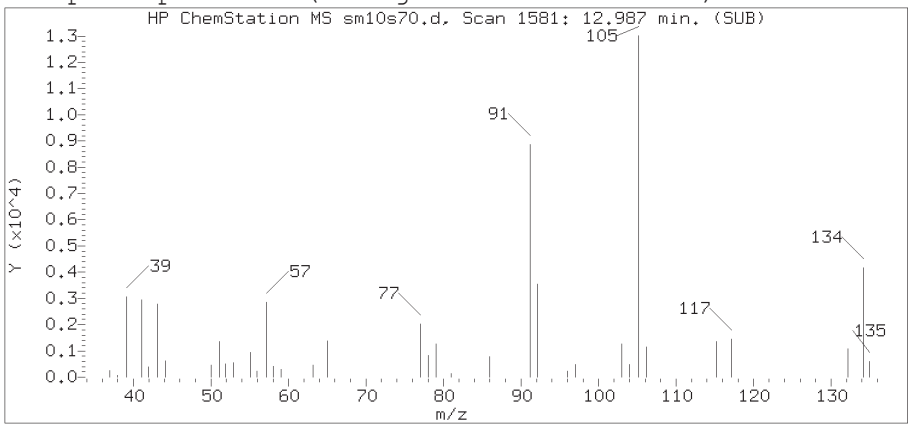
Target 3.5 esignature [illegible]

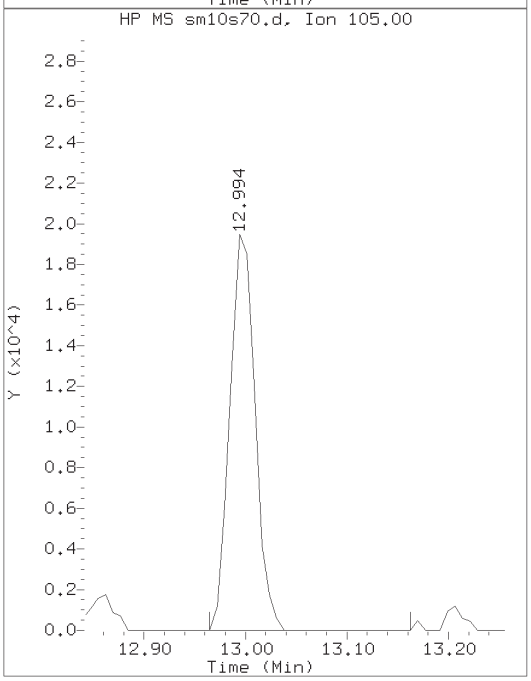
Reference Standard Spectrum for sec-Butylbenzene



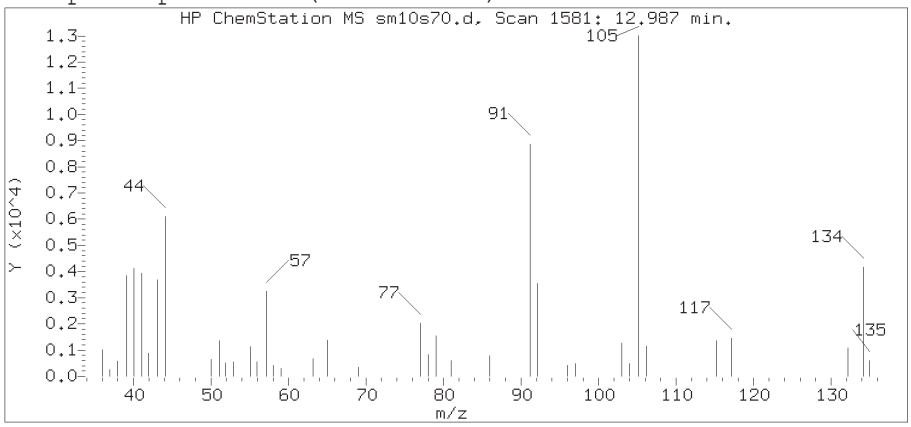


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 85
Compound Name : sec-Butylbenzene
Scan Number : 1581
Retention Time (minutes): 12.987
Relative Retention Time : 0.00150
Quant Ion : 134.00
Area (flag) : 9939
On-Column Amount (ng) : 0.1661

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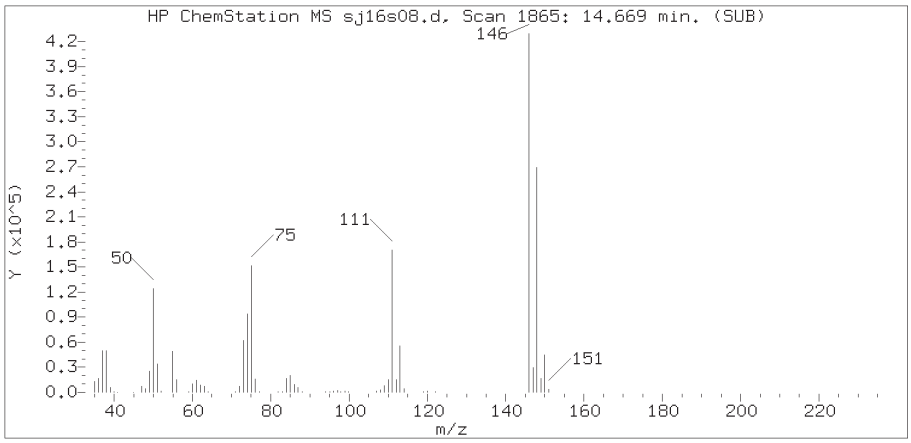
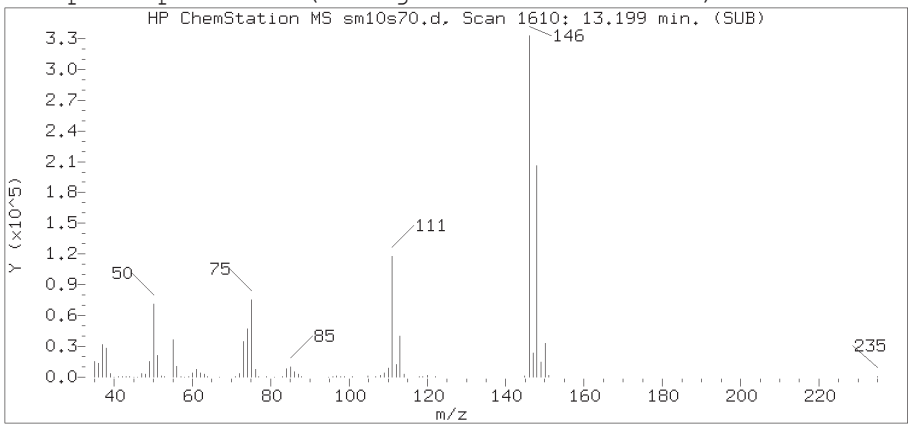
Target 3.5 esignature [illegible]

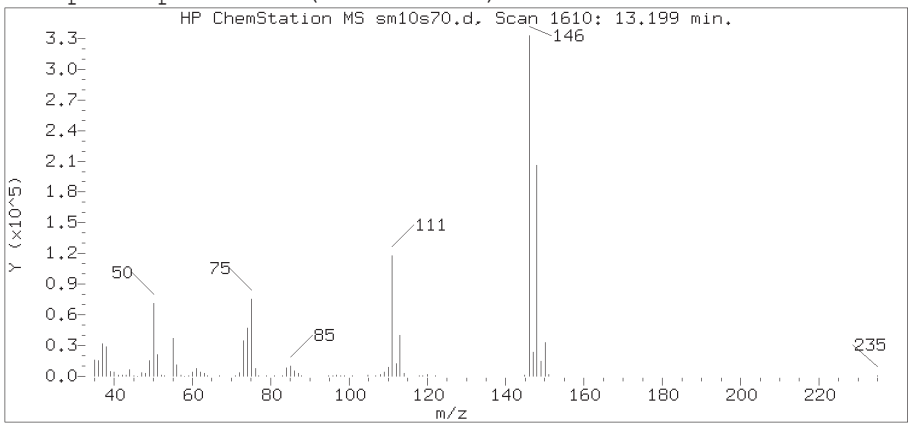
Reference Standard Spectrum for 1,4-Dichlorobenzene

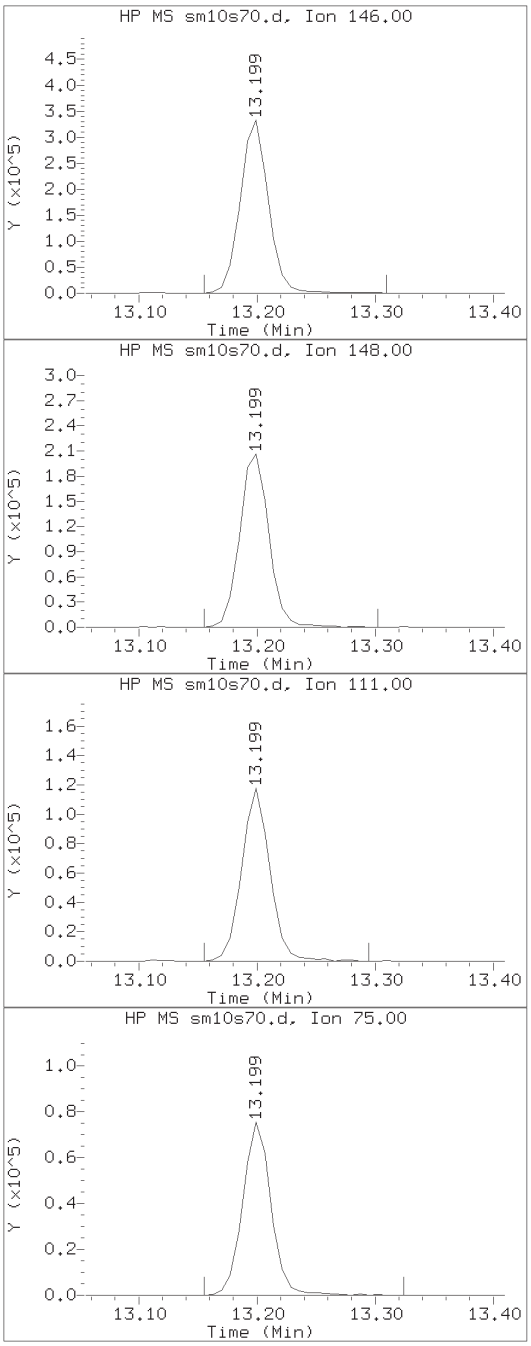


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

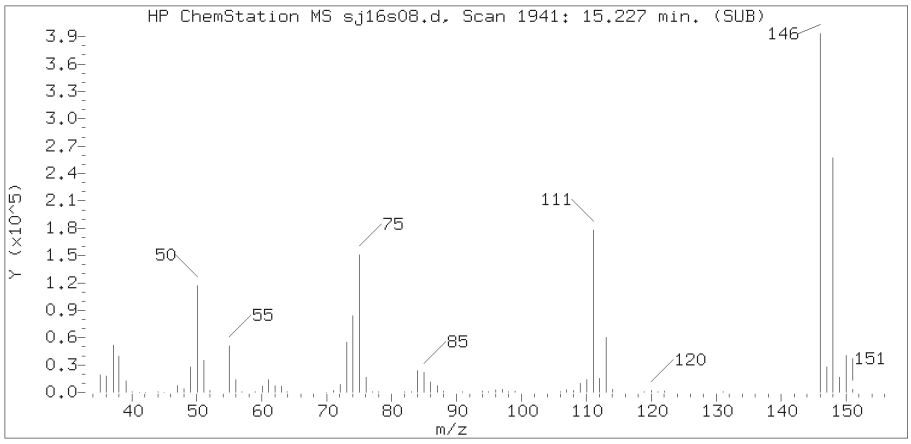
Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

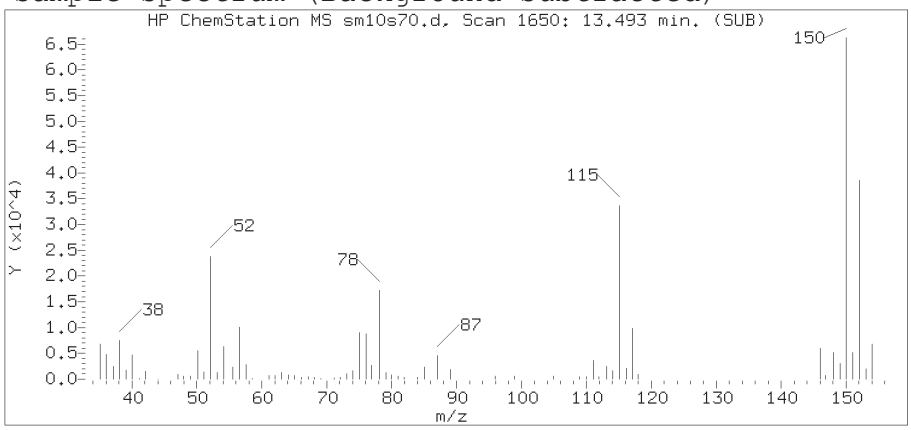
Compound Number : 88
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1610
Retention Time (minutes): 13.199
Relative Retention Time : 0.00060
Quant Ion : 146.00
Area (flag) : 552724
On-Column Amount (ng) : 4.3378

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:17.
Target 3.5 esignature [illegible]

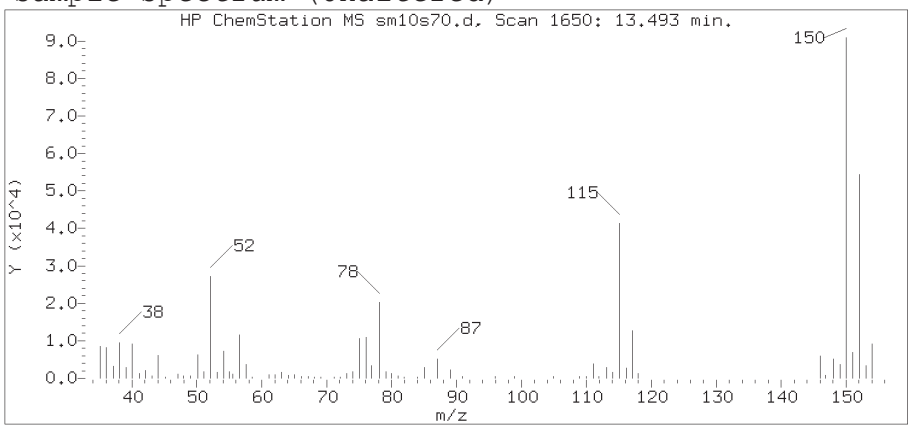
Reference Standard Spectrum for 1,2-Dichlorobenzene

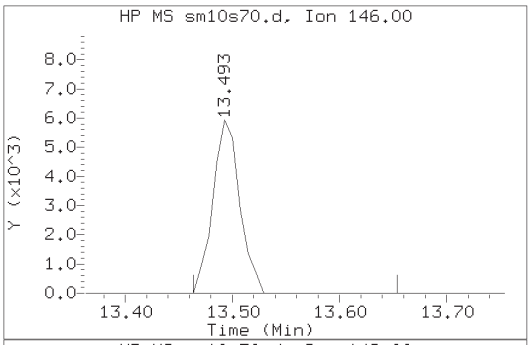


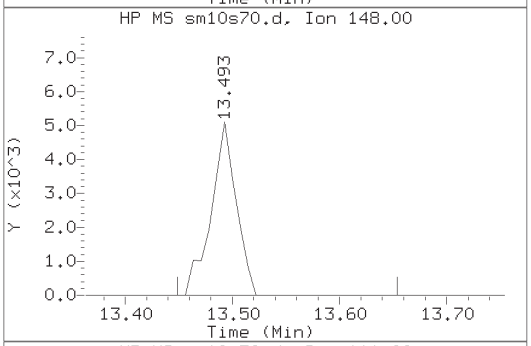
Sample Spectrum (Background Subtracted)

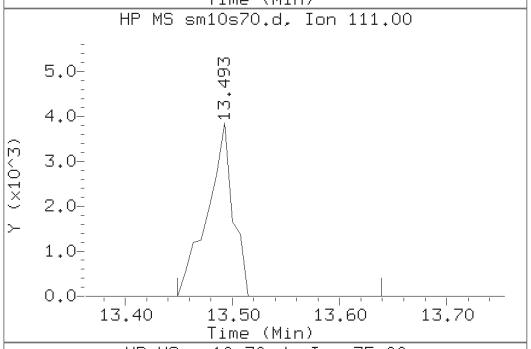


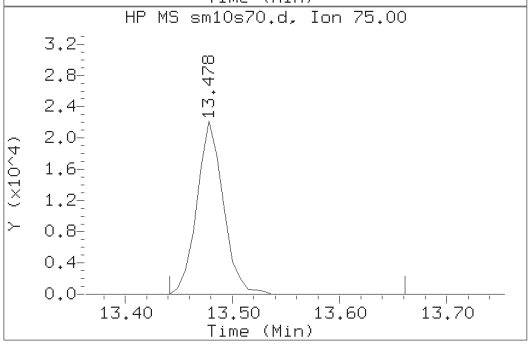
Sample Spectrum (Unaltered)











Data File: /chem/SH08359.i/14mar10b.b/sm10s70.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 04:42 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:17 sej02002

Sample Name: BREWA Lab Sample ID: 7384707

Compound Number : 91
Compound Name : 1,2-Dichlorobenzene
Scan Number : 1650
Retention Time (minutes): 13.493
Relative Retention Time : 0.00064
Quant Ion : 146.00
Area (flag) : 10365
On-Column Amount (ng) : 0.1039

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:17.
Target 3.5 esignature [illegible]

BREWADL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384707DL

Data file: /chem/SH08359.i/14mar11a.b/sm11s06.d Injection date and time: **11-MAR-2014 20:32**
Data file Sample Info. Line: BREWADL;7384707DL;1;0;;WAT19;DRAPER;;sm11b21; Instrument ID: **SH08359.i** Batch: **S140702AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar11a.b/sm11b21.d**

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 11-MAR-2014 17:34
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar11a.b/sm11c01.d**

Bottle Code: **039B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.956	(0.007)	895	96	1038671	(-26)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.195	(-0.002)	174	223158	4.307	86%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.471	(-0.002)	152	229989	4.684	94%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)				Not Detected					2	5
2) Chloromethane	(1)				Not Detected					2	5
3) Vinyl Chloride	(1)				Not Detected					1	5
4) Bromomethane	(1)				Not Detected					1	5
5) Chloroethane	(1)	2.940	(-0.000)	64	73347	1.054	10.54			2	5
7) Trichlorofluoromethane	(1)				Not Detected					2	5
10) 1,1-Dichloroethene	(1)	3.871	(-0.000)	96	7830M	0.104	1.04		J	1	5
16) Methylene Chloride	(1)				Not Detected					3	5
20) trans-1,2-Dichloroethene	(1)				Not Detected					1	5
22) 1,1-Dichloroethane	(1)	5.499	(0.000)	63	407154	2.721	27.21			1	5
26) cis-1,2-Dichloroethene	(1)	6.321	(0.000)	96	37757	0.475	4.75		J	1	5
27) 2,2-Dichloropropane	(1)				Not Detected					2	5
32) Bromochloromethane	(1)				Not Detected					1	5
34) Chloroform	(1)				Not Detected					1	5
35) 1,1,1-Trichloroethane	(1)				Not Detected					1	5
38) Carbon Tetrachloride	(1)				Not Detected					1	5
37) 1,1-Dichloropropene	(1)				Not Detected					1	5
39) Benzene	(1)				Not Detected					1	5
40) 1,2-Dichloroethane	(1)				Not Detected					1	5
43) Trichloroethene	(1)				Not Detected					1	5
44) 1,2-Dichloropropane	(1)				Not Detected					1	5
45) Dibromomethane	(1)				Not Detected					1	5
47) Bromodichloromethane	(1)				Not Detected					1	5
50) cis-1,3-Dichloropropene	(1)				Not Detected					1	5
53) Toluene	(1)				Not Detected					1	5
54) trans-1,3-Dichloropropene	(1)				Not Detected					1	5
56) 1,1,2-Trichloroethane	(1)				Not Detected					1	5
58) Tetrachloroethene	(1)				Not Detected					1	5
59) 1,3-Dichloropropane	(1)				Not Detected					1	5
61) Dibromochloromethane	(1)				Not Detected					1	5
62) 1,2-Dibromoethane	(1)				Not Detected					1	5
63) Chlorobenzene	(1)				Not Detected					1	5
64) 1,1,1,2-Tetrachloroethane	(1)				Not Detected					1	5
65) Ethylbenzene	(1)				Not Detected					1	5
67) m+p-Xylene	(1)				Not Detected					2	5
68) o-Xylene	(1)				Not Detected					1	5

M = Compound was manually integrated.

Digitally signed by Sara E. Johnson on 03/11/2014 at 21:14. Target 3.5 esignature user ID: sej02002

BREWADL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384707DL

Data file: /chem/SH08359.i/14mar11a.b/sm11s06.d Injection date and time: **11-MAR-2014 20:32**
Data file Sample Info. Line: BREWADL;7384707DL;1;0;;WAT19;DRAPER;;sm11b21; Instrument ID: **SH08359.i** Batch: **S140702AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar11a.b/sm11b21.d**

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 11-MAR-2014 17:34
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar11a.b/sm11c01.d**

Bottle Code: **039B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

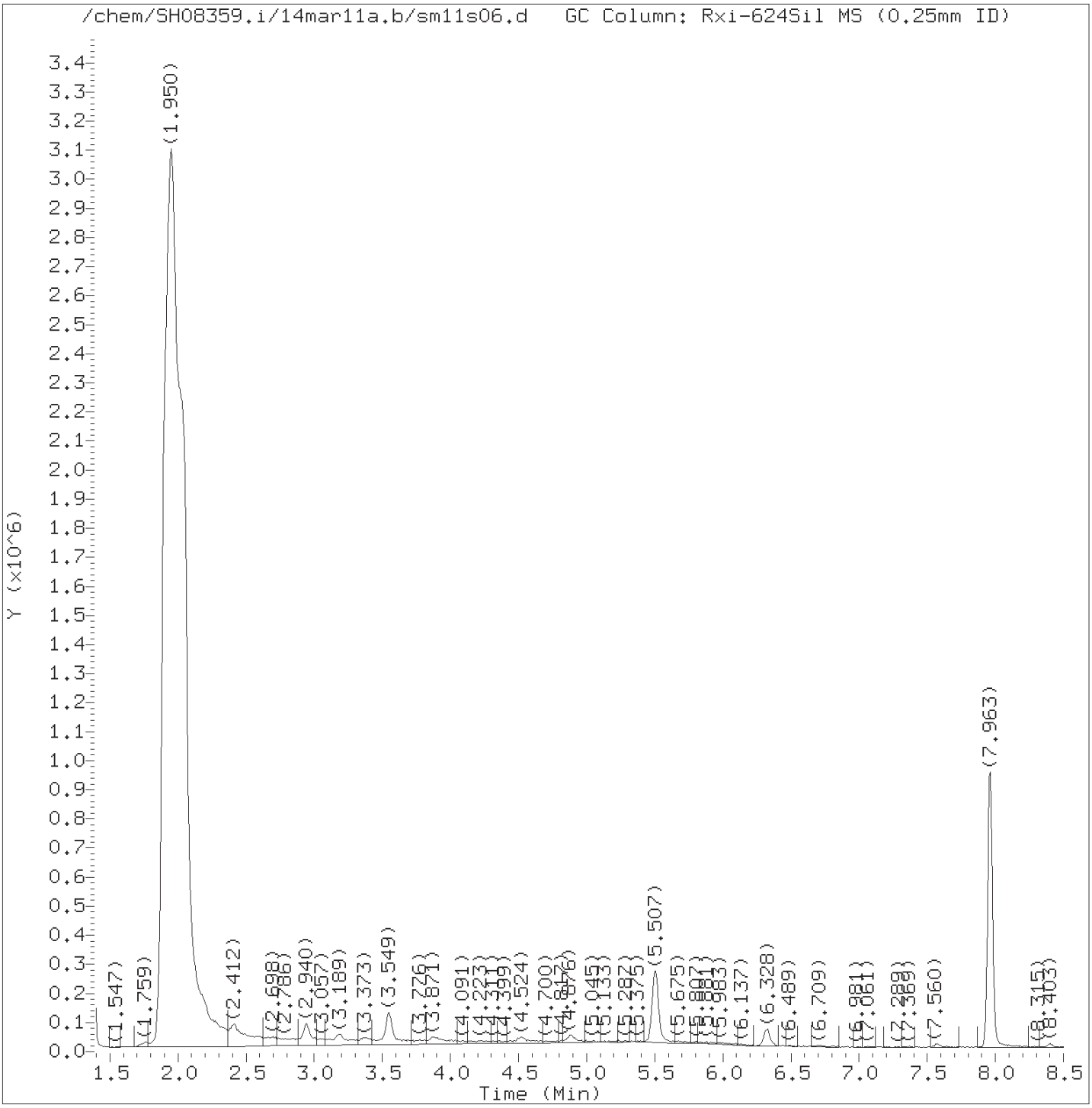
Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)			Not Detected					1	5
71) Xylene (Total)	(1)			Not Detected					1	5
70) Bromoform	(1)			Not Detected					2	5
72) Isopropylbenzene	(1)			Not Detected					1	5
74) 1,1,2,2-Tetrachloroethane	(1)			Not Detected					1	5
75) Bromobenzene	(1)			Not Detected					1	5
76) 1,2,3-Trichloropropane	(1)			Not Detected					2	5
78) n-Propylbenzene	(1)			Not Detected					1	5
79) 2-Chlorotoluene	(1)			Not Detected					1	5
80) 1,3,5-Trimethylbenzene	(1)			Not Detected					1	5
81) 4-Chlorotoluene	(1)			Not Detected					2	5
82) tert-Butylbenzene	(1)			Not Detected					1	5
84) 1,2,4-Trimethylbenzene	(1)			Not Detected					1	5
85) sec-Butylbenzene	(1)			Not Detected					1	5
87) p-Isopropyltoluene	(1)			Not Detected					1	5
86) 1,3-Dichlorobenzene	(1)			Not Detected					1	5
88) 1,4-Dichlorobenzene	(1)	13.192(-0.001)	146	35982	0.284	2.84		J	1	5
89) n-Butylbenzene	(1)			Not Detected					2	5
91) 1,2-Dichlorobenzene	(1)			Not Detected					1	5
93) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					4	5
95) 1,2,4-Trichlorobenzene	(1)			Not Detected					2	5
96) Hexachlorobutadiene	(1)			Not Detected					2	5
97) Naphthalene	(1)			Not Detected					2	5
98) 1,2,3-Trichlorobenzene	(1)			Not Detected					2	5

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/11/2014 at 21:14. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 10:06. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

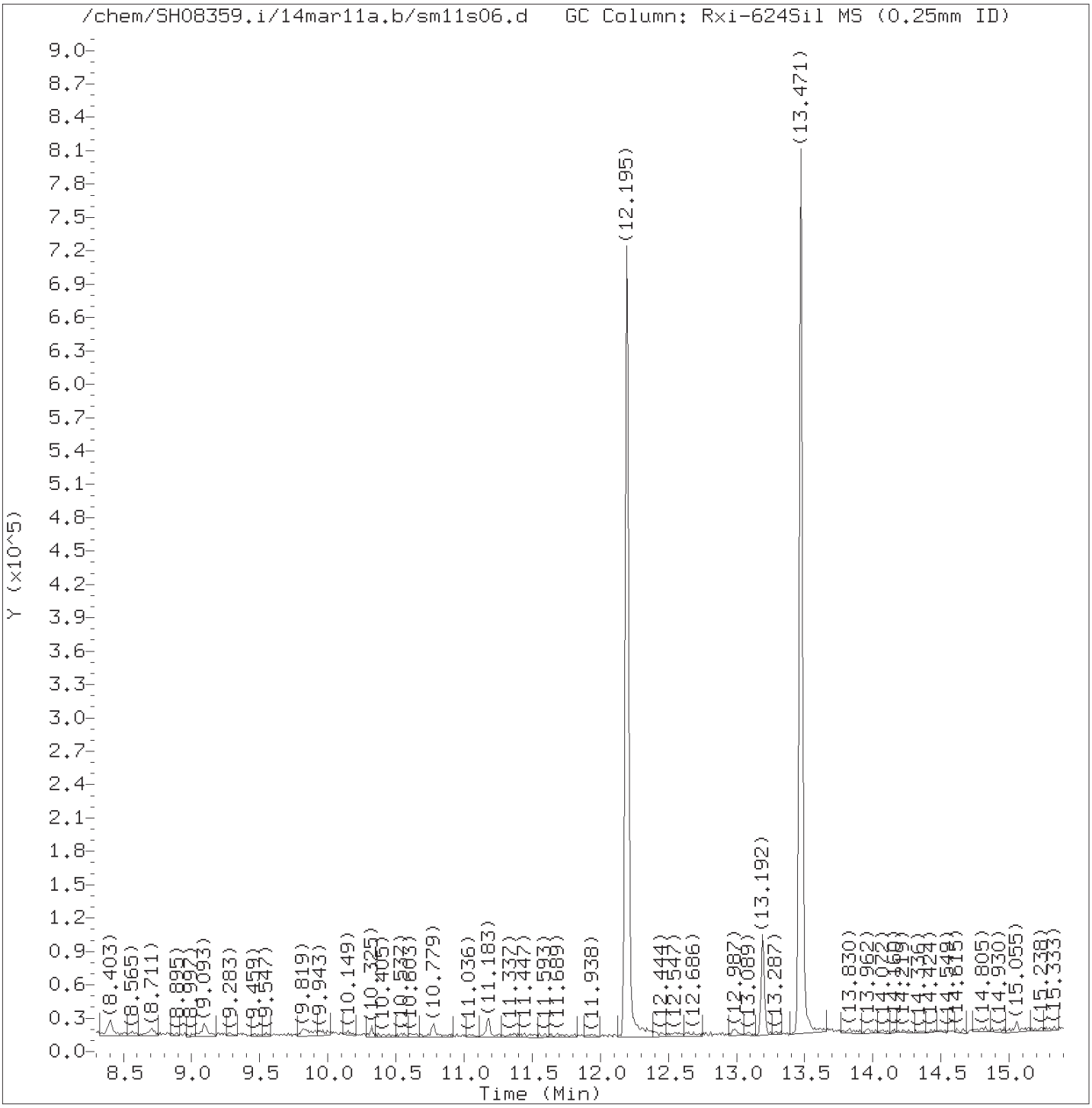
Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

Sample Name: BREWADL Lab Sample ID: 7384707DL

Digitally signed by Sara E. Johnson
on 03/11/2014 at 21:14.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

Sample Name: BREWADL Lab Sample ID: 7384707DL

Digitally signed by Sara E. Johnson
on 03/11/2014 at 21:14.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

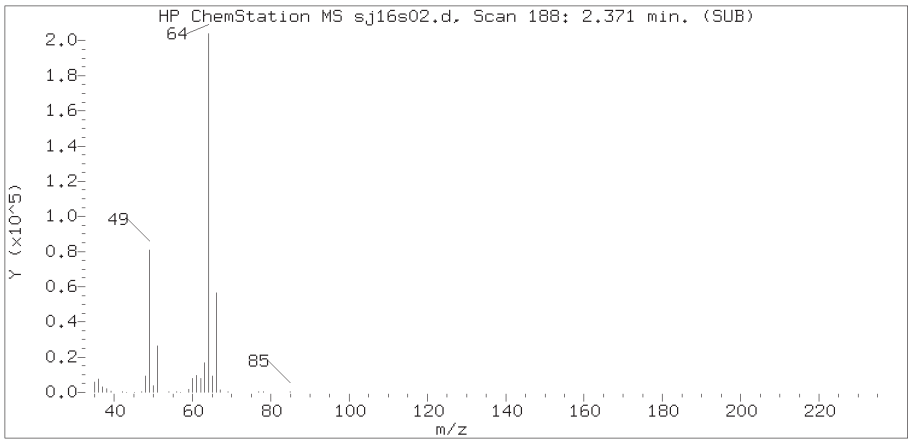
Sample Name: BREWADL Lab Sample ID: 7384707DL

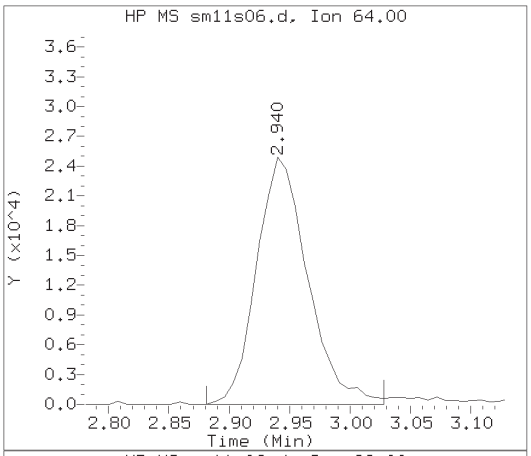
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Chloroethane	(1)	2.940	64	73347	1.054
10) 1,1-Dichloroethene	(1)	3.871	96	7830M	0.104
22) 1,1-Dichloroethane	(1)	5.499	63	407154	2.721
26) cis-1,2-Dichloroethene	(1)	6.321	96	37757	0.475
42)*Fluorobenzene	(1)	7.956	96	1038671	5.000
73)$4-Bromofluorobenzene	(1)	12.195	174	223158	4.307
88) 1,4-Dichlorobenzene	(1)	13.192	146	35982	0.284
90)$1,2-Dichlorobenzene-d4	(1)	13.471	152	229989	4.684

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

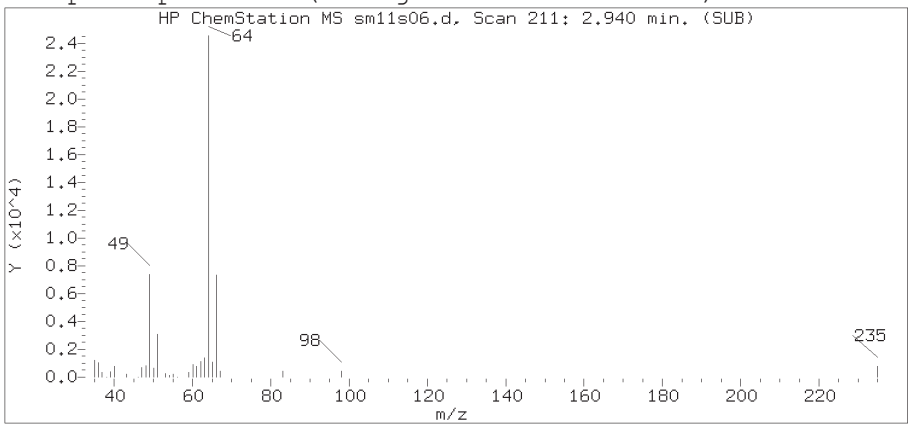
Digitally signed by Sara E. Johnson
on 03/11/2014 at 21:14.
Target 3.5 esignature user ID: sej02002

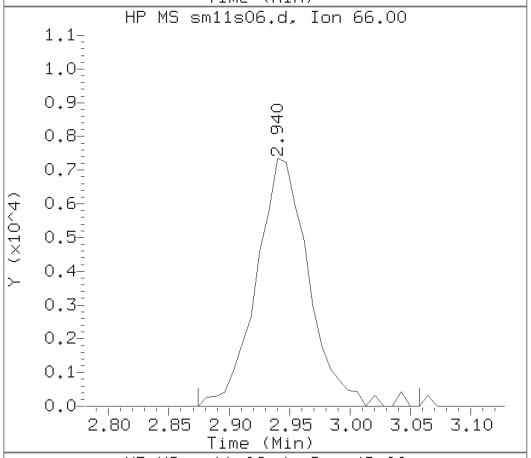
Reference Standard Spectrum for Chloroethane



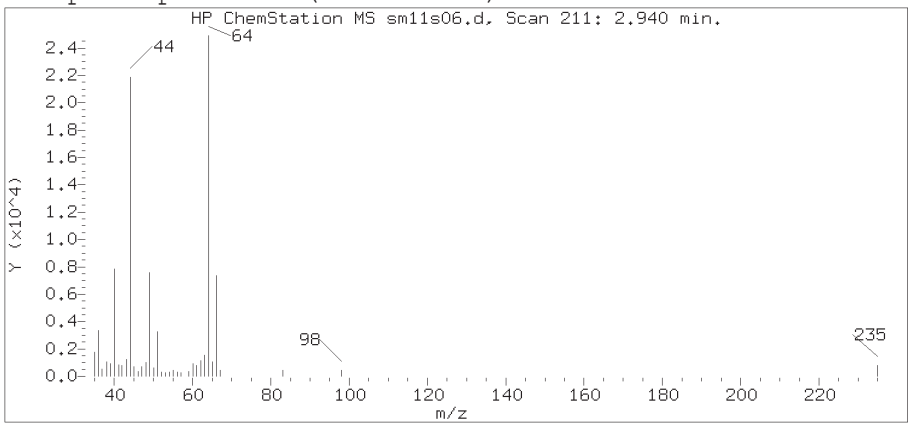


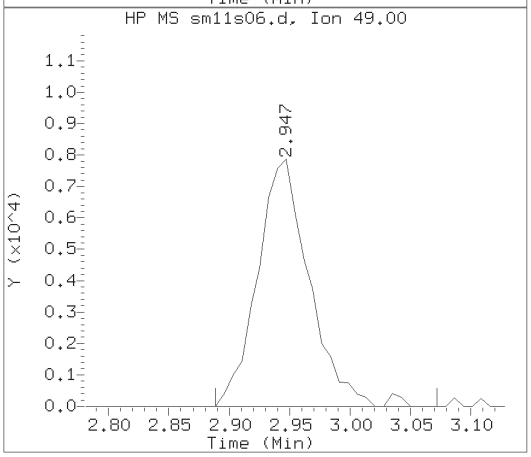
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

Sample Name: BREWADL Lab Sample ID: 7384707DL

Compound Number : 5
Compound Name : Chloroethane
Scan Number : 211
Retention Time (minutes): 2.940
Relative Retention Time :-0.00034
Quant Ion : 64.00
Area (flag) : 73347
On-Column Amount (ng) : 1.0539

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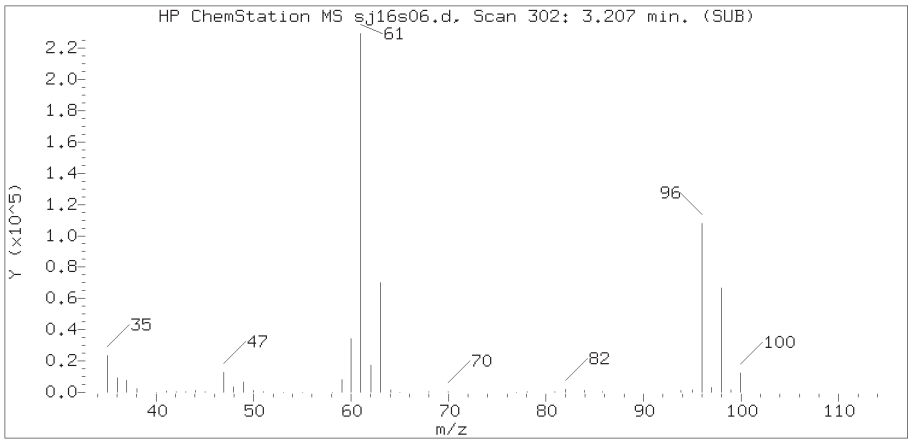
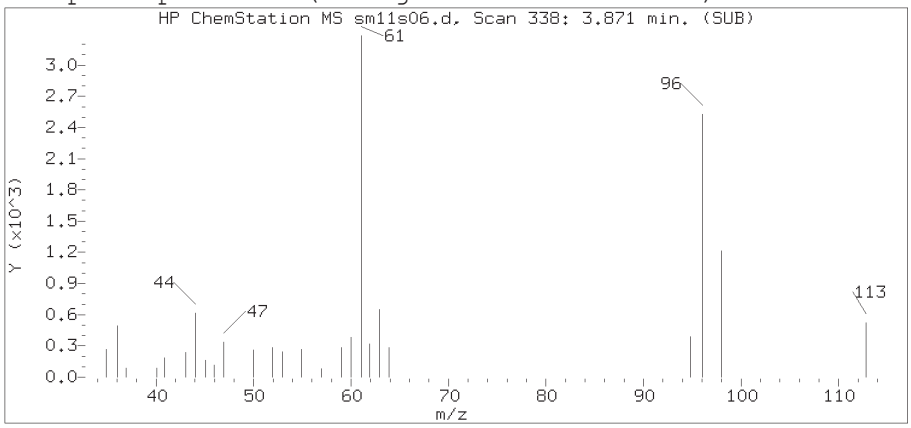
Target 3.5 esignature [illegible]

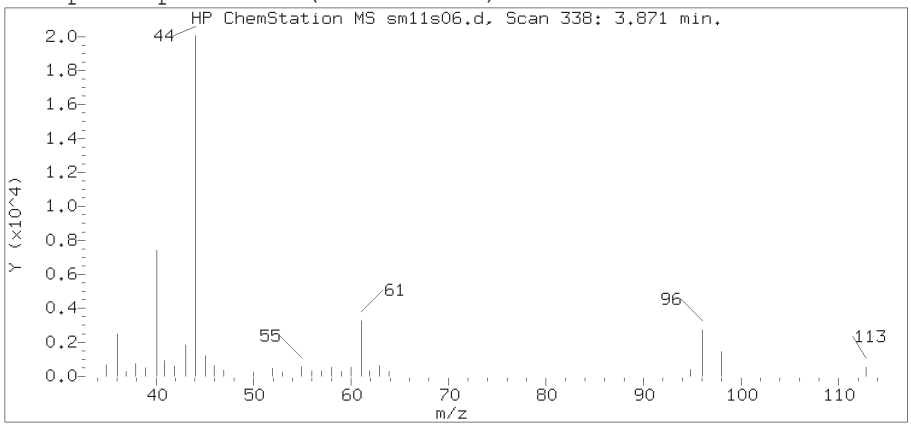
Reference Standard Spectrum for 1,1-Dichloroethene

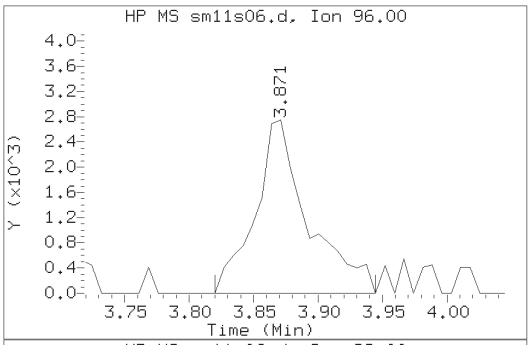


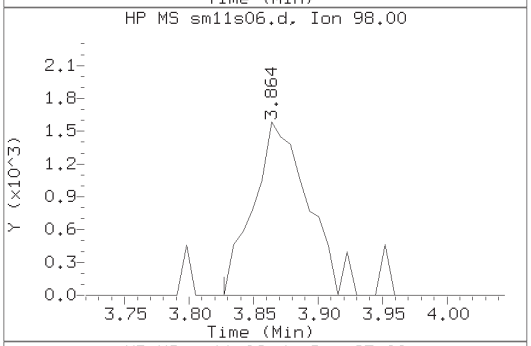
Sample Spectrum (Background Subtracted)

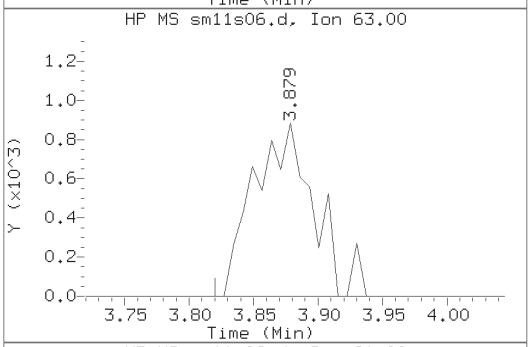


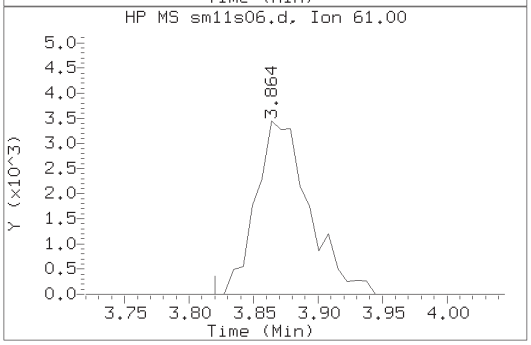
Sample Spectrum (Unaltered)











Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

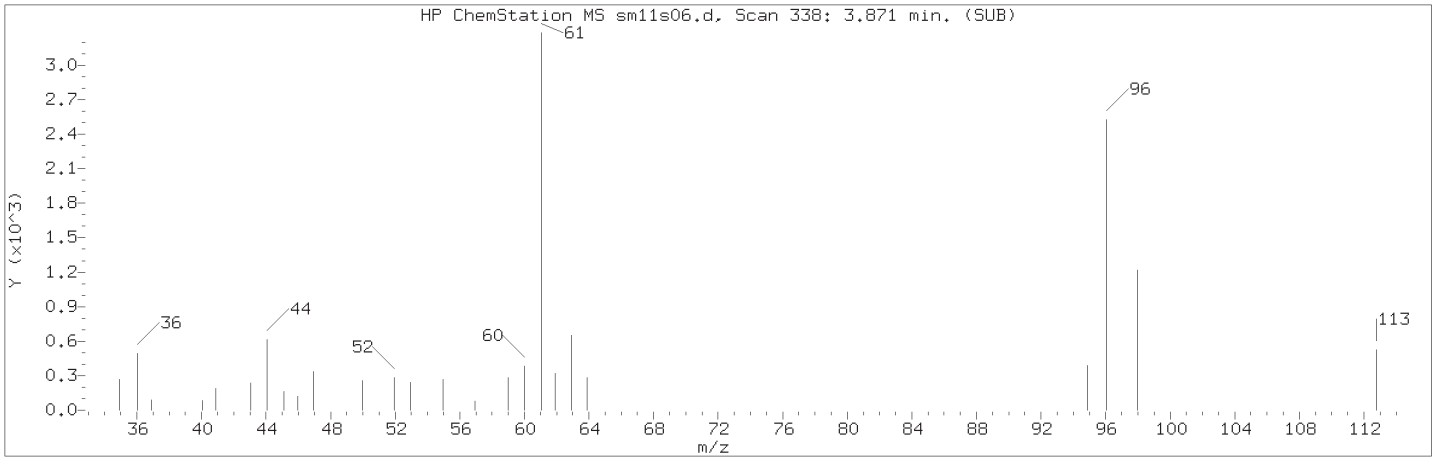
Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

Sample Name: BREWADL Lab Sample ID: 7384707DL

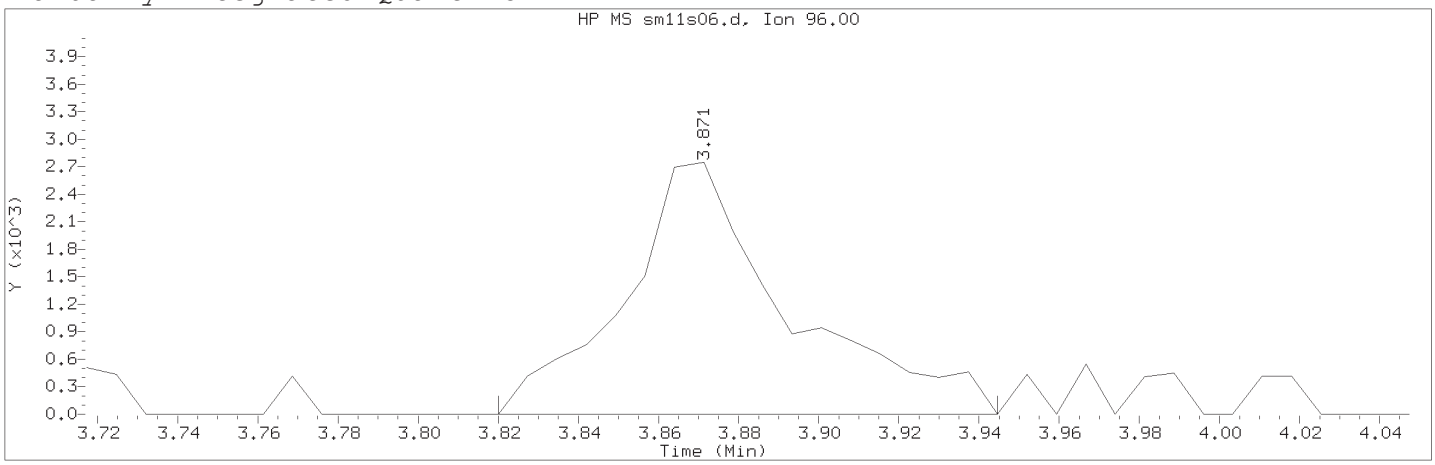
Compound Number : 10
Compound Name : 1,1-Dichloroethene
Scan Number : 338
Retention Time (minutes): 3.871
Relative Retention Time :-0.00045
Quant Ion : 96.00
Area (flag) : 7830M
On-Column Amount (ng) : 0.1036

Digitally signed by Sara E. Johnson on 03/11/2014 at 21:14.
Target 3.5 esignature [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

Sample Name: BREWADL Lab Sample ID: 7384707DL

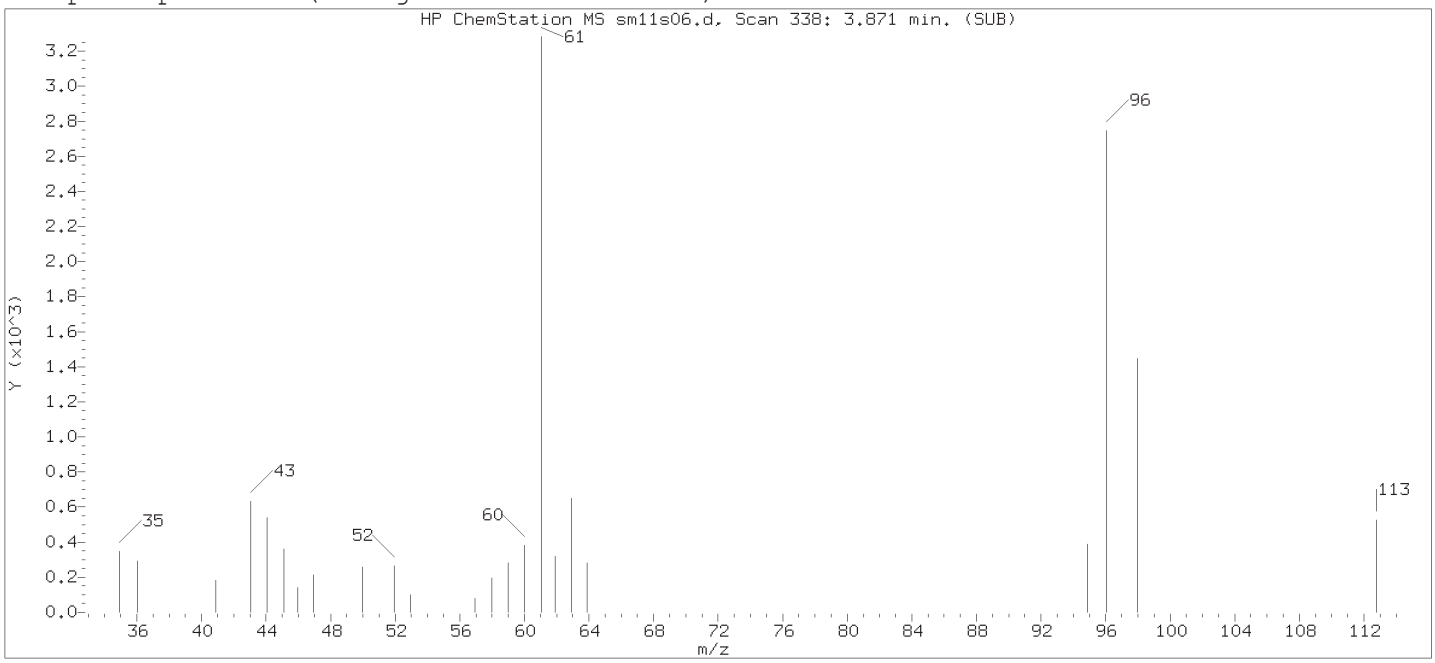
Compound Number : 10
Compound Name : 1,1-Dichloroethene
Scan Number : 338
Retention Time (minutes): 3.871
Quant Ion : 96.00
Area (flag) : 7830M
On-Column Amount (ng) : 0.1036
Integration start scan : 330 Integration stop scan: 347
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

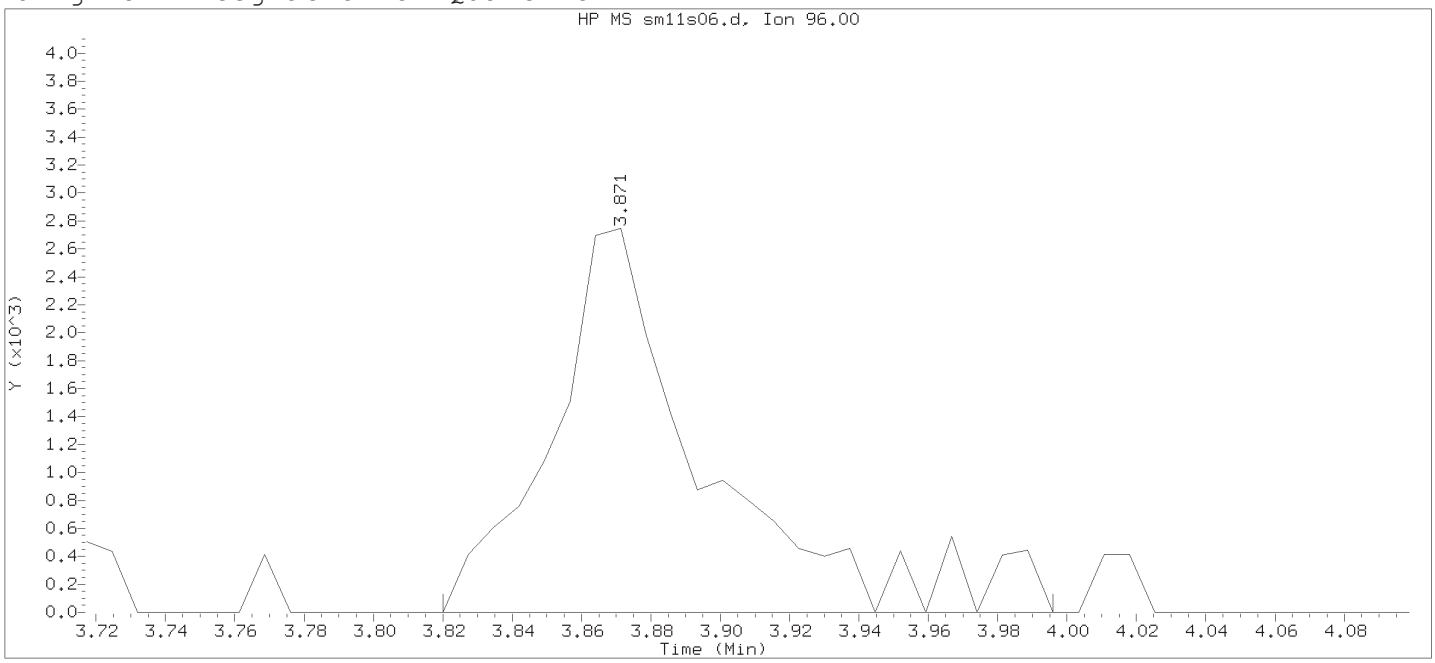
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/11/2014 at 21:14. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 10:06.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

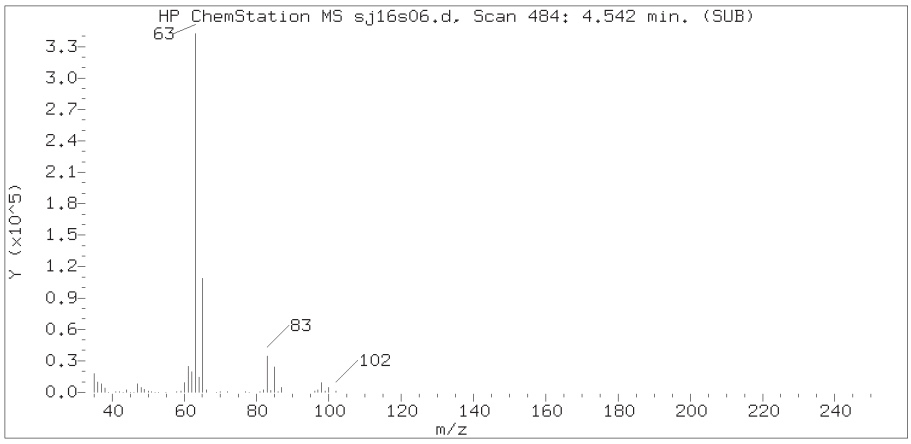
Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 20:53 Automation

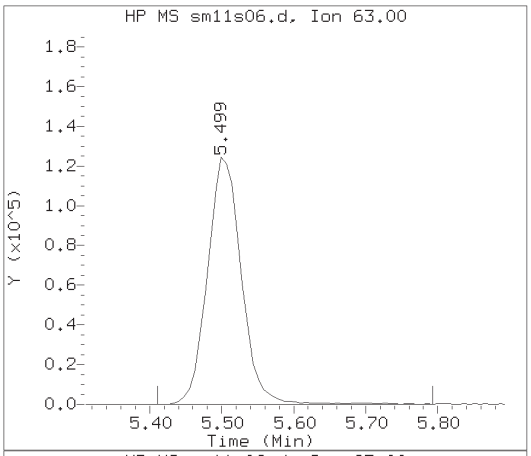
Sample Name: BREWADL Lab Sample ID: 7384707DL

Compound Number : 10
Compound Name : 1,1-Dichloroethene
Scan Number : 338
Retention Time (minutes): 3.871
Quant Ion : 96.00
Area : 8639
On-column Amount (ng) : 0.1143
Integration start scan : 330 Integration stop scan: 354
Y at integration start : 0 Y at integration end: 0

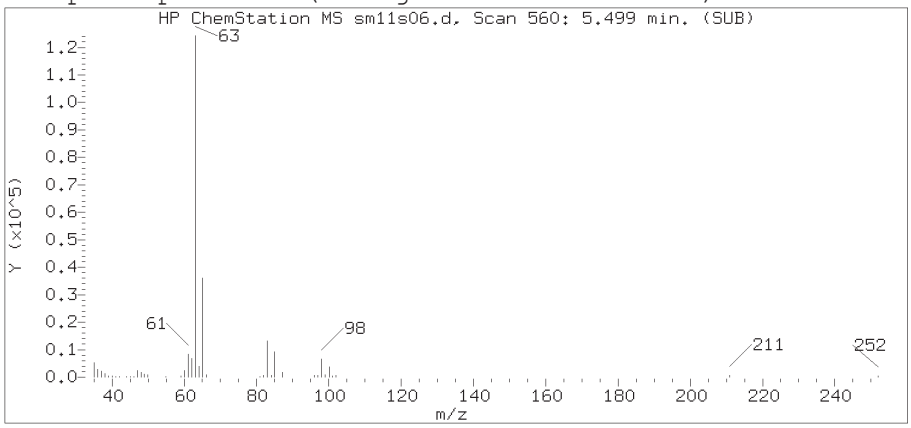
Digitally signed by Sara E. Johnson on 03/11/2014 at 21:14.
Target 3.5 esignature User ID: sej02002

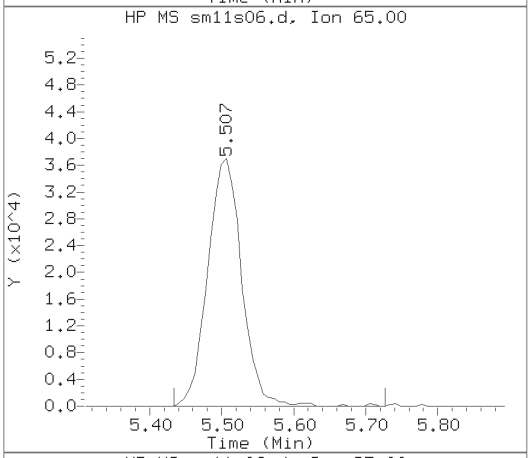
Reference Standard Spectrum for 1,1-Dichloroethane



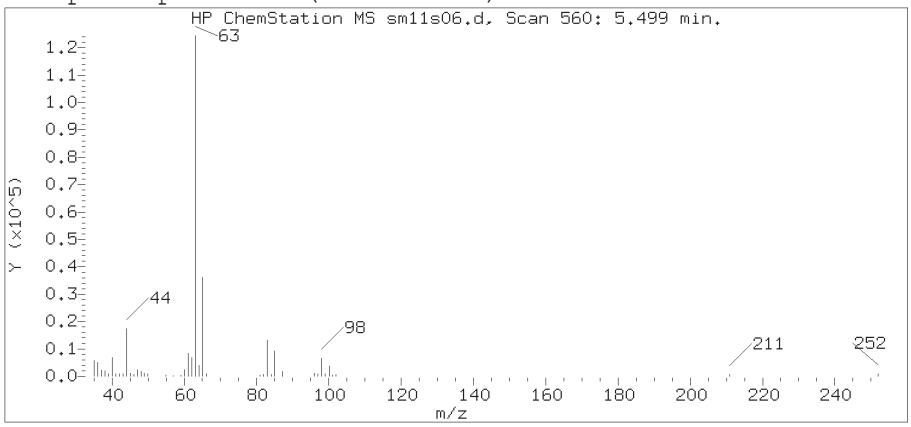


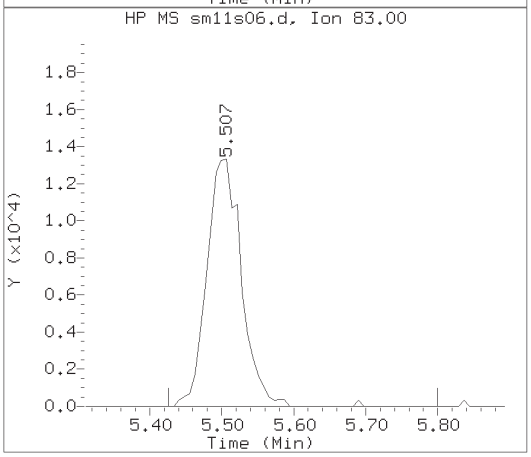
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

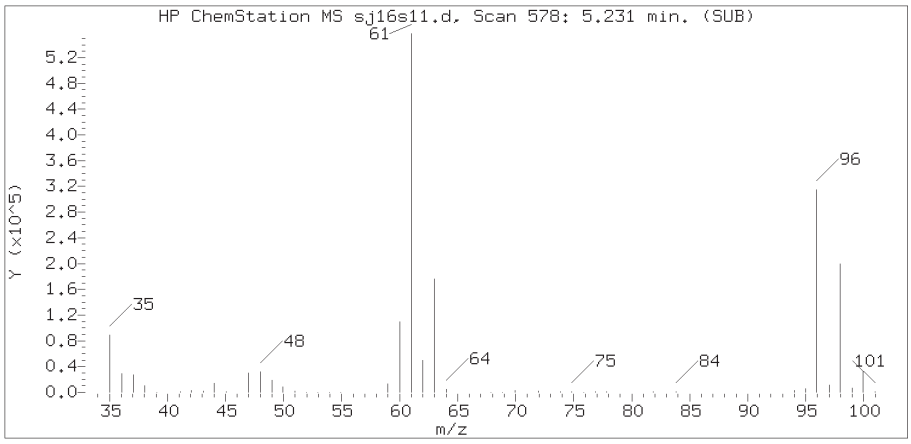
Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

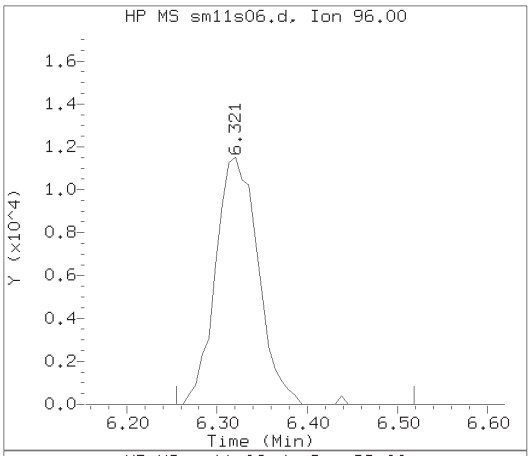
Sample Name: BREWADL Lab Sample ID: 7384707DL

Compound Number : 22
Compound Name : 1,1-Dichloroethane
Scan Number : 560
Retention Time (minutes): 5.499
Relative Retention Time : 0.00028
Quant Ion : 63.00
Area (flag) : 407154
On-Column Amount (ng) : 2.7211

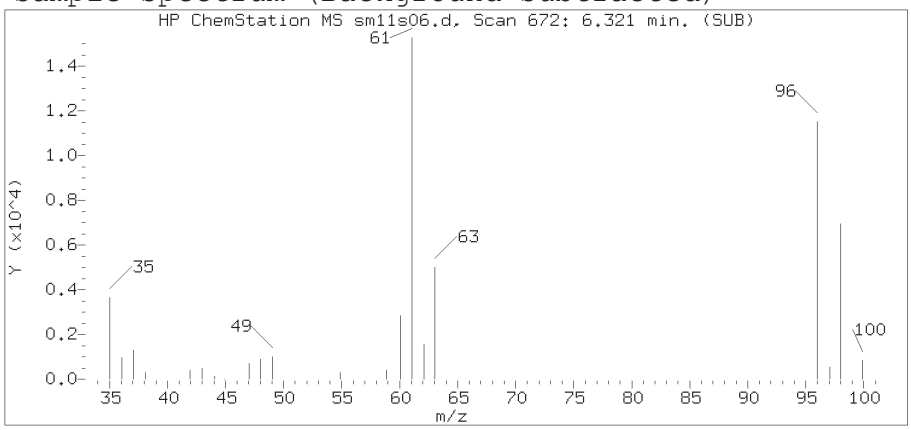
Digitally signed by Sara E. Johnson on 03/11/2014 at 21:14.
Target 3.5 esignature [illegible]

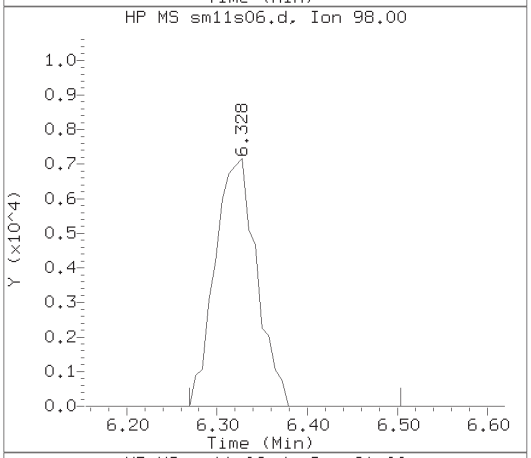
Reference Standard Spectrum for cis-1,2-Dichloroethene



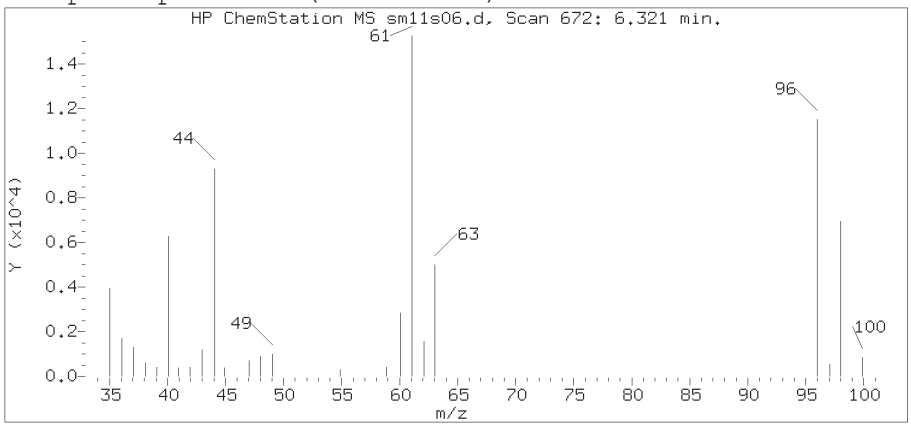


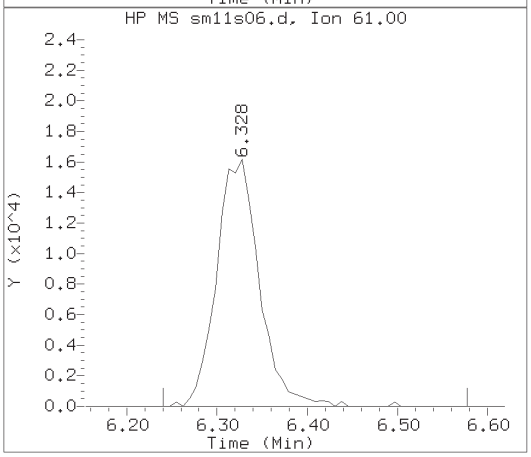
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

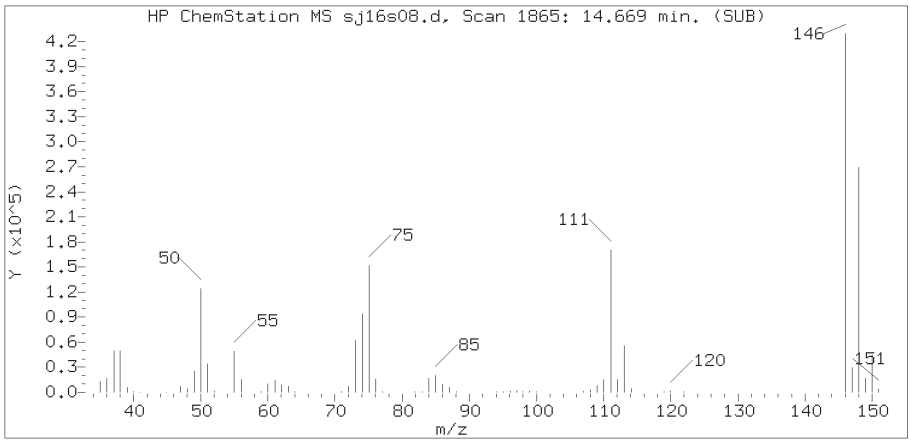
Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

Sample Name: BREWADL Lab Sample ID: 7384707DL

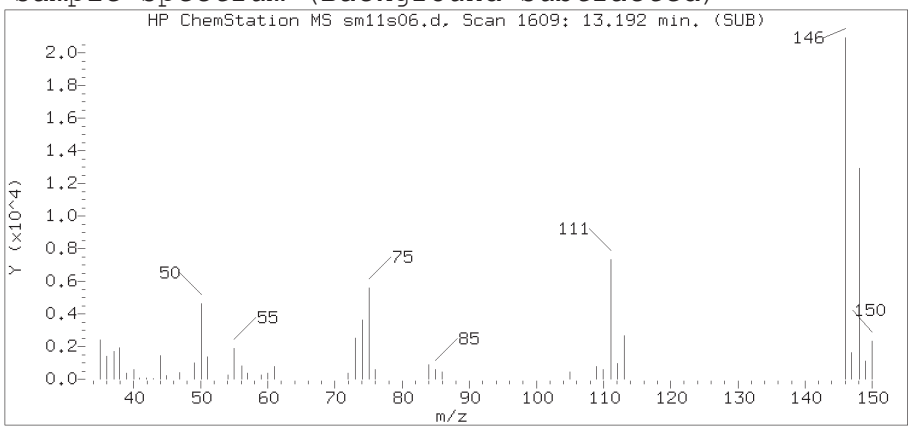
Compound Number : 26
Compound Name : cis-1,2-Dichloroethene
Scan Number : 672
Retention Time (minutes): 6.321
Relative Retention Time : 0.00019
Quant Ion : 96.00
Area (flag) : 37757
On-Column Amount (ng) : 0.4754

Digitally signed by Sara E. Johnson on 03/11/2014 at 21:14.
Target 3.5 esignature meaning: sej02002

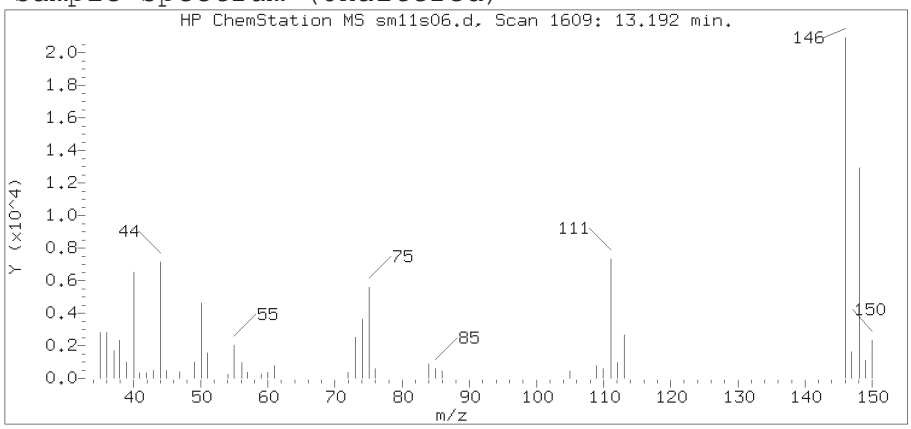
Reference Standard Spectrum for 1,4-Dichlorobenzene

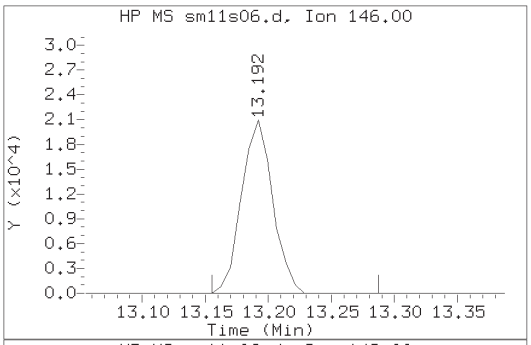


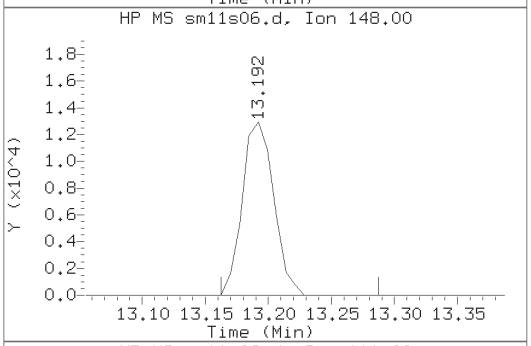
Sample Spectrum (Background Subtracted)

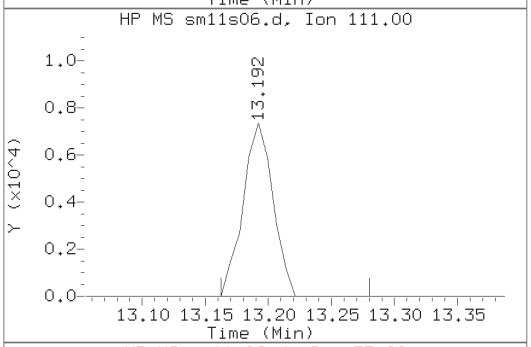


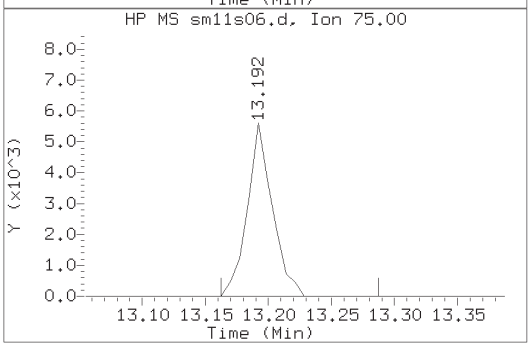
Sample Spectrum (Unaltered)











Data File: /chem/SH08359.i/14mar11a.b/sm11s06.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 20:32 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 21:14 sej02002

Sample Name: BREWADL Lab Sample ID: 7384707DL

Compound Number : 88
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1609
Retention Time (minutes): 13.192
Relative Retention Time :-0.00153
Quant Ion : 146.00
Area (flag) : 35982
On-Column Amount (ng) : 0.2843

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Target 3.5 esignature [illegible]

RE2WA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384708

Data file: /chem/SH08359.i/14mar10b.b/sm10s71.d Injection date and time: **11-MAR-2014 05:09**
Data file Sample Info. Line: RE2WA;7384708;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.971	(-0.007)	897	96	1033422	(-24)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.195	(0.001)	174	235039	4.560	91%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.471	(0.002)	152	232158	4.752	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)				Not Detected					0.2	0.5
2) Chloromethane	(1)				Not Detected					0.2	0.5
3) Vinyl Chloride	(1)				Not Detected					0.1	0.5
4) Bromomethane	(1)				Not Detected					0.1	0.5
5) Chloroethane	(1)	2.947	(-0.000)	64	95072	1.373	1.37			0.2	0.5
7) Trichlorofluoromethane	(1)				Not Detected					0.2	0.5
10) 1,1-Dichloroethene	(1)	3.886	(-0.001)	96	16120	0.214	0.21		J	0.1	0.5
16) Methylene Chloride	(1)				Not Detected					0.3	0.5
20) trans-1,2-Dichloroethene	(1)				Not Detected					0.1	0.5
22) 1,1-Dichloroethane	(1)	5.514	(-0.000)	63	1332855	8.953	8.95			0.1	0.5
26) cis-1,2-Dichloroethene	(1)	6.335	(-0.000)	96	107522	1.361	1.36			0.1	0.5
27) 2,2-Dichloropropane	(1)				Not Detected					0.2	0.5
32) Bromochloromethane	(1)				Not Detected					0.1	0.5
34) Chloroform	(1)				Not Detected					0.1	0.5
35) 1,1,1-Trichloroethane	(1)				Not Detected					0.1	0.5
38) Carbon Tetrachloride	(1)				Not Detected					0.1	0.5
37) 1,1-Dichloropropene	(1)				Not Detected					0.1	0.5
39) Benzene	(1)	7.575	(0.000)	78	36445	0.124	0.12		J	0.1	0.5
40) 1,2-Dichloroethane	(1)				Not Detected					0.1	0.5
43) Trichloroethene	(1)	8.403	(0.000)	95	11739	0.149	0.15		J	0.1	0.5
44) 1,2-Dichloropropane	(1)				Not Detected					0.1	0.5
45) Dibromomethane	(1)				Not Detected					0.1	0.5
47) Bromodichloromethane	(1)				Not Detected					0.1	0.5
50) cis-1,3-Dichloropropene	(1)				Not Detected					0.1	0.5
53) Toluene	(1)				Not Detected					0.1	0.5
54) trans-1,3-Dichloropropene	(1)				Not Detected					0.1	0.5
56) 1,1,2-Trichloroethane	(1)				Not Detected					0.1	0.5
58) Tetrachloroethene	(1)				Not Detected					0.1	0.5
59) 1,3-Dichloropropane	(1)				Not Detected					0.1	0.5
61) Dibromochloromethane	(1)				Not Detected					0.1	0.5
62) 1,2-Dibromoethane	(1)				Not Detected					0.1	0.5
63) Chlorobenzene	(1)				Not Detected					0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
65) Ethylbenzene	(1)				Not Detected					0.1	0.5
67) m+p-Xylene	(1)				Not Detected					0.2	0.5
68) o-Xylene	(1)				Not Detected					0.1	0.5

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:17. Target 3.5 esignature user ID: sej02002

RE2WA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384708

Data file: /chem/SH08359.i/14mar10b.b/sm10s71.d Injection date and time: **11-MAR-2014 05:09**
Data file Sample Info. Line: RE2WA;7384708;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **039A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

