LABELLA Associates, D.P.C.
Engineering
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Planning

Property-Specific Soil Vapor Intrusion Investigation Report: 1770 Emerson Street

Former Emerson Street Landfill
NYSDEC Site #828023

Location:

Former Emerson Street Landfill
1770 Emerson Street
Rochester, New York

Prepared for:

City of Rochester
Division of Environmental Quality
Room 300-B
Rochester, New York 14614

LaBella Project No. 210173

July 2017

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I. Executive Summary

1770 Emerson Street ("the Site") is located on the Former Emerson Street Landfill (FESL) which operated as a municipal landfill by the City of Rochester ("the City") from sometime between the 1940s and 1951 until 1971. Based on an initial assessment of all buildings across the FESL conducted from 2009-2011 by LaBella Associates D.P.C. ("LaBella") on behalf of the City, the Site building was recommended for soil vapor intrusion (SVI) testing. Subsequently, LaBella conducted SVI testing at the Site on behalf of the City to evaluate the presence of SVI due to the FESL. This report documents the SVI testing completed and presents the findings and conclusions of the testing.

Summary of Testing

The initial SVI testing was completed on March 21, 2016 and consisted of the collection of three (3) sub-slab samples with collocated indoor air samples, and one (1) outdoor air sample to evaluate background conditions. The samples were collected over an approximate 6-hour timeframe and analyzed for a select list of volatile organic compounds (VOCs) known to be associated with the FESL.

The testing was completed in accordance with a New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) approved *Soil Vapor Intrusion Investigation Work Plan: Phase II: Parcel Specific Investigation* dated January 2016 and the *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 and subsequent updates dated September 2013 and August 2015 ("NYSDOH Guidance"). A comparison of the first round of samples to the NYSDEC Guidance decision matrices required that actions be taken to identify sources and reduce exposures in the automotive repair portion of the building. Subsequently, VOC-containing products were removed from the automotive repair portion of the building and the indoor air was resampled. The compounds detected in the first round that warranted further action were not detected in indoor air during the second round of sampling indicating the compounds were associated with an indoor air source (i.e., automotive repair operations).

It should be noted the NYSDOH Guidance Decision Matrices were updated in May 2017. A comparison of detected compounds from the first round of sampling to the updated decision matrices changed the required actions for two (2) compounds (cis-1,2-dichloroethene and vinyl chloride) from *"take reasonable and practical actions to identify source(s) and reduce exposure"* to *"identify sources and resample or mitigate"*. Although the updated decision matrices changed the required action for cis-1,2-dichloroethene and vinyl chloride, these two (2) compounds were not detected in indoor air after removing VOC-containing products and resampling; as such, the detection of these compounds was determined to be due to an indoor air source.

Conclusions and Recommendations

The indoor air sampling conducted after removing VOC-containing products from the automotive repair portion of the building did not identify VOCs at levels requiring further action; as such, the VOCs detected during the first round of sampling appear to be due to an indoor air source and not FESL-related. Based on the assessments completed to date, no further action related to SVI associated with the FESL is warranted at the Site.

1.0 Introduction

This Property-Specific Sol Vapor Intrusion Investigation report is for the property located at 1770 Emerson Street, City of Rochester, Monroe County, New York ("the Site"). The Site is located within the Former Emerson Street Landfill (FESL) which operated as a municipal landfill by the City of Rochester ("the City") from the sometime between the 1930s and 1951 until 1971. The City entered into an Order-on-Consent with the New York State Department of Environmental Conservation (NYSDEC) in August 2009 which requires an evaluation of soil vapor intrusion (SVI) due to FESL-related releases. The Order-on-Consent also requires additional remedial investigations, remedial measures, and other mitigation and corrective actions associated with the FESL.

An initial SVI assessment consisting of building inventory and field screening of indoor air was conducted at buildings across the FESL by LaBella Associates, D.P.C. ("LaBella") on behalf of the City from 2009-2011. The results of the initial SVI assessment were summarized in a report titled *Soil Vapor Intrusion Assessment Report: Data Review, Site Screening and Site Prioritization* dated June 2011 (hereinafter referred to as the "SVI Assessment Report"). The initial SVI assessment ranked buildings on the FESL for likelihood for SVI-related issues due to the FESL. The Preliminary Building Assessment and Site Reconnaissance conducted for the Site is included as Appendix 4. The NYSDEC and New York State Department of Health (NYSDOH) provided comments to this report on May 24, 2013.

Based on the initial SVI assessment, a Work Plan titled *Soil Vapor Intrusion Investigation Work Plan: Phase II: Parcel Specific Investigation* (hereinafter referred to as the "SVI Work Plan") was submitted to the NYSDEC and NYSDOH in April 2013. The SVI Work Plan proposed SVI investigations at properties that were ranked at greatest risk for SVI during the initial assessment. The NYSDEC and NYSDOH provided comments to the SVI Work Plan on April 23, 2015 and the SVI Work Plan was resubmitted in January 2016 to address NYSDEC and NYSDOH comments. SVI investigations were completed beginning in March 2016.

The 1770 Emerson Street property has an approximate 12,000 square foot building that serves as office and automobile repair shop ("The Little Speed Shop"), and a coffee supply and service company. This property was recommended for SVI testing (sub-slab/indoor air).This report details the testing completed and the results.

2.0 Former Emerson Street Landfill Description and History

The FESL consists of approximately 250-acres of land comprised of 45 individual parcels, seven (7) of which are owned by the City. The remaining 38 parcels are owned by 25 private owners. The FESL is predominantly occupied by industrial and commercial properties (15 and 20, respectively based on use codes). In addition, City use codes indicate 5 parcels as vacant land, one (1) parcel as unknown (McCrackenville Street) and four (4) parcels are listed as community/public service (one of which is a school, Edison Tech). The surrounding area also contains industrial and commercial properties; however, residential properties are also located to the northeast. Figure 1 provides a project locus map that indicates the area of the FESL.

Prior to FESL operation, the area was primarily vacant and relatively flat lying, with a wetland located in the north-central portion of the site. As a result of landfilling activities, the FESL has been elevated approximately 15+ feet above the surrounding area. An industrial park with existing buildings constructed as early as 1971, presently occupies most of the FESL, including larger facilities and various smaller industrial/commercial facilities, as well as several undeveloped parcels and undeveloped land on otherwise developed parcels.

The FESL was operated by the City beginning between sometime in the 1940's and 1951 to 1971 as a landfill. The landfill was used to dispose of ash derived from the incineration of municipal waste at the City's incinerators. Ash fill and construction and demolition debris were the primary waste materials placed in the landfill. Information pertaining to the incinerator operational status and efficiency indicates that the incinerated materials were completely combusted until approximately 1964 when the incinerator efficiency decreased. Landfilling began south of Emerson Street and gradually expanded northward and eastward to include areas between Emerson Street and Lexington Avenue and east of Colfax Street and south of Emerson Street. Open burning of refuse reportedly occurred in the late 1960s and early 1970s due to operational problems with the incinerators. Fill during this time frame was reportedly being placed north of Emerson Street. In May of 1971 the City's incinerators were shut down; however un-incinerated municipal refuse continued to be placed north of Emerson Street until August of 1971. In August 1971, refuse disposal was ceased at FESL and disposal shifted to a different county landfill. In 1971 the landfill was officially closed and a contract for the closure of the eastern half of the landfill specified 2 feet of cover material (preferred to be a sandy loam) to be placed and compacted to 30% in 1 foot lifts. In September 1971 a contract was awarded for the closure of the western portion of the landfill. Since closure, the majority of the Site has been developed for commercial and industrial uses in addition to one high school.

The general types of wastes encountered in investigations at the FESL site include the following:

- Municipal Incinerator Ash - generally consisting of ash, cinders, charred refuse, glass and metal slag. Most ash observed in site investigations appears to be fly ash and bottom ash (clinker) from the municipal solid waste incinerators. This generally consists of soil and rock fill with traces of plastic, metal, wood, concrete, bricks, tiles, and asphalt. Construction and demolition debris observed in past investigations generally fits the definition of construction demolition debris contained in NYSDEC's Part 360. Construction demolition debris fill is common in areas adjacent to current and former roadways on site, and particularly in the lobe of fill south of Emerson Street and east of Colfax Street.
- Soil and Municipal Refuse - This material generally consists of silty sand cover material and disposed, un-incinerated municipal refuse.
- Low-activity Radioactive Waste - This material generally consisted of a sludge-like waste material associated with glass lenses. The sludge was found to contain low levels of radioactive thorium. This material was primarily encountered in the southwest portion of the FESL and was believed to be associated with incinerator ash and refuse fills. This material was removed by Sevenson Environmental Services on behalf of the City of Rochester (refer to Section 3.0 Previous Investigations).
- The majority of the existing landfill has a soil cover. Cover ranges in thickness from 0 ft. up to approximately 6 ft. Cover materials generally consist of topsoil with grass, gravel, asphalt, or glacial till-derived sandy silt.

A majority of the Site has been delisted; however, three (3) parcels (1660,1740, and 1700 Emerson Street (formerly 1655 Lexington Avenue) comprising approximately sixteen (16) acres are currently listed as a Class "3" site (No. 828023) on the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites (IHWDS). A "3" classification indicates a site "at which contamination does not presently constitute significant threat to public health or the environment." The most recent delisting occurred when LaBella submitted a Delisting Petition on December 9th, 2014, for the parcel currently addressed as1655 Lexington Avenue (formerly 1635 Lexington Avenue and a portion of former 1655 Lexington Avenue) to delist approximately 13.3 acres of land from the NYSDEC Registry of IHWDS. NYSDEC approved this delisting on March 19th, 2015, and the newly delisted land was combined into one parcel with address 1655 Lexington Avenue. The remaining portion of former 1655 Lexington Avenue was renamed 1700 Emerson Street.

3.0 Previous Investigations Related to Soil Vapor Intrusion

A significant number of investigations have been previously conducted at the Site. This section presents pertinent and significant findings in relation to SVI from select previous investigations; a more detailed review can be obtained from each individual report.

Former Emerson Street Landfill Sub-Slab Ventilation Guidance (SSVG) Document Update 2013 dated October 2013*:*

This document was an update of the 2007 version which evaluated and mapped historical information regarding the variable composition of the landfill and analytical data at specific locations. The 2013 document provided an update on SSVG based on additional SVI investigations at the FESL. In 2010, the City of Rochester began a SVI investigation to systematically assess potential vapor intrusion issues at the FESL. This work included detailed assessments of each existing building on the FESL, installation of additional monitoring wells, and sampling of these new wells and several existing wells, catalogue and review of existing historical data regarding the FESL, and review of stereoscopic historic aerial photographs. The results were documented in a report dated June 2010 titled "*Soil Vapor Intrusion Assessment Report: Data Review, Site Screening & Site Prioritization, Former Emerson Street Landfill, NYSDEC Site #828023"*. The 2013 SSVG details methodology for selecting an appropriate ventilation system dependent on landfill gas and VOC measurements. In addition, previous reports are summarized providing pertinent information on types and concentrations of contaminants detected.

Available analytical data types relevant to soil vapor migration include the following:

- ground surface landfill gas flux measurements throughout the landfill;
- soil gas measurements for methane, vinyl chloride (a Chlorinated-VOC), and the VOCs: benzene, toluene, ethylbenzene, and xylenes (BTEX) across a limited area (portions of the state-listed IHWDS portion of the landfill);
- photo-ionization detector (PID) measurements taken in utility vaults and sewers along roadways surrounding the landfill;
- soil samples for select Chlorinated-VOCs from borings across the landfill; and
- groundwater samples for select Chlorinated-VOCs from wells installed across the landfill.

The FESL SSVG 2013 also summarized the existing soil gas contamination information included in

"Former Emerson Street Landfill, Modified Remedial Investigation", H&A of New York, January 1994. During this investigation, landfill gas measurements were obtained across the landfill area with specially-designed gas flux chambers. As summarized in the report, landfill gas is typically composed of 58% methane, 42% carbon dioxide, and trace amounts of hydrogen sulfide and other organic compounds. Methane emission rates varied in the FESL samples from a minimum of 7.8 to a maximum of 1200 µg/m^2-minute. The H&A report also contains analytical information for Chlorinated-VOCs in soil, groundwater, and utility vault water samples, and PID readings for utility vaults and manholes. Analytical results indicated the presence of Chlorinated-VOCs at various locations throughout the landfill, but concentrated in the IHWDS portion.

The report "*Former Emerson Street Landfill Remedial Investigation Report for Parcels 4, 10, and 11*", LaBella Associates P.C., and Geomatrix Consultants, Inc., March 2001, describes sampling completed in the IHWDS portion of the landfill. Sampling was completed in soil, groundwater, sewers, and extensive soil gas points. Analytical results confirmed and further delineated the presence of CVOCs in the IHWDS portion of the landfill. These parcels are located in Quadrant A, an area likely to contain direct burial municipal waste without significant incineration. The soil gas results for the specific constituents detected in this summary are briefly summarized below:

- Vinyl chloride concentrations ranged from 0.02 milligrams per cubic meter (mg/m3) to 9 mg/m3
- Benzene concentrations ranged from 0.02 mg/m^3 to 0.6 mg/m^3
- Total BTEX concentrations ranged from 0.48 mg/m^3 to 499 mg/m^3
- Chlorobenzene concentrations ranged from 0.02 mg/m^3 to 1.6 mg/m^3
- Methane concentrations ranged from 380 parts per million (ppm) (or 0.038%) to 790,000 ppm (or 79%)

The FESL can be separated into four general geographic regions (FESL Quadrants) based on the landfill waste composition and historic analytical data. The Site is located in Quadrant A (refer to Figure 1).

Portions of Quadrant A were filled during the 1970's, the last years of the landfill's operational life. At this time the incinerator was no longer operating properly, resulting in un-incinerated putrescible waste being deposited in the landfill during that period. These portions of the landfill are characterized by thicker fill, higher percentage of potentially putrescible solid waste and less incinerated ash, and higher landfill gas flux at the surface relative to other FESL areas sampled. These areas are characterized by landfill gas flux measurements between 100 and 1200 µg/m^2-minute, and/or soil gas methane concentrations above 5,000 ppm. In addition, this quadrant has also been characterized with Chlorinated-VOC contamination in soil gas, soil, and groundwater. Quadrant A has a large area of documented Chlorinated-VOC contamination. The listed IHWDS portions of the landfill are located within Quadrant A.

Soil Vapor Intrusion Assessment Report (SVI Assessment Report) dated June 2011:

LaBella was retained by the City of Rochester in January 2010 to complete a Soil Vapor Intrusion Assessment Report: Data Review, Site Screening and Site Prioritization and submitted a SVI Assessment report (June 2011) to NYSDEC. This SVI Assessment by LaBella included a detailed review of historic information available for the Site. The historic information included not only previous subsurface environmental investigations but also a detailed review of aerial photography,

subsurface data from redevelopment projects (i.e., geotechnical borings and test pits), available newspaper articles from the time the landfill was operating, and reports/papers relating to City of Rochester and Monroe County waste handling and disposal practices both historically and in particular in the 1960s/1970s. In addition, groundwater sampling of existing wells was completed, additional groundwater monitoring wells were installed, developed and sampled and a site reconnaissance was conducted at every parcel where access was granted by the property owner.

The results of the cumulative work were utilized in a ranking system that use weighted numerous criteria for each building. The criteria can be separated in to two major categories, Non-FESL related factors (e.g., how many people occupy the building, building use/ potential receptor population, building construction and condition, type of heating, ventilation system, etc.) and FESL related factors (e.g., building location in relation to the P-1 plume, location in relation to filling, readings detected during Site walkthrough, etc.). The overall scores were separated into three "Tiers" of sites. Tier 1 sites were determined to be of the highest concern for SVI due to the FESL, Tier 2 sites were determined to be of moderate to low concern for SVI due to the FESL and Tier 3 sites were determined to be of low to no concern for SVI due to FESL.

The Site is located in Quadrant A of the FESL and is approximately 1,000 feet southwest of the P-1 Plume. The Site building was ranked Tier 1 during the SVI Assessment and was recommended for SVI testing.

4.0 Objectives

The objective of this assessment was to evaluate the potential for SVI at the Site via sub-slab and indoor air testing. Work was completed in accordance with the NYSDEC and NYSDOH-approved 2016 SVI Work Plan and the *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 and subsequent updates dated September 2013 and August 2015 (NYSDOH Guidance).

5.0 Standards, Criteria and Guidelines

This section identifies the applicable Standards, Criteria and Guidelines (SCGs) for the Site related to SVI.

Sub-Slab Soil Vapor and Indoor Air SCGs: The NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 and subsequent updates for PCE and TCE in 2013 and 2015, respectively (including the USEPA Building Assessment and Survey Evaluation (BASE) Database (90th Percentile), in Appendix C of the NYSDOH document) is utilized for the SCG for soil vapor and indoor air. It should be noted the NYSDOH Guidance decision matrices were updated in May 2017 after the testing was completed. The results were also compared to the May 2017 updates.

6.0 Sampling Procedures

Sub-Slab Vapor Point Installations

Three (3) sub-slab soil vapor points were installed on March 21, 2016 (refer to Figure 2 for locations).One (1) of the sampling points was installed in the coffee warehouse (southern portion of the building) designated 1770-SVI-1 and two (2) of the sampling points were installed in the automotive repair shop (northern portion of the building) designated 1770-SVI-2 and 1770-SVI-3. The sub-slab vapor sampling points consisted of the Vapor Pin ® sampling system. Points were installed by coring a 1.5-inch diameter hole approximately 2-inches into the floor slab. Subsequently, a 5/8-inch diameter hole was drilled through the center of the 1.5-inch diameter hole using a guide through the floor slab. A 5/8-inch diameter polyethylene sleeve fitted over a metal barbed fitting was installed within the 5/8-inch diameter core hole. Sub-slab soil vapor points were fitted with a threaded cap flush to the finished floor. Figure 3 illustrates the typical construction of a sub-slab vapor sampling point.

Purging Procedures

Sub-slab monitoring points were first evaluated for pressure using a Test Products International Digital Manometer 621. Sub-slab pressures at the SVI monitoring points ranged from -0.006 to 0.00 inches of water column ("wc).

After installation of the probes, one (1) to three (3) volumes (i.e., the volume of the sample probe and tube) was purged prior to collecting the samples to ensure samples collected are representative. Flow rates for purging did not exceed 0.2 liters per minute to minimize the ambient air infiltration during sampling.

A tracer gas evaluation was conducted to verify the integrity of the sub-slab soil vapor probe seal using helium. Tubing was connected to the metal barbed fitting and an enclosure was placed over the sampling point. Subsequently, the enclosure was enriched with the tracer gas. The sub-slab and the enclosure were then tested for the tracer gas using a MDG-2002 Helium Gas Leak Detector. The tracer gas was measured at 0% in the sub-slab.

Sampling and Handling Procedures

On March 21, 2016, sub-slab soil vapor, indoor air, and outdoor air samples were collected using 1-liter Summa Canisters® equipped with pre-calibrated laboratory supplied flow regulators set for a sampling time of six (6) hours. Sub-slab samples were designated "1770-SVI-1" through "1770-SVI-3". At each sub-slab vapor sample location an indoor air sample was also collected. The collocated indoor air samples were collected from approximately 3 to 5 feet above the floor slab and were collected in the same manner and general time period as the sub-slab sample. Indoor air samples were designated "1770-IAQ-1" through "1770-IAQ-3". In addition, an outdoor air sample was collected to evaluate the ambient air conditions. The outdoor ambient air sample was collected from the general upwind direction based on prevailing wind directions. The outdoor air sample was designated "1770-Outdoor Air". Sampling logs are included in Appendix 3.

All samples were submitted under standard chain of custody procedures to Centek Laboratory in Syracuse, New York for analysis of a select list of VOCs using USEPA Method TO-15. Based on the historic data, the detailed evaluation completed as part of the SVI Report and the current heavy

manufacturing setting of the FESL, the analytical testing work was limited to compounds suspected to be due to FESL, including the following:

Compound
Tetrachloroethene
Trichloroethene
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
Vinyl Chloride
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
Chloroethane
Chloromethane

Quality Assurance/Quality Control

The Summa® Canisters were certified clean by the laboratory. Blind duplicates were collected at a rate of one (1) per ten (10) samples, or one (1) per shipment to the laboratory. Matrix spike/ matrix spike duplicate (MS/MSD) samples were collected using a 1.4-liter Summa® canister at a rate of one (1) per twenty (20) samples or one per shipment to the laboratory. The laboratory provided ASP Category B-like reports and NYSDEC EQUIS Electronic Data Deliverables (EDDs). A data usability summary report (DUSR) was prepared by Dataval, Inc.

7.0 First Round Sampling Results

First round SVI sampling and analysis consisted of the collection of three (3) collocated sub-slab and indoor air samples in addition to one (1) outdoor air sample on March 21, 2016 over an approximate 6-hour timeframe. One (1) of the locations ("1770-SVI/IAQ-1) was collected from the coffee warehouse portion of the building and two (2) of the locations ("1770-SVI/IAQ-2" and "1770-SVI/IAQ-3") were collected from the automotive repair portion of the building.

Sub-Slab/ Indoor/ Outdoor Air Sampling

SVI sampling results were compared to the decision matrices in *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York* Guidance Document dated October 2006 and subsequent updates for PCE and TCE in 2013 and 2015, respectively (NYSDOH Guidance Document). Chloromethane, cis-1,2-dichloroethene, and vinyl chloride were detected in one (1) or more indoor air samples (note that there is no air guideline for these compounds in Table 3.1 of the NYSDOH Guidance Document). Chloromethane was detected in the outdoor air at similar levels to the indoor air and is not anticipated to be a result of SVI. Cis-1,2-dichloroethene and vinyl chloride were detected in the automobile repair portion of the building and are anticipated to be a result of an indoor air source. A comparison of detected compounds in sub-slab and indoor air to the NYSDOH Guidance Document Decision Matrices indicates the following:

> *"Take reasonable and practical actions to identify source(s) and reduce exposures: The concentration detected in the indoor air sample is likely due to indoor and/or outdoor sources*

rather than soil vapor intrusion given the concentration detected in the sub-slab vapor sample. Therefore, steps should be taken to identify potential source(s) and to reduce exposures accordingly (e.g., by keeping containers tightly capped or by storing volatile organic compound-containing products in places where people do not spend much time, such as a garage or outdoor shed). Resampling may be recommended to demonstrate the effectiveness of actions taken to reduce exposures".

Based on the results of the first round of sampling, follow-up indoor air sampling following removal of VOC-containing materials in the automotive repair portion of the building was recommended.

8.0 Second Round Sampling Results

On March 3, 2017, LaBella removed VOC-containing chemicals, car parts, etc. that may be a source of elevated concentrations of cis-1,2-dichloroethene and vinyl chloride in the indoor air within the automotive repair portion of the building. Materials removed from the building were placed outside within a trailer. Refer to the photograph log included as Appendix 5 for materials removed and not removed from the building. It should be noted that some materials (i.e., cars, drums, etc.) were not removed from the building.

On March 5, 2017, indoor air and outdoor air samples were collected using 1-liter Summa Canisters® equipped with pre-calibrated laboratory supplied flow regulators set for a sampling time of six (6) hours. Three (3) indoor air samples were collected; two (2) from the sample locations sampled in March 2016 ("1770-IAQ-2 and "1770-IAQ-3") as well as an added location within the office area of the automotive repair shop ("1770-IAQ-4"). Refer to the photograph log included as Appendix 5 for photographs of the office area and automotive repair area.

All samples were submitted under standard chain of custody procedures to Centek Laboratory in Syracuse, New York for analysis the same select list of VOCs analyzed in the first round using USEPA Method TO-15.

Indoor/ Outdoor Air Sampling

One (1) compound (chloromethane) was detected in all three (3) indoor air samples and the outdoor air sample. The concentrations of chloromethane detected in indoor air samples were similar to the concentration detected in the outdoor air. The remaining compounds detected in indoor air during the first round of sampling (cis-1,2-dichloroethene and vinyl chloride) were not detected during the second round after removing VOC-containing products from the automotive repair portion of the building. Based on the lack of cis-1,2-dichloroethene and vinyl chloride in indoor air, the presence of these compounds detected during the first round of sampling is attributed to an indoor air source.

It should be noted the NYSDOH Guidance Decision Matrices were updated in May 2017. A comparison of detected compounds from the first round of sampling to the updated decision matrices changed the required actions for two (2) compounds (cis-1,2-dichloroethene and vinyl chloride) from *"take reasonable and practical actions to identify source(s) and reduce exposure"* to *"identify sources and resample or mitigate"*. Although the updated decision matrices changed the required action for cis-1,2-dichloroethene and vinyl chloride, these two (2) compounds were not detected in indoor air after

removing VOC-containing products and resampling; as such, the detection of these compounds was determined to be due to an indoor air source.

9.0 Conclusions

The Site is located southwest of the P-1 Plume in Quadrant A of the FESL. The Site is currently utilized as a coffee warehouse and an automotive repair shop with approximately 1,000 of the 12,000 square feet utilized as office space.

Two (2) collocated sub-slab and indoor air samples, in addition to one (1) outdoor air sample, were initially collected to evaluate SVI in the Site building. Based on the elevated concentrations of cis-1,2-dichloroethene and vinyl chloride detected in the indoor air within the automotive repair portion of the building during the first round, additional sampling was completed to evaluate whether the compounds detected were associated with SVI or an indoor air source. Products containing VOCs were removed from the automotive repair portion of the building and the indoor air was resampled. The resampling did not identify cis-1,2-dichloroethene or vinyl chloride in indoor air. Based on the sampling completed, the compounds detected during the first round were determined to be due to an indoor air source (i.e., automotive repair operations) and not SVI. Based on the assessment completed, there is no SVI concern due to the FESL. No further action related to SVI associated with the FESL is warranted at the Site.