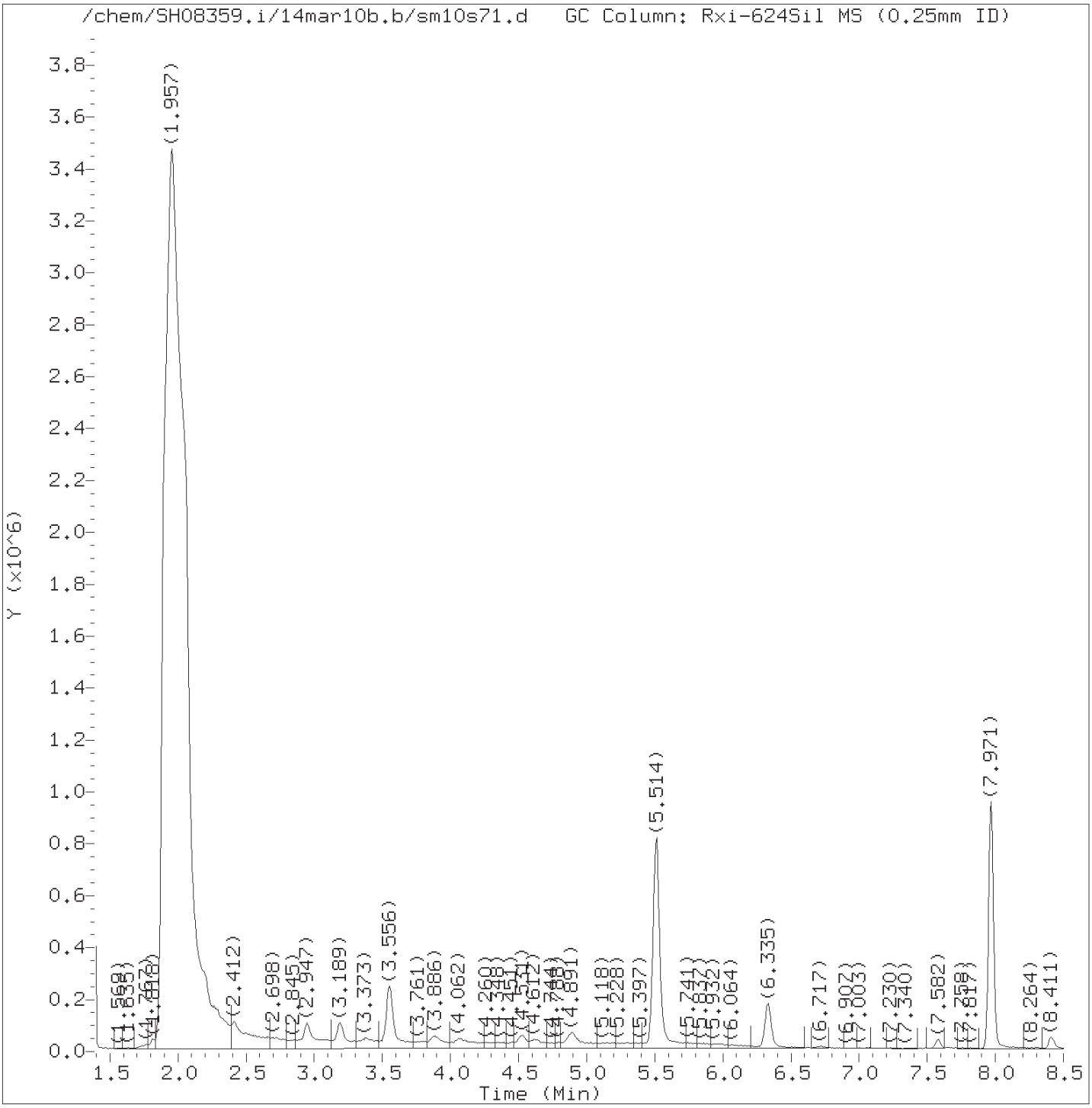
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)			Not Detected					0.1	0.5
71) Xylene (Total)	(1)			Not Detected					0.1	0.5
70) Bromoform	(1)			Not Detected					0.2	0.5
72) Isopropylbenzene	(1)			Not Detected					0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)			Not Detected					0.1	0.5
75) Bromobenzene	(1)			Not Detected					0.1	0.5
76) 1,2,3-Trichloropropane	(1)			Not Detected					0.2	0.5
78) n-Propylbenzene	(1)			Not Detected					0.1	0.5
79) 2-Chlorotoluene	(1)			Not Detected					0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)			Not Detected					0.1	0.5
81) 4-Chlorotoluene	(1)			Not Detected					0.2	0.5
82) tert-Butylbenzene	(1)			Not Detected					0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)			Not Detected					0.1	0.5
85) sec-Butylbenzene	(1)			Not Detected					0.1	0.5
87) p-Isopropyltoluene	(1)			Not Detected					0.1	0.5
86) 1,3-Dichlorobenzene	(1)			Not Detected					0.1	0.5
88) 1,4-Dichlorobenzene	(1)	13.199(0.000)	146	52220	0.415	0.41		J	0.1	0.5
89) n-Butylbenzene	(1)			Not Detected					0.2	0.5
91) 1,2-Dichlorobenzene	(1)			Not Detected					0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)			Not Detected					0.2	0.5
96) Hexachlorobutadiene	(1)			Not Detected					0.2	0.5
97) Naphthalene	(1)			Not Detected					0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)			Not Detected					0.2	0.5

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:17. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

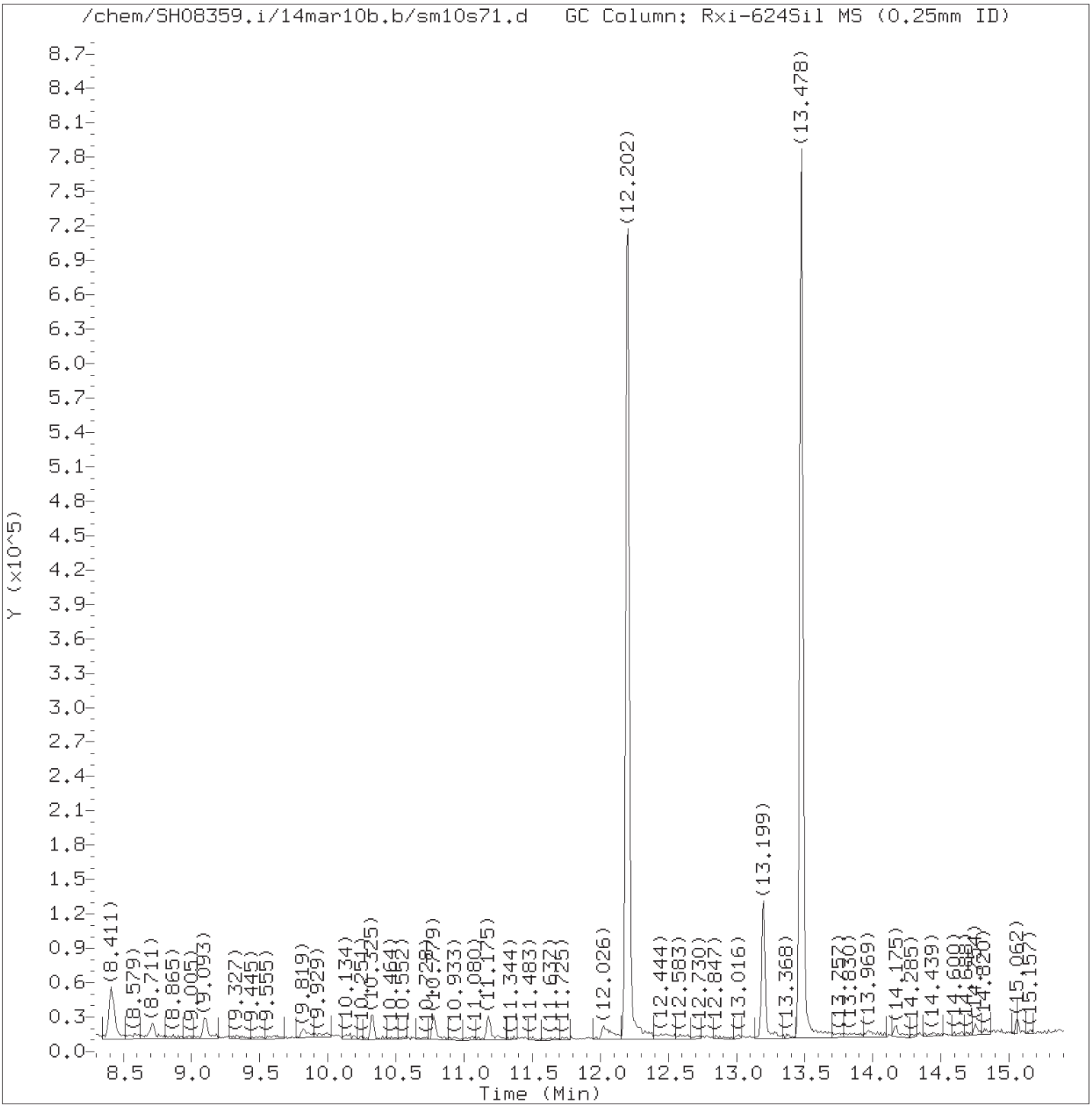
Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Sample Name: RE2WA Lab Sample ID: 7384708

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:17.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Sample Name: RE2WA Lab Sample ID: 7384708

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:17.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

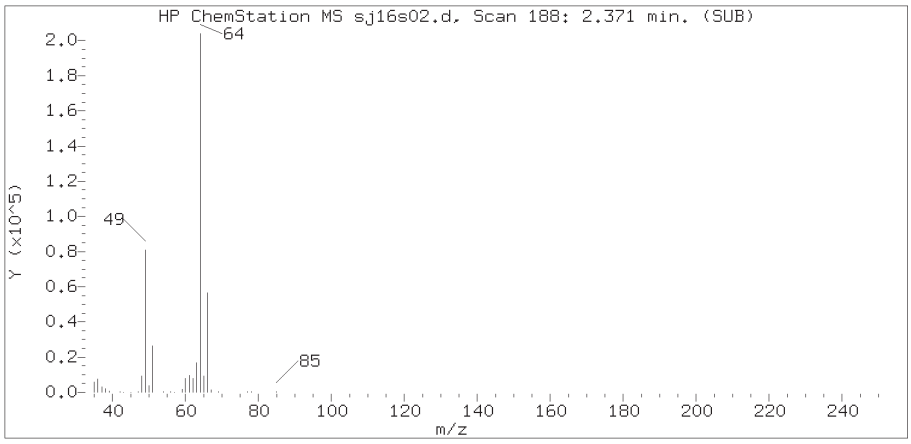
Sample Name: RE2WA Lab Sample ID: 7384708

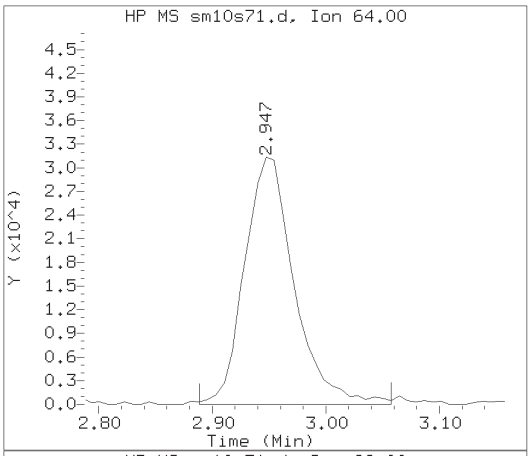
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Chloroethane	(1)	2.947	64	95072	1.373
10) 1,1-Dichloroethene	(1)	3.886	96	16120	0.214
22) 1,1-Dichloroethane	(1)	5.514	63	1332855	8.953
26) cis-1,2-Dichloroethene	(1)	6.335	96	107522	1.361
39) Benzene	(1)	7.575	78	36445	0.124
42)*Fluorobenzene	(1)	7.971	96	1033422	5.000
43) Trichloroethene	(1)	8.403	95	11739	0.149
73)$4-Bromofluorobenzene	(1)	12.195	174	235039	4.560
88) 1,4-Dichlorobenzene	(1)	13.199	146	52220	0.415
90)$1,2-Dichlorobenzene-d4	(1)	13.471	152	232158	4.752

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

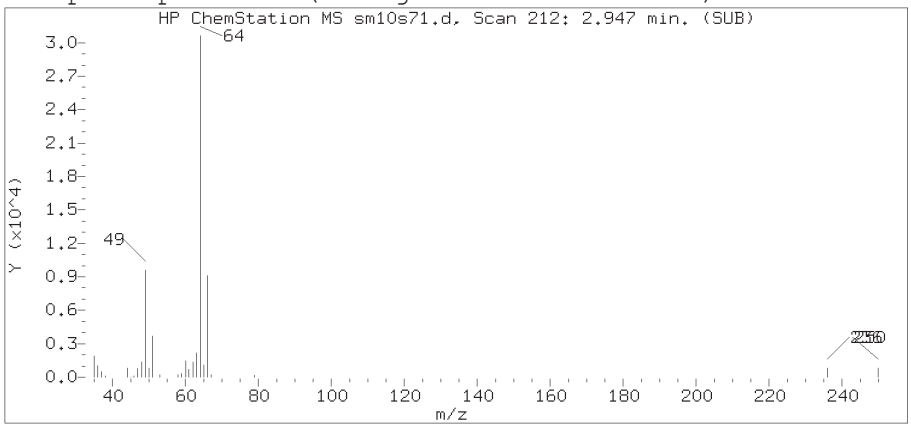
Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:17.
Target 3.5 esignature user ID: sej02002

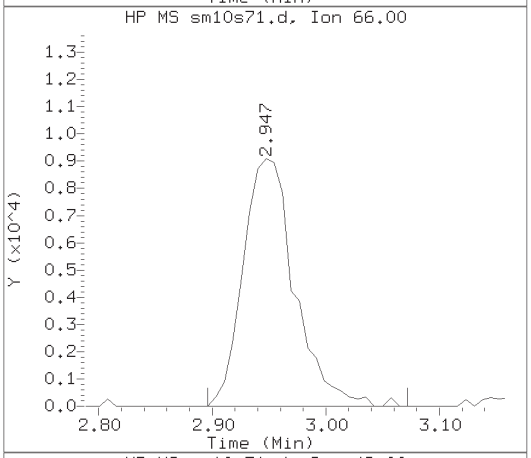
Reference Standard Spectrum for Chloroethane



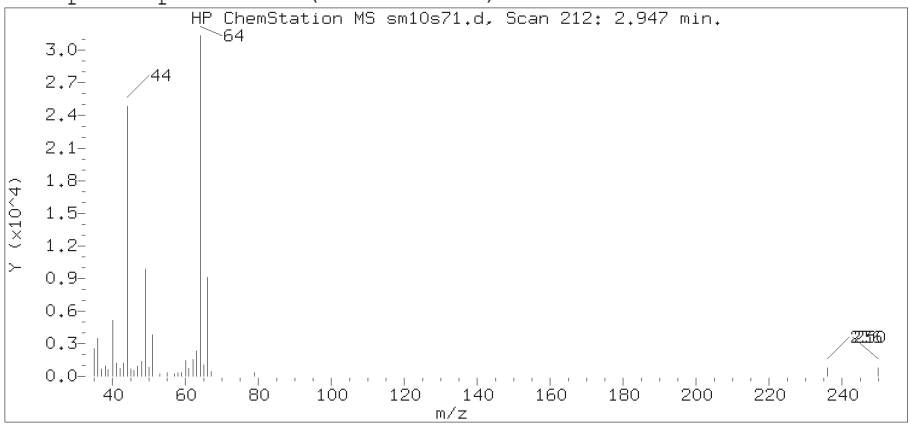


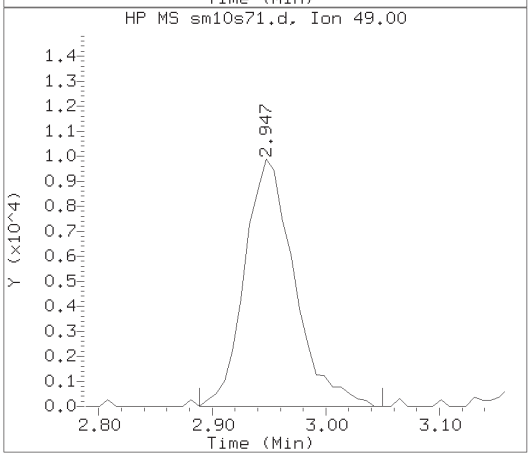
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

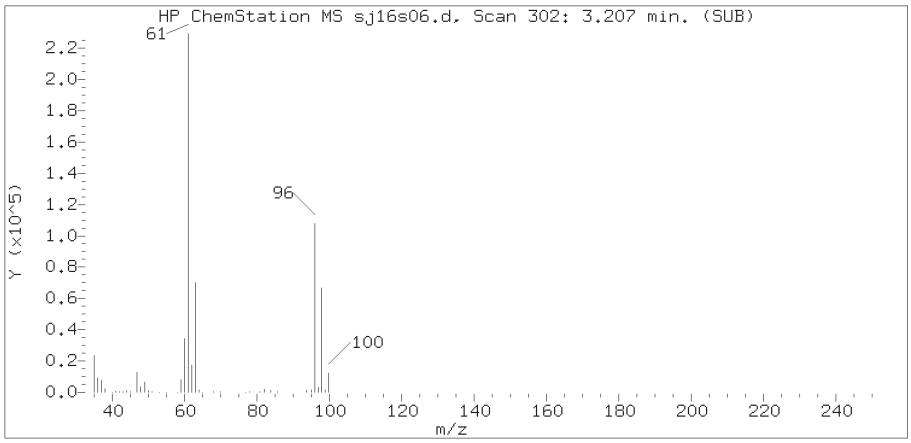
Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Sample Name: RE2WA Lab Sample ID: 7384708

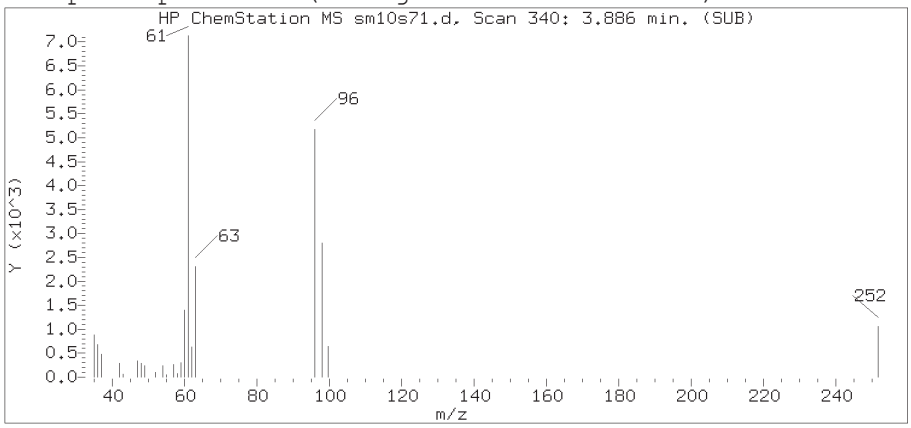
Compound Number : 5
Compound Name : Chloroethane
Scan Number : 212
Retention Time (minutes): 2.947
Relative Retention Time :-0.00058
Quant Ion : 64.00
Area (flag) : 95072
On-Column Amount (ng) : 1.3730

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:17.
Target 3.5 esignature [illegible]

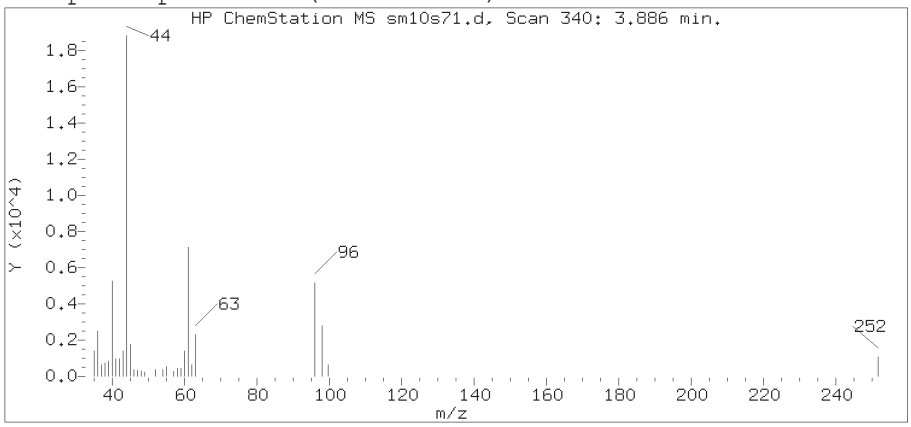
Reference Standard Spectrum for 1,1-Dichloroethene

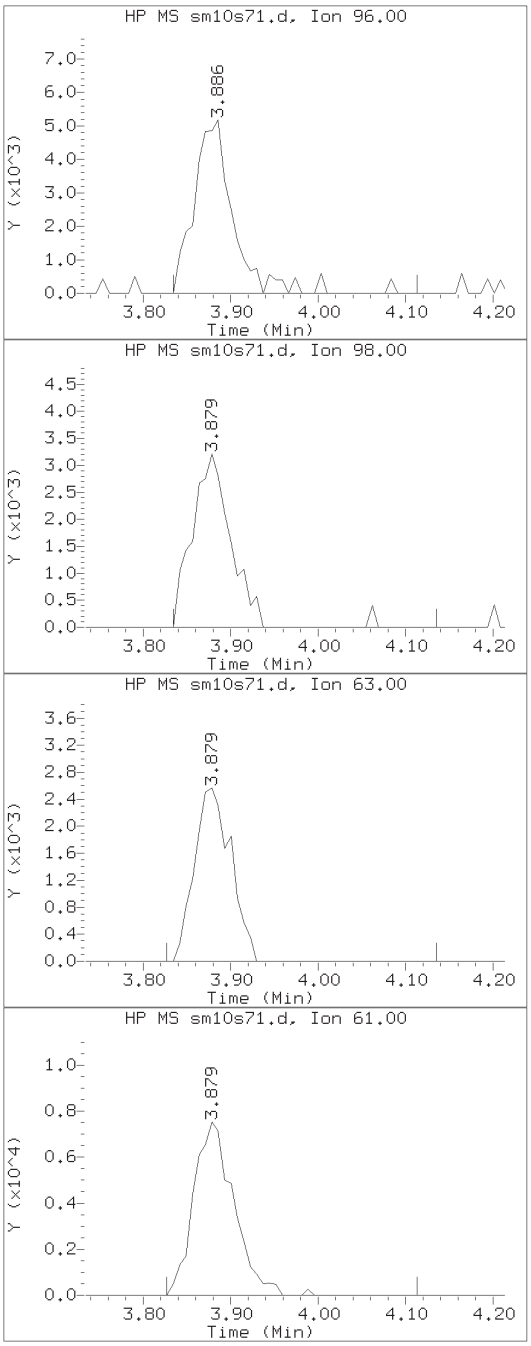


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Sample Name: RE2WA Lab Sample ID: 7384708

Compound Number : 10
Compound Name : 1,1-Dichloroethene
Scan Number : 340
Retention Time (minutes): 3.886
Relative Retention Time :-0.00139
Quant Ion : 96.00
Area (flag) : 16120
On-Column Amount (ng) : 0.2143

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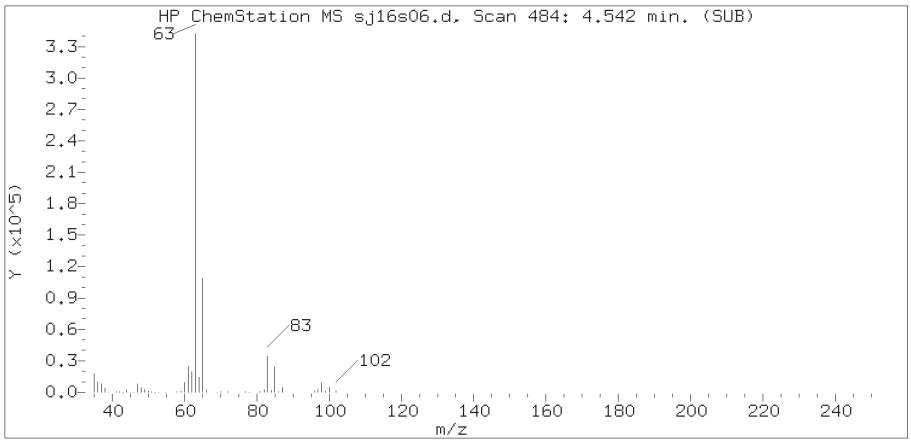
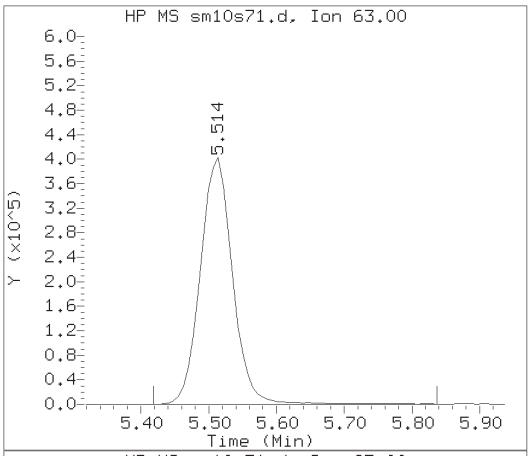
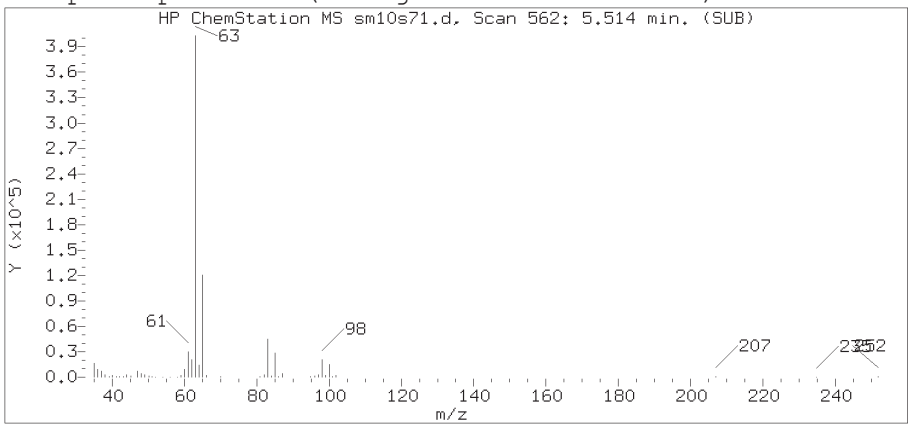
Target 3.5 esignature [illegible]

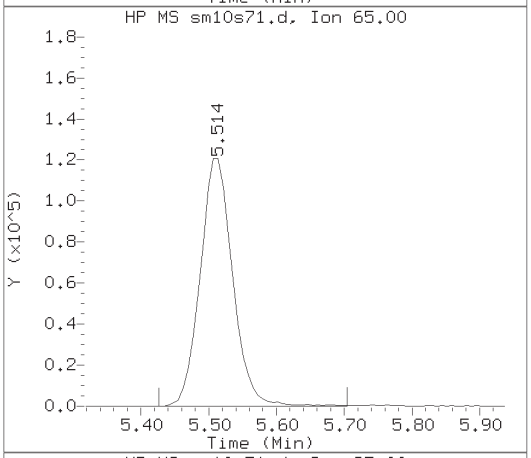
Reference Standard Spectrum for 1,1-Dichloroethane



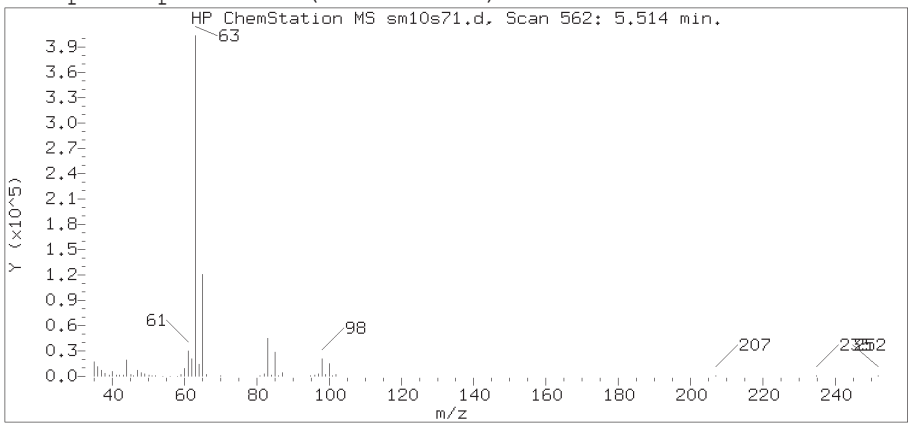


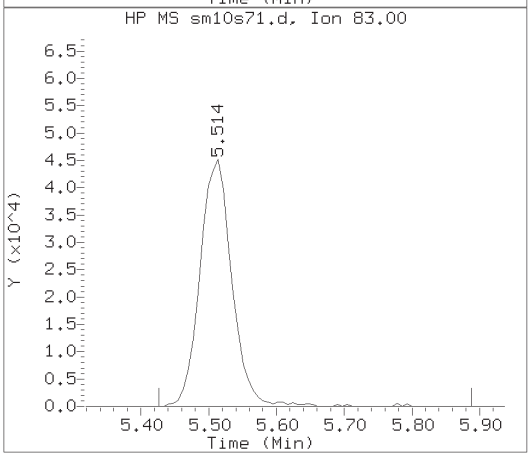
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Sample Name: RE2WA Lab Sample ID: 7384708

Compound Number : 22
Compound Name : 1,1-Dichloroethane
Scan Number : 562
Retention Time (minutes): 5.514
Relative Retention Time :-0.00028
Quant Ion : 63.00
Area (flag) : 1332855
On-Column Amount (ng) : 8.9530

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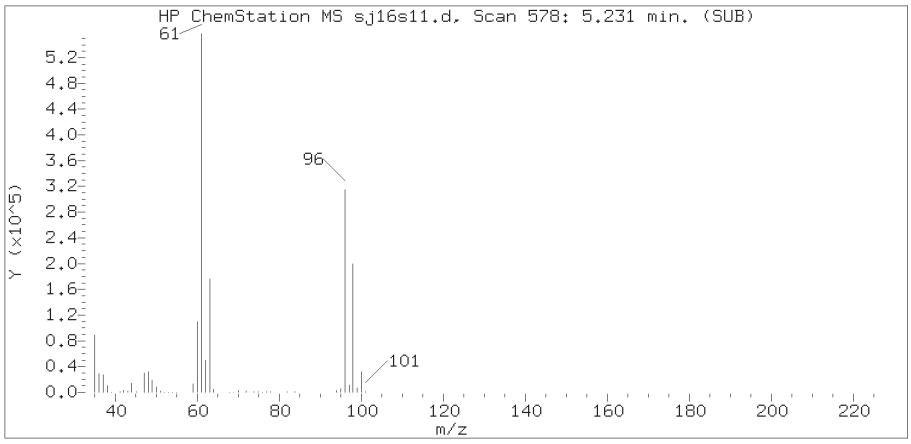
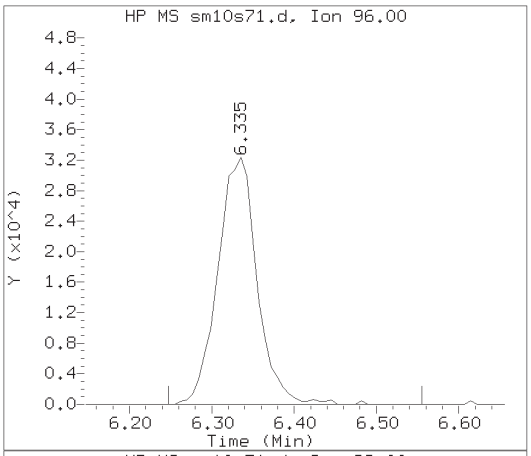
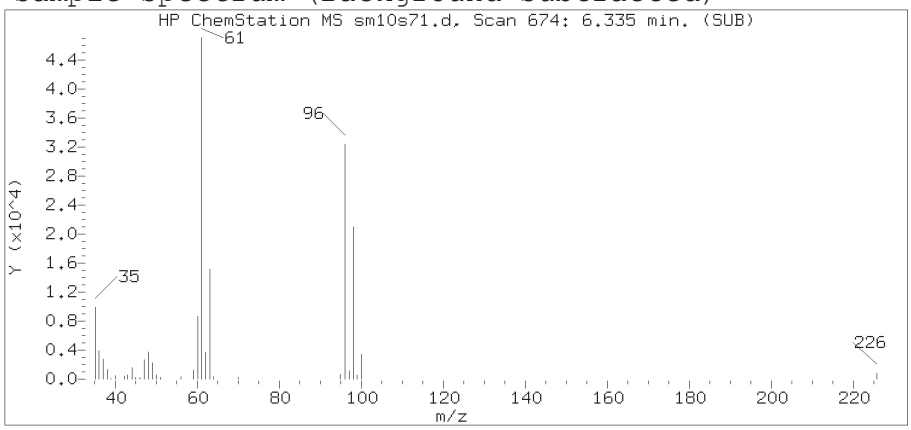
Target 3.5 esignature [illegible]

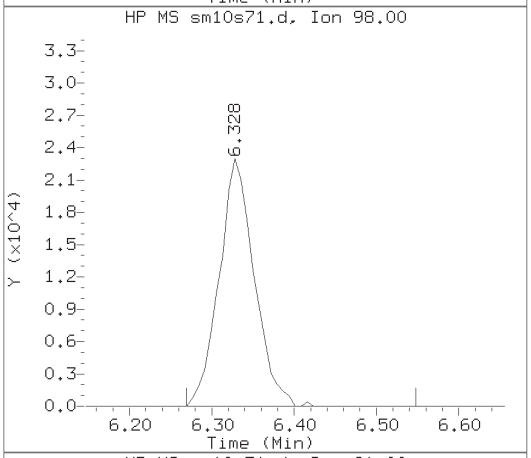
Reference Standard Spectrum for cis-1,2-Dichloroethene



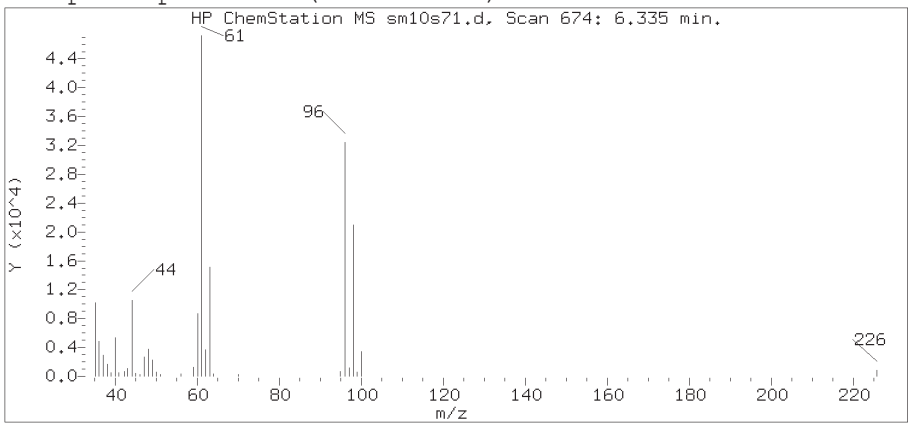


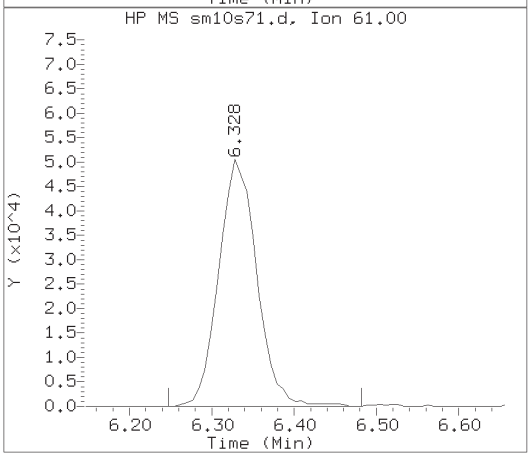
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Sample Name: RE2WA Lab Sample ID: 7384708

Compound Number : 26
Compound Name : cis-1,2-Dichloroethene
Scan Number : 674
Retention Time (minutes): 6.335
Relative Retention Time :-0.00019
Quant Ion : 96.00
Area (flag) : 107522
On-Column Amount (ng) : 1.3607

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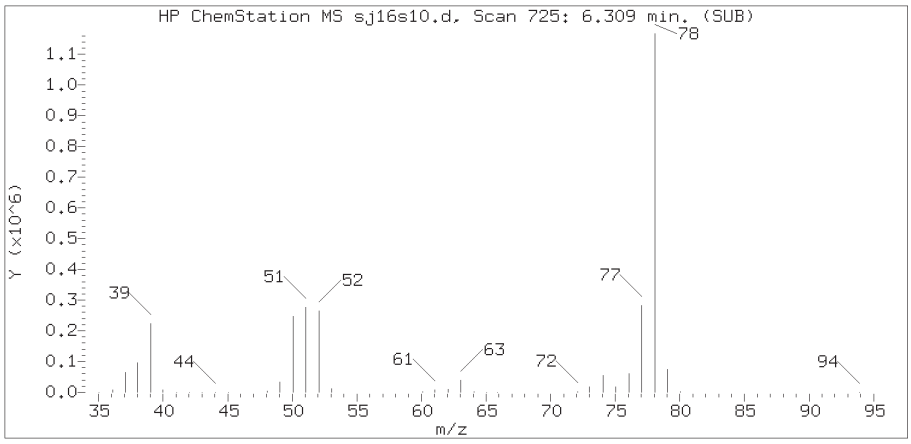
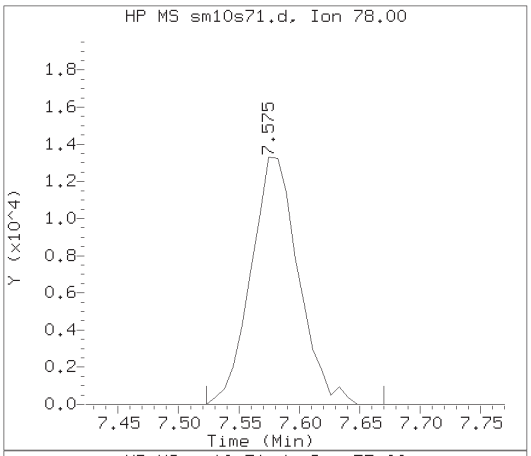
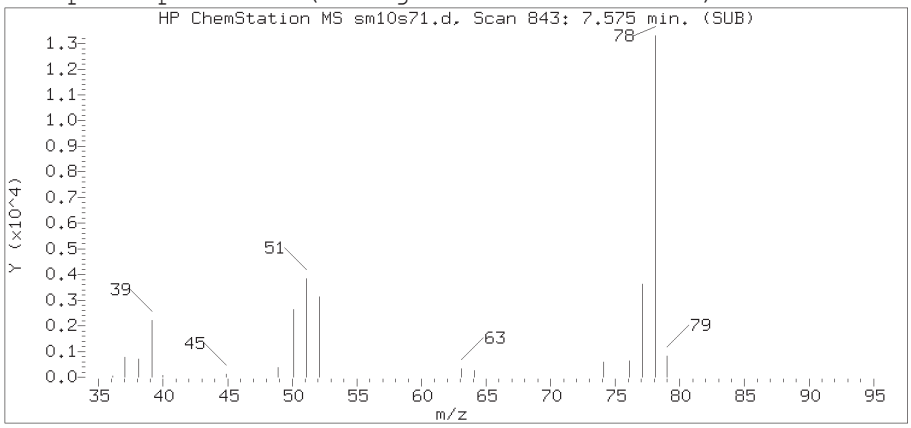
Target 3.5 esignature meaning: sej02002

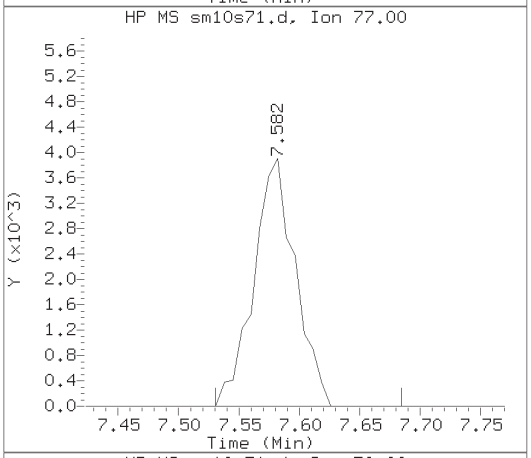
Reference Standard Spectrum for Benzene



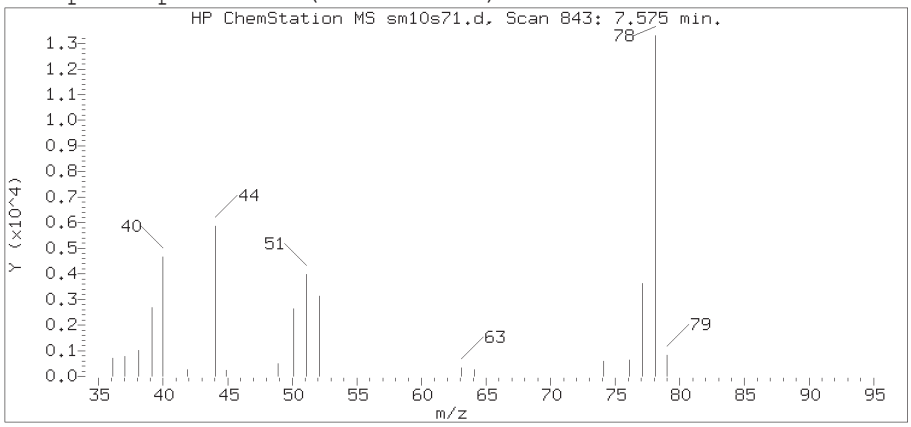


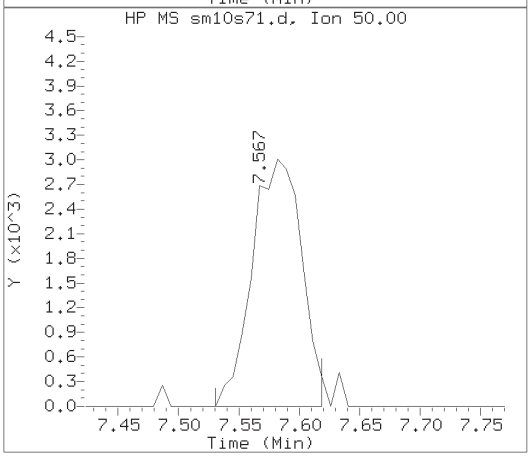
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Sample Name: RE2WA Lab Sample ID: 7384708

Compound Number : 39
Compound Name : Benzene
Scan Number : 843
Retention Time (minutes): 7.575
Relative Retention Time : 0.00088
Quant Ion : 78.00
Area (flag) : 36445
On-Column Amount (ng) : 0.1236

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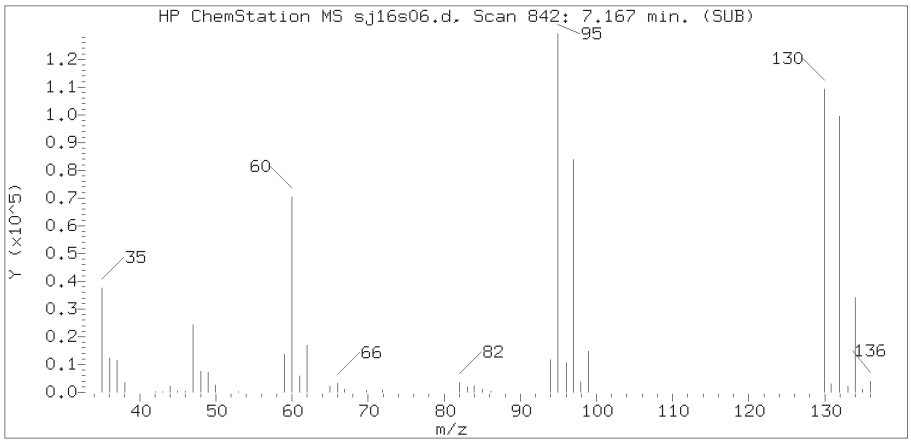
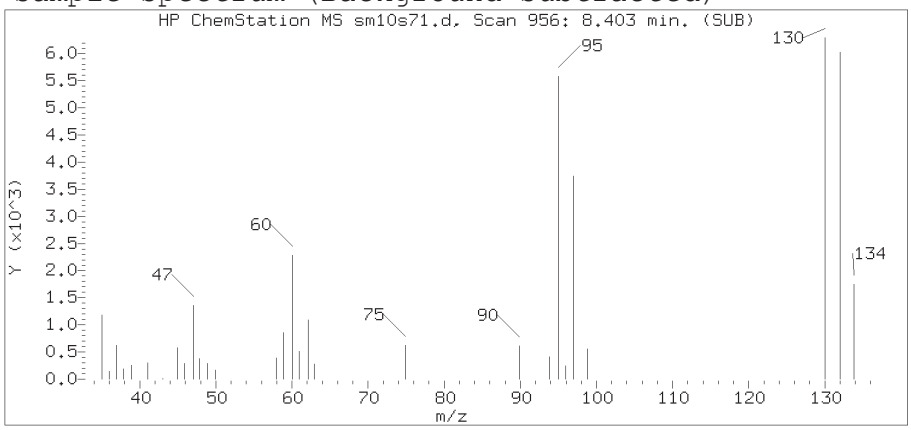
Target 3.5 esignature [illegible]

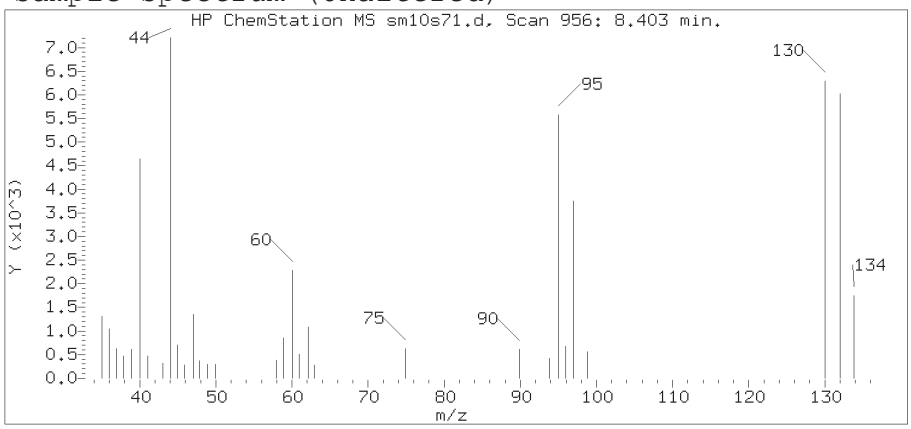
Reference Standard Spectrum for Trichloroethene

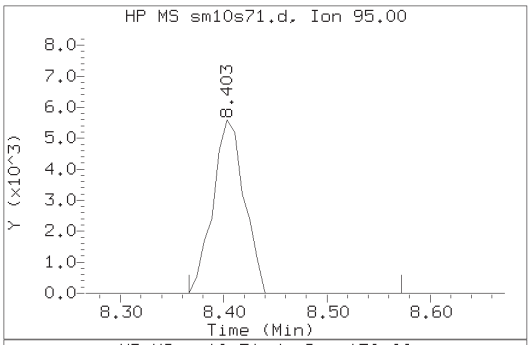


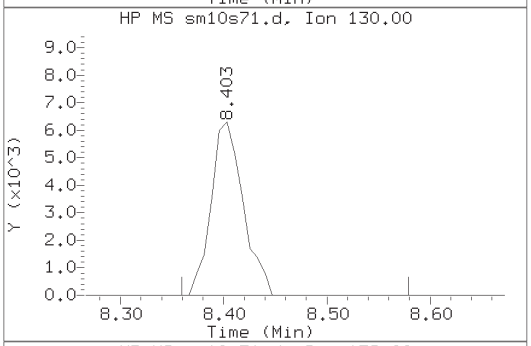
Sample Spectrum (Background Subtracted)

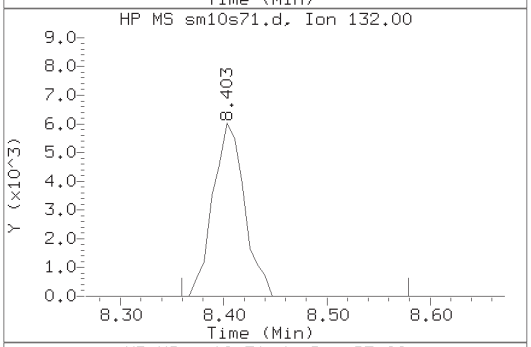


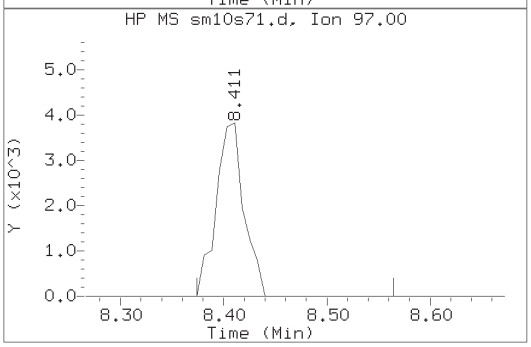
Sample Spectrum (Unaltered)











Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Sample Name: RE2WA Lab Sample ID: 7384708

Compound Number : 43
Compound Name : Trichloroethene
Scan Number : 956
Retention Time (minutes): 8.403
Relative Retention Time : 0.00097
Quant Ion : 95.00
Area (flag) : 11739
On-Column Amount (ng) : 0.1487

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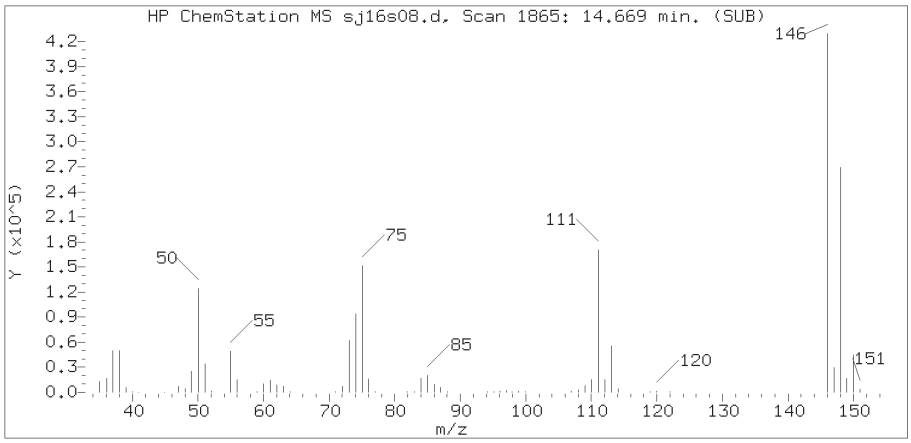
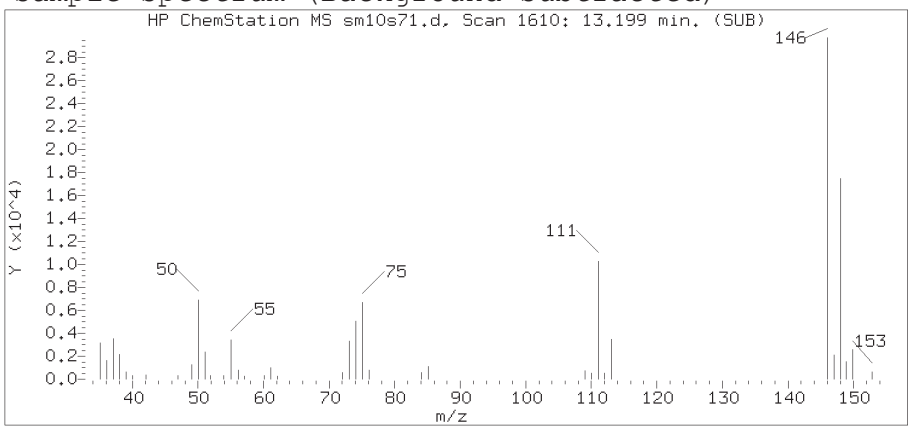
Target 3.5 esignature [illegible]

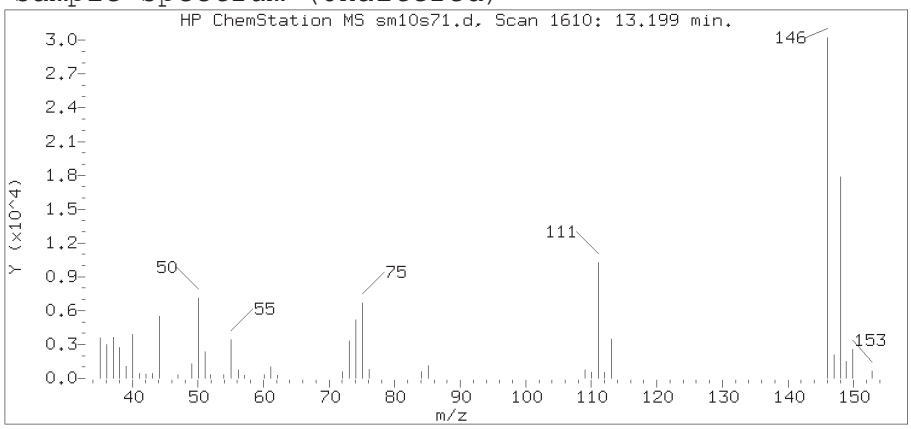
Reference Standard Spectrum for 1,4-Dichlorobenzene

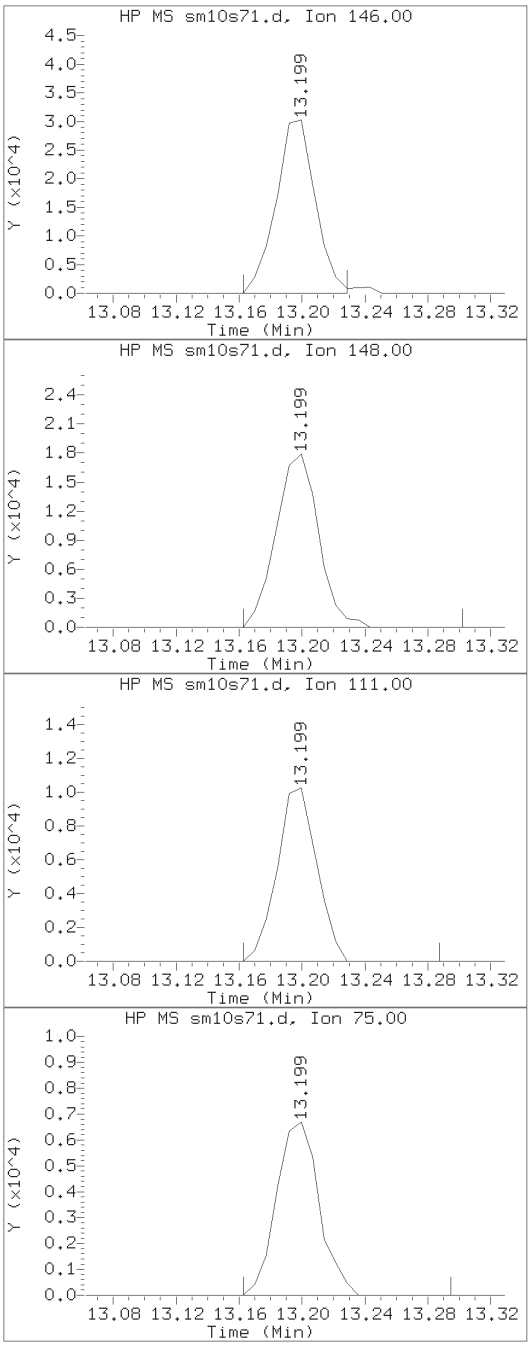


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/SH08359.i/14mar10b.b/sm10s71.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 05:09 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 16:16 sej02002

Sample Name: RE2WA Lab Sample ID: 7384708

Compound Number : 88
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1610
Retention Time (minutes): 13.199
Relative Retention Time : 0.00060
Quant Ion : 146.00
Area (flag) : 52220
On-Column Amount (ng) : 0.4146

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Target 3.5 esignature [illegible]

TBLWA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384709

Data file: /chem/SH08359.i/14mar10b.b/sm10s66.d Injection date and time: **11-MAR-2014 02:54**
Data file Sample Info. Line: TBLWA;7384709;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.971(-0.007)	897	96	1040019 (-23)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.195	(0.001)	174	236708	4.563	91%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.478	(0.001)	152	227718	4.632	93%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)				Not Detected					0.2	0.5
2) Chloromethane	(1)				Not Detected					0.2	0.5
3) Vinyl Chloride	(1)				Not Detected					0.1	0.5
4) Bromomethane	(1)				Not Detected					0.1	0.5
5) Chloroethane	(1)				Not Detected					0.2	0.5
7) Trichlorofluoromethane	(1)				Not Detected					0.2	0.5
10) 1,1-Dichloroethene	(1)				Not Detected					0.1	0.5
16) Methylene Chloride	(1)				Not Detected					0.3	0.5
20) trans-1,2-Dichloroethene	(1)				Not Detected					0.1	0.5
22) 1,1-Dichloroethane	(1)				Not Detected					0.1	0.5
26) cis-1,2-Dichloroethene	(1)				Not Detected					0.1	0.5
27) 2,2-Dichloropropane	(1)				Not Detected					0.2	0.5
32) Bromochloromethane	(1)				Not Detected					0.1	0.5
34) Chloroform	(1)				Not Detected					0.1	0.5
35) 1,1,1-Trichloroethane	(1)				Not Detected					0.1	0.5
38) Carbon Tetrachloride	(1)				Not Detected					0.1	0.5
37) 1,1-Dichloropropene	(1)				Not Detected					0.1	0.5
39) Benzene	(1)				Not Detected					0.1	0.5
40) 1,2-Dichloroethane	(1)				Not Detected					0.1	0.5
43) Trichloroethene	(1)				Not Detected					0.1	0.5
44) 1,2-Dichloropropane	(1)				Not Detected					0.1	0.5
45) Dibromomethane	(1)				Not Detected					0.1	0.5
47) Bromodichloromethane	(1)				Not Detected					0.1	0.5
50) cis-1,3-Dichloropropene	(1)				Not Detected					0.1	0.5
53) Toluene	(1)				Not Detected					0.1	0.5
54) trans-1,3-Dichloropropene	(1)				Not Detected					0.1	0.5
56) 1,1,2-Trichloroethane	(1)				Not Detected					0.1	0.5
58) Tetrachloroethene	(1)				Not Detected					0.1	0.5
59) 1,3-Dichloropropane	(1)				Not Detected					0.1	0.5
61) Dibromochloromethane	(1)				Not Detected					0.1	0.5
62) 1,2-Dibromoethane	(1)				Not Detected					0.1	0.5
63) Chlorobenzene	(1)				Not Detected					0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
65) Ethylbenzene	(1)				Not Detected					0.1	0.5
67) m+p-Xylene	(1)				Not Detected					0.2	0.5
68) o-Xylene	(1)				Not Detected					0.1	0.5

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TBLWA

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7384709

Data file: /chem/SH08359.i/14mar10b.b/sm10s66.d Injection date and time: **11-MAR-2014 02:54**
Data file Sample Info. Line: TBLWA;7384709;1;0;;WAT19;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

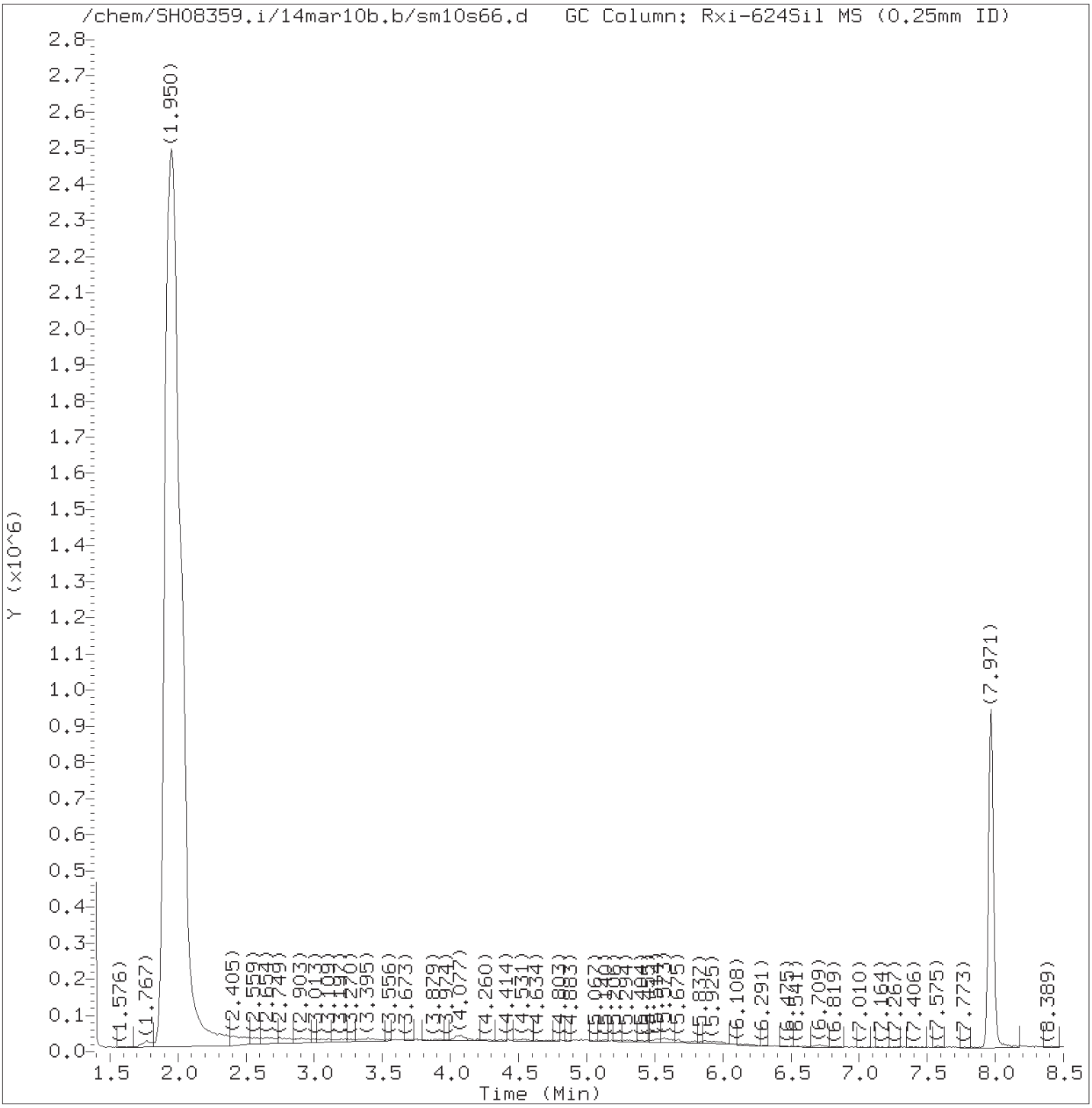
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)				Not Detected					0.1	0.5
71) Xylene (Total)	(1)				Not Detected					0.1	0.5
70) Bromoform	(1)				Not Detected					0.2	0.5
72) Isopropylbenzene	(1)				Not Detected					0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
75) Bromobenzene	(1)				Not Detected					0.1	0.5
76) 1,2,3-Trichloropropane	(1)				Not Detected					0.2	0.5
78) n-Propylbenzene	(1)				Not Detected					0.1	0.5
79) 2-Chlorotoluene	(1)				Not Detected					0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)				Not Detected					0.1	0.5
81) 4-Chlorotoluene	(1)				Not Detected					0.2	0.5
82) tert-Butylbenzene	(1)				Not Detected					0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)				Not Detected					0.1	0.5
85) sec-Butylbenzene	(1)				Not Detected					0.1	0.5
87) p-Isopropyltoluene	(1)				Not Detected					0.1	0.5
86) 1,3-Dichlorobenzene	(1)				Not Detected					0.1	0.5
88) 1,4-Dichlorobenzene	(1)				Not Detected					0.1	0.5
89) n-Butylbenzene	(1)				Not Detected					0.2	0.5
91) 1,2-Dichlorobenzene	(1)				Not Detected					0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)				Not Detected					0.2	0.5
96) Hexachlorobutadiene	(1)				Not Detected					0.2	0.5
97) Naphthalene	(1)				Not Detected					0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)				Not Detected					0.2	0.5

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/11/2014 at 16:10. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

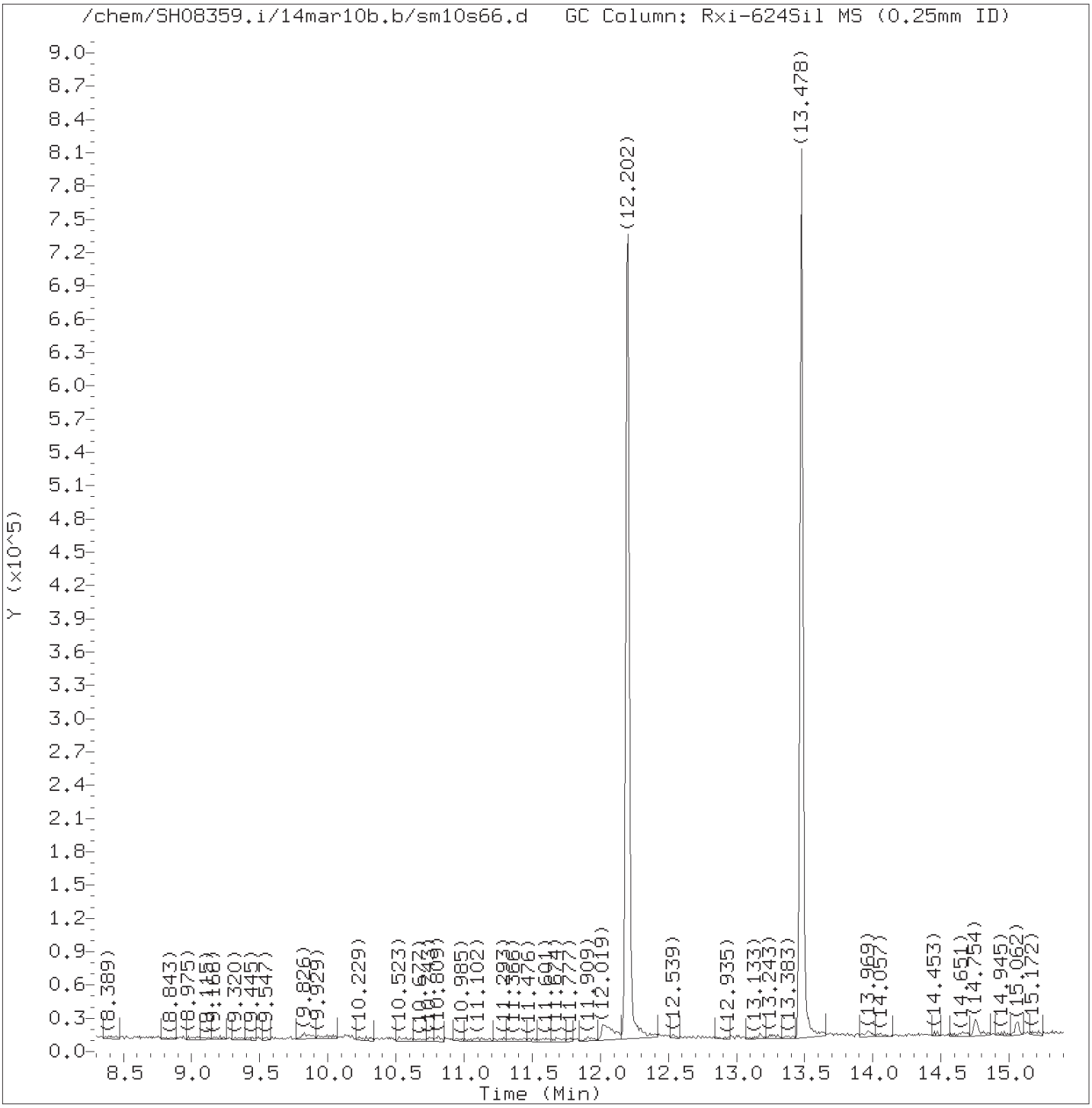
Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s66.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 02:54 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: TBLWA Lab Sample ID: 7384709

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:10.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s66.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 02:54 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: TBLWA Lab Sample ID: 7384709

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:10.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s66.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 02:54 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 11-Mar-2014 15:14 Automation

Sample Name: TBLWA Lab Sample ID: 7384709

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
42)*Fluorobenzene	(1)	7.971	96	1040019	5.000
73)$4-Bromofluorobenzene	(1)	12.195	174	236708	4.563
90)$1,2-Dichlorobenzene-d4	(1)	13.478	152	227718	4.632

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 03/11/2014 at 16:10.
Target 3.5 esignature user ID: sej02002

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Shimadzu GC/MS System SH08359 **SH #01**

Data Directory Path is - d:\data\14feb04a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jml01693	SF04T01.D	25NG BFB	02/04/2014	08:25		
JML01693	SF04I01.D	VSTD025	02/04/2014	09:10		
JML01693	SF04I02.D	VSTD010	02/04/2014	09:37		
JML01693	SF04I03.D	VSTD005	02/04/2014	10:04		
JML01693	SF04I04.D	VSTD0.5	02/04/2014	10:31		
JML01693	SF04I05.D	VSTD0.5	02/04/2014	10:58		
JML01693	SF04B01.D	VBLKS43	02/04/2014	11:25	S140351AA	
JML01693	SF04S01.D	LFBS43	02/04/2014	11:52	S140351AA	

Lancaster Laboratories
Volatiles
Runlog for Shimadzu GC/MS System SH08359 **SH #01**

Data Directory Path is - d:\data\14mar10b\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
sej02002	SM10T05.D	25NG BFB	03/10/2014	18:41		
sej02002	SM10C51.D	VSTD010	03/10/2014	19:06	S140692AA	
sej02002	SM10B51.D	VBLKS70	03/10/2014	19:33	S140692AA	
sej02002	SM10S51.D	LFBS70	03/10/2014	20:00	S140692AA	
sej02002	SM10S52.D	7385376	03/10/2014	20:35	S140692AA	100
sej02002	SM10S53.D	7382430	03/10/2014	21:02	S140692AA	25
sej02002	SM10S54.D	7382505	03/10/2014	21:29	S140692AA	25
sej02002	SM10S55.D	7382550	03/10/2014	21:56	S140692AA	10
sej02002	SM10S56.D	7384923	03/10/2014	22:23	S140692AA	
sej02002	SM10S57.D	7384924	03/10/2014	22:50	S140692AA	
sej02002	SM10S58.D	7384925	03/10/2014	23:17	S140692AA	
sej02002	SM10S59.D	7386630	03/10/2014	23:44	S140692AA	
sej02002	SM10S60.D	7385637	03/11/2014	00:11	S140692AA	
sej02002	SM10S61.D	7385824	03/11/2014	00:38	S140692AA	
sej02002	SM10S62.D	7385826	03/11/2014	01:05	S140692AA	
sej02002	SM10S63.D	7385828	03/11/2014	01:32	S140692AA	
sej02002	SM10S64.D	7385830	03/11/2014	01:59	S140692AA	
sej02002	SM10S65.D	7385832	03/11/2014	02:27	S140692AA	
sej02002	SM10S66.D	7384709	03/11/2014	02:54	S140693AA	
sej02002	SM10S67.D	7384704	03/11/2014	03:21	S140693AA	
sej02002	SM10S68.D	7384705	03/11/2014	03:48	S140693AA	
sej02002	SM10S69.D	7384706	03/11/2014	04:15	S140693AA	
sej02002	SM10S70.D	7384707	03/11/2014	04:42	S140693AA	
sej02002	SM10S71.D	7384708	03/11/2014	05:09	S140693AA	

Lancaster Laboratories
Volatiles
Runlog for Shimadzu GC/MS System SH08359 **SH #01**

Data Directory Path is - d:\data\14mar11a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
sej02002	SM11T01.D	25NG BFB	03/11/2014	16:32		
sej02002	SM11C01.D	VSTD010	03/11/2014	16:57	S140701AA	
sej02002	SM11B01.D	VBLKS72	03/11/2014	17:25	S140701AA	
sej02002	SM11S01.D	LFBS72	03/11/2014	17:52	S140701AA	
sej02002	SM11S02.D	7384749	03/11/2014	18:43	S140701AA	
sej02002	SM11S03.D	7384755	03/11/2014	19:10	S140701AA	
sej02002	SM11S04.D	7388336	03/11/2014	19:37	S140701AA	
sej02002	SM11S05.D	7388337	03/11/2014	20:05	S140701AA	
sej02002	SM11S06.D	7384707DL	03/11/2014	20:32	S140702AA	10
sej02002	SM11S07.D	7382535	03/11/2014	20:59	S140701AA	50
sej02002	SM11S08.D	7382550	03/11/2014	21:26	S140701AA	50
sej02002	SM11S09.D	7385737	03/11/2014	21:54	S140701AA	10
sej02002	SM11S10.D	7384748	03/11/2014	22:21	S140701AA	10
sej02002	SM11S11.D	7384753	03/11/2014	22:48	S140701AA	10

Data File: /chem/SH08359.i/14feb04a.b/sf04t01.d

Date : 04-FEB-2014 08:25

Client ID: BFBSEP18-13

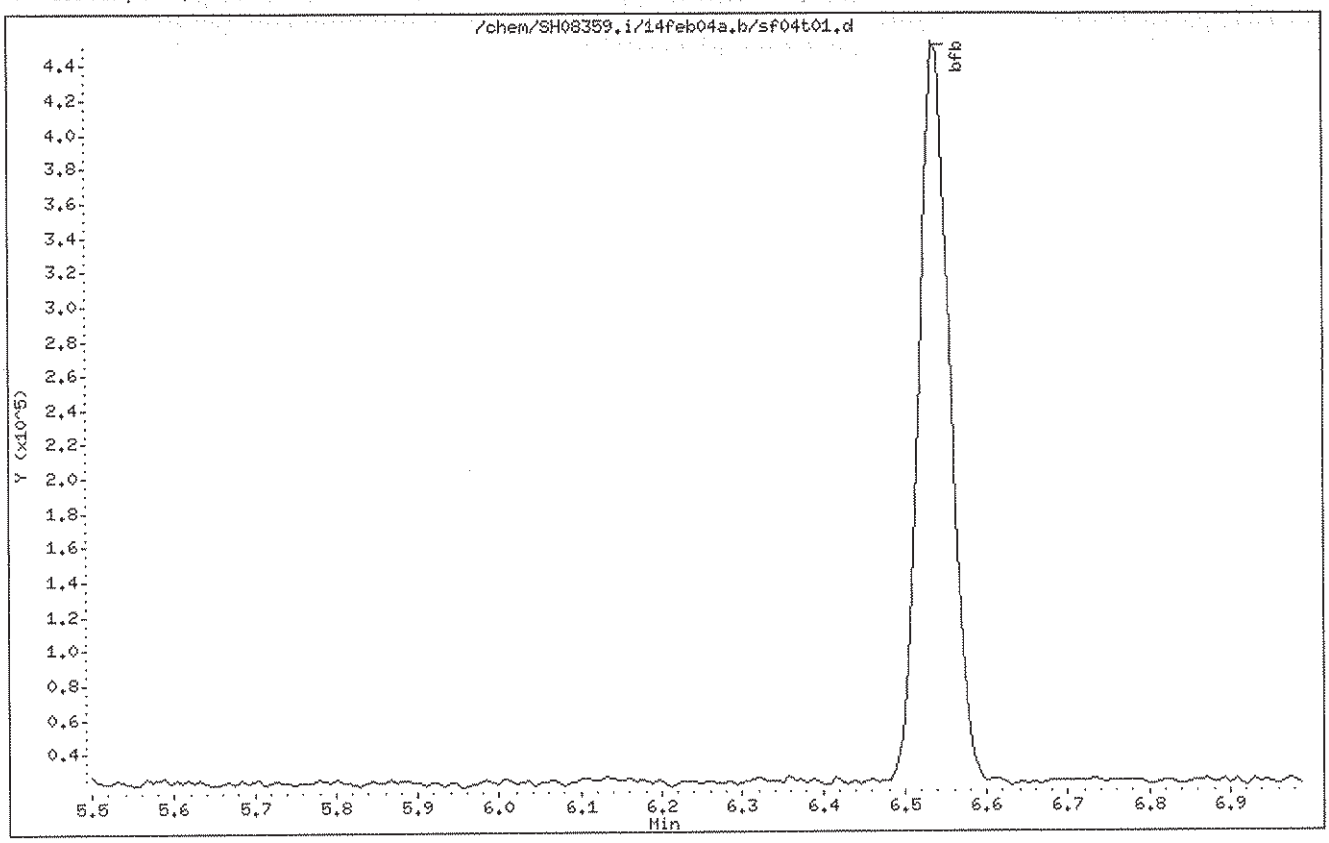
Instrument: SH08359.i

Sample Info: BFBSEP18-13;25NG BFB;

Operator: jml01693

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Jason M. Long on 02/04/2014 at 08:32.
Target 3.5 esignature user ID: jml01693

Data File: /chem/SH08359.i/14feb04a.b/sf04t01.d

Date : 04-FEB-2014 08:25

Client ID: BFBSEP18-13

Instrument: SH08359.i

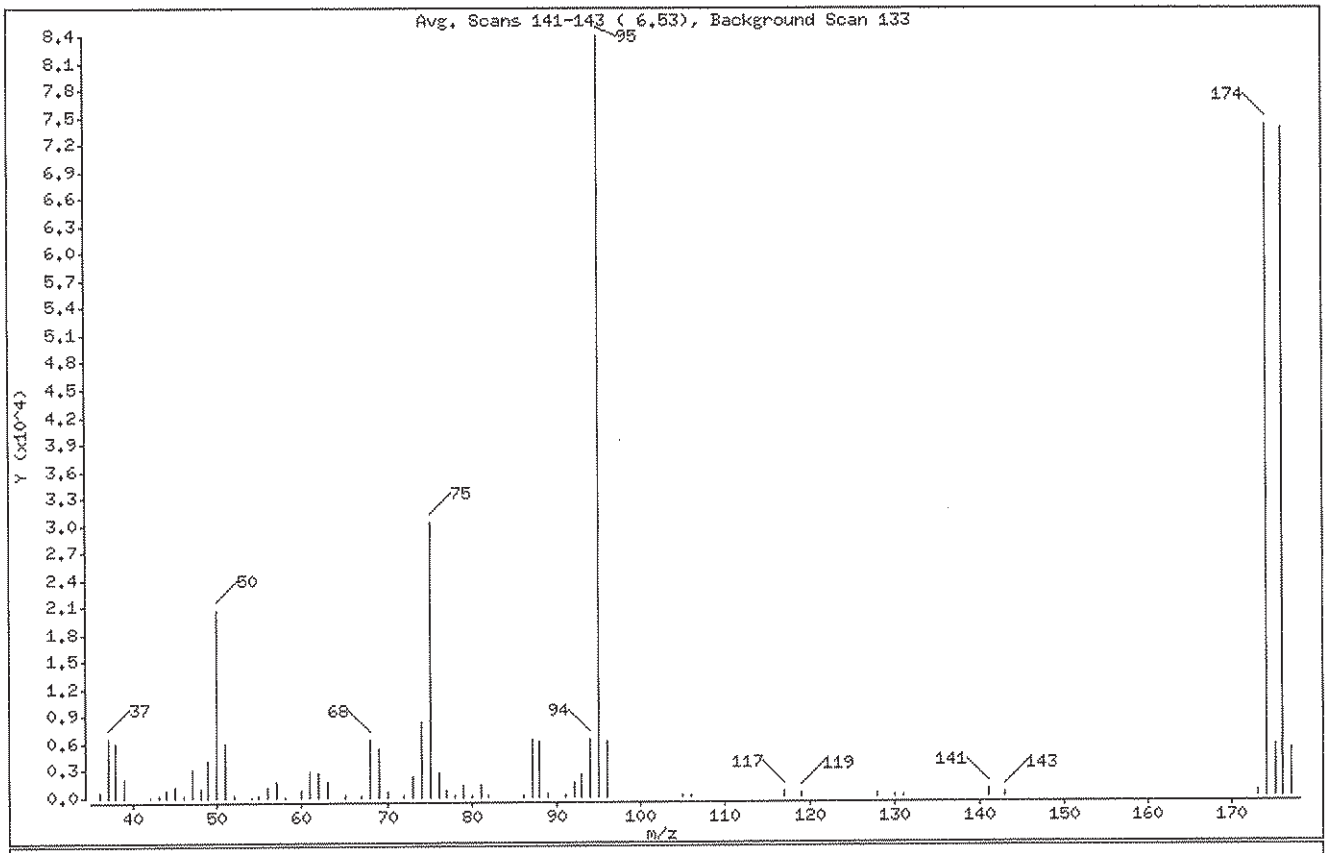
Sample Info: BFBSEP18-13;25NG BFB;

Operator: jml01693

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.64
75	30.00 - 80.00% of mass 95	36.18
96	5.00 - 9.00% of mass 95	7.33
173	Less than 2.00% of mass 174	0.68 (0.77)
174	50.00 - 100.00% of mass 95	88.27
175	5.00 - 9.00% of mass 174	6.67 (7.56)
176	95.00 - 101.00% of mass 174	87.71 (99.37)
177	5.00 - 9.00% of mass 176	6.12 (6.98)

Digitally signed by Jason M. Long on 02/04/2014 at 08:32.
Target 3.5 esignature user ID: jml01693

Data File: /chem/SH08359.i/14feb04a.b/sf04t01.d

Date : 04-FEB-2014 08:25

Client ID: BFBSEP18-13 Instrument: SH08359.i

Sample Info: BFBSEP18-13;25NG BFB;

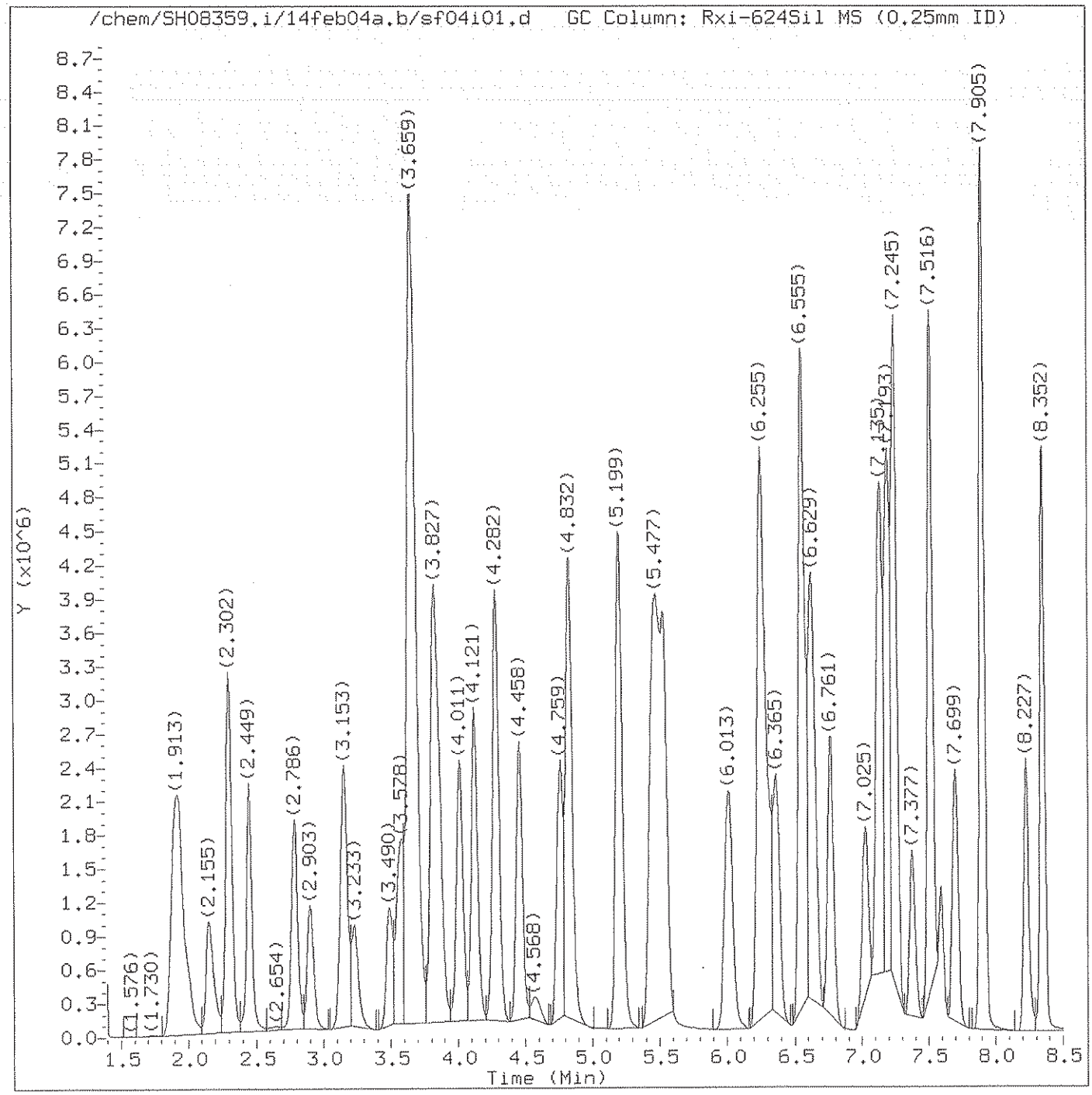
Operator: jml01693

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: sf04t01.d
Spectrum: Avg. Scans 141-143 (6.53), Background Scan 133
Location of Maximum: 95.00
Number of points: 64