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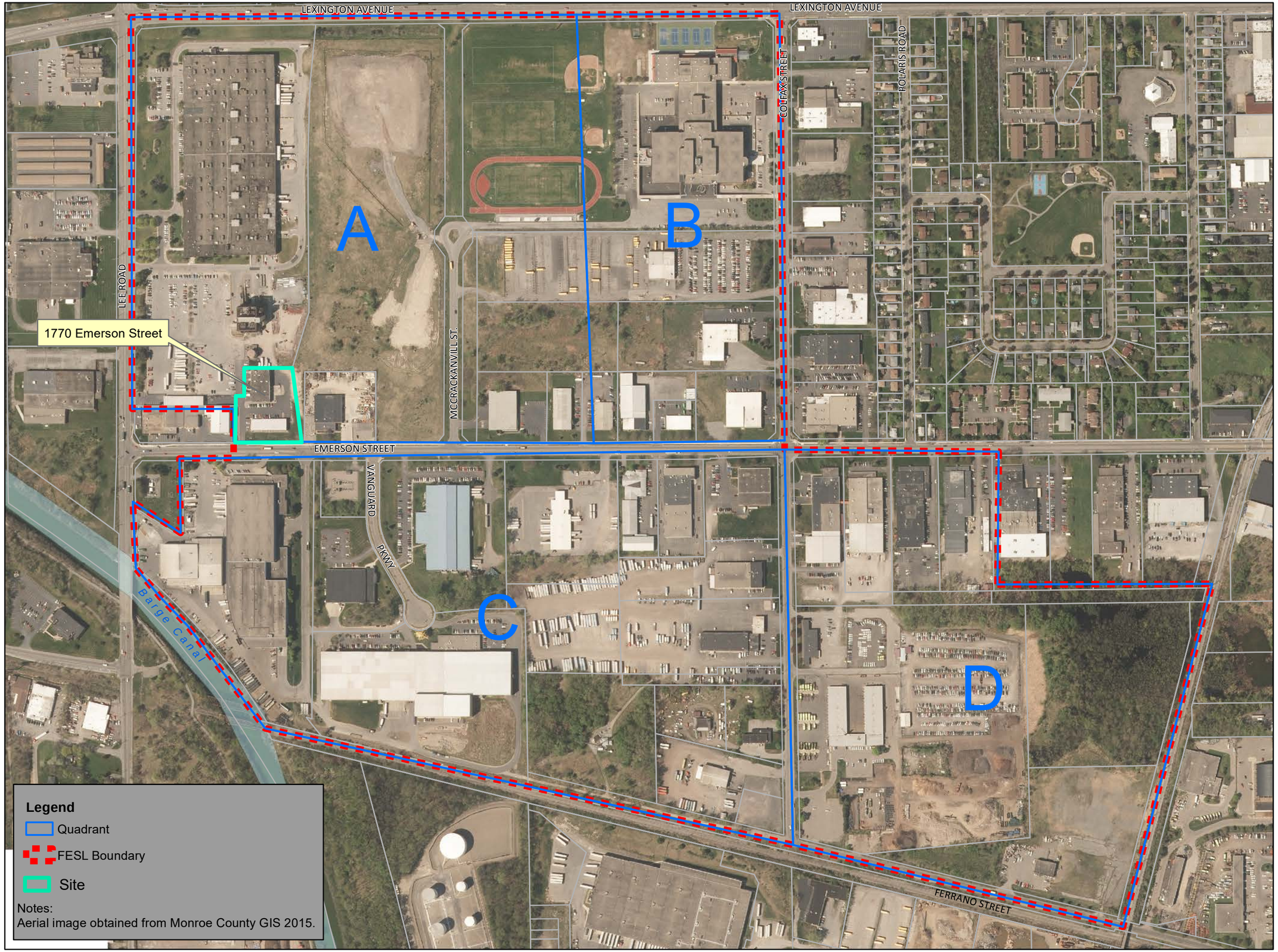
Figures



\\Projects2\Projects\NZ-2\Rochester, City\210173 FESL\Drawings\SVI Testing\For Property Specific Reports\Figure 1 1770 Emerson.mxd

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CITY OF ROCHESTER

FORMER EMERSON STREET LANDFILL
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SOIL VAPOR INTRUSION INVESTIGATION

FORMER EMERSON STREET LANDFILL PROJECT MAP

N
W E
S

0 400 Feet

1 inch = 400 feet

210173

FIGURE 1

Legend

- Outdoor Air Sample Location
- Sub-slab/ Indoor Air Sample Location
- Indoor Air Sample Only
- The Little Speed Shop Office Area
- FESL Boundary
- Parcel Boundaries
- Site

Notes:
Sub-slab, indoor, and outdoor air concentrations expressed in micrograms per cubic meter (ug/m3).
Sub-slab and indoor air samples collected on March 21, 2016. Indoor air samples only collected on March 12, 2017 after removing VOC containing products from The Little Speed Shop on March 10, 2017.
The NYSDOH decision matrices result is based on worst-case concentrations.
Pressure readings in inches water column ("wc)

Not sampled in 2016

March 12, 2017
SAMPLE TYPE: Indoor Air
SAMPLE ID: 1770-IAQ-4B
Chloromethane 1.7

The Little Speed Shop

Coffee Warehouse

1770
EMERSON

March 21, 2016
SAMPLE TYPE: Outdoor Air
SAMPLE ID: 1770-Outdoor Air
Chloromethane 1.6

March 12, 2017
SAMPLE TYPE: Outdoor Air
SAMPLE ID: 1770-Outdoor-B
Chloromethane 1.5

March 21, 2016
SAMPLE TYPE: Sub-slab
SAMPLE ID: 1770-SVI-1
Sub-slab pressure= 0.00 "wc
Tetrachloroethylene 5.2
Trichloroethene 0.97
Vinyl Chloride 0.38

SAMPLE TYPE: Indoor Air
SAMPLE ID: 1770-IAQ-1
Chloromethane 1.7

NYSDOH Guidance
Decision Matrices Result:
No further action

Not sampled in 2017

March 21, 2016
SAMPLE TYPE: Sub-slab
SAMPLE ID: 1770-SVI-2
Sub-slab pressure= 0.00 "wc
cis-1,2-Dichloroethene 3.4
Vinyl Chloride 1.8

SAMPLE TYPE: Indoor Air
SAMPLE ID: 1770-IAQ-2
1,1,1-Trichloroethane 0.65
Chloromethane 2.0
cis-1,2-Dichloroethene 3.1
Vinyl Chloride 1.8

NYSDOH Guidance
Decision Matrices Result:
Take reasonable and practical actions to identify source(s) and reduce exposures

March 12, 2017
SAMPLE TYPE: Indoor Air
SAMPLE ID: 1770-IAQ-2B
Chloromethane 2.0

March 21, 2016
SAMPLE TYPE: Sub-slab
SAMPLE ID: 1770-SVI-3
Sub-slab pressure= -0.006 "wc
1,1,1-Trichloroethane 0.93
Trichloroethene 23
Vinyl Chloride 1.6

SAMPLE TYPE: Indoor Air
SAMPLE ID: 1770-IAQ-3
Chloromethane 1.9
cis-1,2-Dichloroethene 0.91
Vinyl Chloride 0.56

NYSDOH Guidance
Decision Matrices Result:
Take reasonable and practical actions to identify source(s) and reduce exposures

March 12, 2017
SAMPLE TYPE: Indoor Air
SAMPLE ID: 1770-IAQ-3B
Chloromethane 1.7

N
W E
S
0 35 Feet
1 inch = 35 feet

LABELLA Associates, D.P.C.
300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066
www.labellapc.com

CITY OF ROCHESTER

FORMER EMERSON STREET LANDFILL
ROCHESTER, NEW YORK

SOIL VAPOR INTRUSION INVESTIGATION

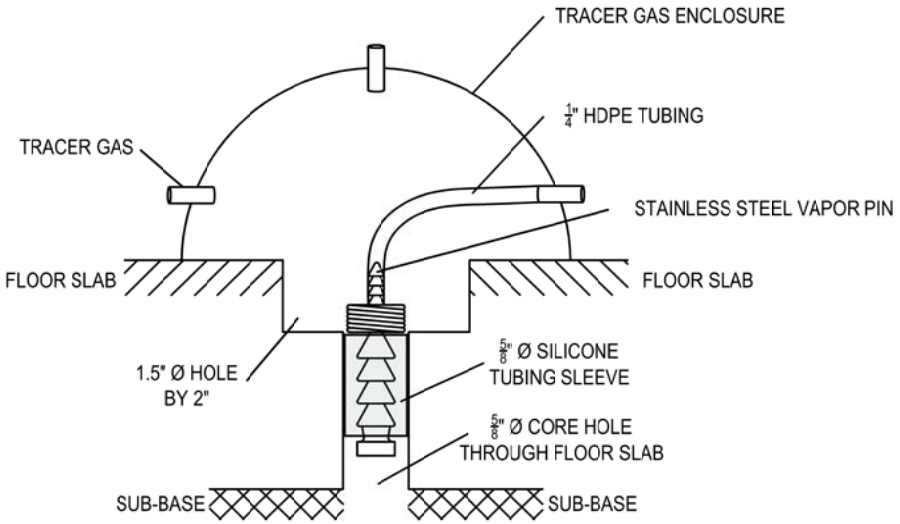
SOIL VAPOR INTRUSION SAMPLING RESULTS

1770 EMERSON ST

210173

FIGURE 1

Path: \\Projects2\ProjectsNZ-2\Rochester, City\210173 FESL\Drawings\SVI Testing\For Property Specific Reports\Figure 2 1770 Emerson.mxd



DETAIL 1

SUB-SLAB SOIL VAPOR SAMPLING POINT DETAIL

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ROCHESTER, NY 14614
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PROJECT/CLIENT
FORMER EMERSON STREET LANDFILL
CITY OF ROCHESTER
ROCHESTER, NEW YORK

DRAWING TITLE
SUB-SLAB SOIL VAPOR POINT DETAILS

ISSUED FOR: FINAL
DESIGNED BY: DPN
DRAWN BY: DEP
REVIEWED BY: DPN
DATE: MARCH, 2017

PROJECT/DRAWING NUMBER
210173
FIGURE 3

J:\Rochester, City\210173 FESL\Drawings\SVI Testing\For Property Specific Reports\SSDS_details

LaBella Associates, D.P.C.
300 State Street

Rochester, New York 14614

Tables

Former Emerson Street Landfill
1770 Emerson Street
Table 1
Soil Vapor Intrusion Testing Results
March 2016

Sample ID	1770-SVI-1	Blind Dup 2 (1770-SVI-1)	1770-SVI-2	1770-SVI-3	1770-IAQ-1	Blind Dup 1 (1770-IAQ-1)	1770-IAQ-2	1770-IAQ-3	1770-Outdoor Air	NYSDOH Sub-Slab Vapor Concentration Decision Matrix (minimum action level) [1]	NYSDOH Indoor Air Concentration (minimum action level) [1]	USEPA (2001) (BASE) Database - 90th Percentile [2]
Sample Location	**Sub-Slab**	**Sub-Slab**	**Sub-Slab**	**Sub-Slab**	**Indoor Air**	**Indoor Air**	**Indoor Air**	**Indoor Air**	**Outdoor Air**			
Sample Date	**3/21/2016**	**3/21/2016**	**3/21/2016**	**3/21/2016**	**3/21/2016**	**3/21/2016**	**3/21/2016**	**3/21/2016**	**3/21/2016**			
1,1,1-Trichloroethane	<0.82	<0.82	<0.82	0.93 J	<0.82	<0.82	0.65 J	<0.82	<0.82	<100***	<3***	20.6
1,1-Dichloroethane	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61 J	<0.61	<0.61	NL	NL	<0.7
1,1-Dichloroethene	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59 J	<0.59	<0.59	<100***	<3***	<1.4
Chloroethane	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40 J	<0.40	<0.40	NL	NL	<1.1
Chloromethane	<0.31	<0.31	<0.31	<0.31	1.7	<0.31	2.0 J	1.9 J	1.6	NL	NL	3.7
cis-1,2-Dichloroethene	<0.59	<0.59	3.4	<0.59	<0.59	<0.59	3.1 J	0.91 J	<0.59	<100***	<3***	<1.9
Tetrachloroethylene	5.2 J	6.3 J	<1.0	<1.0	<1.0	<1.0	<1.0 J	<1.0	<1.0	<100***	<3*** / 30*	15.9
trans-1,2-Dichloroethene	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59 J	<0.59	<0.59	NL	NL	NL
Trichloroethene	0.97 J	1.4 J	<0.81	**23**	<0.21	<0.21	<0.21 J	<0.21	<0.21	<5 **	<0.25** / 2*	4.2
Vinyl chloride	0.38	<0.38	1.8	1.6	<0.10	<0.10	1.8 J	0.56 J	<0.10	<5**	<0.25**	<1.9

Notes:

Concentrations in micrograms per cubic meter (ug/m^3)

Samples analyzed by USEPA Method TO-15

< indicates the concentration was not detected above the reporting limit

(1) New York State Department of Health (NYSDOH), Guidance for Evaluating Soil Vapor Intrusion in the State of New York. [Note: This Guidance uses a combination of indoor air and sub-slab soil vapor when comparing to the matrices. In addition, for compounds not listed in the matrices an overall site approach is employed which utilizes the USEPA BASE Database (see 2. below) as typical background for commercial buildings and also uses the outdoor air sample, refer to Guidance document for details.]

referenced for the indoor air sampling results. This database is also referenced to provide initial benchmarks for comparison to the air sampling data and does not represent regulatory standards or compliance values.

***** = Air Guideline Values obtained from Table 3.1, NYSDOH, Guidance for Evaluating Soil Vapor Intrusion in the State of New York as updated by a September 2013 Fact Sheet for PCE and an August 2015 Fact Sheet for TCE.

****** = Guideline Value obtained from Soil Vapor/Indoor Air Matrix 1 (minimum action level), NYSDOH, Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

******* = Guidance Value obtained from Soil Vapor/Indoor Air Matrix 2 (minimum action level), NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

Bold type denotes that the compound was detected at a concentration that was found to exceed the NYSDOH Sub-Slab Vapor Concentration Decision Matrix (minimum action level).

Underlined type denotes that the compound was detected at a concentration that was found to exceed the NYSDOH Indoor Air Concentration (minimum action level).

Blue font represents changes made in the Data Usability Summary Report (DUSR)

Red values are above Air Guideline Derived by NYSDOH in Table 3.1 of NYSDOH Guidance titled "Evaluating Soil Vapor Intrusion in the State of New York", October 2006 (and subsequent updates).

U indicates the DUSR deemed the concentration undetected

Former Emerson Street Landfill
1770 Emerson Street
Soil Vapor Intrusion Testing
March 2016

NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 Decision Matrices

			MATRIX 1- TRICHLOROETHENE INDOOR AIR CONCENTRATION (ug/m^3)			
	Sample IDs		**IAQ-1 (<0.21) IAQ-3 (<0.21)**			
			<0.25	0.25 to <1	1 to <5.0	5.0 and above
SUB-SLAB VAPOR CONCENTRATION (ug/m^3)	**SVI-1 (0.97)**	<5	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposure	3. Take reasonable and practical actions to identify source(s) and reduce exposure	4. Take reasonable and practical actions to identify source(s) and reduce exposure
	SVI-3 (23)	5 to <50	5. No further action	6. MONITOR	7. MONITOR	8. MITIGATE
		50 to <250	9. MONITOR	10. MONITOR/ MITIGATE	11. MITIGATE	12. MITIGATE
		250 and above	13. MITIGATE	14. MITIGATE	15. MITIGATE	16. MITIGATE

			MATRIX 1- VINYL CHLORIDE INDOOR AIR CONCENTRATION (ug/m^3)			
	Sample IDs		**IAQ-1 (<0.10)**	**IAQ-3 (0.56)**	**IAQ-2 (1.8)**	
			<0.25	0.25 to <1	1 to <5.0	5.0 and above
SUB-SLAB VAPOR CONCENTRATION (ug/m^3)	**SVI-1 (0.38) SVI-2 (1.8) SVI-3 (1.6)**	<5	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposure	3. Take reasonable and practical actions to identify source(s) and reduce exposure	4. Take reasonable and practical actions to identify source(s) and reduce exposure
		5 to <50	5. No further action	6. MONITOR	7. MONITOR	8. MITIGATE
		50 to <250	9. MONITOR	10. MONITOR/ MITIGATE	11. MITIGATE	12. MITIGATE
		250 and above	13. MITIGATE	14. MITIGATE	15. MITIGATE	16. MITIGATE

			MATRIX 2- TETRACHLOROETHYLENE INDOOR AIR CONCENTRATION (ug/m^3)			
	Sample IDs		**IAQ-1 (<1.0)**			
			<3	3 to <30	30 to <100	100 and above
SUB-SLAB VAPOR CONCENTRATION (ug/m^3)	**SVI-1 (5.2)**	<100	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposure	3. Take reasonable and practical actions to identify source(s) and reduce exposure	4. Take reasonable and practical actions to identify source(s) and reduce exposure
		100 to <1,000	5. MONITOR	6. MONITOR/ MITIGATE	7. MITIGATE	8. MITIGATE
		1,000 and above	9. MITIGATE	10. MITIGATE	11. MITIGATE	12. MITIGATE

Former Emerson Street Landfill
1770 Emerson Street
Soil Vapor Intrusion Testing

March 2016

NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 Decision Matrices

MATRIX 2- CIS-1,2-DICHLOROETHENE
INDOOR AIR CONCENTRATION (ug/m^3)

	Sample IDs		IAQ-3 (0.91)	IAQ-2 (3.1)		
			<3	3 to <30	30 to <100	100 and above
SUB-SLAB VAPOR CONCENTRATION (ug/m^3)	**SVI-2 (3.4)** **SVI-3 (<0.59)**	<100	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposure	3. Take reasonable and practical actions to identify source(s) and reduce exposure	4. Take reasonable and practical actions to identify source(s) and reduce exposure
		100 to <1,000	5. MONITOR	6. MONITOR/ MITIGATE	7. MITIGATE	8. MITIGATE
		1,000 and above	9. MITIGATE	10. MITIGATE	11. MITIGATE	12. MITIGATE

MATRIX 2- 1,1,1-TRICHLOROETHANE
INDOOR AIR CONCENTRATION (ug/m^3)

	Sample IDs		IAQ-3 (<0.82)			
			<3	3 to <30	30 to <100	100 and above
SUB-SLAB VAPOR CONCENTRATION (ug/m^3)	**SVI-3 (0.93)**	<100	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposure	3. Take reasonable and practical actions to identify source(s) and reduce exposure	4. Take reasonable and practical actions to identify source(s) and reduce exposure
		100 to <1,000	5. MONITOR	6. MONITOR/ MITIGATE	7. MITIGATE	8. MITIGATE
		1,000 and above	9. MITIGATE	10. MITIGATE	11. MITIGATE	12. MITIGATE

No further action: Given that the compound was not detected in the indoor air sample and that the concentration detected in the sub-slab vapor sample is not expected to significantly affect indoor air quality, no additional actions are needed to address human exposures.

Take steps to identify source(s) and reduce exposures: The concentration detected in the indoor air sample is likely due to indoor and/or outdoor sources rather than soil vapor intrusion given the concentration detected in the sub-slab vapor sample. Therefore, steps should be taken to identify potential source(s) and to reduce exposures accordingly (e.g., by keeping containers tightly capped or by storing volatile organic compound-containing products in places where people do not spend much time, such as a garage or outdoor shed).

Monitor: Monitoring, including sub-slab vapor, basement air, lowest occupied living space air, and outdoor air sampling, is needed to determine whether concentrations in the indoor air or sub-slab vapor have changed. Monitoring may also be needed to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined on a site-specific and building-specific basis, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: Mitigation is needed to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system, and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is an interim measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Former Emerson Street Landfill
1770 Emerson Street
Table 2
Soil Vapor Intrusion Testing Results
March 2017

Sample ID	1770-IAQ-2B	1770-IAQ-3B	1770-IAQ-4B	1770-Dupe B (1770-IAQ-4B)	1770-Outdoor-B	NYSDOH Indoor Air Concentration (minimum action level) [1]	USEPA (2001) (BASE) Database - 90th Percentile [2]
Sample Location	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Outdoor Air		
Sample Date	3/12/2017	3/12/2017	3/12/2017	3/12/2017	3/12/2017		
1,1,1-Trichloroethane	<0.82	<0.82	<0.82 J	<0.82 J	<0.82	<3***	20.6
1,1-Dichloroethane	<0.61	<0.61	<0.61 J	<0.61 J	<0.61	NL	<0.7
1,1-Dichloroethene	<0.59	<0.59	<0.59 J	<0.59 J	<0.59	<3***	<1.4
Chloroethane	<0.40	<0.40	<0.40 J	<0.40 J	<0.40	NL	<1.1
Chloromethane	2.0 J	1.7 J	1.7 J	1.8 J	1.5 J	NL	3.7
cis-1,2-Dichloroethene	<0.59	<0.59	<0.59 J	<0.59 J	<0.59	<3***	<1.9
Tetrachloroethylene	<1.0	<1.0	<1.0 J	<1.0 J	<1.0	<3*** / 30*	15.9
trans-1,2-Dichloroethene	<0.59	<0.59	<0.59 J	<0.59 J	<0.59	NL	NL
Trichloroethene	<0.21	<0.21	<0.21 J	<0.21 J	<0.21	<0.25** / 2*	4.2
Vinyl chloride	<0.10	<0.10	<0.10 J	<0.10 J	<0.10	<0.25**	<1.9

Notes:

Concentrations in micrograms per cubic meter (ug/m^3)

Samples analyzed by USEPA Method TO-15

< indicates the concentration was not detected above the reporting limit

(1) New York State Department of Health (NYSDOH), Guidance for Evaluating Soil Vapor Intrusion in the State of New York. [Note: This Guidance uses a combination of indoor air and sub-slab soil vapor when comparing to the matrices. In addition, for compounds not listed in the matrices an overall site approach is employed which utilizes the USEPA BASE Database (see 2. below) as typical background for commercial buildings and also uses the outdoor air sample, refer to Guidance document for details.]

(2) USEPA Building Assessment and Survey Evaluation (BASE) Database (90th Percentile). As recommended in Section 3.2.4 of the NYSDOH Guidance (Refer to Footnote "1") this database is referenced for the indoor air sampling results. This database is also referenced to provide initial benchmarks for comparison to the air sampling data and does not represent regulatory standards or compliance values.

***** = Air Guideline Values obtained from Table 3.1, NYSDOH, Guidance for Evaluating Soil Vapor Intrusion in the State of New York as updated by a September 2013 Fact Sheet for PCE and an August 2015

****** = Guideline Value obtained from Soil Vapor/Indoor Air Matrix 1 (minimum action level), NYSDOH, Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

******* = Guidance Value obtained from Soil Vapor/Indoor Air Matrix 2 (minimum action level), NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

Bold type denotes that the compound was detected at a concentration that was found to exceed the NYSDOH Sub-Slab Vapor Concentration Decision Matrix (minimum action level).

Underlined type denotes that the compound was detected at a concentration that was found to exceed the NYSDOH Indoor Air Concentration (minimum action level).

Blue font represents changes made in the Data Usability Summary Report (DUSR)

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U indicates the DUSR deemed the concentration undetected

LaBella Associates, D.P.C.
300 State Street

Rochester, New York 14614

Appendix 1

Laboratory Report

TO-15 Package Review Checklist

Client: LADELLA Project: EMERSON LANDFILL SDG: C1603076

		YES	NO	NA
Analytical Results				
TIC's present	Present and Complete	/		
	Present and Complete			
	Holding Times Met			

Comments:

Chain-of-Custody	Present and Complete	/		
Surrogate Recovery	Present and Complete	/		
	Recoveries within limits	/		
	Sample(s) reanalyzed			
Internal Standards Recovery	Present and Complete	/		
	Recoveries within limits		/	
	Sample(s) reanalyzed			

Comments: SEE CASE NARRATIVE

Lab Control Sample (LCS)	Present and Complete	/		
	Recoveries within limits	/		
Lab Control Sample Dupe (LCSD)	Present and Complete	/		
	Recoveries within limits	/		
MS/MSD	Present and Complete			/
	Recoveries within limits			/

Comments: NO MS/MSD

Sample Raw Data	Present and Complete	/		
	Spectra present for all samples	/		

Comments:

TO-15 Package Review Checklist

Client: LANDFILL Project: EMERSON LANDFILL SDG: C1603076

		YES	NO	NA
Standards Data				
Initial Calibration Summary	Present and Complete	✓		
	Calibration(s) met criteria	✓		
Continuing Calibration Summary	Present and Complete	✓		
	Calibration(s) met criteria	✓		
Standards Raw Data	Present and Complete	✓		

Comments:

Raw Quality Control Data

Tune Criteria Report	Present and Complete	✓		
Method Blank Data	MB Results <PQL	✓		
	Associated results flagged "B"			✓
LCS sample data	Present and Complete	✓		
LCSD sample data	Present and Complete	✓		
MS/MSD sample data	Present and Complete			✓

Comments:

Logbooks

Injection Log	Present and Complete	✓		
Standards Log	Present and Complete	✓		
Can Cleaning Log	Present and Complete	✓		
	Raw Data Present	✓		
Calculation sheet	Present and Complete	✓		
IDL's	Present and Complete	✓		
Bottle Order Form	Present and Complete	✓		
Sample Tracking Form	Present and Complete	✓		

Additional Comments:

Section Supervisor: [signature] Date: 4/27/16

QC Supervisor: [signature] Date: 4/27/16

CENTEK LABORATORIES, LLC

143 Midler Park Drive * Syracuse, NY 13206
Phone (315) 431-9730 * Emergency 24/7 (315) 416-2752
NYSDOH ELAP Certificate No. 11830

Analytical Report

Daniel Noll
LaBella Associates, P.C.
300 State Street, Suite 201
Rochester, NY 14614

TEL: (585) 454-6110
FAX (585) 454-3066

Monday, April 04, 2016
Order No.: C1603076

RE: Emerson Landfill

Dear Daniel Noll:

Centek Laboratories, LLC received 9 sample(s) on 3/29/2016 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. Samples were analyzed using the methods outlined in the following references:

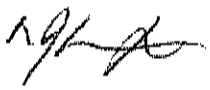
Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

Centek Laboratories SOP TS-80

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

Sincerely,



William Dobbin
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages. ELAP does not offer certification for the following parameters by this method at present time, they are: 4-ethyltoluene, ethyl acetate, propylene, 4-PCH, sulfur derived and silcon series compounds.

Centek Laboratories, LLC Terms and Conditions

Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website www.CentekLabs.com. Samples received after 3:00pm are considered to be a part of the next day's business.

Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any dameges of equipment.

Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4 weeks from time of analysis. Standard Electronic Disk Deliverables (EDD) is also available at no additional charge.

Payment Terms

Payment for all purchases shall be due within 30 days from date of invoice. The client agrees to pay a finance charge of 1.5% per month on the overdue balance and cost of collection, including attorney fees, if collection proceedings are necessary. You must have a completed credit application on file to extend credit. Purchase orders or checks infotmation must be submitted for us to release results

Rush Turnaround Samples

Expedited turn around times is available. Please confirm rush turnaround times with Client Services before submitting samples.

Applicable Surcharges for Rush Turnaround Samples:
Same day TAT = 200%
Next business day TAT by Noon = 150%
Next business day TAT by 6:00pm = 100%
Second business day TAT by 6:00pm = 75%
Third business day TAT by 6:00pm = 50%
Fourth business day TAT by 6:00pm = 35%
Fifth business day = Standard

Statement of Confidentiality

Centek Laboratories, LLC is aware of the importance of the confidentiality of results to many of our clients. Your name and data will be held in the strictest of confidence. We will not accept business that may constitute a conflict of interest. We commonly sign Confidential Nondisclosure Agreements with clients prior to beginning work. All research, results and reports will be kept strictly confidential. Secrecy Agreements and Disclosure Statements will be signed for the client if so specified. Results will be provided only to the addressee specified on the Chain of Custody Form submitted with the samples unless law requires release. Written permission is required from the addressee to release results to any other party.

Limitation on Liability

Centek Laboratories, LLC warrants the test results to be accurate to the methodology and sample type for each sample submitted to Centek Laboratories, LLC. In no event shall Centek Laboratories, LLC be liable for direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Centek Laboratories, LLC has been previously advised of the possibility of such damages whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use or performance of the information, services, products and materials available from the laboratory or this site. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you. This is a comprehensive limitation of liability that applies to all damages of any kind, including (without limitation) compensatory,

direct, indirect or consequential damages, loss of data, income or profit and or loss of or damage to property and claims of third parties.

ASP CAT B DELIVERABLE PACKAGE
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3. Sample Summary Form

4. Sample Tracking Form

5. Bottle Order

6. Analytical Results
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7. Quality Control Summary
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   b. IS Summary Report
   c. MB Summary Report
   d. LCS Summary Report
   e. MSD Summary Report
   f. IDL's
   g. Calculation

8. Sample Data
   a. Form 1 (if requested) TIC's
   b. Quantitation Report with Spectra

9. Standards Data
   a. Initial Calibration with Quant Report
   b. Continuing Calibration with Quant Report

10. Raw Data
    a. Tuning Data

11. Raw QC Data
    a. Method Blank
    b. LCS
    c. MS/MSD

12. Log Books
    a. Injection Log Book
    b. Standards Log Book
    c. QC Canister Log Book

CENTEK LABORATORIES, LLC

Date: *27-Apr-16*

CLIENT: LaBella Associates, P.C.

Project: Emerson Landfill

Lab Order: C1603076

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Centek Laboratories, LLC SOP TS-80
Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

NYSDEC ASP samples:
Canisters should be evacuated to a reading of less than or equal to 50 millitorr prior to shipment to sampling personnel. The vacuum in the canister will be field checked prior to sampling, and must read 28" of Hg (±2", vacuum, absolute) before a sample can be collected. After the sample has been collected, the pressure of the canister will be read and recorded again, and must be 5" of Hg (±1", vacuum, absolute) for the sample to be valid. Once received at the laboratory, the canister vacuum should be confirmed to be 5" of Hg,±1". Please record and report the pressure/vacuum of received canisters on the sample receipt paperwork. A pressure/vacuum reading should also be taken just prior to the withdrawal of sample from the canister, and recorded on the sample preparation log sheet. All regulators are calibrated to meet these requirements before they leave the laboratory. However, due to environmental conditions and use of the equipment Centek can not guarantee that this criteria can always be achieved.

See Corrective Action: [3362] IS did not meet criteria.

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 01-Apr-16 **Corrective Action Report ID:** 3362

Initiated By: Russell Pellegrino **Department:** MSVOA

Corrective Action Description

CAR Summary: IS did not meet criteria.

Description of Nonconformance Root/Cause(s): IS was high and did not meet criteria for samples C1603076-002,003,005,007 & 009. Based on the chromatographic evidence, it appears that the contamination is from a high concentration of interfering compounds that may be associated with a fuel.

Description of Corrective Action w/Proposed C.A.: Sample C1603076-009 was analyzed further as a dilution with criteria being met. C1603076-002,003,005,007 were reanalyzed with similar results. Due to matrix being in a canister it is difficult to see any signs of problems. All sets of data submitted.

Performed By: Russell Pellegrino **Completion Date:** 05-Apr-16

Client Notification

Client Notification Required: No **Notified By:**

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: Monitor all quality control for sample matrix interference. At this time no further corrective action taken. All sets of data submitted.

Approval and Closure

Technical Director / Deputy Tech. Dir.: William Dobbin **Close Date:** 07-Apr-16

QA Officer Approval: Nick Scala **QA Date:** 07-Apr-16

Last Updated BY russ **Updated:** 27-Apr-2016 3:47 PM **Reported:** 27-Apr-2016 3:48 PM

Centek Chain of Custody

Centek Laboratories
143 Midler Park Drive
Syracuse, NY 13206
315-431-9730
www.CentekLabs.com
Vapor Intrusion & IAQ

Site Name:
Project: EDGERTON LANDFILL
PO#: 210173
Quote # Q-SP/1009672
Other:

Detection Limit	Report Level
☐ 5ppbv	☐ Level I
☒ 1ug/M3	☐ Level II
☒ 1ug/M3 +TCE .25	☒ Cat "B" Like

TAT Turnaround Time:	Check One	Rush TAT Surcharge %	Due Date:
5 Business Days	☑	0%	
4 Business Days	☐	25%	
3 Business Days	☐	50%	
2 Business Days	☐	75%	
*Next Day by 5pm	☐	100%	
*Next Day by Noon	☐	150%	
*Same Day	☐	200%	

*For Same and Next Day TAT Please Notify Lab

Company: LABELLA

Report to:
Address: 300 State St
City, State, Zip Rochester NY
Email: dnolla@labellapc.com
Phone:

Company:
Check Here If Same: ☐

Invoice to:
Address: SAME
City, State, Zip
Email:
Phone:

Sample ID	Date Sampled	Canister Number	Regulator Number	Analysis Request	Comments	Vacuum Start/Stop
1770-IAQ-1	3/21/16	1183	339	TO-15		30/4
1770-SVI-1	3/21/16	1179	343	Select		30/5
Blind Dup 1	3/21/16	419	339	List		30/4
1770 Outdoor air	3/21/16	192	342			30/3
Blind Dup 2	3/21/16	1193	343			30/5
1770-IAQ-2	3/21/16	564	447			29/9.5
1770-SVI-2	3/21/16	89	1166			30/3
1770-IAQ-3	3/21/16	131	297			30/7
1770-SVI-3	3/21/16	188	308			30/4

Chain of Custody	Print Name	Signature	Date/Time	Courier: CIRCLE ONE
Sampled by:	Ann Aguilar		3/28/16 1450	FedEx UPS Pickup/Dropoff
Relinquished by:				For LAB USE ONLY
Received at Lab by:	Jan Cole		3/29/16	Work Order # C160307G

*** By signing Centek Labs Chain of Custody, you are accepting Centek Labs Terms and Conditions listed on the reverse side.

3/29/16

CENTEK LABORATORIES, LLC

Date: *27-Apr-16*

CLIENT: LaBella Associates, P.C.
Project: Emerson Landfill
Lab Order: C1603076

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1603076-001A	1770-IAQ-1	1183,339	3/21/2016	3/29/2016
C1603076-002A	1770-SVI-1	1179,343	3/21/2016	3/29/2016
C1603076-003A	Blind Dup 1	419,339	3/21/2016	3/29/2016
C1603076-004A	1770-Outdoor Air	192,342	3/21/2016	3/29/2016
C1603076-005A	Blind Dup 2	1193,343	3/21/2016	3/29/2016
C1603076-006A	1770-IAQ-2	564,447	3/21/2016	3/29/2016
C1603076-007A	1770-SVI-2	89,1166	3/21/2016	3/29/2016

CLIENT:	LaBella Associates, P.C.
Project:	Emerson Landfill
Lab Order:	C1603076

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1603076-008A	1770-IAQ-3	131,297	3/21/2016	3/29/2016
C1603076-009A	1770-SVI-3	188,308	3/21/2016	3/29/2016

CENTEK LABORATORIES, LLC

Sample Receipt Checklist

Client Name LABELLA - ROCHESTER

Date and Time Receive 3/29/2016

Work Order Numbe C1603076

Received by JDS

Checklist completed by _____ 3-29-16
Signature Date

Reviewed by WD 3/29/16
Initials Date

Matrix: Carrier name FedEx Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Presen ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Presen ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☑	

Adjusted? _____ Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section be

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

_____

_____

Corrective Action _____

_____

_____

Lab Order: C1603076
Client: LaBella Associates, P.C.
Project: Emerson Landfill

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C1603076-001A	1770-IAQ-1	3/21/2016	Air	ug/m3 w/ 0.25ug/M3 CT-TCE-VC			4/1/2016
C1603076-002A	1770-SVI-1			ug/M3 by Method TO15			4/1/2016
C1603076-003A	Blind Dup 1			ug/m3 w/ 0.25ug/M3 CT-TCE-VC			4/1/2016
C1603076-004A	1770-Outdoor Air			ug/m3 w/ 0.25ug/M3 CT-TCE-VC			4/1/2016
C1603076-005A	Blind Dup 2			ug/M3 by Method TO15			4/1/2016
C1603076-006A	1770-IAQ-2			ug/m3 w/ 0.25ug/M3 CT-TCE-VC			4/1/2016
C1603076-007A	1770-SVI-2			ug/M3 by Method TO15			4/1/2016
C1603076-008A	1770-IAQ-3			ug/m3 w/ 0.25ug/M3 CT-TCE-VC			4/1/2016
C1603076-009A	1770-SVI-3			ug/M3 by Method TO15			4/2/2016
				ug/M3 by Method TO15			4/1/2016

CANISTER ORDER

CENTEK LABORATORIES, LLC

Air Quality Testing...It's a Gas

143 Midler Park Drive * Syracuse, NY 13206

TEL: 315-431-9730 * FAX: 315-431-9731

5692

27-Apr-16

SHIPPED TO:

Company: LaBella Associates, P.C.
Contact: Ann Aquilina
Address: 300 State Street, Suite 201
Rochester, NY 14614
Phone: (585) 454-6110
Quote ID: 0
Project:
PO: Emerson Landfill

Submitted By:
MadeBy: rjp
Ship Date: 3/16/2016
VIA: FedEx Ground
Due Date: 3/17/2016

Bottle Code	Bottle Type	TEST(s)	QTY
MC1400CC	1.4L Mini-Can	1ug/M3 by Method TO15	1
MC1000CC	1L Mini-Can	1ug/M3 by Method TO15	22
DOME	Encloser Dome	Helium Leak Test	2

Can / Reg ID	Description
89	1L Mini-Can - 1090 VI
93	1L Mini-Can - 1109 VI
128	1L Mini-Can - 1076 VI
131	1L Mini-Can - 1079 VI
136	1L Mini-Can - 1110 VI
139	1L Mini-Can - 1113 VI
141	1L Mini-Can - 1115 VI
174	Time-Set Reg - 659 VI
187	Time-Set Reg - 625 VI
188	1L Mini-Can - 1143 VI
192	1L Mini-Can - 1147 VI
223	1L Mini-Can - 1185 VI
249	Time-Set Reg - 687 VI
258	Time-Set Reg - 696 VI
266	Time-Set Reg - 704 VI
286	1L Mini-Can - 1262 VI
292	Time-Set Reg - 715 VI
296	Time-Set Reg - 719 VI
297	Time-Set Reg - 720 VI
301	Time-Set Reg - 724 VI
308	Time-Set Reg - 809R VI
332	1L Mini-Can - 1295 VI
339	Time-Set Reg - 736 VI
342	Time-Set Reg - 739 VI
343	Time-Set Reg - 740 VI
366	1L Mini-Can - 1315 VI
387	Time-Set Reg - 761 VI
388	Time-Set Reg - 762 VI
419	1L Mini-Can - 1343 VI
447	Time-Set Reg - 826 VI
465	1L Mini-Can - 1369 VI

SHIPPED TO:

Company:	LaBella Associates, P.C.	Submitted By:	
Contact:	Ann Aquilina	MadeBy:	rjp
Address:	300 State Street, Suite 201 Rochester, NY 14614	Ship Date:	3/16/2016
Phone:	(585) 454-6110	VIA:	FedEx Ground
Quote ID:	0	Due Date:	3/17/2016
Project:			
PO:	Emerson Landfill		

Bottle Code	Bottle Type	TEST(s)	QTY
564	1L Mini-Can - 135 VI		
567	1L Mini-Can - 138 VI		
1157	Time-Set Reg-VI		
1160	Time-Set Reg-0673 VI		
1165	Time-Set Reg-0676 VI		
1166	Time-Set Reg-0791 VI		
1178	1L Mini-Can - 1236 VI		
1179	1L Mini-Can - 1249 VI		
1183	1L Mini-Can - 1250 VI		
1193	1L Mini-Can - 1246 VI		
1195	1L Mini-Can - 1254 VI		
1320	1.4L Mini-Can - 1197 VI		

Comments: 20 1L @ 6hr + 2 dupe + 1.4L @ 6hr + 10'tubing + 2 dome (updated) wac 021916 j-k, 030816 a-f

GC/MS-Whole Air Calculations

Relative Response Factor (RRF)

$$RRF = \frac{Ax * Cis}{Ais * Cx}$$

where: Ax = area of the characteristic ion for the compound being measured
Ais = area of the characteristic ion for the specific internal standard of the compound being measured
Cx = concentration of the compound being measured (ppbv)
Cis = concentration of the internal standard (ppbv)

Percent Relative Standard Deviation (%RSD)

$$\% RSD = \frac{\text{Standard deviation of RRF values} * 100}{\text{mean RRF}}$$

Percent Difference (%D)

$$\% D = \frac{(RRFc - \text{mean RRFi}) * 100}{\text{mean RRFi}}$$

where: RRFc = relative response factor from the continuing calibration
mean RRFi = mean relative response factor from the initial calibration

Sample Calculations

$$ppbv = \frac{Ax * Is * Df}{Ais * RRF}$$

where: Ax = area of the characteristic ion for the compound being measured
Ais = area of the characteristic ion for the specific internal standard of the compound being measured
Is = Concentration of the internal standard injected (ppbv)
RRF= relative response factor for the compound being measured
Df = Dilution factor

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

ANALYTICAL RESULTS

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-1
Lab Order:	C1603076	**Tag Number:**	1183,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-4			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
Chloromethane	0.80	0.15		ppbV	1	4/1/2016 4:18:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 4:18:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/1/2016 4:18:00 AM
Surr: Bromofluorobenzene	110	70-130		%REC	1	4/1/2016 4:18:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-1
Lab Order:	C1603076	**Tag Number:**	1183,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:18:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:18:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:18:00 AM
Chloromethane	1.7	0.31		ug/m3	1	4/1/2016 4:18:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 4:18:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 4:18:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/1/2016 4:18:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-1
Lab Order:	C1603076	**Tag Number:**	1179,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-5			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
Tetrachloroethylene	0.77	0.15		ppbV	1	4/1/2016 5:36:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
Trichloroethene	0.18	0.15		ppbV	1	4/1/2016 5:36:00 PM
Vinyl chloride	0.26	0.15		ppbV	1	4/1/2016 5:36:00 PM
Surr: Bromofluorobenzene	88.0	70-130		%REC	1	4/1/2016 5:36:00 PM

Qualifiers:

**	Reporting Limit
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
JN	Non-routine analyte. Quantitation estimated.
S	Spike Recovery outside accepted recovery limits
.	Results reported are not blank corrected
E	Value above quantitation range
J	Analyte detected at or below quantitation limits
ND	Not Detected at the Reporting Limit

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-1
Lab Order:	C1603076	**Tag Number:**	1179,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 5:36:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 5:36:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 5:36:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 5:36:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 PM
Tetrachloroethylene	5.2	1.0		ug/m3	1	4/1/2016 5:36:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 PM
Trichloroethene	0.97	0.81		ug/m3	1	4/1/2016 5:36:00 PM
Vinyl chloride	0.66	0.38		ug/m3	1	4/1/2016 5:36:00 PM

Qualifiers:

**	Reporting Limit	,	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 1
Lab Order:	C1603076	**Tag Number:**	419,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-4			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 4:18:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/1/2016 4:18:00 PM
Surr: Bromofluorobenzene	117	70-130		%REC	1	4/1/2016 4:18:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 1
Lab Order:	C1603076	**Tag Number:**	419,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:18:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:18:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:18:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 4:18:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 4:18:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 4:18:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/1/2016 4:18:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor Air
Lab Order:	C1603076	**Tag Number:**	192,342
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		**FLD**				Analyst:
Lab Vacuum In	-3			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
Chloromethane	0.76	0.15		ppbV	1	4/1/2016 4:57:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 4:57:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/1/2016 4:57:00 AM
Surr: Bromofluorobenzene	104	70-130		%REC	1	4/1/2016 4:57:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor Air
Lab Order:	C1603076	**Tag Number:**	192,342
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:57:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:57:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:57:00 AM
Chloromethane	1.6	0.31		ug/m3	1	4/1/2016 4:57:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 4:57:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 4:57:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/1/2016 4:57:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 2
Lab Order:	C1603076	**Tag Number:**	1193,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-5			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Tetrachloroethylene	0.93	0.15		ppbV	1	4/1/2016 4:57:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Trichloroethene	0.26	0.15		ppbV	1	4/1/2016 4:57:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Surr: Bromofluorobenzene	108	70-130		%REC	1	4/1/2016 4:57:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 2
Lab Order:	C1603076	**Tag Number:**	1193,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:57:00 PM
1,1-Dichloroethene	< 0.61	0.61		ug/m3	1	4/1/2016 4:57:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:57:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 4:57:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 PM
Tetrachloroethylene	6.3	1.0		ug/m3	1	4/1/2016 4:57:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 PM
Trichloroethene	1.4	0.81		ug/m3	1	4/1/2016 4:57:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	4/1/2016 4:57:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-2
Lab Order:	C1603076	**Tag Number:**	564,447
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-006A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-10			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	0.12	0.15	J	ppbV	1	4/1/2016 5:36:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
Chloromethane	0.95	0.15		ppbV	1	4/1/2016 5:36:00 AM
cis-1,2-Dichloroethene	0.77	0.15		ppbV	1	4/1/2016 5:36:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 5:36:00 AM
Vinyl chloride	0.70	0.040		ppbV	1	4/1/2016 5:36:00 AM
Surr: Bromofluorobenzene	126	70-130		%REC	1	4/1/2016 5:36:00 AM

Qualifiers:

**	Reporting Limit
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
JN	Non-routine analyte. Quantitation estimated.
S	Spike Recovery outside accepted recovery limits
.	Results reported are not blank corrected
E	Value above quantitation range
J	Analyte detected at or below quantitation limits
ND	Not Detected at the Reporting Limit

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-2
Lab Order:	C1603076	**Tag Number:**	564,447
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-006A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	0.65	0.82	J	ug/m3	1	4/1/2016 5:36:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 5:36:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 5:36:00 AM
Chloromethane	2.0	0.31		ug/m3	1	4/1/2016 5:36:00 AM
cis-1,2-Dichloroethene	3.1	0.59		ug/m3	1	4/1/2016 5:36:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 5:36:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 5:36:00 AM
Vinyl chloride	1.8	0.10		ug/m3	1	4/1/2016 5:36:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SV1-2
Lab Order:	C1603076	**Tag Number:**	89,1166
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-007A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-3			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
cis-1,2-Dichloroethene	0.87	0.15		ppbV	1	4/1/2016 6:15:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
Vinyl chloride	0.72	0.15		ppbV	1	4/1/2016 6:15:00 PM
Surr: Bromofluorobenzene	102	70-130		%REC	1	4/1/2016 6:15:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-2
Lab Order:	C1603076	**Tag Number:**	89,1166
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-007A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 6:15:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 6:15:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 6:15:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 6:15:00 PM
cis-1,2-Dichloroethene	3.4	0.59		ug/m3	1	4/1/2016 6:15:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 6:15:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	4/1/2016 6:15:00 PM
Vinyl chloride	1.8	0.36		ug/m3	1	4/1/2016 6:15:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3
Lab Order:	C1603076	**Tag Number:**	131,297
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-008A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-7			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
Chloromethane	0.90	0.15		ppbV	1	4/1/2016 6:15:00 AM
cis-1,2-Dichloroethene	0.23	0.15		ppbV	1	4/1/2016 6:15:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 6:15:00 AM
Vinyl chloride	0.22	0.040		ppbV	1	4/1/2016 6:15:00 AM
Surr: Bromofluorobenzene	128	70-130		%REC	1	4/1/2016 6:15:00 AM

Qualifiers:

**	Reporting Limit	,	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3
Lab Order:	C1603076	**Tag Number:**	131,297
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-008A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 6:15:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 6:15:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 6:15:00 AM
Chloromethane	1.9	0.31		ug/m3	1	4/1/2016 6:15:00 AM
cis-1,2-Dichloroethene	0.91	0.59		ug/m3	1	4/1/2016 6:15:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 6:15:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 6:15:00 AM
Vinyl chloride	0.56	0.10		ug/m3	1	4/1/2016 6:15:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-3
Lab Order:	C1603076	**Tag Number:**	188,308
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-009A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-4			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	0.17	0.15		ppbV	1	4/1/2016 6:54:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
Trichloroethene	4.2	0.75		ppbV	5	4/2/2016 4:03:00 PM
Vinyl chloride	0.61	0.15		ppbV	1	4/1/2016 6:54:00 PM
Surr: Bromofluorobenzene	92.0	70-130		%REC	1	4/1/2016 6:54:00 PM

Qualifiers:

**	Reporting Limit	,	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-3
Lab Order:	C1603076	**Tag Number:**	188,308
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-009A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	0.93	0.82		ug/m3	1	4/1/2016 6:54:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 6:54:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:54:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 6:54:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 6:54:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:54:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 6:54:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:54:00 PM
Trichloroethene	23	4.0		ug/m3	5	4/2/2016 4:03:00 PM
Vinyl chloride	1.6	0.38		ug/m3	1	4/1/2016 6:54:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

QUALITY CONTROL SUMMARY

Date: 26-Apr-16

CENTEK LABORATORIES, LLC

QC SUMMARY REPORT
SURROGATE RECOVERIES

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill
Test No: TO-15 **Matrix:** A

Sample ID	BR4FBZ
ALCS1UG-033116	115
ALCS1UG-040116	116
ALCS1UG-040216	112
ALCS1UGD-033116	118
ALCS1UGD-040116	108
ALCS1UGD-040216	106
AMB1UG-033116	88.0
AMB1UG-040116	91.0
AMB1UG-040216	90.0
C1603075-004A MS	116
C1603075-004A MSD	107
C1603076-001A	110
C1603076-002A	88.0
C1603076-003A	117
C1603076-004A	104
C1603076-005A	108
C1603076-006A	126
C1603076-007A	102
C1603076-008A	128
C1603076-009A	92.0

Acronym	Surrogate	QC Limits
BR4FBZ	= Bromofluorobenzene	70-130

*** Surrogate recovery outside acceptance limits**

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA2\AN033104.D
Tune Time : 31 Mar 2016 12:19 pm

Daily Calibration File : C:\HPCHEM\1\DATA2\AN033104.D

			(BFB)	(IS1)	(IS2)	(IS3)
				21478	48888	36495
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
AN033105.D	ALCS1UG-033116	115		20235	53595	32893
AN033106.D	AMB1UG-033116	88		20032	47930	44161
AN033129.D	C1603076-001A	110		17319	46632	44330
AN033130.D	C1603076-004A	104		16741	43872	44391
AN033131.D	C1603076-006A	126		18828	58984	31805
AN033132.D	C1603076-008A	128		20410	65363	31903
AN033133.D	ALCS1UGD-033116	118		22710	52964	34225

t - fails 24hr time check * - fails criteria

Created: Tue Apr 26 15:59:27 2016 MSD #1/

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AN040102.D
Tune Time : 1 Apr 2016 12:06 pm