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	663	56.00	1100	77.00	867	106.00	177
37.00	6633	57.00	1738	78.00	263	117.00	492
38.00	5910	58.00	90	79.00	1323	119.00	460
39.00	2156	60.00	829	80.00	119	128.00	437
42.00	21	61.00	2970	81.00	1419	130.00	204
43.00	242	62.00	2647	82.00	252	131.00	217
44.00	781	63.00	1683	86.00	124	141.00	753
45.00	1164	65.00	236	87.00	6337	143.00	451
46.00	170	67.00	196	88.00	6238	173.00	571
47.00	3001	68.00	6377	89.00	336	174.00	74152
48.00	1000	69.00	5465	91.00	161	175.00	5604
49.00	4114	70.00	507	92.00	1499	176.00	73688
50.00	20696	72.00	138	93.00	2537	177.00	5140
51.00	5923	73.00	2296	94.00	6357		
52.00	116	74.00	8373	95.00	84008		
54.00	96	75.00	30392	96.00	6156		
55.00	116	76.00	2764	105.00	131		

Digitally signed by Jason M. Long on 02/04/2014 at 08:32.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i01.d
Injection date and time: 04-FEB-2014 09:10

Instrument ID: SH08359.i
Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m
Calibration date and time: 04-FEB-2014 11:34

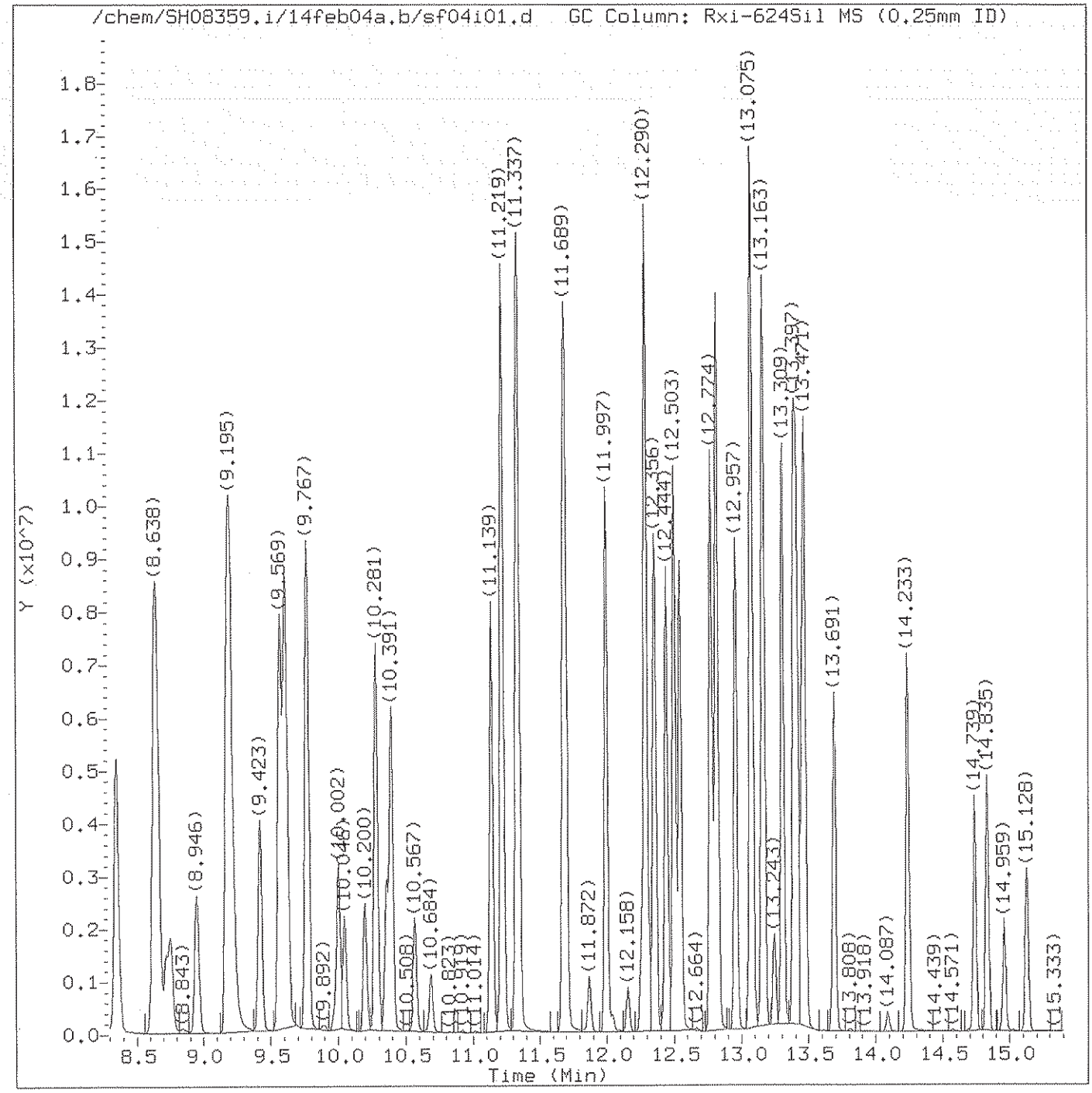
Sublist used: M03648

Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Jason M. Long
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i01.d
Injection date and time: 04-FEB-2014 09:10

Instrument ID: SH08359.i
Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m
Calibration date and time: 04-FEB-2014 11:34

Sublist used: M03648

Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Jason M. Long
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:10 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(1)	2.155	85	2303614	25.167
2) Chloromethane	(1)	2.302	50	5845829	22.838
3) Vinyl Chloride	(1)	2.449	62	3465346	22.236
4) Bromomethane	(1)	2.786	94	2364026	22.343
5) Chloroethane	(1)	2.903	64	1698157	23.180
6) Dichlorofluoromethane	(1)	3.153	67	3526946	23.085
7) Trichlorofluoromethane	(1)	3.233	101	2234448	24.544
8) Ethyl Ether	(1)	3.490	59	1019471	23.020
9) Acrolein	(1)	3.681	56	8041472	1075.269
10) 1,1-Dichloroethene	(1)	3.813	96	1824023	22.916
11) Freon 113	(1)	3.849	101	1827527	23.684
12) Acetone	(1)	3.849	58	541375	225.564
12) Acetone	(1)	3.842	43	1778075	225.866
13) Methyl Iodide	(1)	4.011	142	4529225	23.317
14) Carbon Disulfide	(1)	4.121	76	6311031	22.430
15) Allyl Chloride	(1)	4.282	39	2996070	23.271
16) Methylene Chloride	(1)	4.458	84	1621467	23.221
17) t-Butyl Alcohol	(1)	4.583	59	803843	427.711
18) Acrylonitrile	(1)	4.759	53	3528421	282.957
21) Methyl Tertiary Butyl Ether	(1)	4.825	73	1445699	22.544
20) trans-1,2-Dichloroethene	(1)	4.832	96	2111777	22.881
22) 1,1-Dichloroethane	(1)	5.441	63	3599762	22.855
23) di-Isopropyl Ether	(1)	5.485	87	1079480	22.721
25) Ethyl t-Butyl Ether	(1)	6.013	59	3729526	22.782
28) 2-Butanone	(1)	6.240	43	4218251	232.848
26) cis-1,2-Dichloroethene	(1)	6.255	96	1980588	23.691
27) 2,2-Dichloropropane	(1)	6.284	77	1838597	22.997
29) Propionitrile	(1)	6.328	54	2144165	454.577
30) Methyl Acrylate	(1)	6.372	55	4039877	118.554
31) Methacrylonitrile	(1)	6.555	67	2257933	236.600
32) Bromochloromethane	(1)	6.614	128	835286	24.632
33) Tetrahydrofuran	(1)	6.636	71	752014	327.171
34) Chloroform	(1)	6.761	83	2868533	23.330
35) 1,1,1-Trichloroethane	(1)	7.025	97	1869775	23.890
36) 1-Chlorobutane	(1)	7.193	56	5388746	23.636
38) Carbon Tetrachloride	(1)	7.245	117	1747781	23.509
37) 1,1-Dichloropropene	(1)	7.245	75	2427502	23.852
39) Benzene	(1)	7.516	78	6953325	22.290

Digitally signed by Jason M. Long
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:10 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
40) 1,2-Dichloroethane	(1)	7.597	62	1102818	23.130
41) t-Amyl Methyl Ether	(1)	7.699	73	2117876	24.210
42)*Fluorobenzene	(1)	7.905	96	1093355	5.000
43) Trichloroethene	(1)	8.352	95	2019254	24.177
44) 1,2-Dichloropropane	(1)	8.660	63	1899892	23.370
46) Methyl Methacrylate	(1)	8.711	69	385937	24.878
45) Dibromomethane	(1)	8.755	93	727225	24.069
47) Bromodichloromethane	(1)	8.946	83	1811940	23.865
48) 2-Nitropropane	(1)	9.188	46	727668	2410.668
49) Chloroacetonitrile	(1)	9.225	75	1587067	1170.063
50) cis-1,3-Dichloropropene	(1)	9.423	75	2113440	24.073
51) 4-Methyl-2-pentanone	(1)	9.569	58	2936000	242.051
52) 1,1-Dichloropropanone	(1)	9.606	83	1108180	2368.231
53) Toluene	(1)	9.767	92	4534634	24.790
54) trans-1,3-Dichloropropene	(1)	10.002	75	1400338	24.327
55) Ethyl Methacrylate	(1)	10.046	69	838337	25.114
56) 1,1,2-Trichloroethane	(1)	10.200	83	797459	23.517
58) Tetrachloroethene	(1)	10.281	166	2507760	24.335
59) 1,3-Dichloropropane	(1)	10.354	76	1340647	23.448
60) 2-Hexanone	(1)	10.391	58	2742450	245.548
61) Dibromochloromethane	(1)	10.567	129	1250414	23.760
62) 1,2-Dibromoethane	(1)	10.684	107	871695	23.259
63) Chlorobenzene	(1)	11.139	112	4499894	23.703
64) 1,1,1,2-Tetrachloroethane	(1)	11.219	131	1532708	23.469
65) Ethylbenzene	(1)	11.219	106	2457911	24.415
67) m+p-Xylene	(1)	11.337	106	5890490	47.026
68) o-Xylene	(1)	11.681	106	2724568	24.251
69) Styrene	(1)	11.696	104	4192739	24.148
71) Xylene (Total)	(1)		106	8615058	71.224
70) Bromoform	(1)	11.865	173	575897	24.280
72) Isopropylbenzene	(1)	11.997	120	2089003	24.493
73)$4-Bromofluorobenzene	(1)	12.158	174	269209	4.936
74) 1,1,2,2-Tetrachloroethane	(1)	12.261	83	912800	22.221
75) Bromobenzene	(1)	12.290	156	1737483	24.075
77) trans-1,4-Dichloro-2-butene	(1)	12.290	53	2252502	231.940
76) 1,2,3-Trichloropropane	(1)	12.312	110	159900	22.717
78) n-Propylbenzene	(1)	12.356	120	2192549	24.270
79) 2-Chlorotoluene	(1)	12.444	126	2014001	24.079

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:10 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
80) 1,3,5-Trimethylbenzene	(1)	12.503	105	5240595	22.750
81) 4-Chlorotoluene	(1)	12.547	126	2067604	24.237
82) tert-Butylbenzene	(1)	12.774	134	1341145M	24.827
83) Pentachloroethane	(1)	12.811	167	976122	24.132
84) 1,2,4-Trimethylbenzene	(1)	12.818	105	5088704	22.637
85) sec-Butylbenzene	(1)	12.957	134	1545083	24.700
86) 1,3-Dichlorobenzene	(1)	13.075	146	3149161	23.152
87) p-Isopropyltoluene	(1)	13.082	119	5859009	22.698
88) 1,4-Dichlorobenzene	(1)	13.155	146	3034188	22.771
89) n-Butylbenzene	(1)	13.412	92	3703181	23.330
90)$1,2-Dichlorobenzene-d4	(1)	13.434	152	247182	4.782
91) 1,2-Dichlorobenzene	(1)	13.456	146	2349763	22.514
92) Hexachloroethane	(1)	13.691	201	1103715	23.743
93) 1,2-Dibromo-3-chloropropane	(1)	14.087	157	117527	23.572
94) Nitrobenzene	(1)	14.241	123	285373	584.730
95) 1,2,4-Trichlorobenzene	(1)	14.739	180	1454678	24.478
96) Hexachlorobutadiene	(1)	14.835	225	984665	22.959
97) Naphthalene	(1)	14.959	128	1633114	24.587
98) 1,2,3-Trichlorobenzene	(1)	15.128	180	1043192	23.465

M = Compound was manually integrated.
$ = Compound is a surrogate standard.

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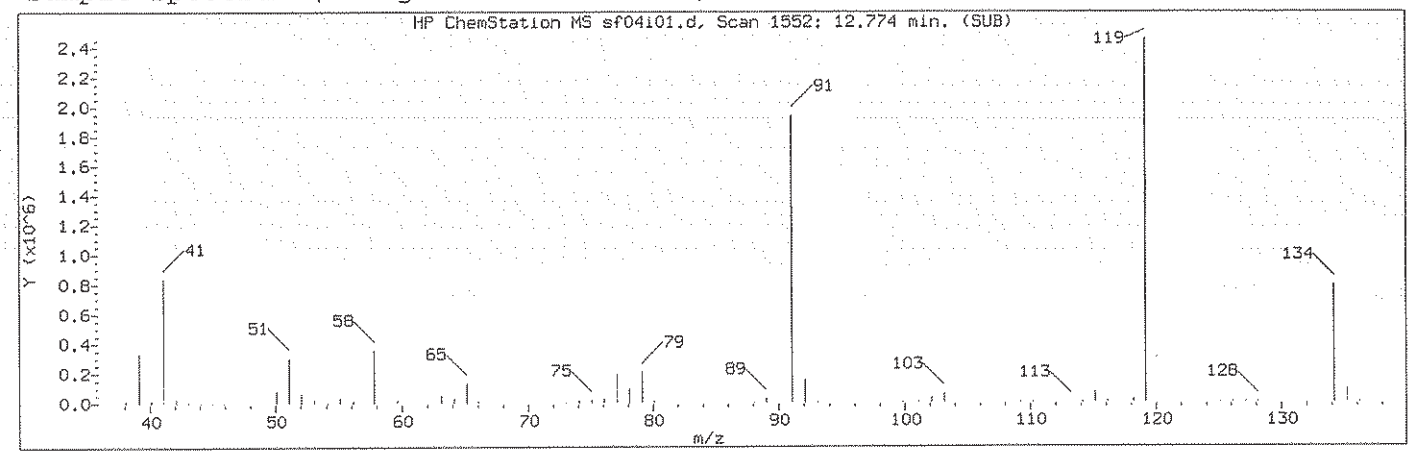
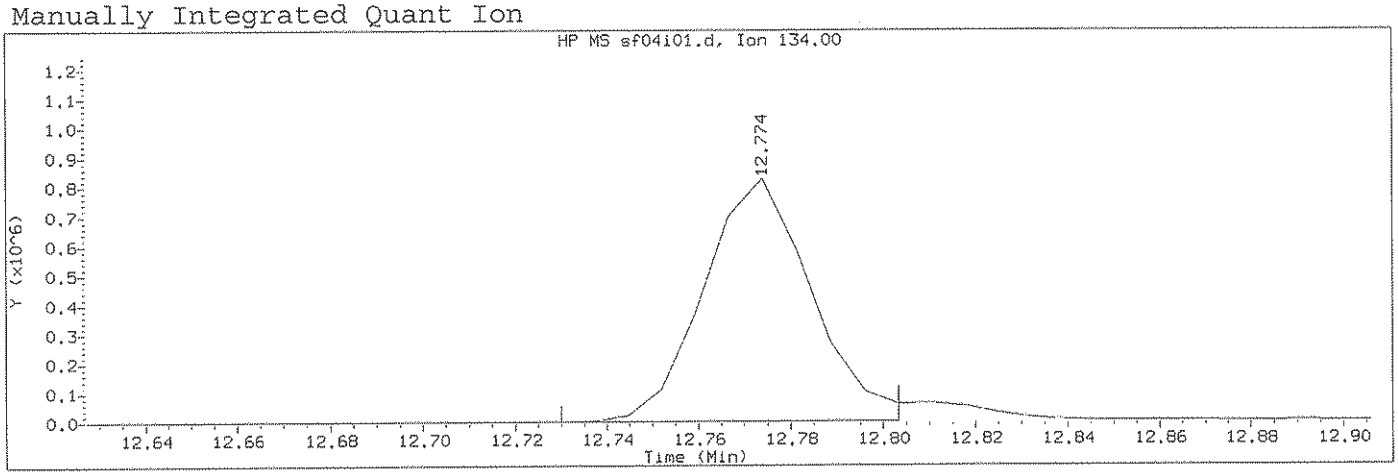
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:10 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

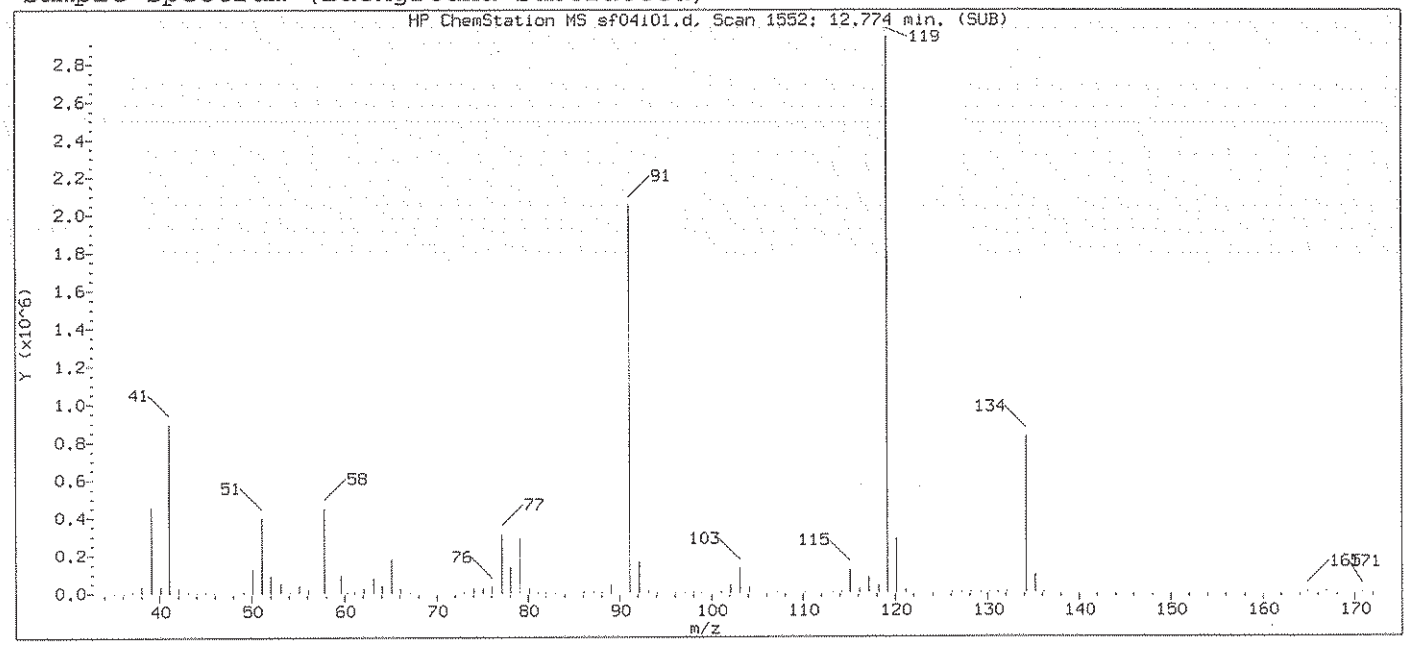
Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1552
Retention Time (minutes): 12.774
Quant Ion : 134.00
Area (flag) : 1341145M
On-Column Amount (ng) : 24.8272
Integration start scan : 1545 Integration stop scan: 1555
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

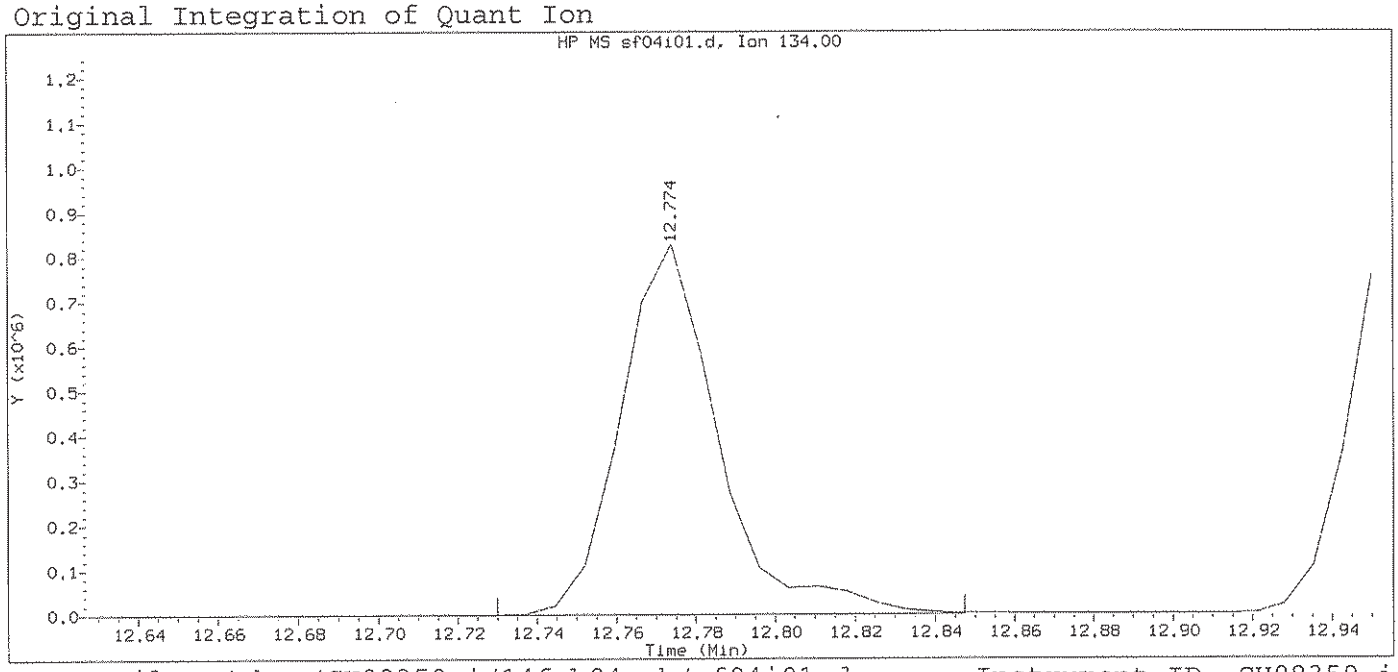
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:34. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: [signature] 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



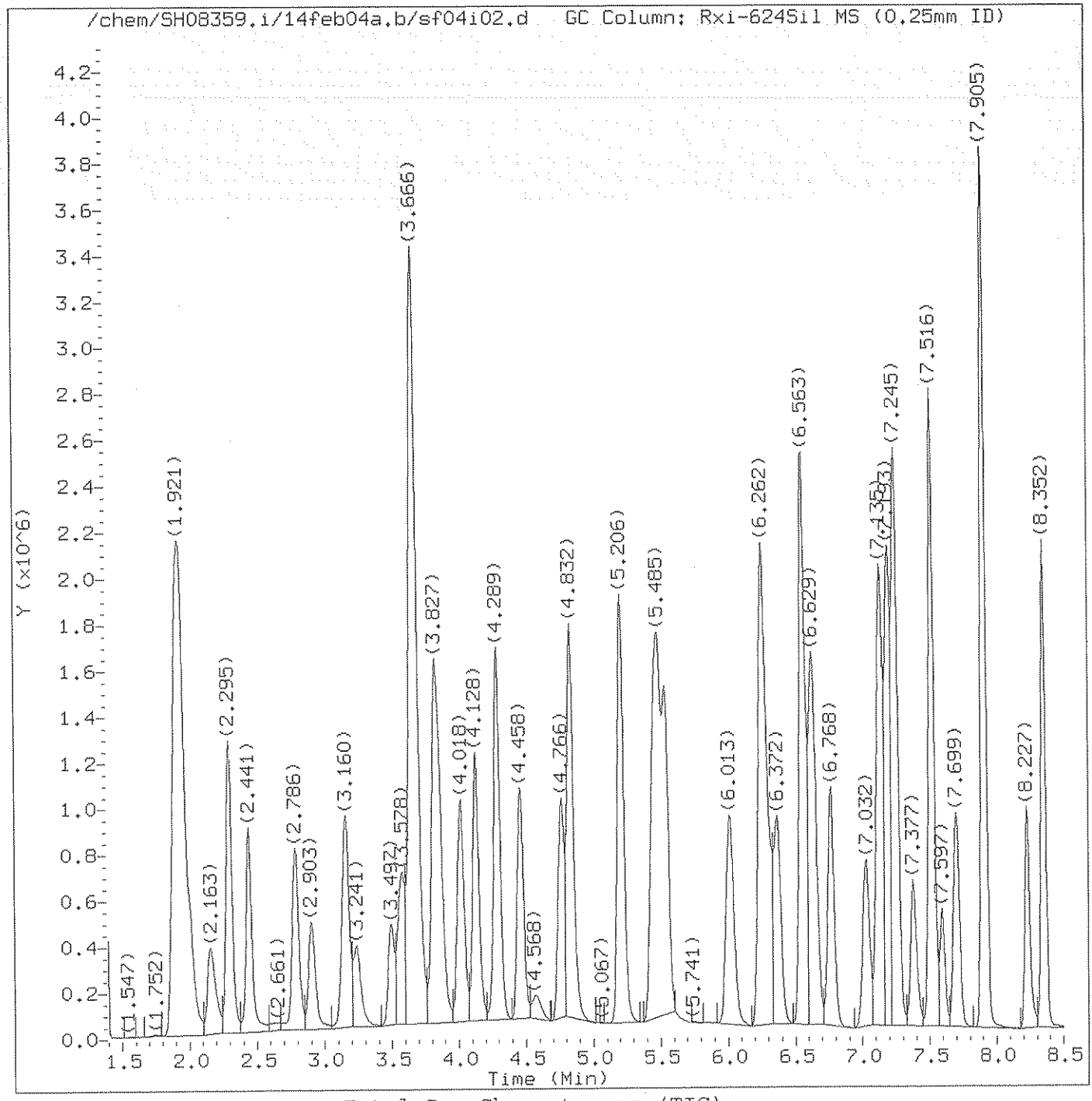
Data File: /chem/SH08359.i/14feb04a.b/sf04i01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:10 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:53
Date, time and analyst ID of latest file update: 04-Feb-2014 10:53 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1552
Retention Time (minutes): 12.774
Quant Ion : 134.00
Area : 1411061
On-column Amount (ng) : 23.9408
Integration start scan : 1545 Integration stop scan: 1561
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 02/04/2014 at 11:34.
Target 3.5 esignature used ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i02.d
Injection date and time: 04-FEB-2014 09:37

Instrument ID: SH08359.i
Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m
Calibration date and time: 04-FEB-2014 11:34

Sublist used: M03648

Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD010

Lab Sample ID: VSTD010

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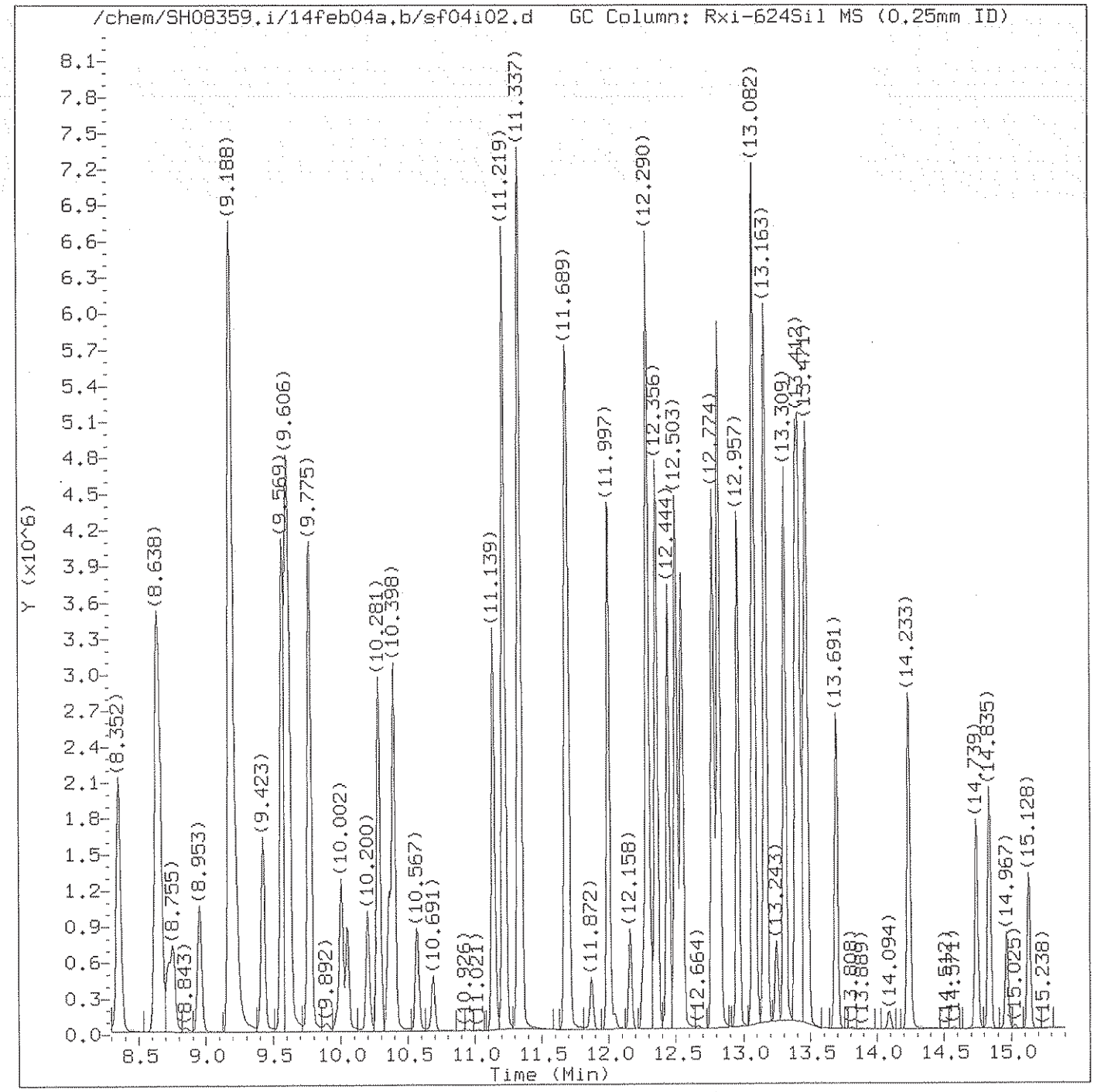
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i02.d
Injection date and time: 04-FEB-2014 09:37

Instrument ID: SH08359.i
Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m
Calibration date and time: 04-FEB-2014 11:34

Sublist used: M03648

Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jason M. Long
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i02.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:37 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(1)	2.155	85	853956	9.605
2) Chloromethane	(1)	2.295	50	2361928	9.500
3) Vinyl Chloride	(1)	2.441	62	1464024	9.672
4) Bromomethane	(1)	2.786	94	972999	9.468
5) Chloroethane	(1)	2.903	64	689007	9.683
6) Dichlorofluoromethane	(1)	3.153	67	1413232	9.524
7) Trichlorofluoromethane	(1)	3.233	101	846840	9.577
8) Ethyl Ether	(1)	3.490	59	412672	9.594
9) Acrolein	(1)	3.681	56	3492738	480.841
10) 1,1-Dichloroethene	(1)	3.820	96	738364	9.551
12) Acetone	(1)	3.849	58	227050	97.397
12) Acetone	(1)	3.849	43	710594	92.934
11) Freon 113	(1)	3.857	101	736654	9.829
13) Methyl Iodide	(1)	4.018	142	1866256	9.892
14) Carbon Disulfide	(1)	4.128	76	2621897	9.594
15) Allyl Chloride	(1)	4.289	39	1172480	9.376
16) Methylene Chloride	(1)	4.458	84	646853	9.537
17) t-Butyl Alcohol	(1)	4.583	59	345949	189.516
18) Acrylonitrile	(1)	4.766	53	1435063	118.485
20) trans-1,2-Dichloroethene	(1)	4.832	96	853171	9.517
21) Methyl Tertiary Butyl Ether	(1)	4.832	73	602702	9.676
22) 1,1-Dichloroethane	(1)	5.441	63	1477156	9.656
23) di-Isopropyl Ether	(1)	5.485	87	450095	9.754
25) Ethyl t-Butyl Ether	(1)	6.013	59	1572496	9.890
28) 2-Butanone	(1)	6.240	43	1693760	96.260
26) cis-1,2-Dichloroethene	(1)	6.262	96	802866	9.888
27) 2,2-Dichloropropane	(1)	6.291	77	739809	9.527
29) Propionitrile	(1)	6.335	54	876057	191.221
30) Methyl Acrylate	(1)	6.372	55	1638979	49.519
31) Methacrylonitrile	(1)	6.555	67	920508	99.308
32) Bromochloromethane	(1)	6.614	128	331894	10.077
33) Tetrahydrofuran	(1)	6.643	71	303776	136.068
34) Chloroform	(1)	6.768	83	1140191	9.547
35) 1,1,1-Trichloroethane	(1)	7.032	97	740868	9.746
36) 1-Chlorobutane	(1)	7.193	56	2110786	9.532
38) Carbon Tetrachloride	(1)	7.245	117	695394	9.630
37) 1,1-Dichloropropene	(1)	7.245	75	970294	9.816
39) Benzene	(1)	7.516	78	3002109	9.908

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on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i02.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:37 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
40) 1,2-Dichloroethane	(1)	7.597	62	443322	9.573
41) t-Amyl Methyl Ether	(1)	7.699	73	857246	10.089
42)*Fluorobenzene	(1)	7.912	96	1061958	5.000
43) Trichloroethene	(1)	8.352	95	803880	9.910
44) 1,2-Dichloropropane	(1)	8.660	63	774078	9.803
46) Methyl Methacrylate	(1)	8.719	69	152622	10.129
45) Dibromomethane	(1)	8.755	93	289270	9.857
47) Bromodichloromethane	(1)	8.953	83	713600	9.677
48) 2-Nitropropane	(1)	9.188	46	298248	1017.268
49) Chloroacetonitrile	(1)	9.225	75	643120	488.157
50) cis-1,3-Dichloropropene	(1)	9.423	75	862468	10.114
51) 4-Methyl-2-pentanone	(1)	9.569	58	1203512	102.154
52) 1,1-Dichloropropanone	(1)	9.606	83	444531	978.069
53) Toluene	(1)	9.775	92	1797907	10.119
54) trans-1,3-Dichloropropene	(1)	10.002	75	558149	9.983
55) Ethyl Methacrylate	(1)	10.046	69	334430	10.315
56) 1,1,2-Trichloroethane	(1)	10.200	83	322353	9.787
58) Tetrachloroethene	(1)	10.281	166	980947	9.801
59) 1,3-Dichloropropane	(1)	10.361	76	539971	9.723
60) 2-Hexanone	(1)	10.398	58	1108545	102.189
61) Dibromochloromethane	(1)	10.567	129	499603	9.774
62) 1,2-Dibromoethane	(1)	10.691	107	358851	9.858
63) Chlorobenzene	(1)	11.139	112	1837242	9.964
64) 1,1,1,2-Tetrachloroethane	(1)	11.219	131	623359	9.827
65) Ethylbenzene	(1)	11.219	106	992522	10.151
67) m+p-Xylene	(1)	11.337	106	2454183	20.172
68) o-Xylene	(1)	11.681	106	1120323	10.267
69) Styrene	(1)	11.696	104	1713827	10.162
71) Xylene (Total)	(1)		106	3574506	30.425
70) Bromoform	(1)	11.872	173	231345	10.042
72) Isopropylbenzene	(1)	11.997	120	849851	10.259
73)$4-Bromofluorobenzene	(1)	12.158	174	270878	5.114
74) 1,1,2,2-Tetrachloroethane	(1)	12.261	83	385616	9.665
75) Bromobenzene	(1)	12.290	156	700802	9.997
77) trans-1,4-Dichloro-2-butene	(1)	12.290	53	942192	99.886
76) 1,2,3-Trichloropropane	(1)	12.319	110	64978	9.505
78) n-Propylbenzene	(1)	12.356	120	889759	10.140
79) 2-Chlorotoluene	(1)	12.444	126	807604	9.941

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i02.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:37 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

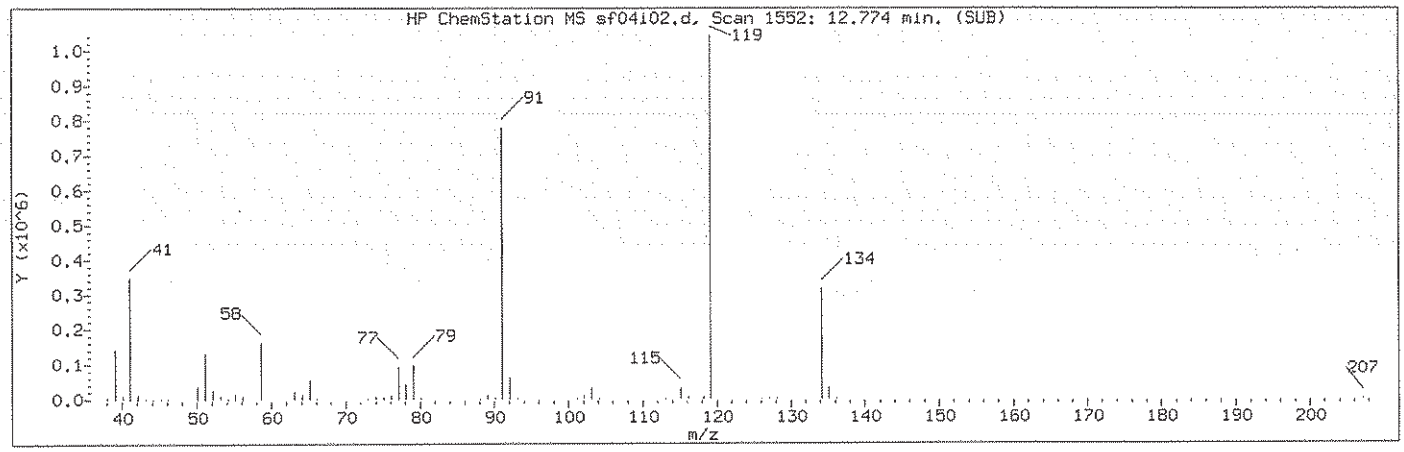
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
80) 1,3,5-Trimethylbenzene	(1)	12.503	105	2269370	10.143
81) 4-Chlorotoluene	(1)	12.547	126	831172	10.031
82) tert-Butylbenzene	(1)	12.774	134	531267M	10.126
83) Pentachloroethane	(1)	12.811	167	394250	10.035
84) 1,2,4-Trimethylbenzene	(1)	12.825	105	2220621	10.170
85) sec-Butylbenzene	(1)	12.957	134	614772	10.118
86) 1,3-Dichlorobenzene	(1)	13.075	146	1314023	9.946
87) p-Isopropyltoluene	(1)	13.082	119	2590485	10.332
88) 1,4-Dichlorobenzene	(1)	13.163	146	1262503	9.755
89) n-Butylbenzene	(1)	13.419	92	1551544	10.064
90)$1,2-Dichlorobenzene-d4	(1)	13.441	152	254040	5.060
91) 1,2-Dichlorobenzene	(1)	13.456	146	977360	9.641
92) Hexachloroethane	(1)	13.691	201	445707	9.872
93) 1,2-Dibromo-3-chloropropane	(1)	14.087	157	44388	9.166
94) Nitrobenzene	(1)	14.241	123	104463	220.373
95) 1,2,4-Trichlorobenzene	(1)	14.739	180	582215	10.087
96) Hexachlorobutadiene	(1)	14.835	225	403354	9.683
97) Naphthalene	(1)	14.967	128	647586	10.038
98) 1,2,3-Trichlorobenzene	(1)	15.128	180	432055	10.006

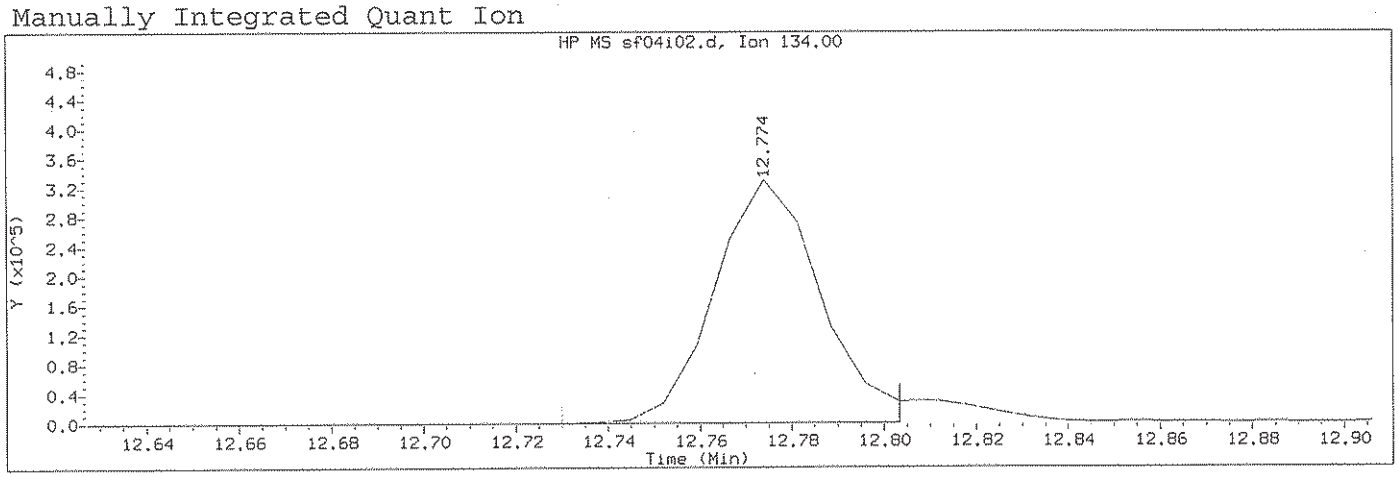
M = Compound was manually integrated.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i02.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:37 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

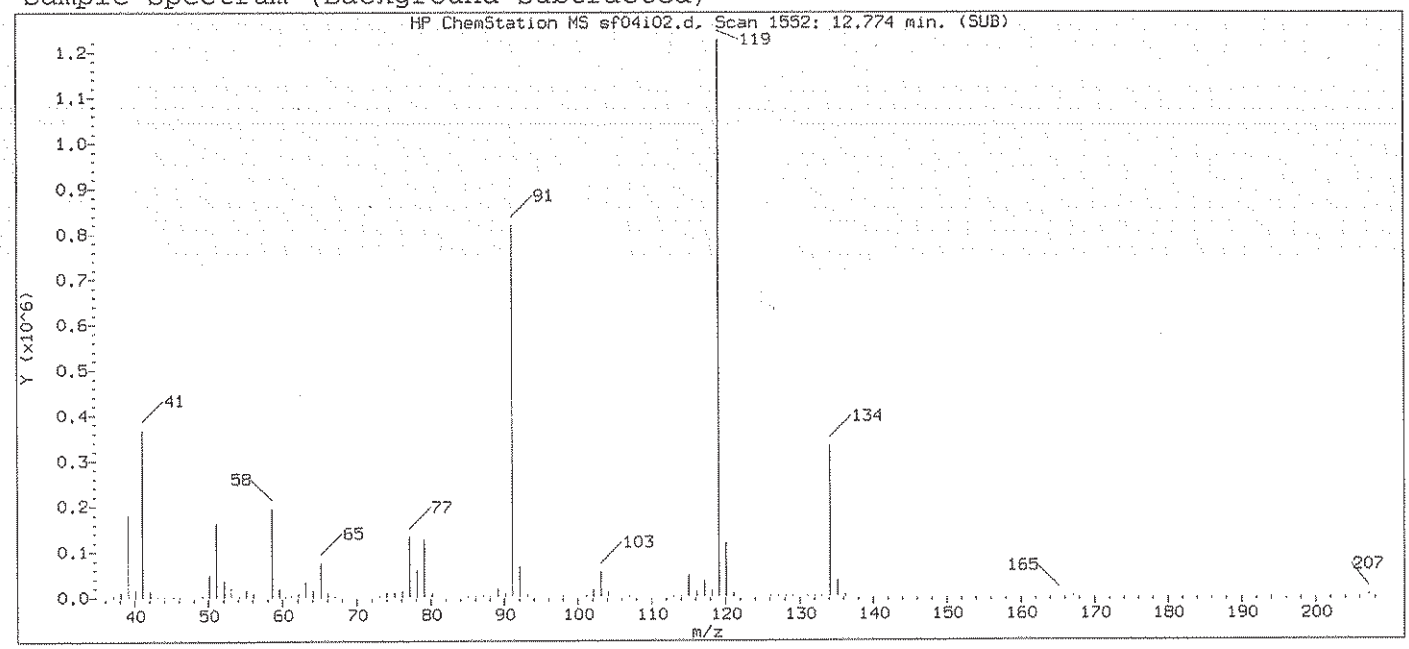
Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1552
Retention Time (minutes): 12.774
Quant Ion : 134.00
Area (flag) : 531267M
On-Column Amount (ng) : 10.1256
Integration start scan : 1545 Integration stop scan: 1555
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

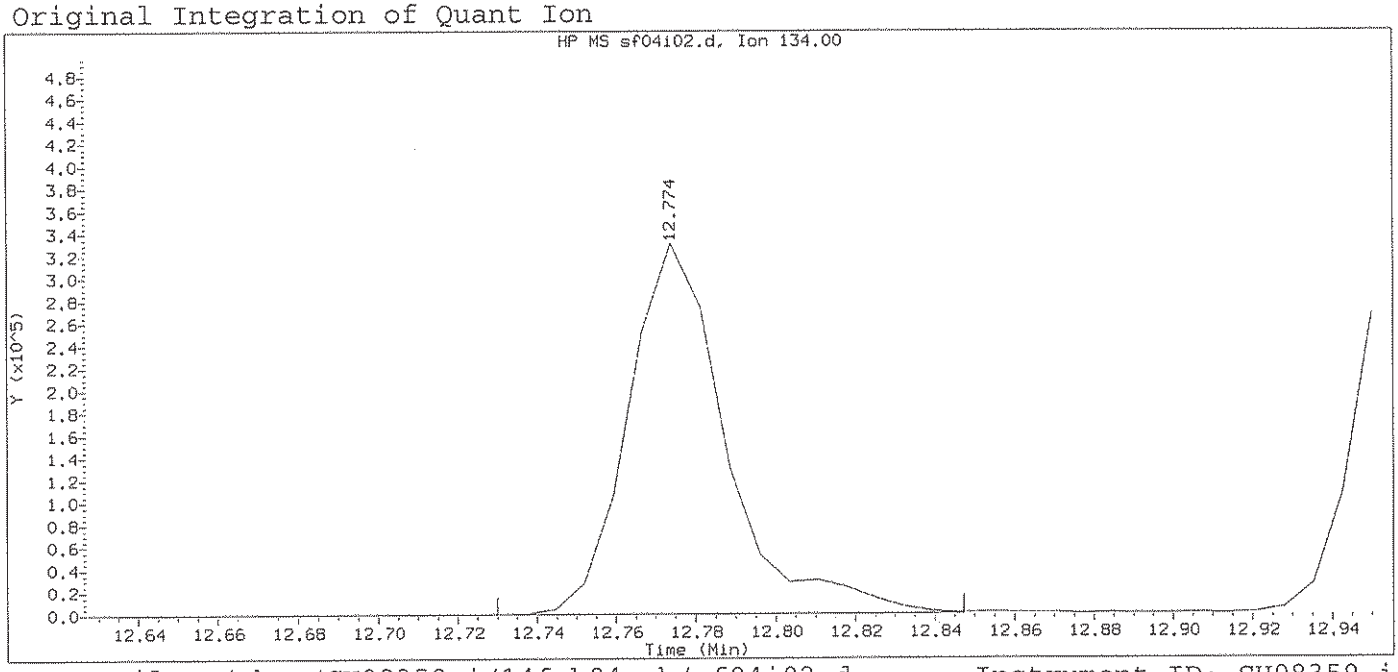
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:34. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: [signature] 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



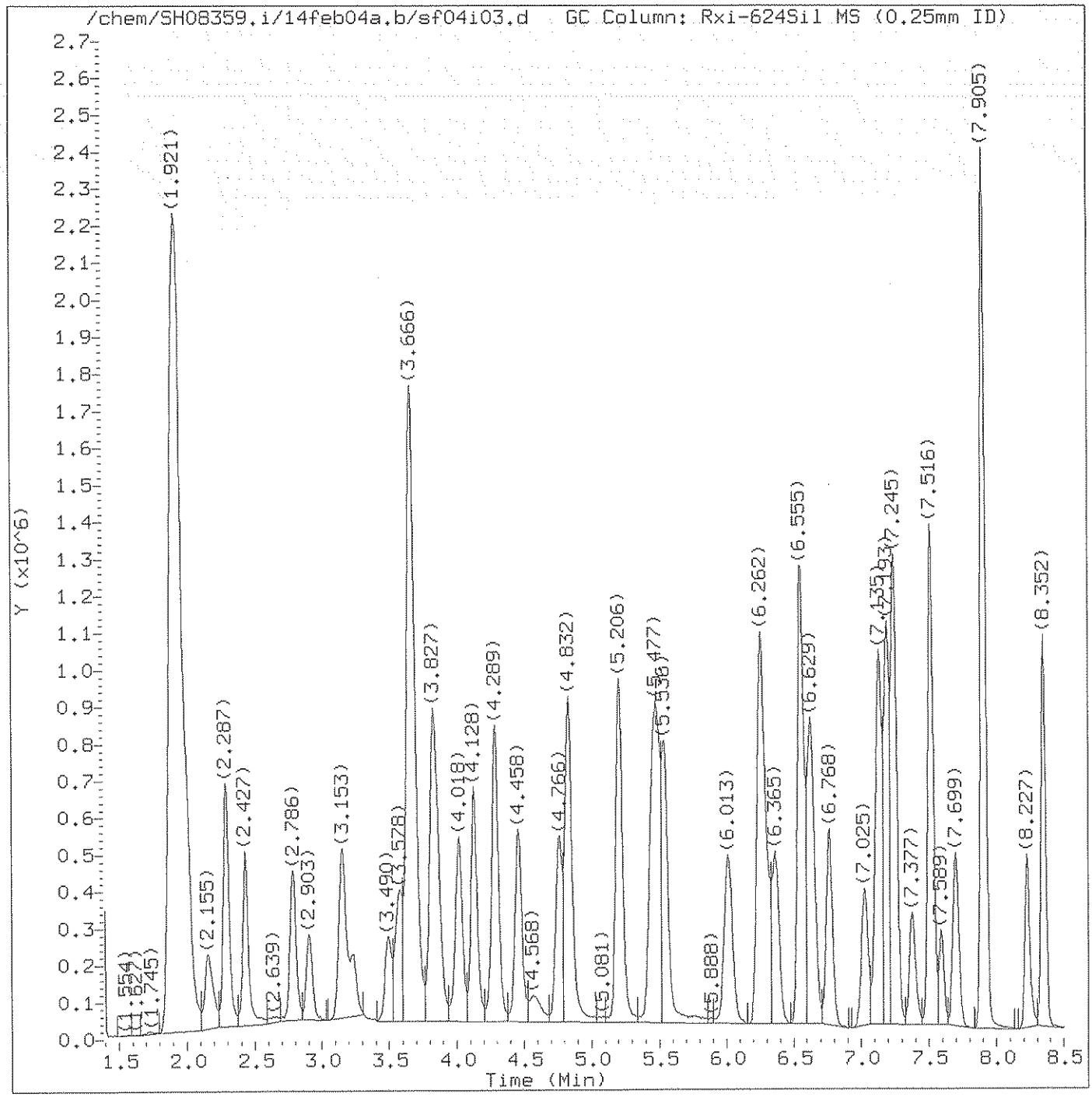
Data File: /chem/SH08359.i/14feb04a.b/sf04i02.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 09:37 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:53
Date, time and analyst ID of latest file update: 04-Feb-2014 10:53 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 82
Compound Name	: tert-Butylbenzene
Scan Number	: 1552
Retention Time (minutes)	: 12.774
Quant Ion	: 134.00
Area	: 564998
On-column Amount (ng)	: 9.7321
Integration start scan	: 1545 Integration stop scan: 1561
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Jason M. Long on 02/04/2014 at 11:34.
Target 3.5 esignature using TID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i03.d
Injection date and time: 04-FEB-2014 10:04

Instrument ID: SH08359.i
Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m
Calibration date and time: 04-FEB-2014 11:34

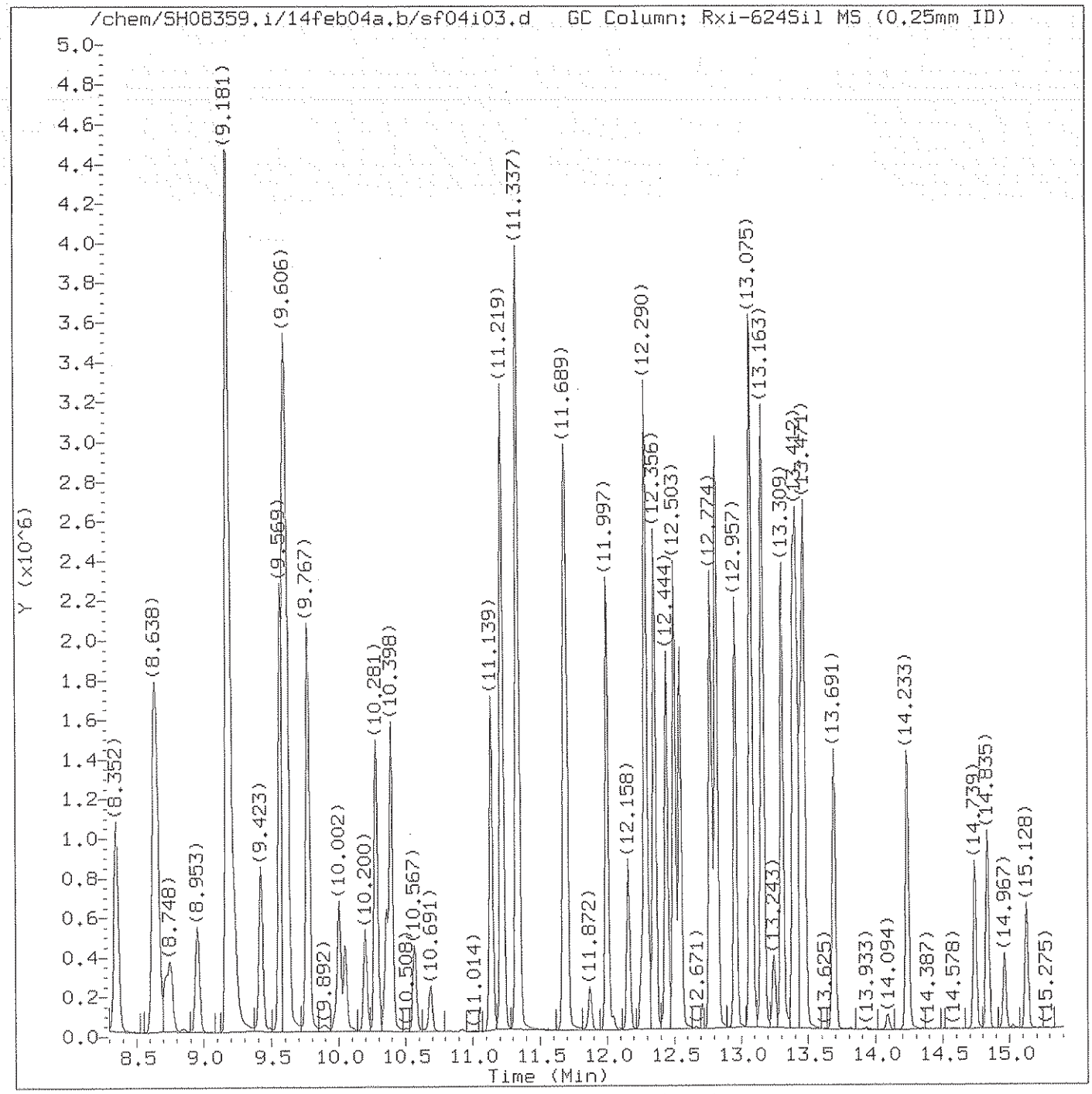
Sublist used: M03648

Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Jason M. Long
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i03.d
Injection date and time: 04-FEB-2014 10:04

Instrument ID: SH08359.i
Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m
Calibration date and time: 04-FEB-2014 11:34

Sublist used: M03648

Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Jason M. Long
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i03.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:04 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(1)	2.155	85	426007	4.740
2) Chloromethane	(1)	2.287	50	1199591	4.772
3) Vinyl Chloride	(1)	2.427	62	743346	4.857
4) Bromomethane	(1)	2.779	94	506797	4.878
5) Chloroethane	(1)	2.903	64	347184	4.826
6) Dichlorofluoromethane	(1)	3.145	67	715251	4.768
7) Trichlorofluoromethane	(1)	3.233	101	429089	4.800
8) Ethyl Ether	(1)	3.490	59	218489	5.024
9) Acrolein	(1)	3.681	56	1823905	248.362
10) 1,1-Dichloroethene	(1)	3.820	96	374489	4.791
12) Acetone	(1)	3.849	58	114453	48.562
12) Acetone	(1)	3.849	43	373267	48.286
11) Freon 113	(1)	3.857	101	369847	4.881
13) Methyl Iodide	(1)	4.018	142	937736	4.916
14) Carbon Disulfide	(1)	4.128	76	1344470	4.866
15) Allyl Chloride	(1)	4.289	39	595632	4.711
16) Methylene Chloride	(1)	4.458	84	333679	4.866
17) t-Butyl Alcohol	(1)	4.583	59	179404	97.210
18) Acrylonitrile	(1)	4.759	53	756706	61.797
21) Methyl Tertiary Butyl Ether	(1)	4.825	73	309624	4.917
20) trans-1,2-Dichloroethene	(1)	4.832	96	435031	4.800
22) 1,1-Dichloroethane	(1)	5.441	63	749405	4.845
23) di-Isopropyl Ether	(1)	5.485	87	226214	4.849
25) Ethyl t-Butyl Ether	(1)	6.013	59	794787	4.944
28) 2-Butanone	(1)	6.240	43	880436M	49.493
26) cis-1,2-Dichloroethene	(1)	6.262	96	399950	4.872
27) 2,2-Dichloropropane	(1)	6.284	77	377209	4.805
29) Propionitrile	(1)	6.328	54	454626	98.154
30) Methyl Acrylate	(1)	6.372	55	842337	25.173
31) Methacrylonitrile	(1)	6.555	67	469782	50.131
32) Bromochloromethane	(1)	6.614	128	167297	5.024
33) Tetrahydrofuran	(1)	6.643	71	158226	70.102
34) Chloroform	(1)	6.768	83	581010	4.812
35) 1,1,1-Trichloroethane	(1)	7.032	97	383298	4.987
36) 1-Chlorobutane	(1)	7.193	56	1155462	5.161
37) 1,1-Dichloropropene	(1)	7.245	75	498775	4.991
38) Carbon Tetrachloride	(1)	7.252	117	355744	4.873
39) Benzene	(1)	7.516	78	1532349	5.002

M = Compound was manually integrated.

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on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i03.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:04 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
40) 1,2-Dichloroethane	(1)	7.589	62	232681	4.970
41) t-Amyl Methyl Ether	(1)	7.699	73	431847	5.027
42)*Fluorobenzene	(1)	7.905	96	1073641	5.000
43) Trichloroethene	(1)	8.352	95	394478	4.810
44) 1,2-Dichloropropane	(1)	8.660	63	395248	4.951
46) Methyl Methacrylate	(1)	8.719	69	77347	5.077
45) Dibromomethane	(1)	8.755	93	148880	5.018
47) Bromodichloromethane	(1)	8.953	83	360567	4.836
48) 2-Nitropropane	(1)	9.181	46	157078	529.934
49) Chloroacetonitrile	(1)	9.225	75	329180	247.144
50) cis-1,3-Dichloropropene	(1)	9.423	75	431494	5.005
51) 4-Methyl-2-pentanone	(1)	9.569	58	608005	51.046
52) 1,1-Dichloropropanone	(1)	9.606	83	230992	502.705
53) Toluene	(1)	9.767	92	888190	4.945
54) trans-1,3-Dichloropropene	(1)	10.002	75	280326	4.959
55) Ethyl Methacrylate	(1)	10.046	69	167845	5.121
56) 1,1,2-Trichloroethane	(1)	10.200	83	167027	5.016
58) Tetrachloroethene	(1)	10.281	166	487957	4.822
59) 1,3-Dichloropropane	(1)	10.361	76	278093	4.953
60) 2-Hexanone	(1)	10.398	58	556800	50.769
61) Dibromochloromethane	(1)	10.567	129	253957	4.914
62) 1,2-Dibromoethane	(1)	10.691	107	181129	4.922
63) Chlorobenzene	(1)	11.139	112	917139	4.920
64) 1,1,1,2-Tetrachloroethane	(1)	11.212	131	310253	4.838
65) Ethylbenzene	(1)	11.219	106	500217	5.060
67) m+p-Xylene	(1)	11.337	106	1250331	10.165
68) o-Xylene	(1)	11.681	106	557587	5.054
69) Styrene	(1)	11.696	104	856866	5.026
71) Xylene (Total)	(1)		106	1807918	15.221
70) Bromoform	(1)	11.872	173	114567	4.919
72) Isopropylbenzene	(1)	11.997	120	419133	5.004
73)$4-Bromofluorobenzene	(1)	12.158	174	271882	5.077
74) 1,1,2,2-Tetrachloroethane	(1)	12.253	83	196415	4.869
75) Bromobenzene	(1)	12.290	156	355561	5.017
77) trans-1,4-Dichloro-2-butene	(1)	12.290	53	481184	50.457
76) 1,2,3-Trichloropropane	(1)	12.312	110	33046	4.781
78) n-Propylbenzene	(1)	12.356	120	441975	4.982
79) 2-Chlorotoluene	(1)	12.444	126	404481	4.925

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i03.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:04 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
80) 1,3,5-Trimethylbenzene	(1)	12.503	105	1140583	5.042
81) 4-Chlorotoluene	(1)	12.547	126	416641	4.974
82) tert-Butylbenzene	(1)	12.774	134	266434M	5.023
83) Pentachloroethane	(1)	12.811	167	198225	4.991
84) 1,2,4-Trimethylbenzene	(1)	12.818	105	1118827	5.068
85) sec-Butylbenzene	(1)	12.957	134	305171	4.968
86) 1,3-Dichlorobenzene	(1)	13.075	146	664583	4.976
87) p-Isopropyltoluene	(1)	13.082	119	1285532	5.072
88) 1,4-Dichlorobenzene	(1)	13.155	146	641446	4.902
89) n-Butylbenzene	(1)	13.412	92	771739	4.951
90)$1,2-Dichlorobenzene-d4	(1)	13.434	152	256609	5.056
91) 1,2-Dichlorobenzene	(1)	13.456	146	497763	4.857
92) Hexachloroethane	(1)	13.691	201	234839	5.145
93) 1,2-Dibromo-3-chloropropane	(1)	14.094	157	23092	4.717
94) Nitrobenzene	(1)	14.241	123	46446	96.915
95) 1,2,4-Trichlorobenzene	(1)	14.739	180	280089	4.800
96) Hexachlorobutadiene	(1)	14.835	225	201771	4.791
97) Naphthalene	(1)	14.959	128	313354	4.804
98) 1,2,3-Trichlorobenzene	(1)	15.128	180	206895	4.739

M = Compound was manually integrated.
$ = Compound is a surrogate standard.

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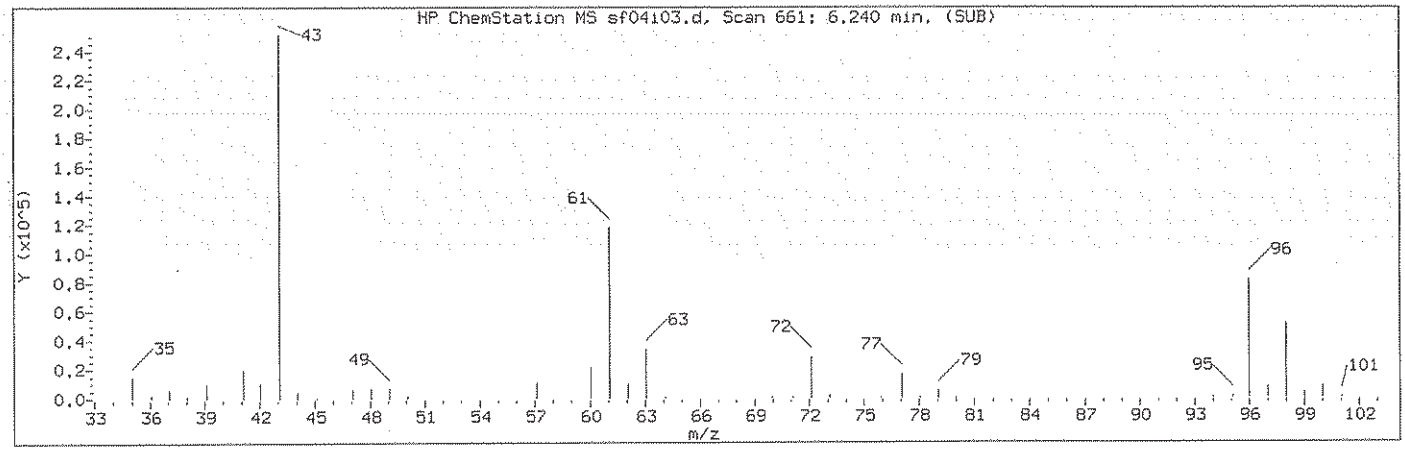
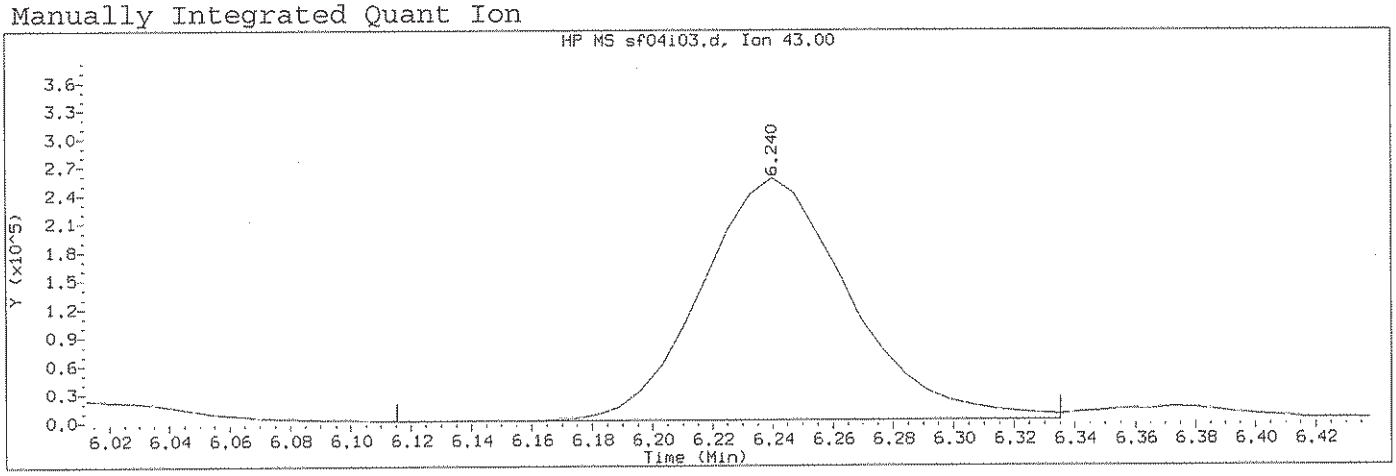
on 02/04/2014 at 11:34.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i03.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:04 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

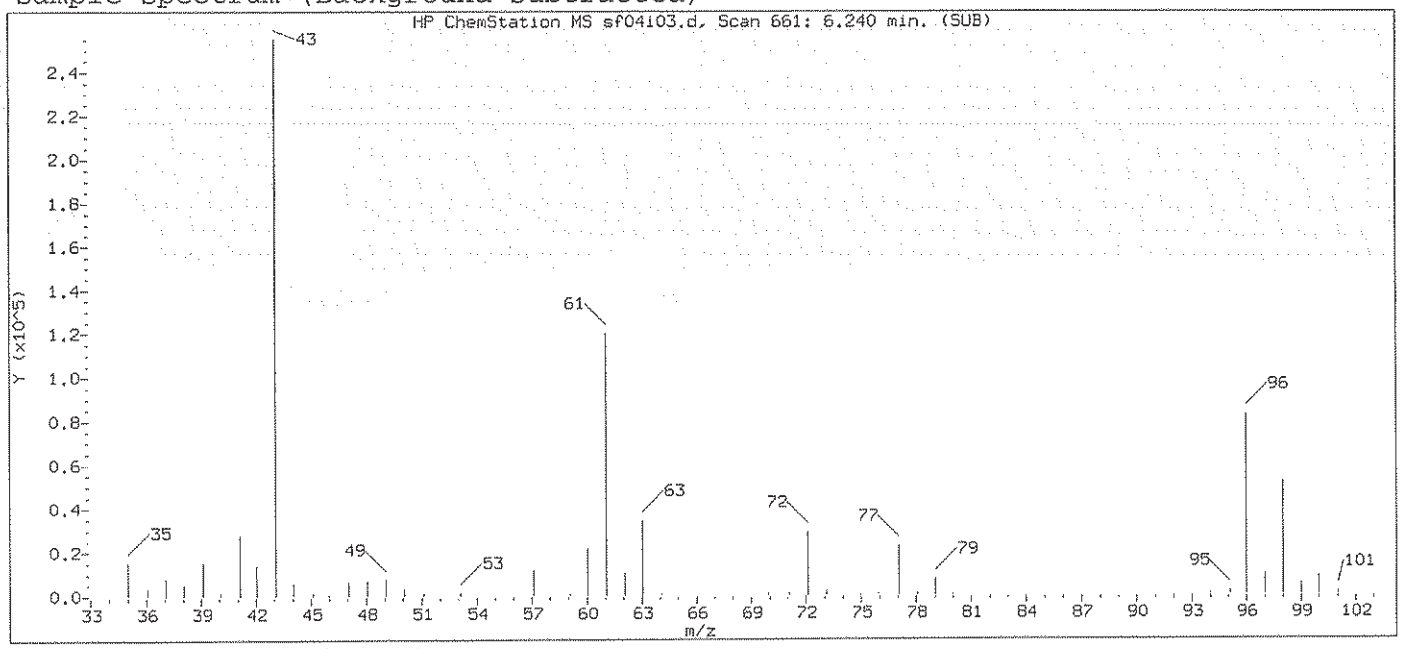
Compound Number : 28
Compound Name : 2-Butanone
Scan Number : 661
Retention Time (minutes): 6.240
Quant Ion : 43.00
Area (flag) : 880436M
On-Column Amount (ng) : 49.4926
Integration start scan : 643 Integration stop scan: 673
Y at integration start : 1232 Y at integration end: 1232

Reason for manual integration: improper integration

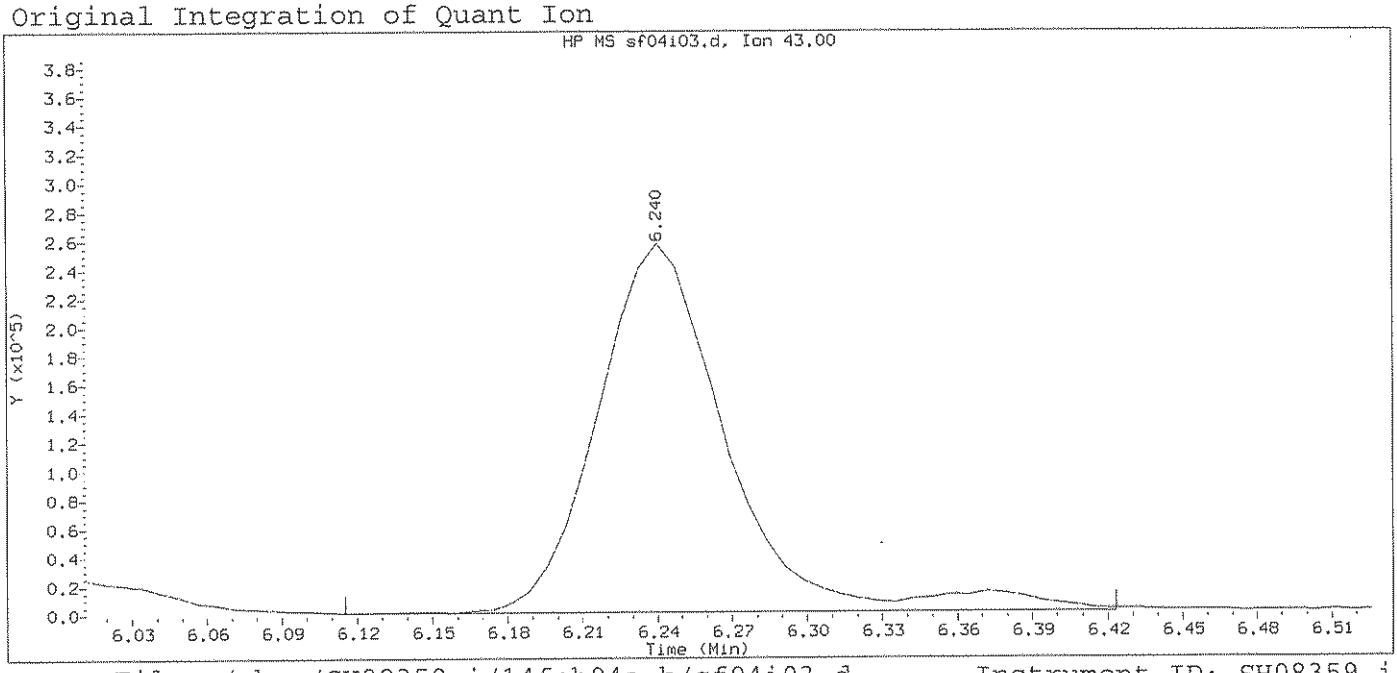
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:34. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: [signature] 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i03.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:04 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:54
Date, time and analyst ID of latest file update: 04-Feb-2014 10:54 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 28
Compound Name : 2-Butanone
Scan Number : 661
Retention Time (minutes): 6.240
Quant Ion : 43.00
Area : 923765
On-column Amount (ng) : 51.4682
Integration start scan : 643 Integration stop scan: 685
Y at integration start : 1236 Y at integration end: 1228

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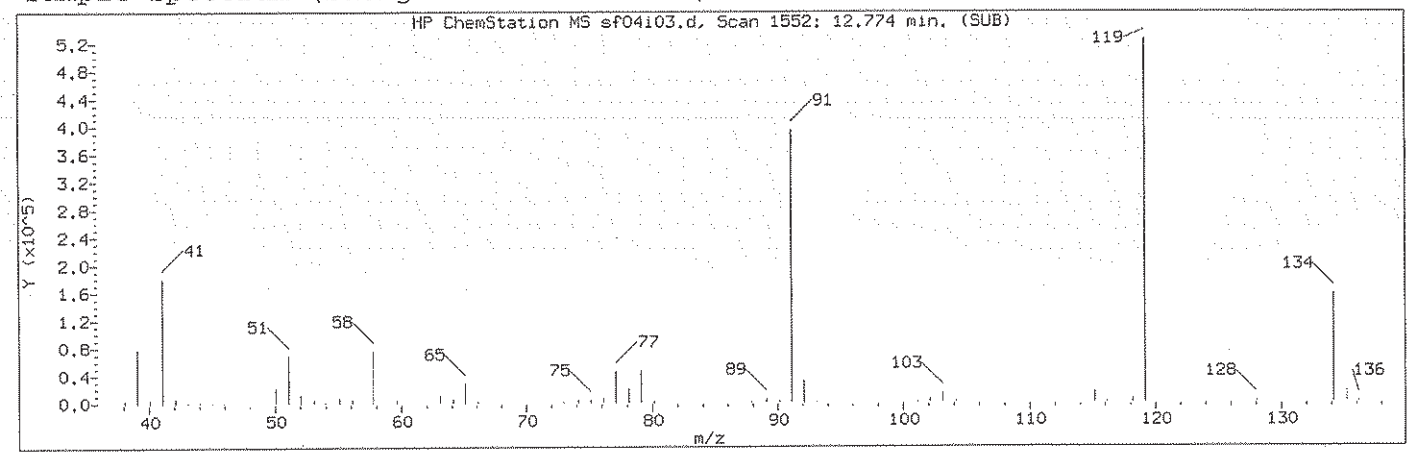
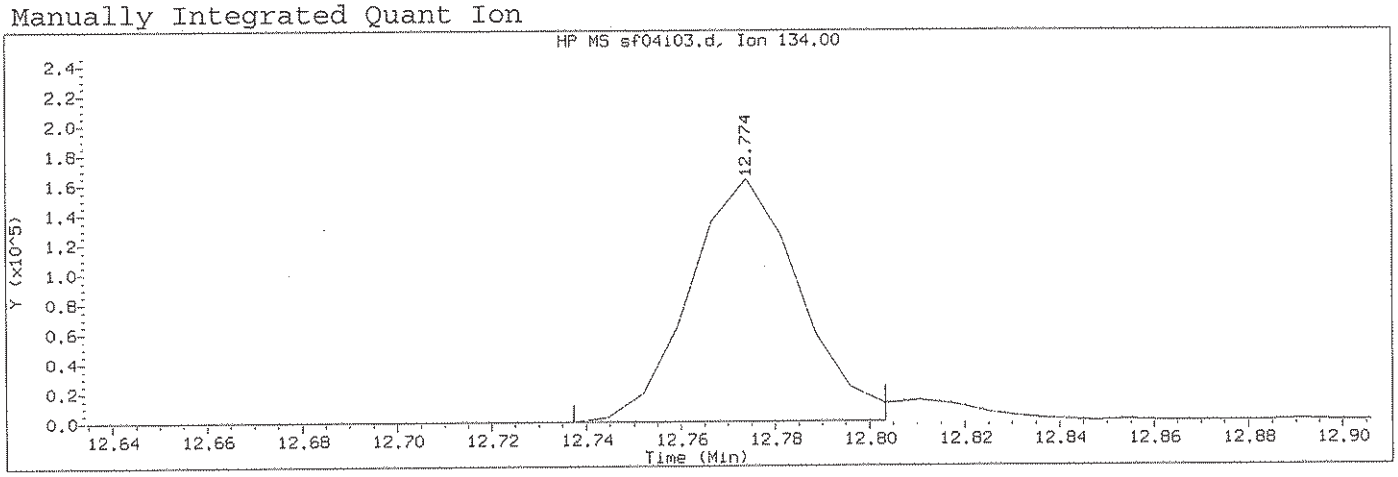
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i03.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:04 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