Daily Calibration File : C:\HPCHEM\1\DATA\AN040102.D

		(BFB)	(IS1)	(IS2)	(IS3)
			20214	45908	32719
File	Sample	DL Surrogate Recovery %	Internal Standard Responses		
AN040103.D	ALCS1UG-040116	116	20858	46019	31397
AN040104.D	AMB1UG-040116	91	18252	46023	41257
AN040108.D	C1603076-003A	117	24896	74463*	58495*
AN040109.D	C1603076-005A	108	26433	86881*	45080
AN040110.D	C1603076-002A	88	26432	89168*	49311*
AN040111.D	C1603076-007A	102	27896	94901*	52262*
AN040112.D	C1603076-009A	92	28019	97134*	49886*
AN040125.D	ALCS1UGD-040116	108	20437	45874	33404

t - fails 24hr time check * - fails criteria

Created: Tue Apr 26 16:00:31 2016 MSD #1/

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AN040203.D
Tune Time : 2 Apr 2016 12:08 pm

Daily Calibration File : C:\HPCHEM\1\DATA\AN040203.D

			(BFB)	(IS1)	(IS2)	(IS3)
				23340	60425	46554
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
AN040204.D	ALCS1UG-040216		112	21348	52201	44220
AN040205.D	AMB1UG-040216		90	17717	49878	41390
AN040209.D	C1603076-009A 5X		113	18360	53965	40273
AN040224.D	ALCS1UGD-040216		106	16685	39568	28434

t - fails 24hr time check * - fails criteria

Created: Tue Apr 26 16:01:33 2016 MSD #1/

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AN040402.D
Tune Time : 4 Apr 2016 9:37 am

Daily Calibration File : C:\HPCHEM\1\DATA\AN040402.D

			(BFB)	(IS1)	(IS2)	(IS3)
				22087	49561	31552
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
AN040403.D	ALCS1UG-040416		100	23166	49402	37389
AN040404.D	AMB1UG-040416		82	21865	49252	42435
AN040406.D	C1603076-003A	RE	105	19294	43636	39672
AN040407.D	C1603076-005A	RE	121	26358	86314*	51558*
AN040408.D	C1603076-002A	RE	120	28253	94627*	56547*
AN040409.D	C1603076-007A	RE	100	28391	97706*	57357*

t - fails 24hr time check * - fails criteria

Created: Tue Apr 26 16:02:37 2016 MSD #1/

CENTEK LABORATORIES, LLC

Date: *26-Apr-16*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID **AMB1UG-033116** SampType: **MBLK** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10817**
Client ID: **ZZZZZ** Batch ID: **R10817** TestNo: **TO-15** Analysis Date: **3/31/2016** SeqNo: **127095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.040	0.040									
Vinyl chloride	< 0.040	0.040									

Sample ID **AMB1UG-040116** SampType: **MBLK** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10818**
Client ID: **ZZZZZ** Batch ID: **R10818** TestNo: **TO-15** Analysis Date: **4/1/2016** SeqNo: **127112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.040	0.040									

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	AMB1UG-040116	SampType:	MBLK	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	10818
Client ID:	ZZZZZ	Batch ID:	R10818	TestNo:	TO-15			Analysis Date:	4/1/2016	SeqNo:	127112

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	< 0.040	0.040									

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 1ugM3_TO15

Sample ID **AMB1UG-040216** SampType: **MBLK** TestCode: **1ugM3_TO15** Units: **ppbV** Prep Date: RunNo: **10819**
Client ID: **ZZZZZ** Batch ID: **R10819** TestNo: **TO-15** Analysis Date: **4/2/2016** SeqNo: **127124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CENTEK LABORATORIES, LLC

Date: *26-Apr-16*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID **ALCS1UG-033116** SampType: **LCS** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10817**
Client ID: **ZZZZZ** Batch ID: **R10817** TestNo: **TO-15** Analysis Date: **3/31/2016** SeqNo: **127096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.250	0.15	1	0	125	70	130				
1,1-Dichloroethane	1.120	0.15	1	0	112	70	130				
1,1-Dichloroethene	1.120	0.15	1	0	112	70	130				
Chloroethane	1.220	0.15	1	0	122	70	130				
Chloromethane	1.230	0.15	1	0	123	70	130				
cis-1,2-Dichloroethene	1.060	0.15	1	0	106	70	130				
Tetrachloroethylene	0.9200	0.15	1	0	92.0	70	130				
trans-1,2-Dichloroethene	1.050	0.15	1	0	105	70	130				
Trichloroethene	1.110	0.040	1	0	111	70	130				
Vinyl chloride	1.090	0.040	1	0	109	70	130				

Sample ID **ALCS1UG-040116** SampType: **LCS** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10818**
Client ID: **ZZZZZ** Batch ID: **R10818** TestNo: **TO-15** Analysis Date: **4/1/2016** SeqNo: **127113**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.290	0.15	1	0	129	70	130				
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130				
1,1-Dichloroethene	1.100	0.15	1	0	110	70	130				
Chloroethane	1.130	0.15	1	0	113	70	130				
Chloromethane	1.230	0.15	1	0	123	70	130				
cis-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130				
Tetrachloroethylene	0.8800	0.15	1	0	88.0	70	130				
trans-1,2-Dichloroethene	0.9900	0.15	1	0	99.0	70	130				
Trichloroethene	1.230	0.040	1	0	123	70	130				

Qualifiers:
- . Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	ALCS1UG-040116	SampType:	LCS	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	10818
Client ID:	ZZZZZ	Batch ID:	R10818	TestNo:	TO-15			Analysis Date:	4/1/2016	SeqNo:	127113

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.100	0.040	1	0	110	70	130				

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-040216	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 10819
Client ID: ZZZZZ	Batch ID: R10819	TestNo: TO-15		Analysis Date: 4/2/2016	SeqNo: 127125

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.290	0.15	1	0	129	70	130				
1,1-Dichloroethane	1.170	0.15	1	0	117	70	130				
1,1-Dichloroethene	1.200	0.15	1	0	120	70	130				
Chloroethane	1.230	0.15	1	0	123	70	130				
Chloromethane	1.290	0.15	1	0	129	70	130				
cis-1,2-Dichloroethene	1.170	0.15	1	0	117	70	130				
Tetrachloroethylene	0.7800	0.15	1	0	78.0	70	130				
trans-1,2-Dichloroethene	1.180	0.15	1	0	118	70	130				
Trichloroethene	1.260	0.15	1	0	126	70	130				
Vinyl chloride	1.140	0.15	1	0	114	70	130				

Qualifiers:

- `.` Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CENTEK LABORATORIES, LLC

Date: *26-Apr-16*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID **ALCS1UGD-033116** SampType: **LCSD** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10817**
Client ID: **ZZZZZ** Batch ID: **R10817** TestNo: **TO-15** Analysis Date: **4/1/2016** SeqNo: **127097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.280	0.15	1	0	128	70	130	1.25	2.37	30	
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130	1.12	7.41	30	
1,1-Dichloroethene	1.120	0.15	1	0	112	70	130	1.12	0	30	
Chloroethane	1.250	0.15	1	0	125	70	130	1.22	2.43	30	
Chloromethane	1.210	0.15	1	0	121	70	130	1.23	1.64	30	
cis-1,2-Dichloroethene	1.010	0.15	1	0	101	70	130	1.05	4.83	30	
Tetrachloroethylene	0.9000	0.15	1	0	90.0	70	130	0.92	2.20	30	
trans-1,2-Dichloroethene	1.000	0.15	1	0	100	70	130	1.05	4.88	30	
Trichloroethene	1.150	0.040	1	0	115	70	130	1.11	3.54	30	
Vinyl chloride	1.050	0.040	1	0	105	70	130	1.09	3.74	30	

Sample ID **ALCS1UGD-040116** SampType: **LCSD** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10818**
Client ID: **ZZZZZ** Batch ID: **R10818** TestNo: **TO-15** Analysis Date: **4/2/2016** SeqNo: **127114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.280	0.15	1	0	128	70	130	1.29	0.778	30	
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130	1.04	0	30	
1,1-Dichloroethene	1.100	0.15	1	0	110	70	130	1.1	0	30	
Chloroethane	1.240	0.15	1	0	124	70	130	1.13	9.28	30	
Chloromethane	1.230	0.15	1	0	123	70	130	1.23	0	30	
cis-1,2-Dichloroethene	0.9400	0.15	1	0	94.0	70	130	0.98	4.17	30	
Tetrachloroethylene	0.8300	0.15	1	0	83.0	70	130	0.88	5.85	30	
trans-1,2-Dichloroethene	0.9600	0.15	1	0	96.0	70	130	0.99	3.08	30	
Trichloroethene	1.210	0.040	1	0	121	70	130	1.23	1.64	30	

Qualifiers:
. Results reported are not blank corrected
J Analyte detected at or below quantitation limits
S Spike Recovery outside accepted recovery limits
E Value above quantitation range
ND Not Detected at the Reporting Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID: ALCS1UGD-040116	SampType: LCSD	TestCode: 0.25CT-TCE-	Units: ppbV	Prep Date:	RunNo: 10818
Client ID: ZZZZZ	Batch ID: R10818	TestNo: TO-15		Analysis Date: 4/2/2016	SeqNo: 127114

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.070	0.040	1	0	107	70	130	1.1	2.76	30	

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 1ugM3_TO15

Sample ID **ALCS1UGD-040216** SampType: **LCSD** TestCode: **1ugM3_TO15** Units: **ppbV** Prep Date: RunNo: **10819**
Client ID: **ZZZZZ** Batch ID: **R10819** TestNo: **TO-15** Analysis Date: **4/3/2016** SeqNo: **127130**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.300	0.15	1	0	130	70	130	1.29	0.772	30	
1,1-Dichloroethane	1.170	0.15	1	0	117	70	130	1.17	0	30	
1,1-Dichloroethene	1.110	0.15	1	0	111	70	130	1.2	7.79	30	
Chloroethane	1.090	0.15	1	0	109	70	130	1.23	12.1	30	
Chloromethane	1.190	0.15	1	0	119	70	130	1.29	8.06	30	
cis-1,2-Dichloroethene	1.110	0.15	1	0	111	70	130	1.17	5.26	30	
Tetrachloroethylene	0.8900	0.15	1	0	89.0	70	130	0.78	13.2	30	
trans-1,2-Dichloroethene	1.150	0.15	1	0	115	70	130	1.18	2.58	30	
Trichloroethene	1.220	0.15	1	0	122	70	130	1.26	3.23	30	
Vinyl chloride	1.220	0.15	1	0	122	70	130	1.14	6.78	30	

Qualifiers:
- `-` Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Name	Amount	IDL#1	IDL#2	IDL#3	IDL#4	IDL#5	IDL#6	IDL#7	Average	StdDev	%Rec	IDL
Propylene	0.15	0.16	0.15	0.16	0.14	0.16	0.14	0.16	0.153	0.010	98.1	0.030
Freon 12	0.15	0.18	0.17	0.17	0.17	0.18	0.17	0.17	0.173	0.005	86.8	0.015
Chloromethane	0.15	0.19	0.18	0.16	0.18	0.18	0.2	0.17	0.180	0.013	83.3	0.041
Freon 114	0.15	0.18	0.17	0.17	0.17	0.18	0.17	0.18	0.174	0.005	86.1	0.017
Vinyl Chloride	0.15	0.17	0.16	0.16	0.15	0.16	0.15	0.15	0.157	0.008	95.5	0.024
Butane	0.15	0.18	0.16	0.17	0.18	0.18	0.19	0.19	0.179	0.011	84.0	0.034
1,3-butadiene	0.15	0.21	0.2	0.2	0.22	0.17	0.18	0.23	0.201	0.021	74.5	0.066
Bromomethane	0.15	0.18	0.2	0.21	0.18	0.22	0.16	0.21	0.194	0.021	77.2	0.068
Chloroethane	0.15	0.19	0.19	0.16	0.19	0.19	0.18	0.19	0.184	0.011	81.4	0.036
Ethanol	0.15	0.16	0.16	0.18	0.17	0.19	0.18	0.19	0.176	0.013	85.4	0.040
Acrolein	0.15	0.22	0.17	0.19	0.16	0.18	0.21	0.17	0.186	0.022	80.8	0.070
Vinyl Bromide	0.15	0.17	0.15	0.16	0.16	0.17	0.17	0.17	0.164	0.008	91.3	0.025
Freon 11	0.15	0.18	0.17	0.17	0.18	0.19	0.17	0.18	0.177	0.008	84.7	0.024
Acetone	0.15	0.2	0.17	0.18	0.15	0.15	0.18	0.14	0.167	0.021	89.7	0.067
Pentane	0.15	0.18	0.17	0.18	0.16	0.17	0.2	0.16	0.174	0.014	86.1	0.044
Isopropyl alcohol	0.15	0.22	0.2	0.19	0.2	0.19	0.21	0.19	0.200	0.012	75.0	0.036
1,1-dichloroethene	0.15	0.2	0.17	0.19	0.19	0.19	0.18	0.18	0.186	0.010	80.8	0.031
Freon 113	0.15	0.17	0.16	0.18	0.18	0.18	0.17	0.17	0.173	0.008	86.8	0.024
t-Butyl alcohol	0.15	0.21	0.2	0.2	0.21	0.2	0.2	0.18	0.200	0.010	75.0	0.031
Methylene chloride	0.15	0.2	0.18	0.19	0.18	0.2	0.19	0.17	0.187	0.011	80.2	0.035
Allyl chloride	0.15	0.18	0.17	0.16	0.18	0.18	0.2	0.18	0.179	0.012	84.0	0.038
Carbon disulfide	0.15	0.2	0.17	0.19	0.19	0.2	0.18	0.19	0.189	0.011	79.5	0.034
trans-1,2-dichloroethene	0.15	0.15	0.14	0.14	0.14	0.16	0.14	0.15	0.146	0.008	102.9	0.025
methyl tert-butyl ether	0.15	0.14	0.14	0.14	0.13	0.15	0.14	0.13	0.139	0.007	108.2	0.022
1,1-dichloroethane	0.15	0.17	0.15	0.16	0.15	0.17	0.16	0.16	0.160	0.008	93.8	0.026
Vinyl acetate	0.15	0.14	0.13	0.14	0.13	0.13	0.13	0.12	0.131	0.007	114.1	0.022
Methyl Ethyl Ketone	0.15	0.17	0.17	0.16	0.16	0.15	0.13	0.12	0.151	0.020	99.1	0.061
cis-1,2-dichloroethene	0.15	0.15	0.14	0.16	0.15	0.16	0.15	0.14	0.150	0.008	100.0	0.026
Hexane	0.15	0.12	0.14	0.13	0.13	0.13	0.12	0.12	0.127	0.008	118.0	0.024
Ethyl acetate	0.15	0.16	0.17	0.14	0.15	0.14	0.16	0.13	0.150	0.014	100.0	0.044
Chloroform	0.15	0.16	0.16	0.16	0.16	0.17	0.16	0.17	0.163	0.005	92.1	0.015
Tetrahydrofuran	0.15	0.15	0.13	0.15	0.15	0.15	0.15	0.14	0.146	0.008	102.9	0.025
1,2-dichloroethane	0.15	0.16	0.15	0.16	0.16	0.17	0.16	0.17	0.161	0.007	92.9	0.022
1,1,1-trichloroethane	0.15	0.17	0.16	0.17	0.17	0.16	0.17	0.17	0.167	0.005	89.7	0.015
Cyclohexane	0.15	0.14	0.14	0.14	0.15	0.15	0.14	0.14	0.143	0.005	105.0	0.015
Carbon tetrachloride	0.15	0.13	0.15	0.15	0.15	0.15	0.15	0.16	0.149	0.009	101.0	0.028
Benzene	0.15	0.15	0.16	0.16	0.15	0.16	0.16	0.16	0.157	0.005	95.5	0.015
Methyl methacrylate	0.15	0.15	0.15	0.14	0.14	0.14	0.15	0.11	0.140	0.014	107.1	0.044
1,4-dioxane	0.15	0.18	0.18	0.19	0.18	0.15	0.17	0.12	0.167	0.024	89.7	0.076

Centek Laboratories
IDL Study

1ug/M3 Detection Limit
January 2016

Method TO-15A
Units=ppb

Name	Amount	IDL#1	IDL#2	IDL#3	IDL#4	IDL#5	IDL#6	IDL#7	Average	StdDev	%Rec	IDL
2,2,4-trimethylpentane	0.15	0.15	0.15	0.15	0.16	0.14	0.16	0.15	0.151	0.007	99.1	0.022
Heptane	0.15	0.12	0.13	0.13	0.12	0.13	0.13	0.13	0.127	0.005	118.0	0.015
Trichloroethene	0.15	0.14	0.15	0.14	0.15	0.15	0.14	0.15	0.146	0.005	102.9	0.017
1,2-dichloropropane	0.15	0.16	0.17	0.17	0.16	0.17	0.16	0.16	0.164	0.005	91.3	0.017
Bromodichloromethane	0.15	0.16	0.16	0.16	0.15	0.16	0.17	0.16	0.160	0.006	93.8	0.018
cis-1,3-dichloropropene	0.15	0.13	0.13	0.14	0.14	0.13	0.13	0.13	0.133	0.005	112.9	0.015
trans-1,3-dichloropropene	0.15	0.16	0.13	0.13	0.14	0.14	0.14	0.16	0.143	0.013	105.0	0.039
1,1,2-trichloroethane	0.15	0.16	0.15	0.16	0.15	0.16	0.18	0.17	0.161	0.011	92.9	0.034
Toluene	0.15	0.14	0.14	0.14	0.13	0.16	0.14	0.15	0.143	0.010	105.0	0.030
Methyl Isobutyl Ketone	0.15	0.18	0.18	0.18	0.18	0.16	0.18	0.15	0.173	0.013	86.8	0.039
Dibromochloromethane	0.15	0.16	0.16	0.17	0.18	0.16	0.17	0.18	0.169	0.009	89.0	0.028
Methyl Butyl Ketone	0.15	0.17	0.16	0.18	0.17	0.16	0.17	0.14	0.164	0.013	91.3	0.040
1,2-dibromoethane	0.15	0.16	0.17	0.16	0.16	0.16	0.16	0.17	0.163	0.005	92.1	0.015
Tetrachloroethylene	0.15	0.16	0.17	0.16	0.16	0.16	0.17	0.17	0.164	0.005	91.3	0.017
Chlorobenzene	0.15	0.16	0.16	0.16	0.17	0.15	0.17	0.17	0.163	0.008	92.1	0.024
1,1,1,2-tetrachloroethane	0.15	0.17	0.17	0.17	0.18	0.16	0.18	0.17	0.171	0.007	87.5	0.022
Ethylbenzene	0.15	0.13	0.14	0.14	0.14	0.12	0.14	0.13	0.134	0.008	111.7	0.025
m&p-xylene	0.3	0.25	0.25	0.25	0.23	0.25	0.25	0.25	0.247	0.008	121.4	0.024
Nonane	0.15	0.11	0.11	0.11	0.11	0.1	0.1	0.11	0.107	0.005	140.0	0.015
Styrene	0.15	0.12	0.13	0.13	0.11	0.12	0.13	0.12	0.123	0.008	122.1	0.024
Bromoform	0.15	0.15	0.15	0.16	0.15	0.15	0.17	0.16	0.156	0.008	96.3	0.025
o-xylene	0.15	0.11	0.12	0.12	0.14	0.14	0.12	0.11	0.123	0.013	122.1	0.039
Cumene	0.15	0.12	0.13	0.13	0.12	0.13	0.13	0.13	0.127	0.005	118.0	0.015
Bromofluorobenzene	1	0.88	0.9	0.9	0.87	0.89	0.89	0.9	0.890	0.012	112.4	0.036
1,1,2,2-tetrachloroethane	0.15	0.16	0.16	0.17	0.16	0.17	0.17	0.16	0.164	0.005	91.3	0.017
Propylbenzene	0.15	0.13	0.12	0.13	0.13	0.11	0.13	0.11	0.123	0.010	122.1	0.030
2-Chlorotoluene	0.15	0.13	0.13	0.13	0.14	0.13	0.12	0.13	0.130	0.006	115.4	0.018
4-ethyltoluene	0.15	0.11	0.12	0.12	0.12	0.13	0.13	0.11	0.120	0.008	125.0	0.026
1,3,5-trimethylbenzene	0.15	0.12	0.13	0.14	0.12	0.13	0.13	0.13	0.129	0.007	116.7	0.022
1,2,4-trimethylbenzene	0.15	0.12	0.13	0.12	0.12	0.13	0.12	0.12	0.123	0.005	122.1	0.015
1,3-dichlorobenzene	0.15	0.14	0.14	0.14	0.13	0.14	0.13	0.14	0.137	0.005	109.4	0.015
benzyl chloride	0.15	0.13	0.16	0.13	0.15	0.13	0.15	0.16	0.144	0.014	104.0	0.044
1,4-dichlorobenzene	0.15	0.13	0.11	0.12	0.12	0.12	0.12	0.13	0.121	0.007	123.5	0.022
1,2,3-trimethylbenzene	0.15	0.12	0.11	0.12	0.12	0.12	0.11	0.11	0.116	0.005	129.6	0.017
1,2-dichlorobenzene	0.15	0.13	0.14	0.14	0.14	0.14	0.14	0.13	0.137	0.005	109.4	0.015
1,2,4-trichlorobenzene	0.15	0.1	0.11	0.1	0.11	0.11	0.12	0.1	0.107	0.008	140.0	0.024
Naphthalene	0.15	0.13	0.13	0.14	0.11	0.12	0.14	0.12	0.127	0.011	118.0	0.035
Hexachloro-1,3-butadiene	0.15	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.164	0.005	91.3	0.017

Name	Amount	IDL#1	IDL#2	IDL#3	IDL#4	IDL#5	IDL#6	IDL#7	Average	StdDev	%Rec	IDL
Vinyl Chloride	0.1	0.11	0.11	0.09	0.09	0.1	0.09	0.1	0.099	0.009	101.4	0.028
Carbon tetrachloride	0.1	0.1	0.11	0.08	0.09	0.09	0.09	0.09	0.093	0.010	107.7	0.030
Trichloroethene	0.1	0.1	0.1	0.07	0.08	0.08	0.08	0.08	0.084	0.011	118.6	0.036
Tetrachloroethylene	0.1	0.11	0.12	0.09	0.09	0.1	0.09	0.09	0.099	0.012	101.4	0.038
Naphthalene	0.1	0.09	0.08	0.07	0.06	0.06	0.07	0.06	0.070	0.012	142.9	0.036

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

SAMPLE DATA

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-1
Lab Order:	C1603076	**Tag Number:**	1183,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-4			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
Chloromethane	0.60	0.15		ppbV	1	4/1/2016 4:18:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 4:18:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/1/2016 4:18:00 AM
Surr: Bromofluorobenzene	110	70-130		%REC	1	4/1/2016 4:18:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-1
Lab Order:	C1603076	**Tag Number:**	1183,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:18:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:18:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:18:00 AM
Chloromethane	1.7	0.31		ug/m3	1	4/1/2016 4:18:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 4:18:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 4:18:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/1/2016 4:18:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033129.D Vial: 8
Acq On : 1 Apr 2016 4:18 am Operator: RJP
Sample : C1603076-001A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 11:43:13 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

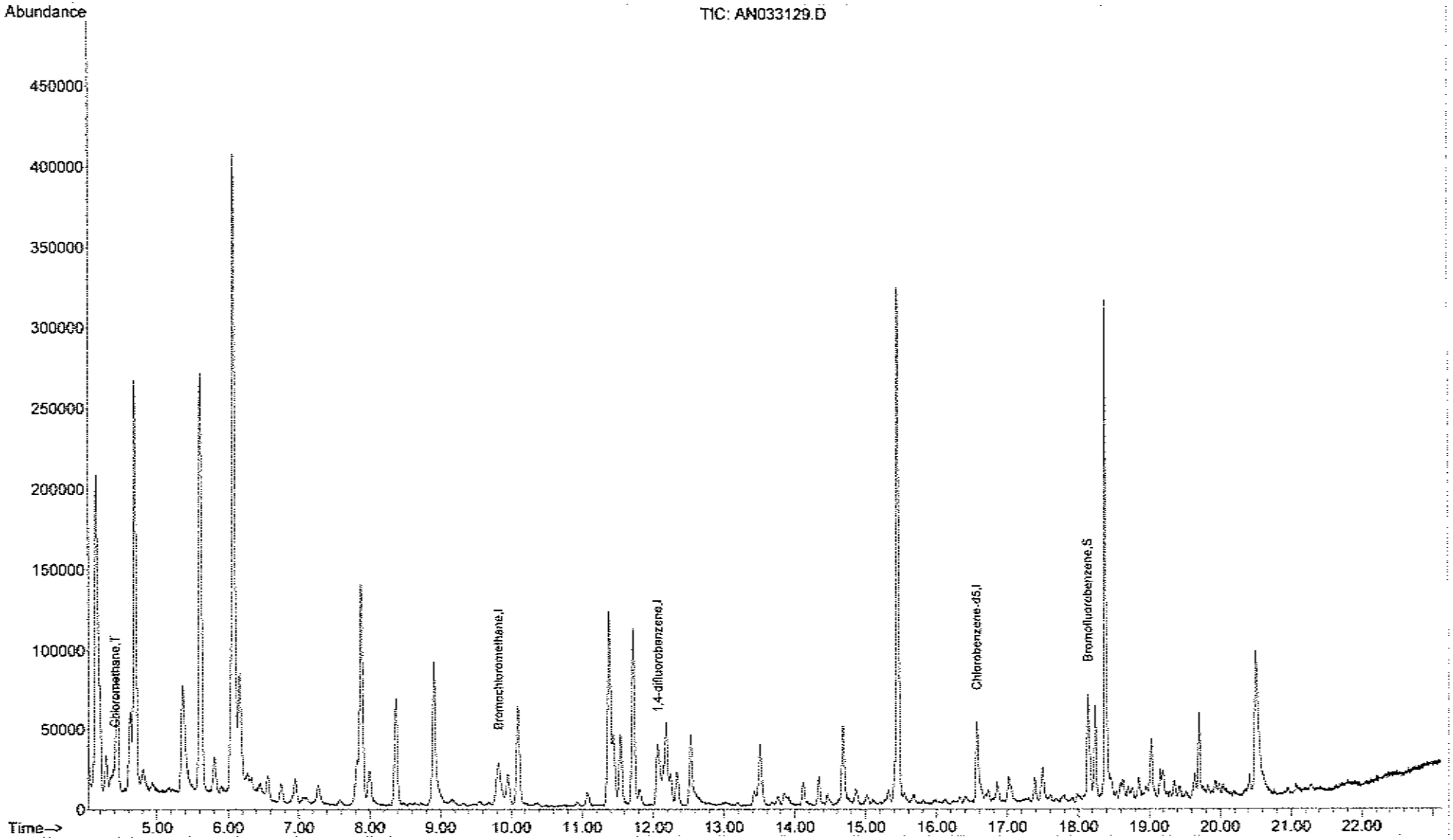
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.82	128	17319	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.07	114	46632	1.00	ppb	0.00
50) Chlorobenzene-d5	16.57	117	44330	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	31394	1.10	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 110.00%			
Target Compounds						Qvalue
4) Chloromethane	4.40	50	15411	0.80	ppb	85

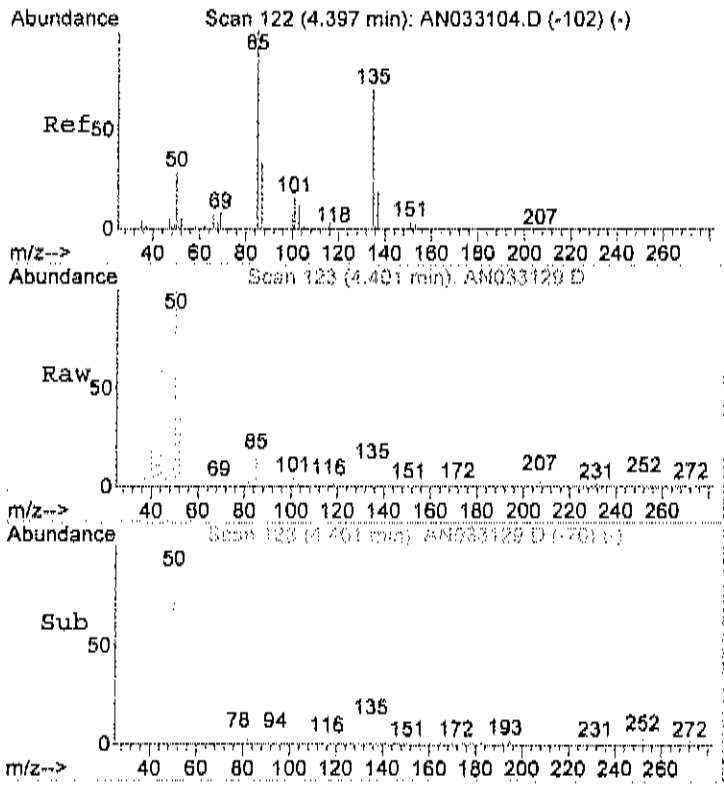
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033129.D Vial: 8
Acq On : 1 Apr 2016 4:18 am Operator: RJP
Sample : C1603076-001A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 1 11:48 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration

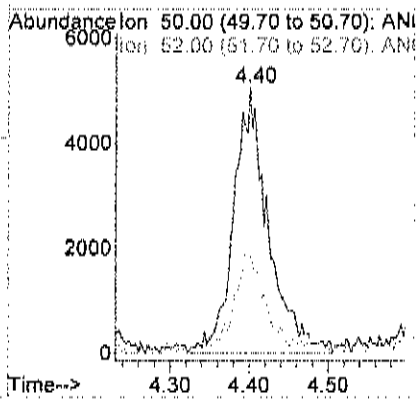




#4
Chloromethane
Concen: 0.80 ppb
RT: 4.40 min Scan# 123
Delta R.T. 0.01 min
Lab File: AN033129.D
Acq: 1 Apr 2016 4:18 am

Tgt Ion: 50 Resp: 15411

Ion	Ratio	Lower	Upper
50	100		
52	37.1	9.2	49.2



Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-1
Lab Order:	C1603076	**Tag Number:**	1179,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-5			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
Tetrachloroethylene	0.77	0.15		ppbV	1	4/1/2016 5:36:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 PM
Trichloroethene	0.18	0.15		ppbV	1	4/1/2016 5:36:00 PM
Vinyl chloride	0.26	0.15		ppbV	1	4/1/2016 5:36:00 PM
Surr: Bromofluorobenzene	88.0	70-130		%REC	1	4/1/2016 5:36:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-1
Lab Order:	C1603076	**Tag Number:**	1179,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 5:36:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 5:36:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 5:36:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 5:36:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 PM
Tetrachloroethylene	5.2	1.0		ug/m3	1	4/1/2016 5:36:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 PM
Trichloroethene	0.97	0.81		ug/m3	1	4/1/2016 5:36:00 PM
Vinyl chloride	0.66	0.38		ug/m3	1	4/1/2016 5:36:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040110.D Vial: 26
Acq On : 1 Apr 2016 5:36 pm Operator: RJP
Sample : C1603076-002A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 21:18:24 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

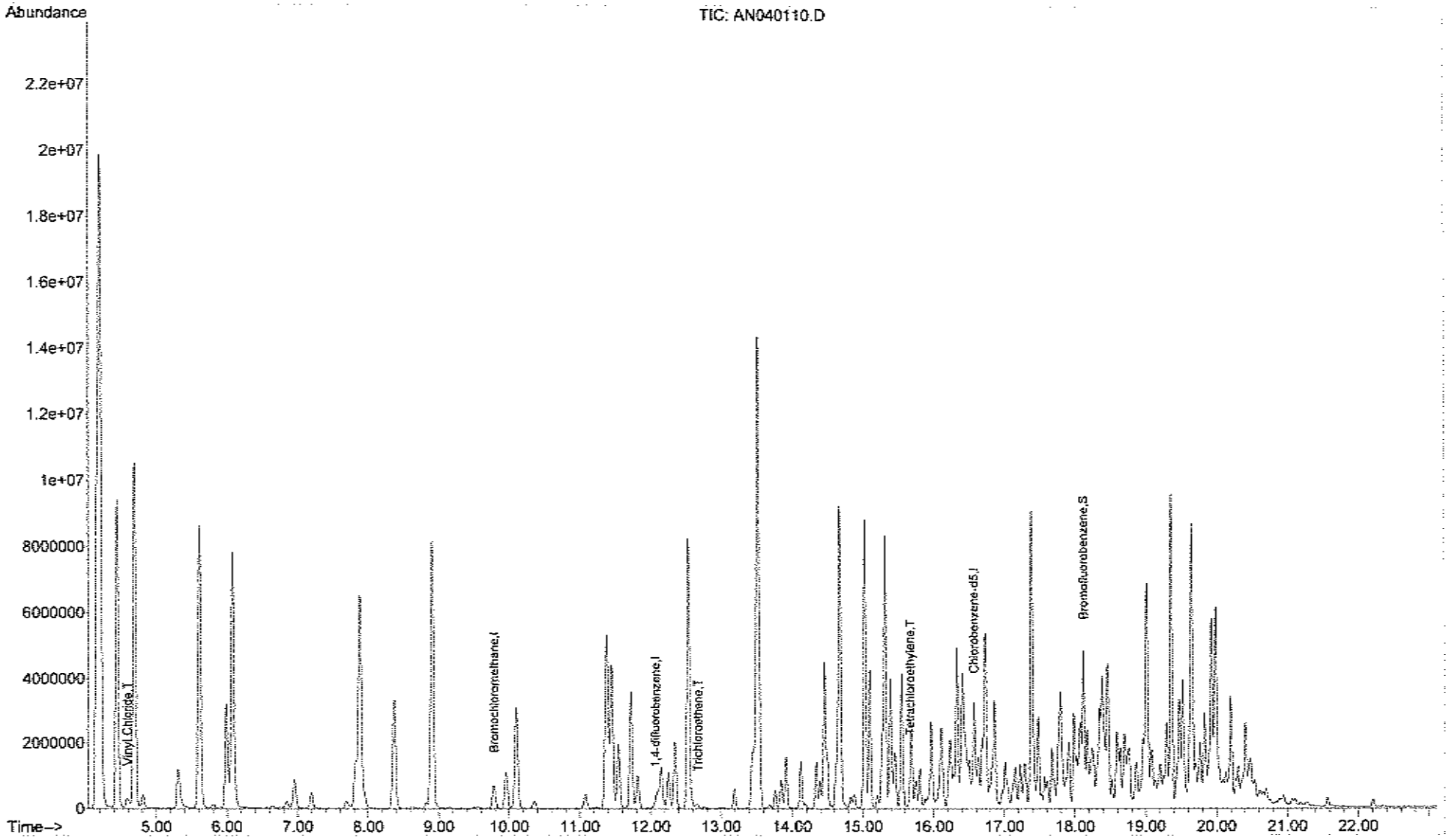
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.79	128	26432	1.00	ppb	-0.02
35) 1,4-difluorobenzene	12.06	114	89168	1.00	ppb	0.00
50) Chlorobenzene-d5	16.56	117	49311	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	27953m	0.88	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 88.00%			
Target Compounds						Qvalue
6) Vinyl Chloride	4.59	62	7747	0.26	ppb	92
44) Trichloroethene	12.68	130	6776	0.18	ppb	99
56) Tetrachloroethylene	15.66	164	24691	0.77	ppb	100

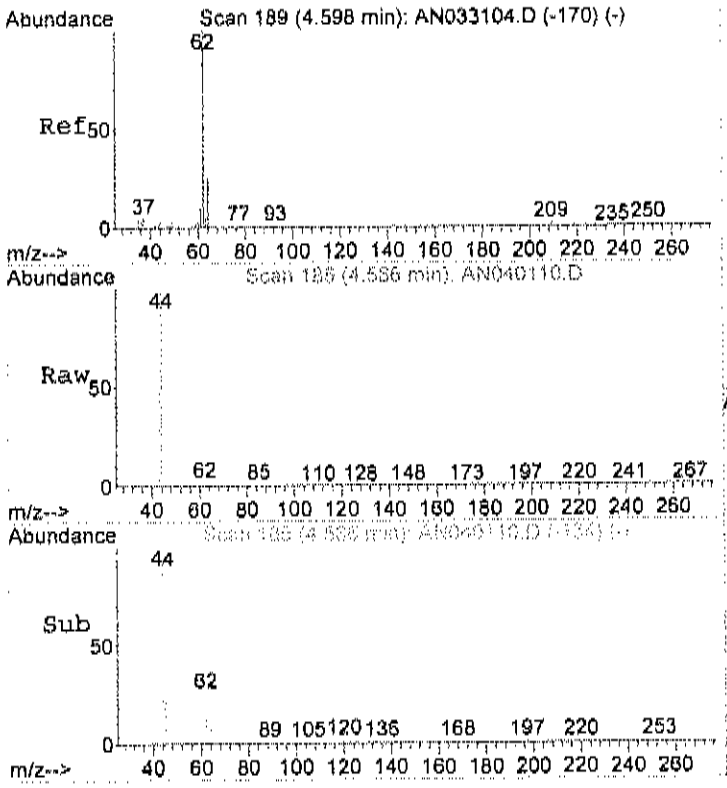
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040110.D Vial: 26
Acq On : 1 Apr 2016 5:36 pm Operator: RJP
Sample : C1603076-002A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 2 12:20 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration

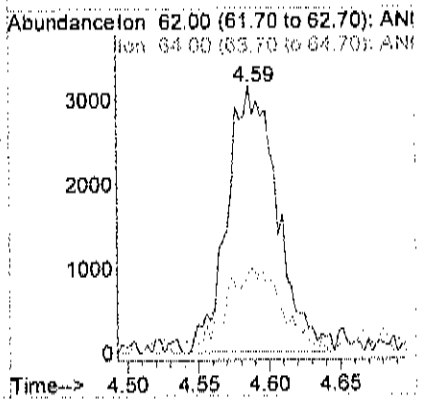


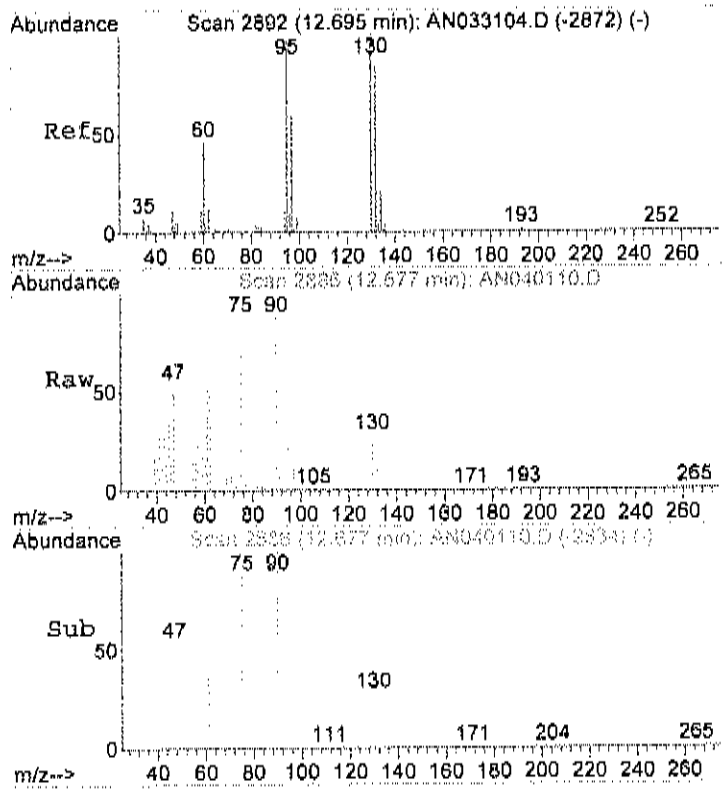


#6
Vinyl Chloride
Concen: 0.26 ppb
RT: 4.59 min Scan# 185
Delta R.T. 0.00 min
Lab File: AN040110.D
Acq: 1 Apr 2016 5:36 pm

Tgt Ion: 62 Resp: 7747

Ion	Ratio	Lower	Upper
62	100		
64	35.0	9.9	69.9

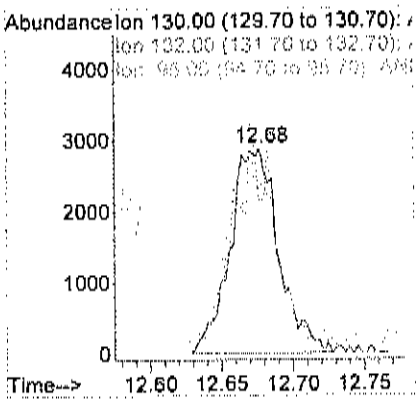


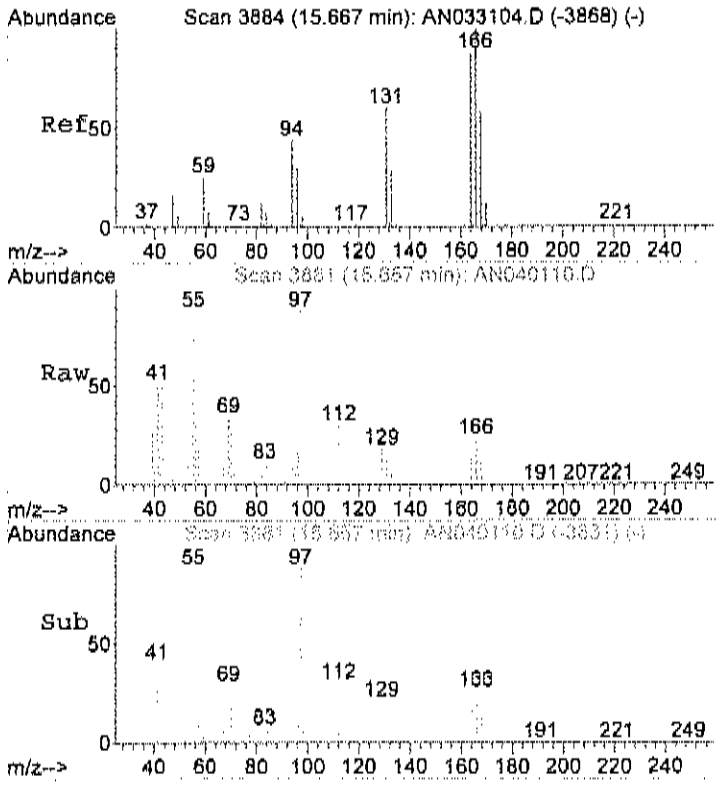


#44
Trichloroethene
Concen: 0.18 ppb
RT: 12.68 min Scan# 2886
Delta R.T. 0.01 min
Lab File: AN040110.D
Acq: 1 Apr 2016 5:36 pm

Tgt Ion:130 Resp: 6776

Ion	Ratio	Lower	Upper
130	100		
132	95.1	76.1	116.1
95	103.1	85.0	125.0

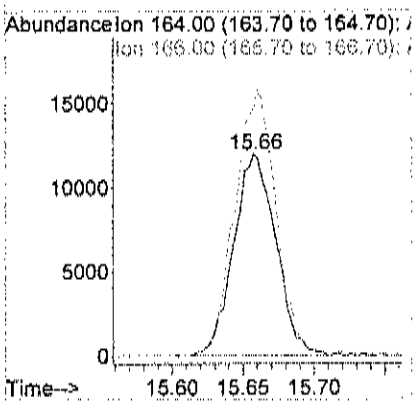




#56
Tetrachloroethylene
Concen: 0.77 ppb
RT: 15.66 min Scan# 3881
Delta R.T. -0.00 min
Lab File: AN040110.D
Acq: 1 Apr 2016 5:36 pm

Tgt Ion:164 Resp: 24691

Ion	Ratio	Lower	Upper
164	100		
166	128.9	108.6	148.6



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040408.D
Acq On : 4 Apr 2016 2:39 pm
Sample : C1603076-002A RE
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 04 15:38:09 2016

Vial: 35
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

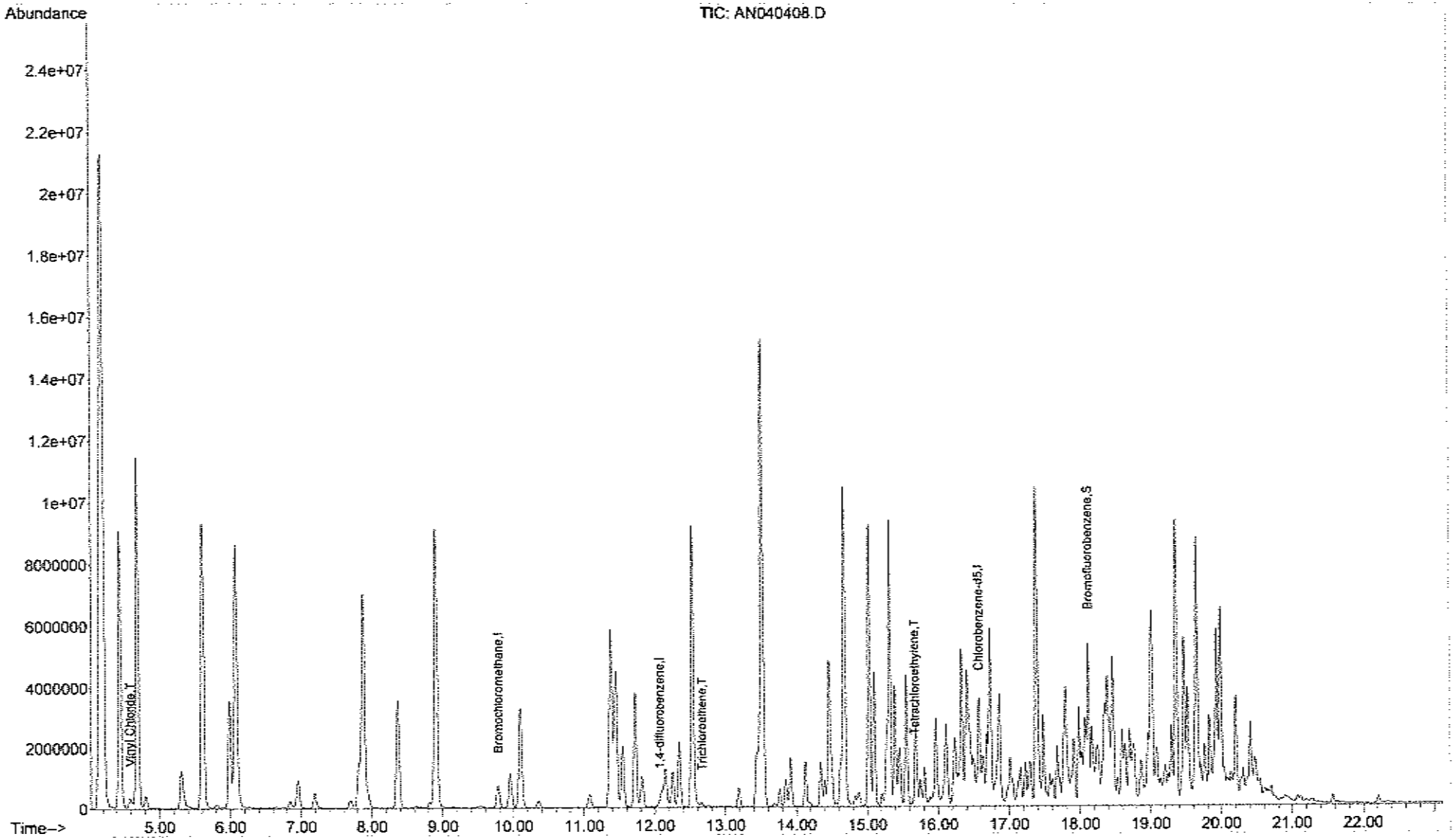
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.78	128	28253	1.00	ppb	-0.02
35) 1,4-difluorobenzene	12.05	114	94627	1.00	ppb	0.00
50) Chlorobenzene-d5	16.56	117	56547	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	43623m	1.20	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 120.00%			
Target Compounds						Qvalue
6) Vinyl Chloride	4.58	62	8265	0.26	ppb	96
44) Trichloroethene	12.67	130	7735	0.19	ppb	95
56) Tetrachloroethylene	15.66	164	27949	0.76	ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040408.D Vial: 35
Acq On : 4 Apr 2016 2:39 pm Operator: RJP
Sample : C1603076-002A RE Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 15:53 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration



AN040408.D A316_1UG.M Tue Apr 26 15:56:45 2016 MSD1

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 1
Lab Order:	C1603076	**Tag Number:**	419,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-4			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:18:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 4:18:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/1/2016 4:18:00 PM
Surr: Bromofluorobenzene	117	70-130		%REC	1	4/1/2016 4:18:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 1
Lab Order:	C1603076	**Tag Number:**	419,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:18:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:18:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:18:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 4:18:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 4:18:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 4:18:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/1/2016 4:18:00 PM

Qualifiers:

**	Reporting Limit
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
JN	Non-routine analyte. Quantitation estimated.
S	Spike Recovery outside accepted recovery limits
.	Results reported are not blank corrected
E	Value above quantitation range
J	Analyte detected at or below quantitation limits
ND	Not Detected at the Reporting Limit

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040108.D Vial: 24
Acq On : 1 Apr 2016 4:18 pm Operator: RJP
Sample : C1603076-003A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 16:48:49 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.80	128	24896	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.06	114	74463	1.00	ppb	0.00
50) Chlorobenzene-d5	16.57	117	58495	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	44207	1.17	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 117.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