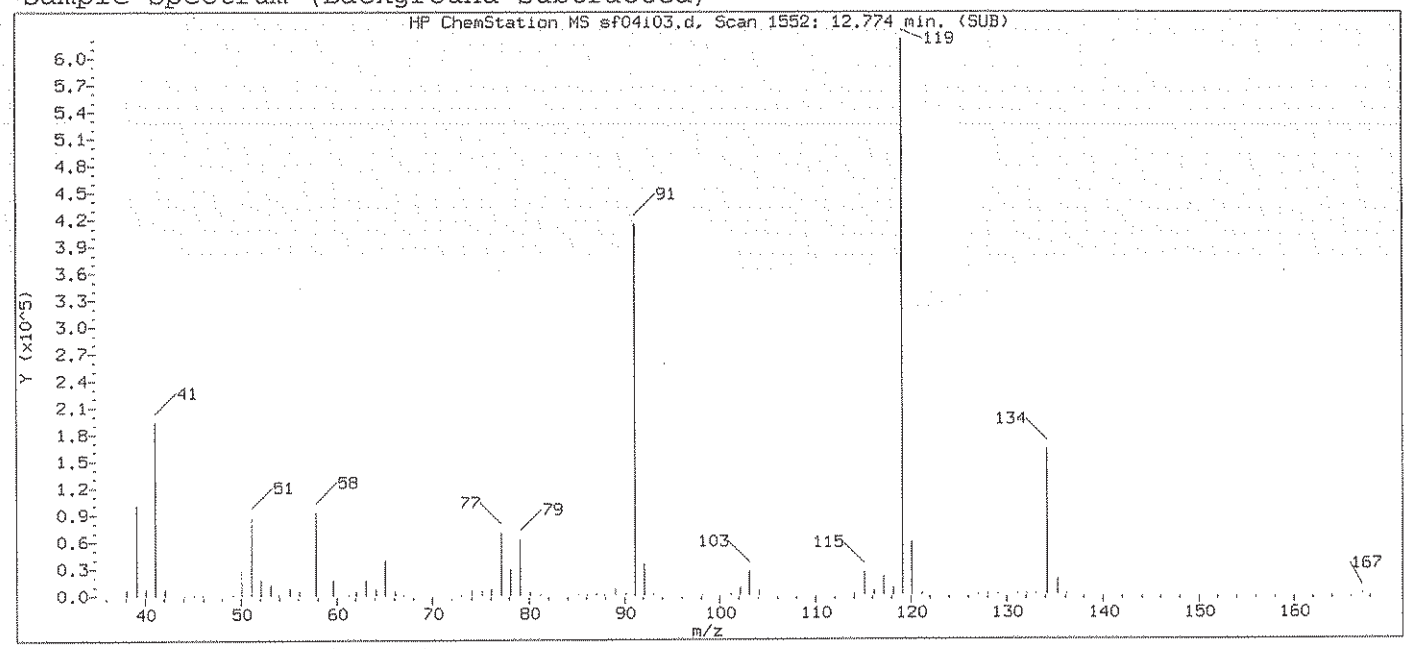
Compound Number	: 82		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1552		
Retention Time (minutes)	: 12.774		
Quant Ion	: 134.00		
Area (flag)	: 266434M		
On-Column Amount (ng)	: 5.0228		
Integration start scan	: 1546	Integration stop scan:	1555
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

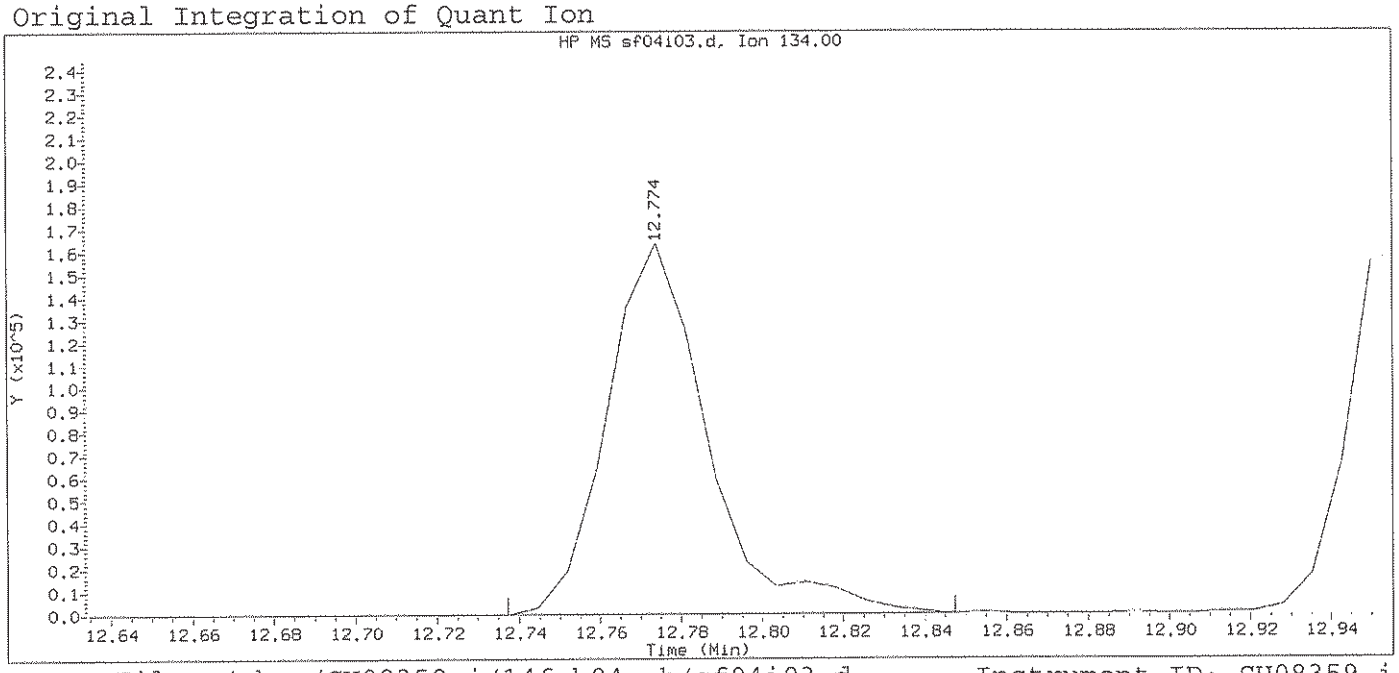
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:34. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: [signature] 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



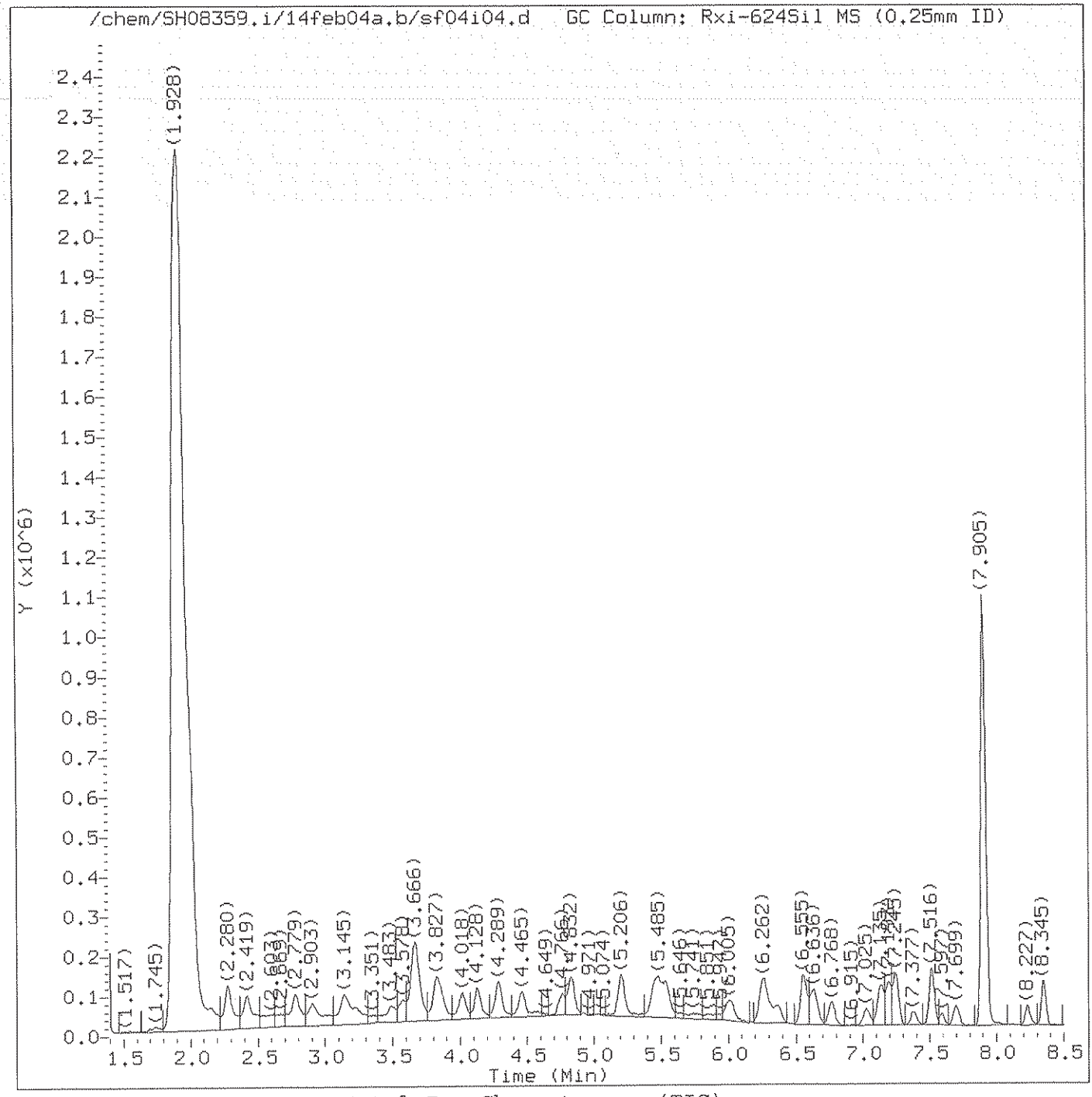
Data File: /chem/SH08359.i/14feb04a.b/sf04i03.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:04 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:54
Date, time and analyst ID of latest file update: 04-Feb-2014 10:54 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1552
Retention Time (minutes): 12.774
Quant Ion : 134.00
Area : 282197
On-column Amount (ng) : 4.7746
Integration start scan : 1546 Integration stop scan: 1561
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 02/04/2014 at 11:34.
Target 3.5 esignature used ID: jml01693



Total Ion Chromatogram (TIC)

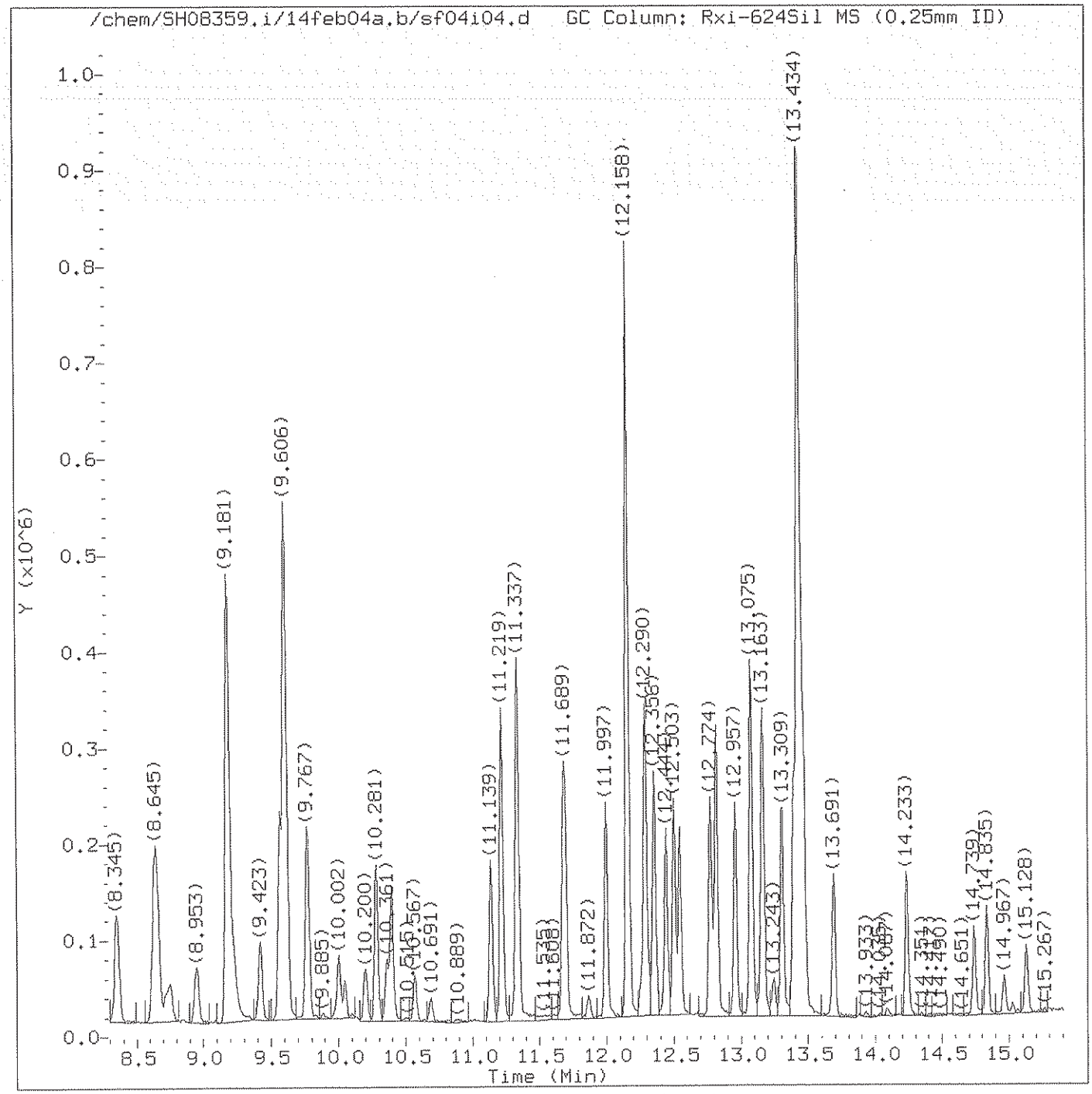
Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Jason M. Long
on 02/04/2014 at 11:35.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d
Injection date and time: 04-FEB-2014 10:31

Instrument ID: SH08359.i
Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m
Calibration date and time: 04-FEB-2014 11:34

Sublist used: M03648

Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Digitally signed by Jason M. Long
on 02/04/2014 at 11:35.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(1)	2.163	85	46399	0.542
2) Chloromethane	(1)	2.273	50	141368	0.591
3) Vinyl Chloride	(1)	2.419	62	85338	0.586
4) Bromomethane	(1)	2.779	94	58530	0.592
5) Chloroethane	(1)	2.903	64	39000	0.570
6) Dichlorofluoromethane	(1)	3.145	67	83572	0.585
7) Trichlorofluoromethane	(1)	3.219	101	46817	0.550
8) Ethyl Ether	(1)	3.490	59	23071	0.557
9) Acrolein	(1)	3.688	56	206981	29.616
10) 1,1-Dichloroethene	(1)	3.820	96	43517	0.585
12) Acetone	(1)	3.849	58	12925M	5.763
12) Acetone	(1)	3.857	43	44194	6.007
11) Freon 113	(1)	3.857	101	39428	0.547
13) Methyl Iodide	(1)	4.018	142	99382	0.547
14) Carbon Disulfide	(1)	4.128	76	153848	0.585
15) Allyl Chloride	(1)	4.289	39	71539	0.595
16) Methylene Chloride	(1)	4.465	84	37331	0.572
17) t-Butyl Alcohol	(1)	4.568	59	21513	12.249
18) Acrylonitrile	(1)	4.766	53	83971	7.206
21) Methyl Tertiary Butyl Ether	(1)	4.817	73	34377	0.574
20) trans-1,2-Dichloroethene	(1)	4.832	96	50587	0.587
22) 1,1-Dichloroethane	(1)	5.441	63	84722	0.576
23) di-Isopropyl Ether	(1)	5.477	87	25442	0.573
25) Ethyl t-Butyl Ether	(1)	6.013	59	84981	0.555
28) 2-Butanone	(1)	6.233	43	94479M	5.581
26) cis-1,2-Dichloroethene	(1)	6.262	96	42547	0.545
27) 2,2-Dichloropropane	(1)	6.277	77	43572	0.583
29) Propionitrile	(1)	6.335	54	50832	11.532
30) Methyl Acrylate	(1)	6.372	55	83930	2.636
31) Methacrylonitrile	(1)	6.555	67	47173	5.290
32) Bromochloromethane	(1)	6.621	128	15880	0.501
33) Tetrahydrofuran	(1)	6.643	71	16417	7.643
34) Chloroform	(1)	6.768	83	66050	0.575
35) 1,1,1-Trichloroethane	(1)	7.025	97	39214	0.536
36) 1-Chlorobutane	(1)	7.186	56	113898	0.535
38) Carbon Tetrachloride	(1)	7.237	117	38975M	0.561
37) 1,1-Dichloropropene	(1)	7.245	75	50701	0.533
39) Benzene	(1)	7.516	78	162824	0.559

M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 02/04/2014 at 11:35.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
40) 1,2-Dichloroethane	(1)	7.589	62	25029	0.562
41) t-Amyl Methyl Ether	(1)	7.699	73	41580	0.509
42)*Fluorobenzene	(1)	7.905	96	1021743	5.000
43) Trichloroethene	(1)	8.352	95	42146	0.540
44) 1,2-Dichloropropane	(1)	8.660	63	41584	0.547
46) Methyl Methacrylate	(1)	8.719	69	7078	0.488
45) Dibromomethane	(1)	8.763	93	14794	0.524
47) Bromodichloromethane	(1)	8.953	83	39394	0.555
48) 2-Nitropropane	(1)	9.181	46	16341	57.930
49) Chloroacetonitrile	(1)	9.225	75	34828	27.477
50) cis-1,3-Dichloropropene	(1)	9.423	75	42034	0.512
51) 4-Methyl-2-pentanone	(1)	9.569	58	56072	4.947
52) 1,1-Dichloropropanone	(1)	9.606	83	23378	53.461
53) Toluene	(1)	9.767	92	86117	0.504
54) trans-1,3-Dichloropropene	(1)	10.002	75	27885	0.518
55) Ethyl Methacrylate	(1)	10.046	69	14659	0.470
56) 1,1,2-Trichloroethane	(1)	10.200	83	17071	0.539
58) Tetrachloroethene	(1)	10.281	166	52103	0.541
59) 1,3-Dichloropropane	(1)	10.361	76	29364	0.550
60) 2-Hexanone	(1)	10.391	58	51170	4.903
61) Dibromochloromethane	(1)	10.567	129	26787	0.545
62) 1,2-Dibromoethane	(1)	10.684	107	19255	0.550
63) Chlorobenzene	(1)	11.139	112	95051	0.536
64) 1,1,1,2-Tetrachloroethane	(1)	11.219	131	33902	0.555
65) Ethylbenzene	(1)	11.219	106	46866	0.498
67) m+p-Xylene	(1)	11.337	106	121083	1.034
68) o-Xylene	(1)	11.681	106	52101	0.496
69) Styrene	(1)	11.696	104	82159	0.506
71) Xylene (Total)	(1)		106	173184	1.532
70) Bromoform	(1)	11.872	173	11535	0.520
72) Isopropylbenzene	(1)	11.997	120	39595	0.497
73)$4-Bromofluorobenzene	(1)	12.158	174	248328	4.873
74) 1,1,2,2-Tetrachloroethane	(1)	12.261	83	22474	0.585
75) Bromobenzene	(1)	12.290	156	34863	0.517
77) trans-1,4-Dichloro-2-butene	(1)	12.290	53	48292M	5.321
76) 1,2,3-Trichloropropane	(1)	12.305	110	3896	0.592
78) n-Propylbenzene	(1)	12.356	120	43002	0.509
79) 2-Chlorotoluene	(1)	12.444	126	41338	0.529

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 02/04/2014 at 11:35.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

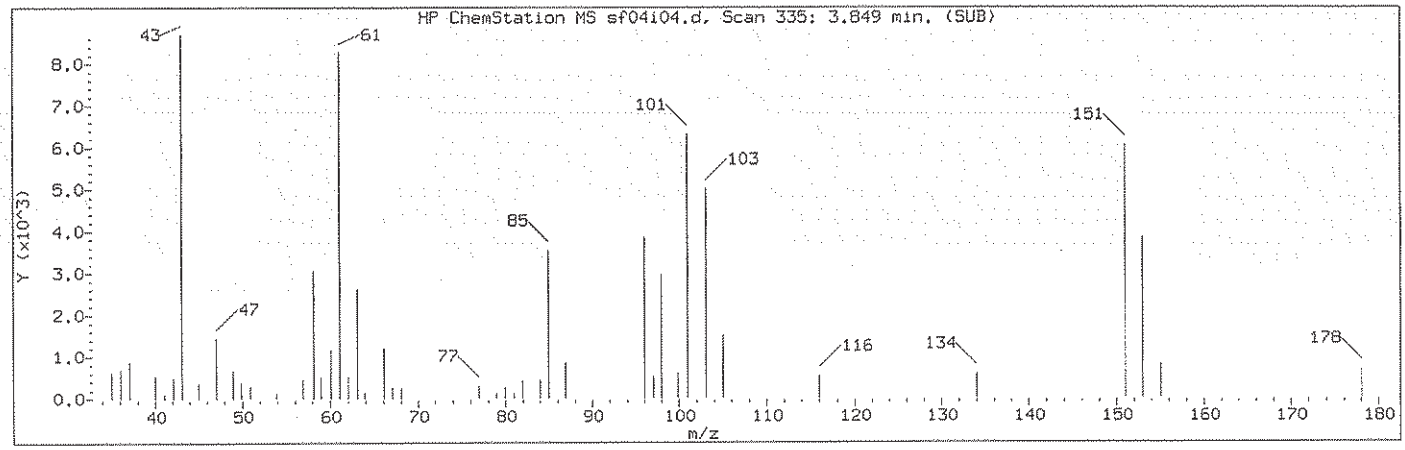
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
80) 1,3,5-Trimethylbenzene	(1)	12.503	105	114866	0.534
81) 4-Chlorotoluene	(1)	12.547	126	41161	0.516
82) tert-Butylbenzene	(1)	12.774	134	24983M	0.495
83) Pentachloroethane	(1)	12.811	167	19526	0.517
84) 1,2,4-Trimethylbenzene	(1)	12.818	105	111743	0.532
85) sec-Butylbenzene	(1)	12.957	134	29421	0.503
86) 1,3-Dichlorobenzene	(1)	13.075	146	68911	0.542
87) p-Isopropyltoluene	(1)	13.082	119	125979	0.522
88) 1,4-Dichlorobenzene	(1)	13.155	146	70550	0.567
89) n-Butylbenzene	(1)	13.412	92	79369	0.535
90)$1,2-Dichlorobenzene-d4	(1)	13.434	152	246392	5.101
91) 1,2-Dichlorobenzene	(1)	13.449	146	56763	0.582
92) Hexachloroethane	(1)	13.683	201	22462	0.517
93) 1,2-Dibromo-3-chloropropane	(1)	14.079	157	2789	0.599
94) Nitrobenzene	(1)	14.241	123	3464	7.595
95) 1,2,4-Trichlorobenzene	(1)	14.739	180	29219	0.526
96) Hexachlorobutadiene	(1)	14.835	225	23149	0.578
97) Naphthalene	(1)	14.959	128	32644	0.526
98) 1,2,3-Trichlorobenzene	(1)	15.128	180	23119	0.556

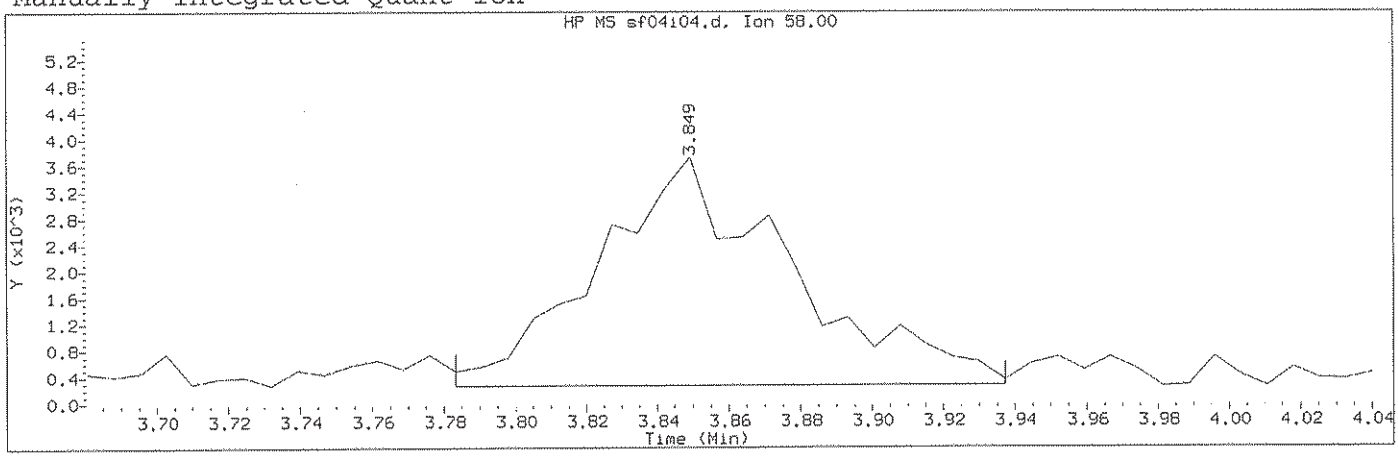
M = Compound was manually integrated.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 02/04/2014 at 11:35.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

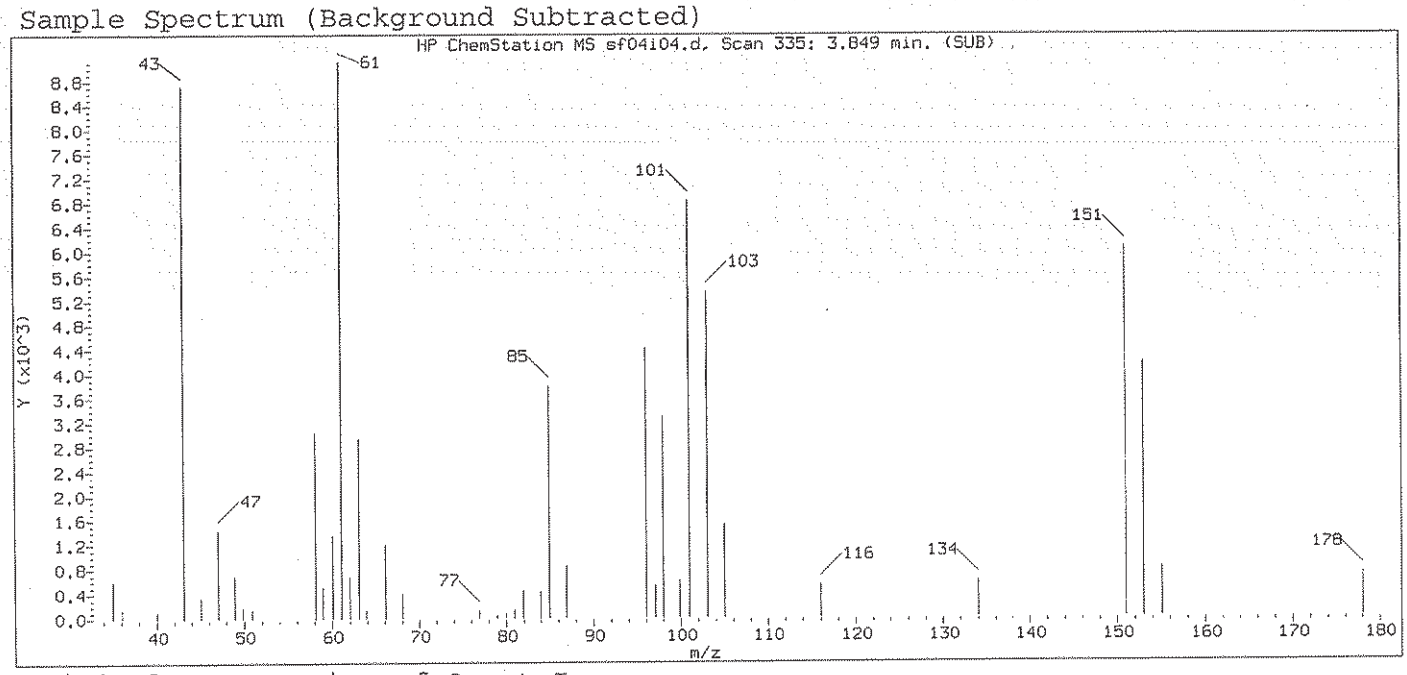
Compound Number	: 12		
Compound Name	: Acetone		
Scan Number	: 335		
Retention Time (minutes)	: 3.849		
Quant Ion	: 58.00		
Area (flag)	: 12925M		
On-Column Amount (ng)	: 5.7626		
Integration start scan	: 325	Integration stop scan:	346
Y at integration start	: 266	Y at integration end:	266

Reason for manual integration: improper integration

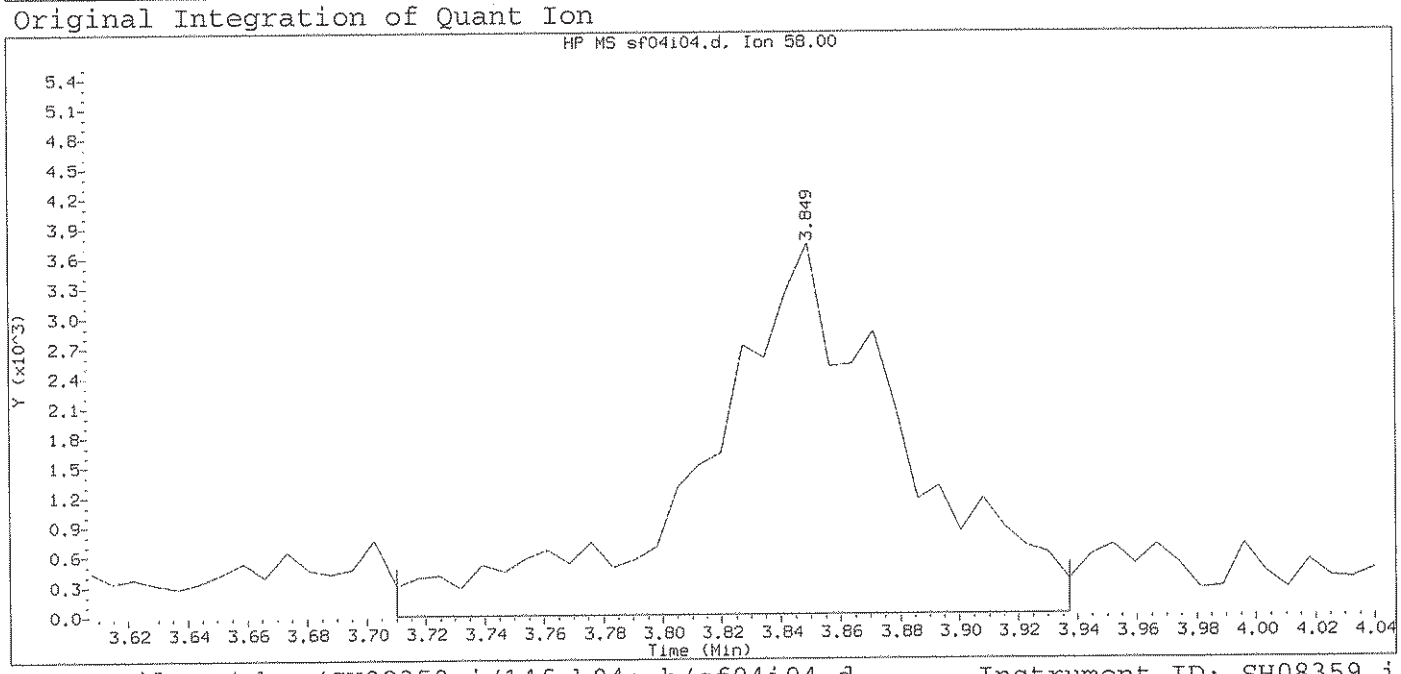
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:35. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: Wthandson 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:54
Date, time and analyst ID of latest file update: 04-Feb-2014 10:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 12		
Compound Name	: Acetone		
Scan Number	: 335		
Retention Time (minutes)	: 3.849		
Quant Ion	: 58.00		
Area	: 17463		
On-column Amount (ng)	: 3.2459		
Integration start scan	: 315	Integration stop scan:	346
Y at integration start	: 0	Y at integration end:	0

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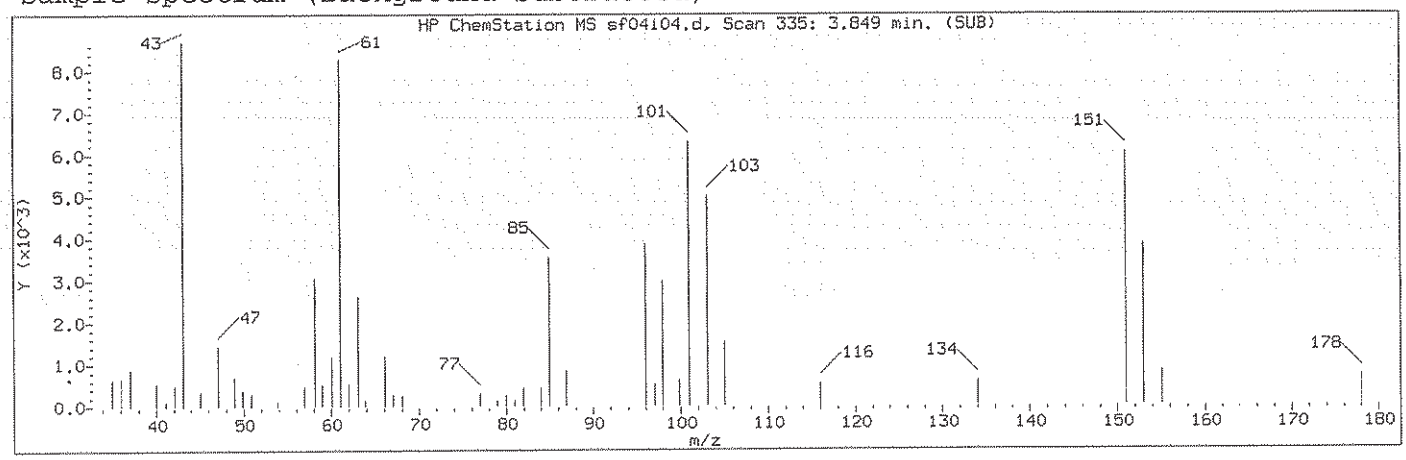
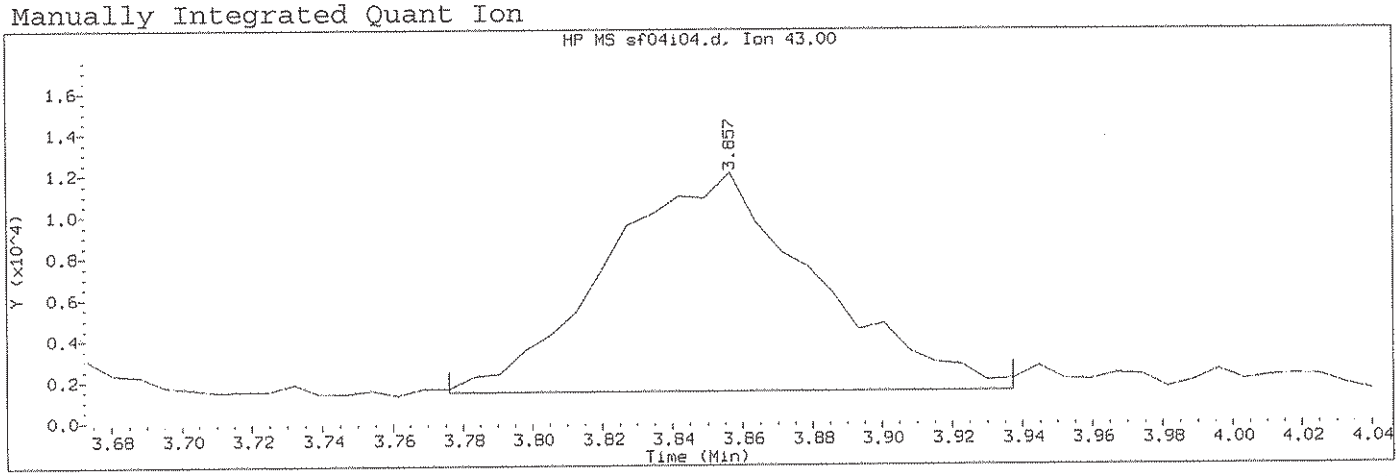
Target 3.5 esignature using [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

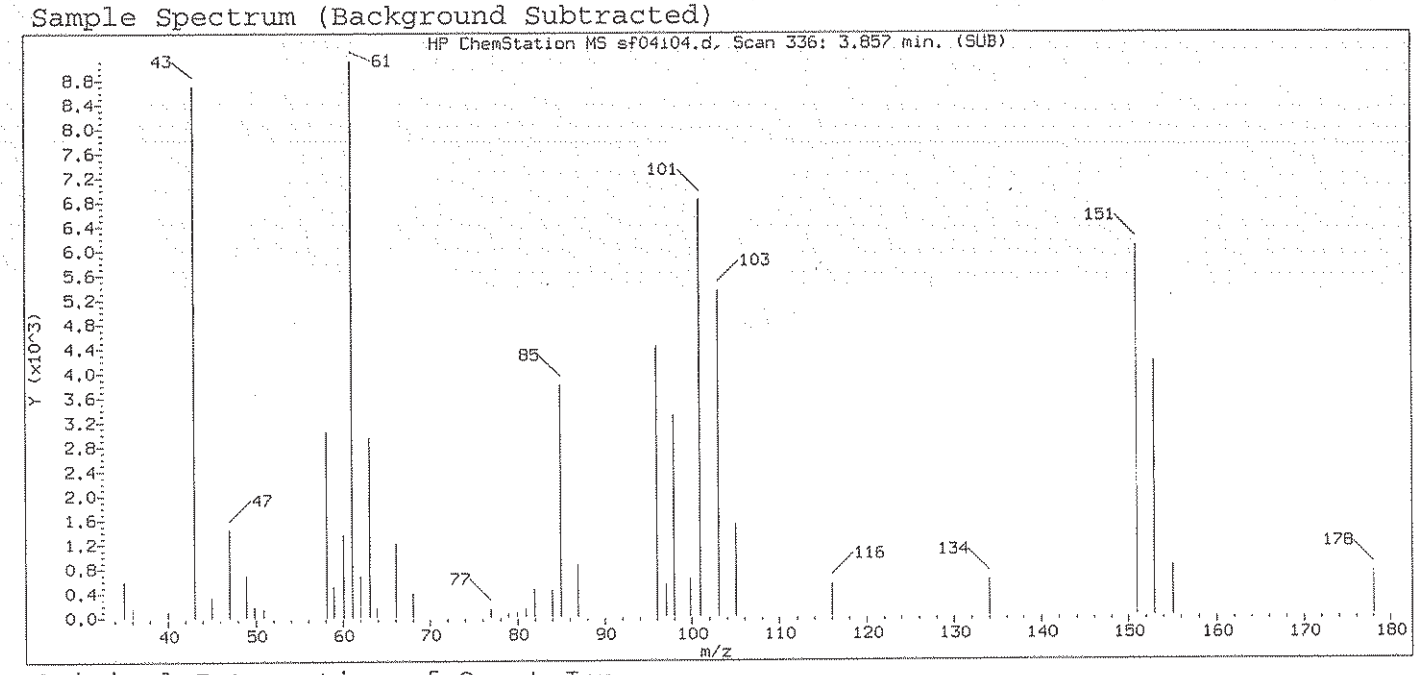
Compound Number	: 12		
Compound Name	: Acetone		
Scan Number	: 336		
Retention Time (minutes)	: 3.857		
Quant Ion	: 43.00		
Area (flag)	: 44194M		
On-Column Amount (ng)	: 6.0074		
Integration start scan	: 324	Integration stop scan:	346
Y at integration start	: 1452	Y at integration end:	1452

Reason for manual integration: improper integration

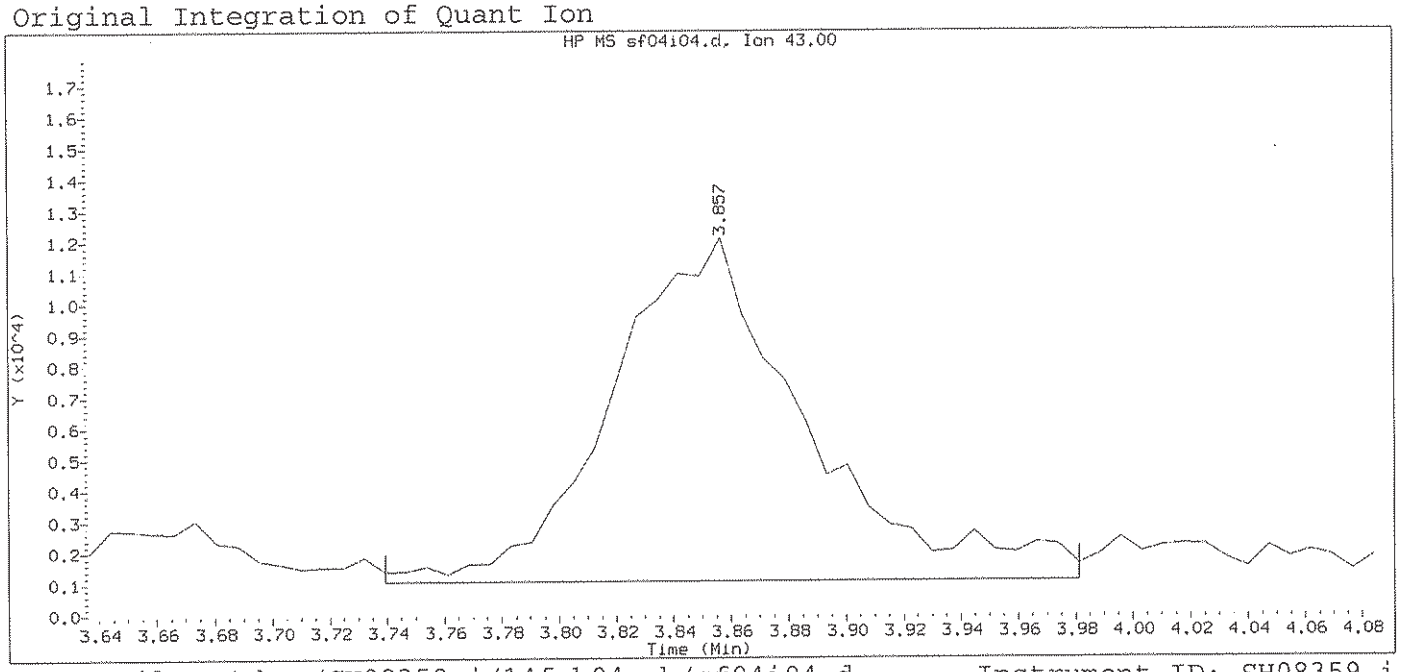
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:35. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: Whism 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:54
Date, time and analyst ID of latest file update: 04-Feb-2014 10:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 12
Compound Name	: Acetone
Scan Number	: 336
Retention Time (minutes)	: 3.857
Quant Ion	: 43.00
Area	: 51904
On-column Amount (ng)	: 4.2482
Integration start scan	: 319
Integration stop scan	: 352
Y at integration start	: 1039
Y at integration end	: 1039

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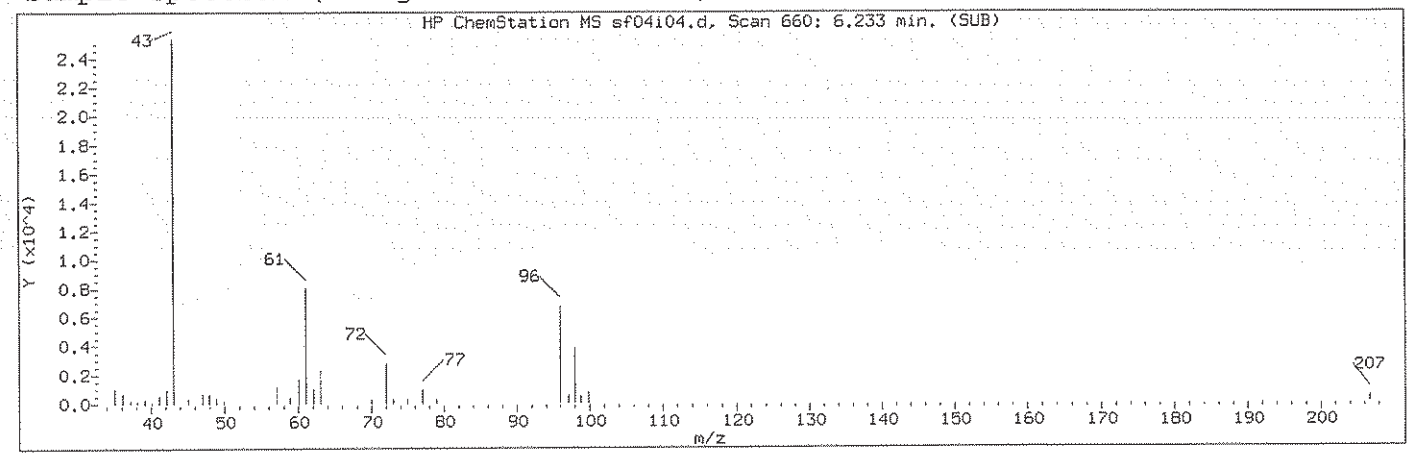
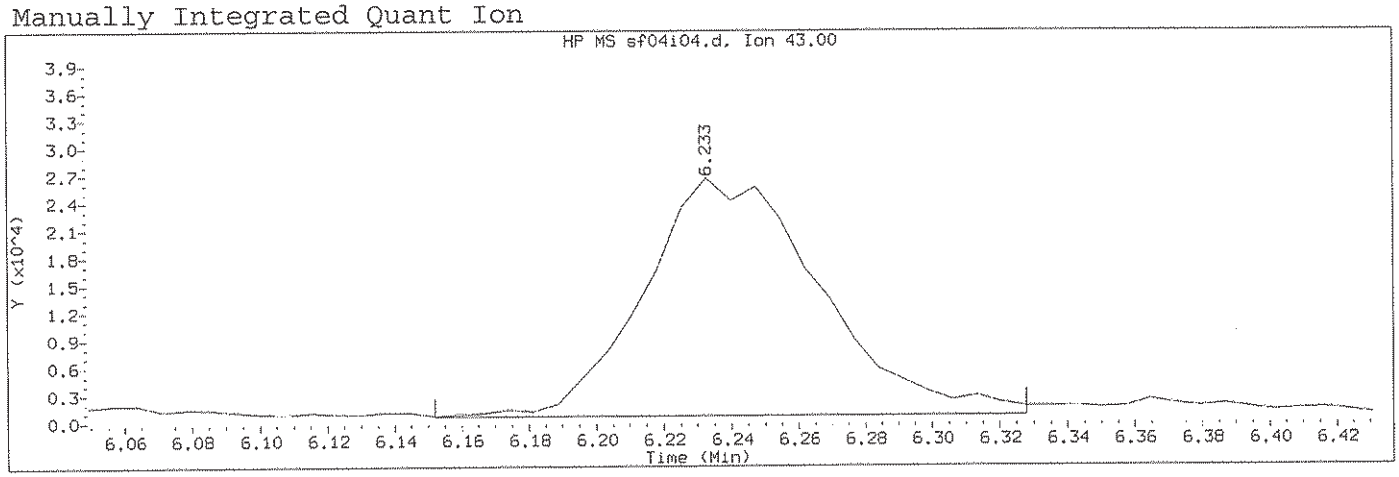
Target 3.5 esignature using TID: Jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

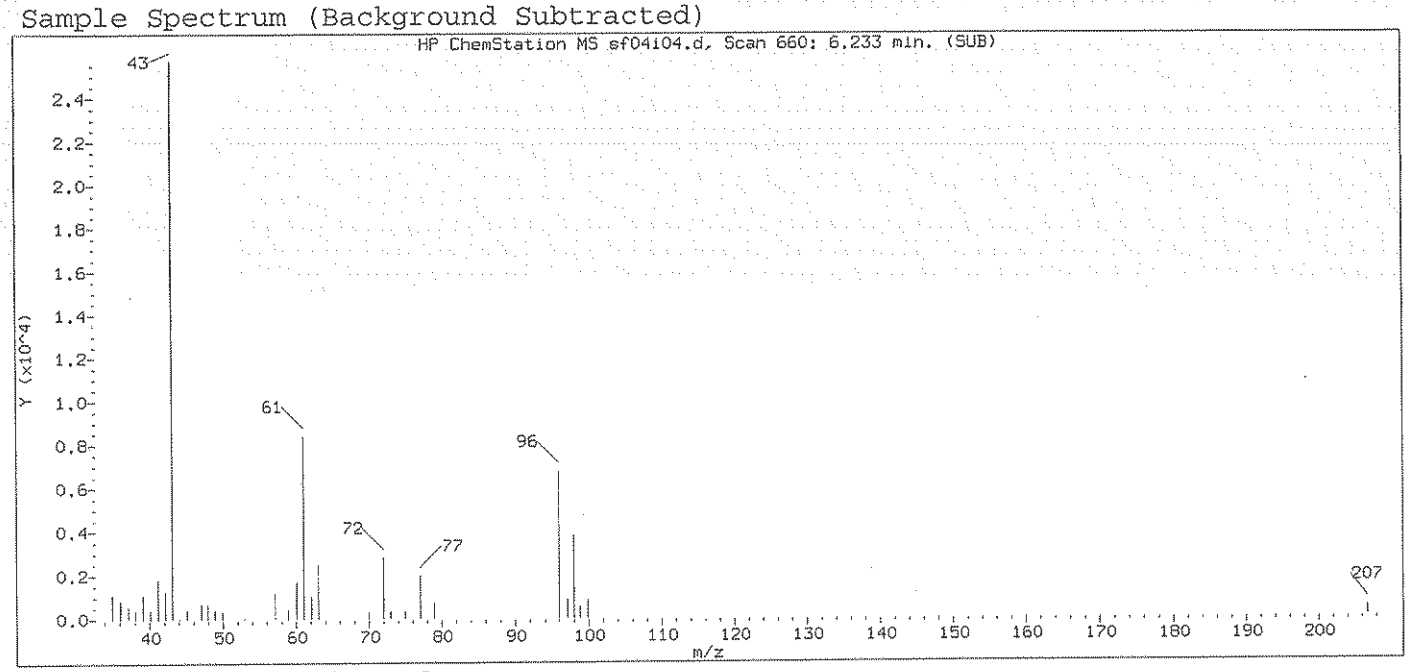
Compound Number	: 28		
Compound Name	: 2-Butanone		
Scan Number	: 660		
Retention Time (minutes)	: 6.233		
Quant Ion	: 43.00		
Area (flag)	: 94479M		
On-Column Amount (ng)	: 5.5808		
Integration start scan	: 648	Integration stop scan:	672
Y at integration start	: 661	Y at integration end:	661

Reason for manual integration: improper integration

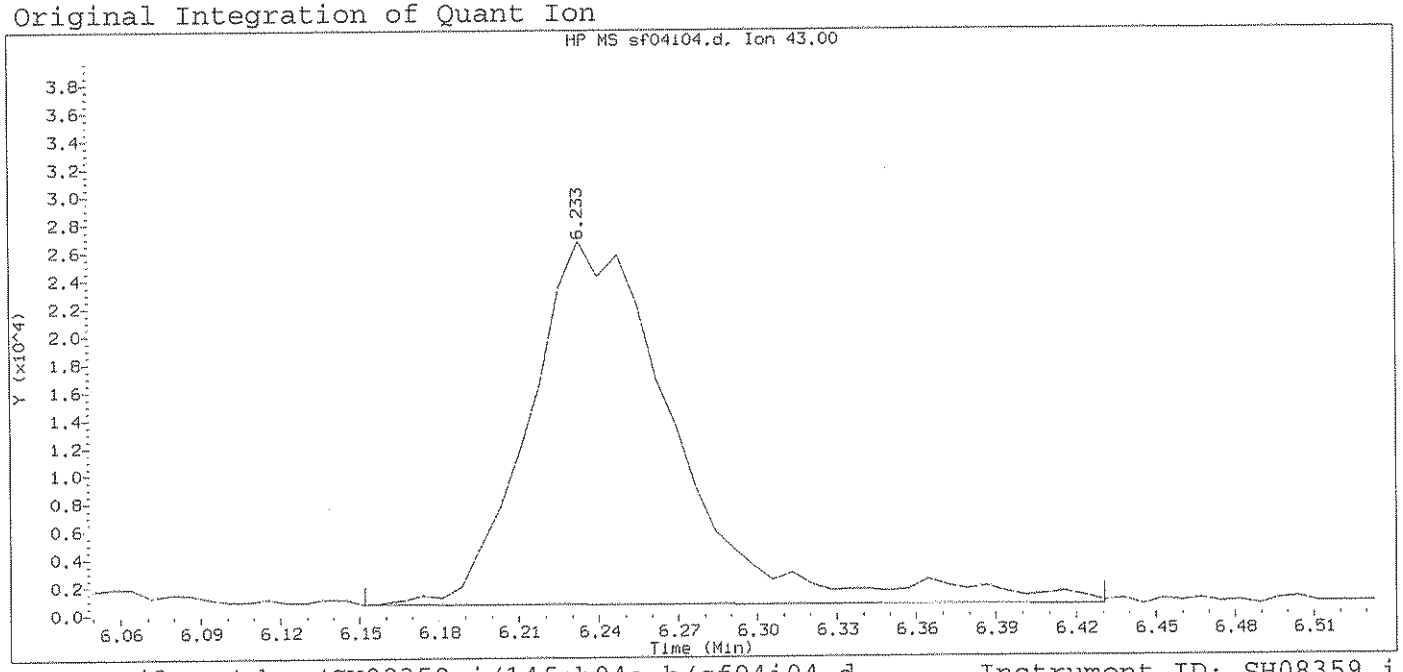
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:35. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: [signature] 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:54
Date, time and analyst ID of latest file update: 04-Feb-2014 10:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 28		
Compound Name	: 2-Butanone		
Scan Number	: 660		
Retention Time (minutes)	: 6.233		
Quant Ion	: 43.00		
Area	: 100736		
On-column Amount (ng)	: 5.7734		
Integration start scan	: 648	Integration stop scan:	686
Y at integration start	: 697	Y at integration end:	500

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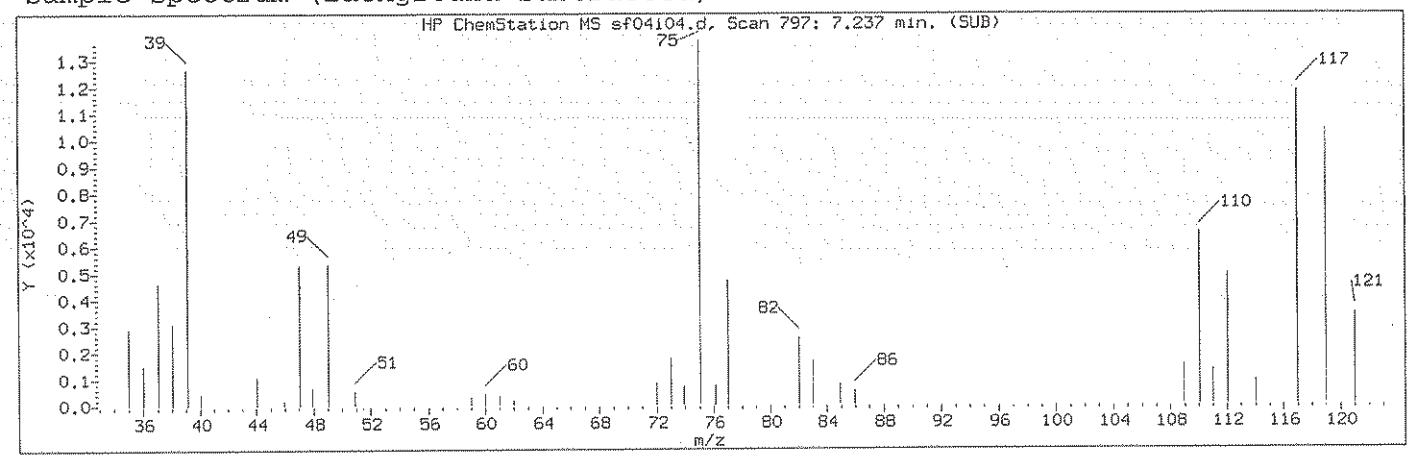
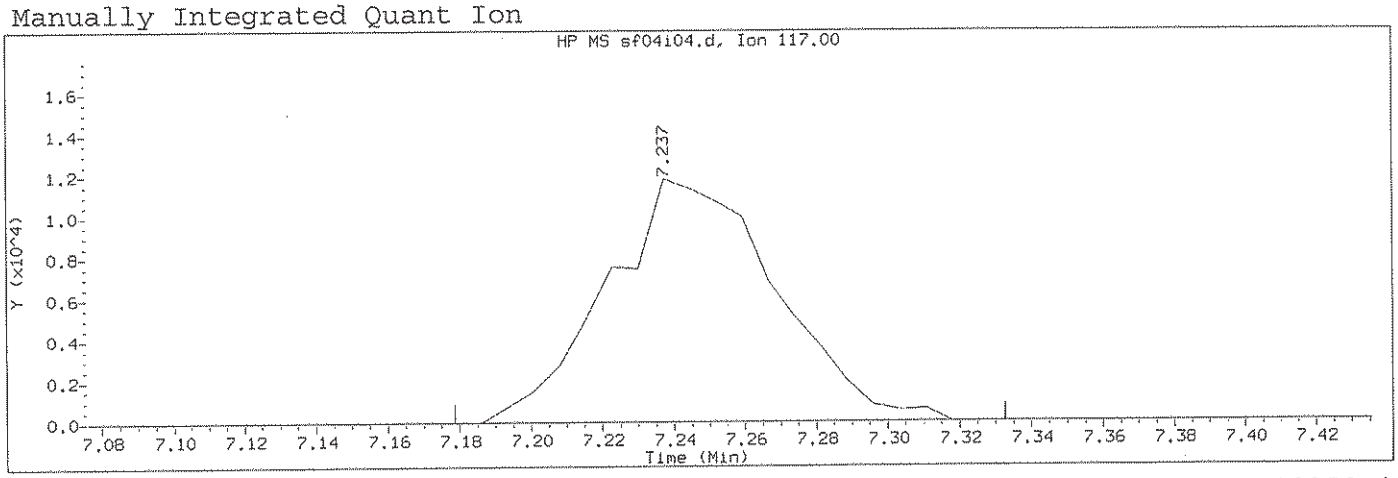
Target 3.5 esignature using ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

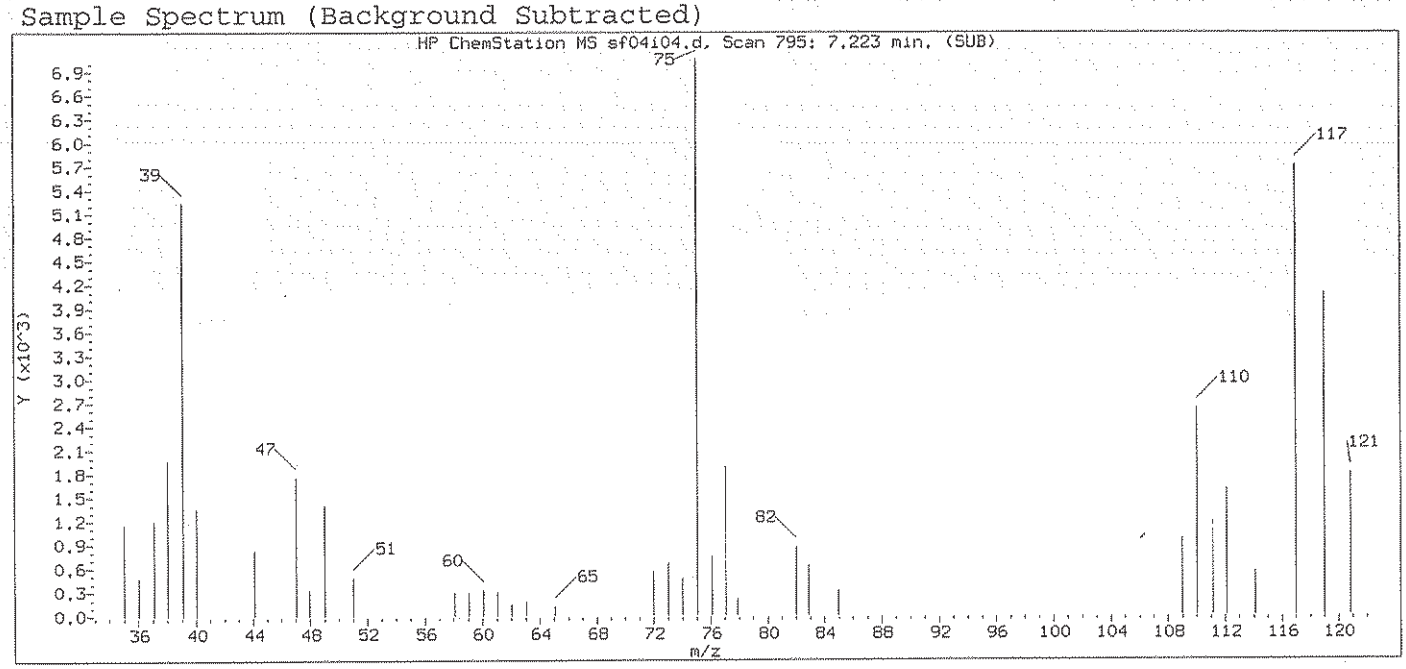
Compound Number	: 38		
Compound Name	: Carbon Tetrachloride		
Scan Number	: 797		
Retention Time (minutes)	: 7.237		
Quant Ion	: 117.00		
Area (flag)	: 38975M		
On-Column Amount (ng)	: 0.5610		
Integration start scan	: 788	Integration stop scan:	809
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

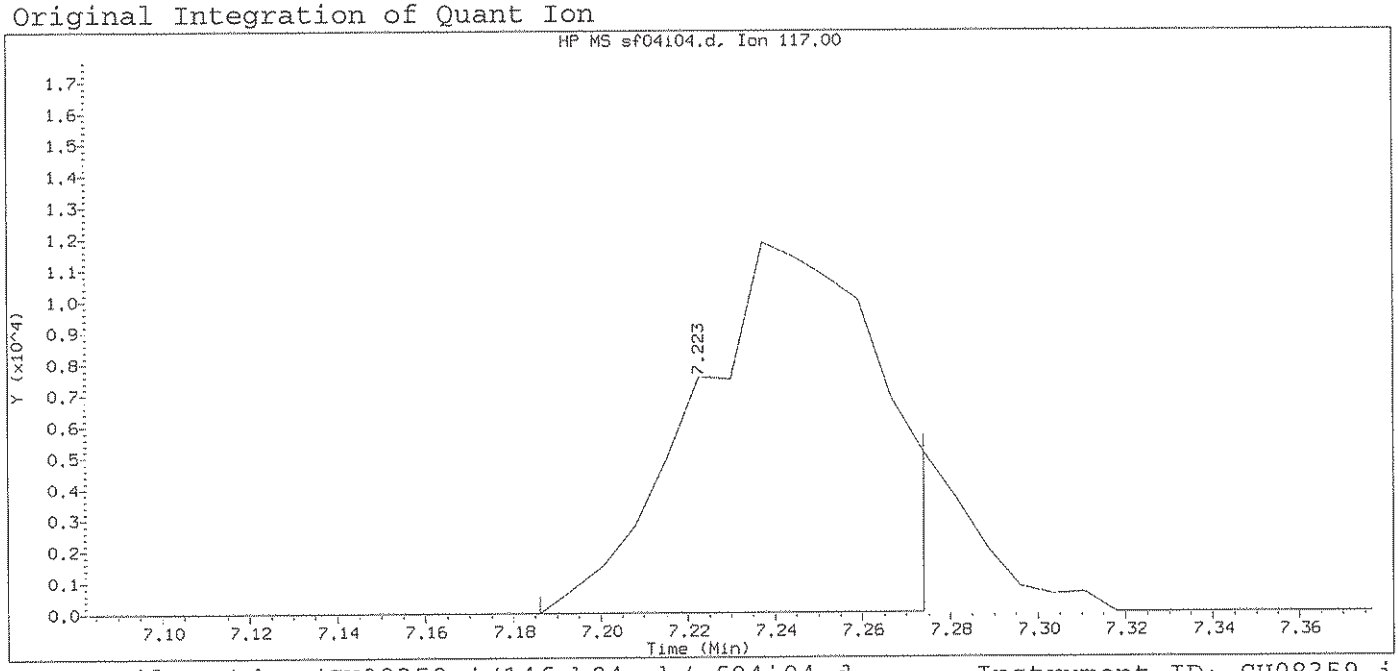
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:35. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: JMLong 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:54
Date, time and analyst ID of latest file update: 04-Feb-2014 10:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 38		
Compound Name	: Carbon Tetrachloride		
Scan Number	: 795		
Retention Time (minutes)	: 7.223		
Quant Ion	: 117.00		
Area	: 34458		
On-column Amount (ng)	: 0.5127		
Integration start scan	: 789	Integration stop scan:	801
Y at integration start	: 0	Y at integration end:	0

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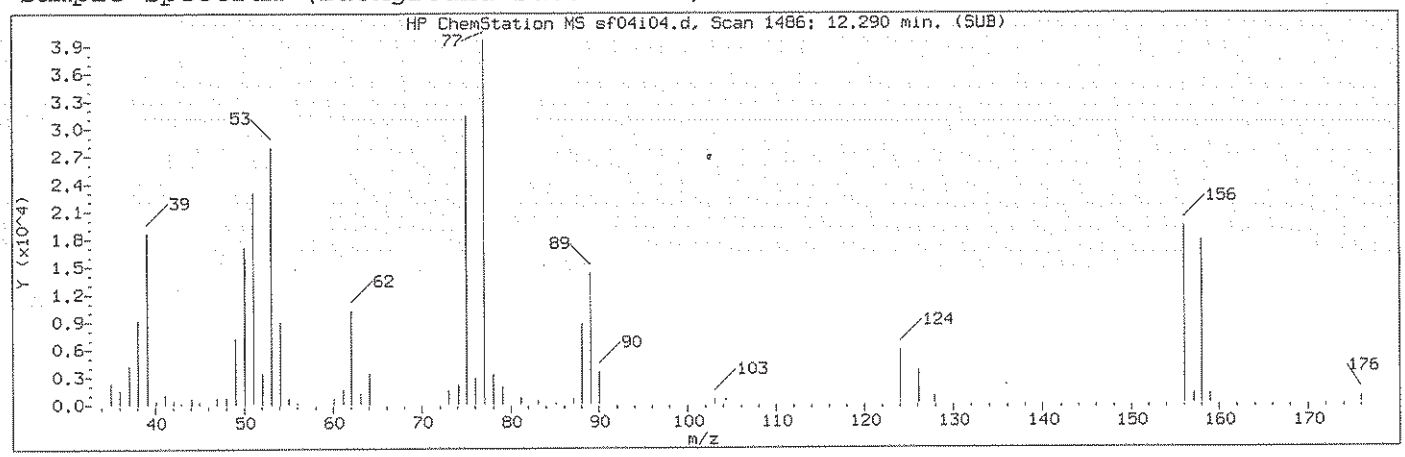
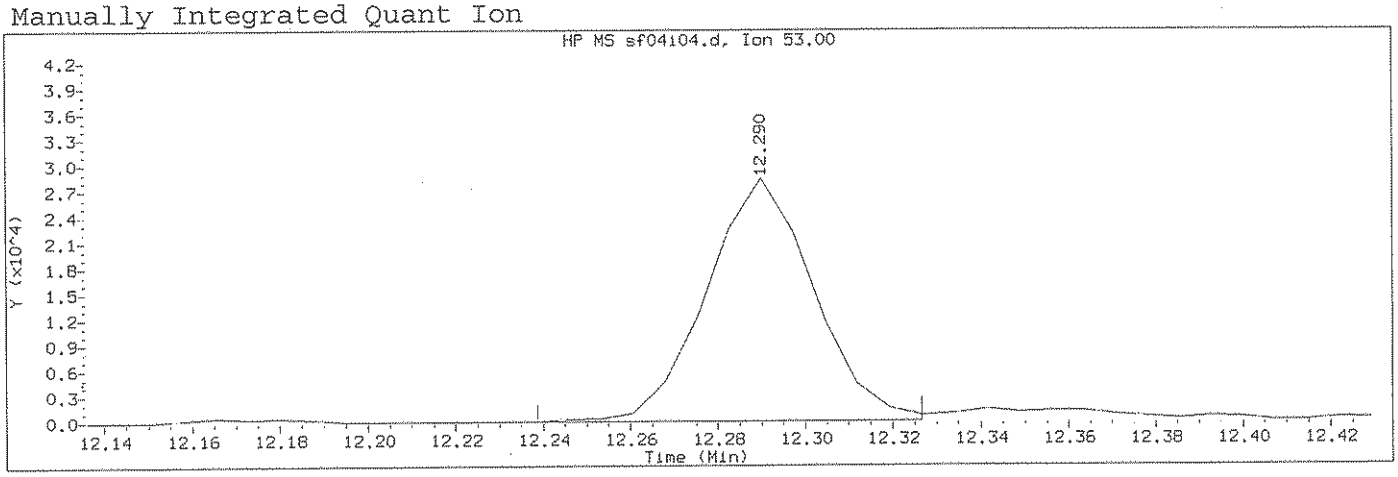
Target 3.5 esignature using [illegible] jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

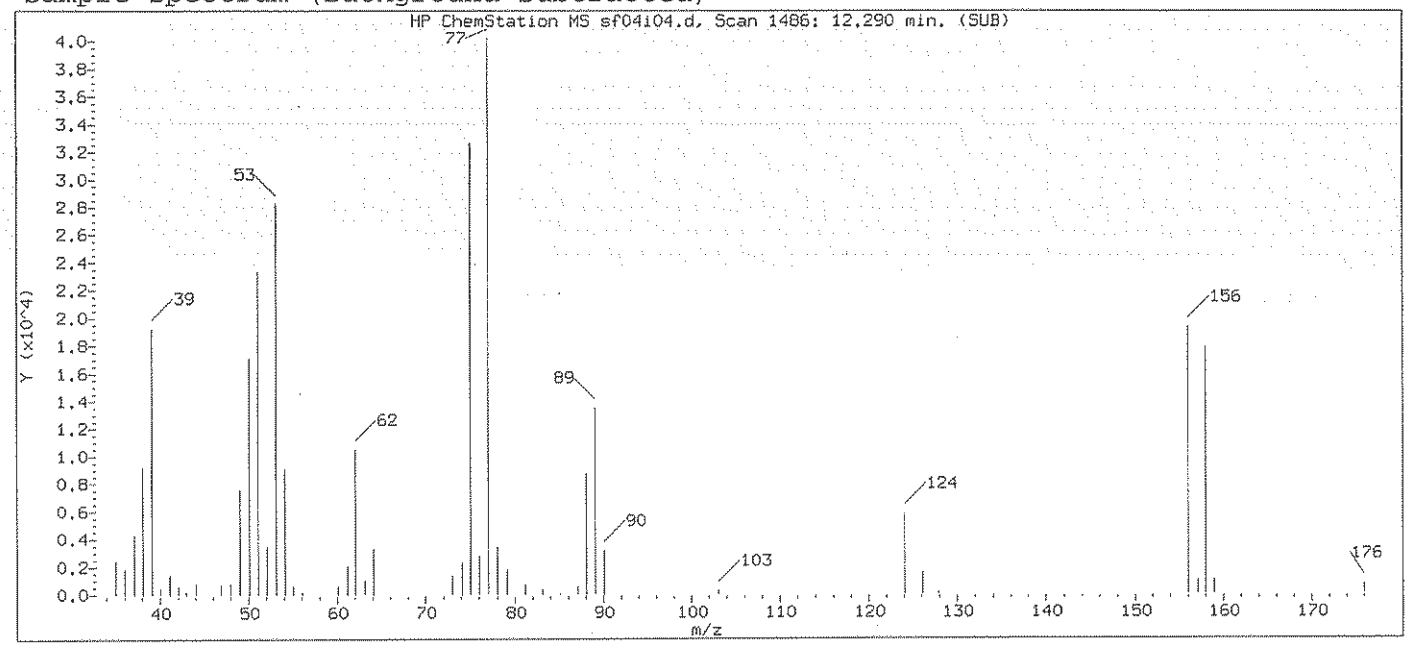
Compound Number : 77
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 53.00
Area (flag) : 48292M
On-Column Amount (ng) : 5.3212
Integration start scan : 1478 Integration stop scan: 1490
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

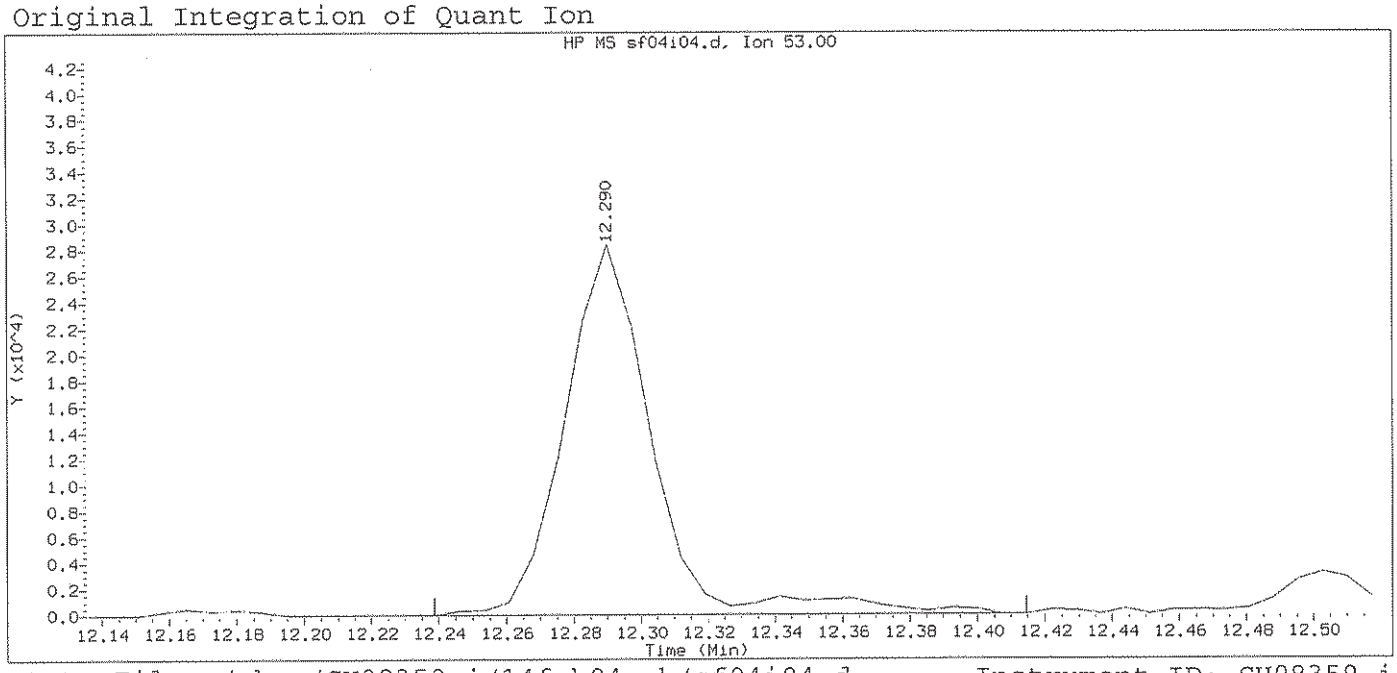
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:35. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: [signature] 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

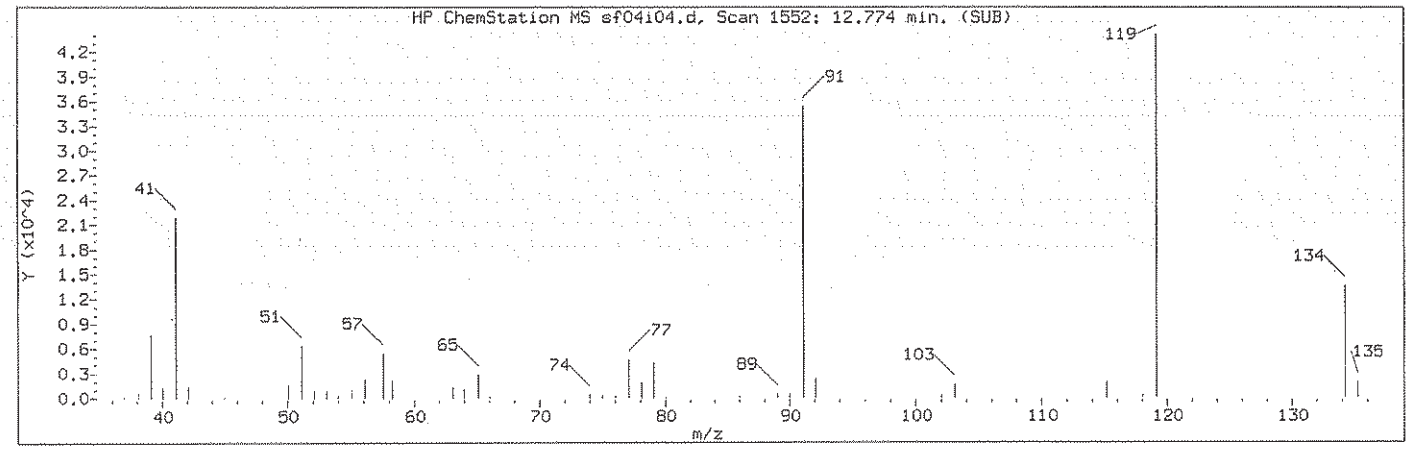
Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:54
Date, time and analyst ID of latest file update: 04-Feb-2014 10:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

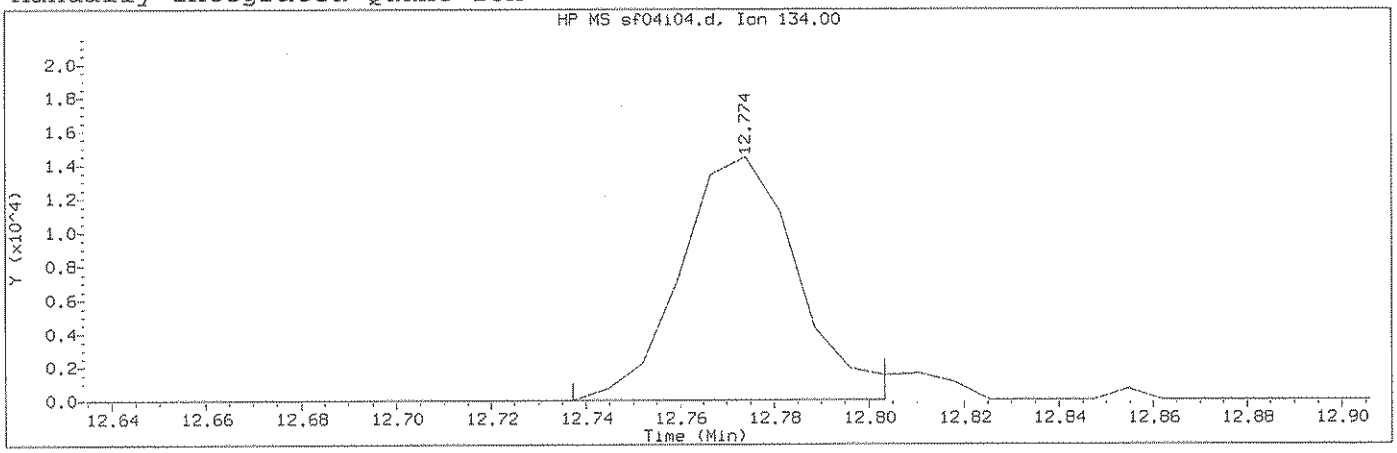
Compound Number : 77
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 53.00
Area : 51831
On-column Amount (ng) : 5.6020
Integration start scan : 1478 Integration stop scan: 1502
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 02/04/2014 at 11:35.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 11:34 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

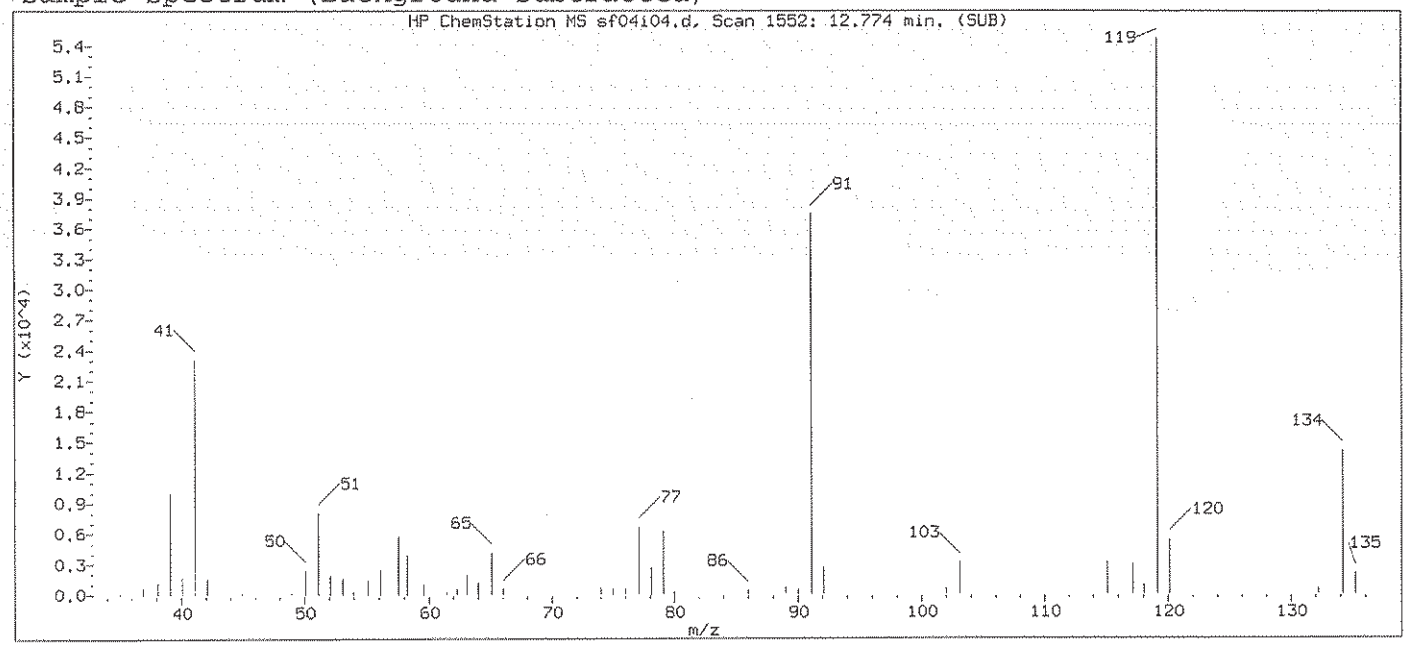
Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1552
Retention Time (minutes): 12.774
Quant Ion : 134.00
Area (flag) : 24983M
On-Column Amount (ng) : 0.4949
Integration start scan : 1546 Integration stop scan: 1555
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