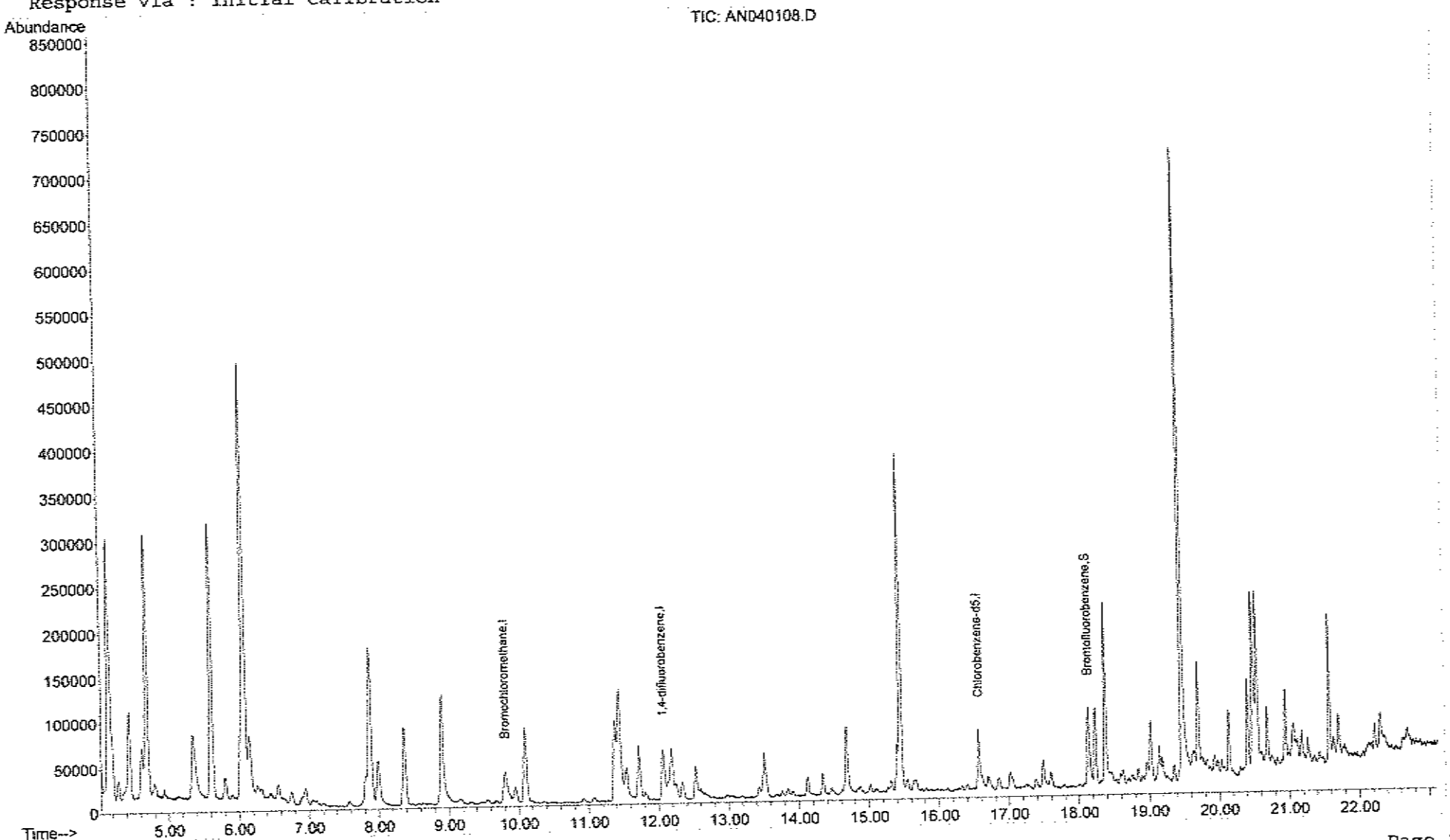
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040108.D
Acq On : 1 Apr 2016 4:18 pm
Sample : C1603076-003A
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 2 12:16 2016

Vial: 24
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040406.D Vial: 33
Acq On : 4 Apr 2016 12:25 pm Operator: RJP
Sample : C1603076-003A RE Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 04 15:38:06 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

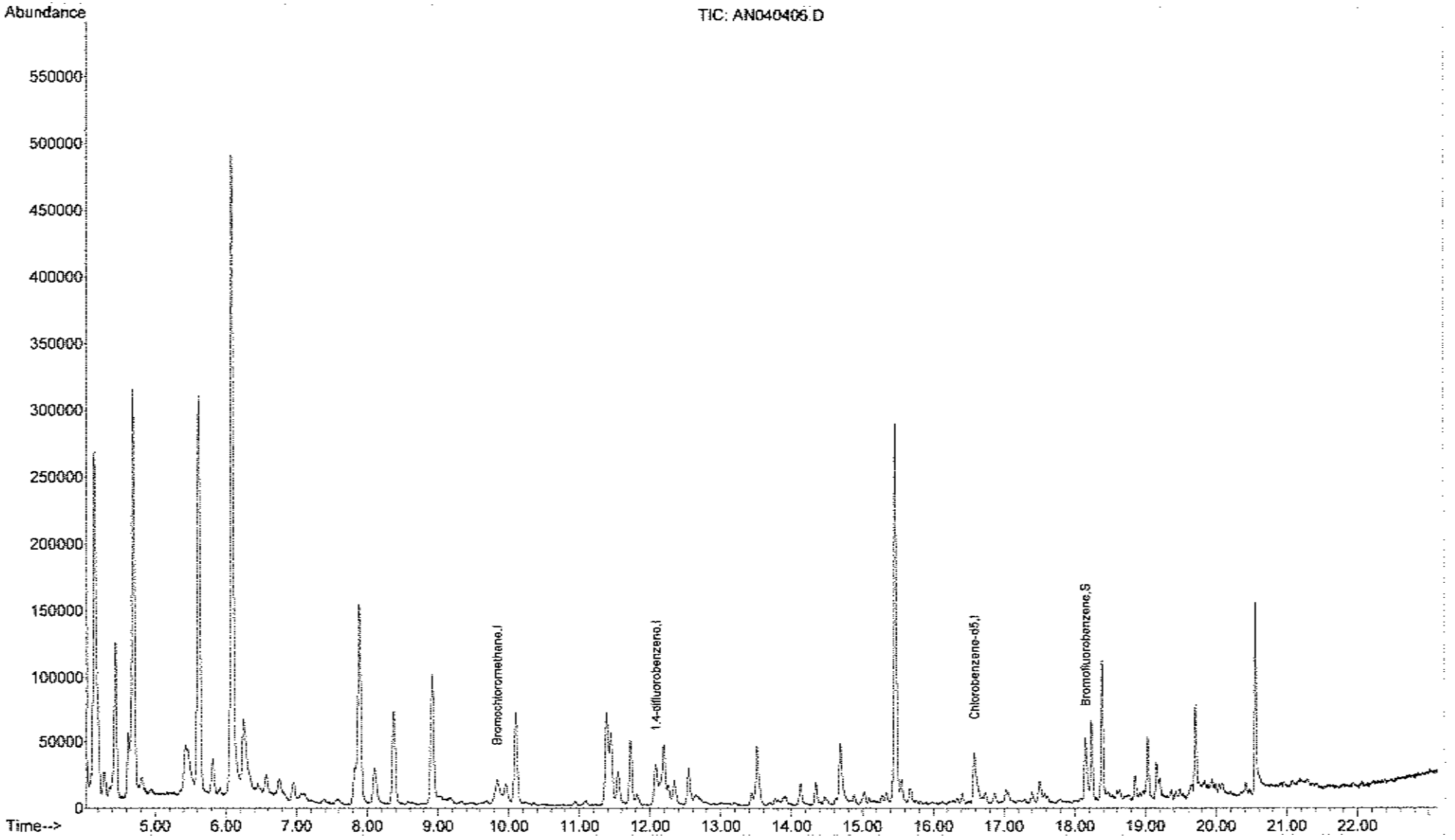
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.84	128	19294m	1.00	ppb	0.03
35) 1,4-difluorobenzene	12.08	114	43636	1.00	ppb	0.02
50) Chlorobenzene-d5	16.58	117	39672	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	26829	1.05	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 105.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040406.D Vial: 33
Acq On : 4 Apr 2016 12:25 pm Operator: RJP
Sample : C1603076-003A RE Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 15:51 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration



Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor Air
Lab Order:	C1603076	**Tag Number:**	192,342
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-3			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
Chloromethane	0.76	0.15		ppbV	1	4/1/2016 4:57:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 4:57:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/1/2016 4:57:00 AM
Surr: Bromofluorobenzene	104	70-130		%REC	1	4/1/2016 4:57:00 AM

Qualifiers:

**	Reporting Limit	,	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor Air
Lab Order:	C1603076	**Tag Number:**	192,342
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:57:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:57:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:57:00 AM
Chloromethane	1.6	0.31		ug/m3	1	4/1/2016 4:57:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 4:57:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 4:57:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/1/2016 4:57:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033130.D
Acq On : 1 Apr 2016 4:57 am
Sample : C1603076-004A
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 01 11:43:15 2016

Vial: 9
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

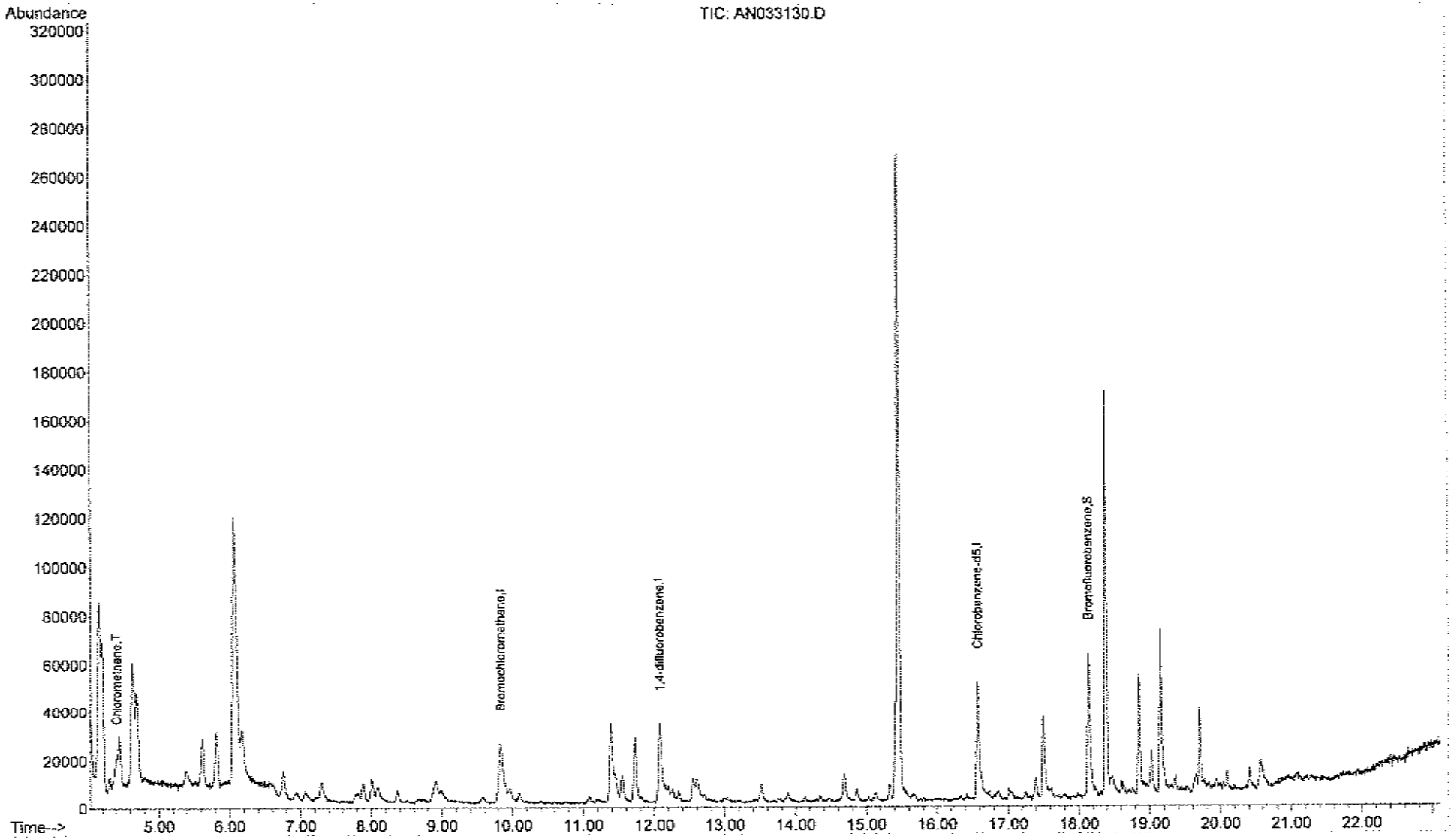
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.83	128	16741	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.07	114	43872	1.00	ppb	0.02
50) Chlorobenzene-d5	16.57	117	44391	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	29751	1.04	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 104.00%			
Target Compounds						Qvalue
4) Chloromethane	4.40	50	14250	0.76	ppb	92

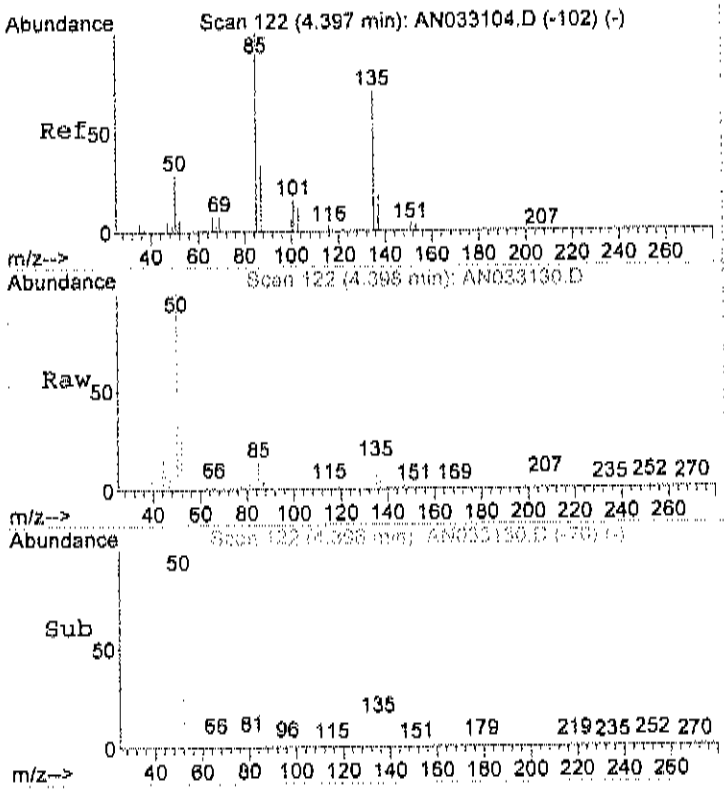
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033130.D Vial: 9
Acq On : 1 Apr 2016 4:57 am Operator: RJP
Sample : C1603076-004A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 1 11:49 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration

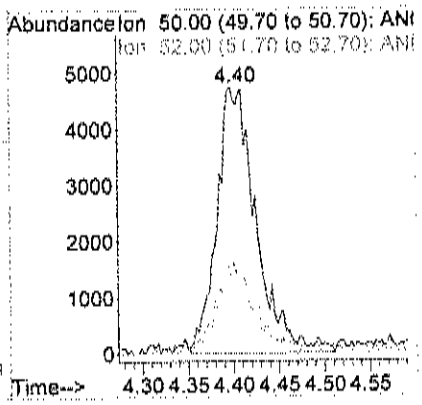




#4
Chloromethane
Concen: 0.76 ppb
RT: 4.40 min Scan# 122
Delta R.T. 0.01 min
Lab File: AN033130.D
Acq: 1 Apr 2016 4:57 am

Tgt Ion: 50 Resp: 14250

Ion	Ratio	Lower	Upper
50	100		
52	33.5	9.2	49.2



Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 2
Lab Order:	C1603076	**Tag Number:**	1193,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-5			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Tetrachloroethylene	0.93	0.15		ppbV	1	4/1/2016 4:57:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Trichloroethene	0.26	0.15		ppbV	1	4/1/2016 4:57:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	4/1/2016 4:57:00 PM
Surr: Bromofluorobenzene	108	70-130		%REC	1	4/1/2016 4:57:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 2
Lab Order:	C1603076	**Tag Number:**	1193,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:57:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:57:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:57:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 4:57:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 PM
Tetrachloroethylene	6.3	1.0		ug/m3	1	4/1/2016 4:57:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 PM
Trichloroethene	1.4	0.81		ug/m3	1	4/1/2016 4:57:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	4/1/2016 4:57:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040109.D
Acq On : 1 Apr 2016 4:57 pm
Sample : C1603076-005A
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 01 21:17:19 2016

Vial: 25
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.78	128	26433	1.00	ppb	-0.03
35) 1,4-difluorobenzene	12.05	114	86881	1.00	ppb	0.00
50) Chlorobenzene-d5	16.56	117	45080	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	31362m	1.08	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 108.00%			
Target Compounds						Qvalue
44) Trichloroethene	12.67	130	9757	0.26	ppb	94
56) Tetrachloroethylene	15.66	164	27301	0.93	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

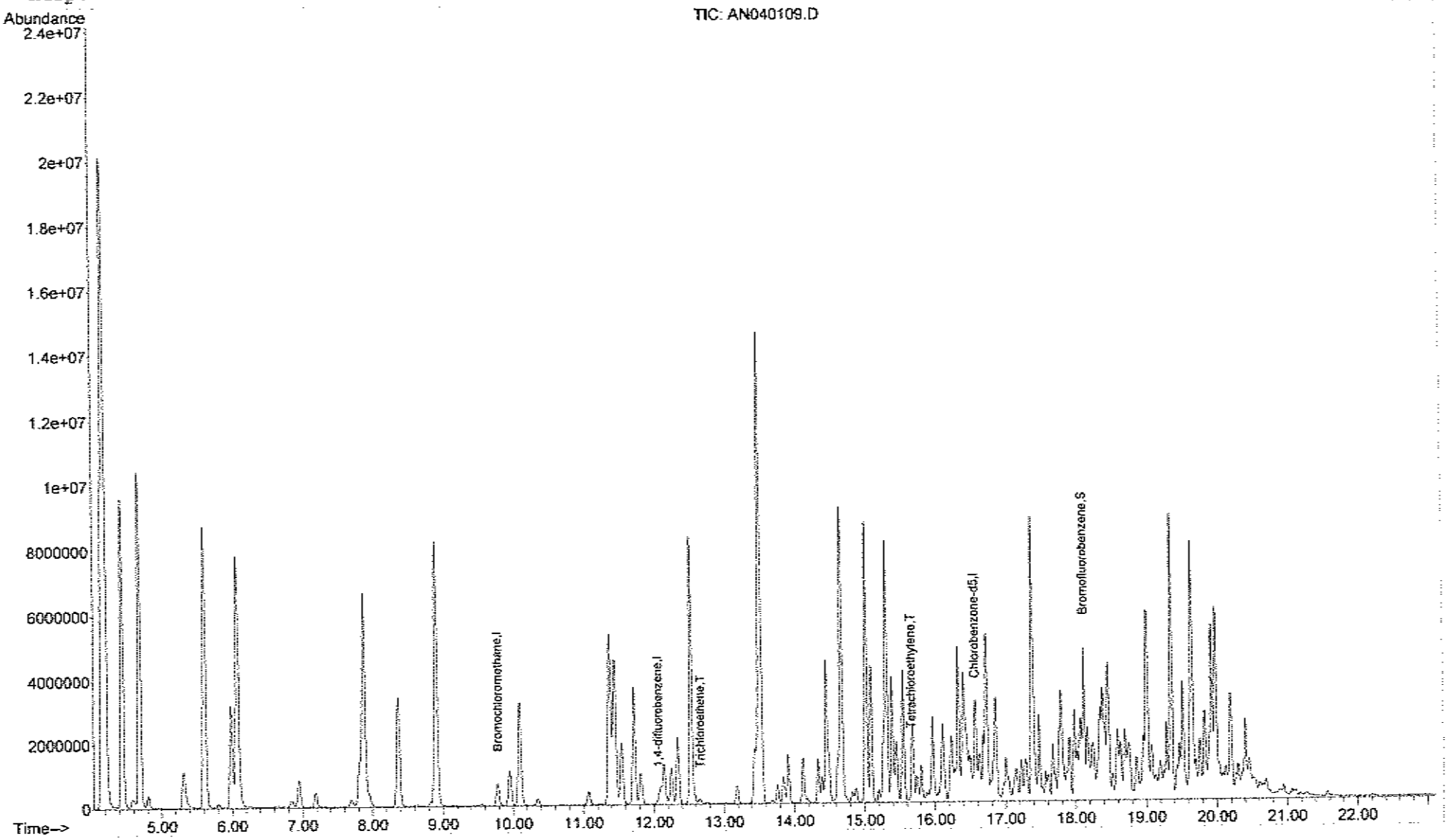
Quantitation Report (QT Reviewed)

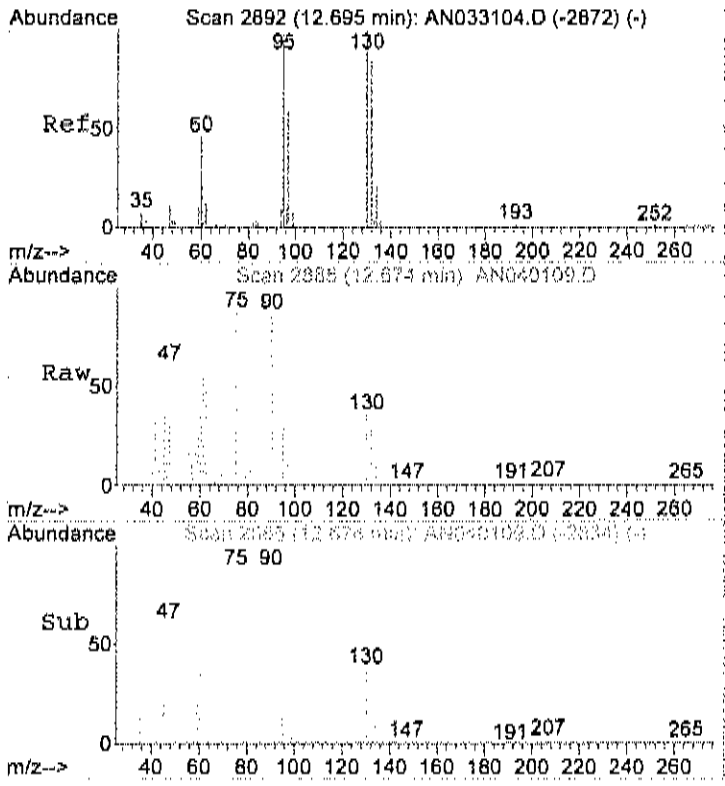
Data File : C:\HPCHEM\1\DATA\AN040109.D
Acq On : 1 Apr 2016 4:57 pm
Sample : C1603076-005A
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 2 12:18 2016

Vial: 25
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration

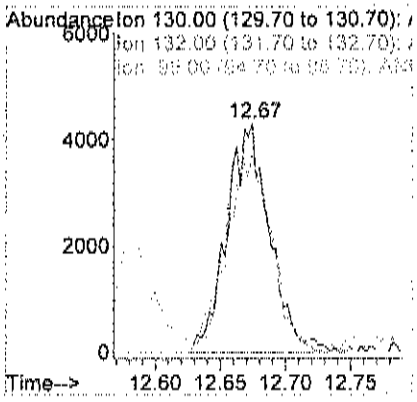


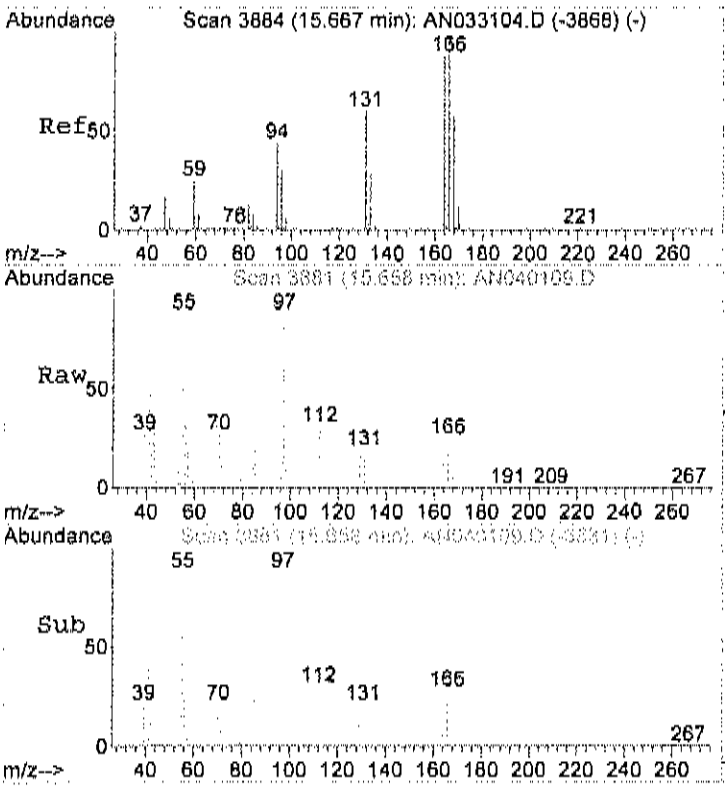


#44
Trichloroethene
Concen: 0.26 ppb
RT: 12.67 min Scan# 2885
Delta R.T. 0.00 min
Lab File: AN040109.D
Acq: 1 Apr 2016 4:57 pm

Tgt Ion:130 Resp: 9757

Ion	Ratio	Lower	Upper
130	100		
132	90.0	76.1	116.1
95	98.2	85.0	125.0

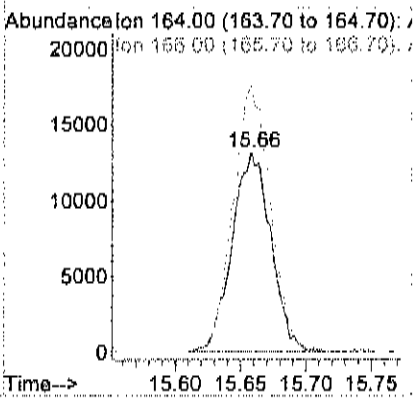




#56
Tetrachloroethylene
Concen: 0.93 ppb
RT: 15.66 min Scan# 3881
Delta R.T. 0.00 min
Lab File: AN040109.D
Acq: 1 Apr 2016 4:57 pm

Tgt Ion:164 Resp: 27301

Ion	Ratio	Lower	Upper
164	100		
166	128.5	108.6	148.6



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040407.D Vial: 34
Acq On : 4 Apr 2016 2:00 pm Operator: RJP
Sample : C1603076-005A RE Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 04 15:38:08 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

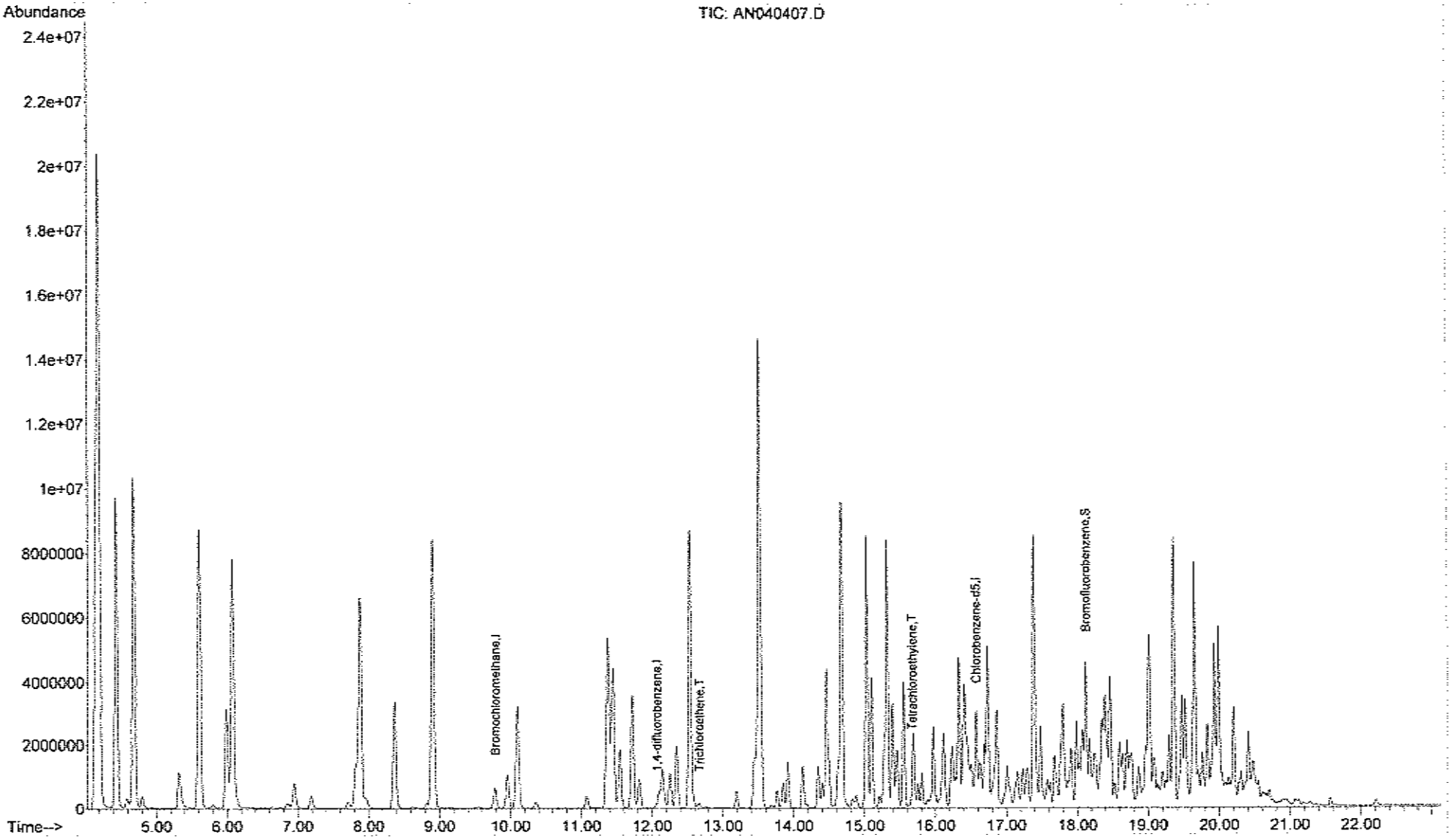
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.79	128	26358	1.00	ppb	-0.01
35) 1,4-difluorobenzene	12.06	114	86314	1.00	ppb	0.00
50) Chlorobenzene-d5	16.56	117	51558	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	40195m	1.21	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 121.00%			
Target Compounds						Qvalue
44) Trichloroethene	12.68	130	9882	0.27	ppb	97
56) Tetrachloroethylene	15.66	164	28397	0.85	ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040407.D Vial: 34
Acq On : 4 Apr 2016 2:00 pm Operator: RJP
Sample : C1603076-005A RE Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 15:52 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration



Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-2
Lab Order:	C1603076	**Tag Number:**	564,447
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-006A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-10			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	0.12	0.15	J	ppbV	1	4/1/2016 5:36:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
Chloromethane	0.95	0.15		ppbV	1	4/1/2016 5:36:00 AM
cis-1,2-Dichloroethene	0.77	0.15		ppbV	1	4/1/2016 5:36:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 5:36:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 5:36:00 AM
Vinyl chloride	0.70	0.040		ppbV	1	4/1/2016 5:36:00 AM
Surr: Bromofluorobenzene	126	70-130		%REC	1	4/1/2016 5:36:00 AM

Qualifiers:

**	Reporting Limit
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
JN	Non-routine analyte. Quantitation estimated.
S	Spike Recovery outside accepted recovery limits
.	Results reported are not blank corrected
E	Value above quantitation range
J	Analyte detected at or below quantitation limits
ND	Not Detected at the Reporting Limit

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-1AQ-2
Lab Order:	C1603076	**Tag Number:**	564,447
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-006A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	0.65	0.82	J	ug/m3	1	4/1/2016 5:36:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 5:36:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 5:36:00 AM
Chloromethane	2.0	0.31		ug/m3	1	4/1/2016 5:36:00 AM
cis-1,2-Dichloroethene	3.1	0.59		ug/m3	1	4/1/2016 5:36:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 5:36:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 5:36:00 AM
Vinyl chloride	1.6	0.10		ug/m3	1	4/1/2016 5:36:00 AM

Qualifiers:

**	Reporting Limit	,	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033131.D Vial: 10
Acq On : 1 Apr 2016 5:36 am Operator: RJP
Sample : C1603076-006A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 11:43:17 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

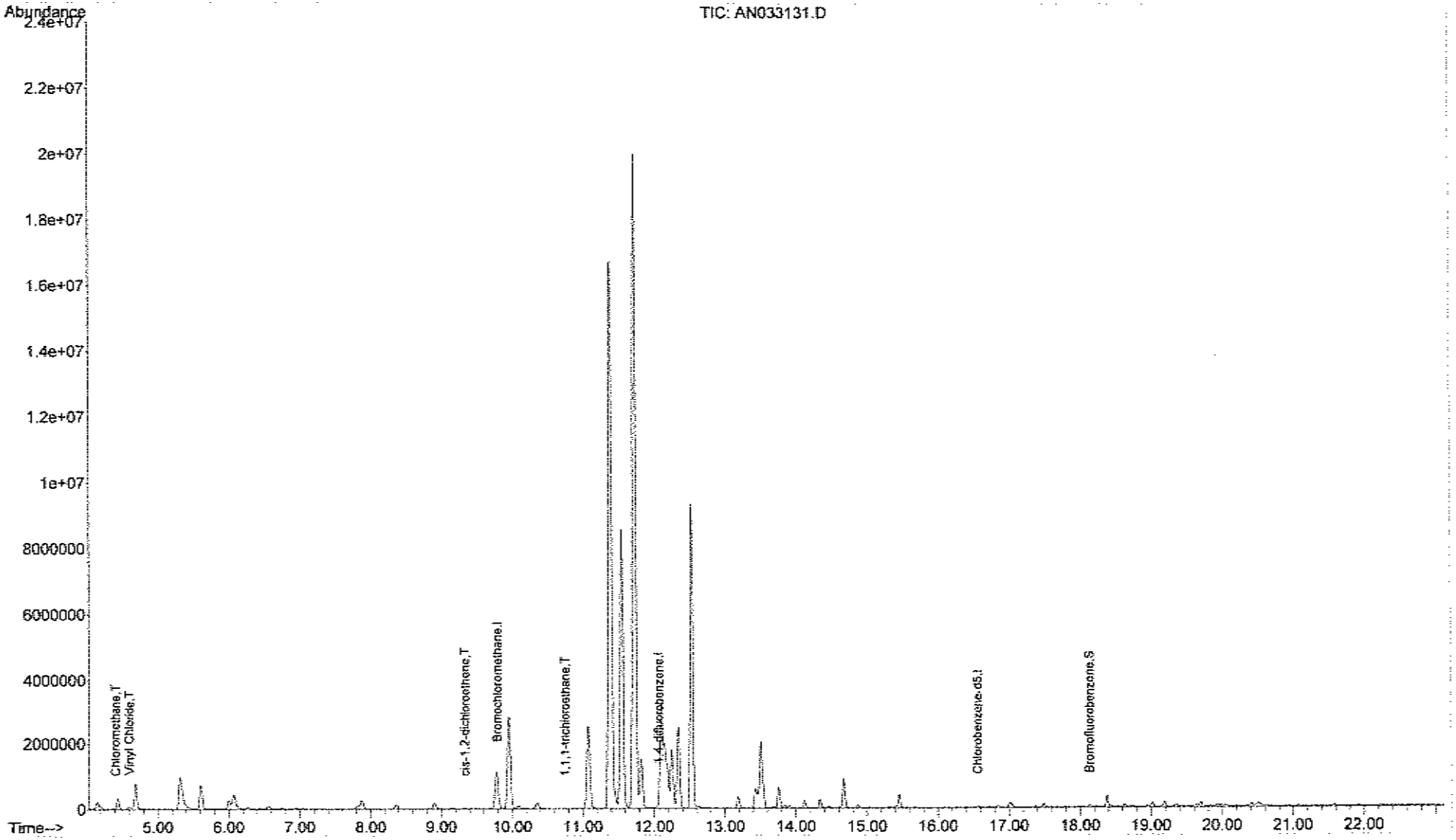
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.80	128	18828	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.06	114	58984	1.00	ppb	0.00
50) Chlorobenzene-d5	16.56	117	31805m	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	25696m	1.26	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 126.00%			
Target Compounds						Qvalue
4) Chloromethane	4.39	50	19925	0.95	ppb	96
6) Vinyl Chloride	4.60	62	14862	0.70	ppb	87
29) cis-1,2-dichloroethene	9.34	61	18149	0.77	ppb	93
36) 1,1,1-trichloroethane	10.75	97	6607	0.12	ppb	98

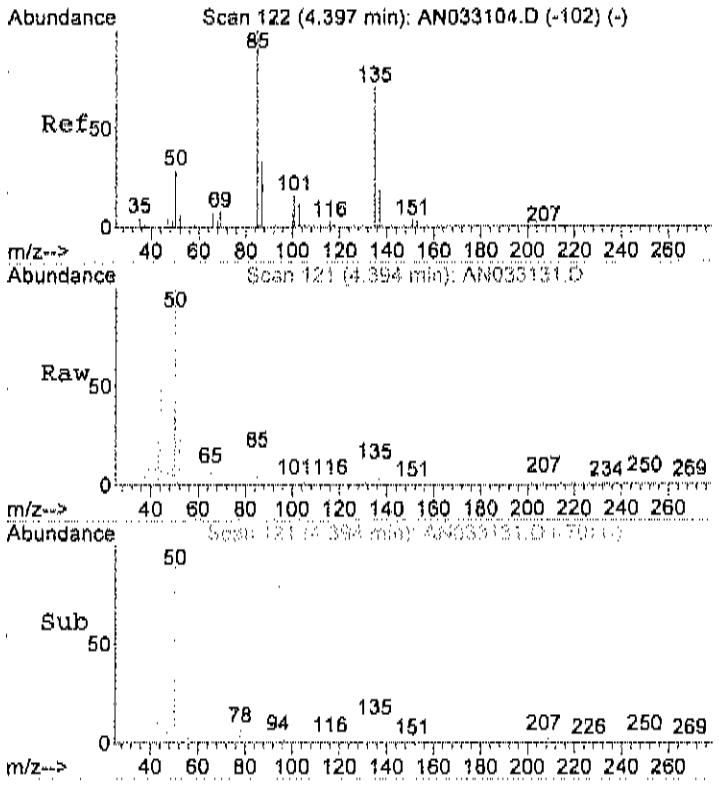
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033131.D Vial: 10
Acq On : 1 Apr 2016 5:36 am Operator: RJP
Sample : C1603076-006A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 1 11:50 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration

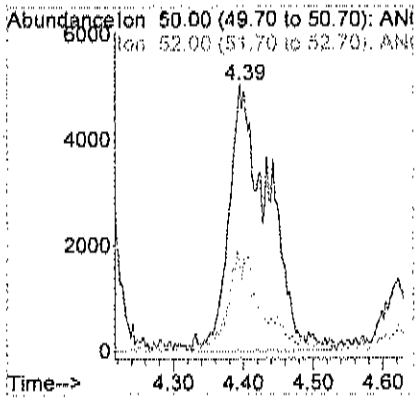


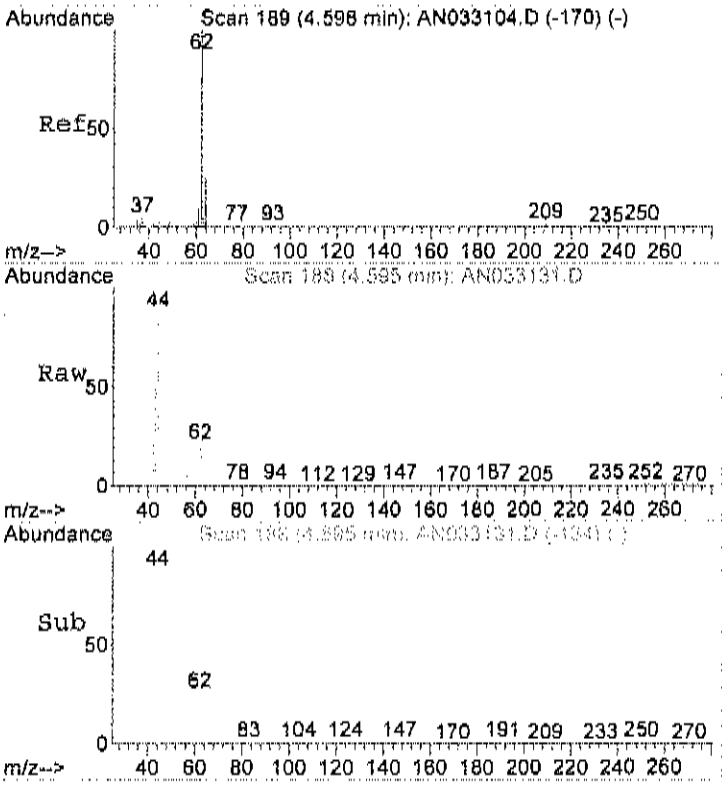


#4
Chloromethane
Concen: 0.95 ppb
RT: 4.39 min Scan# 121
Delta R.T. 0.00 min
Lab File: AN033131.D
Acq: 1 Apr 2016 5:36 am

Tgt Ion: 50 Resp: 19925

Ion	Ratio	Lower	Upper
50	100		
52	31.5	9.2	49.2

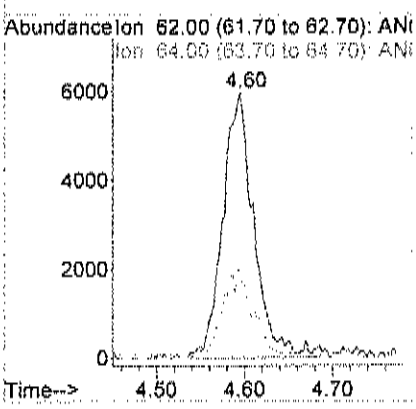


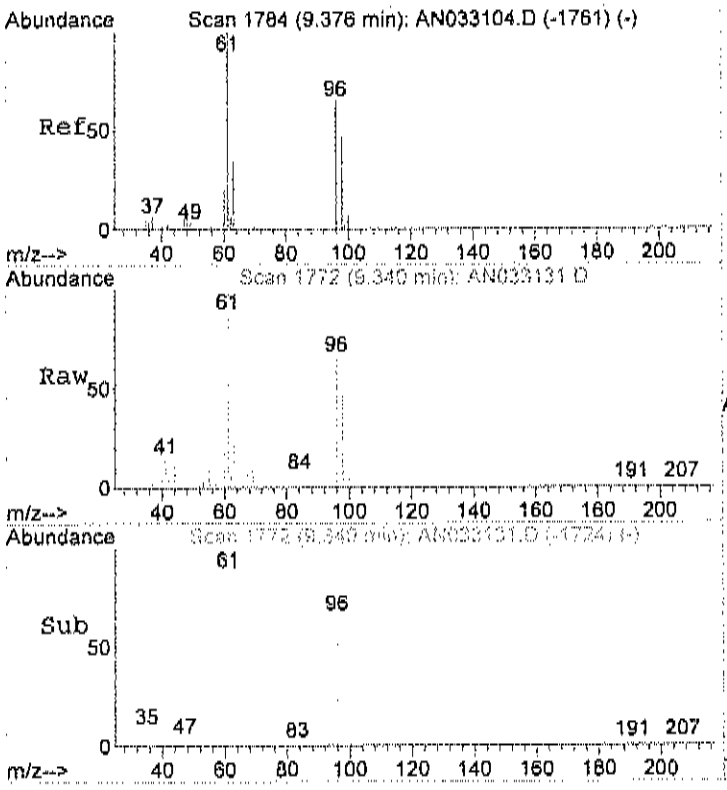


#6
Vinyl Chloride
Concen: 0.70 ppb
RT: 4.60 min Scan# 188
Delta R.T. 0.01 min
Lab File: AN033131.D
Acq: 1 Apr 2016 5:36 am

Tgt Ion: 62 Resp: 14862

Ion	Ratio	Lower	Upper
62	100		
64	31.7	9.9	69.9

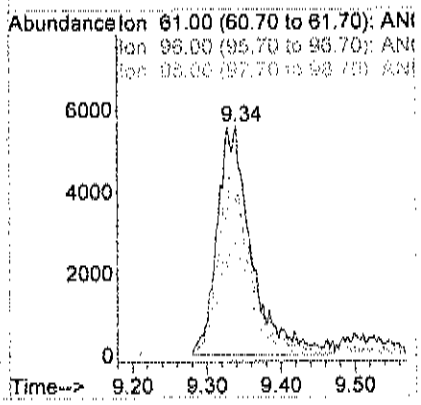


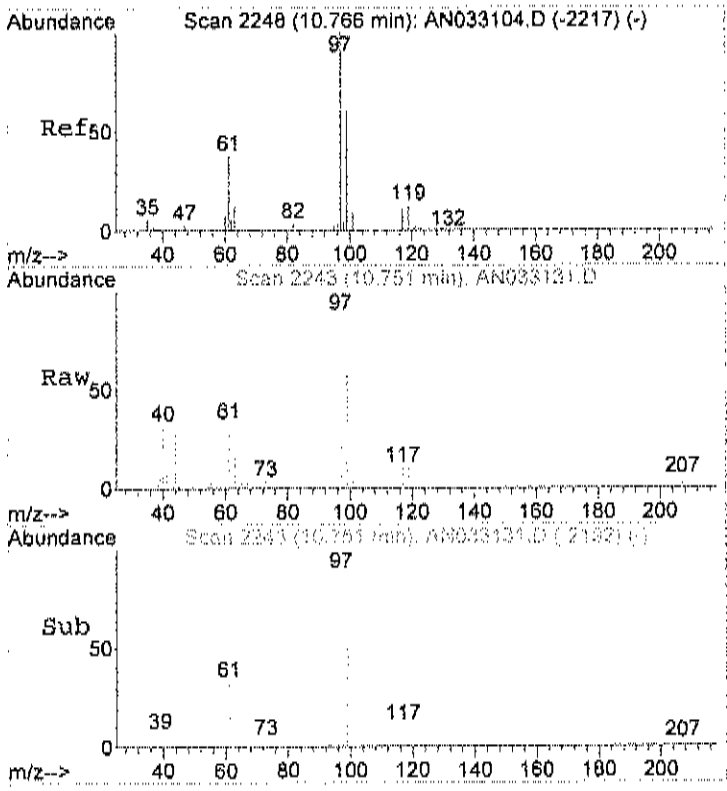


#29
cis-1,2-dichloroethene
Concen: 0.77 ppb
RT: 9.34 min Scan# 1772
Delta R.T. -0.01 min
Lab File: AN033131.D
Acq: 1 Apr 2016 5:36 am

Tgt Ion: 61 Resp: 18149

Ion	Ratio	Lower	Upper
61	100		
96	76.0	51.2	91.2
98	49.8	23.7	63.7

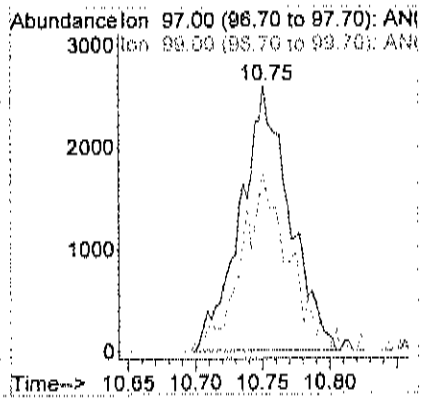




#36
1,1,1-trichloroethane
Concen: 0.12 ppb
RT: 10.75 min Scan# 2243
Delta R.T. 0.00 min
Lab File: AN033131.D
Acq: 1 Apr 2016 5:36 am

Tgt Ion: 97 Resp: 6607

Ion	Ratio	Lower	Upper
97	100		
99	63.5	45.4	85.4



Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-2
Lab Order:	C1603076	**Tag Number:**	89,1166
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-007A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-3			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
cis-1,2-Dichloroethene	0.87	0.15		ppbV	1	4/1/2016 6:15:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 PM
Vinyl chloride	0.72	0.15		ppbV	1	4/1/2016 6:15:00 PM
Surr: Bromofluorobenzene	102	70-130		%REC	1	4/1/2016 6:15:00 PM

Qualifiers:

**	Reporting Limit
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
JN	Non-routine analyte. Quantitation estimated.
S	Spike Recovery outside accepted recovery limits
.	Results reported are not blank corrected
E	Value above quantitation range
J	Analyte detected at or below quantitation limits
ND	Not Detected at the Reporting Limit

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-2
Lab Order:	C1603076	**Tag Number:**	89,1166
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-007A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 6:15:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 6:15:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 6:15:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 6:15:00 PM
cis-1,2-Dichloroethene	3.4	0.59		ug/m3	1	4/1/2016 6:15:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 6:15:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	4/1/2016 6:15:00 PM
Vinyl chloride	1.8	0.38		ug/m3	1	4/1/2016 6:15:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040111.D Vial: 27
Acq On : 1 Apr 2016 6:15 pm Operator: RJP
Sample : C1603076-007A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 21:19:09 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

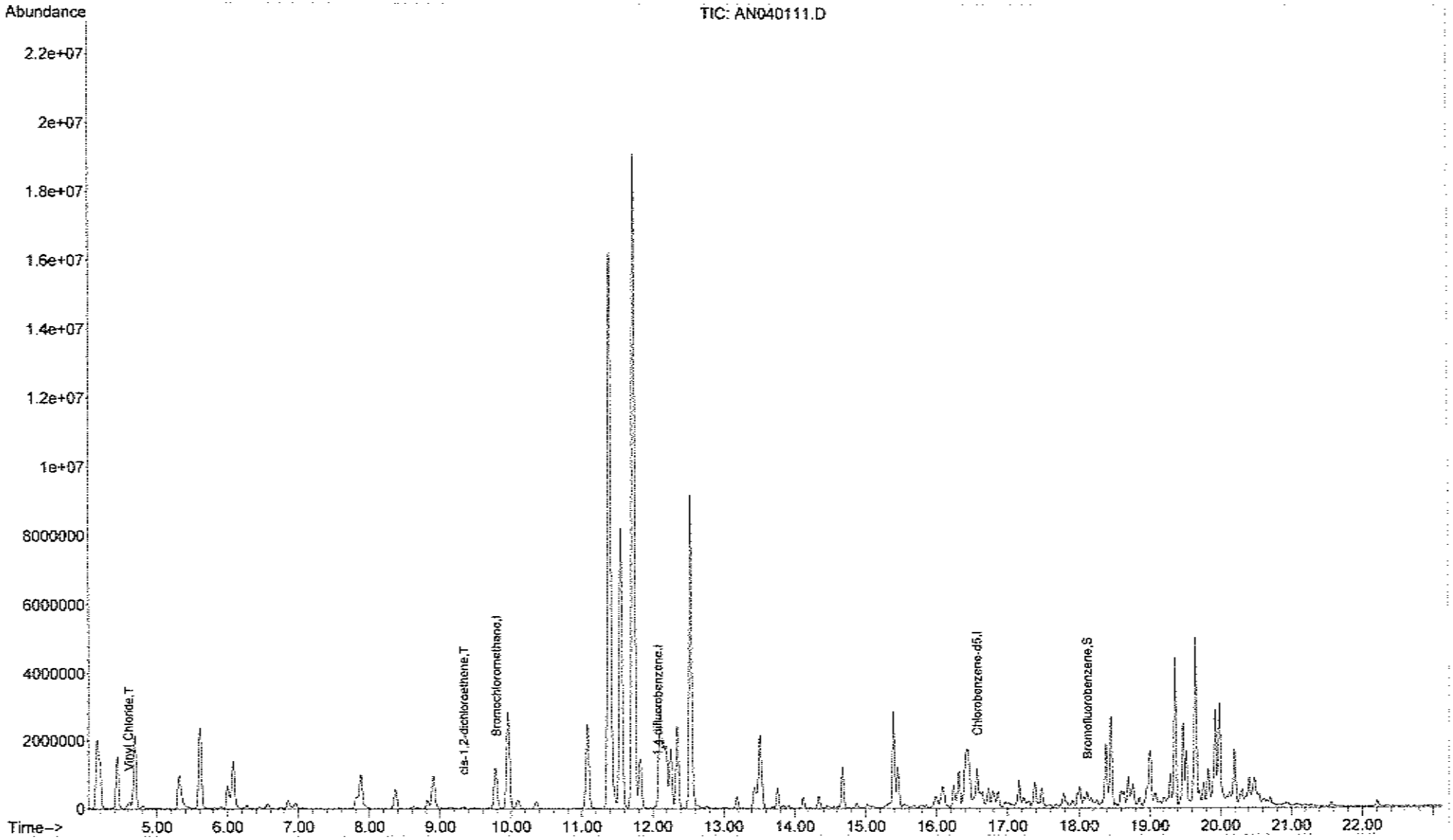
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.80	128	27896	1.00	ppb	-0.01
35) 1,4-difluorobenzene	12.06	114	94901	1.00	ppb	0.00
50) Chlorobenzene-d5	16.56	117	52262	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	34190m	1.02	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 102.00%			
Target Compounds						Qvalue
6) Vinyl Chloride	4.59	62	22613	0.72	ppb	92
29) cis-1,2-dichloroethene	9.33	61	30423	0.87	ppb	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