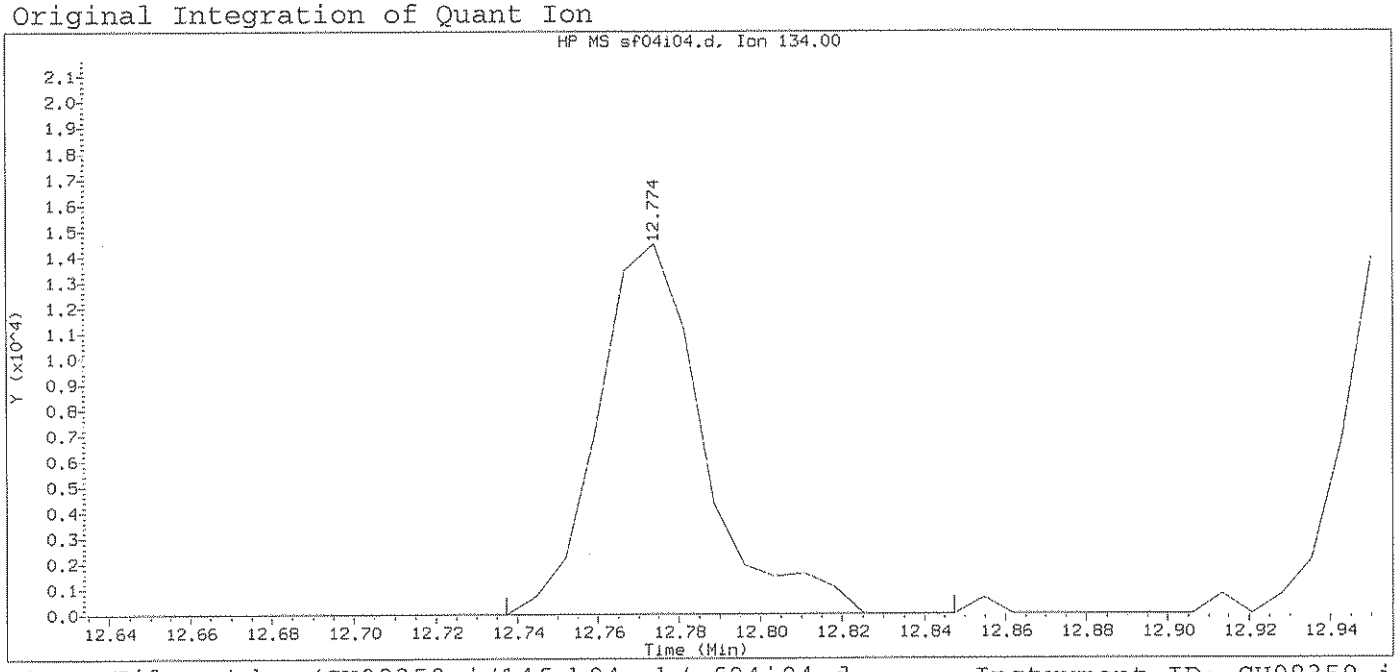
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 11:35. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: [signature] 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



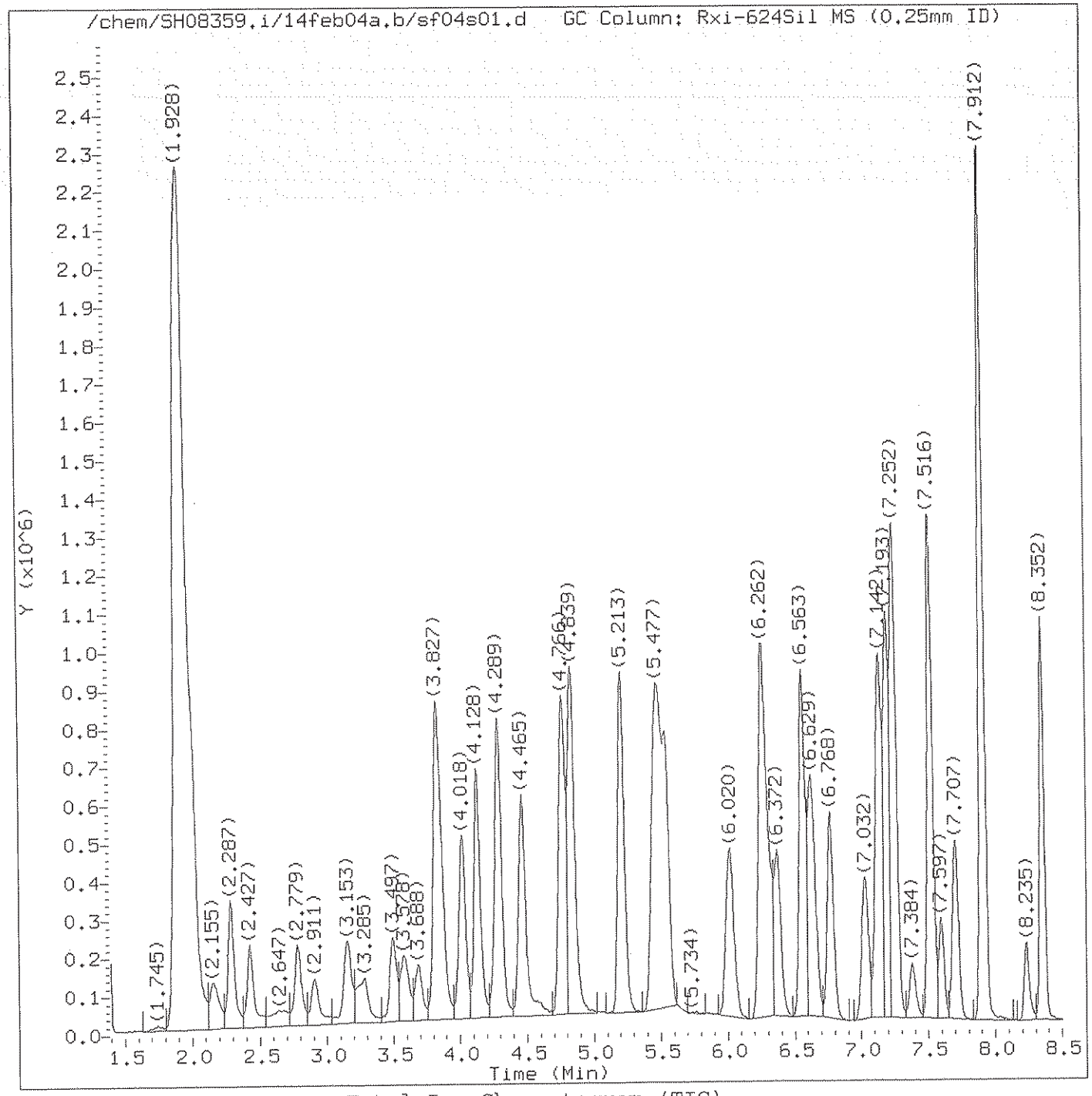
Data File: /chem/SH08359.i/14feb04a.b/sf04i04.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 10:31 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 10:54
Date, time and analyst ID of latest file update: 04-Feb-2014 10:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1552
Retention Time (minutes): 12.774
Quant Ion : 134.00
Area : 26158
On-column Amount (ng) : 0.4909
Integration start scan : 1546 Integration stop scan: 1561
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 02/04/2014 at 11:35.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04s01.d
Injection date and time: 04-FEB-2014 11:52

Instrument ID: SH08359.i
Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m
Calibration date and time: 04-FEB-2014 11:34

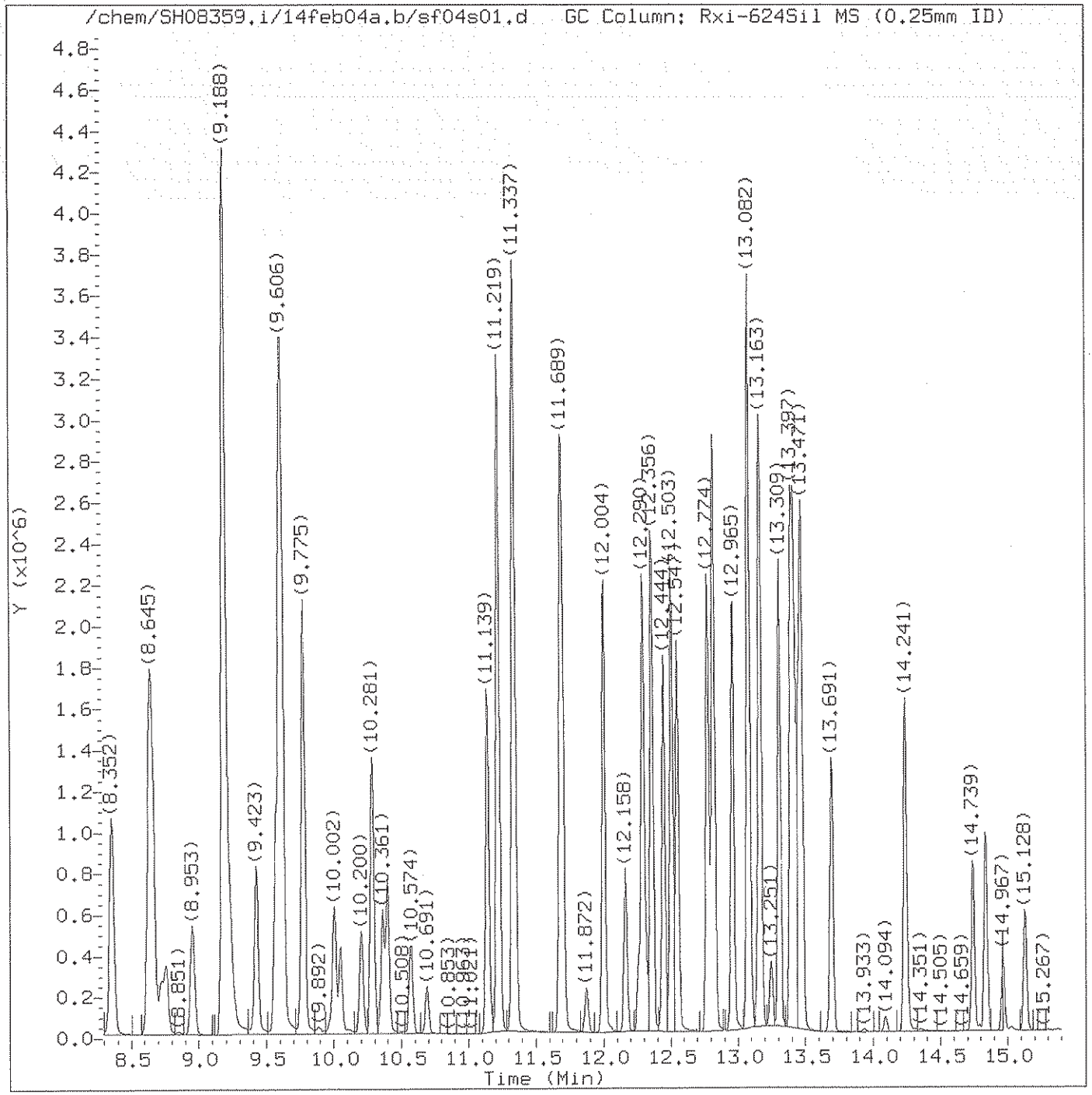
Sublist used: M03648

Date, time and analyst ID of latest file update: 04-Feb-2014 12:07 jml01693

Sample Name: LFBS43

Lab Sample ID: LFBS43

Digitally signed by Jason M. Long
on 02/04/2014 at 12:09.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04s01.d
Injection date and time: 04-FEB-2014 11:52

Instrument ID: SH08359.i
Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m
Calibration date and time: 04-FEB-2014 11:34

Sublist used: M03648

Date, time and analyst ID of latest file update: 04-Feb-2014 12:07 jml01693

Sample Name: LFBS43

Lab Sample ID: LFBS43

Digitally signed by Jason M. Long
on 02/04/2014 at 12:09.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04s01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 11:52 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 12:07 jml01693

Sample Name: LFBS43 Lab Sample ID: LFBS43

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(1)	2.155	85	193075	2.244
2) Chloromethane	(1)	2.287	50	546536	2.272
3) Vinyl Chloride	(1)	2.427	62	310551	2.120
4) Bromomethane	(1)	2.779	94	218350	2.196
5) Chloroethane	(1)	2.903	64	145449	2.112
6) Dichlorofluoromethane	(1)	3.145	67	317225	2.209
7) Trichlorofluoromethane	(1)	3.233	101	181172M	2.117
8) Ethyl Ether	(1)	3.497	59	195045	4.686
9) Acrolein	(1)	3.688	56	253953	36.128
10) 1,1-Dichloroethene	(1)	3.827	96	378845	5.064
12) Acetone	(1)	3.849	58	87017	38.573
11) Freon 113	(1)	3.857	101	356000	4.909
13) Methyl Iodide	(1)	4.018	142	960134	5.259
14) Carbon Disulfide	(1)	4.128	76	1421819	5.376
15) Allyl Chloride	(1)	4.297	39	563800	4.659
16) Methylene Chloride	(1)	4.465	84	355084	5.410
17) t-Butyl Alcohol	(1)	4.575	59	84894	48.058
18) Acrylonitrile	(1)	4.766	53	1311202	111.872
21) Methyl Tertiary Butyl Ether	(1)	4.832	73	299485	4.969
20) trans-1,2-Dichloroethene	(1)	4.839	96	432185	4.982
22) 1,1-Dichloroethane	(1)	5.448	63	746724	5.044
23) di-Isopropyl Ether	(1)	5.492	87	225655	5.053
25) Ethyl t-Butyl Ether	(1)	6.020	59	750365	4.877
28) 2-Butanone	(1)	6.240	43	620089	36.417
26) cis-1,2-Dichloroethene	(1)	6.262	96	391869	4.987
27) 2,2-Dichloropropane	(1)	6.291	77	369555	4.918
29) Propionitrile	(1)	6.335	54	423943	95.625
30) Methyl Acrylate	(1)	6.379	55	784023	24.479
31) Methacrylonitrile	(1)	6.563	67	335036	37.352
32) Bromochloromethane	(1)	6.621	128	157153	4.931
33) Tetrahydrofuran	(1)	6.651	71	93118	43.102
34) Chloroform	(1)	6.768	83	594970	5.148
35) 1,1,1-Trichloroethane	(1)	7.025	97	378260	5.142
36) 1-Chlorobutane	(1)	7.193	56	1054330	4.920
38) Carbon Tetrachloride	(1)	7.245	117	371969	5.323
37) 1,1-Dichloropropene	(1)	7.252	75	506516	5.295
39) Benzene	(1)	7.516	78	1481309	5.052
40) 1,2-Dichloroethane	(1)	7.597	62	229025	5.111

M = Compound was manually integrated.

Digitally signed by Jason M. Long
on 02/04/2014 at 12:09.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04s01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 11:52 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 12:07 jml01693

Sample Name: LFBS43 Lab Sample ID: LFBS43

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
41) t-Amyl Methyl Ether	(1)	7.707	73	412060	5.011
42)*Fluorobenzene	(1)	7.912	96	1027656	5.000
43) Trichloroethene	(1)	8.352	95	396296	5.048
44) 1,2-Dichloropropane	(1)	8.660	63	402912	5.273
46) Methyl Methacrylate	(1)	8.719	69	71856	4.928
45) Dibromomethane	(1)	8.763	93	145351	5.118
47) Bromodichloromethane	(1)	8.953	83	360717	5.055
48) 2-Nitropropane	(1)	9.188	46	146129	515.055
49) Chloroacetonitrile	(1)	9.225	75	301302	236.336
50) cis-1,3-Dichloropropene	(1)	9.423	75	428051	5.187
51) 4-Methyl-2-pentanone	(1)	9.569	58	282668	24.794
52) 1,1-Dichloropropanone	(1)	9.606	83	219168	498.315
53) Toluene	(1)	9.775	92	870616	5.064
54) trans-1,3-Dichloropropene	(1)	10.002	75	269011	4.972
55) Ethyl Methacrylate	(1)	10.053	69	158778	5.061
56) 1,1,2-Trichloroethane	(1)	10.200	83	164338	5.156
58) Tetrachloroethene	(1)	10.281	166	457024	4.719
59) 1,3-Dichloropropane	(1)	10.361	76	271903	5.060
60) 2-Hexanone	(1)	10.398	58	253011	24.102
61) Dibromochloromethane	(1)	10.567	129	249872	5.052
62) 1,2-Dibromoethane	(1)	10.691	107	180219	5.116
63) Chlorobenzene	(1)	11.139	112	906117	5.078
64) 1,1,1,2-Tetrachloroethane	(1)	11.219	131	309872	5.048
65) Ethylbenzene	(1)	11.219	106	494269	5.224
67) m+p-Xylene	(1)	11.337	106	1228070	10.431
68) o-Xylene	(1)	11.681	106	553941	5.246
69) Styrene	(1)	11.703	104	855977	5.245
71) Xylene (Total)	(1)		106	1782011	15.677
70) Bromoform	(1)	11.872	173	116568	5.229
72) Isopropylbenzene	(1)	11.997	120	412379	5.144
73)$4-Bromofluorobenzene	(1)	12.158	174	254829	4.971
74) 1,1,2,2-Tetrachloroethane	(1)	12.261	83	200190	5.185
75) Bromobenzene	(1)	12.290	156	350138	5.162
77) trans-1,4-Dichloro-2-butene	(1)	12.290	53	249905	27.378
76) 1,2,3-Trichloropropane	(1)	12.319	110	34651	5.238
78) n-Propylbenzene	(1)	12.356	120	442519	5.212
79) 2-Chlorotoluene	(1)	12.444	126	395768	5.034
80) 1,3,5-Trimethylbenzene	(1)	12.503	105	1132711	5.232

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 02/04/2014 at 12:09.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14feb04a.b/sf04s01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 11:52 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 12:07 jml01693

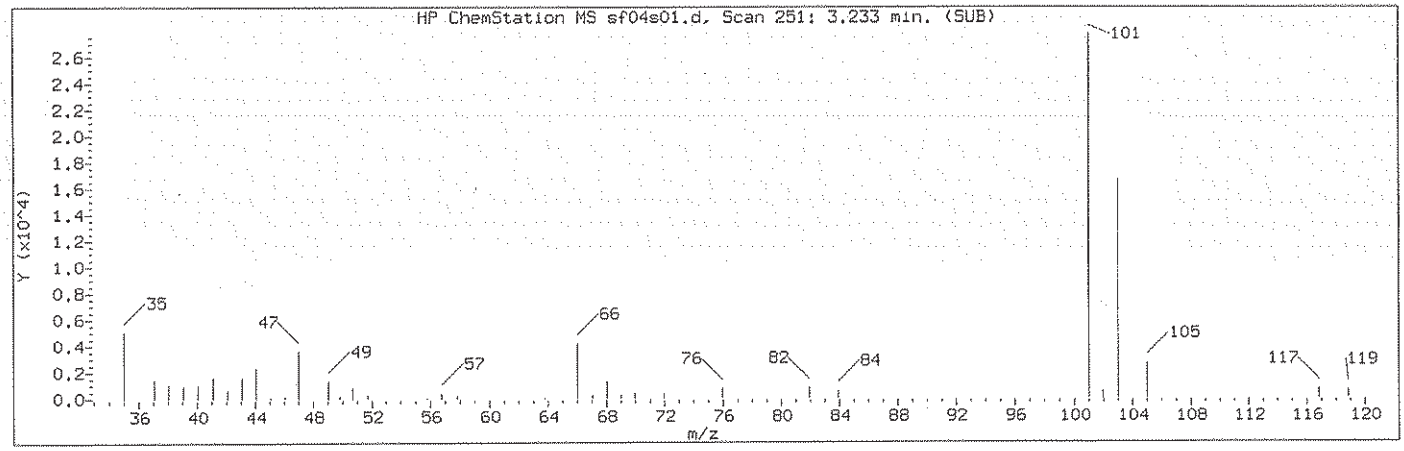
Sample Name: LFBS43 Lab Sample ID: LFBS43

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
81) 4-Chlorotoluene	(1)	12.547	126	408306	5.092
82) tert-Butylbenzene	(1)	12.774	134	268016M	5.279
83) Pentachloroethane	(1)	12.811	167	193944	5.101
84) 1,2,4-Trimethylbenzene	(1)	12.825	105	1106605	5.237
85) sec-Butylbenzene	(1)	12.957	134	302577	5.146
86) 1,3-Dichlorobenzene	(1)	13.075	146	673757	5.270
87) p-Isopropyltoluene	(1)	13.082	119	1241252	5.116
88) 1,4-Dichlorobenzene	(1)	13.163	146	650299	5.192
89) n-Butylbenzene	(1)	13.419	92	766467	5.137
90)$1,2-Dichlorobenzene-d4	(1)	13.441	152	250995	5.167
91) 1,2-Dichlorobenzene	(1)	13.456	146	506667	5.165
92) Hexachloroethane	(1)	13.691	201	223831	5.123
93) 1,2-Dibromo-3-chloropropane	(1)	14.087	157	22916	4.890
94) Nitrobenzene	(1)	14.241	123	119470	260.444
95) 1,2,4-Trichlorobenzene	(1)	14.739	180	274605	4.916
96) Hexachlorobutadiene	(1)	14.835	225	194958	4.836
97) Naphthalene	(1)	14.967	128	300826	4.819
98) 1,2,3-Trichlorobenzene	(1)	15.128	180	195895	4.688

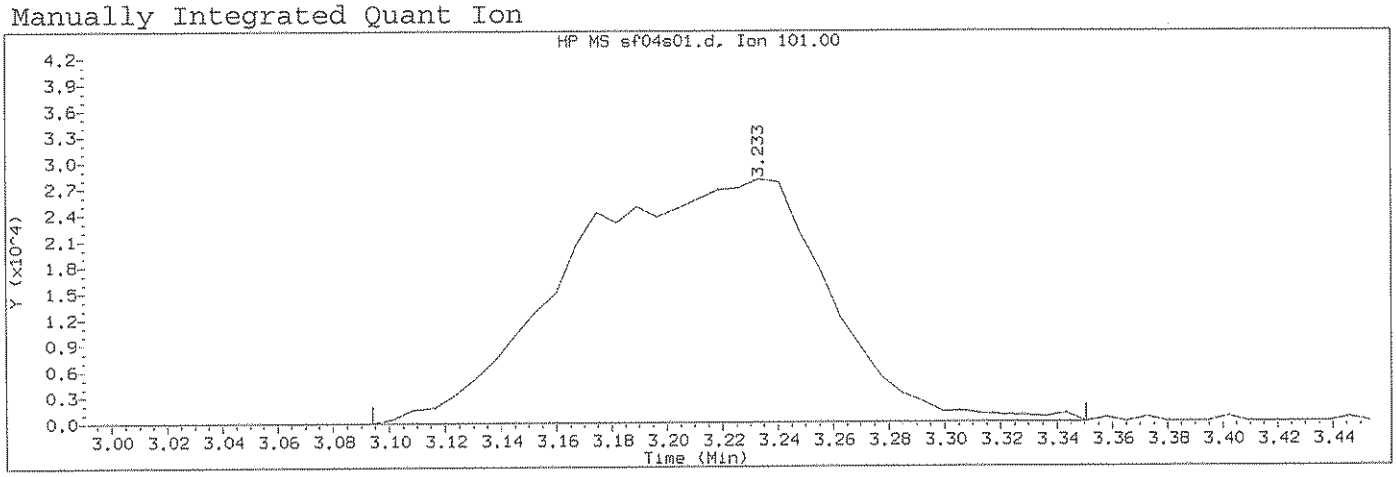
M = Compound was manually integrated.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 02/04/2014 at 12:09.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04s01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 11:52 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 12:07 jml01693

Sample Name: LFBS43 Lab Sample ID: LFBS43

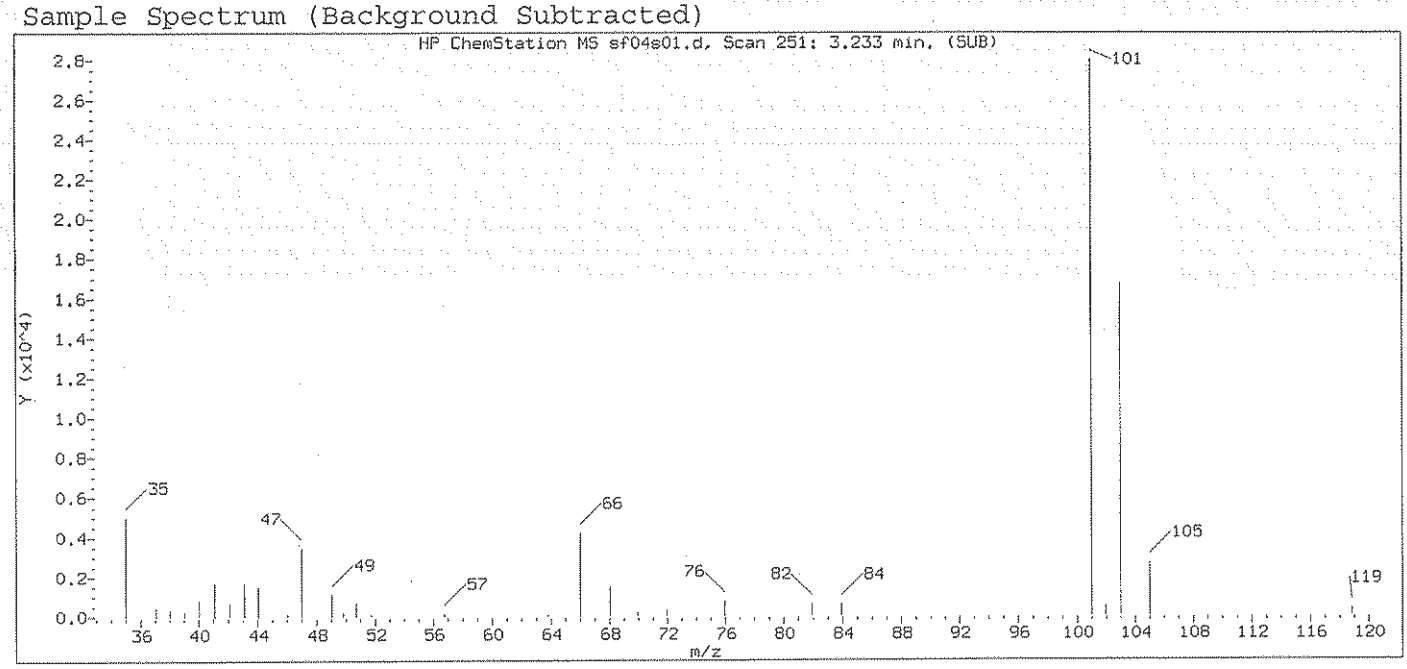
Compound Number : 7
Compound Name : Trichlorofluoromethane
Scan Number : 251
Retention Time (minutes): 3.233
Quant Ion : 101.00
Area (flag) : 181172M
On-Column Amount (ng) : 2.1173
Integration start scan : 231 Integration stop scan: 266
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

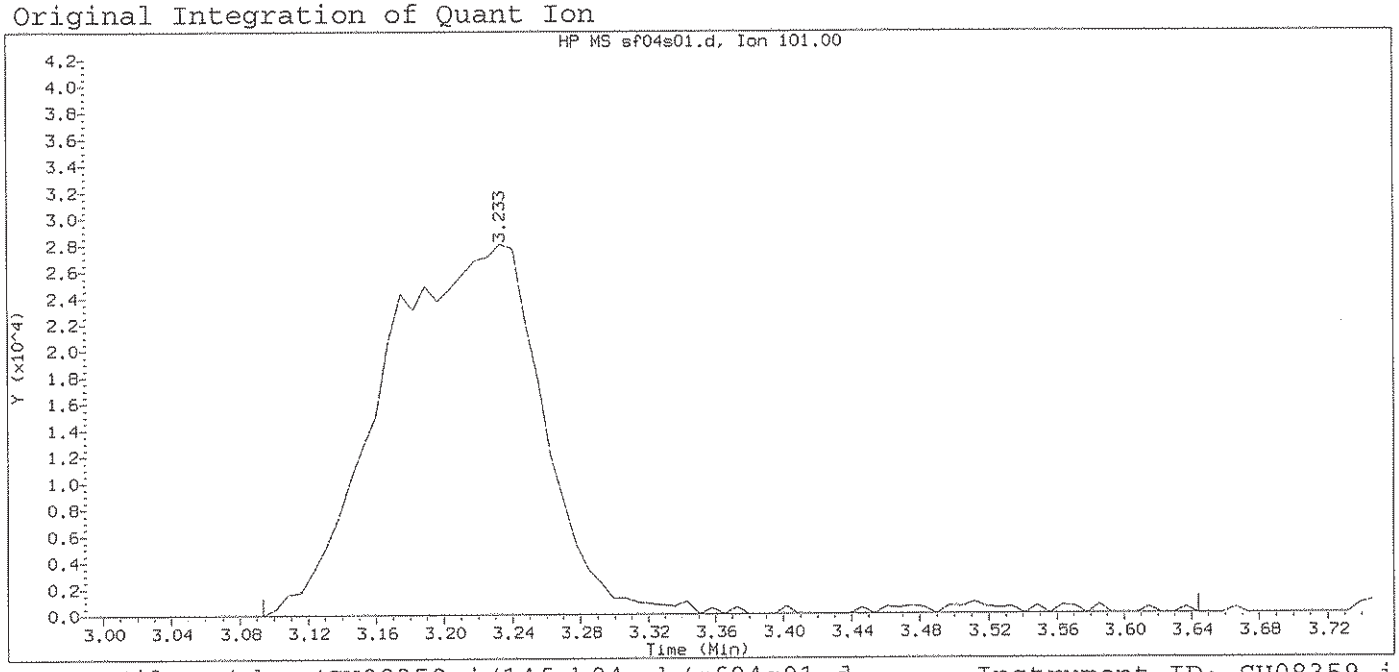
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 12:09. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: JMLong 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04s01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 11:52 Analyst ID: JML01693

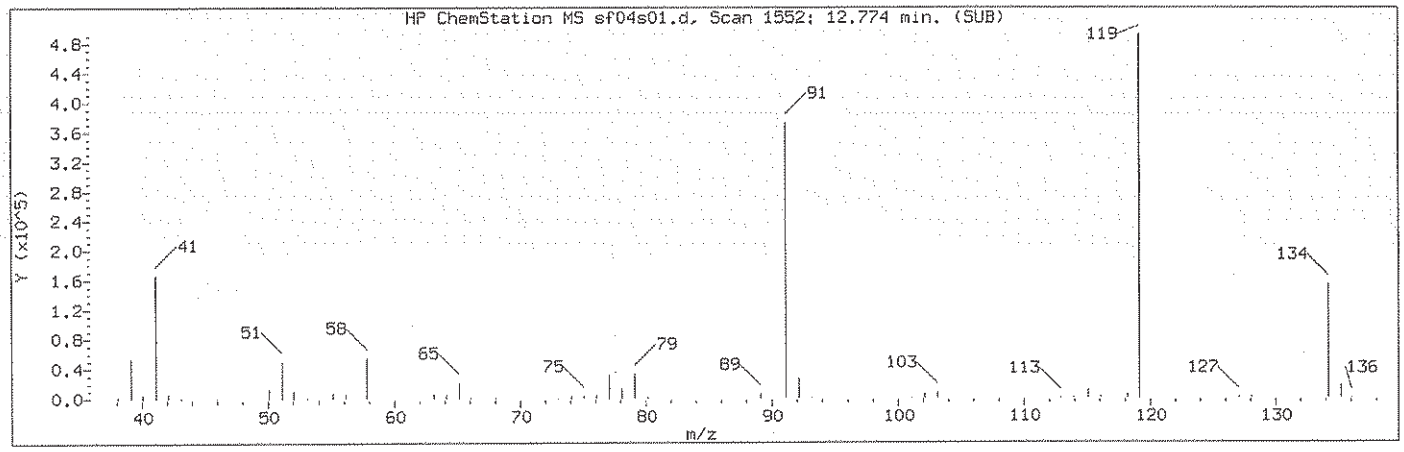
Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 12:06 Automation

Sample Name: LFBS43 Lab Sample ID: LFBS43

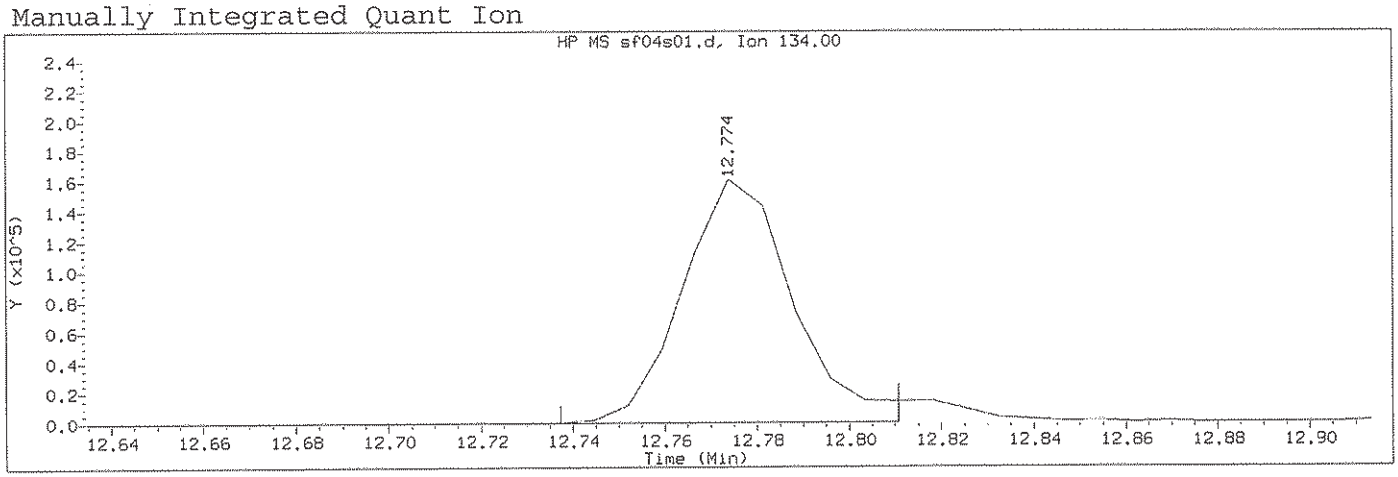
Compound Number : 7
Compound Name : Trichlorofluoromethane
Scan Number : 251
Retention Time (minutes): 3.233
Quant Ion : 101.00
Area : 185945
On-column Amount (ng) : 2.1731
Integration start scan : 231 Integration stop scan: 306
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 02/04/2014 at 12:09.
Target 3.5 esignature using ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04s01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 11:52 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 12:07 jml01693

Sample Name: LFBS43 Lab Sample ID: LFBS43

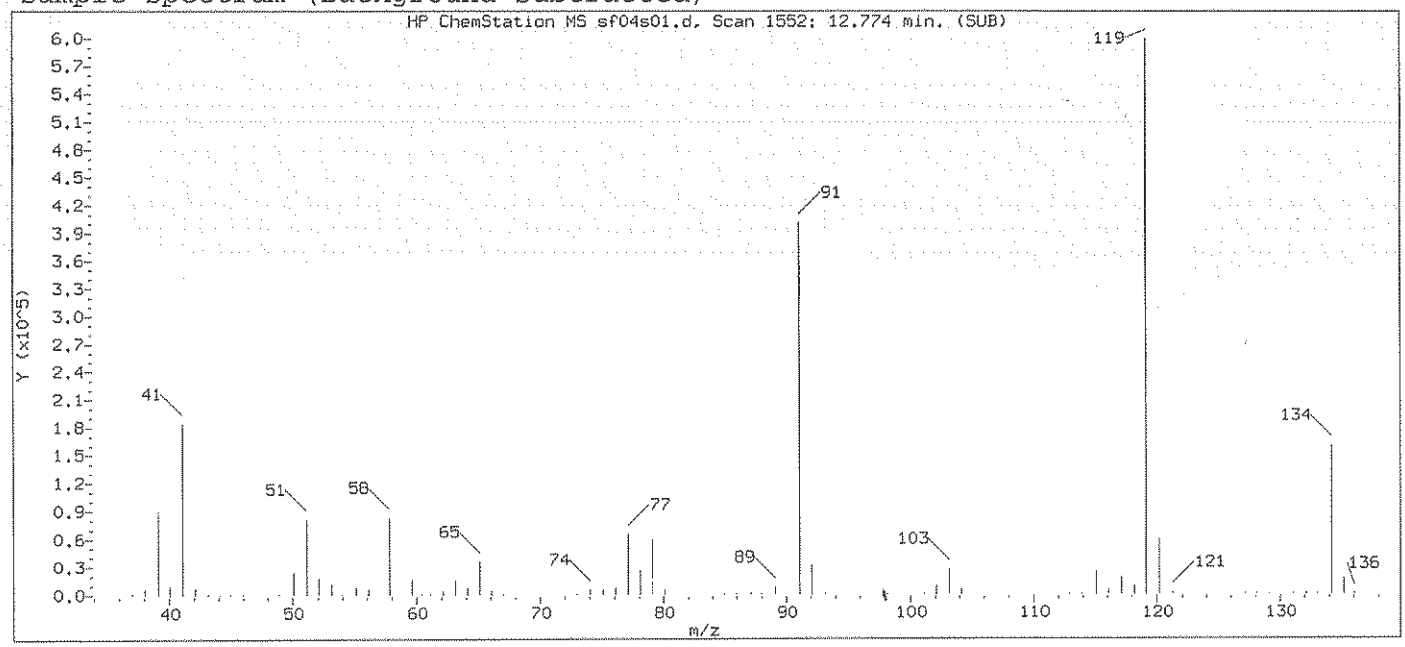
Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1552
Retention Time (minutes): 12.774
Quant Ion : 134.00
Area (flag) : 268016M
On-Column Amount (ng) : 5.2787
Integration start scan : 1546 Integration stop scan: 1556
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

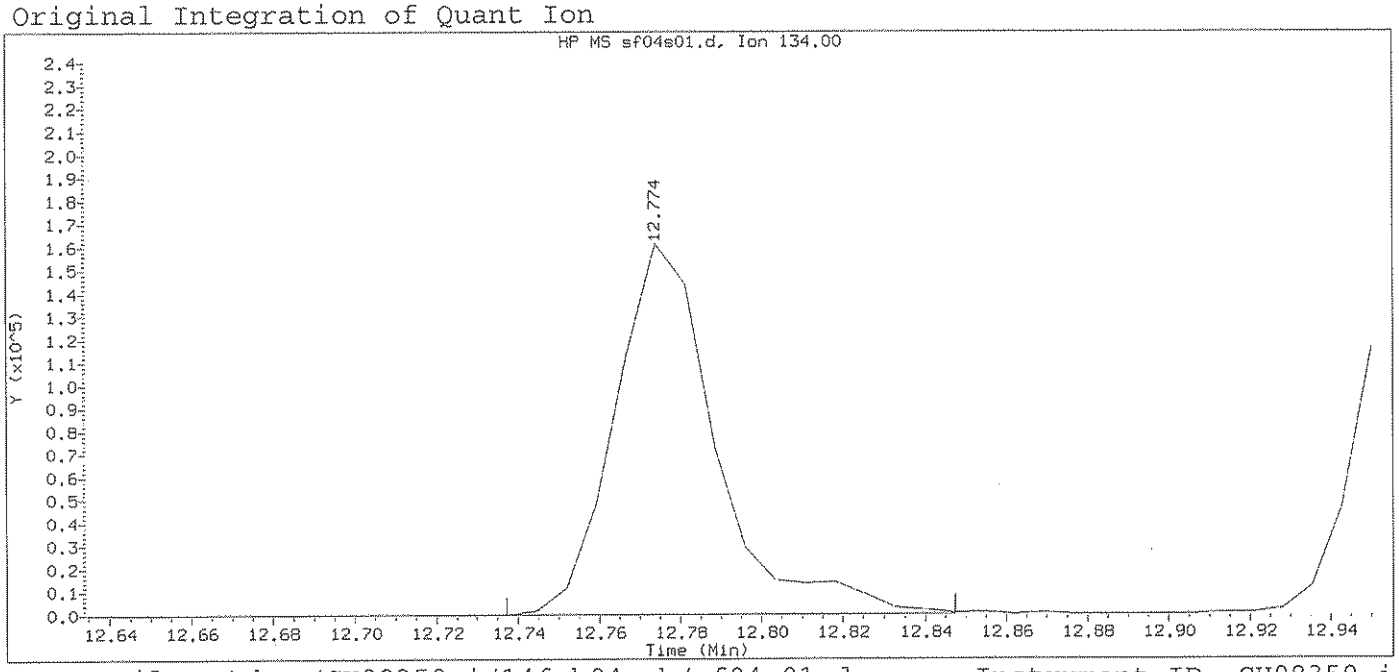
Analyst responsible for change: Digitally signed by Jason M. Long on 02/04/2014 at 12:09. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: JMLh1257 2/4/14

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14feb04a.b/sf04s01.d Instrument ID: SH08359.i
Injection date and time: 04-FEB-2014 11:52 Analyst ID: JML01693

Method used: /chem/SH08359.i/14feb04a.b/m524-2.m Sublist used: M03648
Calibration date and time: 04-FEB-2014 11:34
Date, time and analyst ID of latest file update: 04-Feb-2014 12:06 Automation

Sample Name: LFBS43 Lab Sample ID: LFBS43

Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1552
Retention Time (minutes): 12.774
Quant Ion : 134.00
Area : 280591
On-column Amount (ng) : 5.5264
Integration start scan : 1546 Integration stop scan: 1561
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jason M. Long on 02/04/2014 at 12:09.
Target 3.5 esignature using TID: jml01693

Data File: /chem/SH08359.i/14mar10b.b/sm10t05.d

Date : 10-MAR-2014 18:41

Client ID: BFBSEP18-13

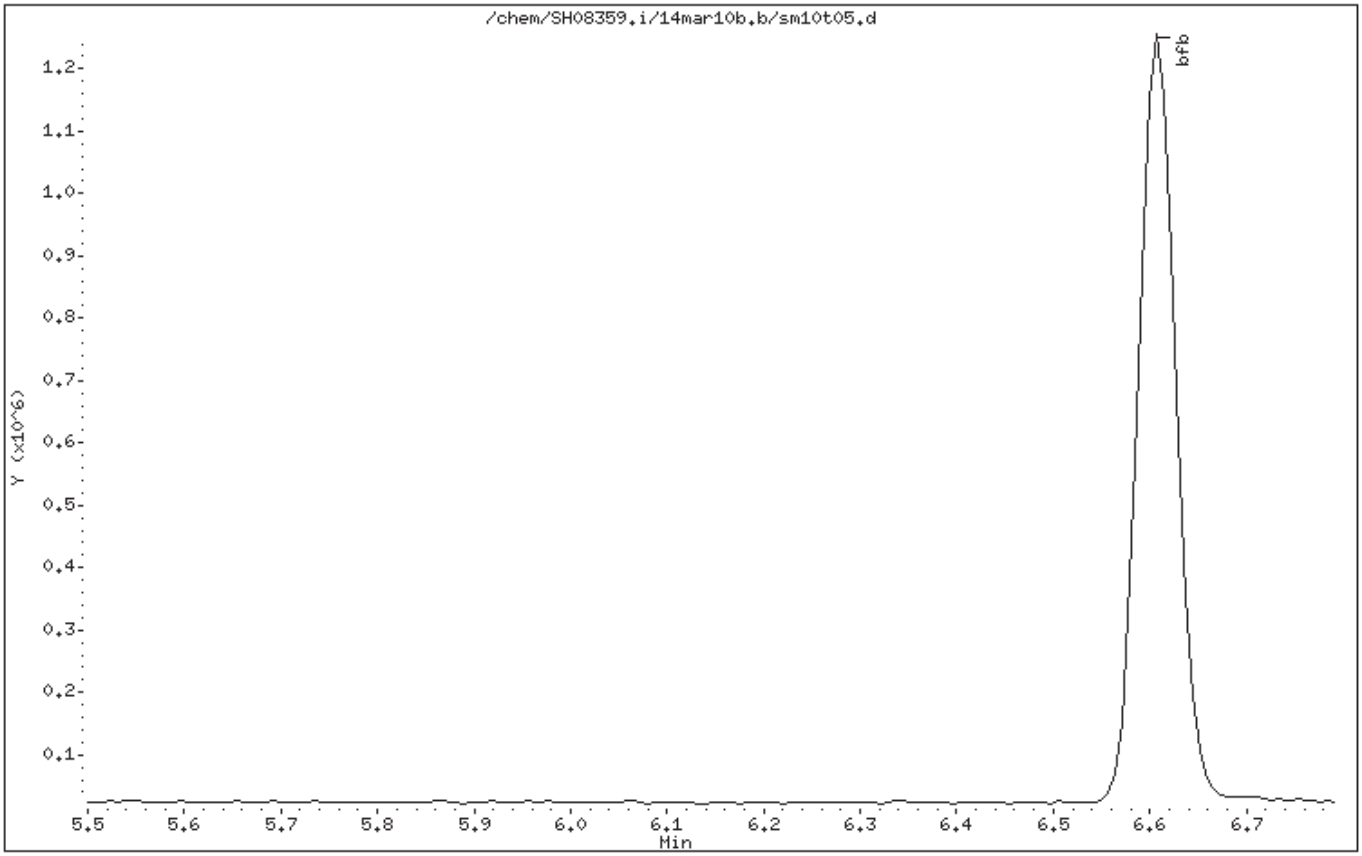
Instrument: SH08359.i

Sample Info: BFBSEP18-13;25NG BFB;

Operator: sej02002

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Sara E. Johnson on 03/10/2014 at 19:53.
Target 3.5 esignature user ID: sej02002

Data File: /chem/SH08359.i/14mar10b.b/sm10t05.d

Date : 10-MAR-2014 18:41

Client ID: BFBSEP18-13

Instrument: SH08359.i

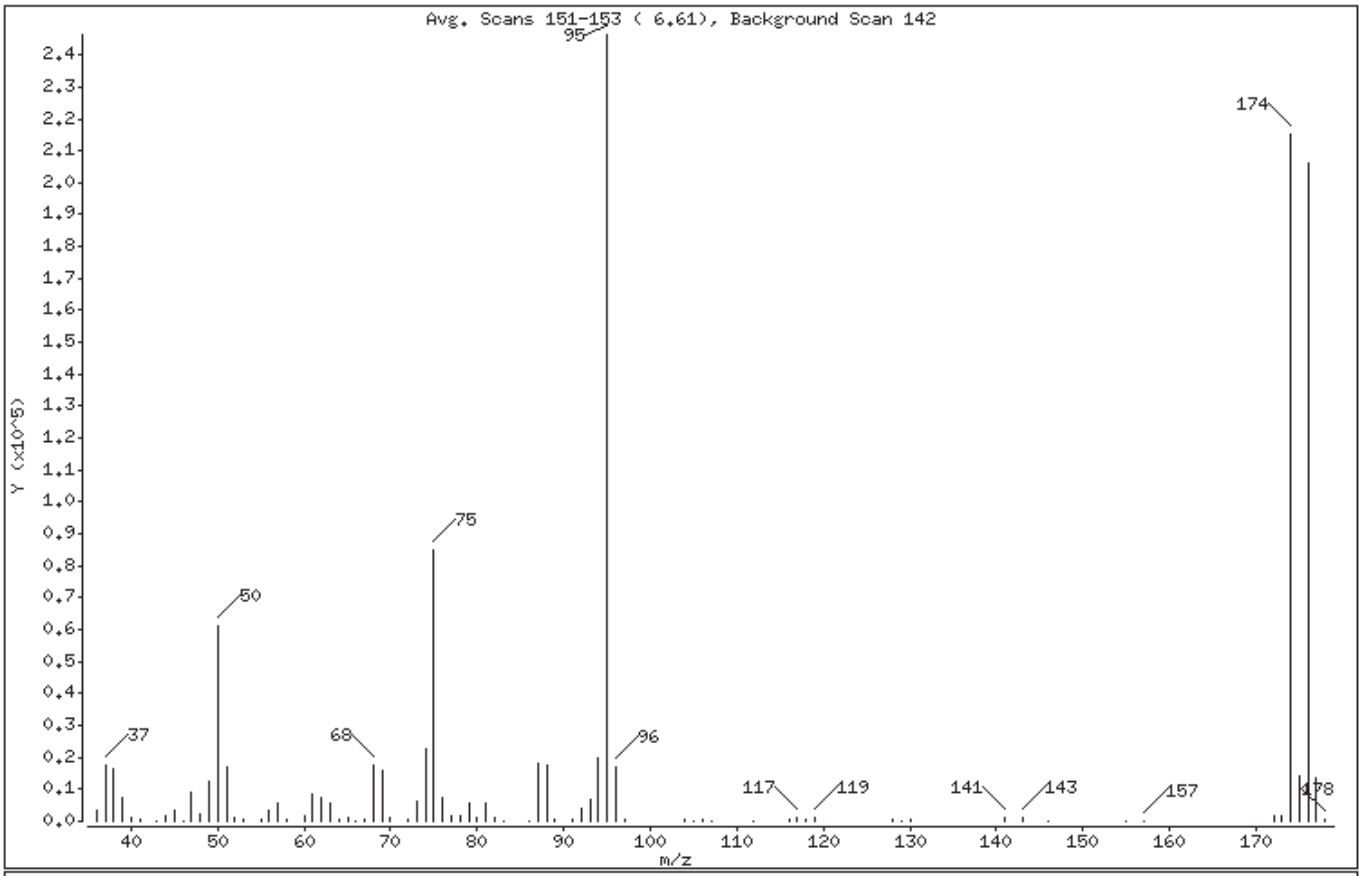
Sample Info: BFBSEP18-13;25NG BFB;

Operator: sej02002

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.94
75	30.00 - 80.00% of mass 95	34.47
96	5.00 - 9.00% of mass 95	6.84
173	Less than 2.00% of mass 174	0.80 (0.91)
174	50.00 - 100.00% of mass 95	87.45
175	5.00 - 9.00% of mass 174	5.82 (6.65)
176	95.00 - 101.00% of mass 174	83.67 (95.67)
177	5.00 - 9.00% of mass 176	5.63 (6.72)

Digitally signed by Sara E. Johnson on 03/10/2014 at 19:53.
Target 3.5 esignature user ID: sej02002

Data File: /chem/SH08359.i/14mar10b.b/sm10t05.d

Date : 10-MAR-2014 18:41

Client ID: BFBSEP18-13 Instrument: SH08359.i

Sample Info: BFBSEP18-13;25NG BFB;

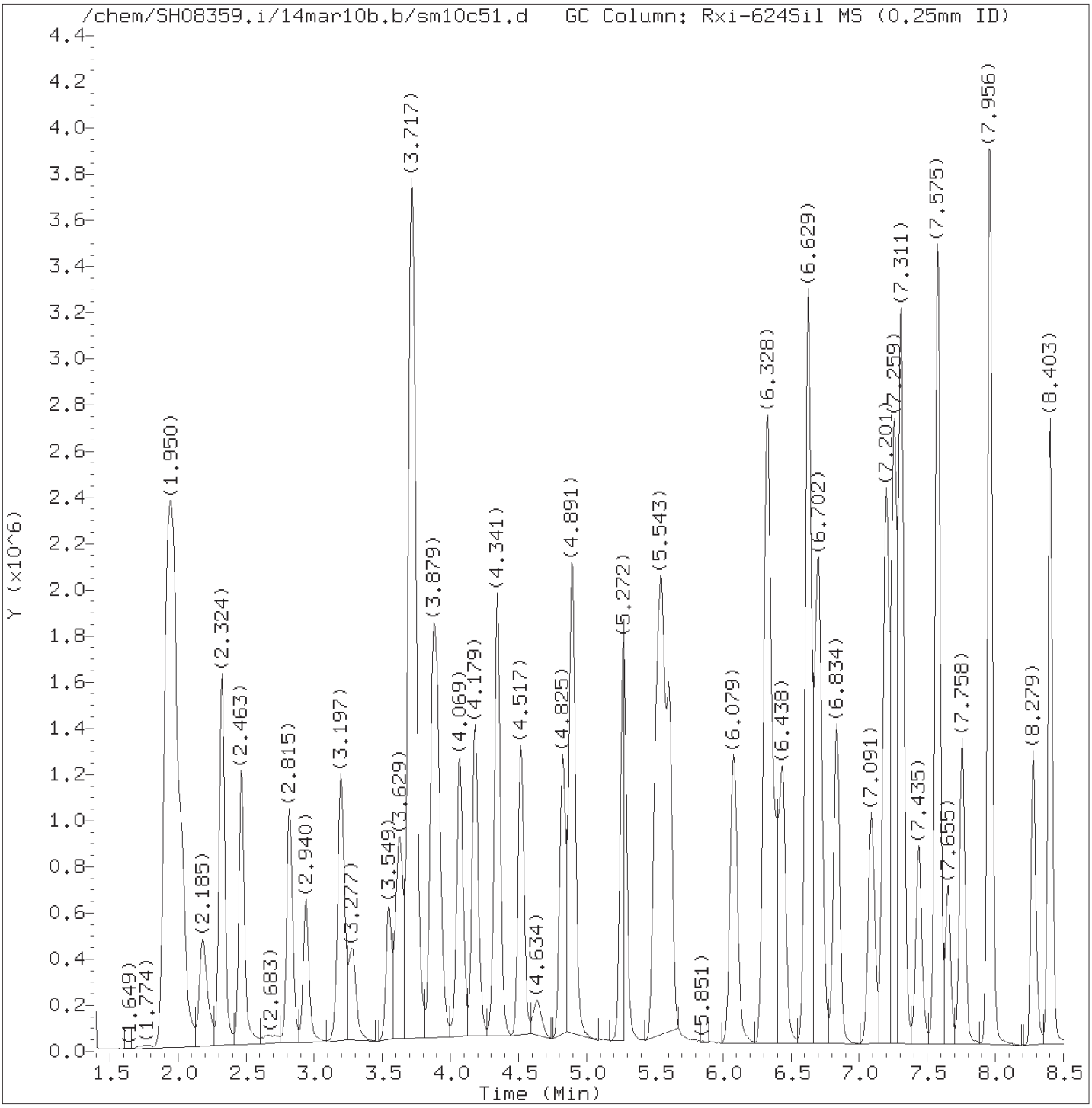
Operator: sej02002

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: sm10t05.d
Spectrum: Avg. Scans 151-153 (6.61), Background Scan 142
Location of Maximum: 95.00
Number of points: 79

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3161	58.00	416	80.00	1283	116.00	701
37.00	17776	60.00	1698	81.00	5946	117.00	1219
38.00	16632	61.00	8294	82.00	1210	118.00	547
39.00	7311	62.00	7524	83.00	111	119.00	992
40.00	1180	63.00	5875	86.00	162	128.00	587
41.00	534	64.00	785	87.00	18272	129.00	209
43.00	58	65.00	1136	88.00	17696	130.00	517
44.00	1753	66.00	181	89.00	781	141.00	979
45.00	3241	67.00	593	91.00	659	143.00	1326
46.00	265	68.00	17512	92.00	3790	146.00	246
47.00	8915	69.00	16107	93.00	7019	155.00	205
48.00	2326	70.00	1209	94.00	20080	157.00	210
49.00	12403	72.00	827	95.00	246336	172.00	1890
50.00	61432	73.00	6294	96.00	16832	173.00	1965
51.00	17208	74.00	22728	97.00	689	174.00	215424
52.00	985	75.00	84904	104.00	562	175.00	14335
53.00	330	76.00	7477	105.00	166	176.00	206080
55.00	839	77.00	1571	106.00	698	177.00	13860
56.00	3160	78.00	1861	107.00	202	178.00	563
57.00	5894	79.00	5904	112.00	162		

Digitally signed by Sara E. Johnson on 03/10/2014 at 19:53.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

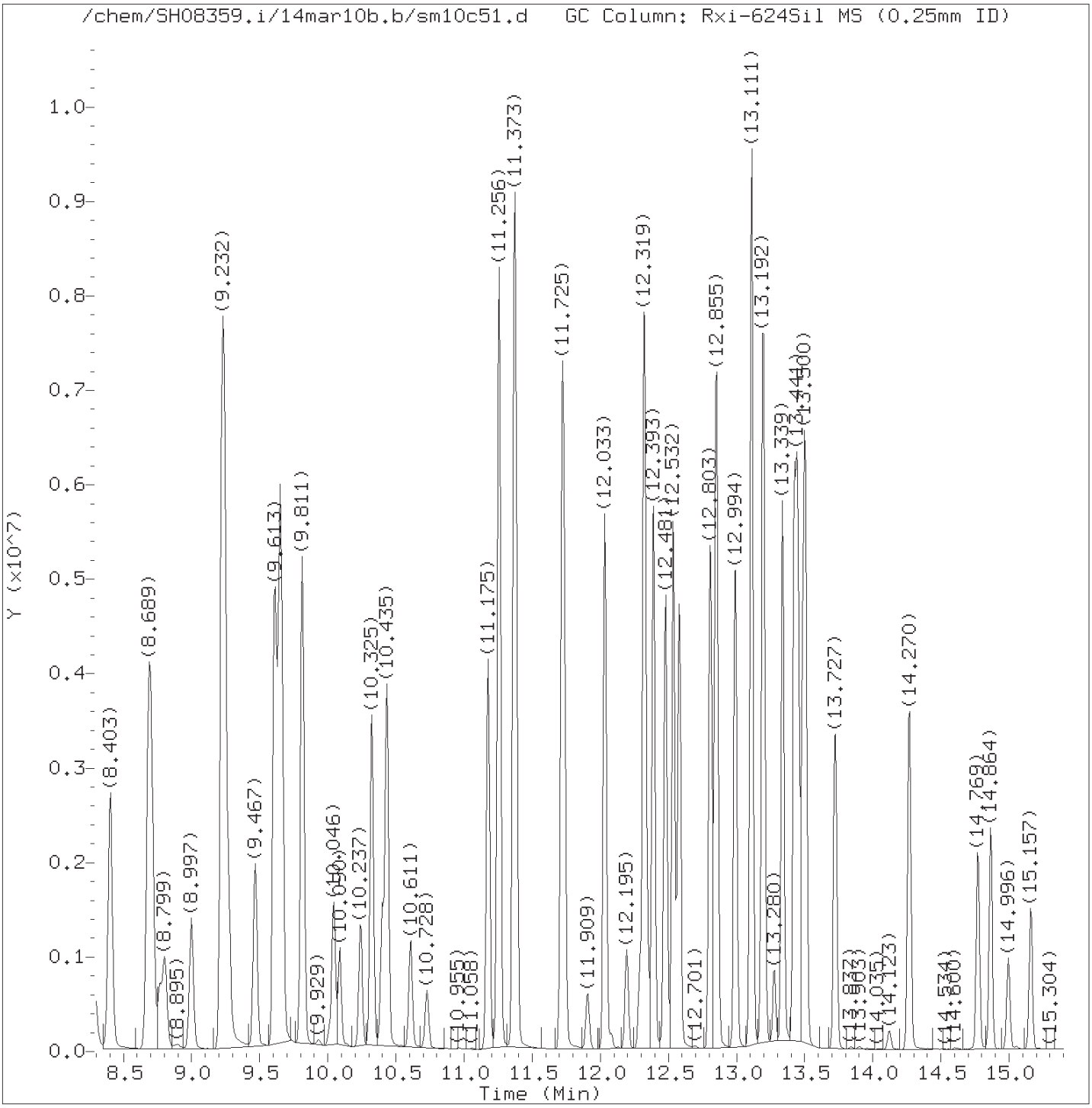
Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:53 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 03/10/2014 at 19:53.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:53 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 03/10/2014 at 19:53.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:53 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(1)	2.185	85	986903	8.698
2) Chloromethane	(1)	2.324	50	2747693	8.660
3) Vinyl Chloride	(1)	2.463	62	1714233	8.874
4) Bromomethane	(1)	2.815	94	1177863	8.981
5) Chloroethane	(1)	2.940	64	850796	9.369
6) Dichlorofluoromethane	(1)	3.189	67	1754212	9.263
7) Trichlorofluoromethane	(1)	3.277	101	968209	8.580
8) Ethyl Ether	(1)	3.549	59	494368	9.006
9) Acrolein	(1)	3.732	56	3749269	404.460
10) 1,1-Dichloroethene	(1)	3.871	96	859910	8.716
11) Freon 113	(1)	3.908	101	784090	8.198
12) Acetone	(1)	3.908	58	270050	90.774
12) Acetone	(1)	3.901	43	876057	89.780
13) Methyl Iodide	(1)	4.069	142	2199153	9.134
14) Carbon Disulfide	(1)	4.179	76	3012863	8.639
15) Allyl Chloride	(1)	4.348	39	1328890	8.327
16) Methylene Chloride	(1)	4.517	84	772101	8.921
17) t-Butyl Alcohol	(1)	4.634	59	386994	166.123
18) Acrylonitrile	(1)	4.825	53	1677180	108.509
21) Methyl Tertiary Butyl Ether	(1)	4.883	73	664685	8.362
20) trans-1,2-Dichloroethene	(1)	4.898	96	981965	8.584
22) 1,1-Dichloroethane	(1)	5.507	63	1721198	8.816
23) di-Isopropyl Ether	(1)	5.551	87	493238	8.376
25) Ethyl t-Butyl Ether	(1)	6.079	59	1886723	9.298
28) 2-Butanone	(1)	6.306	43	2081581	92.700
26) cis-1,2-Dichloroethene	(1)	6.328	96	1021961	9.862
27) 2,2-Dichloropropane	(1)	6.343	77	879015	8.870
29) Propionitrile	(1)	6.401	54	1153614	197.314
30) Methyl Acrylate	(1)	6.438	55	2111586	49.993
31) Methacrylonitrile	(1)	6.629	67	1171929	99.073
32) Bromochloromethane	(1)	6.680	128	466702	11.103
33) Tetrahydrofuran	(1)	6.709	71	387041	135.848
34) Chloroform	(1)	6.834	83	1480315	9.713
35) 1,1,1-Trichloroethane	(1)	7.091	97	929577	9.582
36) 1-Chlorobutane	(1)	7.252	56	2704230	9.569
38) Carbon Tetrachloride	(1)	7.311	117	899885	9.765
37) 1,1-Dichloropropene	(1)	7.311	75	1161194	9.205
39) Benzene	(1)	7.575	78	3725760	9.636

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on 03/10/2014 at 19:53.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:53 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
40) 1,2-Dichloroethane	(1)	7.655	62	584424	9.889
41) t-Amyl Methyl Ether	(1)	7.758	73	988390	9.115
42)*Fluorobenzene	(1)	7.963	96	1355231	5.000
43) Trichloroethene	(1)	8.403	95	994137	9.603
44) 1,2-Dichloropropane	(1)	8.711	63	997619	9.900
46) Methyl Methacrylate	(1)	8.763	69	187501	9.751
45) Dibromomethane	(1)	8.807	93	391541	10.455
47) Bromodichloromethane	(1)	8.997	83	926679	9.847
48) 2-Nitropropane	(1)	9.232	46	394374	1054.048
49) Chloroacetonitrile	(1)	9.269	75	836736	497.680
50) cis-1,3-Dichloropropene	(1)	9.467	75	1010765	9.288
51) 4-Methyl-2-pentanone	(1)	9.606	58	1566597	104.197
52) 1,1-Dichloropropanone	(1)	9.650	83	625000	1077.561
53) Toluene	(1)	9.811	92	2264439	9.987
54) trans-1,3-Dichloropropene	(1)	10.046	75	669795	9.387
55) Ethyl Methacrylate	(1)	10.090	69	399220	9.649
56) 1,1,2-Trichloroethane	(1)	10.237	83	419151	9.972
58) Tetrachloroethene	(1)	10.317	166	1210305	9.475
59) 1,3-Dichloropropane	(1)	10.398	76	688073	9.709
60) 2-Hexanone	(1)	10.435	58	1470015	106.186
61) Dibromochloromethane	(1)	10.611	129	684435	10.492
62) 1,2-Dibromoethane	(1)	10.728	107	462358	9.953
63) Chlorobenzene	(1)	11.175	112	2270186	9.647
64) 1,1,1,2-Tetrachloroethane	(1)	11.256	131	826537	10.210
65) Ethylbenzene	(1)	11.256	106	1233205	9.883
67) m+p-Xylene	(1)	11.373	106	3120232	20.096
68) o-Xylene	(1)	11.718	106	1401482	10.064
69) Styrene	(1)	11.733	104	2231911	10.371
71) Xylene (Total)	(1)		106	4521714	30.159
70) Bromoform	(1)	11.909	173	322762	10.978
72) Isopropylbenzene	(1)	12.033	120	1052979	9.960
73)$4-Bromofluorobenzene	(1)	12.195	174	350216	5.181
74) 1,1,2,2-Tetrachloroethane	(1)	12.290	83	507036M	9.958
75) Bromobenzene	(1)	12.319	156	971906	10.865
77) trans-1,4-Dichloro-2-butene	(1)	12.319	53	1166152M	96.876
76) 1,2,3-Trichloropropane	(1)	12.349	110	94170	10.794
78) n-Propylbenzene	(1)	12.385	120	1141601	10.195
79) 2-Chlorotoluene	(1)	12.481	126	1077557	10.394

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/10/2014 at 19:53.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:53 sej02002

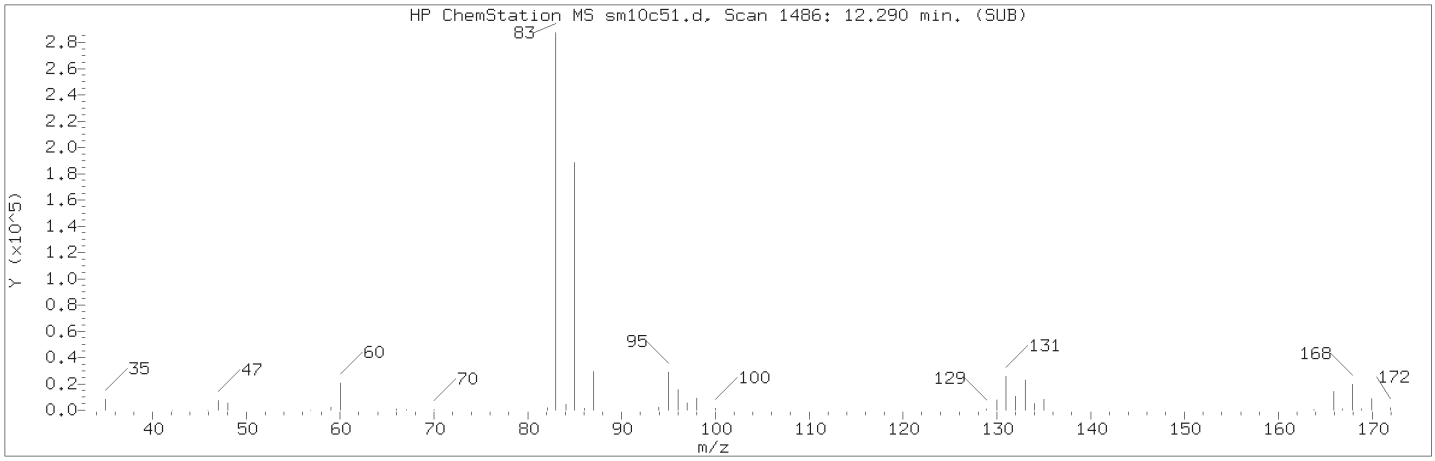
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
80) 1,3,5-Trimethylbenzene	(1)	12.532	105	2862691	10.026
81) 4-Chlorotoluene	(1)	12.576	126	1103097	10.432
82) tert-Butylbenzene	(1)	12.803	134	700759M	10.466
83) Pentachloroethane	(1)	12.840	167	522955	10.430
84) 1,2,4-Trimethylbenzene	(1)	12.855	105	2795310	10.032
85) sec-Butylbenzene	(1)	12.987	134	809778	10.444
86) 1,3-Dichlorobenzene	(1)	13.104	146	1759089	10.433
87) p-Isopropyltoluene	(1)	13.111	119	3232609	10.103
88) 1,4-Dichlorobenzene	(1)	13.192	146	1720568	10.418
89) n-Butylbenzene	(1)	13.449	92	1935004	9.835
90)$1,2-Dichlorobenzene-d4	(1)	13.471	152	364758	5.694
91) 1,2-Dichlorobenzene	(1)	13.485	146	1356901	10.489
92) Hexachloroethane	(1)	13.720	201	612193	10.625
93) 1,2-Dibromo-3-chloropropane	(1)	14.116	157	59854	9.685
94) Nitrobenzene	(1)	14.270	123	131626	217.586
95) 1,2,4-Trichlorobenzene	(1)	14.769	180	707464	9.604
96) Hexachlorobutadiene	(1)	14.864	225	493214	9.278
97) Naphthalene	(1)	14.996	128	763587	9.275
98) 1,2,3-Trichlorobenzene	(1)	15.157	180	513433	9.317

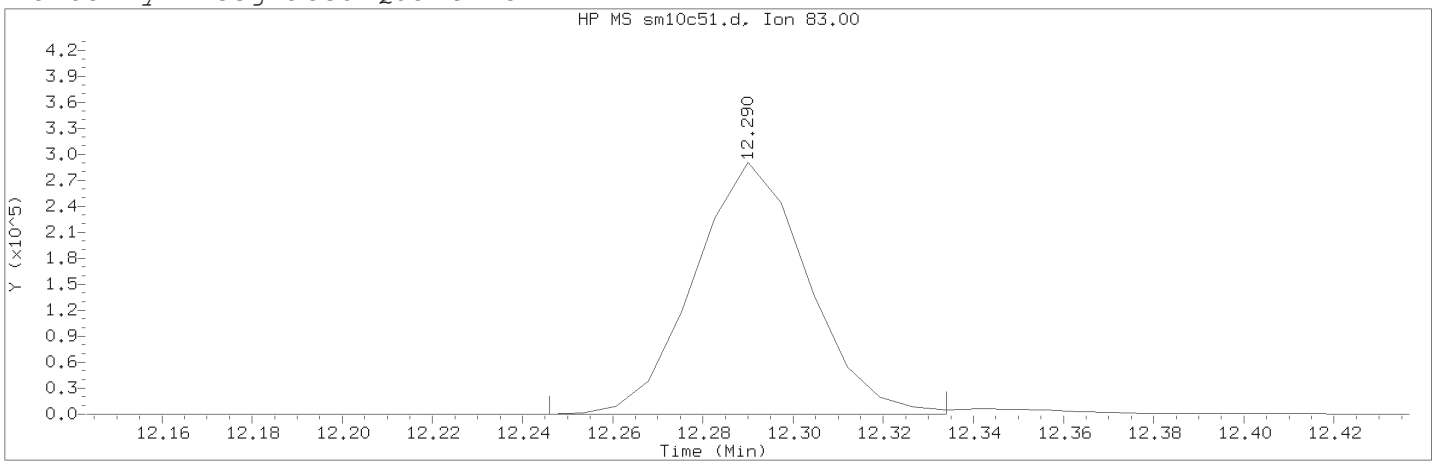
M = Compound was manually integrated.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 03/10/2014 at 19:53.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:53 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

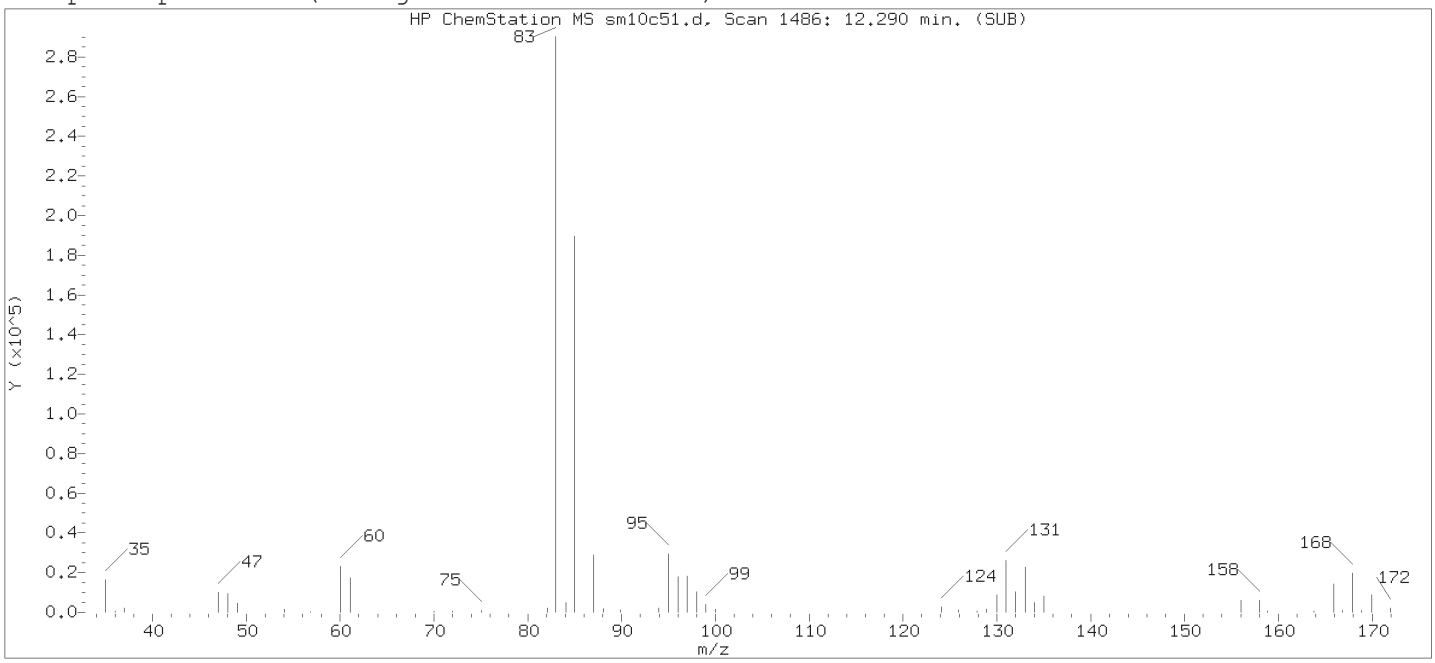
Compound Number : 74
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 83.00
Area (flag) : 507036M
On-Column Amount (ng) : 9.9579
Integration start scan : 1479 Integration stop scan: 1491
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

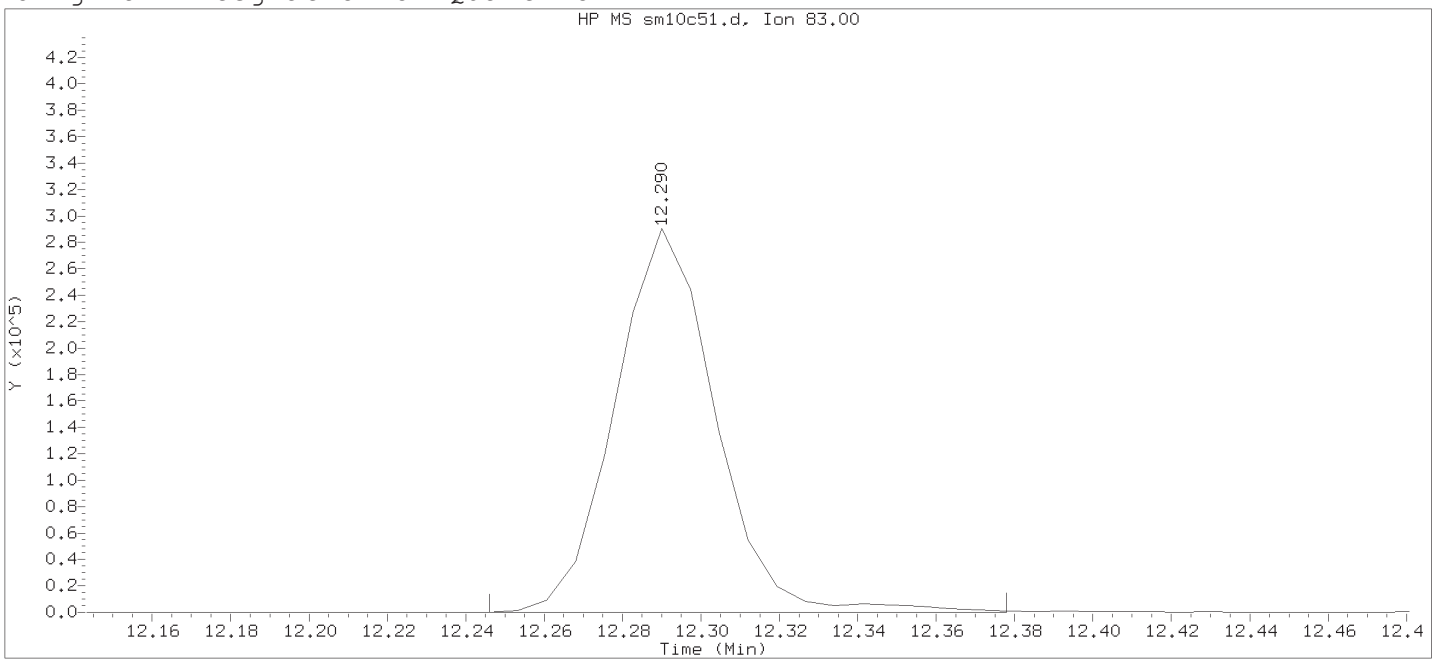
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/10/2014 at 19:53. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/12/2014 at 16:28.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

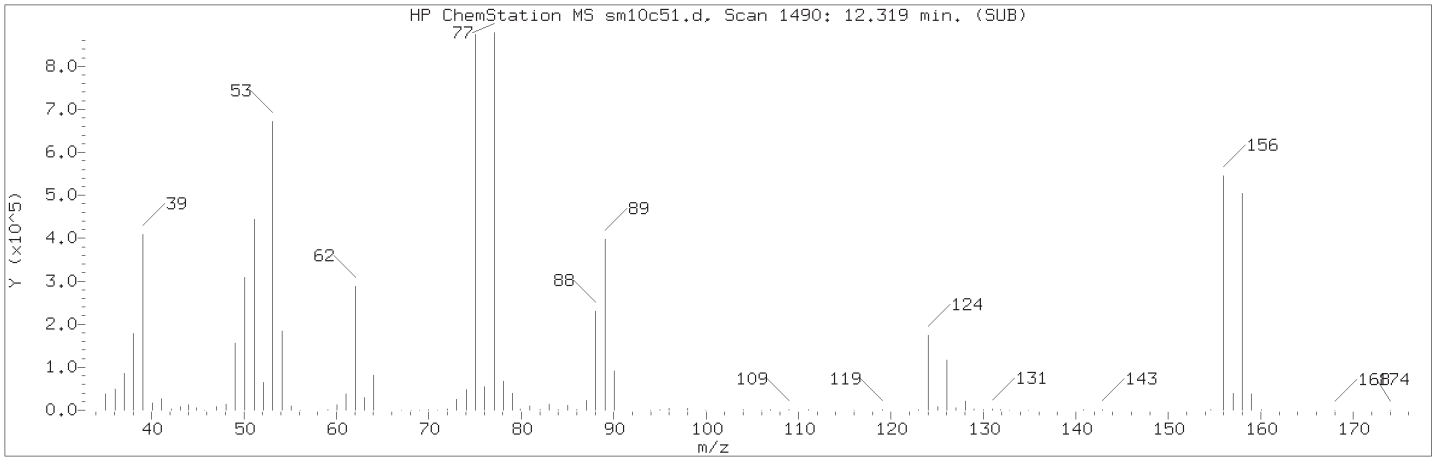
Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:51 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

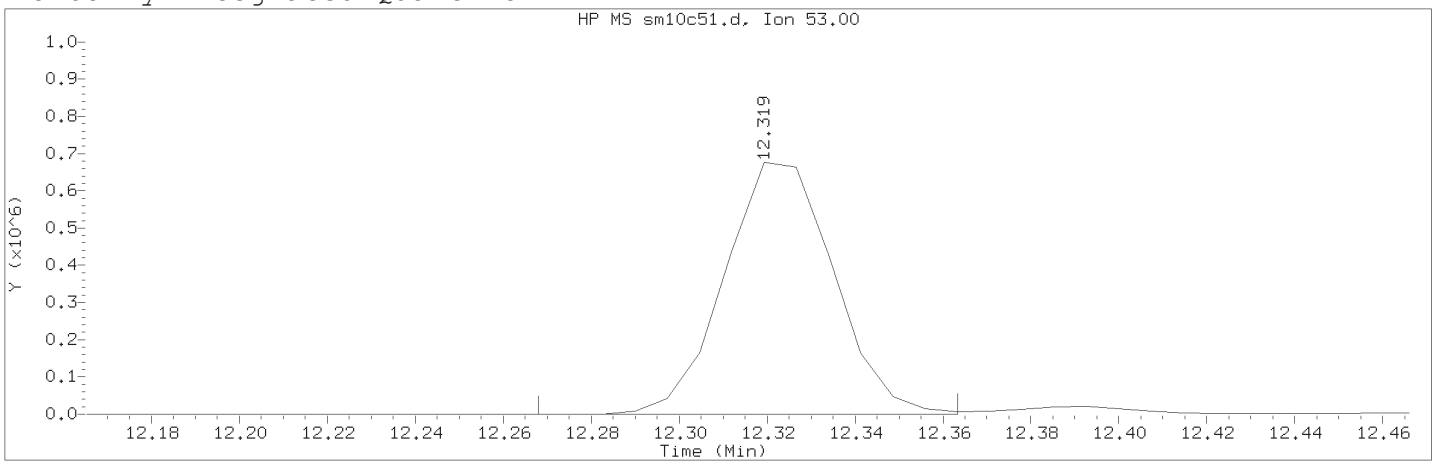
Compound Number : 74
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 83.00
Area : 516418
On-column Amount (ng) : 10.1421
Integration start scan : 1479 Integration stop scan: 1497
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/10/2014 at 19:53.
Target 3.5 esignature User ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:53 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

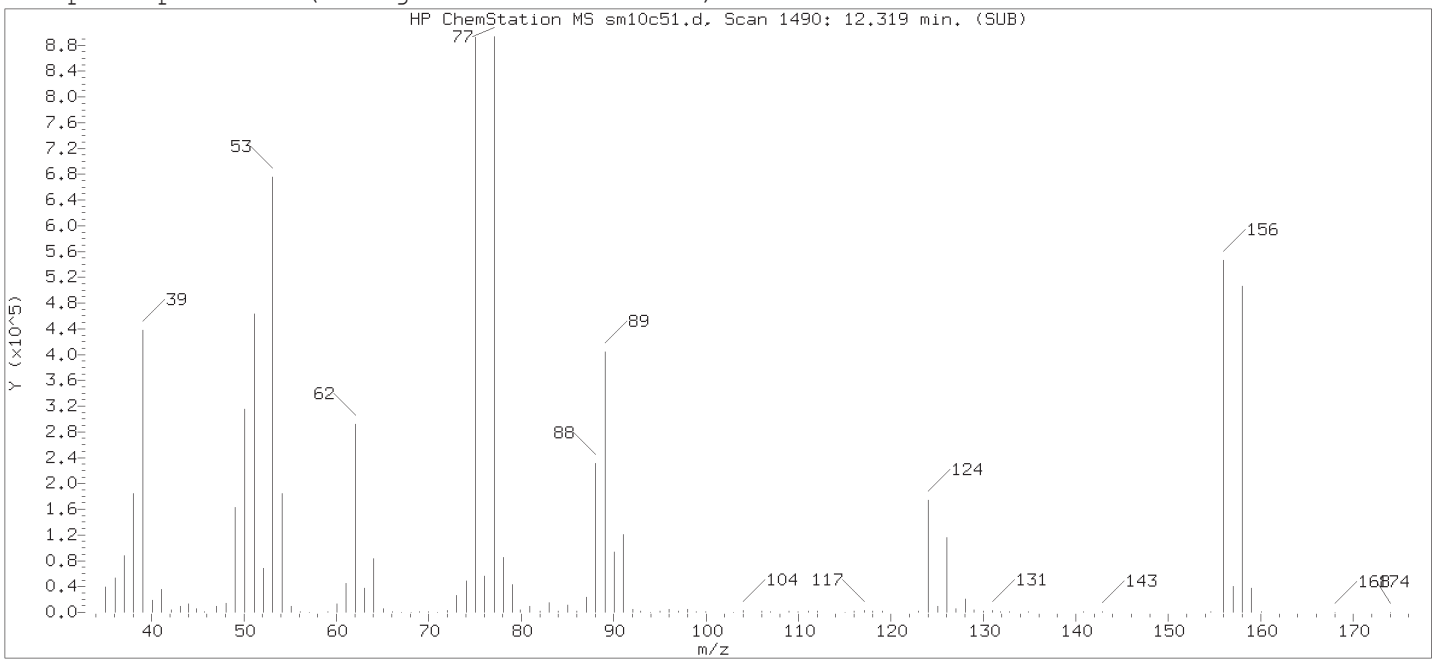
Compound Number : 77
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1490
Retention Time (minutes): 12.319
Quant Ion : 53.00
Area (flag) : 1166152M
On-Column Amount (ng) : 96.8756
Integration start scan : 1482 Integration stop scan: 1495
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

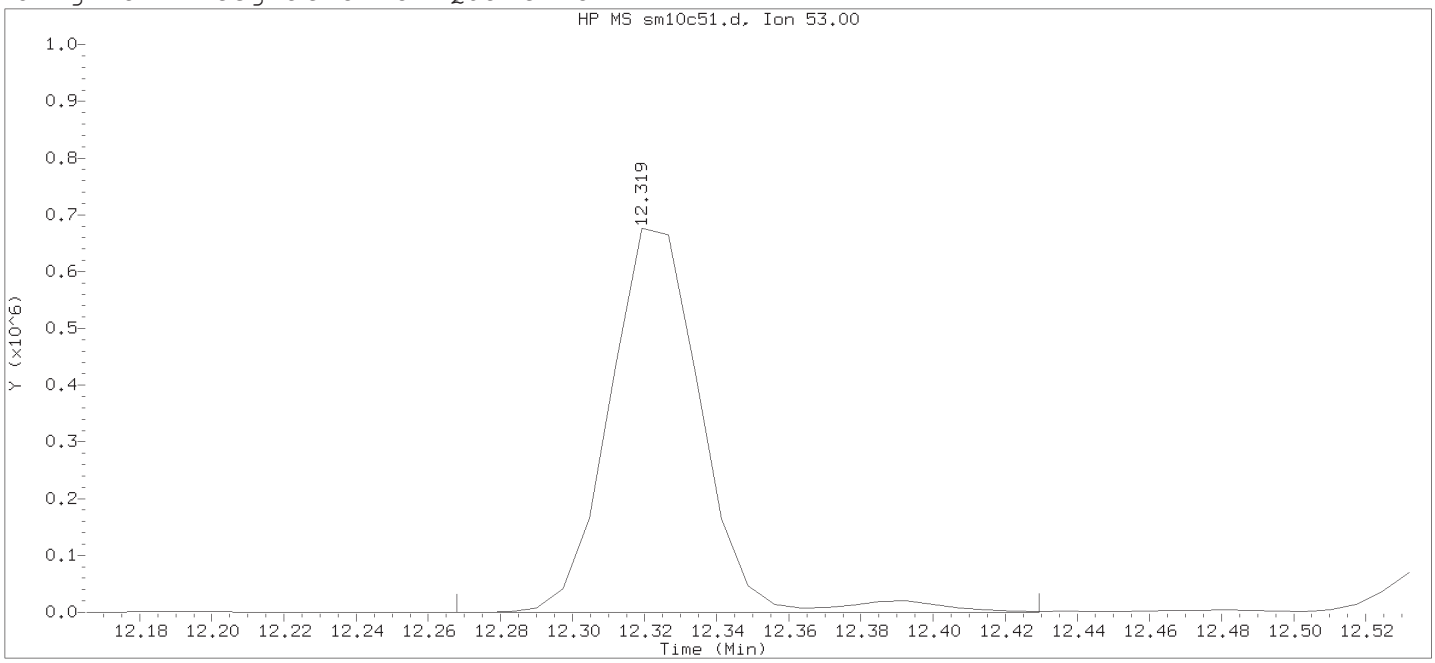
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/10/2014 at 19:53. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/12/2014 at 16:28.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

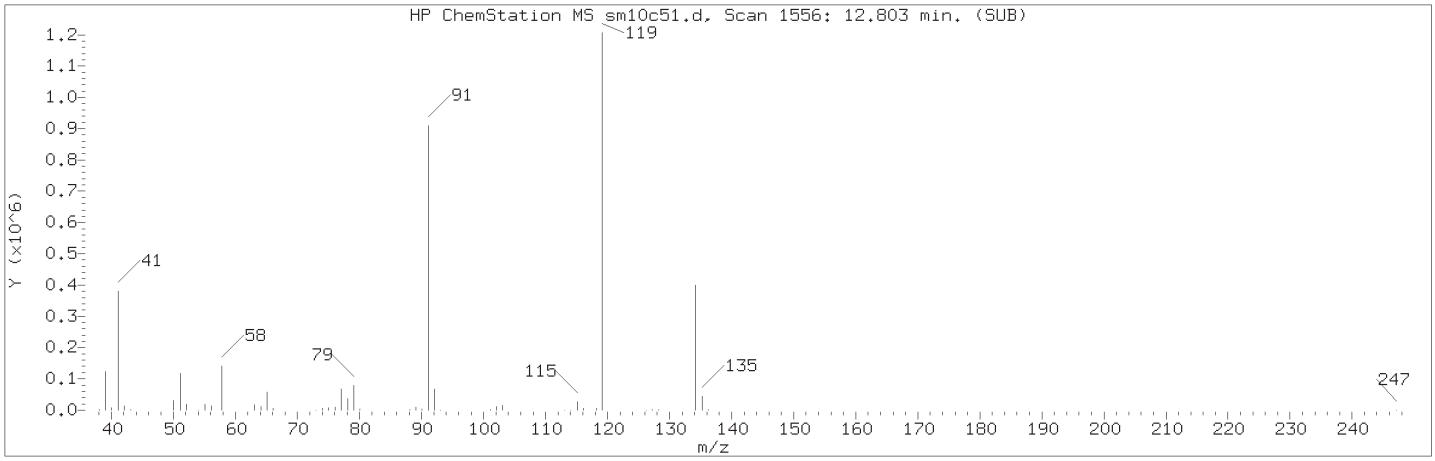
Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:51 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

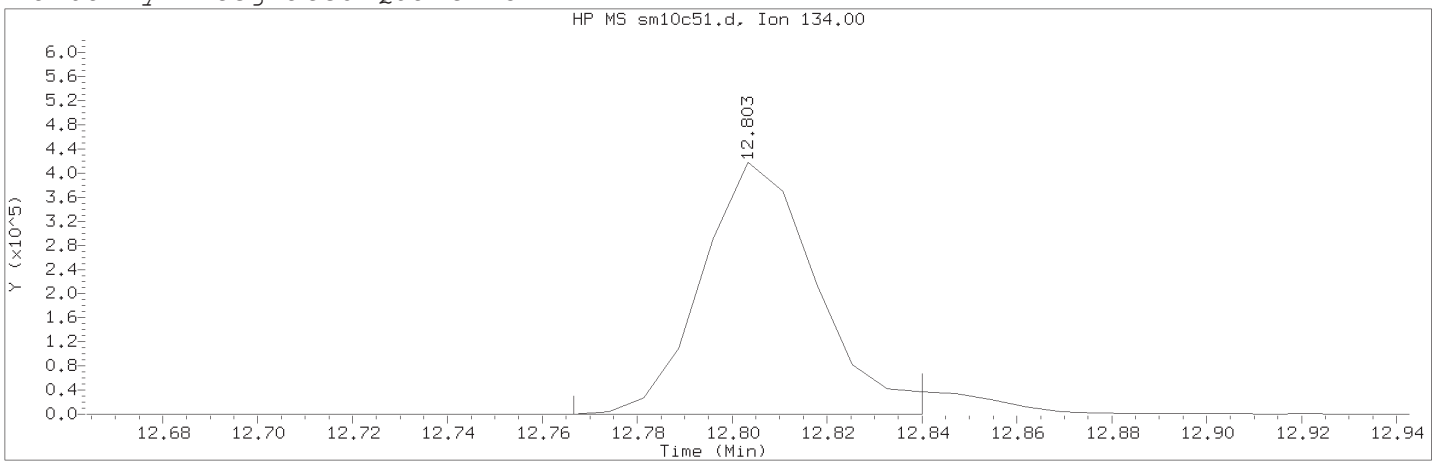
Compound Number : 77
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1490
Retention Time (minutes): 12.319
Quant Ion : 53.00
Area : 1205211
On-column Amount (ng) : 100.1203
Integration start scan : 1482 Integration stop scan: 1504
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/10/2014 at 19:53.
Target 3.5 esignature User ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:53 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

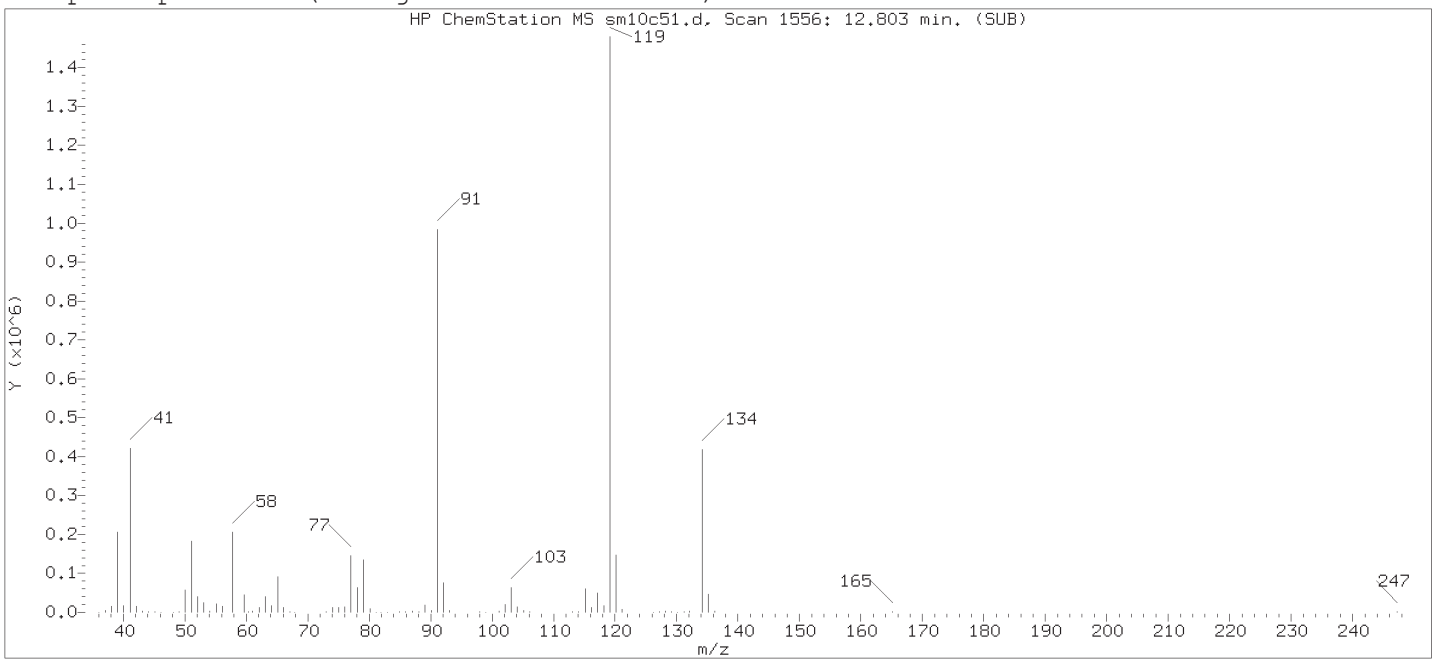
Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1556
Retention Time (minutes): 12.803
Quant Ion : 134.00
Area (flag) : 700759M
On-Column Amount (ng) : 10.4657
Integration start scan : 1550 Integration stop scan: 1560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

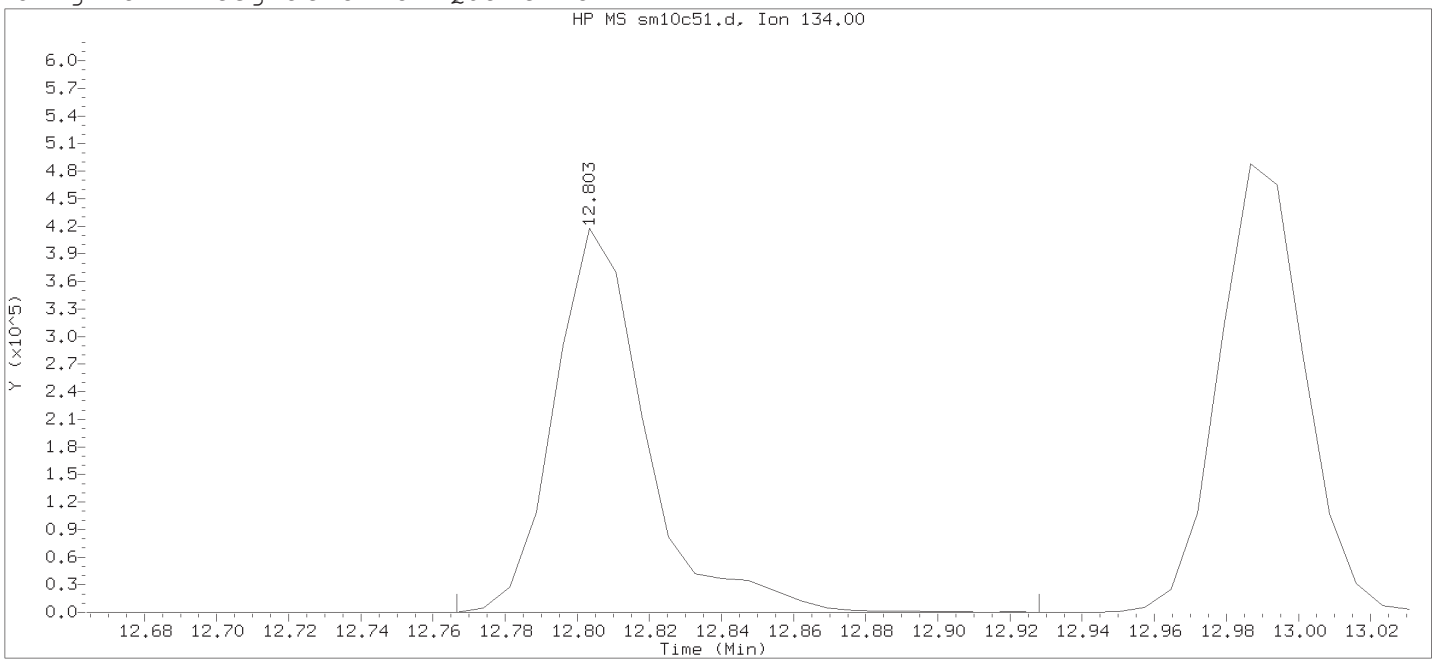
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/10/2014 at 19:53. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/12/2014 at 16:28.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10c51.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:06 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: M03648
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 19:51 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1556
Retention Time (minutes): 12.803
Quant Ion : 134.00
Area : 736811
On-column Amount (ng) : 11.0042
Integration start scan : 1550 Integration stop scan: 1572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/10/2014 at 19:53.
Target 3.5 esignature User ID: sej02002

Data File: /chem/SH08359.i/14mar11a.b/sm11t01.d

Date : 11-MAR-2014 16:32

Client ID: BFBSEP18-13

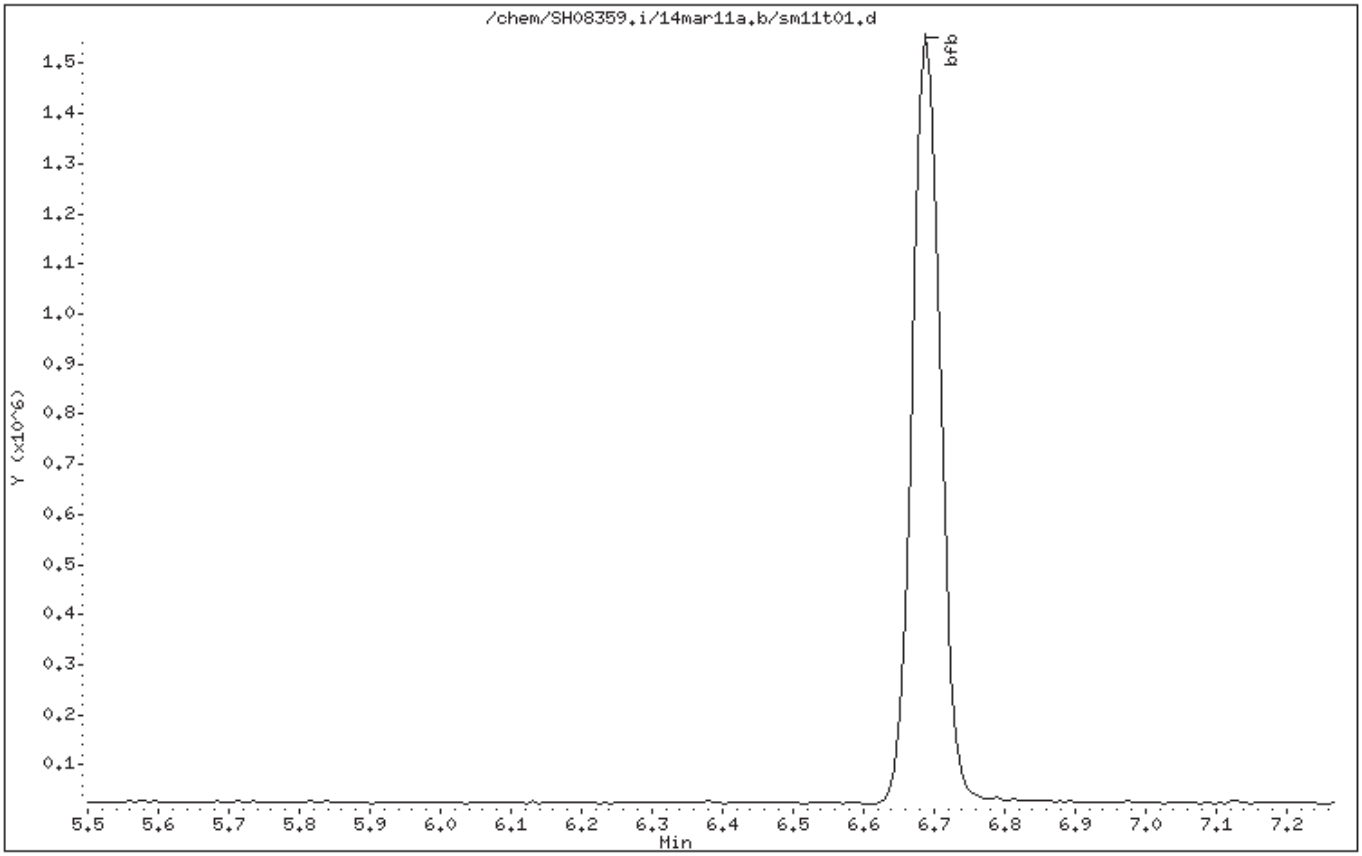
Instrument: SH08359.i

Sample Info: BFBSEP18-13;25NG BFB;

Operator: sej02002

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Sara E. Johnson on 03/11/2014 at 17:36.
Target 3.5 esignature user ID: sej02002

Data File: /chem/SH08359.i/14mar11a.b/sm11t01.d

Date : 11-MAR-2014 16:32

Client ID: BFBSEP18-13

Instrument: SH08359.i

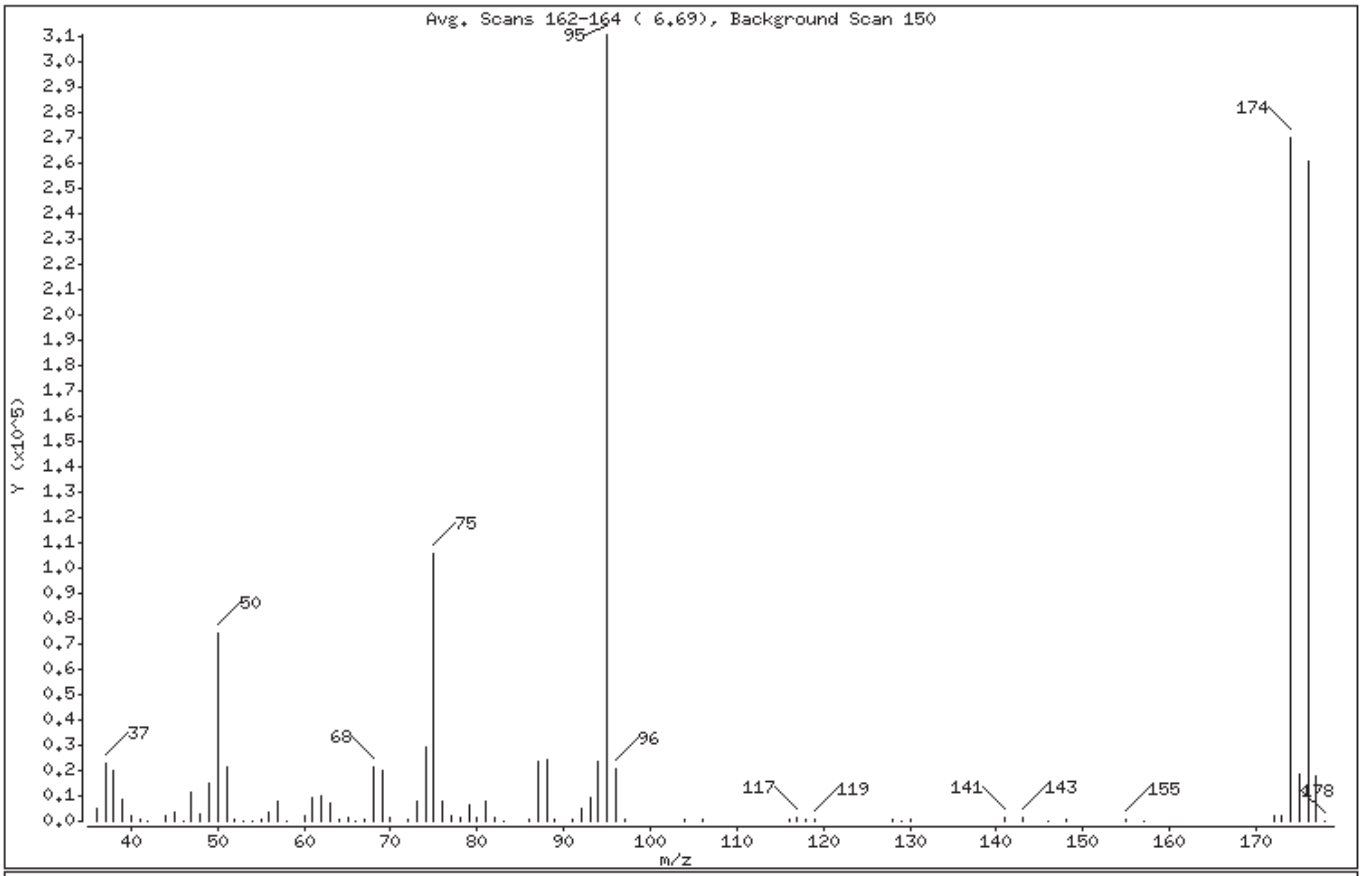
Sample Info: BFBSEP18-13;25NG BFB;

Operator: sej02002

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.87
75	30.00 - 80.00% of mass 95	33.98
96	5.00 - 9.00% of mass 95	6.76
173	Less than 2.00% of mass 174	0.65 (0.75)
174	50.00 - 100.00% of mass 95	86.79
175	5.00 - 9.00% of mass 174	5.90 (6.80)
176	95.00 - 101.00% of mass 174	83.84 (96.60)
177	5.00 - 9.00% of mass 176	5.71 (6.81)

Digitally signed by Sara E. Johnson on 03/11/2014 at 17:36.
Target 3.5 esignature user ID: sej02002

Data File: /chem/SH08359.i/14mar11a.b/sm11t01.d

Date : 11-MAR-2014 16:32

Client ID: BFBSEP18-13 Instrument: SH08359.i

Sample Info: BFBSEP18-13;25NG BFB;

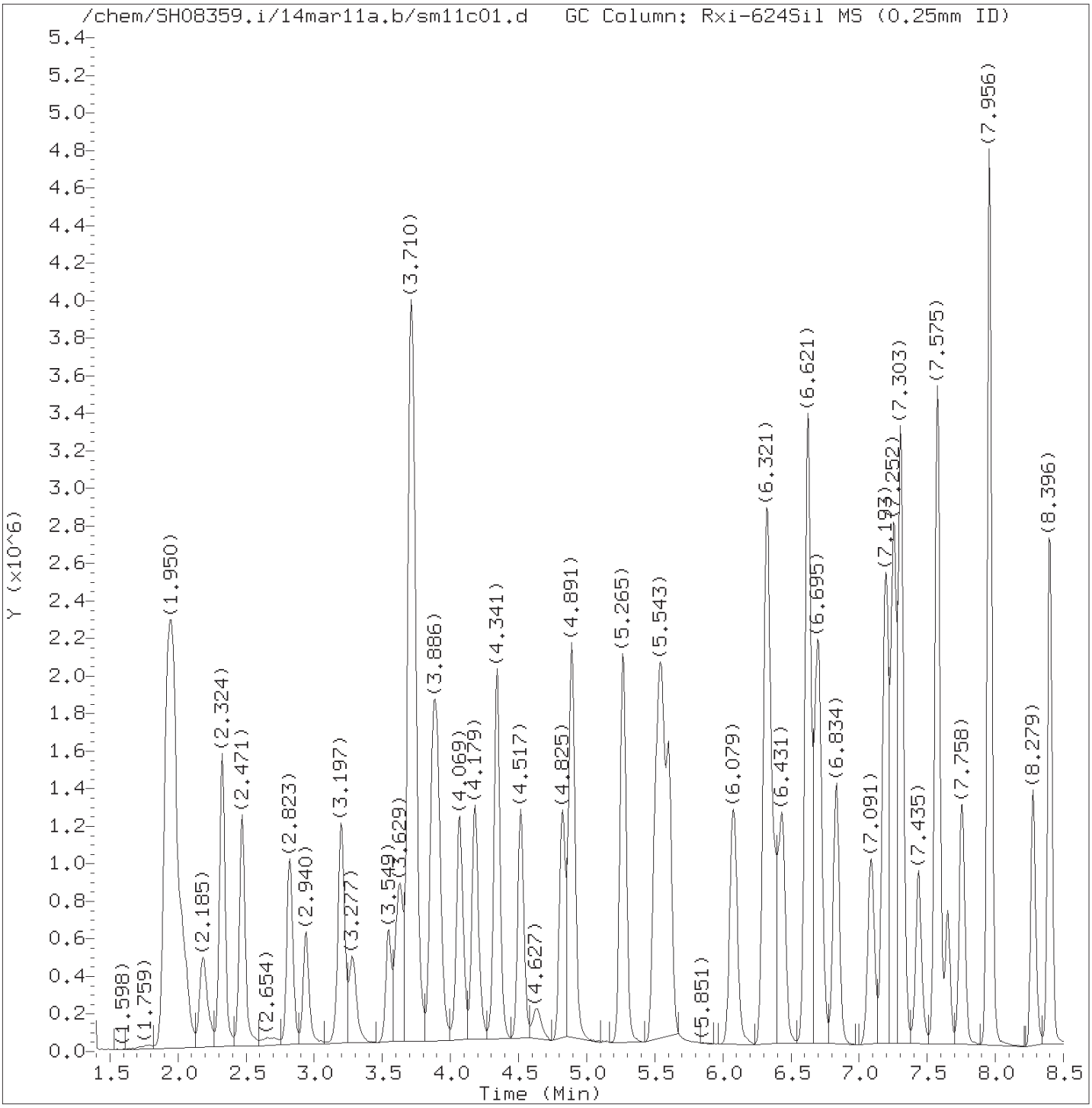
Operator: sej02002

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: sm11t01.d
Spectrum: Avg. Scans 162-164 (6.69), Background Scan 150
Location of Maximum: 95.00
Number of points: 78

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4691	57.00	7701	79.00	6751	118.00	717
37.00	23136	58.00	265	80.00	1428	119.00	963
38.00	20320	60.00	1937	81.00	7805	128.00	856
39.00	8666	61.00	9563	82.00	1392	129.00	188
40.00	1953	62.00	9764	83.00	130	130.00	768
41.00	396	63.00	6828	86.00	845	141.00	1164
42.00	170	64.00	985	87.00	23552	143.00	1461
44.00	2117	65.00	1424	88.00	24136	146.00	208
45.00	3800	66.00	253	89.00	886	148.00	607
46.00	223	67.00	725	91.00	807	155.00	868
47.00	11134	68.00	21624	92.00	5004	157.00	269
48.00	3025	69.00	19728	93.00	9506	172.00	2259
49.00	14697	70.00	1570	94.00	23696	173.00	2012
50.00	74104	72.00	885	95.00	310400	174.00	269440
51.00	21280	73.00	7691	96.00	20976	175.00	18312
52.00	927	74.00	29416	97.00	361	176.00	260288
53.00	343	75.00	105472	104.00	708	177.00	17728
54.00	240	76.00	8000	106.00	839	178.00	244
55.00	1021	77.00	2435	116.00	755		
56.00	3829	78.00	1747	117.00	1159		

Digitally signed by Sara E. Johnson on 03/11/2014 at 17:36.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

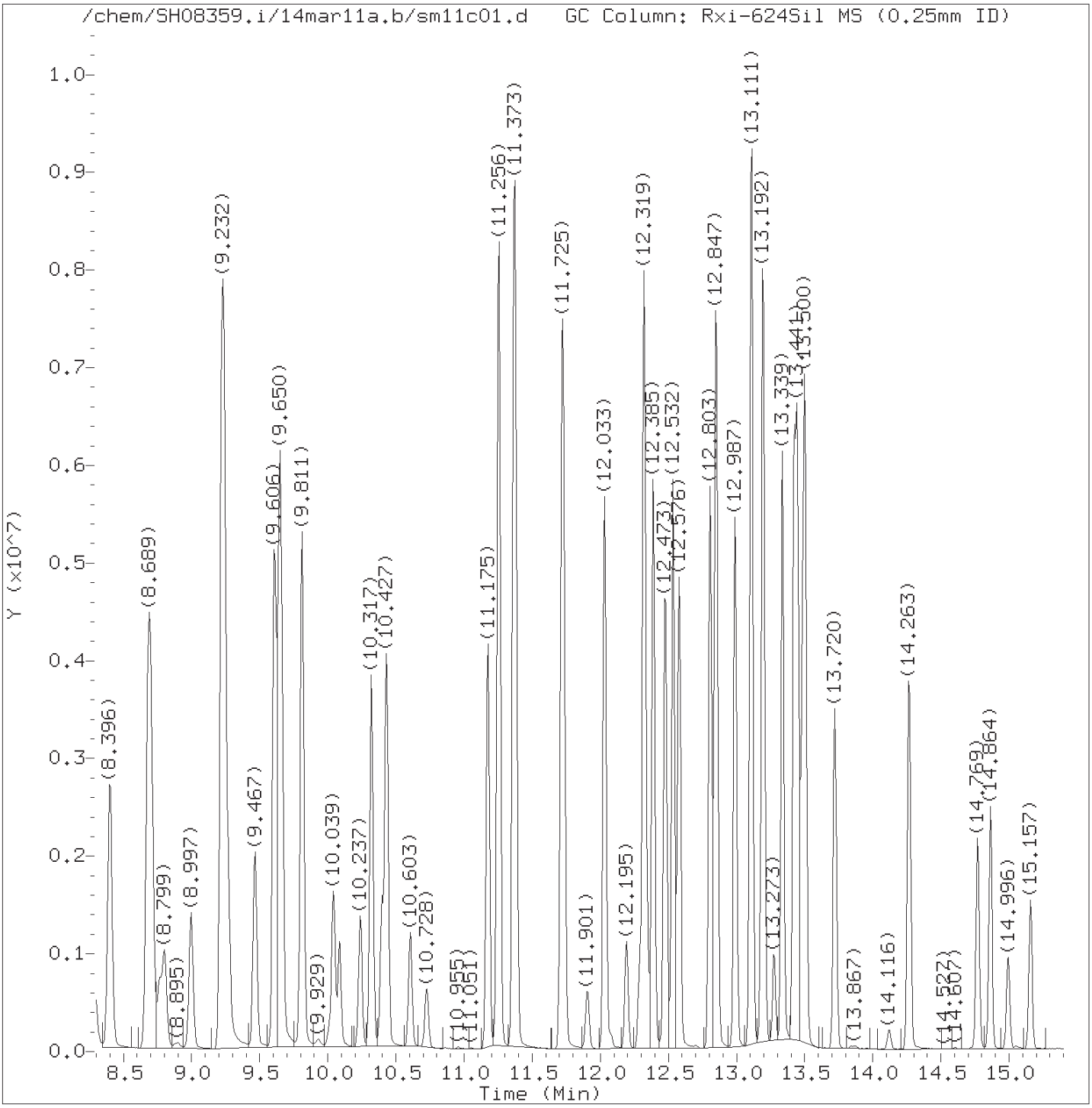
Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:36 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 03/11/2014 at 17:36.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:36 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 03/11/2014 at 17:36.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:36 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(1)	2.185	85	1031317	8.788
2) Chloromethane	(1)	2.324	50	2670306	8.137
3) Vinyl Chloride	(1)	2.471	62	1703688	8.527
4) Bromomethane	(1)	2.823	94	1191306	8.782
5) Chloroethane	(1)	2.940	64	838792	8.931
6) Dichlorofluoromethane	(1)	3.197	67	1733101	8.848
7) Trichlorofluoromethane	(1)	3.277	101	1029600	8.821
8) Ethyl Ether	(1)	3.549	59	514291	9.058
9) Acrolein	(1)	3.732	56	3928141	409.697
10) 1,1-Dichloroethene	(1)	3.871	96	877642	8.600
12) Acetone	(1)	3.901	58	273875	89.006
12) Acetone	(1)	3.901	43	900300	89.204
11) Freon 113	(1)	3.908	101	867999	8.774
13) Methyl Iodide	(1)	4.069	142	2238254	8.988
14) Carbon Disulfide	(1)	4.179	76	2974047	8.245
15) Allyl Chloride	(1)	4.341	39	1371439	8.309
16) Methylene Chloride	(1)	4.517	84	760561	8.496
17) t-Butyl Alcohol	(1)	4.641	59	407604	169.166
18) Acrylonitrile	(1)	4.817	53	1682652	105.252
21) Methyl Tertiary Butyl Ether	(1)	4.883	73	686671	8.352
20) trans-1,2-Dichloroethene	(1)	4.891	96	1016693	8.592
22) 1,1-Dichloroethane	(1)	5.507	63	1755559	8.694
23) di-Isopropyl Ether	(1)	5.551	87	493143	8.096
25) Ethyl t-Butyl Ether	(1)	6.079	59	1934321	9.216
28) 2-Butanone	(1)	6.306	43	2155097	92.790
26) cis-1,2-Dichloroethene	(1)	6.328	96	1042902	9.730
27) 2,2-Dichloropropane	(1)	6.350	77	936321	9.135
29) Propionitrile	(1)	6.401	54	1158583	191.589
30) Methyl Acrylate	(1)	6.438	55	2176732	49.825
31) Methacrylonitrile	(1)	6.621	67	1208351	98.762
32) Bromochloromethane	(1)	6.680	128	474279	10.909
33) Tetrahydrofuran	(1)	6.709	71	403151	136.808
34) Chloroform	(1)	6.834	83	1504280	9.543
35) 1,1,1-Trichloroethane	(1)	7.083	97	973353	9.701
36) 1-Chlorobutane	(1)	7.252	56	2698917	9.233
38) Carbon Tetrachloride	(1)	7.303	117	938058	9.842
37) 1,1-Dichloropropene	(1)	7.303	75	1187305	9.100
39) Benzene	(1)	7.575	78	3772662	9.433

Digitally signed by Sara E. Johnson
on 03/11/2014 at 17:36.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:36 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
40) 1,2-Dichloroethane	(1)	7.648	62	605847	9.911
41) t-Amyl Methyl Ether	(1)	7.758	73	1008115	8.989
42)*Fluorobenzene	(1)	7.963	96	1401737	5.000
43) Trichloroethene	(1)	8.403	95	1025753	9.580
44) 1,2-Dichloropropane	(1)	8.704	63	1025185	9.836
46) Methyl Methacrylate	(1)	8.763	69	188914	9.499
45) Dibromomethane	(1)	8.799	93	412153	10.640
47) Bromodichloromethane	(1)	8.997	83	949122	9.751
48) 2-Nitropropane	(1)	9.232	46	408915	1056.652
49) Chloroacetonitrile	(1)	9.261	75	858616	493.750
50) cis-1,3-Dichloropropene	(1)	9.467	75	1028012M	9.133
51) 4-Methyl-2-pentanone	(1)	9.606	58	1631028	104.883
52) 1,1-Dichloropropanone	(1)	9.650	83	654322	1090.687
53) Toluene	(1)	9.811	92	2283965	9.739
54) trans-1,3-Dichloropropene	(1)	10.039	75	684241	9.272
55) Ethyl Methacrylate	(1)	10.083	69	413708	9.667
56) 1,1,2-Trichloroethane	(1)	10.237	83	426877	9.819
58) Tetrachloroethene	(1)	10.317	166	1270529	9.617
59) 1,3-Dichloropropane	(1)	10.398	76	696476	9.501
60) 2-Hexanone	(1)	10.427	58	1534403	107.160
61) Dibromochloromethane	(1)	10.603	129	699999	10.375
62) 1,2-Dibromoethane	(1)	10.728	107	470540	9.793
63) Chlorobenzene	(1)	11.175	112	2302572	9.460
64) 1,1,1,2-Tetrachloroethane	(1)	11.249	131	842991	10.068
65) Ethylbenzene	(1)	11.256	106	1263223	9.787
67) m+p-Xylene	(1)	11.373	106	3152746	19.632
68) o-Xylene	(1)	11.718	106	1429445	9.924
69) Styrene	(1)	11.733	104	2241116	10.068
71) Xylene (Total)	(1)		106	4582191	29.549
70) Bromoform	(1)	11.901	173	332416	10.932
72) Isopropylbenzene	(1)	12.033	120	1085334	9.926
73)$4-Bromofluorobenzene	(1)	12.187	174	366238	5.238
74) 1,1,2,2-Tetrachloroethane	(1)	12.290	83	508393M	9.653
75) Bromobenzene	(1)	12.319	156	957951	10.353
77) trans-1,4-Dichloro-2-butene	(1)	12.319	53	1138973	91.479
76) 1,2,3-Trichloropropane	(1)	12.349	110	96575	10.702
78) n-Propylbenzene	(1)	12.385	120	1156660	9.987
79) 2-Chlorotoluene	(1)	12.473	126	1080940	10.080

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 03/11/2014 at 17:36.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:36 sej02002

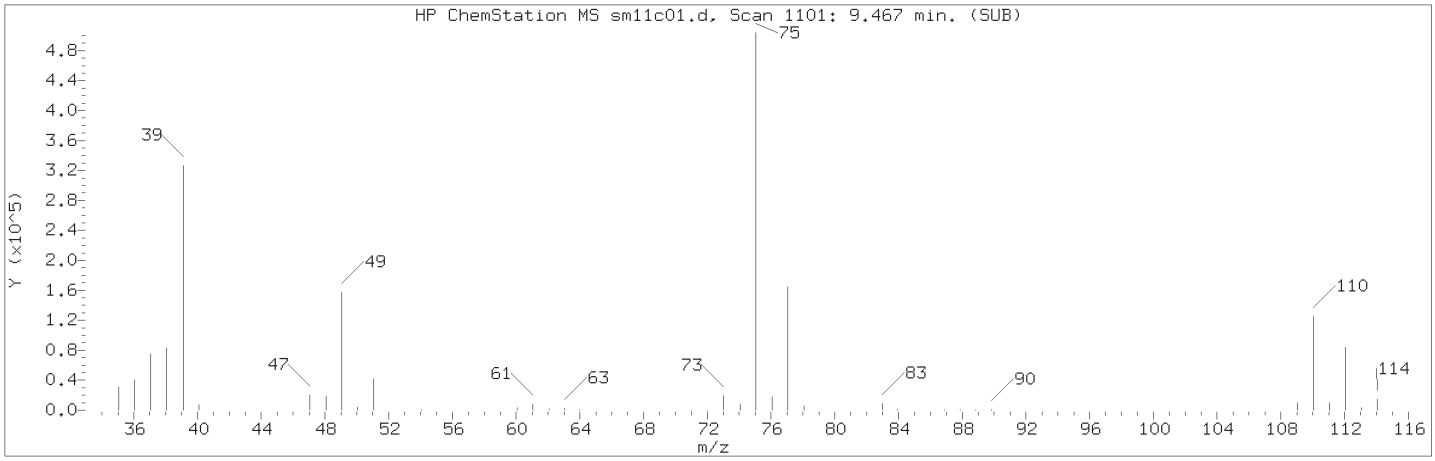
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
80) 1,3,5-Trimethylbenzene	(1)	12.532	105	2937497	9.947
81) 4-Chlorotoluene	(1)	12.576	126	1132734	10.357
82) tert-Butylbenzene	(1)	12.803	134	696798M	10.061
83) Pentachloroethane	(1)	12.840	167	546009	10.529
84) 1,2,4-Trimethylbenzene	(1)	12.855	105	2870819	9.961
85) sec-Butylbenzene	(1)	12.987	134	827156	10.314
86) 1,3-Dichlorobenzene	(1)	13.104	146	1791354	10.272
87) p-Isopropyltoluene	(1)	13.111	119	3264158	9.863
88) 1,4-Dichlorobenzene	(1)	13.192	146	1729918	10.127
89) n-Butylbenzene	(1)	13.441	92	2022839	9.940
90)$1,2-Dichlorobenzene-d4	(1)	13.471	152	372480	5.621
91) 1,2-Dichlorobenzene	(1)	13.485	146	1388871	10.380
92) Hexachloroethane	(1)	13.720	201	620235	10.407
93) 1,2-Dibromo-3-chloropropane	(1)	14.116	157	61451	9.614
94) Nitrobenzene	(1)	14.270	123	166661	266.361
95) 1,2,4-Trichlorobenzene	(1)	14.769	180	730648	9.590
96) Hexachlorobutadiene	(1)	14.864	225	509409	9.265
97) Naphthalene	(1)	14.996	128	775836	9.111
98) 1,2,3-Trichlorobenzene	(1)	15.157	180	526656	9.240

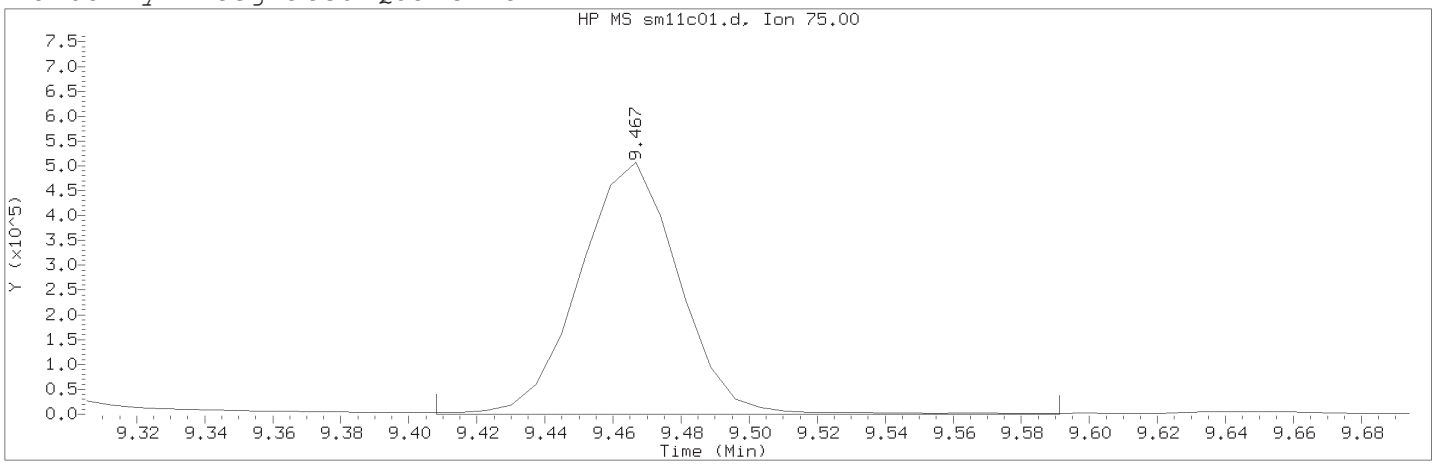
M = Compound was manually integrated.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 03/11/2014 at 17:36.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:36 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

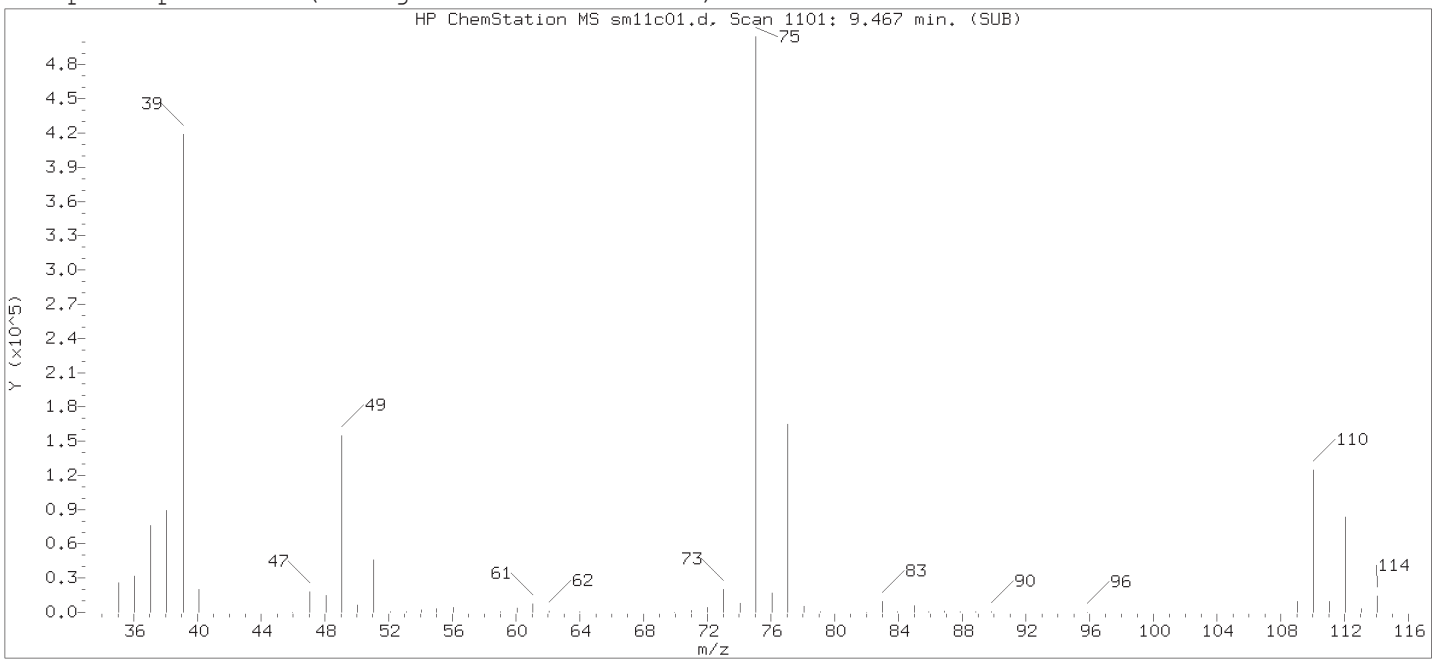
Compound Number : 50
Compound Name : cis-1,3-Dichloropropene
Scan Number : 1101
Retention Time (minutes): 9.467
Quant Ion : 75.00
Area (flag) : 1028012M
On-Column Amount (ng) : 9.1333
Integration start scan : 1092 Integration stop scan: 1117
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

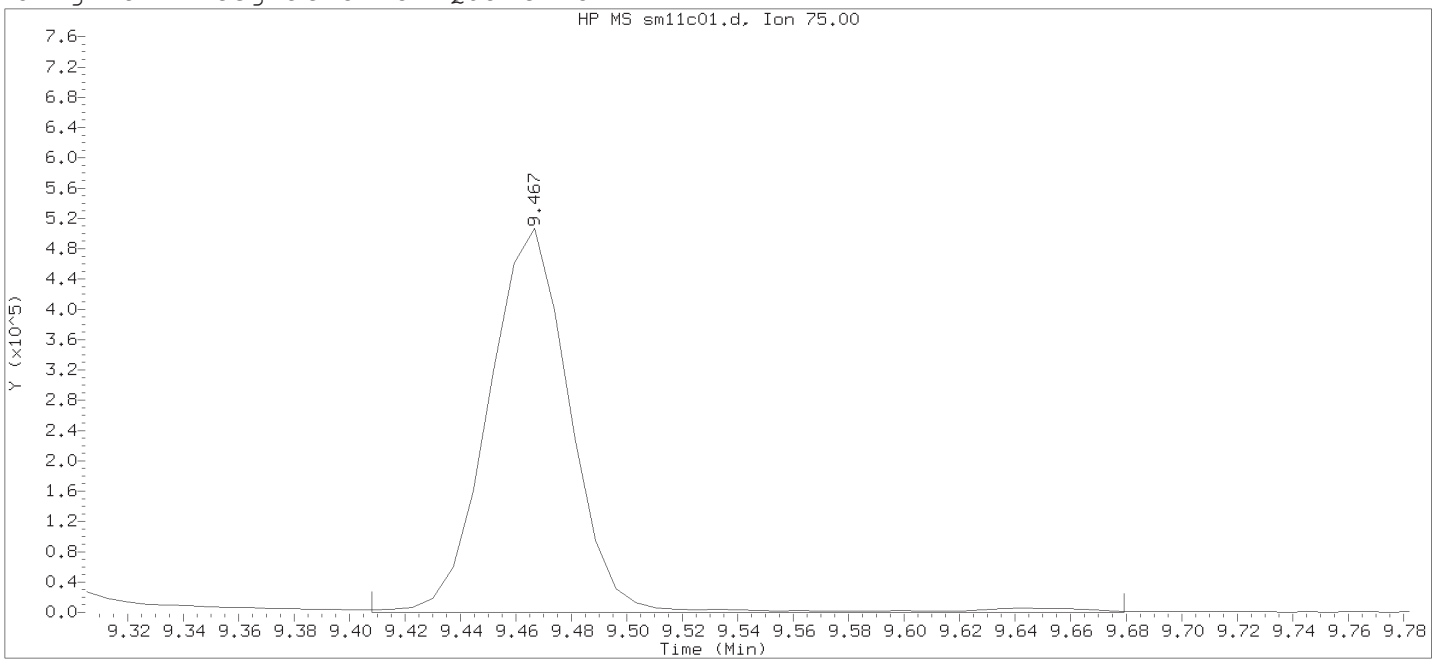
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/11/2014 at 17:36. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Robin C. Runkle on 03/13/2014 at 11:26.
Parallax ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

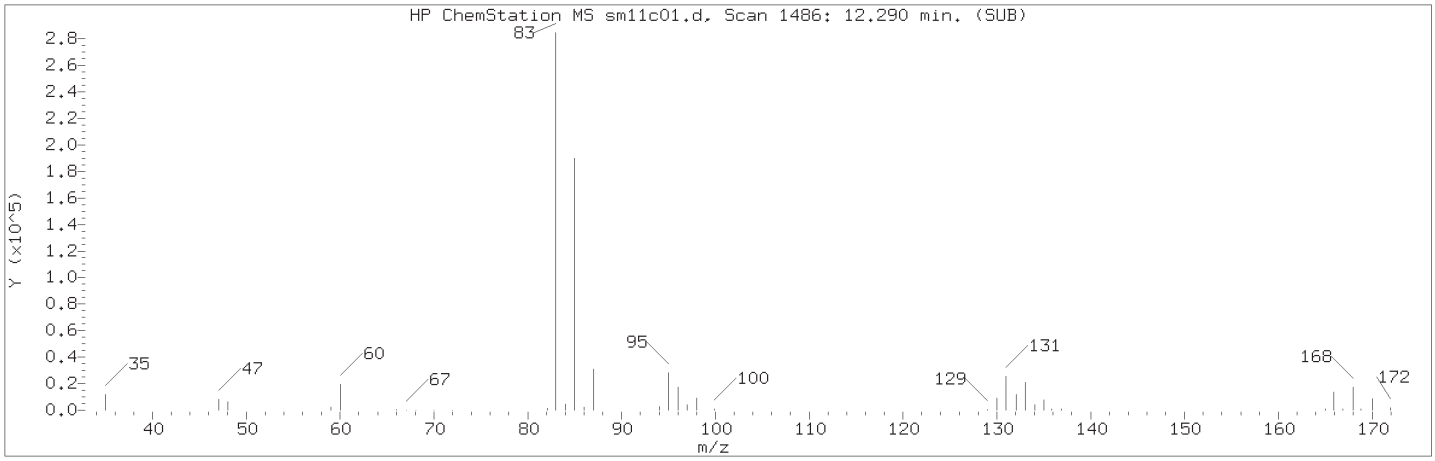
Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:34 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

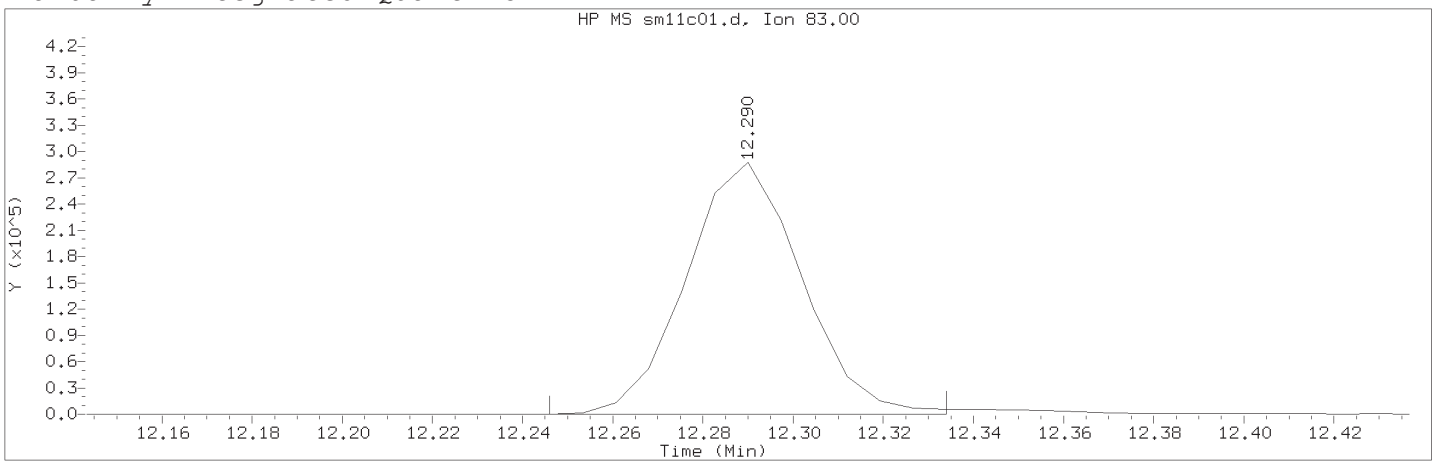
Compound Number : 50
Compound Name : cis-1,3-Dichloropropene
Scan Number : 1101
Retention Time (minutes): 9.467
Quant Ion : 75.00
Area : 1042835
On-column Amount (ng) : 9.2650
Integration start scan : 1092 Integration stop scan: 1129
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/11/2014 at 17:36.
Target 3.5 esignature User ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:36 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

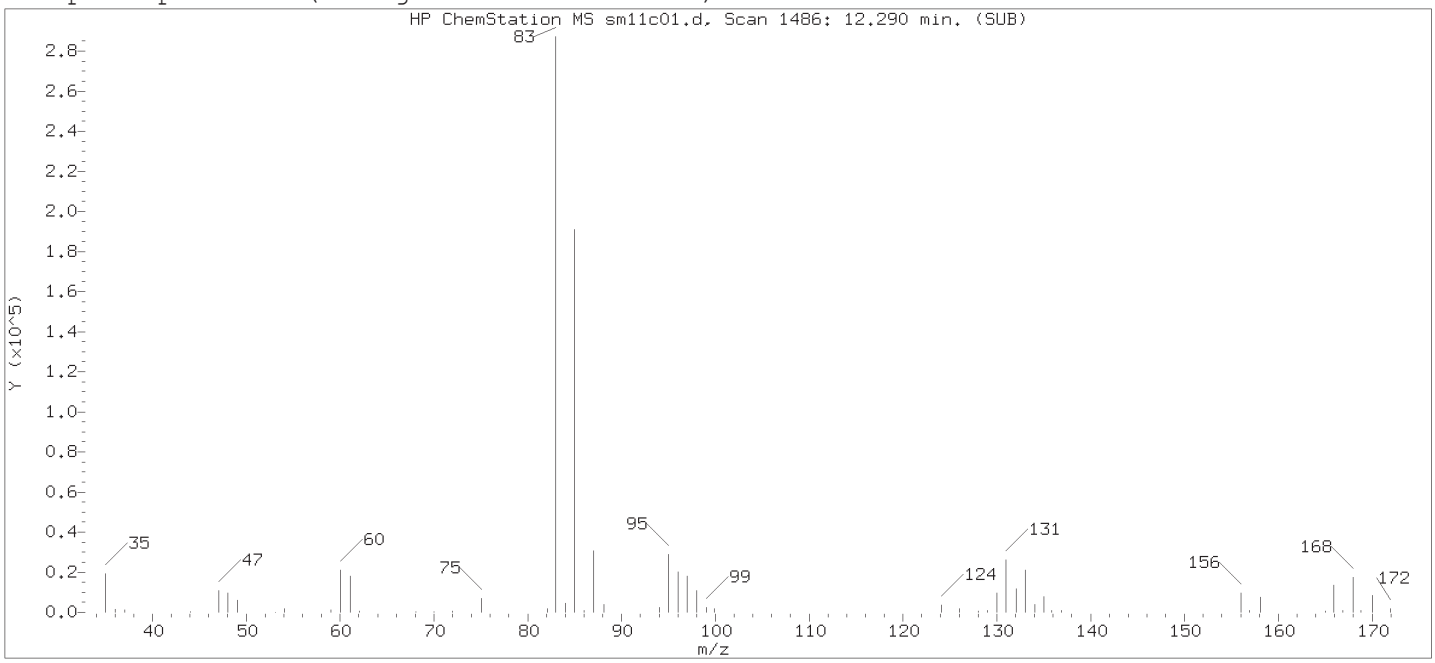
Compound Number : 74
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 83.00
Area (flag) : 508393M
On-Column Amount (ng) : 9.6533
Integration start scan : 1479 Integration stop scan: 1491
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

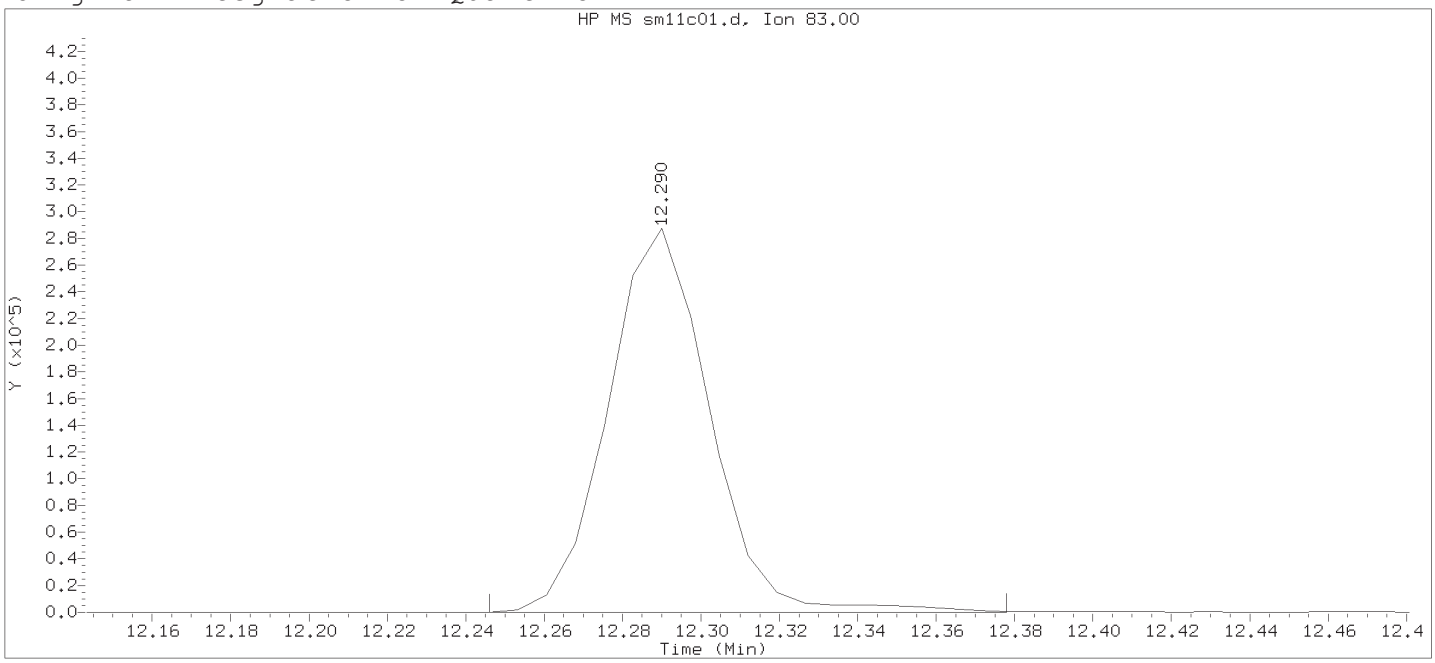
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/11/2014 at 17:36. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Robin C. Runkle on 03/13/2014 at 11:26.
Parallax ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

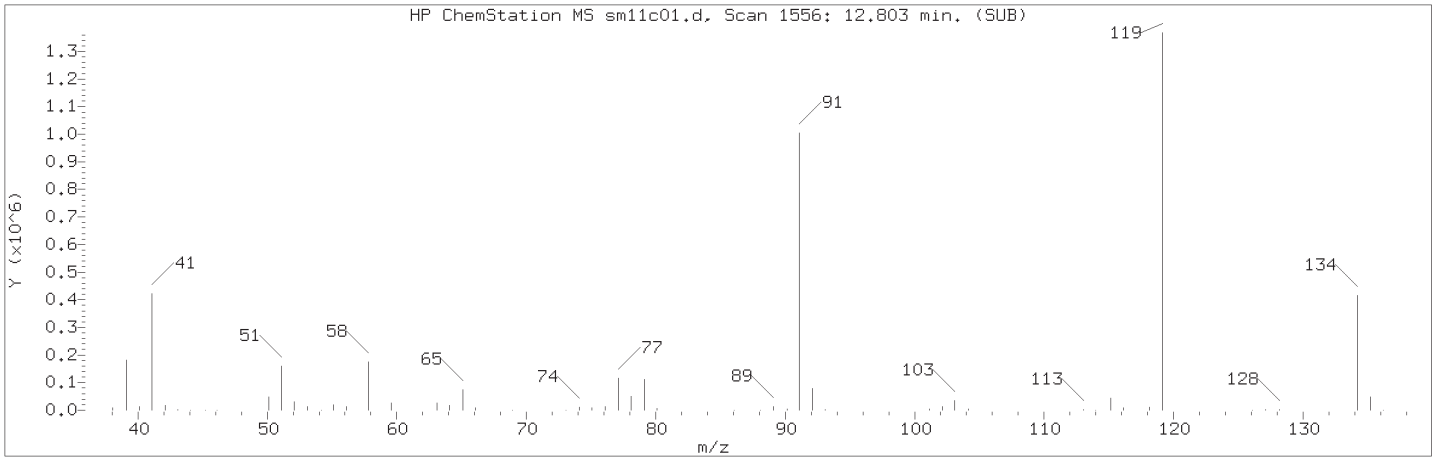
Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:34 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

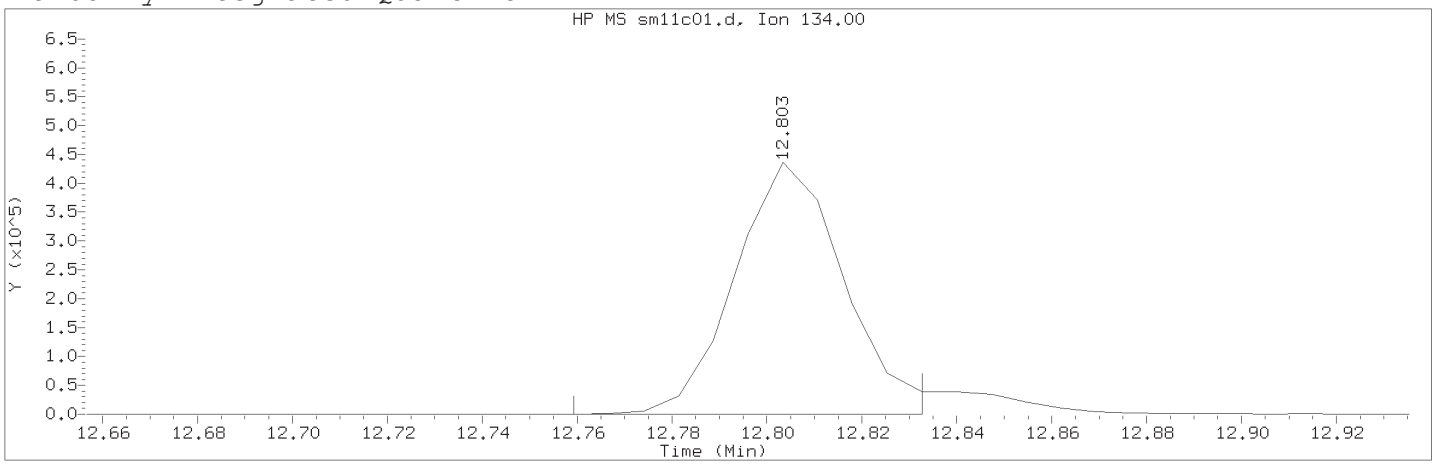
Compound Number : 74
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 83.00
Area : 516761
On-column Amount (ng) : 9.8122
Integration start scan : 1479 Integration stop scan: 1497
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/11/2014 at 17:36.
Target 3.5 esignature User ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:36 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

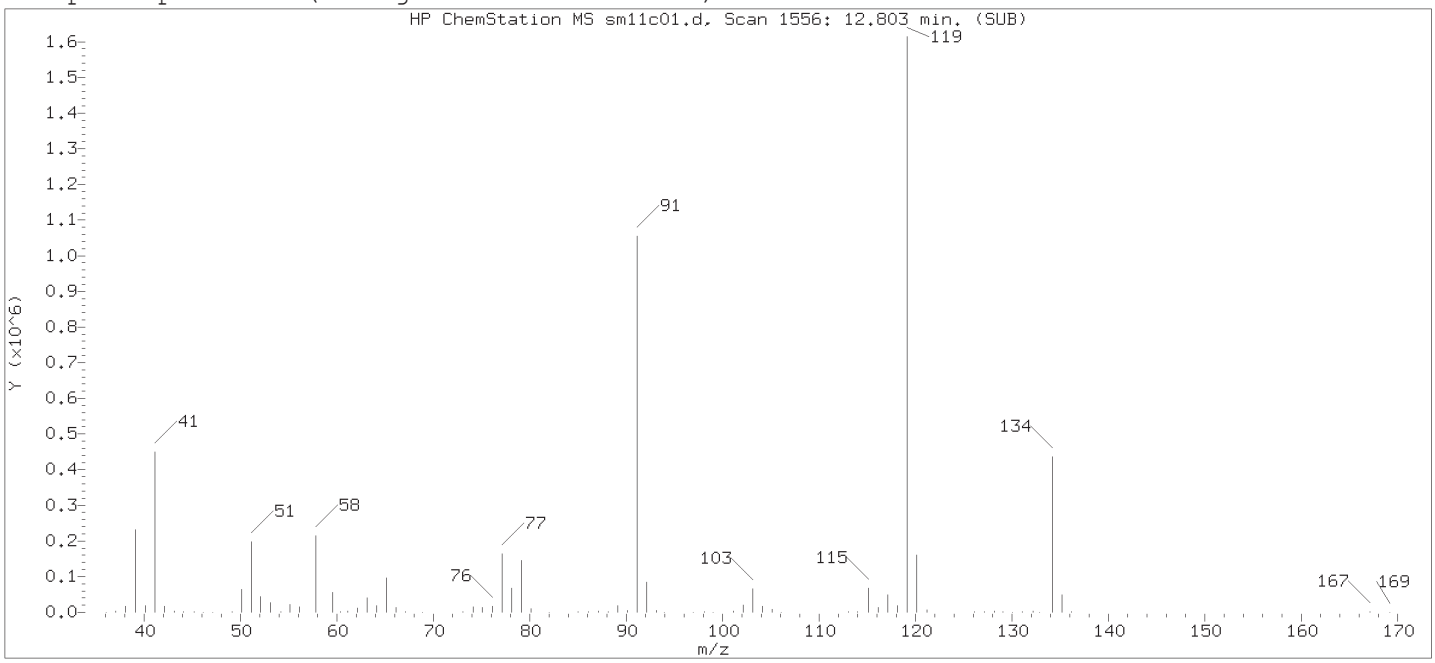
Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1556
Retention Time (minutes): 12.803
Quant Ion : 134.00
Area (flag) : 696798M
On-Column Amount (ng) : 10.0613
Integration start scan : 1549 Integration stop scan: 1559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

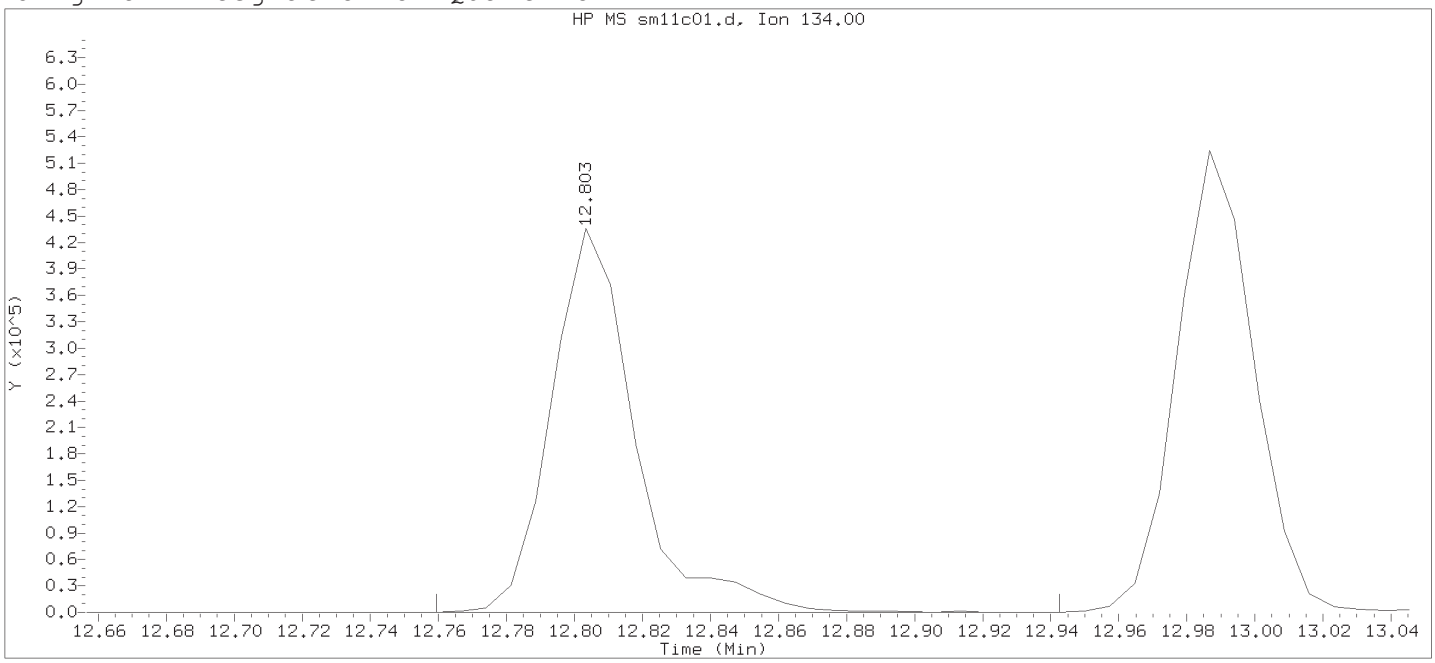
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/11/2014 at 17:36. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Robin C. Runkle on 03/13/2014 at 11:26.
Parallax ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11c01.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 16:57 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: M03648
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 17:34 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1556
Retention Time (minutes): 12.803
Quant Ion : 134.00
Area : 747353
On-column Amount (ng) : 10.7913
Integration start scan : 1549 Integration stop scan: 1574
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/11/2014 at 17:36.
Target 3.5 esignature User ID: sej02002

Raw QC Data

Volatiles by GC/MS

VBLKS71 Lancaster Laboratories VBLKS71

Analysis Summary for GC/MS Volatiles

Data file: /chem/SH08359.i/14mar10b.b/sm10b75.d Injection date and time: **10-MAR-2014 19:33**
Data file Sample Info. Line: VBLKS71;VBLKS71;1;3;;;DRAPER;;; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 10-Mar-2014 20:06 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.963(0.000)	896	96	1121879 (-17)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.195(0.000)	174	241428	4.314	86%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.471(0.000)	152	249781	4.710	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)			Not Detected					0.2	0.5
2) Chloromethane	(1)			Not Detected					0.2	0.5
3) Vinyl Chloride	(1)			Not Detected					0.1	0.5
4) Bromomethane	(1)			Not Detected					0.1	0.5
5) Chloroethane	(1)			Not Detected					0.2	0.5
7) Trichlorofluoromethane	(1)			Not Detected					0.2	0.5
10) 1,1-Dichloroethene	(1)			Not Detected					0.1	0.5
16) Methylene Chloride	(1)			Not Detected					0.3	0.5
20) trans-1,2-Dichloroethene	(1)			Not Detected					0.1	0.5
22) 1,1-Dichloroethane	(1)			Not Detected					0.1	0.5
26) cis-1,2-Dichloroethene	(1)			Not Detected					0.1	0.5
27) 2,2-Dichloropropane	(1)			Not Detected					0.2	0.5
32) Bromochloromethane	(1)			Not Detected					0.1	0.5
34) Chloroform	(1)			Not Detected					0.1	0.5
35) 1,1,1-Trichloroethane	(1)			Not Detected					0.1	0.5
38) Carbon Tetrachloride	(1)			Not Detected					0.1	0.5
37) 1,1-Dichloropropene	(1)			Not Detected					0.1	0.5
39) Benzene	(1)			Not Detected					0.1	0.5
40) 1,2-Dichloroethane	(1)			Not Detected					0.1	0.5
43) Trichloroethene	(1)			Not Detected					0.1	0.5
44) 1,2-Dichloropropane	(1)			Not Detected					0.1	0.5
45) Dibromomethane	(1)			Not Detected					0.1	0.5
47) Bromodichloromethane	(1)			Not Detected					0.1	0.5
50) cis-1,3-Dichloropropene	(1)			Not Detected					0.1	0.5
53) Toluene	(1)			Not Detected					0.1	0.5
54) trans-1,3-Dichloropropene	(1)			Not Detected					0.1	0.5
56) 1,1,2-Trichloroethane	(1)			Not Detected					0.1	0.5
58) Tetrachloroethene	(1)			Not Detected					0.1	0.5
59) 1,3-Dichloropropane	(1)			Not Detected					0.1	0.5
61) Dibromochloromethane	(1)			Not Detected					0.1	0.5
62) 1,2-Dibromoethane	(1)			Not Detected					0.1	0.5
63) Chlorobenzene	(1)			Not Detected					0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)			Not Detected					0.1	0.5
65) Ethylbenzene	(1)			Not Detected					0.1	0.5
67) m+p-Xylene	(1)			Not Detected					0.2	0.5
68) o-Xylene	(1)			Not Detected					0.1	0.5

Digitally signed by Sara E. Johnson on 03/10/2014 at 20:06. Target 3.5 esignature user ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKS71

Data file: /chem/SH08359.i/14mar10b.b/sm10b75.d
Injection date and time: **10-MAR-2014 19:33**
Data file Sample Info. Line: VBLKS71;VBLKS71;1;3;;;DRAPER;;;
Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 10-Mar-2014 20:06 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

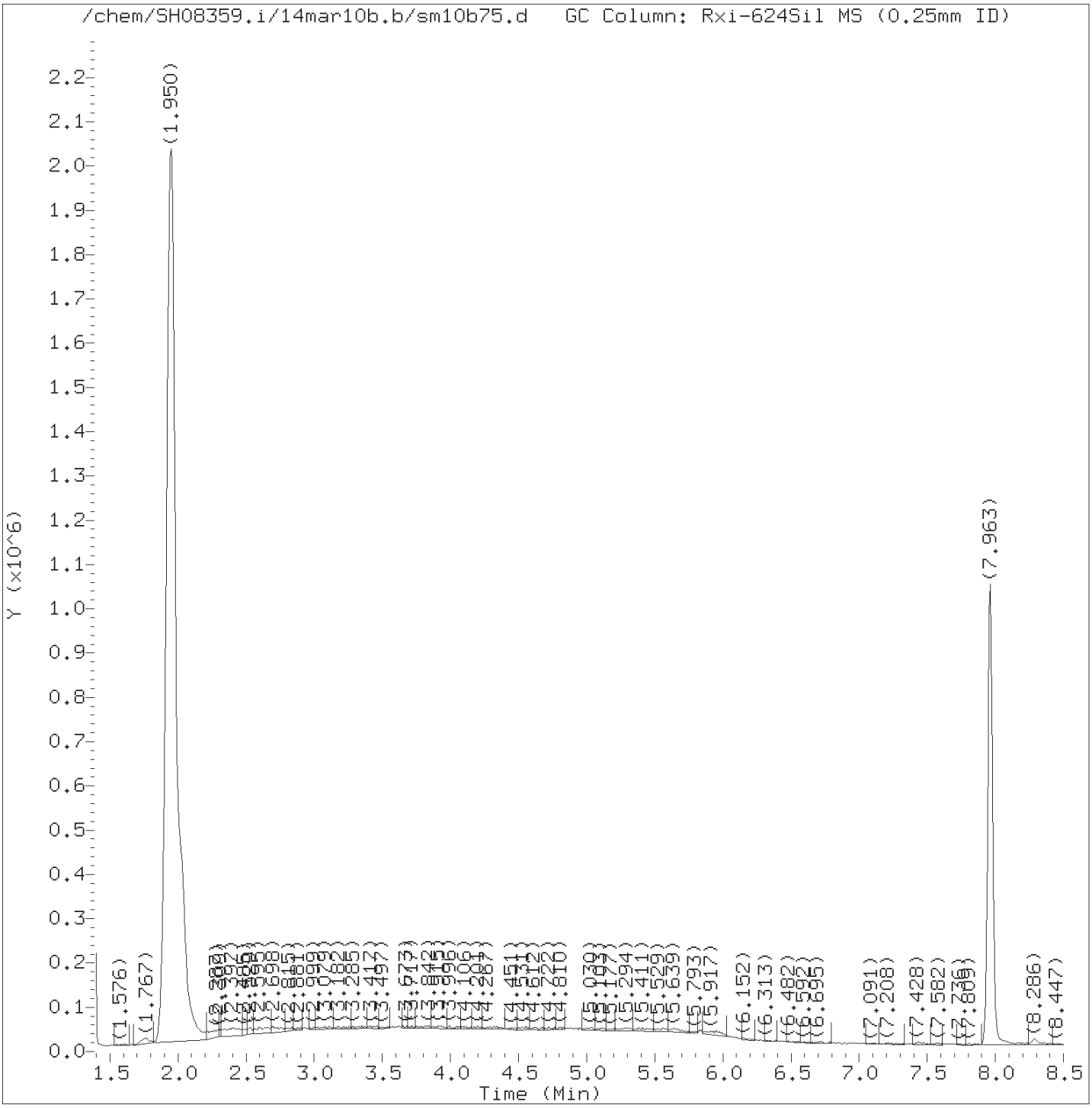
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)				Not Detected					0.1	0.5
71) Xylene (Total)	(1)				Not Detected					0.1	0.5
70) Bromoform	(1)				Not Detected					0.2	0.5
72) Isopropylbenzene	(1)				Not Detected					0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
75) Bromobenzene	(1)				Not Detected					0.1	0.5
76) 1,2,3-Trichloropropane	(1)				Not Detected					0.2	0.5
78) n-Propylbenzene	(1)				Not Detected					0.1	0.5
79) 2-Chlorotoluene	(1)				Not Detected					0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)				Not Detected					0.1	0.5
81) 4-Chlorotoluene	(1)				Not Detected					0.2	0.5
82) tert-Butylbenzene	(1)				Not Detected					0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)				Not Detected					0.1	0.5
85) sec-Butylbenzene	(1)				Not Detected					0.1	0.5
87) p-Isopropyltoluene	(1)				Not Detected					0.1	0.5
86) 1,3-Dichlorobenzene	(1)				Not Detected					0.1	0.5
88) 1,4-Dichlorobenzene	(1)				Not Detected					0.1	0.5
89) n-Butylbenzene	(1)				Not Detected					0.2	0.5
91) 1,2-Dichlorobenzene	(1)				Not Detected					0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)				Not Detected					0.2	0.5
96) Hexachlorobutadiene	(1)				Not Detected					0.2	0.5
97) Naphthalene	(1)				Not Detected					0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)				Not Detected					0.2	0.5

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/10/2014 at 20:06. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

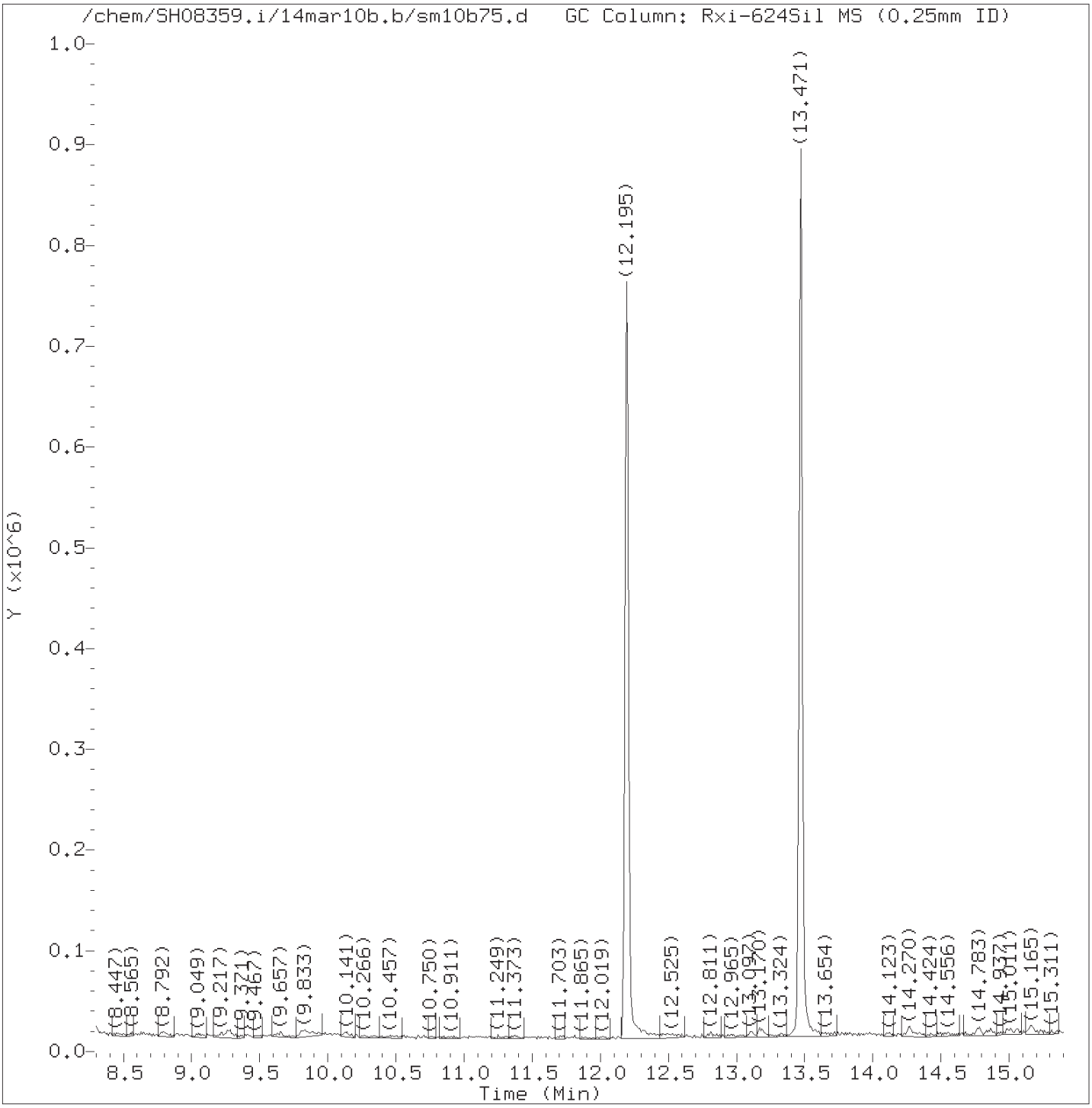
Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10b75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:33 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:06 sej02002

Sample Name: VBLKS71 Lab Sample ID: VBLKS71

Digitally signed by Sara E. Johnson
on 03/10/2014 at 20:06.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10b75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:33 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:06 sej02002

Sample Name: VBLKS71 Lab Sample ID: VBLKS71

Digitally signed by Sara E. Johnson
on 03/10/2014 at 20:06.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10b75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 19:33 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:06 sej02002

Sample Name: VBLKS71 Lab Sample ID: VBLKS71

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
42)*Fluorobenzene	(1)	7.963	96	1121879	5.000
73)$4-Bromofluorobenzene	(1)	12.195	174	241428	4.314
90)$1,2-Dichlorobenzene-d4	(1)	13.471	152	249781	4.710

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 03/10/2014 at 20:06.
Target 3.5 esignature user ID: sej02002

VBLKS73

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKS73

Data file: /chem/SH08359.i/14mar11a.b/sm11b21.d
Injection date and time: **11-MAR-2014 17:25**
Data file Sample Info. Line: VBLKS73;VBLKS73;1;3;;;DRAPER;;;
Instrument ID: **SH08359.i** Batch: **S140702AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 18:45 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar11a.b/sm11b21.d**

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 11-MAR-2014 17:34
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar11a.b/sm11c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.963	(0.000)	896	96	1141023	(-19)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.195	(-0.001)	174	252565	4.438	89%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.471	(0.000)	152	246266	4.566	91%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)				Not Detected					0.2	0.5
2) Chloromethane	(1)				Not Detected					0.2	0.5
3) Vinyl Chloride	(1)				Not Detected					0.1	0.5
4) Bromomethane	(1)				Not Detected					0.1	0.5
5) Chloroethane	(1)				Not Detected					0.2	0.5
7) Trichlorofluoromethane	(1)				Not Detected					0.2	0.5
10) 1,1-Dichloroethene	(1)				Not Detected					0.1	0.5
16) Methylene Chloride	(1)				Not Detected					0.3	0.5
20) trans-1,2-Dichloroethene	(1)				Not Detected					0.1	0.5
22) 1,1-Dichloroethane	(1)				Not Detected					0.1	0.5
26) cis-1,2-Dichloroethene	(1)				Not Detected					0.1	0.5
27) 2,2-Dichloropropane	(1)				Not Detected					0.2	0.5
32) Bromochloromethane	(1)				Not Detected					0.1	0.5
34) Chloroform	(1)				Not Detected					0.1	0.5
35) 1,1,1-Trichloroethane	(1)				Not Detected					0.1	0.5
38) Carbon Tetrachloride	(1)				Not Detected					0.1	0.5
37) 1,1-Dichloropropene	(1)				Not Detected					0.1	0.5
39) Benzene	(1)				Not Detected					0.1	0.5
40) 1,2-Dichloroethane	(1)				Not Detected					0.1	0.5
43) Trichloroethene	(1)				Not Detected					0.1	0.5
44) 1,2-Dichloropropane	(1)				Not Detected					0.1	0.5
45) Dibromomethane	(1)				Not Detected					0.1	0.5
47) Bromodichloromethane	(1)				Not Detected					0.1	0.5
50) cis-1,3-Dichloropropene	(1)				Not Detected					0.1	0.5
53) Toluene	(1)				Not Detected					0.1	0.5
54) trans-1,3-Dichloropropene	(1)				Not Detected					0.1	0.5
56) 1,1,2-Trichloroethane	(1)				Not Detected					0.1	0.5
58) Tetrachloroethene	(1)				Not Detected					0.1	0.5
59) 1,3-Dichloropropane	(1)				Not Detected					0.1	0.5
61) Dibromochloromethane	(1)				Not Detected					0.1	0.5
62) 1,2-Dibromoethane	(1)				Not Detected					0.1	0.5
63) Chlorobenzene	(1)				Not Detected					0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
65) Ethylbenzene	(1)				Not Detected					0.1	0.5
67) m+p-Xylene	(1)				Not Detected					0.2	0.5
68) o-Xylene	(1)				Not Detected					0.1	0.5

Digitally signed by Sara E. Johnson on 03/11/2014 at 18:46. Target 3.5 esignature user ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKS73

Data file: /chem/SH08359.i/14mar11a.b/sm11b21.d
Injection date and time: **11-MAR-2014 17:25**
Data file Sample Info. Line: VBLKS73;VBLKS73;1;3;;;DRAPER;;;
Instrument ID: **SH08359.i** Batch: **S140702AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 18:45 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar11a.b/sm11b21.d**

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 11-MAR-2014 17:34
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar11a.b/sm11c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

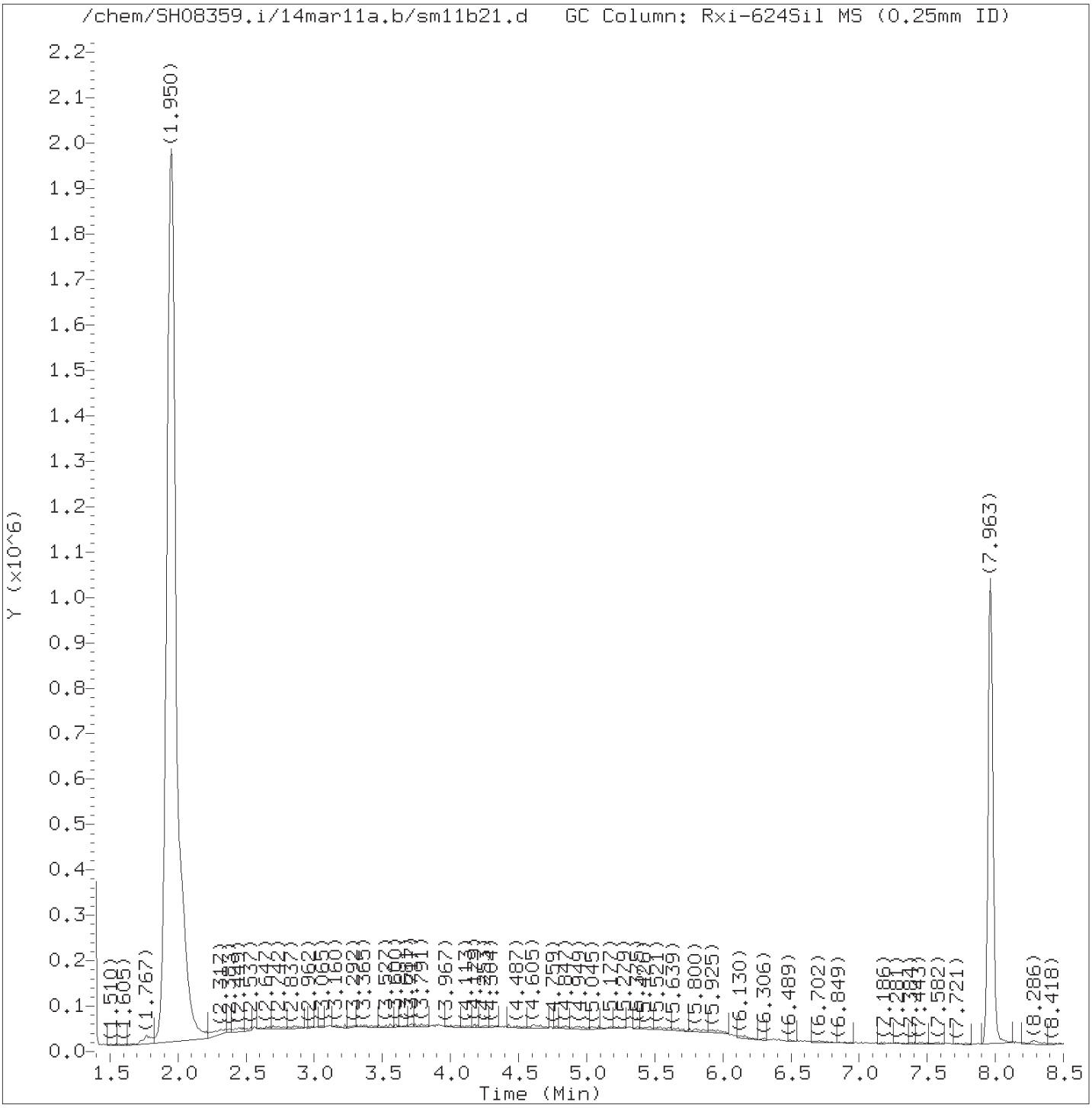
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)				Not Detected					0.1	0.5
71) Xylene (Total)	(1)				Not Detected					0.1	0.5
70) Bromoform	(1)				Not Detected					0.2	0.5
72) Isopropylbenzene	(1)				Not Detected					0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)				Not Detected					0.1	0.5
75) Bromobenzene	(1)				Not Detected					0.1	0.5
76) 1,2,3-Trichloropropane	(1)				Not Detected					0.2	0.5
78) n-Propylbenzene	(1)				Not Detected					0.1	0.5
79) 2-Chlorotoluene	(1)				Not Detected					0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)				Not Detected					0.1	0.5
81) 4-Chlorotoluene	(1)				Not Detected					0.2	0.5
82) tert-Butylbenzene	(1)				Not Detected					0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)				Not Detected					0.1	0.5
85) sec-Butylbenzene	(1)				Not Detected					0.1	0.5
87) p-Isopropyltoluene	(1)				Not Detected					0.1	0.5
86) 1,3-Dichlorobenzene	(1)				Not Detected					0.1	0.5
88) 1,4-Dichlorobenzene	(1)				Not Detected					0.1	0.5
89) n-Butylbenzene	(1)				Not Detected					0.2	0.5
91) 1,2-Dichlorobenzene	(1)				Not Detected					0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)				Not Detected					0.2	0.5
96) Hexachlorobutadiene	(1)				Not Detected					0.2	0.5
97) Naphthalene	(1)				Not Detected					0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)				Not Detected					0.2	0.5

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/11/2014 at 18:46. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 10:06. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

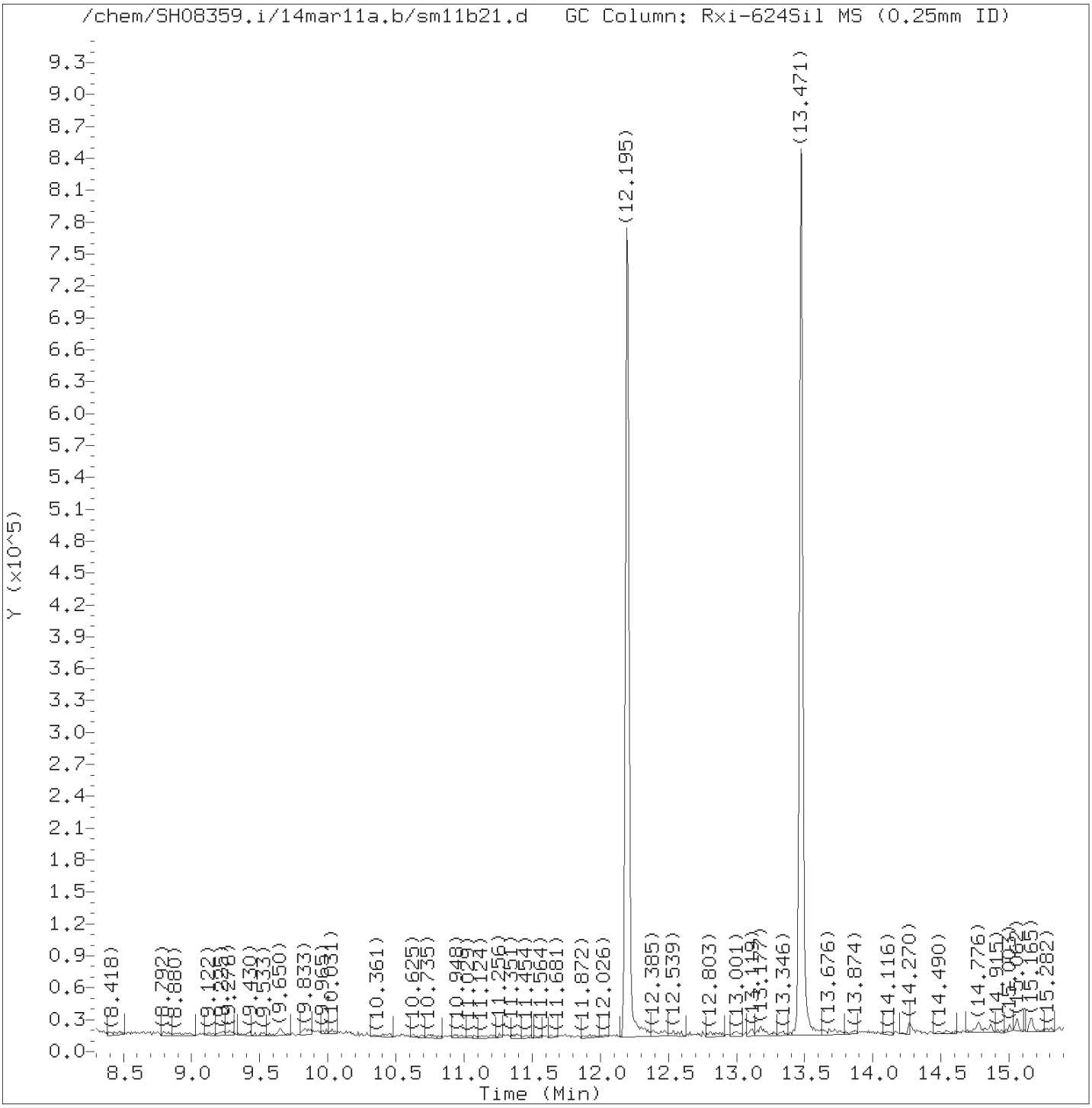
Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11b21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:25 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:45 sej02002

Sample Name: VBLKS73 Lab Sample ID: VBLKS73

Digitally signed by Sara E. Johnson
on 03/11/2014 at 18:46.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11b21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:25 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:45 sej02002

Sample Name: VBLKS73 Lab Sample ID: VBLKS73

Digitally signed by Sara E. Johnson
on 03/11/2014 at 18:46.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11b21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:25 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:45 sej02002

Sample Name: VBLKS73 Lab Sample ID: VBLKS73

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
42)*Fluorobenzene	(1)	7.963	96	1141023	5.000
73)$4-Bromofluorobenzene	(1)	12.195	174	252565	4.438
90)$1,2-Dichlorobenzene-d4	(1)	13.471	152	246266	4.566

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 03/11/2014 at 18:46.
Target 3.5 esignature user ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LFBS71

Data file: /chem/SH08359.i/14mar10b.b/sm10s75.d Injection date and time: **10-MAR-2014 20:00**
Data file Sample Info. Line: LFBS71;LFBS71;1;3;LCS;;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 10-Mar-2014 20:21 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.963	(0.000)	896	96	1329833	(-2)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.195	(0.000)	174	357716	5.393	108%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.471	(0.000)	152	360674	5.737	115%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)	2.185	(0.000)	85	164845	1.481	1.48			0.2	0.5
2) Chloromethane	(1)	2.317	(0.000)	50	532682	1.711	1.71			0.2	0.5
3) Vinyl Chloride	(1)	2.463	(0.000)	62	333394	1.759	1.76			0.1	0.5
4) Bromomethane	(1)	2.815	(0.000)	94	242491	1.884	1.88			0.1	0.5
5) Chloroethane	(1)	2.940	(0.000)	64	165980	1.863	1.86			0.2	0.5
7) Trichlorofluoromethane	(1)	3.270	(0.000)	101	189787	1.714	1.71			0.2	0.5
10) 1,1-Dichloroethene	(1)	3.871	(0.000)	96	454531	4.695	4.69			0.1	0.5
16) Methylene Chloride	(1)	4.524	(-0.000)	84	413762	4.872	4.87			0.3	0.5
20) trans-1,2-Dichloroethene	(1)	4.898	(0.000)	96	530207	4.723	4.72			0.1	0.5
22) 1,1-Dichloroethane	(1)	5.507	(0.000)	63	897702	4.686	4.69			0.1	0.5
26) cis-1,2-Dichloroethene	(1)	6.328	(0.000)	96	512037	5.036	5.04			0.1	0.5
27) 2,2-Dichloropropane	(1)	6.350	(-0.000)	77	429045	4.412	4.41			0.2	0.5
32) Bromochloromethane	(1)	6.680	(0.000)	128	237659	5.762	5.76			0.1	0.5
34) Chloroform	(1)	6.834	(0.000)	83	784305	5.244	5.24			0.1	0.5
35) 1,1,1-Trichloroethane	(1)	7.091	(0.000)	97	478355	5.025	5.03			0.1	0.5
38) Carbon Tetrachloride	(1)	7.311	(0.000)	117	467836	5.174	5.17			0.1	0.5
37) 1,1-Dichloropropene	(1)	7.311	(0.000)	75	596667	4.820	4.82			0.1	0.5
39) Benzene	(1)	7.575	(0.000)	78	1826767	4.815	4.81			0.1	0.5
40) 1,2-Dichloroethane	(1)	7.655	(0.000)	62	313693	5.409	5.41			0.1	0.5
43) Trichloroethene	(1)	8.403	(0.000)	95	508763	5.008	5.01			0.1	0.5
44) 1,2-Dichloropropane	(1)	8.711	(0.000)	63	524956	5.309	5.31			0.1	0.5
45) Dibromomethane	(1)	8.807	(0.000)	93	203271	5.531	5.53			0.1	0.5
47) Bromodichloromethane	(1)	8.997	(0.000)	83	480254	5.201	5.20			0.1	0.5
50) cis-1,3-Dichloropropene	(1)	9.467	(0.000)	75	509889	4.775	4.77			0.1	0.5
53) Toluene	(1)	9.811	(0.000)	92	1126222	5.062	5.06			0.1	0.5
54) trans-1,3-Dichloropropene	(1)	10.046	(0.000)	75	333414	4.762	4.76			0.1	0.5
56) 1,1,2-Trichloroethane	(1)	10.244	(-0.000)	83	224232	5.437	5.44			0.1	0.5
58) Tetrachloroethene	(1)	10.325	(-0.000)	166	581706	4.641	4.64			0.1	0.5
59) 1,3-Dichloropropane	(1)	10.398	(0.000)	76	349109	5.020	5.02			0.1	0.5
61) Dibromochloromethane	(1)	10.611	(0.000)	129	354608	5.540	5.54			0.1	0.5
62) 1,2-Dibromoethane	(1)	10.728	(0.000)	107	240869	5.284	5.28			0.1	0.5
63) Chlorobenzene	(1)	11.175	(0.000)	112	1128882	4.889	4.89			0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)	11.256	(0.000)	131	432314	5.442	5.44			0.1	0.5
65) Ethylbenzene	(1)	11.256	(0.000)	106	612499	5.002	5.00			0.1	0.5
67) m+p-Xylene	(1)	11.373	(0.000)	106	1556894	10.219	10.22			0.2	0.5
68) o-Xylene	(1)	11.718	(0.000)	106	700763	5.128	5.13			0.1	0.5

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LFBS71

Data file: /chem/SH08359.i/14mar10b.b/sm10s75.d Injection date and time: **10-MAR-2014 20:00**
Data file Sample Info. Line: LFBS71;LFBS71;1;3;LCS;;DRAPER;;sm10b75; Instrument ID: **SH08359.i** Batch: **S140693AA**
Date, time and analyst ID of latest file update: 10-Mar-2014 20:21 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar10b.b/sm10b75.d**

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 10-MAR-2014 19:51
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar10b.b/sm10c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

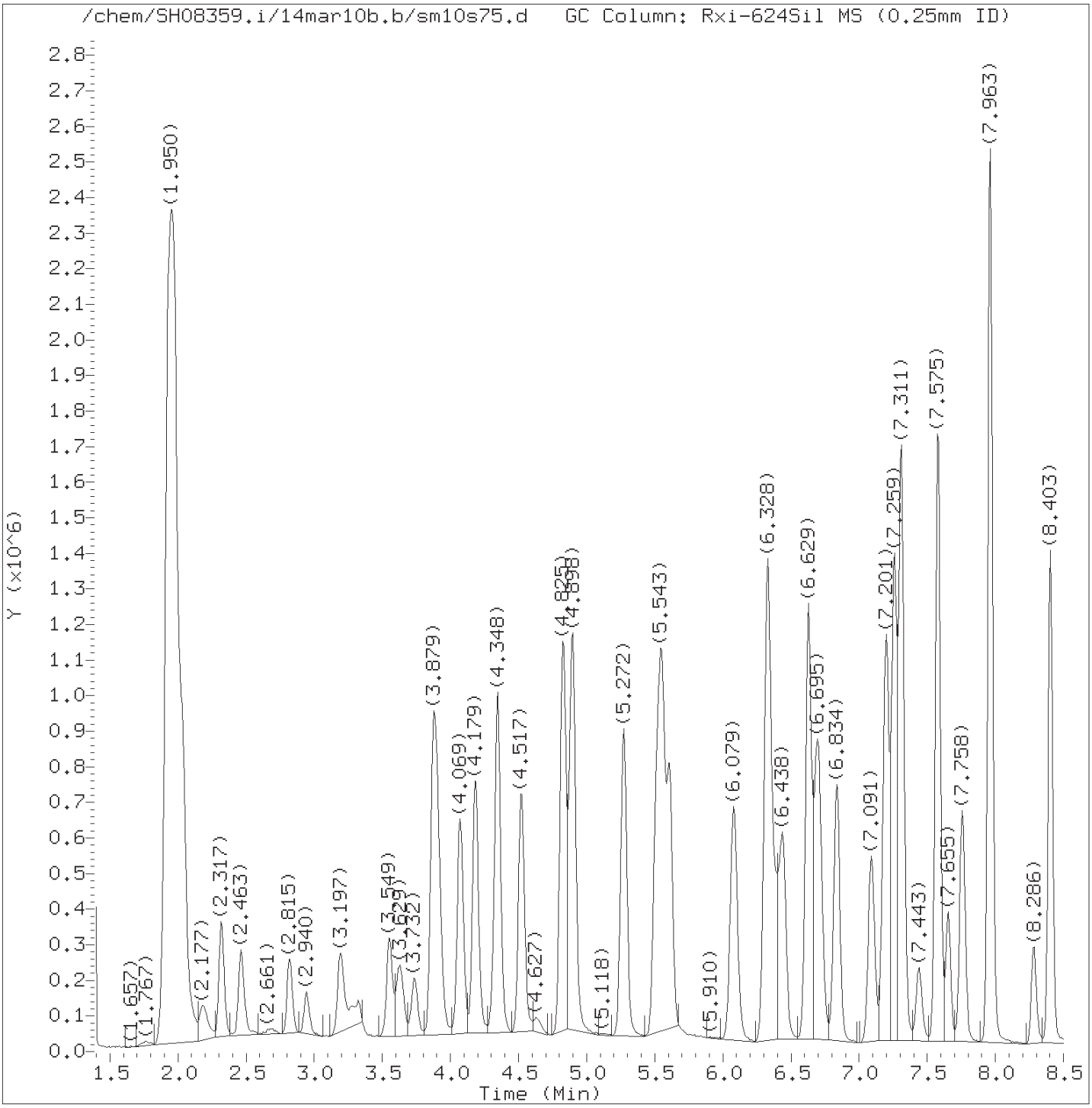
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)	11.733(0.000)	104	1137698	5.387	5.39			0.1	0.5
71) Xylene (Total)	(1)		106	2257657	15.347	15.35			0.1	0.5
70) Bromoform	(1)	11.909(0.000)	173	168832	5.852	5.85			0.2	0.5
72) Isopropylbenzene	(1)	12.033(0.000)	120	506856	4.886	4.89			0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)	12.290(0.000)	83	265804M	5.320	5.32			0.1	0.5
75) Bromobenzene	(1)	12.327(-0.000)	156	482664	5.499	5.50			0.1	0.5
76) 1,2,3-Trichloropropane	(1)	12.356(-0.000)	110	51029	5.961	5.96			0.2	0.5
78) n-Propylbenzene	(1)	12.393(-0.000)	120	564917	5.141	5.14			0.1	0.5
79) 2-Chlorotoluene	(1)	12.481(0.000)	126	529297	5.203	5.20			0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)	12.539(-0.000)	105	1419845	5.068	5.07			0.1	0.5
81) 4-Chlorotoluene	(1)	12.583(-0.000)	126	561389	5.411	5.41			0.2	0.5
82) tert-Butylbenzene	(1)	12.811(-0.000)	134	331429M	5.044	5.04			0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)	12.855(0.000)	105	1402910	5.131	5.13			0.1	0.5
85) sec-Butylbenzene	(1)	12.994(-0.000)	134	377408	4.960	4.96			0.1	0.5
87) p-Isopropyltoluene	(1)	13.111(0.000)	119	1536146	4.893	4.89			0.1	0.5
86) 1,3-Dichlorobenzene	(1)	13.111(-0.000)	146	908250	5.490	5.49			0.1	0.5
88) 1,4-Dichlorobenzene	(1)	13.192(0.000)	146	888840	5.484	5.48			0.1	0.5
89) n-Butylbenzene	(1)	13.449(0.000)	92	941908	4.879	4.88			0.2	0.5
91) 1,2-Dichlorobenzene	(1)	13.493(-0.000)	146	699589	5.511	5.51			0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)	14.123(-0.000)	157	30678	5.059	5.06			0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)	14.776(-0.000)	180	334582	4.629	4.63			0.2	0.5
96) Hexachlorobutadiene	(1)	14.871(-0.000)	225	244555	4.688	4.69			0.2	0.5
97) Naphthalene	(1)	14.996(0.000)	128	347267	4.299	4.30			0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)	15.165(-0.000)	180	246543	4.559	4.56			0.2	0.5

M = Compound was manually integrated.

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/10/2014 at 20:22. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

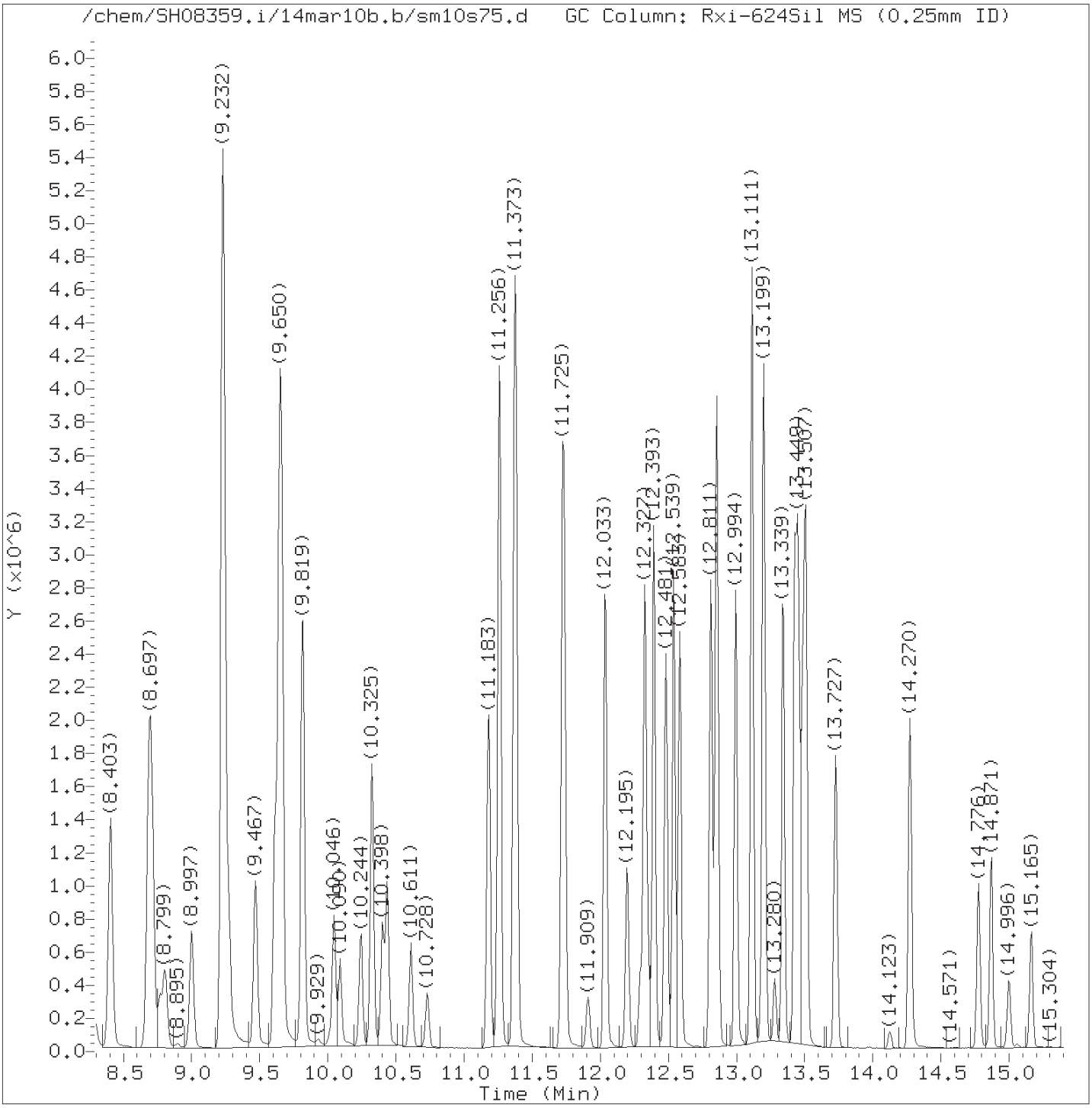
Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 20:00 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:21 sej02002

Sample Name: LFBS71 Lab Sample ID: LFBS71

Digitally signed by Sara E. Johnson
on 03/10/2014 at 20:22.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 20:00 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:21 sej02002

Sample Name: LFBS71 Lab Sample ID: LFBS71

Digitally signed by Sara E. Johnson
on 03/10/2014 at 20:22.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 20:00 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:21 sej02002

Sample Name: LFBS71 Lab Sample ID: LFBS71

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(1)	2.185	85	164845	1.481
2) Chloromethane	(1)	2.317	50	532682	1.711
3) Vinyl Chloride	(1)	2.463	62	333394	1.759
4) Bromomethane	(1)	2.815	94	242491	1.884
5) Chloroethane	(1)	2.940	64	165980	1.863
7) Trichlorofluoromethane	(1)	3.270	101	189787	1.714
10) 1,1-Dichloroethene	(1)	3.871	96	454531	4.695
16) Methylene Chloride	(1)	4.524	84	413762	4.872
20) trans-1,2-Dichloroethene	(1)	4.898	96	530207	4.723
22) 1,1-Dichloroethane	(1)	5.507	63	897702	4.686
26) cis-1,2-Dichloroethene	(1)	6.328	96	512037	5.036
27) 2,2-Dichloropropane	(1)	6.350	77	429045	4.412
32) Bromochloromethane	(1)	6.680	128	237659	5.762
34) Chloroform	(1)	6.834	83	784305	5.244
35) 1,1,1-Trichloroethane	(1)	7.091	97	478355	5.025
38) Carbon Tetrachloride	(1)	7.311	117	467836	5.174
37) 1,1-Dichloropropene	(1)	7.311	75	596667	4.820
39) Benzene	(1)	7.575	78	1826767	4.815
40) 1,2-Dichloroethane	(1)	7.655	62	313693	5.409
42)*Fluorobenzene	(1)	7.963	96	1329833	5.000
43) Trichloroethene	(1)	8.403	95	508763	5.008
44) 1,2-Dichloropropane	(1)	8.711	63	524956	5.309
45) Dibromomethane	(1)	8.807	93	203271	5.531
47) Bromodichloromethane	(1)	8.997	83	480254	5.201
50) cis-1,3-Dichloropropene	(1)	9.467	75	509889	4.775
53) Toluene	(1)	9.811	92	1126222	5.062
54) trans-1,3-Dichloropropene	(1)	10.046	75	333414	4.762
56) 1,1,2-Trichloroethane	(1)	10.244	83	224232	5.437
58) Tetrachloroethene	(1)	10.325	166	581706	4.641
59) 1,3-Dichloropropane	(1)	10.398	76	349109	5.020
61) Dibromochloromethane	(1)	10.611	129	354608	5.540
62) 1,2-Dibromoethane	(1)	10.728	107	240869	5.284
63) Chlorobenzene	(1)	11.175	112	1128882	4.889
64) 1,1,1,2-Tetrachloroethane	(1)	11.256	131	432314	5.442
65) Ethylbenzene	(1)	11.256	106	612499	5.002
67) m+p-Xylene	(1)	11.373	106	1556894	10.219
68) o-Xylene	(1)	11.718	106	700763	5.128
69) Styrene	(1)	11.733	104	1137698	5.387

* = Compound is an internal standard.

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on 03/10/2014 at 20:22.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar10b.b/sm10s75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 20:00 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:21 sej02002

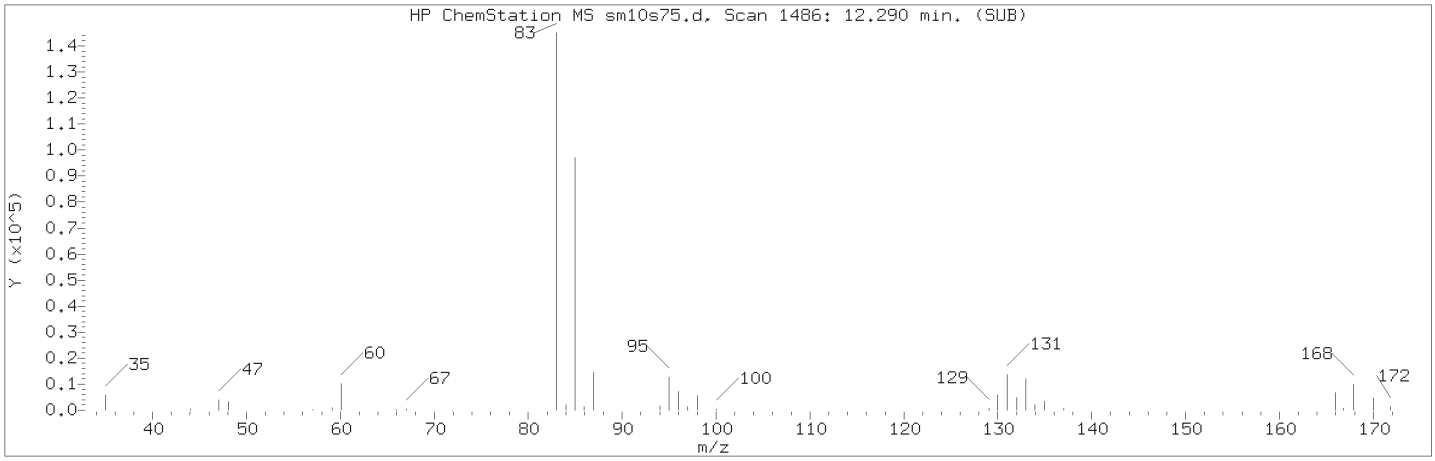
Sample Name: LFBS71 Lab Sample ID: LFBS71

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
71) Xylene (Total)	(1)		106	2257657	15.347
70) Bromoform	(1)	11.909	173	168832	5.852
72) Isopropylbenzene	(1)	12.033	120	506856	4.886
73)$4-Bromofluorobenzene	(1)	12.195	174	357716	5.393
74) 1,1,2,2-Tetrachloroethane	(1)	12.290	83	265804M	5.320
75) Bromobenzene	(1)	12.327	156	482664	5.499
76) 1,2,3-Trichloropropane	(1)	12.356	110	51029	5.961
78) n-Propylbenzene	(1)	12.393	120	564917	5.141
79) 2-Chlorotoluene	(1)	12.481	126	529297	5.203
80) 1,3,5-Trimethylbenzene	(1)	12.539	105	1419845	5.068
81) 4-Chlorotoluene	(1)	12.583	126	561389	5.411
82) tert-Butylbenzene	(1)	12.811	134	331429M	5.044
84) 1,2,4-Trimethylbenzene	(1)	12.855	105	1402910	5.131
85) sec-Butylbenzene	(1)	12.994	134	377408	4.960
87) p-Isopropyltoluene	(1)	13.111	119	1536146	4.893
86) 1,3-Dichlorobenzene	(1)	13.111	146	908250	5.490
88) 1,4-Dichlorobenzene	(1)	13.192	146	888840	5.484
89) n-Butylbenzene	(1)	13.449	92	941908	4.879
90)$1,2-Dichlorobenzene-d4	(1)	13.471	152	360674	5.737
91) 1,2-Dichlorobenzene	(1)	13.493	146	699589	5.511
93) 1,2-Dibromo-3-chloropropane	(1)	14.123	157	30678	5.059
95) 1,2,4-Trichlorobenzene	(1)	14.776	180	334582	4.629
96) Hexachlorobutadiene	(1)	14.871	225	244555	4.688
97) Naphthalene	(1)	14.996	128	347267	4.299
98) 1,2,3-Trichlorobenzene	(1)	15.165	180	246543	4.559

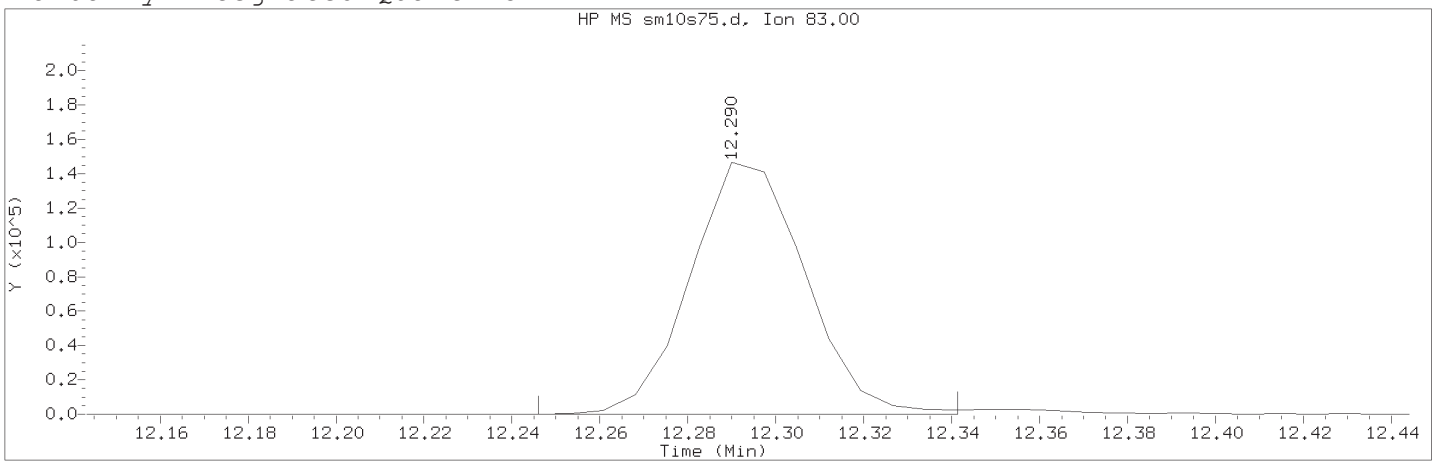
M = Compound was manually integrated.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 03/10/2014 at 20:22.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10s75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 20:00 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:21 sej02002

Sample Name: LFBS71 Lab Sample ID: LFBS71

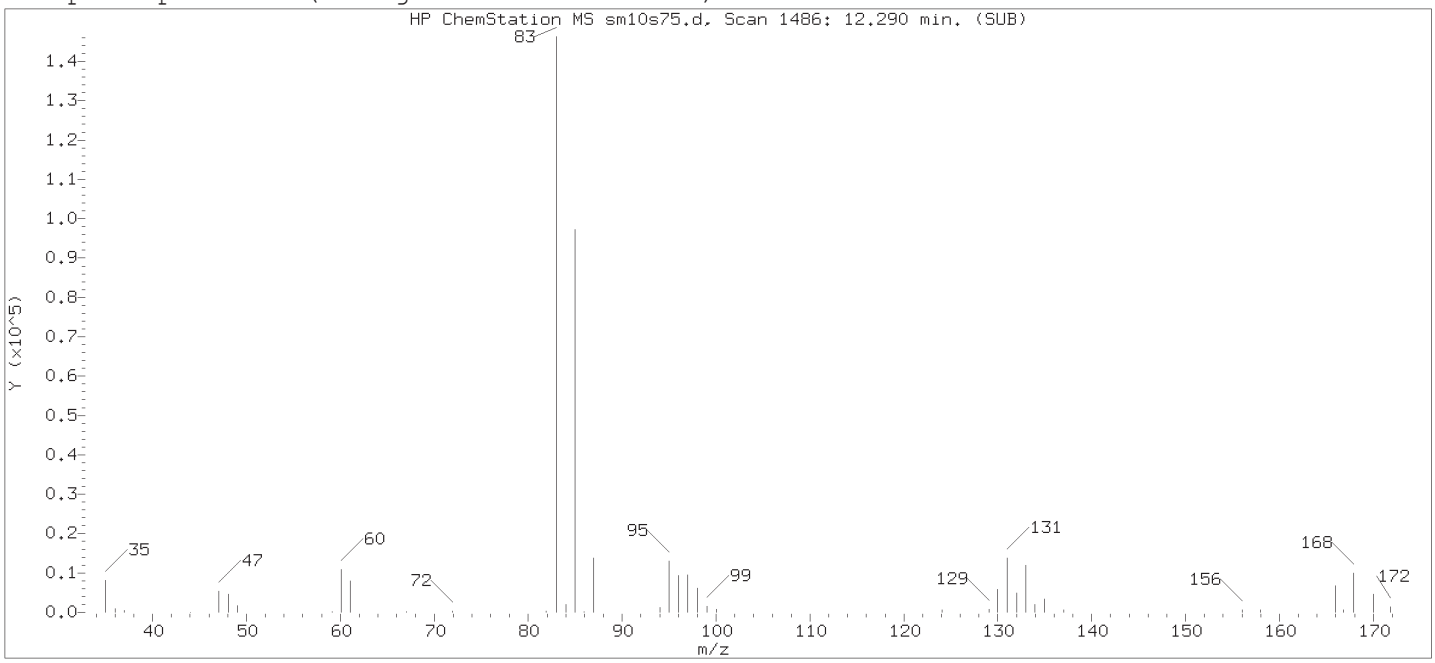
Compound Number : 74
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 83.00
Area (flag) : 265804M
On-Column Amount (ng) : 5.3199
Integration start scan : 1479 Integration stop scan: 1492
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

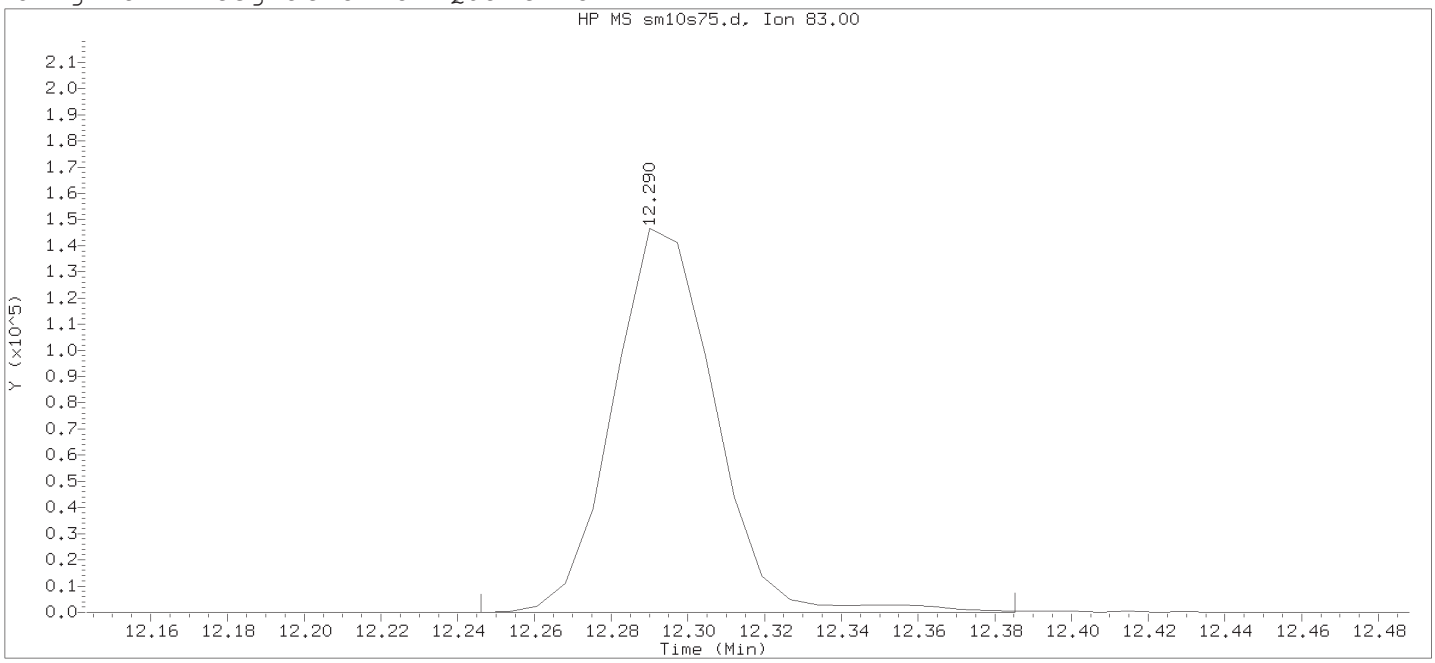
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/10/2014 at 20:22. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10s75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 20:00 Analyst ID: sej02002

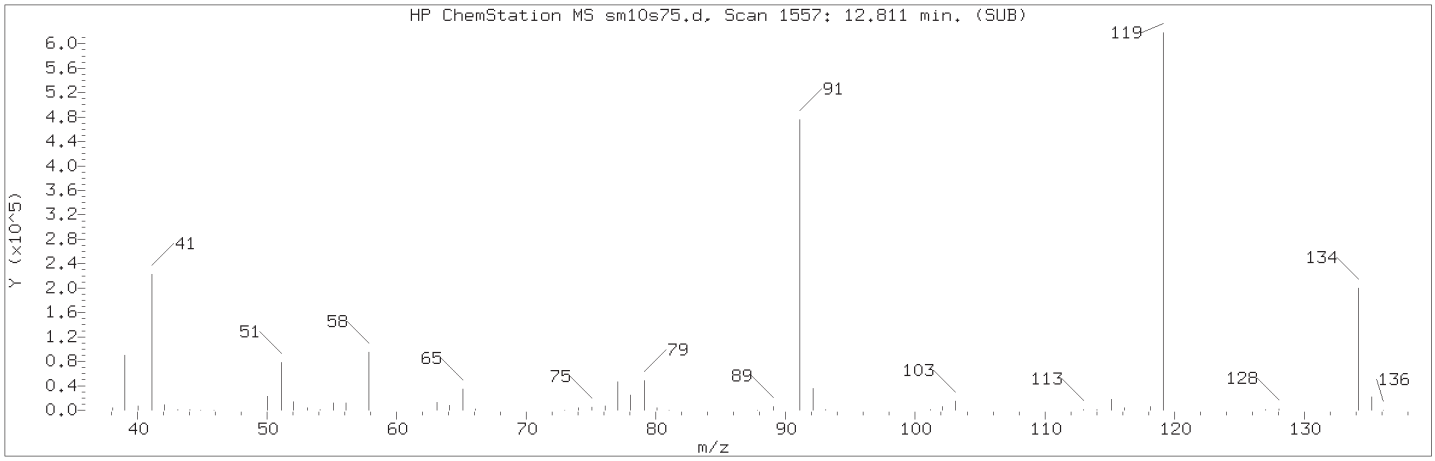
Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:20 sej02002

Sample Name: LFBS71 Lab Sample ID: LFBS71

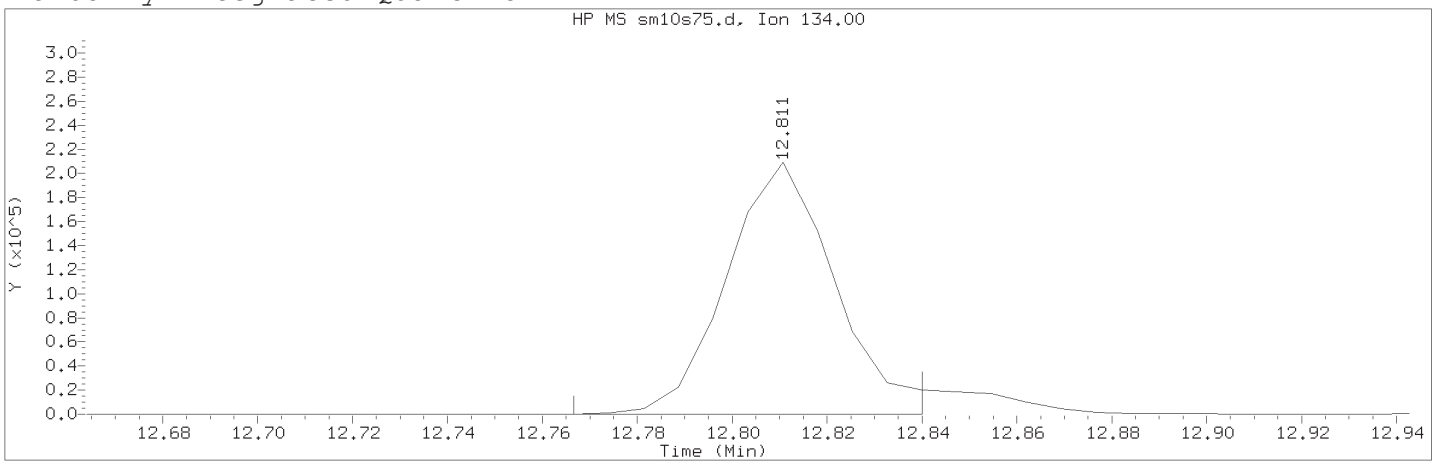
Compound Number : 74
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 83.00
Area : 270185
On-column Amount (ng) : 5.4076
Integration start scan : 1479 Integration stop scan: 1498
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/10/2014 at 20:22.
Target 3.5 esignature User ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10s75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 20:00 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:21 sej02002

Sample Name: LFBS71 Lab Sample ID: LFBS71

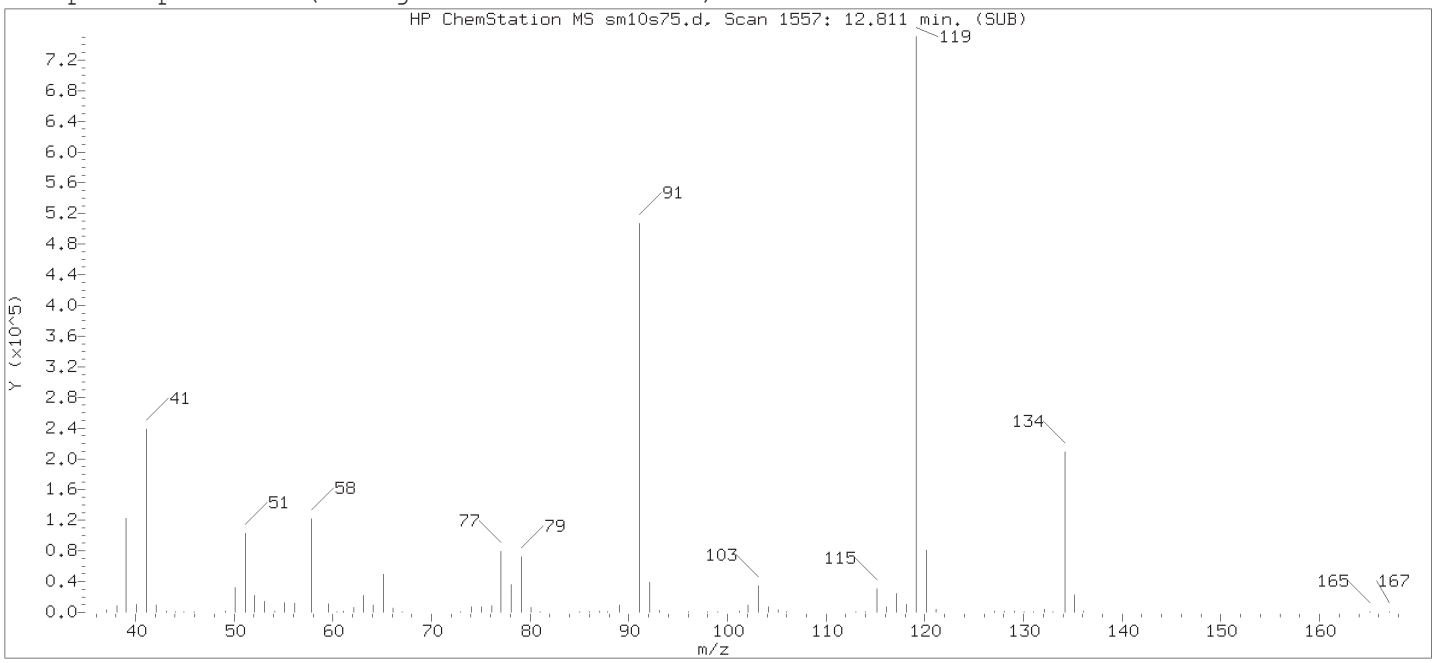
Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1557
Retention Time (minutes): 12.811
Quant Ion : 134.00
Area (flag) : 331429M
On-Column Amount (ng) : 5.0444
Integration start scan : 1550 Integration stop scan: 1560
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

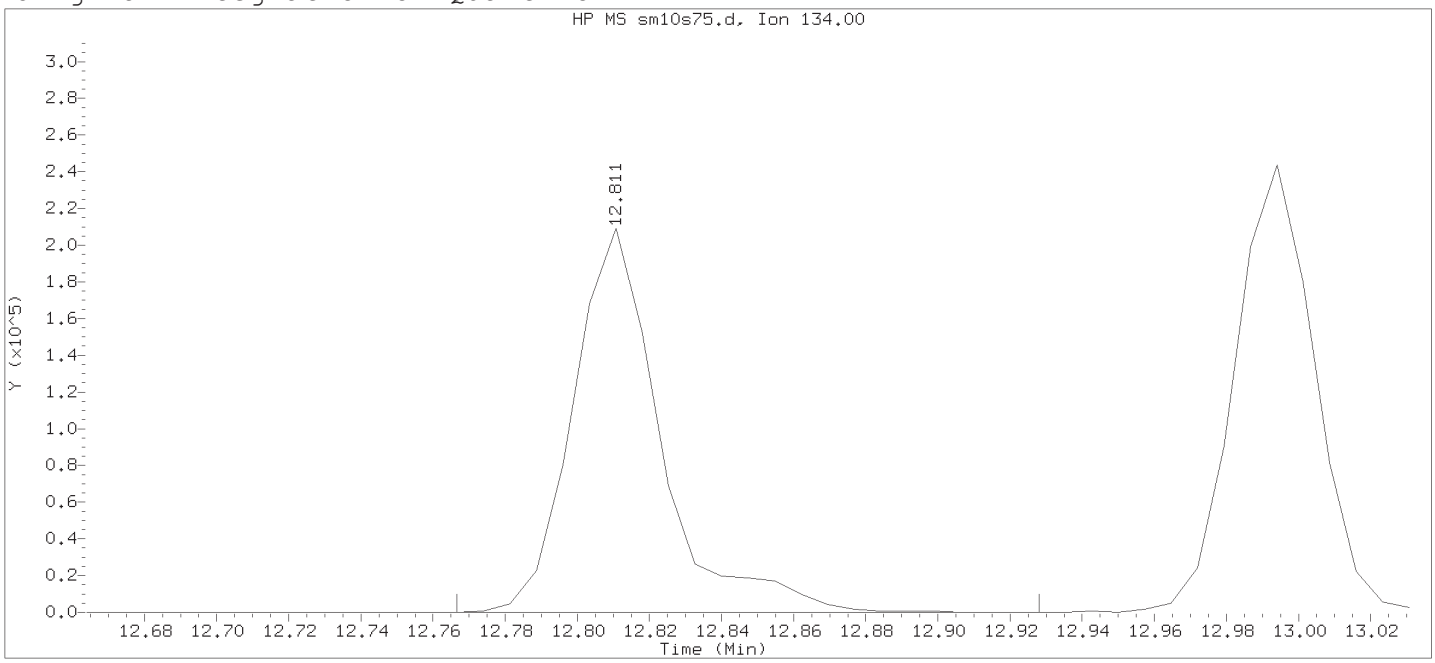
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/10/2014 at 20:22. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 09:59.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar10b.b/sm10s75.d Instrument ID: SH08359.i
Injection date and time: 10-MAR-2014 20:00 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar10b.b/m524-2.m Sublist used: 2764
Calibration date and time: 10-MAR-2014 19:51
Date, time and analyst ID of latest file update: 10-Mar-2014 20:20 sej02002

Sample Name: LFBS71 Lab Sample ID: LFBS71

Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1557
Retention Time (minutes): 12.811
Quant Ion : 134.00
Area : 355132
On-column Amount (ng) : 5.4051
Integration start scan : 1550 Integration stop scan: 1572
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/10/2014 at 20:22.
Target 3.5 esignature User ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LFBS73

Data file: /chem/SH08359.i/14mar11a.b/sm11s21.d Injection date and time: **11-MAR-2014 17:52**
Data file Sample Info. Line: LFBS73;LFBS73;1;3;LCS;;DRAPER;;sm11b21; Instrument ID: **SH08359.i** Batch: **S140702AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 18:47 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar11a.b/sm11b21.d**

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 11-MAR-2014 17:34
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar11a.b/sm11c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
42) Fluorobenzene	7.956	(0.007)	895	96	1354525	(-3)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
73) 4-Bromofluorobenzene	(1)	12.187	(-0.001)	174	351069	5.196	104%		80 - 120
90) 1,2-Dichlorobenzene-d4	(1)	13.463	(-0.001)	152	354115	5.530	111%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(1)	2.185	(-0.000)	85	183452	1.618	1.62			0.2	0.5
2) Chloromethane	(1)	2.317	(0.000)	50	540525	1.705	1.70			0.2	0.5
3) Vinyl Chloride	(1)	2.456	(0.001)	62	349570	1.811	1.81			0.1	0.5
4) Bromomethane	(1)	2.815	(0.000)	94	242984	1.854	1.85			0.1	0.5
5) Chloroethane	(1)	2.940	(-0.000)	64	173510	1.912	1.91			0.2	0.5
7) Trichlorofluoromethane	(1)	3.277	(-0.000)	101	210059M	1.862	1.86			0.2	0.5
10) 1,1-Dichloroethene	(1)	3.864	(0.000)	96	462667	4.692	4.69			0.1	0.5
16) Methylene Chloride	(1)	4.517	(-0.000)	84	402831	4.657	4.66			0.3	0.5
20) trans-1,2-Dichloroethene	(1)	4.891	(-0.000)	96	538532	4.710	4.71			0.1	0.5
22) 1,1-Dichloroethane	(1)	5.499	(0.000)	63	912655	4.677	4.68			0.1	0.5
26) cis-1,2-Dichloroethene	(1)	6.313	(0.001)	96	520427	5.025	5.02			0.1	0.5
27) 2,2-Dichloropropane	(1)	6.335	(0.001)	77	453390	4.578	4.58			0.2	0.5
32) Bromochloromethane	(1)	6.673	(0.000)	128	237720	5.659	5.66			0.1	0.5
34) Chloroform	(1)	6.827	(0.000)	83	773492	5.078	5.08			0.1	0.5
35) 1,1,1-Trichloroethane	(1)	7.083	(-0.000)	97	486122	5.014	5.01			0.1	0.5
38) Carbon Tetrachloride	(1)	7.303	(-0.000)	117	479617	5.207	5.21			0.1	0.5
37) 1,1-Dichloropropene	(1)	7.303	(-0.000)	75	612654	4.859	4.86			0.1	0.5
39) Benzene	(1)	7.567	(0.000)	78	1833189	4.744	4.74			0.1	0.5
40) 1,2-Dichloroethane	(1)	7.648	(-0.000)	62	312226	5.286	5.29			0.1	0.5
43) Trichloroethene	(1)	8.396	(-0.000)	95	515976	4.987	4.99			0.1	0.5
44) 1,2-Dichloropropane	(1)	8.704	(-0.001)	63	532541	5.287	5.29			0.1	0.5
45) Dibromomethane	(1)	8.799	(-0.001)	93	198562	5.305	5.30			0.1	0.5
47) Bromodichloromethane	(1)	8.990	(-0.000)	83	472073	5.019	5.02			0.1	0.5
50) cis-1,3-Dichloropropene	(1)	9.459	(-0.000)	75	501356	4.609	4.61			0.1	0.5
53) Toluene	(1)	9.811	(-0.001)	92	1124760	4.963	4.96			0.1	0.5
54) trans-1,3-Dichloropropene	(1)	10.039	(-0.001)	75	325632	4.566	4.57			0.1	0.5
56) 1,1,2-Trichloroethane	(1)	10.237	(-0.001)	83	218904	5.211	5.21			0.1	0.5
58) Tetrachloroethene	(1)	10.317	(-0.001)	166	594425	4.656	4.66			0.1	0.5
59) 1,3-Dichloropropane	(1)	10.391	(-0.000)	76	344170	4.859	4.86			0.1	0.5
61) Dibromochloromethane	(1)	10.603	(-0.001)	129	345844	5.305	5.30			0.1	0.5
62) 1,2-Dibromoethane	(1)	10.721	(-0.000)	107	234334	5.047	5.05			0.1	0.5
63) Chlorobenzene	(1)	11.168	(-0.000)	112	1090014	4.635	4.63			0.1	0.5
64) 1,1,1,2-Tetrachloroethane	(1)	11.249	(-0.001)	131	416738	5.151	5.15			0.1	0.5
65) Ethylbenzene	(1)	11.249	(-0.000)	106	597037	4.787	4.79			0.1	0.5
67) m+p-Xylene	(1)	11.366	(-0.000)	106	1571992	10.130	10.13			0.2	0.5
68) o-Xylene	(1)	11.711	(-0.000)	106	686993	4.936	4.94			0.1	0.5

M = Compound was manually integrated.

Digitally signed by Sara E. Johnson on 03/11/2014 at 18:48. Target 3.5 esignature user ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LFBS73

Data file: /chem/SH08359.i/14mar11a.b/sm11s21.d Injection date and time: **11-MAR-2014 17:52**
Data file Sample Info. Line: LFBS73;LFBS73;1;3;LCS;;DRAPER;;sm11b21; Instrument ID: **SH08359.i** Batch: **S140702AA**
Date, time and analyst ID of latest file update: 11-Mar-2014 18:47 sej02002

Blank Data file reference: **/chem/SH08359.i/14mar11a.b/sm11b21.d**

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: **2764**
Calibration date and time (Last Method Edit): 11-MAR-2014 17:34
Mid Level Daily Calibration Standard Reference: **/chem/SH08359.i/14mar11a.b/sm11c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

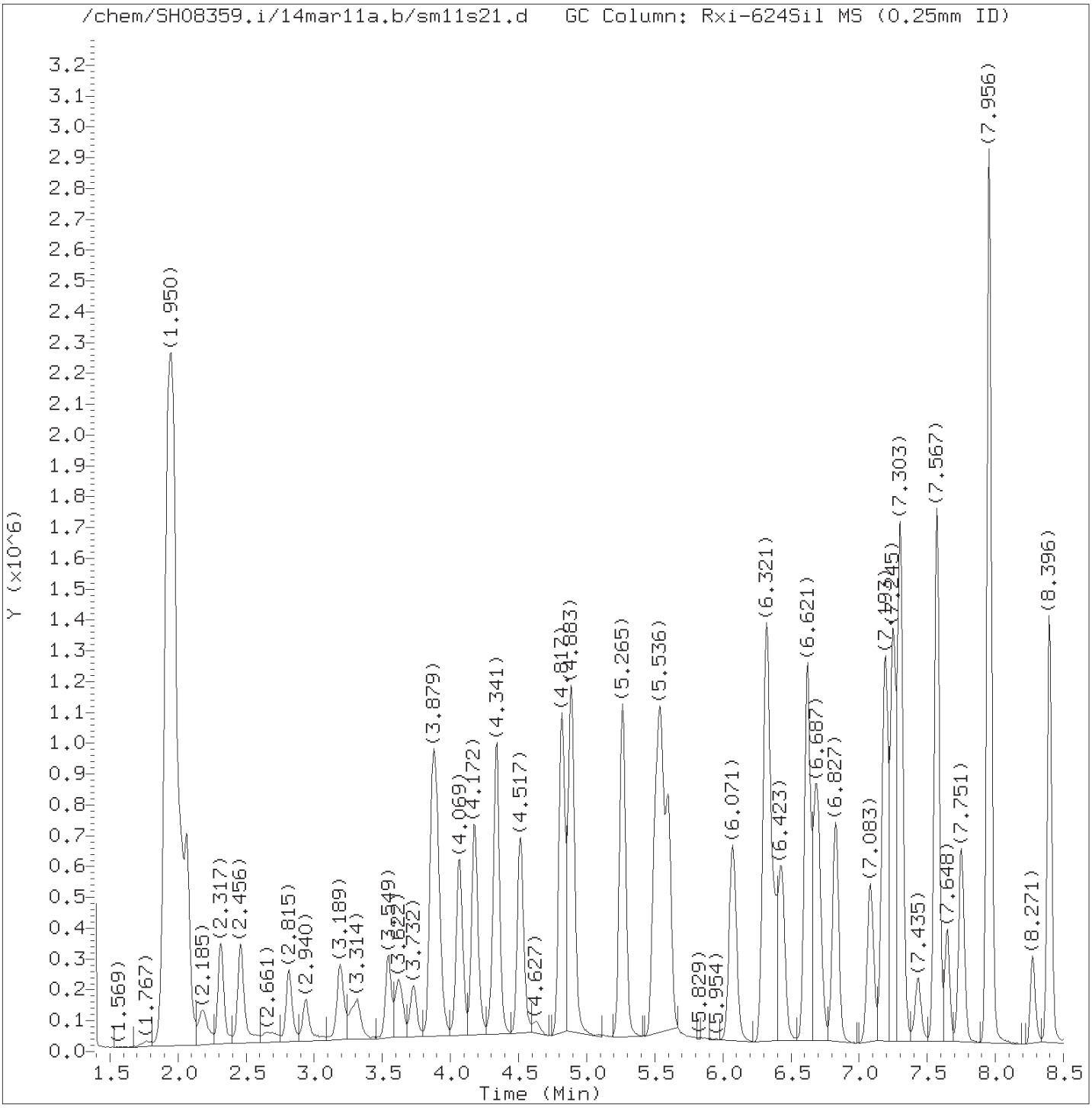
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
69) Styrene	(1)	11.725(-0.000)	104	1124032	5.226	5.23			0.1	0.5
71) Xylene (Total)	(1)		106	2258985	15.066	15.07			0.1	0.5
70) Bromoform	(1)	11.901(-0.001)	173	170840	5.814	5.81			0.2	0.5
72) Isopropylbenzene	(1)	12.026(-0.000)	120	515587	4.879	4.88			0.1	0.5
74) 1,1,2,2-Tetrachloroethane	(1)	12.290(-0.001)	83	258185M	5.073	5.07			0.1	0.5
75) Bromobenzene	(1)	12.319(-0.001)	156	474558	5.308	5.31			0.1	0.5
76) 1,2,3-Trichloropropane	(1)	12.341(-0.000)	110	46514	5.334	5.33			0.2	0.5
78) n-Propylbenzene	(1)	12.385(-0.001)	120	567514	5.071	5.07			0.1	0.5
79) 2-Chlorotoluene	(1)	12.473(-0.001)	126	517864	4.998	5.00			0.1	0.5
80) 1,3,5-Trimethylbenzene	(1)	12.532(-0.001)	105	1415975	4.962	4.96			0.1	0.5
81) 4-Chlorotoluene	(1)	12.576(-0.001)	126	549297	5.198	5.20			0.2	0.5
82) tert-Butylbenzene	(1)	12.803(-0.001)	134	326016M	4.872	4.87			0.1	0.5
84) 1,2,4-Trimethylbenzene	(1)	12.847(-0.000)	105	1405305	5.046	5.05			0.1	0.5
85) sec-Butylbenzene	(1)	12.987(-0.001)	134	386809	4.991	4.99			0.1	0.5
87) p-Isopropyltoluene	(1)	13.104(-0.000)	119	1525710	4.771	4.77			0.1	0.5
86) 1,3-Dichlorobenzene	(1)	13.104(-0.001)	146	909724	5.398	5.40			0.1	0.5
88) 1,4-Dichlorobenzene	(1)	13.185(-0.000)	146	886099	5.368	5.37			0.1	0.5
89) n-Butylbenzene	(1)	13.441(-0.001)	92	978635	4.977	4.98			0.2	0.5
91) 1,2-Dichlorobenzene	(1)	13.485(-0.001)	146	693026	5.360	5.36			0.1	0.5
93) 1,2-Dibromo-3-chloropropane	(1)	14.116(-0.001)	157	29041	4.702	4.70			0.4	0.5
95) 1,2,4-Trichlorobenzene	(1)	14.769(-0.001)	180	335456	4.556	4.56			0.2	0.5
96) Hexachlorobutadiene	(1)	14.864(-0.001)	225	246160	4.633	4.63			0.2	0.5
97) Naphthalene	(1)	14.989(-0.000)	128	326702	3.970	3.97			0.2	0.5
98) 1,2,3-Trichlorobenzene	(1)	15.157(-0.001)	180	236951	4.302	4.30			0.2	0.5

M = Compound was manually integrated.

Total number of targets = 60

Digitally signed by Sara E. Johnson on 03/11/2014 at 18:48. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 10:06. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

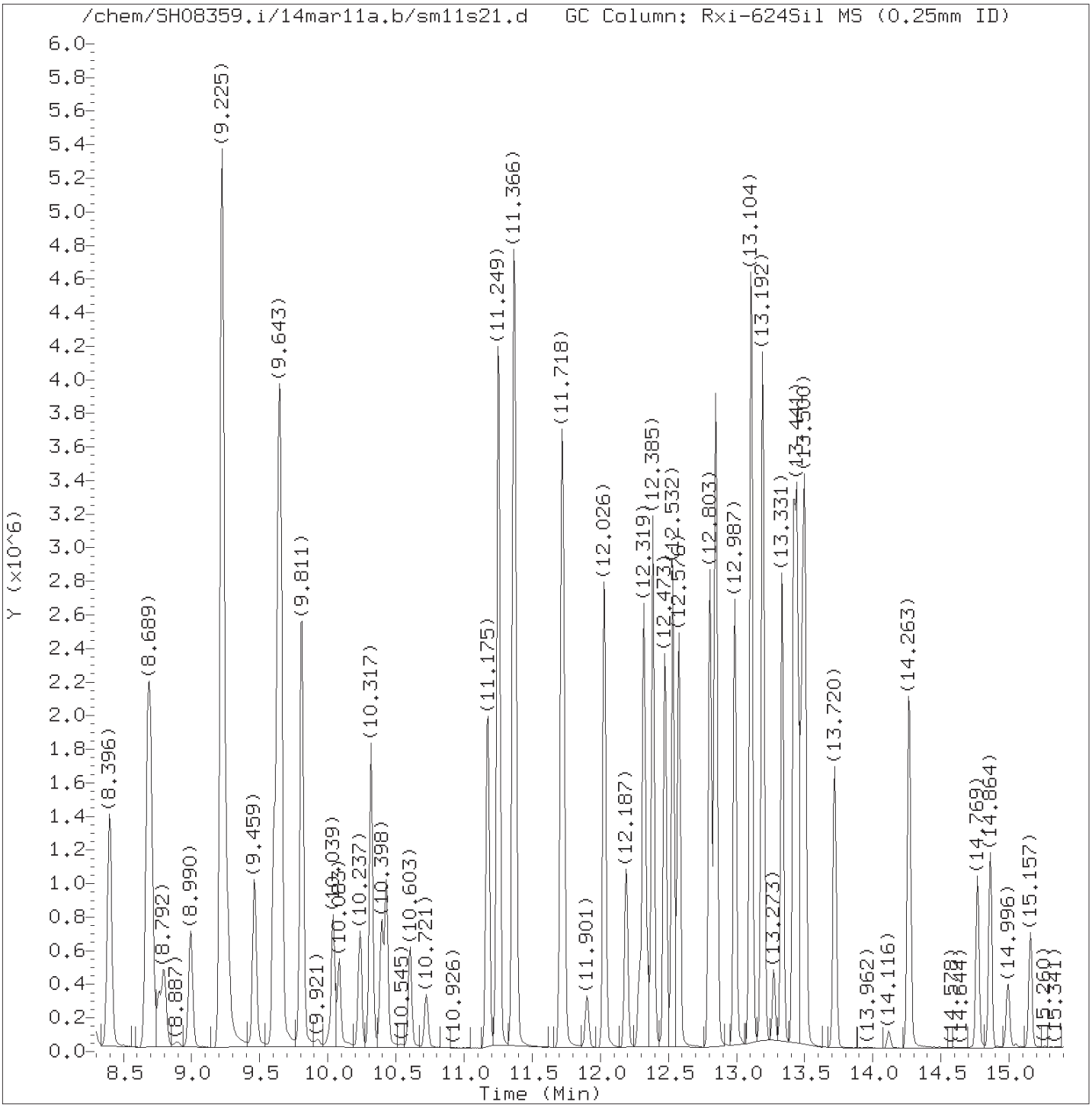
Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11s21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:52 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:47 sej02002

Sample Name: LFBS73 Lab Sample ID: LFBS73

Digitally signed by Sara E. Johnson
on 03/11/2014 at 18:48.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11s21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:52 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:47 sej02002

Sample Name: LFBS73 Lab Sample ID: LFBS73

Digitally signed by Sara E. Johnson
on 03/11/2014 at 18:48.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11s21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:52 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:47 sej02002

Sample Name: LFBS73 Lab Sample ID: LFBS73

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(1)	2.185	85	183452	1.618
2) Chloromethane	(1)	2.317	50	540525	1.705
3) Vinyl Chloride	(1)	2.456	62	349570	1.811
4) Bromomethane	(1)	2.815	94	242984	1.854
5) Chloroethane	(1)	2.940	64	173510	1.912
7) Trichlorofluoromethane	(1)	3.277	101	210059M	1.862
10) 1,1-Dichloroethene	(1)	3.864	96	462667	4.692
16) Methylene Chloride	(1)	4.517	84	402831	4.657
20) trans-1,2-Dichloroethene	(1)	4.891	96	538532	4.710
22) 1,1-Dichloroethane	(1)	5.499	63	912655	4.677
26) cis-1,2-Dichloroethene	(1)	6.313	96	520427	5.025
27) 2,2-Dichloropropane	(1)	6.335	77	453390	4.578
32) Bromochloromethane	(1)	6.673	128	237720	5.659
34) Chloroform	(1)	6.827	83	773492	5.078
35) 1,1,1-Trichloroethane	(1)	7.083	97	486122	5.014
38) Carbon Tetrachloride	(1)	7.303	117	479617	5.207
37) 1,1-Dichloropropene	(1)	7.303	75	612654	4.859
39) Benzene	(1)	7.567	78	1833189	4.744
40) 1,2-Dichloroethane	(1)	7.648	62	312226	5.286
42)*Fluorobenzene	(1)	7.956	96	1354525	5.000
43) Trichloroethene	(1)	8.396	95	515976	4.987
44) 1,2-Dichloropropane	(1)	8.704	63	532541	5.287
45) Dibromomethane	(1)	8.799	93	198562	5.305
47) Bromodichloromethane	(1)	8.990	83	472073	5.019
50) cis-1,3-Dichloropropene	(1)	9.459	75	501356	4.609
53) Toluene	(1)	9.811	92	1124760	4.963
54) trans-1,3-Dichloropropene	(1)	10.039	75	325632	4.566
56) 1,1,2-Trichloroethane	(1)	10.237	83	218904	5.211
58) Tetrachloroethene	(1)	10.317	166	594425	4.656
59) 1,3-Dichloropropane	(1)	10.391	76	344170	4.859
61) Dibromochloromethane	(1)	10.603	129	345844	5.305
62) 1,2-Dibromoethane	(1)	10.721	107	234334	5.047
63) Chlorobenzene	(1)	11.168	112	1090014	4.635
64) 1,1,1,2-Tetrachloroethane	(1)	11.249	131	416738	5.151
65) Ethylbenzene	(1)	11.249	106	597037	4.787
67) m+p-Xylene	(1)	11.366	106	1571992	10.130
68) o-Xylene	(1)	11.711	106	686993	4.936
69) Styrene	(1)	11.725	104	1124032	5.226

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 03/11/2014 at 18:48.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem/SH08359.i/14mar11a.b/sm11s21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:52 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:47 sej02002

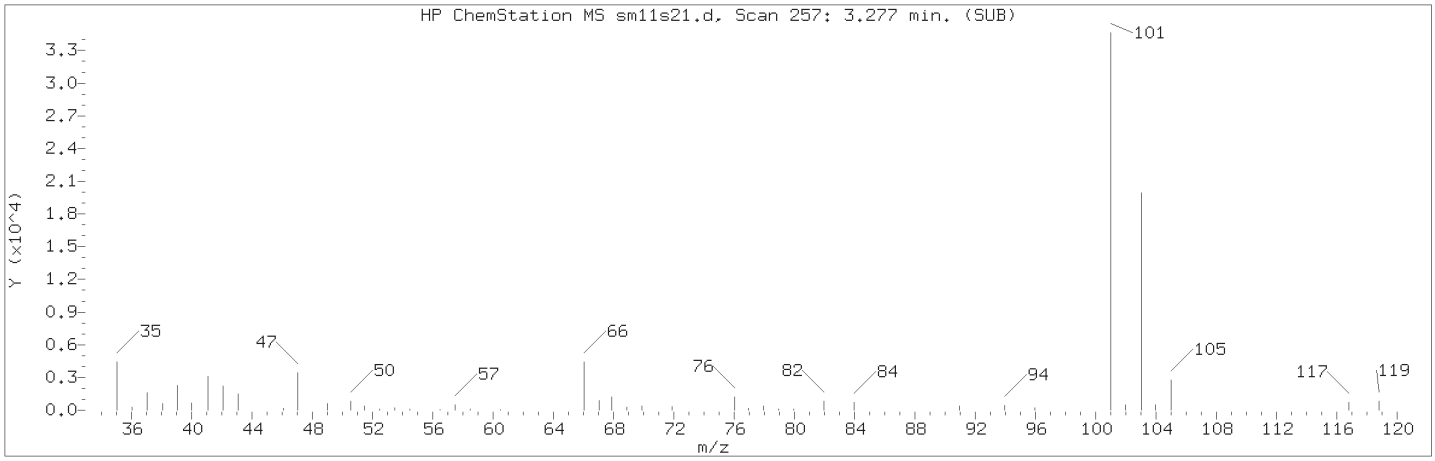
Sample Name: LFBS73 Lab Sample ID: LFBS73

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
71) Xylene (Total)	(1)		106	2258985	15.066
70) Bromoform	(1)	11.901	173	170840	5.814
72) Isopropylbenzene	(1)	12.026	120	515587	4.879
73)$4-Bromofluorobenzene	(1)	12.187	174	351069	5.196
74) 1,1,2,2-Tetrachloroethane	(1)	12.290	83	258185M	5.073
75) Bromobenzene	(1)	12.319	156	474558	5.308
76) 1,2,3-Trichloropropane	(1)	12.341	110	46514	5.334
78) n-Propylbenzene	(1)	12.385	120	567514	5.071
79) 2-Chlorotoluene	(1)	12.473	126	517864	4.998
80) 1,3,5-Trimethylbenzene	(1)	12.532	105	1415975	4.962
81) 4-Chlorotoluene	(1)	12.576	126	549297	5.198
82) tert-Butylbenzene	(1)	12.803	134	326016M	4.872
84) 1,2,4-Trimethylbenzene	(1)	12.847	105	1405305	5.046
85) sec-Butylbenzene	(1)	12.987	134	386809	4.991
87) p-Isopropyltoluene	(1)	13.104	119	1525710	4.771
86) 1,3-Dichlorobenzene	(1)	13.104	146	909724	5.398
88) 1,4-Dichlorobenzene	(1)	13.185	146	886099	5.368
89) n-Butylbenzene	(1)	13.441	92	978635	4.977
90)$1,2-Dichlorobenzene-d4	(1)	13.463	152	354115	5.530
91) 1,2-Dichlorobenzene	(1)	13.485	146	693026	5.360
93) 1,2-Dibromo-3-chloropropane	(1)	14.116	157	29041	4.702
95) 1,2,4-Trichlorobenzene	(1)	14.769	180	335456	4.556
96) Hexachlorobutadiene	(1)	14.864	225	246160	4.633
97) Naphthalene	(1)	14.989	128	326702	3.970
98) 1,2,3-Trichlorobenzene	(1)	15.157	180	236951	4.302

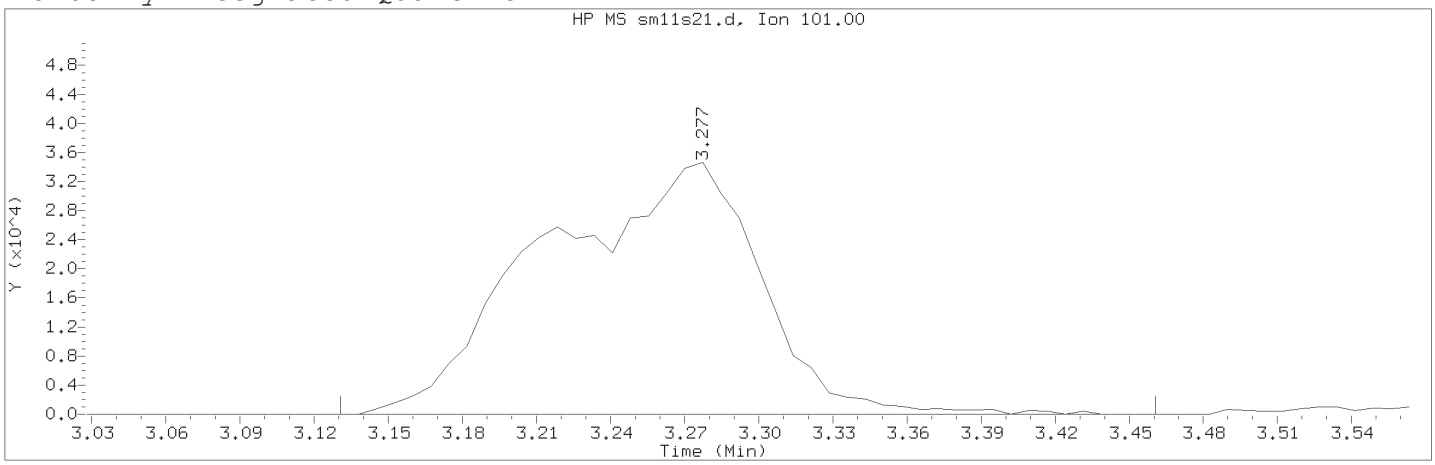
M = Compound was manually integrated.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 03/11/2014 at 18:48.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11s21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:52 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:47 sej02002

Sample Name: LFBS73 Lab Sample ID: LFBS73

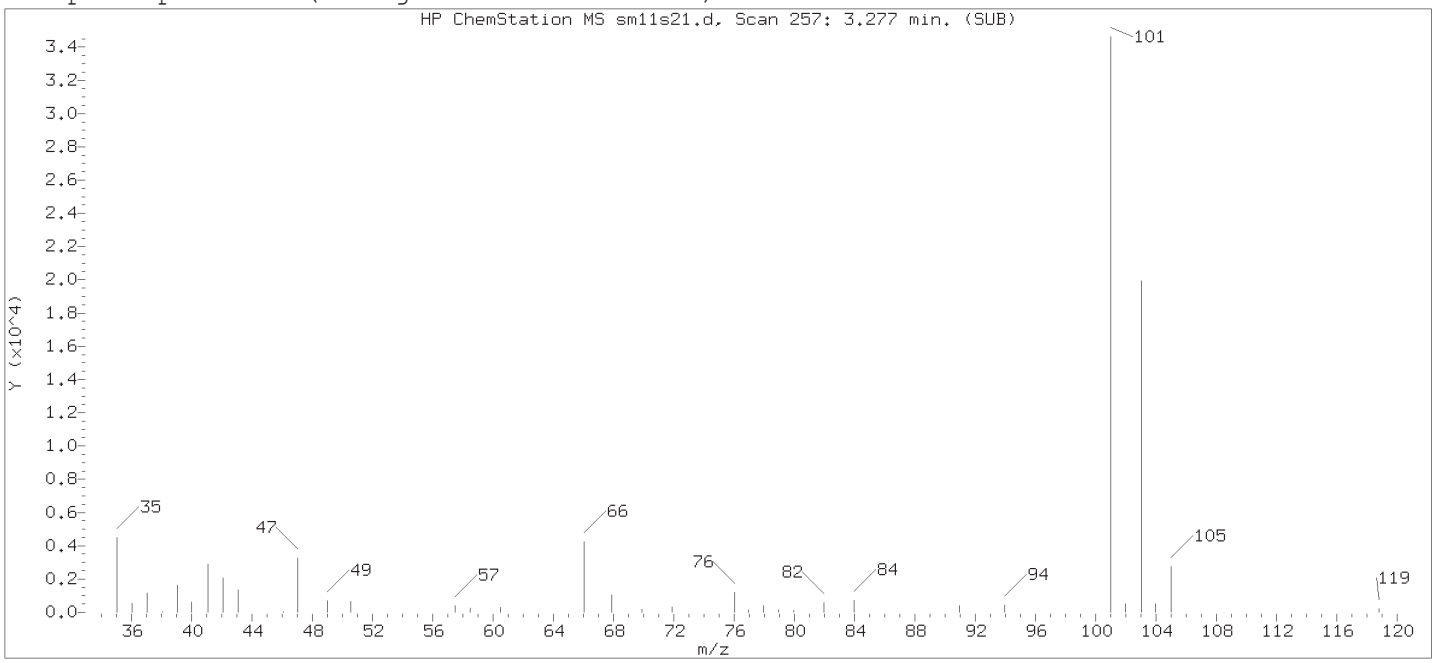
Compound Number : 7
Compound Name : Trichlorofluoromethane
Scan Number : 257
Retention Time (minutes): 3.277
Quant Ion : 101.00
Area (flag) : 210059M
On-Column Amount (ng) : 1.8625
Integration start scan : 236 Integration stop scan: 281
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

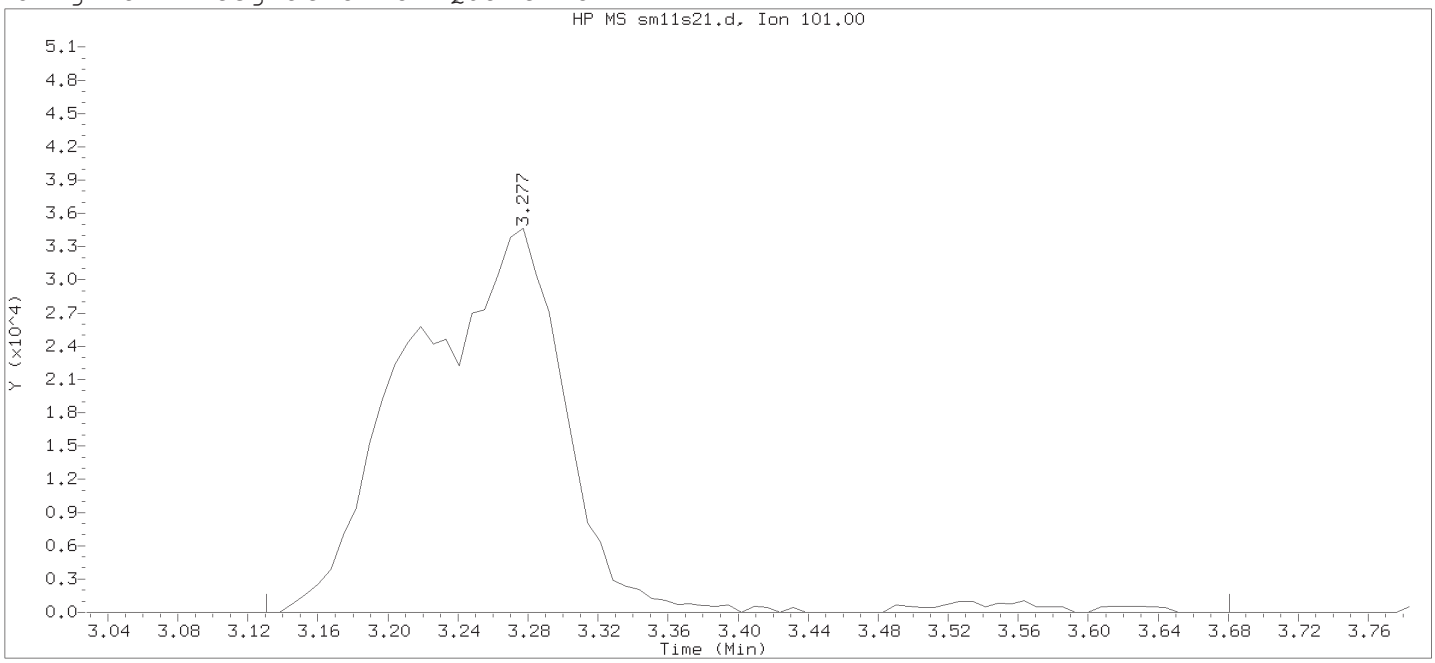
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/11/2014 at 18:48. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 10:06.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11s21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:52 Analyst ID: sej02002

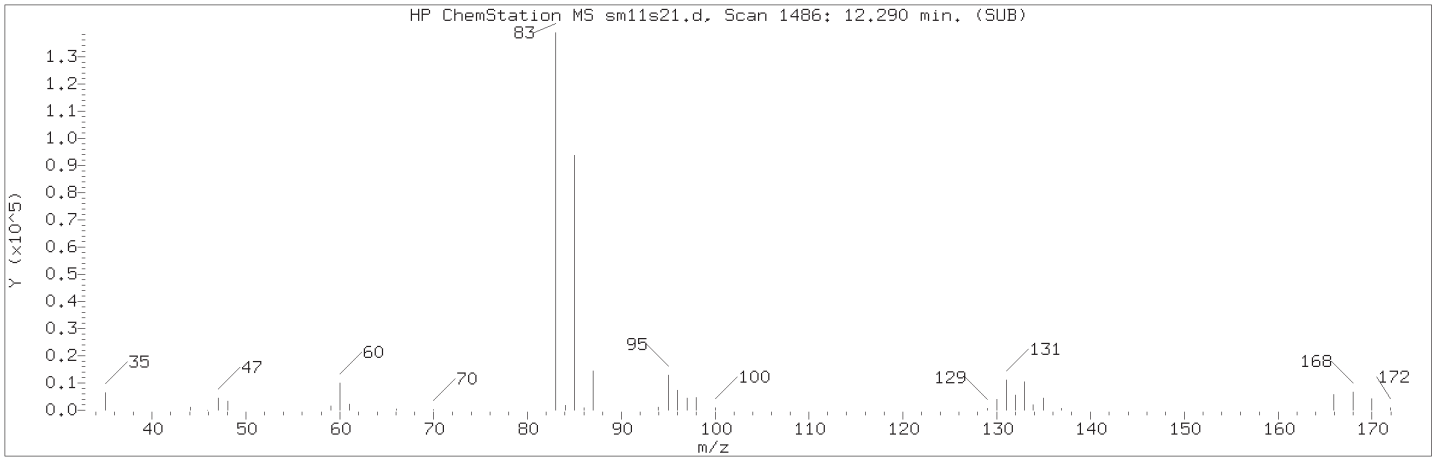
Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:46 sej02002

Sample Name: LFBS73 Lab Sample ID: LFBS73

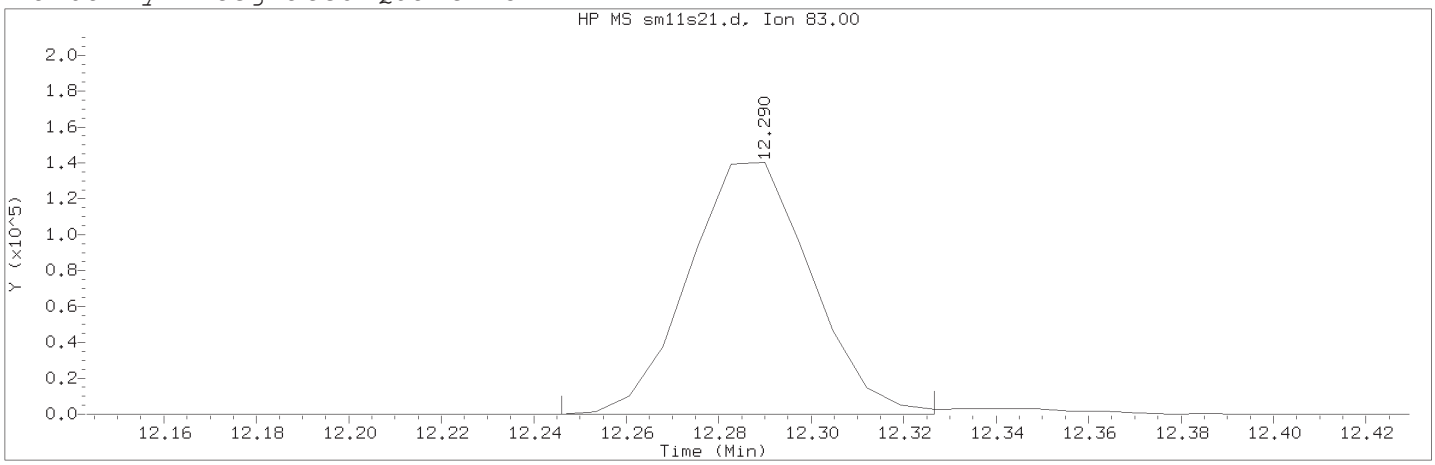
Compound Number : 7
Compound Name : Trichlorofluoromethane
Scan Number : 257
Retention Time (minutes): 3.277
Quant Ion : 101.00
Area : 215446
On-column Amount (ng) : 1.9102
Integration start scan : 236 Integration stop scan: 311
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/11/2014 at 18:48.
Target 3.5 esignature User ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11s21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:52 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:47 sej02002

Sample Name: LFBS73 Lab Sample ID: LFBS73

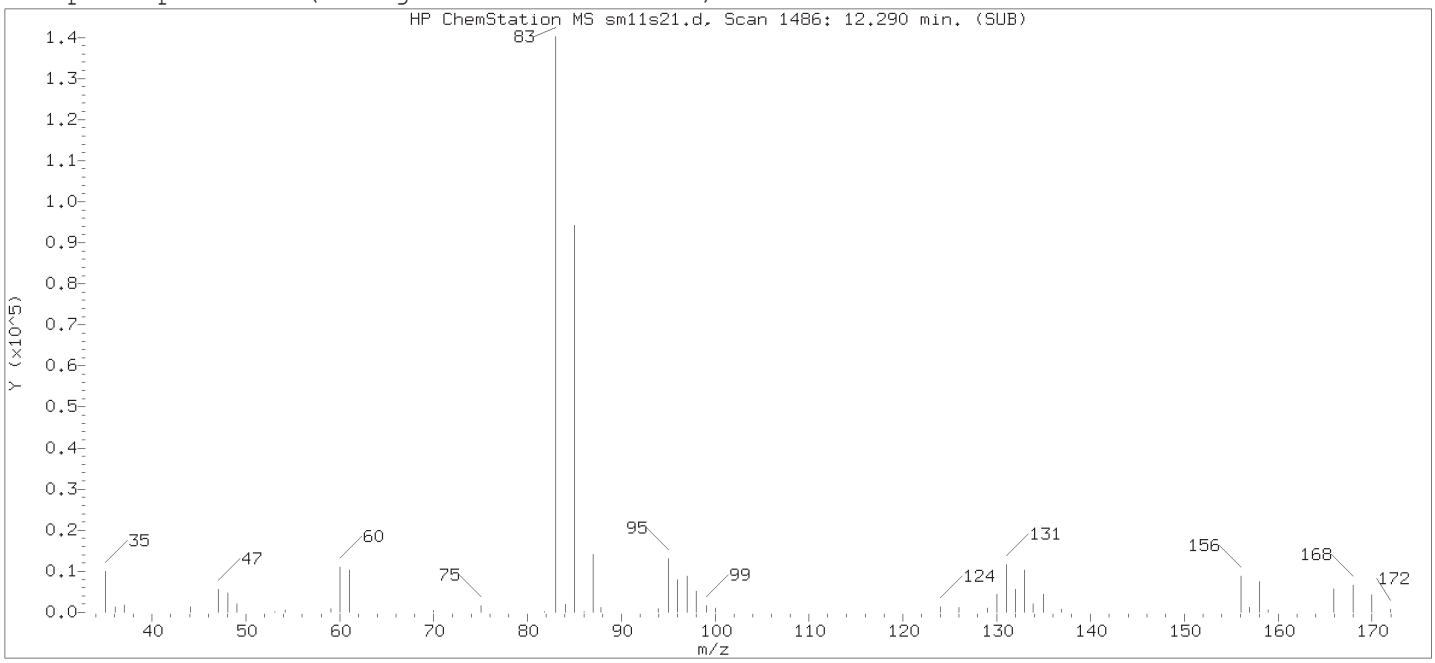
Compound Number : 74
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 83.00
Area (flag) : 258185M
On-Column Amount (ng) : 5.0732
Integration start scan : 1479 Integration stop scan: 1490
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

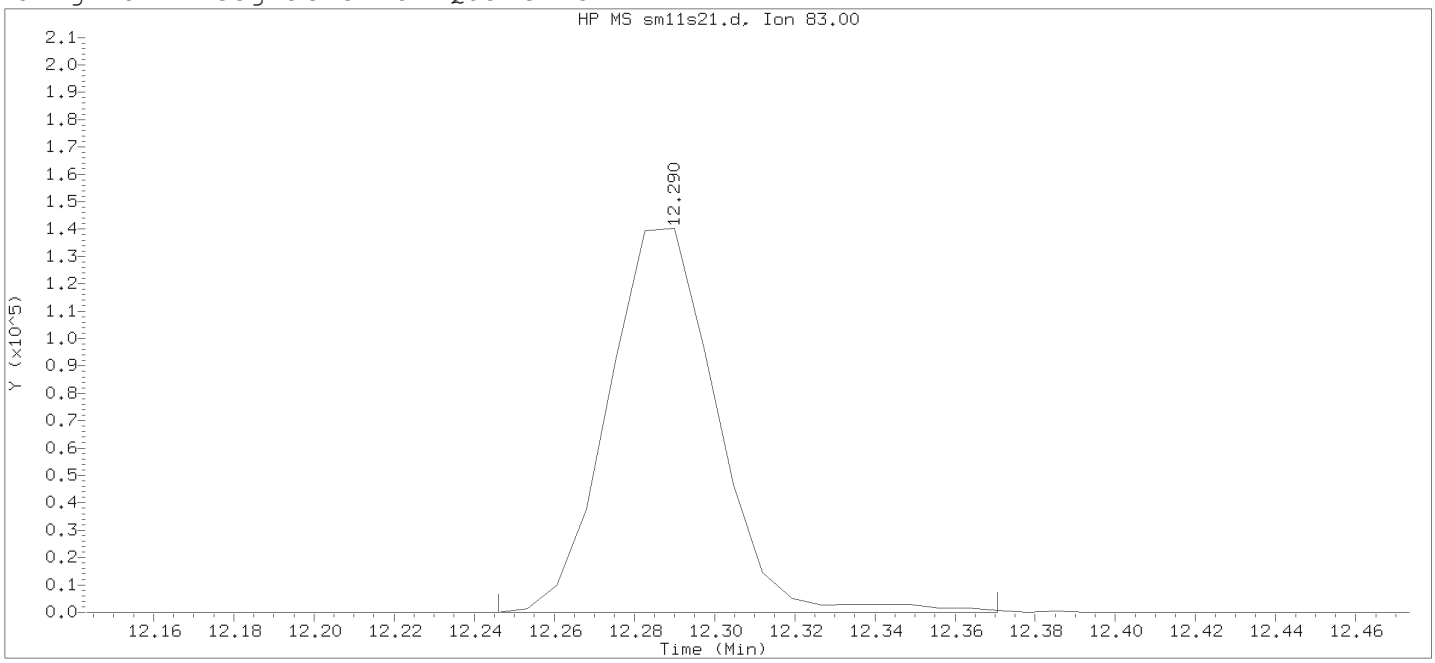
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/11/2014 at 18:48. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 10:06.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 11-MAR-2014 17:52 Analyst ID: sej02002

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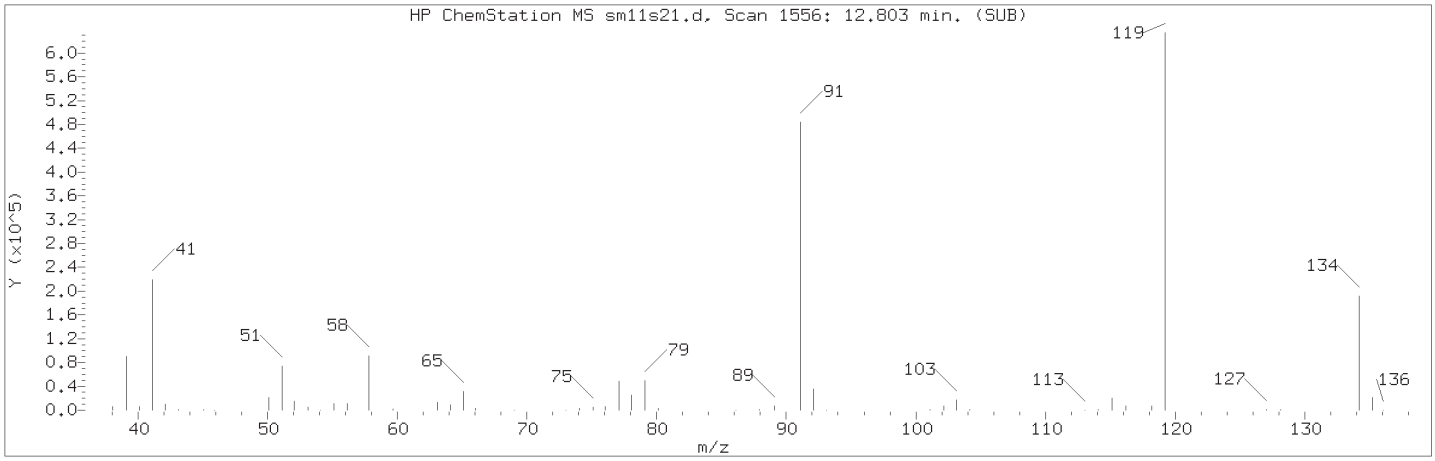
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:46 sej02002

Sample Name: LFBS73 Lab Sample ID: LFBS73

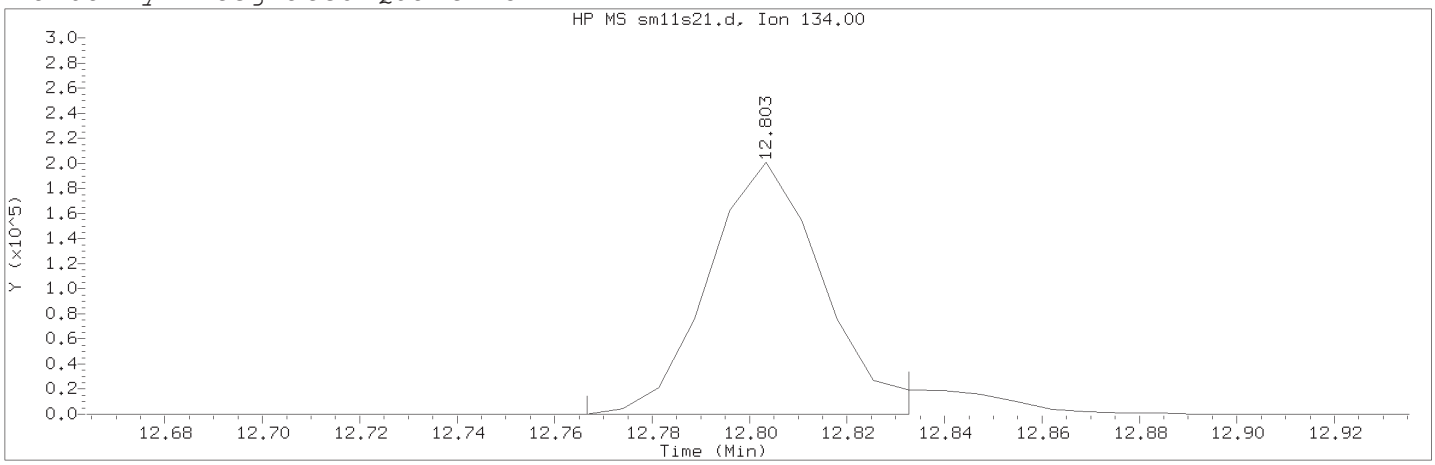
Compound Number : 74
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1486
Retention Time (minutes): 12.290
Quant Ion : 83.00
Area : 263592
On-column Amount (ng) : 5.1795
Integration start scan : 1479 Integration stop scan: 1496
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/11/2014 at 18:48.
Target 3.5 esignature User ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:47 sej02002

Sample Name: LFBS73 Lab Sample ID: LFBS73

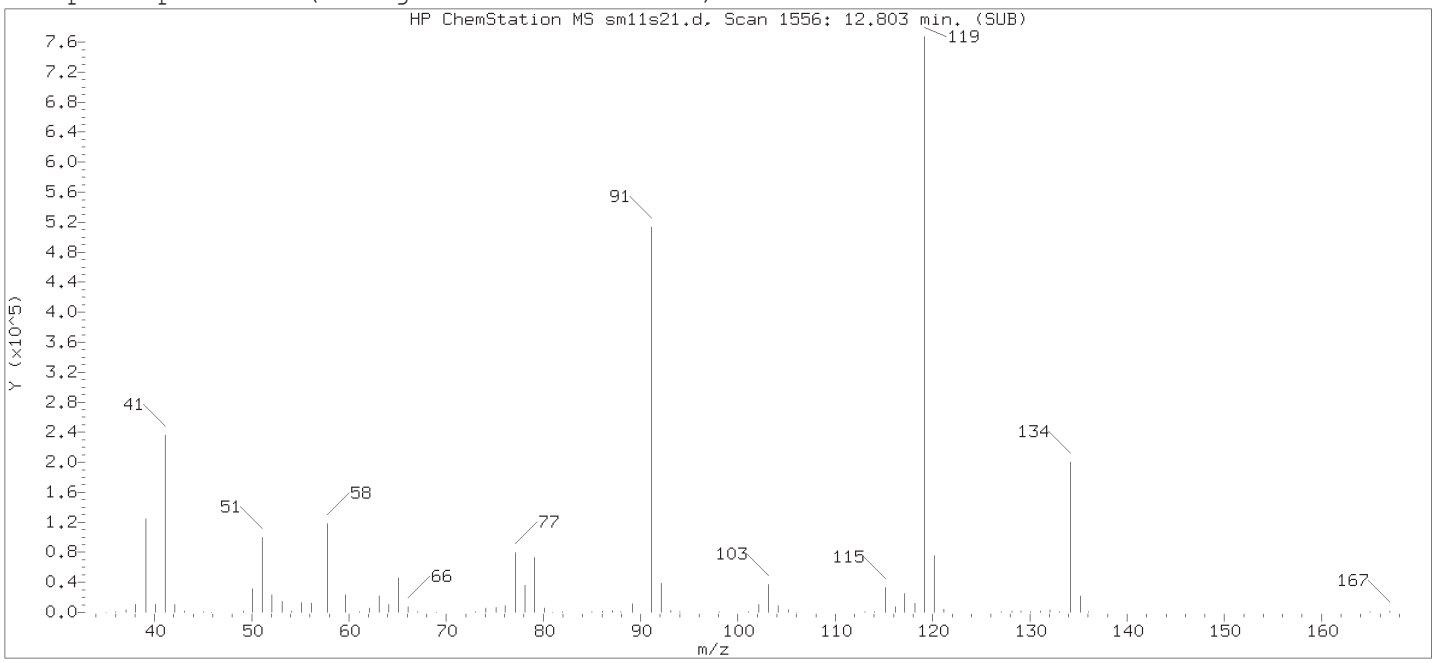
Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1556
Retention Time (minutes): 12.803
Quant Ion : 134.00
Area (flag) : 326016M
On-Column Amount (ng) : 4.8715
Integration start scan : 1550 Integration stop scan: 1559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

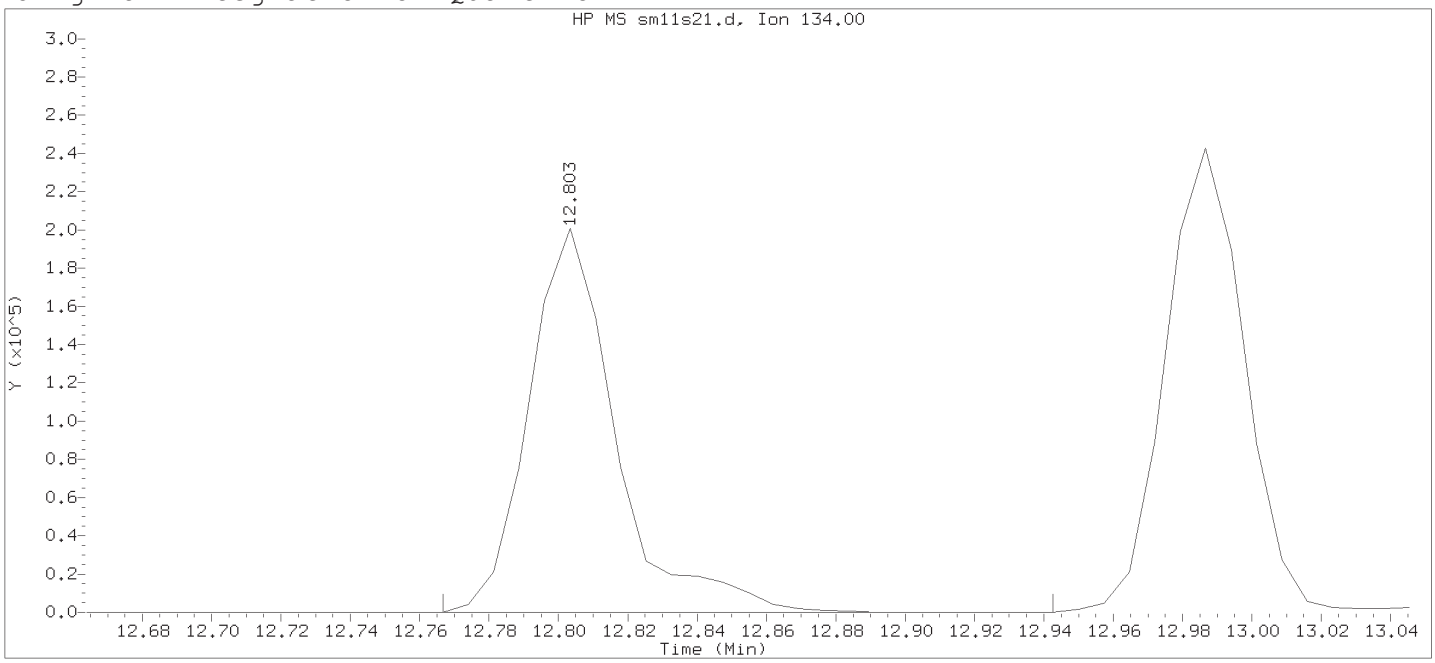
Analyst responsible for change: Digitally signed by Sara E. Johnson on 03/11/2014 at 18:48. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Abraham H. Uysal on 03/18/2014 at 10:06.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08359.i/14mar11a.b/sm11s21.d Instrument ID: SH08359.i
Injection date and time: 11-MAR-2014 17:52 Analyst ID: sej02002

Method used: /chem/SH08359.i/14mar11a.b/m524-2.m Sublist used: 2764
Calibration date and time: 11-MAR-2014 17:34
Date, time and analyst ID of latest file update: 11-Mar-2014 18:46 sej02002

Sample Name: LFBS73 Lab Sample ID: LFBS73

Compound Number : 82
Compound Name : tert-Butylbenzene
Scan Number : 1556
Retention Time (minutes): 12.803
Quant Ion : 134.00
Area : 349106
On-column Amount (ng) : 5.2166
Integration start scan : 1550 Integration stop scan: 1574
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 03/11/2014 at 18:48.
Target 3.5 esignature User ID: sej02002

Data Validation Report

SW-846 METHOD 8260B VOLATILE ORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a limited review of the analytical results for the March 3-4, 2014 groundwater monitoring event at the Watauga County Landfill, Facility ID 95-02. Draper Aden Associates collected groundwater samples from monitoring wells MW-2, MW-3, MW-8, MW-9, MW-12, and MW-17. MW-15 was not sampled. Draper Aden Associates also collected samples from surface water locations S-1, S-2, S-3, S-4, and S-5.

The groundwater samples and a trip blank were analyzed for 62 volatile organic analytes by USEPA SW-846 Method 8260B using a 25 ml purge volume. The surface water samples and a trip blank were analyzed by USEPA SW-846 Method 8260B using a 25 ml purge volume for sixteen target analytes which included benzene, chlorobenzene, chloroethane; 1,4-dichlorobenzene, dichlorodifluoromethane; 1,1-dichloroethane; 1,2-dichloroethane; 1,1-dichloroethylene; cis-1,2-dichloroethylene; trans-1,2-dichloroethylene; 1,2-dichloropropane, methylene chloride, tetrachloroethylene; 1,1,1-trichloroethane, trichloroethylene and vinyl chloride. The following information and attached table summarize the data validation results.

Draper Aden Associates sent samples to CompuChem (CompuChem), a Division of Liberty Analytical, of Cary, North Carolina. CompuChem performed the SW-846 Method 8260B volatile analysis. CompuChem submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results as well as relevant documentation to validate and verify the results. CompuChem is a North Carolina Certified Laboratory (NC Certification No 79).

The evaluation of CompuChem's compliance with Method 8260B and validation of the results was based on a limited review of the following items: QC deliverables package, QC history documentation, case narrative, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibrations, blank analysis, surrogate spike recoveries, matrix spike and matrix spike duplicate (MS/MSD) analyses, laboratory control sample (LCS/LCSD) data, and internal standard requirements. A review of transcriptions from instrument data to sample summary sheets was performed. Specific representative calculations were not performed, unless noted. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

CompuChem received the samples on ice and in good condition with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel. Technical holding time and preservation criteria were met, except where noted below. The chain of custody requested SW-846 Method 8260C; however, the laboratory reported results by Method 8260B. No data qualifications were needed due to the discrepancy.

The original certificate of analysis was received on March 28, 2014. The certificate of analysis was complete and no data was rejected. The data set demonstrated the laboratory's ability to achieve the reported limit of quantitation (LOQ), as supported by the initial calibration data and laboratory method detection limit (DL) study. The surface water samples were analyzed by

SW-846 Method 8260B (low level - 25ml purge volume) instead of the USEPA CLP Statement of Work (SOW) document number SOM01.2 (medium level - 5ml purge volume). The Method 8260B (low level - 25ml purge volume) was used in order to report lower detection limits and LOQs. For this project, the trip blank results were used to assess surface water and groundwater results.

QC history documentation, instrument performance check (tuning) criteria, initial calibration, calibration verification, blank, surrogate, MS/MSD, LCS, and internal standard requirements were met, except where noted below. Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

Sample preservation criteria were met except for the pH requirement for acrolein. Acrolein results were obtained from a sample aliquot preserved at pH < 2 instead of pH 4-5. Acrolein was not detected in any sample and sample results for acrolein were qualified "UJ" to note that the DL/LOQ were estimated due to the observed QC deficiency.

Ethyl methacrylate did not meet the initial calibration verification (ICV) standard percent difference/drift requirement (±30%). This analyte was not detected at or above the DL/LOQ in any sample and sample results for this analyte was validated and qualified "UJ" to note that the DL/LOQ was estimated due to the observed QC deficiency. The remaining CV standard criteria were met.

Methylene chloride was reported below the LOQ in the method blank. Detected methylene chloride results less than the LOQ were attributed to the observed blank contamination and validated as "U." The remaining blank criteria were met or no data qualifications were required.

Sample MW-2 required analysis in dilution and reported results for MW-2 were obtained from the 1:10 dilution analysis. LOQs and detection limits were adjusted for the dilution factor applied (1:10).

Results were reported and validated to at or above the DL. Target analytes detected at or above the DL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table. Except where attributed to blank contamination as noted above, target analytes reported by the laboratory as detected less than the corresponding LOQs were validated and qualified as "J" to note that the reported concentration should be considered estimated.

Target analytes remain as reported by the laboratory, unless noted. Except where noted above, other sample results were validated and reported as "U" to note the target analyte was analyze for, but not detected at or above the DL or LOQ. No results were rejected based on the data validation criteria.

SW-846 METHOD 8260B (GC/MS) VOLATILE ORGANIC DATA VALIDATION

CompuChem, a division of Liberty Analytical, Cary, NC; SDGs: 1403006 (Groundwater) and 1403007 (Surface water); Preparation Method: 5030B

Comment: *Volatile organic analysis uses a purge and trap system to remove volatile organic target analytes from a 25 ml water sample (SW-846 5030B). Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).*

A. QC DELIVERABLES PACKAGE:

1. Was the case narrative present/signed by a lab representative? ☑ YES ☐ NO
2. Was the Chain of Custody present/signed by a lab representative? ☑ YES ☐ NO
3. Were the sample results included for the sample locations? ☑ YES ☐ NO
4. Did the laboratory analyte list correspond to the project specific analyte list? ☑ YES ☐ NO
5. Were the analyte LOQs reported on sample summary sheets in agreement with the instrument specific MDL study? ☑ YES ☐ NO

Comments: QC deliverables package requirements were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

1. Was an instrument specific MDL study provided, which included LOD and LOQ values for the target analytes? ☑ YES ☐ NO
2. Was the instrument calibration range specified? ☑ YES ☐ NO
3. Was analyst initial demonstration of proficiency data provided for each target analyte? ☑ YES ☐ NO

Comments: QC history documentation criteria were met. MDL study provided previously. The IDOC study for analyst JAO was provided as a revision.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1. Was the 14-day sample collection to analysis holding time met? ☑ YES ☐ NO
2. Were the samples received at $\leq 6^{o}C$ and zero headspace? ☑ YES ☐ NO
3. Was the pH of each sample adjusted to < 2 with HCl? ☑ YES ☐ NO
4. Was a separate sample aliquot adjusted with HCl to a pH between 4-5? (For analysis of acrolein only). ☐ YES ☑ NO

Comments: Technical holding time criteria and sample preservation criteria were met except for acrolein at noted in the data review summary above.

D. GC/MS INSTRUMENT PERFORMANCE (TUNING) CHECK CRITERIA:

1. Was analysis of the instrument performance check solution performed at the beginning of each 12-hour period during which standards or samples were analyzed? ☑ YES ☐ NO
2. Was there documentation of the injection of 5-50 ng BFB? *See comment*
3. Were the ion abundance criteria met? ☑ YES ☐ NO
4. Were calibration, blank, and sample analyses performed within 12 hours of tuning? ☑ YES ☐ NO

Comments: Instrument performance check criteria were met. The laboratory stated that the BFB concentration injected was 50 ng.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Was the internal standard (IS) which was selected for analyte RF calculation the IS which had the closest retention time? ☑ YES ☐ NO
2. Were the target analytes included in the ICAL? ☑ YES ☐ NO
3. Were any calibration levels removed from the curve that would negatively influence the data integrity? ☐ YES ☑ NO
4. Did the ICALs consist of a minimum of 5 calibration levels? ☑ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL, regulatory compliance, or action limit? *See comment*
6. Was the calibration curve developed using the same purge volume used for sample analysis? ☑ YES ☐ NO
7. Were 8260B SPCC criteria met? ☑ YES ☐ NO
   - chloromethane (0.100)
   - 1,1-dichloroethane (0.100)
   - bromoform (0.100)
   - 1,1,2,2-tetrachloroethane (0.300)
   - chlorobenzene (0.300)
8. Were 8260B CCC criteria met? (%RSD ≤ 30%) ☑ YES ☐ NO
   - 1,1-dichloroethene
   - chloroform
   - 1,2-dichloropropane
   - toluene
   - ethylbenzene
   - vinyl chloride
9. Was each target analyte %RSD ≤ 15% (excluding CCCs)? ☐ YES ☑ NO
10. Was the correlation coefficient >0.99 for target analytes with ≥15 % RSD? ☑ YES ☐ NO

SW-846 8260C Criteria (suggested):

11. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☑ YES ☐ NO
12. Was the recovery within 70-130%? ☐ YES ☑ NO
13. Was the ICV standard prepared from a different source? ☑ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates have % RSDs ≤ 15% or a >0.99 correlation coefficient? ☑ YES ☐ NO
   (Evaluate RRFs < 0.05 (>0.01 acceptable for poor purge analytes (acetone)).

Comments: Initial calibration criteria were met except where discussed above.

F. CALIBRATION VERIFICATION (CV) CRITERIA:

SW-846 Criteria:

1. Was a CV analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☑ YES ☐ NO
2. Were 8260B SPCC criteria met? ☑ YES ☐ NO
   - chloromethane (0.100)
   - 1,1-dichloroethane (0.100)
   - bromoform (0.100)
   - 1,1,2,2-tetrachloroethane (0.300)
   - chlorobenzene (0.300)
3. Were 8260B CCC criteria met?
   (%Drift or % Difference (%D) within ± 20%) ☑ YES ☐ NO
   - 1,1-dichloroethene
   - chloroform
   - 1,2-dichloropropane
   - toluene
   - ethylbenzene
   - vinyl chloride

Method Validation Performance Criteria:

1. Did the target analytes and system monitoring analytes (surrogates) have the % D within ± 25.0%? ☑ YES ☐ NO
   (Evaluate RRFs < 0.05 for potential problems.)
   If "NO", list analytes that exceed these criteria:

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes (surrogates) have % Ds within ± 25.0%? ☑ YES ☐ NO
2. Three analytes may fail to meet maximum % D as long as the % D is within ± 40.0%; Did the calibration verification meet these criteria? ☑ YES ☐ NO

Comments: CV standard criteria were met.

G. BLANK CRITERIA:

1. Was a method blank analyzed after the calibration standards, prior to sample analysis, and once for every 12 hour period beginning with the injection of BFB? ☑ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☑ YES ☐ NO
3. Were the trip blanks and method blanks interference free? ☐ YES ☑ NO

4. List analytes detected in the blanks: *methylene chloride*
5. Was the level of blank contamination less than 5% of the MCL associated with the analyte? ☑ YES ☐ NO
6. Did any samples contain high concentrations of VOCs in excess of the linear range of the calibration curve? ☑ YES ☐ NO
7. Were one or more blanks analyzed following the high concentration sample to prevent cross contamination? ☐ NA ☐ YES ☑ NO

Comments: Blank criteria were met except where discussed above.

H. SURROGATE CRITERIA:

SW-846 Criteria:

1. Were the following surrogates used? *See comment*
   - dibromofluoromethane (80%-120%)
   - 4-bromofluorobenzene (80%-120%)
   - toluene-d_8 (80%-120%)
   - 1,2-dichloroethane-d_4 (80%-120%)
2. Were recoveries within the specified ranges? ☑ YES ☐ NO
   If "NO", corrective action is required. Flagging of the data as estimated is not acceptable until corrective action has been attempted.
3. Were samples with surrogates outside the QC window reanalyzed as required? ☑ NA ☐ YES ☐ NO

Comments: The laboratory substituted bromofluorobenzene for 4-bromofluorobenzene as allowed by the method. Surrogate criteria were met.

I. MATRIX SPIKE, MATRIX SPIKE DUPLICATE CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	*% R Water*	*RPD Water*
1,1-dichloroethene	61-145	14
trichloroethene	71-120	14
benzene	76-127	11
toluene	76-125	13
chlorobenzene	75-130	13

1. Was a matrix spike and matrix spike duplicate (MS/MSD) analyzed per sample batch or every 20 samples, whichever may occur first? ☑ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. MS/MSD acceptance range: *See certificate of analysis*
   RPD ≤20 if not otherwise specified.
5. Were analytes qualified as estimated due to MS/MSD criteria? ☐ YES ☑ NO
   - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample batch analysis? ☑ YES ☐ NO
2. Did the LCS contain the required target analytes? ☑ YES ☐ NO
3. List the LCS acceptance criteria: *See certificate of analysis*
4. Were any analytes flagged as estimated due to LCS criteria? ☐ YES ☑ NO

Comments: LCS criteria were met.

K. INTERNAL STANDARDS CRITERIA:

1. Were the following internal standards used? ☑ YES ☐ NO
   - fluorobenzene
   - chlorobenzene-d_5
   - 1,4-dichlorobenzene-d_4
2. Were internal standard areas within - 50% to + 100% of the last calibration verification? ☑ YES ☐ NO
3. Were internal standard retention times within ± 30 seconds of the last calibration verification? ☑ YES ☐ NO
4. Were samples failing items 2. and/or 3. above reanalyzed as required by the method? ☑ NA ☐ YES ☐ NO

Comments: Internal standards criteria were met.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☑ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met:
   * Did characteristic ions maximize in the same scan or within one scan of each other?
   * Were the characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the LOQ?
   * Were the relative intensities of the ions between standard and sample spectra within ± 30%?
3. Were the reported analytes confirmed? ☑ YES ☐ NO

Comments: Target analyte identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

* If the %RSD of an analyte was 15% or less, then the average relative response factor should have been used for quantitation.
* If the %RSD of an analyte was greater than 15%, then the quantitation should be based on a calibration curve using the first or higher order regression fit of the five calibration points (6 calibration points for 2nd order).

1. List the analytes detected above the LOQ whose %RSD was >15%:
   a. Was the subsequent quantitation based on a linear regression fit? ☑ NA

b. Was the curve forced through the origin? ☑ NA ☐ YES ☐ NO

2. Did the initial analysis of any sample have a target analyte concentration that exceeded the initial calibration range? ☑ YES ☐ NO
   -If so, was the sample reanalyzed at a higher dilution? ☑ YES ☐ NO
3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO

Comments: Target analyte quantitation criteria were met.

N. LIBRARY SEARCHES:

Comments: Library searches were not provided.

O. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: The laboratory previously provided the MDL and IDOC studies as a revision. No other corrective action was taken.

P. REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data validation was conducted in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, October, 1999) and where applicable with *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).where applicable*. Validation of this data set is limited to the items detailed in this report.

LIMITATIONS:

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Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

This Report has been prepared by:

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This Report has been subjected to technical and quality review by:

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Data Validation Report for GC/MS Fraction. Monitoring Event: 3/2/2014

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

Watauga County Landfill Facility ID 95-02

Analyte	Sample ID	Laboratory Results (ug/L)		Validated Results (ug/L)		LOQ/CRQL (ug/L)	Dilution	Validation Notes
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Method: *8260B*								
Acrolein	MW-2	50	U	U	J	50	10	Analyte not detected. Analyzed in dilution (1:10). LOQ adjusted. Sample pH <2 SU.
1,1-Dichloroethane	MW-2	43		43		5	10	Analyzed in dilution (1:10). LOQ adjusted.
1,1-Dichloroethene	MW-2	61		61		5	10	Analyzed in dilution (1:10). LOQ adjusted.
Ethyl methacrylate	MW-2	50	U	U	J	50	10	Analyte not detected. Analyzed in dilution (1:10). LOQ adjusted. CV did not meet +/- 25%D criteria (25.9%).
Methylene chloride	MW-2	0.49	J	U		5	10	Result < LOQ. Analyzed in dilution (1:10). LOQ adjusted. Laboratory blank contamination in method blank (0.057 ug/l).
Tetrachloroethene	MW-2	3.9	J	3.9	J	5	10	Result < LOQ. Analyzed in dilution (1:10). LOQ adjusted.
Toluene	MW-2	0.31	J	0.31	J	5	10	Result < LOQ. Analyzed in dilution (1:10). LOQ adjusted.
1,1,1-Trichloroethane	MW-2	290		290		5	10	Analyzed in dilution (1:10). LOQ adjusted.

Definitions: LOQ Denotes laboratory limit of quantitation. **CRQL** Denotes laboratory contract required quantitation limit.
U Denotes analyte not detected above detection limit or LOQ/CRQL. **J** Denotes analyte is estimated. When used with a "U" (i.e., "UJ"), denotes analyte not detected above detection limit or LOQ/CRQL and LOQ/CRQL is estimated. **UA** denotes analyte not detected at or above the adjusted LOQ. **B** Denotes result attributed to blank contamination, a laboratory data qualifier. R Denotes result rejected.
Target analytes not listed above were not detected at or above the laboratory detection limit , LOQ/CRQL and no data qualification was required. For method reference CLP SOW-use CRQL.
CompuChem NC Certification Number 79. Lancaster Laboratories NC Certification Number 42705.
Notes: Due to format limitations, for the monitoring event listed as 3/9/2012, the actual event was 3/7/2012-3/8/2012. For the monitoring event listed 9/6/2012 , the actual event was conducted 9/4-9/5/2012. For the monitoring event listed 3/5 , the actual event was conducted 3/4-3/5/2013. For the monitoring event listed 9/3, the actual event was conducted 9/3-9/4/2013. For the monitoring event listed 3/2, the actual event was conducted 3/3-3/4/2014. See event COC for actual collection date.

Data Validation Report for GC/MS Fraction. Monitoring Event: 3/4/2014

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

Watauga County Landfill Facility ID 95-02

Analyte	Sample ID	Laboratory Results (ug/L)		Validated Results (ug/L)		LOQ/CRQL (ug/L)	Dilution	Validation Notes
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Method: *8260B*								
Acrolein	MW-12	5	U	U	J	5	1	Analyte not detected. Sample pH <2 SU.
Chloroethane	MW-12	0.68		0.68		0.5	1	No action taken.
Chloroform	MW-12	0.1	J	0.1	J	0.5	1	Result < LOQ.
1,2-Dichlorobenzene	MW-12	0.083	J	0.083	J	0.5	1	Result < LOQ.
1,1-Dichloroethane	MW-12	9.3		9.3		0.5	1	No action taken.
1,1-Dichloroethene	MW-12	0.084	J	0.084	J	0.5	1	Result < LOQ.
cis-1,2-Dichloroethene	MW-12	14		14		0.5	1	No action taken.
trans-1,2-Dichloroethene	MW-12	0.22	J	0.22	J	0.5	1	Result < LOQ.
1,2-Dichloropropane	MW-12	0.28	J	0.28	J	0.5	1	Result < LOQ.
Ethyl methacrylate	MW-12	5	U	U	J	5	I	Analyte not detected. ICV did not meet +/- 30 %D criteria (34.2%).
Methylene chloride	MW-12	0.1	J	U		0.5	1	Result < LOQ. Blank contamination in the method blank (0.057 ug/l).
Tetrachloroethene	MW-12	0.12	J	0.12	J	0.5	1	Result < LOQ.
Trichloroethene	MW-12	1.3		1.3		0.5	1	No action taken.
Method: *8260B*								
Acrolein	MW-17	5	U	U	J	5	1	Analyte not detected. Sample pH <2 SU.
1,1-Dichloroethane	MW-17	0.74		0.74		0.5	1	No action taken.
cis-1,2-Dichloroethene	MW-17	1.2		1.2		0.5	1	No action taken.
Ethyl methacrylate	MW-17	5	U	U	J	5	1	Analyte not detected. ICV did not meet +/- 30 %D criteria (34.2%).
Methylene chloride	MW-17	0.026	J	U		0.5	I	Result < LOQ. Blank contamination in the method blank (0.057 ug/l).
Tetrachloroethene	MW-17	0.52		0.52		0.5	1	No action taken.
Trichloroethene	MW-17	0.3	J	0.3	J	0.5	1	Result < LOQ.

Definitions: LOQ Denotes laboratory limit of quantitation. **CRQL** Denotes laboratory contract required quantitation limit.
U Denotes analyte not detected above detection limit or LOQ/CRQL. **J** Denotes analyte is estimated. When used with a "U" (i.e., "UJ"), denotes analyte not detected above detection limit or LOQ/CRQL and LOQ/CRQL is estimated. **UA** denotes analyte not detected at or above the adjusted LOQ. **B** Denotes result attributed to blank contamination, a laboratory data qualifier. R Denotes result rejected.
Target analytes not listed above were not detected at or above the laboratory detection limit , LOQ/CRQL and no data qualification was required. For method reference CLP SOW-use CRQL.
CompuChem NC Certification Number 79. Lancaster Laboratories NC Certification Number 42705.
Notes: Due to format limitations, for the monitoring event listed as 3/9/2012, the actual event was 3/7/2012-3/8/2012. For the monitoring event listed 9/6/2012 , the actual event was conducted 9/4-9/5/2012. For the monitoring event listed 3/5 , the actual event was conducted 3/4-3/5/2013. For the monitoring event listed 9/3, the actual event was conducted 9/3-9/4/2013. For the monitoring event listed 3/2, the actual event was conducted 3/3-3/4/2014. See event COC for actual collection date.

Data Validation Report for GC/MS Fraction. Monitoring Event: 3/4/2014

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

Watauga County Landfill Facility ID 95-02

Analyte	Sample ID	Laboratory Results (ug/L)		Validated Results (ug/L)		LOQ/CRQL (ug/L)	Dilution	Validation Notes
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Method: *8260B*								
Acrolein	MW-3	5	U	U	J	5	1	Analyte not detected. Sample pH <2 SU.
Chloroethane	MW-3	0.48	J	0.48	J	0.5	1	Result < LOQ.
1,1-Dichloroethane	MW-3	2.7		2.7		0.5	1	No action taken.
cis-1,2-Dichloroethene	MW-3	4.3		4.3		0.5	1	No action taken.
trans-1,2-Dichloroethene	MW-3	0.09	J	0.09	J	0.5	1	Result < LOQ.
Ethyl methacrylate	MW-3	5	U	U	J	5	1	Analyte not detected. ICV did not meet +/- 30 %D criteria (34.2%).
Methylene chloride	MW-3	0.034	J	U		0.5	1	Result < LOQ. Blank contamination in the method blank (0.057 ug/l).
Toluene	MW-3	0.031	J	0.031	J	0.5	1	Result < LOQ.
Trichloroethene	MW-3	0.41	J	0.41	J	0.5	1	Result < LOQ.
Method: *8260B*								
Acetone	MW-8	0.89	J	0.89	J	2.5	1	Result < LOQ.
Acrolein	MW-8	5	U	U	J	5	1	Analyte not detected. Sample pH <2 SU.
Ethyl methacrylate	MW-8	5	U	U	J	5	1	Analyte not detected. ICV did not meet +/- 30 %D criteria (34.2%).
Methylene chloride	MW-8	0.042	J	U		0.5	1	Result < LOQ. Blank contamination in the method blank (0.057 ug/l).

Definitions: LOQ Denotes laboratory limit of quantitation. **CRQL** Denotes laboratory contract required quantitation limit.
U Denotes analyte not detected above detection limit or LOQ/CRQL. **J** Denotes analyte is estimated. When used with a "U" (i.e., "UJ"), denotes analyte not detected above detection limit or LOQ/CRQL and LOQ/CRQL is estimated. **UA** denotes analyte not detected at or above the adjusted LOQ. **B** Denotes result attributed to blank contamination, a laboratory data qualifier. R Denotes result rejected.
Target analytes not listed above were not detected at or above the laboratory detection limit , LOQ/CRQL and no data qualification was required. For method reference CLP SOW-use CRQL.
CompuChem NC Certification Number 79. Lancaster Laboratories NC Certification Number 42705.
Notes: Due to format limitations, for the monitoring event listed as 3/9/2012, the actual event was 3/7/2012-3/8/2012. For the monitoring event listed 9/6/2012 , the actual event was conducted 9/4-9/5/2012. For the monitoring event listed 3/5 , the actual event was conducted 3/4-3/5/2013. For the monitoring event listed 9/3, the actual event was conducted 9/3-9/4/2013. For the monitoring event listed 3/2, the actual event was conducted 3/3-3/4/2014. See event COC for actual collection date.

Data Validation Report for GC/MS Fraction. Monitoring Event: 3/4/2014

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

Watauga County Landfill Facility ID 95-02

Analyte	Sample ID	Laboratory Results (ug/L)		Validated Results (ug/L)		LOQ/CRQL (ug/L)	Dilution	Validation Notes
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Method: *8260B*								
Acrolein	MW-9	5	U	U	J	5	1	Analyte not detected. Sample pH <2 SU.
Benzene	MW-9	0.12	J	0.12	J	0.5	1	Result < LOQ.
Chlorobenzene	MW-9	0.024	J	0.024	J	0.5	1	Result < LOQ.
Dichlorodifluoromethane	MW-9	0.072	J	0.072	J	0.5	1	Result < LOQ.
1,1-Dichloroethane	MW-9	1.5		1.5		0.5	1	No action taken.
cis-1,2-Dichloroethene	MW-9	0.39	J	0.39	J	0.5	1	Result < LOQ.
Ethyl methacrylate	MW-9	5	U	U	J	5	1	Analyte not detected. ICV did not meet +/- 30 %D criteria (34.2%).
Methylene chloride	MW-9	0.085	J	U		0.5	1	Result < LOQ. Blank contamination in the method blank (0.057 ug/l).
Tetrachloroethene	MW-9	0.28	J	0.28	J	0.5	1	Result < LOQ.
Trichloroethene	MW-9	0.12	J	0.12	J	0.5	1	Result < LOQ.
Method: *8260B*								
Benzene	S-2	0.12	J	0.12	J	0.5	1	Result < LOQ.
Chlorobenzene	S-2	0.1	J	0.1	J	0.5	1	Result < LOQ.
Chloroethane	S-2	2.5		2.5		0.5	1	No action taken.
1,4-Dichlorobenzene	S-2	0.56		0.56		0.5	1	No action taken.
Dichlorodifluoromethane	S-2	0.093	J	0.093	J	0.5	1	Result < LOQ.
1,1-Dichloroethane	S-2	0.4	J	0.4	J	0.5	1	Result < LOQ.
cis-1,2-Dichloroethene	S-2	0.065	J	0.065	J	0.5	1	Result < LOQ.
Method: *8260B*								
1,1-Dichloroethane	S-4	0.56		0.56		0.5	1	No action taken.
cis-1,2-Dichloroethene	S-4	0.71		0.71		0.5	1	No action taken.
Trichloroethene	S-4	0.14	J	0.14	J	0.5	1	Result < LOQ.

Definitions: LOQ Denotes laboratory limit of quantitation. **CRQL** Denotes laboratory contract required quantitation limit.
U Denotes analyte not detected above detection limit or LOQ/CRQL. **J** Denotes analyte is estimated. When used with a "U" (i.e., "UJ"), denotes analyte not detected above detection limit or LOQ/CRQL and LOQ/CRQL is estimated. **UA** denotes analyte not detected at or above the adjusted LOQ. **B** Denotes result attributed to blank contamination, a laboratory data qualifier. R Denotes result rejected.
Target analytes not listed above were not detected at or above the laboratory detection limit, LOQ/CRQL and no data qualification was required. For method reference CLP SOW-use CRQL.
CompuChem NC Certification Number 79. Lancaster Laboratories NC Certification Number 42705.
Notes: Due to format limitations, for the monitoring event listed as 3/9/2012, the actual event was 3/7/2012-3/8/2012. For the monitoring event listed 9/6/2012, the actual event was conducted 9/4-9/5/2012. For the monitoring event listed 3/5, the actual event was conducted 3/4-3/5/2013. For the monitoring event listed 9/3, the actual event was conducted 9/3-9/4/2013. For the monitoring event listed 3/2, the actual event was conducted 3/3-3/4/2014. See event COC for actual collection date.

Data Validation Report for GC/MS Fraction. Monitoring Event: 3/4/2014

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

Watauga County Landfill Facility ID 95-02

Analyte	Sample ID	Laboratory Results (ug/L)	Validated Results (ug/L)	LOQ/CRQL (ug/L)	Dilution	Validation Notes
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC						
Method: *8260B*						
1,1,1-Trichloroethane	S-5	1	1	0.5	1	No action taken.

Definitions: LOQ Denotes laboratory limit of quantitation. **CRQL** Denotes laboratory contract required quantitation limit.
U Denotes analyte not detected above detection limit or LOQ/CRQL. **J** Denotes analyte is estimated. When used with a "U" (i.e., "UJ"), denotes analyte not detected above detection limit or LOQ/CRQL and LOQ/CRQL is estimated. **UA** denotes analyte not detected at or above the adjusted LOQ. **B** Denotes result attributed to blank contamination, a laboratory data qualifier. R Denotes result rejected.
Target analytes not listed above were not detected at or above the laboratory detection limit, LOQ/CRQL and no data qualification was required. For method reference CLP SOW-use CRQL.
CompuChem NC Certification Number 79. Lancaster Laboratories NC Certification Number 42705.
Notes: Due to format limitations, for the monitoring event listed as 3/9/2012, the actual event was 3/7/2012-3/8/2012. For the monitoring event listed 9/6/2012, the actual event was conducted 9/4-9/5/2012. For the monitoring event listed 3/5, the actual event was conducted 3/4-3/5/2013. For the monitoring event listed 9/3, the actual event was conducted 9/3-9/4/2013. For the monitoring event listed 3/2, the actual event was conducted 3/3-3/4/2014. See event COC for actual collection date.

Data Validation Report

INORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a limited review of the analytical results for the March 3-4, 2014 groundwater monitoring event at the Watauga County Landfill, Facility ID 95-02. The sample locations MW-2, MW-3, MW-8, MW-9, MW-12 and MW-17 were analyzed for six inorganic target parameters: barium, chromium, cobalt, iron, nickel, and vanadium. All metals, except for iron, were analyzed by Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) SW-846 Method 6020A. Iron was analyzed by USEPA SW-846 Method 6010C (ICP). Target metals were analyzed for their total concentrations. Sample MW-3 was designated as the project specific quality control (QC) sample (i.e., the analytical sample duplicate and matrix spike). Validation of other required methods presented on separate reports. The following information and attached table summarize the inorganic data review results.

CompuChem, a Division of Liberty Analytical Corporation (CompuChem), of Cary, North Carolina, performed the inorganic analyses. The final certificate of analysis (WO# 1403006) was received on March 28, 2014.

On behalf of Watauga County, CompuChem submitted results to Draper Aden Associates in a final certificate of analysis which included sample analytical results as well as relevant documentation to verify and validate the results. The results of this data validation presented here are based upon a review of QA/QC information including holding times, preservation procedures and standards, blank samples analyses (method and calibration blanks), interference check sample results, matrix spike/matrix spike duplicate (MS/MSD) or analytical sample duplicate, laboratory control sample (LCS), serial dilution criteria, MDL information. Review was performed on summary sheets provided by the laboratory, unless a notable discrepancy in the data package required additional review of the raw data. The completeness of this data package was verified. The data package included instrument analytical data, chain of custody and preparation logs.

CompuChem received the samples on ice and in good condition with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel. Technical holding time and preservation criteria were met. Due to a change in the regulatory limits, the laboratory was requested to analyze the samples using the low-level ICP-MS for the target analytes except for iron.

The revised certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The certificate of analysis demonstrated the ability of the laboratory to achieve the project quantitation limit (LOQ) for each target parameter. LOQs were equal to or less than the respective USEPA MCL drinking water standard and North Carolina groundwater quality standards, where applicable.

QC documentation criteria were met. Instrument calibration and calibration verification criteria were met. LOQ standards, blank samples, interference check samples, pre-digestion MS and analytical sample duplicate, LCS and serial dilution samples were analyzed as required and

quality control criteria were met except where noted below. Deviations from specific control limits and QA/QC controls that were identified during the data review process are summarized below.

Cobalt and nickel were reported in the laboratory preparation blank. Cobalt and nickel sample results less than the LOQ were attributed to laboratory blank contamination and qualified as "U", analyte not detected at or above the project LOQ. No other data qualification associated with blank results was required.

Sample results greater than the LOQ and unaffected by the above data validation process remain as reported by the laboratory. Sample results were reported and validated to at or above the method detection limit (MDL). Results reported between the MDL and LOQ were considered estimated and qualified as "J." No results were rejected based on the data validation criteria.

INORGANIC DATA EVALUATION FOR ICP SW-846 METHOD 6010C

"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. DOCUMENTATION COMPLETENESS CRITERIA:

Data Quality Objective: Representativeness

☑ Chain of custody - including sampler signatures, date and time of sampling, sample ID, analysis requested; Custody transfers must be signed and dated

B. DETECTION LIMIT AND QUANTITATION LIMIT CRITERIA:

Data Quality Objective: Analytical Sensitivity

☑ Specific detection limits/quantitation limit (LOQs) for all target analytes
☑ Standard analyzed at or below the LOQ (LLQC), digested, 70-130% recovery, analyzed after MDL determination and as needed
☑ Passed single blind performance evaluation study within 12 months
☑ Passing MDL check sample
☑ Target analytes analyzed by requested method

C. INITIAL DEMONSTRATION OF CAPABILITY (IDOC) CRITERIA:

Data Quality Objective: Laboratory Method Sensitivity

☑ IDOC for analyst JCF submitted previously

D. TECHNICAL HOLDING TIME / PRESERVATION / PREPARATION METHOD:

Data Quality Objective: Representativeness

☑ Digestion method: 3010A
☑ 6 month holding time, pH <2 w/ HNO_3

E. INSTRUMENT CALIBRATION CRITERIA:

Data Quality Objective: Laboratory Accuracy

☑ 1 calibration blank and at least 1 standard
1 calibration blank and at least 3 standards (alternate calibration)
☑ Linear curve fit with correlation coefficient $r \geq 0.998$

F. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:

Data Quality Objective: Laboratory Accuracy

☑ ICV, analyzed prior to analysis (90-110% R)
☑ LLICV concentration at LOQ, prior to analysis (70-130% R)
☑ CCV prior to analysis, after every 10 samples, end of analysis, 90-110%
☑ LLCCV concentration at LOQ, prior to analysis, after each batch of 20 samples and end of analysis (70-130% R)

G. BLANK SAMPLE CRITERIA:

Data Quality Objective: Sensitivity/Instrument Drift/Contamination Evaluation

Trip Blank (check only if analyzed)
Equipment Blank (check only if analyzed)
☑ Method/Other Lab Blanks (check only if analyzed)
☑ Interference free
☑ CCB 10 sample frequency

H. INTERFERENCE CHECK SAMPLE (ICS) CRITERIA:

Data Quality Objective: Analytical Accuracy/Verification of Isobaric Interference Corrections

- ☑ ICS analyzed at beginning of analytical run (80-120% ICSAB Recovery)

I. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

Data Quality Objective: Method Precision in Sample Matrix

- ☑ All analytes, one MSD or sample duplicate per batch of 20 samples
- ☑ RPD $\leq$ 20 between MS and MSD or sample and duplicate results
- ☑ Recovery 75-125% for MSD

J. MATRIX SPIKE (MS) CRITERIA:

Data Quality Objective: Method Precision in Sample Matrix

- ☑ Recovery of MS analytes within 75-125%
- ☑ All analytes, spiked prior to digestion, one MS per batch of 20 samples
- ☑ Post digestion spike if MS/MSD recoveries fail (80-120 %R)

K. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

Data Quality Objective: Laboratory Method Accuracy, Laboratory Performance

- ☑ LCS for all analytes
- ☑ Recovery 80-120% all analytes
- ☑ Independent source for LCS standard

L. SERIAL DILUTION CRITERIA:

Data Quality Objective: Accuracy in Sample Matrix

- ☑ Similar matrix
- ☑ <10% Difference (applicable when concentration >10X LOQ)

M. SAMPLE RESULTS CRITERIA:

Data Quality Objective: n/a

- ☑ Results reported within ICP linear calibration range
- ☑ Results reported to detection limit

REFERENCES:

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004 and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010, where applicable). Validation of this data set is limited to review of items detailed in this data review report.

INORGANIC DATA EVALUATION FOR SW-846 ICP-MS METHOD 6020A

"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. DOCUMENTATION COMPLETENESS CRITERIA:

Data Quality Objective: Representativeness

- ☑ Chain of custody – Custody transfers must be signed and dated
- ☑ Chain of custody properly and completely filled out including sampler signatures, date and time of sampling, sample ID, analysis requested

B. DETECTION LIMIT AND QUANTITATION LIMIT CRITERIA:

Data Quality Objective: Analytical Sensitivity

- ☑ Specific detection limit reported
- ☑ Specific quantitation limit reported
- ☑ Instrument detection limit (IDL) less than LOQ
- ☑ Performance evaluation (PE) sample analyzed within 12 months

C. INITIAL DEMONSTRATION OF CAPABILITY (IDOC) CRITERIA:

Data Quality Objective: Laboratory Method Sensitivity

- ☑ Analyst IDOC for JCF submitted previously

D. SAMPLE AND STANDARD PREPARATION CRITERIA:

Data Quality Objective: Accuracy and Representativeness

- ☑ Digestion prior to analysis
- ☑ Digestion method: 3005A
- ☑ Samples and standards matrix matched

E. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

Data Quality Objective: Representativeness

- ☑ 6 month holding time, pH<2 with Nitric Acid (HNO_3)

F. INSTRUMENT TUNE CRITERIA:

Data Quality Objective: Verify Operating Conditions

- ☑ Prior to calibration
- ☑ Relative Standard Deviation (RSD) </=5%
- ☑ Resolution < 0.9 amu full width at 10% peak height (or lower)
- ☑ Mass calibration </=0.1 amu difference from true value

G. INITIAL CALIBRATION CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ 1 calibration blank and at least 1 standard,
- ☑ Linear curve fit with correlation coefficient r>0.998
- ☑ Daily calibration following tuning and prior to sample analysis

H. INITIAL CALIBRATION VERIFICATION (ICV) CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ Daily following initial calibration - Independent/second source used for standard
- ☑ ICV recovery 90-110% - near mid-point of calibration curve
- ☑ Low level ICV (LLICV) – prior to analysis, at LOQ concentration, 70-130% recovery

I. INITIAL CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☑ Daily following ICV
- ☑ Interference free

J. LOQ CHECK STANDARD CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity

- ☑ Standard analyzed at or below the LOQ (LLQC), digested, analyzed after MDL determination and as needed
- ☑ LOQ standard recovery 70-130%

K. CONTINUING CALIBRATION VERIFICATION (CCV) CRITERIA:

Data Quality Objective: Laboratory Analytical Accuracy

- ☑ CCV, prior to analysis, after every 10 samples, at end of analysis
- ☑ CCV recovery within 90-110%, mid-point of curve concentration
- ☑ Low level CCV (LLCCV), concentration at LOQ, prior to analysis and at end of analysis batch (70-130%).

L. CONTINUING CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☑ Immediately after the CCV, 10 sample frequency
- ☑ Interference free

M. BLANK CRITERIA:

Data Quality Objective: Sensitivity/Instrument Drift/Contamination Evaluation

- Trip Blank (check only if analyzed)
- ☑ Method/Other Lab Blanks (check only if analyzed), one per digestion batch
- ☑ Interference free

N. INTERFERENCE CHECK SAMPLE (ICS) CRITERIA:

Data Quality Objective: Analytical Accuracy/Verification of Isobaric Interference Corrections

- ☑ At beginning of analytical run
- ☑ Recovery: 80-120% for ICSAB

O. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

Data Quality Objective: Method Precision in Sample Matrix

- ☑ All analytes, one MSD or sample duplicate per batch of 20 samples
- ☑ Spiked prior to sample preparation
- ☑ RPD $\leq$ 20 between MS and MSD results or sample and duplicate results

P. MATRIX SPIKE (MS) CRITERIA:

Data Quality Objective: Method Accuracy in Sample Matrix

- ☑ All analytes, one MS per digestion batch of 20 samples
- ☑ Spiked prior to sample preparation
- ☑ Recovery: 75-125%

Q. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

Data Quality Objective: Laboratory Method Accuracy, Laboratory Performance

- ☑ 1 LCS per 20 samples, all analytes, Recovery: 80-120%

R. INTERNAL STANDARDS (IS) CRITERIA:

Data Quality Objective: Analytical Accuracy in Sample Matrix

- ☑ IS intensities, IS added to each sample and QC sample
- ☑ Relative intensity (RI) should be within 70-125%

S. SERIAL DILUTION TEST CRITERIA:

Data Quality Objective: Accuracy in Sample Matrix

- ☑ <10% Difference (applicable when concentration >10X LOQ)

T. SAMPLE QUANTITATION AND GENERAL REPORTING CRITERIA:

Data Quality Objective: n/a

- ☑ Sample results reported within instrument calibration range
- ☑ Sample results reported to the method detection limit

REFERENCES:

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Data Validation Report for Inorganics Fraction. Monitoring Event: 3/4/2014

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Watauga County Landfill Facility ID 95-02

Analyte	Sample ID	Laboratory Results (ug/L)	Validated Results (ug/L)	LOQ/CRQL (ug/L)	Validation Notes
Method: 6010C					
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC					
Iron	MW-3	7340	7340	200	No action taken.
	MW-8	2220	2220	200	No action taken.
	MW-9	142 J	142 J	200	Result < LOQ.

Definitions: CRQL/LOQ Denotes contract/project required quantitation limit. **B or J** Denote result < CRQL/LOQ, an estimated value (a laboratory data qualifier). **R** Denotes res
J Denotes result is estimated (data validation qualifier). Target analytes not listed above were not detected above detection limit and no data qualification was required.

Data Validation Report for Inorganics Fraction. Monitoring Event: 3/4/2014

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Watauga County Landfill Facility ID 95-02

Analyte	Sample ID	Laboratory Results (ug/L)	Validated Results (ug/L)	LOQ/CRQL (ug/L)	Validation Notes
Method: 6020A					
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC					
Barium	MW-2	237	237	10	No action taken.
	MW-3	187	187	10	No action taken.
	MW-8	62.3	62.3	10	No action taken.
	MW-9	380	380	10	No action taken.
	MW-12	298	298	10	No action taken.
	MW-17	238	238	10	No action taken.
Chromium	MW-2	0.236 J	0.236 J	2	Result < LOQ.
	MW-3	10.1	10.1	2	No action taken.
	MW-8	2.83	2.83	2	No action taken.
	MW-9	0.432 J	0.432 J	2	Result < LOQ.
	MW-12	0.312 J	0.312 J	2	Result < LOQ.
	MW-17	0.4 J	0.4 J	2	Result < LOQ.
Cobalt	MW-2	0.128 J	U	1	Result < LOQ. Blank contamination in the prep blank.
	MW-3	1.69	1.69	1	No action taken.
	MW-8	1.12	1.12	1	No action taken.
	MW-9	4	4	1	No action taken.
	MW-12	1.38	1.38	1	No action taken.
	MW-17	1.25	1.25	1	No action taken.
Nickel	MW-2	0.803 J	U	1	Result < LOQ. Blank contamination in the prep blank.
	MW-3	4.74	4.74	1	No action taken.
	MW-8	2.48	2.48	1	No action taken.
	MW-9	1.79	1.79	1	No action taken.
	MW-12	3.16	3.16	1	No action taken.
	MW-17	1.57	1.57	1	No action taken.
Vanadium	MW-2	1.11 J	1.11 J	5	Result < LOQ.
	MW-3	13.8	13.8	5	No action taken.
	MW-8	3.74 J	3.74 J	5	Result < LOQ.
	MW-9	0.137 J	0.137 J	5	Result < LOQ.

Definitions: CRQL/LOQ Denotes contract/project required quantitation limit. **B or J** Denote result < CRQL/LOQ, an estimated value (a laboratory data qualifier). **R** Denotes res
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Data Validation Report for Inorganics Fraction. Monitoring Event: 3/4/2014

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Watauga County Landfill Facility ID 95-02

Analyte	Sample ID	Laboratory Results (ug/L)	Validated Results (ug/L)	LOQ/CRQL (ug/L)	Validation Notes
Method: 6020A					
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC					
Vanadium	MW-12	0.694 J	0.694 J	5	Result < LOQ.
	MW-17	0.148 J	0.148 J	5	Result < LOQ.

Definitions: CRQL/LOQ Denotes contract/project required quantitation limit. **B or J** Denote result < CRQL/LOQ, an estimated value (a laboratory data qualifier). **R** Denotes res
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