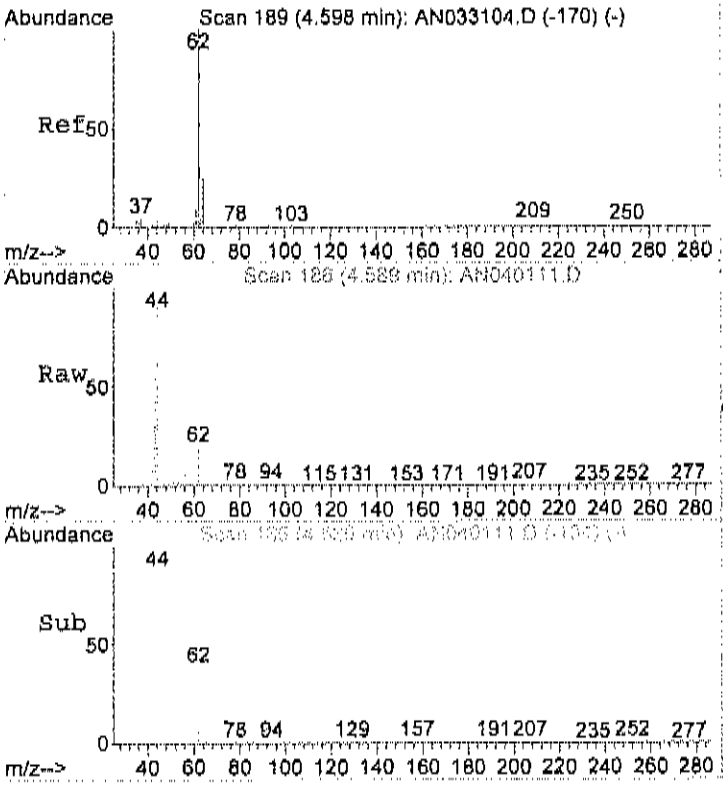
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040111.D Vial: 27
Acq On : 1 Apr 2016 6:15 pm Operator: RJP
Sample : C1603076-007A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 15:55 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration



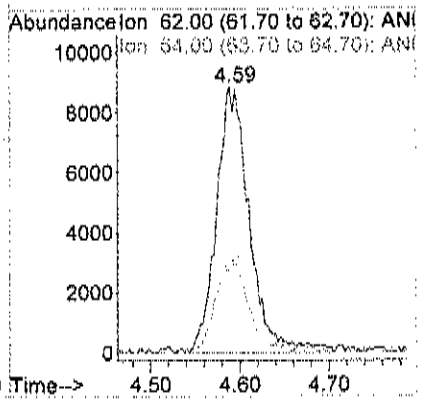
AN040111.D A316_1UG.M Tue Apr 26 15:55:47 2016 MSD1 Page 2

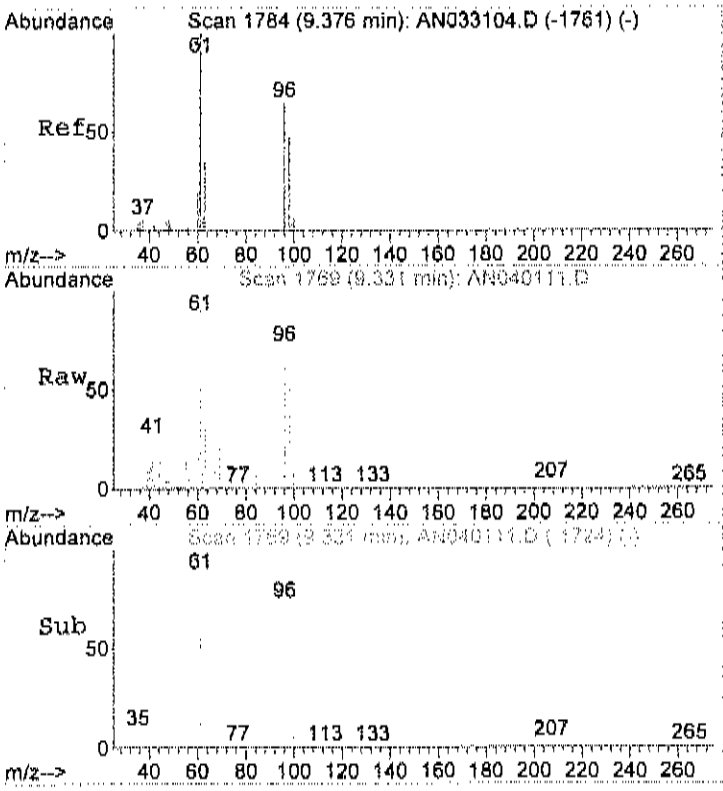


#6
Vinyl Chloride
Concen: 0.72 ppb
RT: 4.59 min Scan# 186
Delta R.T. 0.01 min
Lab File: AN040111.D
Acq: 1 Apr 2016 6:15 pm

Tgt Ion: 62 Resp: 22613

Ion	Ratio	Lower	Upper
62	100		
64	34.8	9.9	69.9

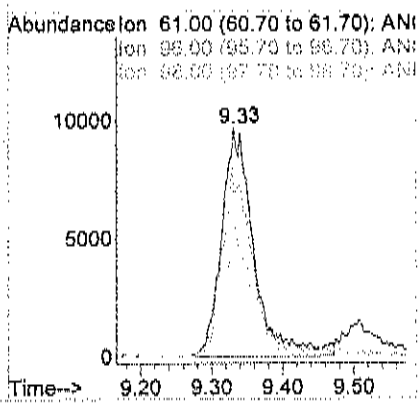




#29
cis-1,2-dichloroethene
Concen: 0.87 ppb
RT: 9.33 min Scan# 1769
Delta R.T. -0.02 min
Lab File: AN040111.D
Acq: 1 Apr 2016 6:15 pm

Tgt Ion: 61 Resp: 30423

Ion	Ratio	Lower	Upper
61	100		
96	79.5	51.2	91.2
98	51.9	23.7	63.7



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040409.D
Acq On : 4 Apr 2016 3:18 pm
Sample : C1603076-007A RE
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 26 15:53:52 2016

Vial: 36
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

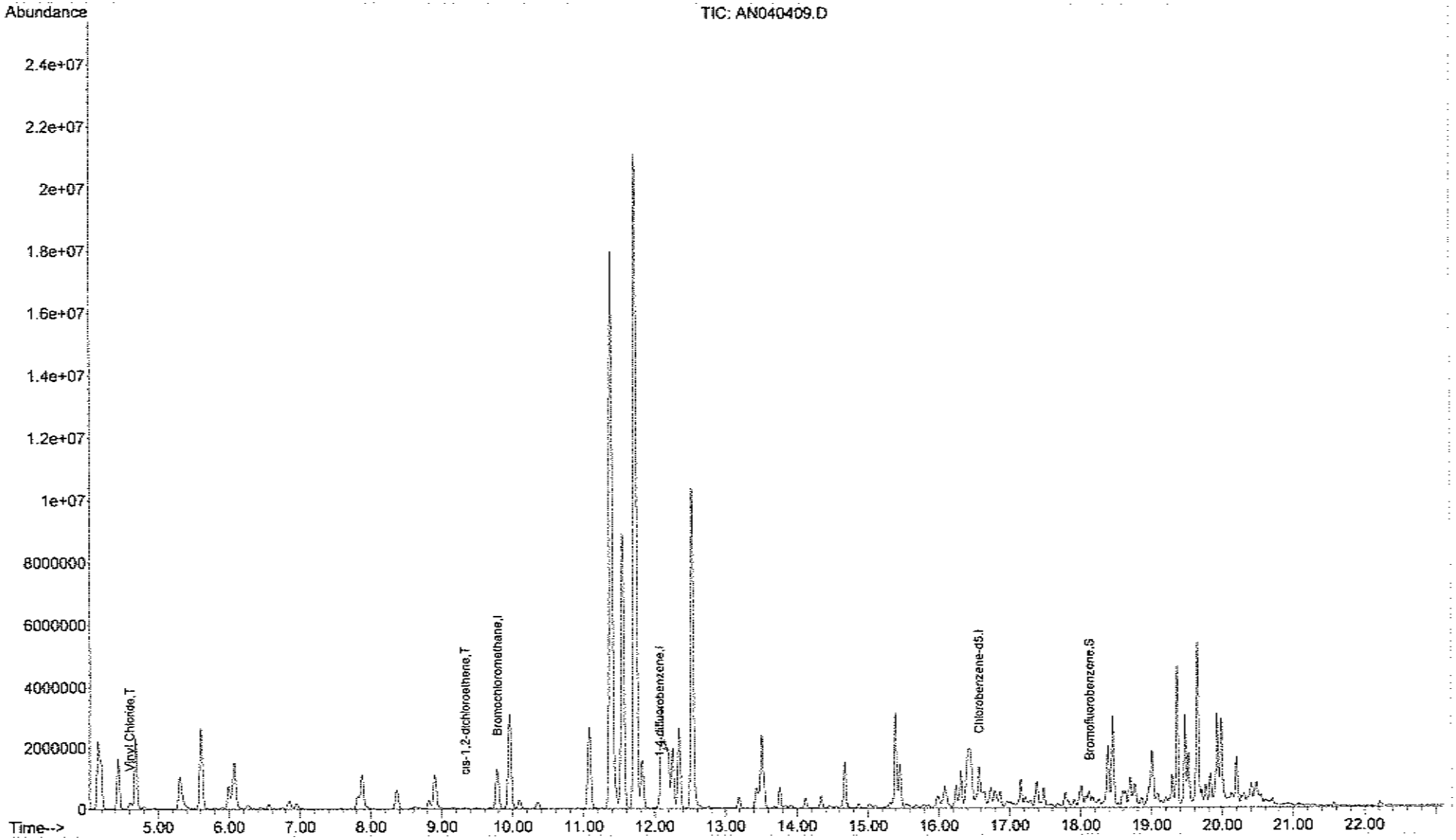
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.78	128	28391	1.00	ppb	-0.05
35) 1,4-difluorobenzene	12.06	114	97706	1.00	ppb	-0.02
50) Chlorobenzene-d5	16.56	117	57357	1.00	ppb	-0.01
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	37037m	1.00	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 100.00%			
Target Compounds						Qvalue
6) Vinyl Chloride	4.59	62	25415	0.80	ppb	87
29) cis-1,2-dichloroethene	9.33	61	31805	0.90	ppb	85

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040409.D Vial: 36
Acq On : 4 Apr 2016 3:18 pm Operator: RJP
Sample : C1603076-007A RE Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 15:54 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration



Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3
Lab Order:	C1603076	**Tag Number:**	131,297
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-008A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-7			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
Chloromethane	0.90	0.15		ppbV	1	4/1/2016 6:15:00 AM
cis-1,2-Dichloroethene	0.23	0.15		ppbV	1	4/1/2016 6:15:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:15:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	4/1/2016 6:15:00 AM
Vinyl chloride	0.22	0.040		ppbV	1	4/1/2016 6:15:00 AM
Surr: Bromofluorobenzene	128	70-130		%REC	1	4/1/2016 6:15:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3
Lab Order:	C1603076	**Tag Number:**	131,297
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-008A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 6:15:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 6:15:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 6:15:00 AM
Chloromethane	1.9	0.31		ug/m3	1	4/1/2016 6:15:00 AM
cis-1,2-Dichloroethene	0.91	0.59		ug/m3	1	4/1/2016 6:15:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 6:15:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 6:15:00 AM
Vinyl chloride	0.56	0.10		ug/m3	1	4/1/2016 6:15:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033132.D
Acq On : 1 Apr 2016 6:15 am
Sample : C1603076-008A
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 01 11:43:19 2016

Vial: 11
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

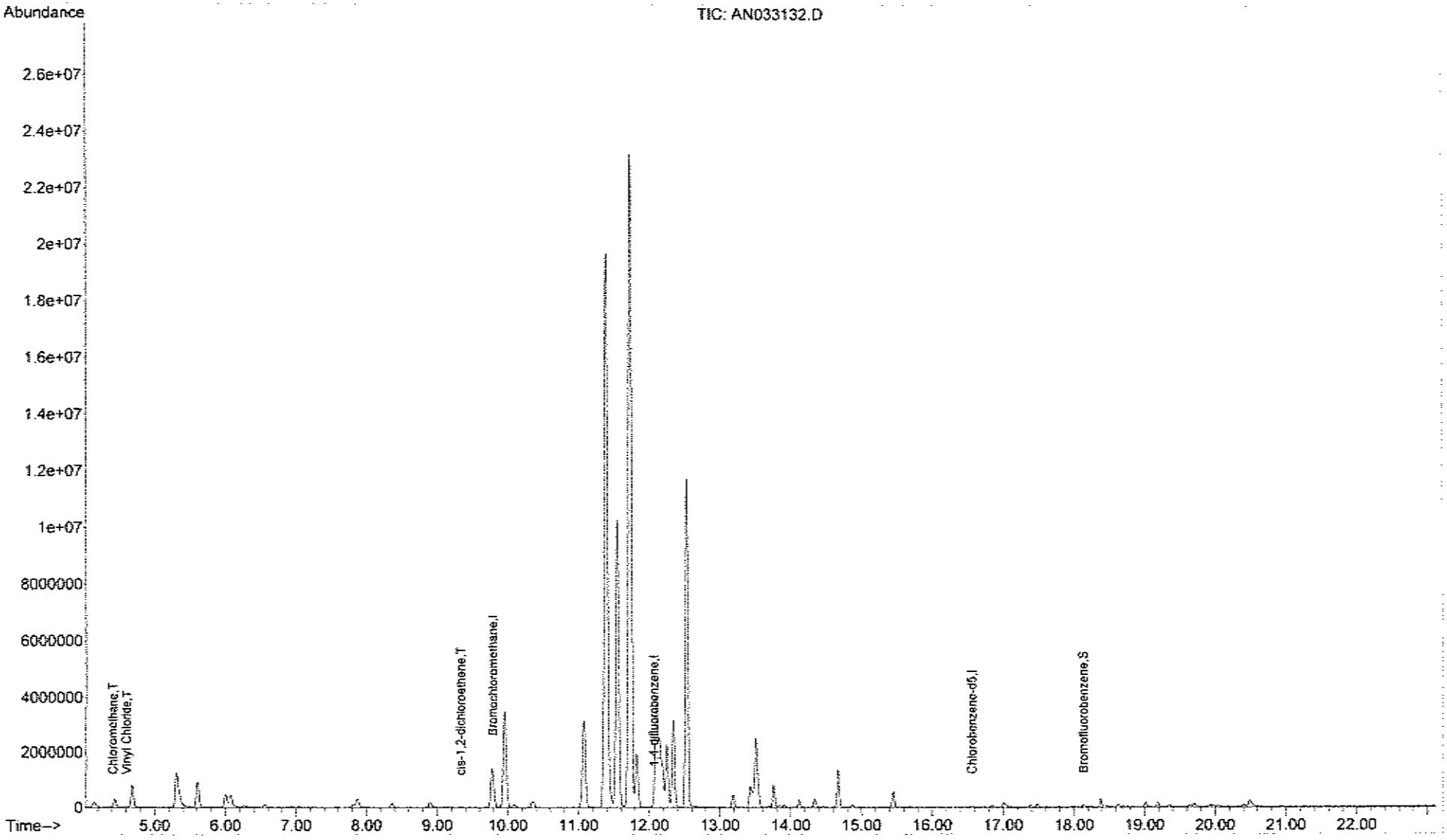
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.79	128	20410	1.00	ppb	-0.01
35) 1,4-difluorobenzene	12.05	114	65363	1.00	ppb	0.00
50) Chlorobenzene-d5	16.56	117	31903	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	26287m	1.28	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 128.00%			
Target Compounds						Qvalue
4) Chloromethane	4.40	50	20620	0.90	ppb	96
6) Vinyl Chloride	4.60	62	4938	0.22	ppb	88
29) cis-1,2-dichloroethene	9.33	61	5951	0.23	ppb	92

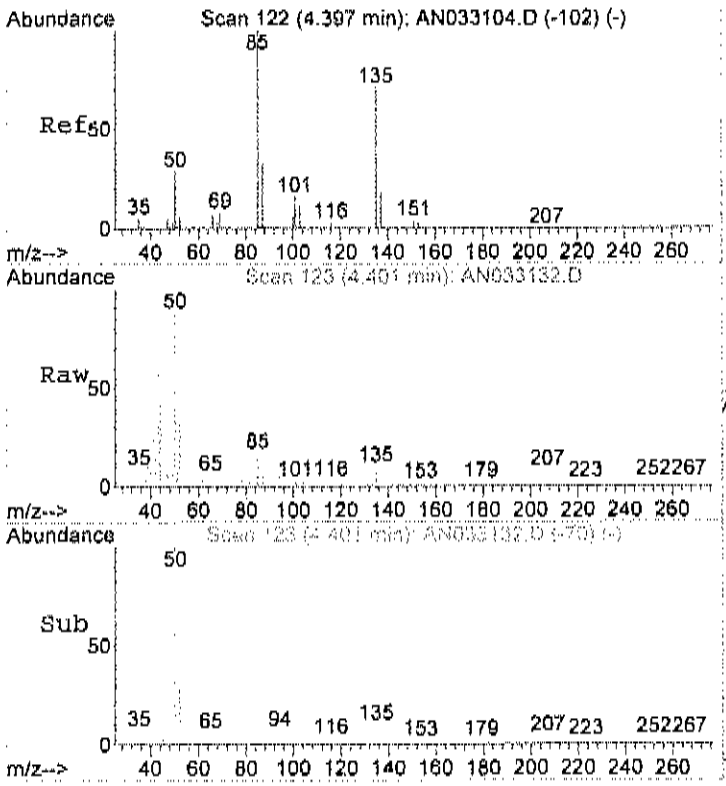
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033132.D Vial: 11
Acq On : 1 Apr 2016 6:15 am Operator: RJP
Sample : C1603076-008A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 1 11:52 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration

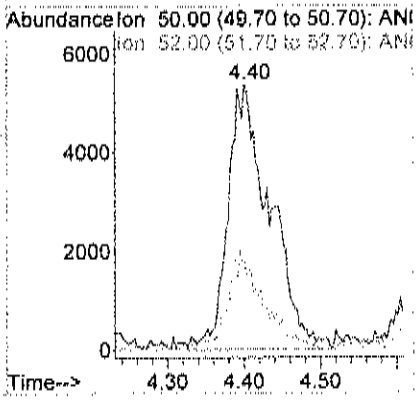


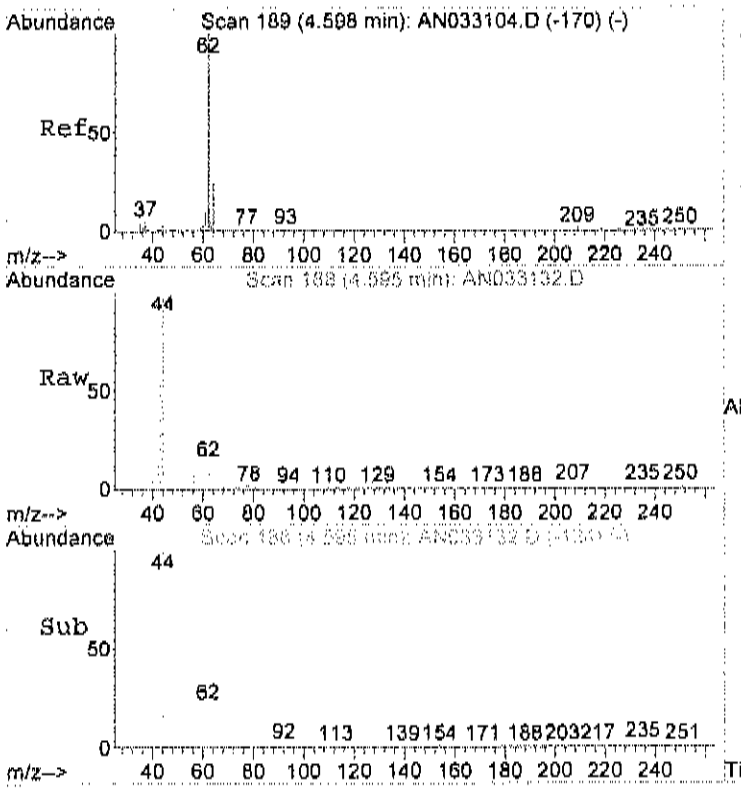


#4
Chloromethane
Concen: 0.90 ppb
RT: 4.40 min Scan# 123
Delta R.T. 0.01 min
Lab File: AN033132.D
Acq: 1 Apr 2016 6:15 am

Tgt Ion: 50 Resp: 20620

Ion	Ratio	Lower	Upper
50	100		
52	31.2	9.2	49.2

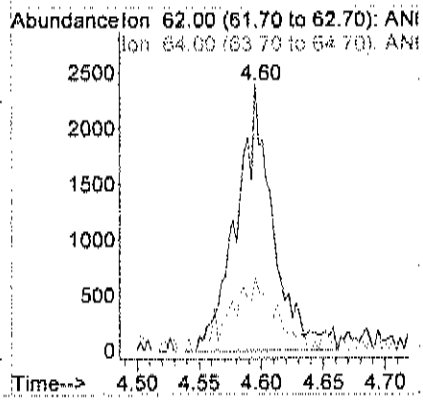


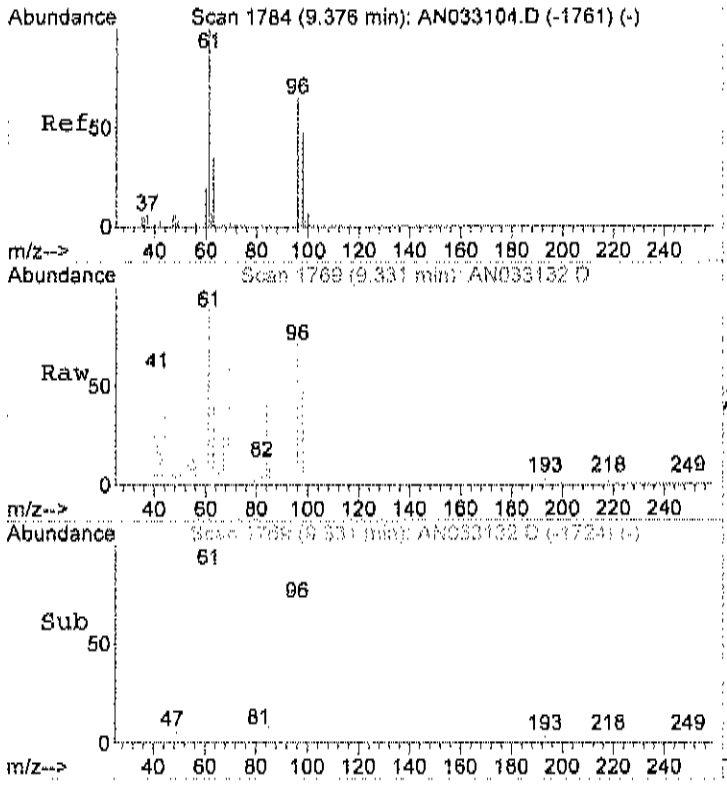


#6
Vinyl Chloride
Concen: 0.22 ppb
RT: 4.60 min Scan# 188
Delta R.T. 0.01 min
Lab File: AN033132.D
Acq: 1 Apr 2016 6:15 am

Tgt Ion: 62 Resp: 4938

Ion	Ratio	Lower	Upper
62	100		
64	32.2	9.9	69.9

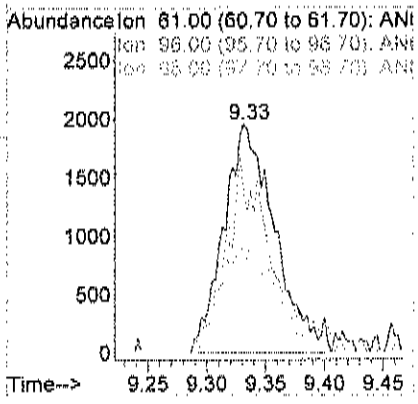




#29
cis-1,2-dichloroethene
Concen: 0.23 ppb
RT: 9.33 min Scan# 1769
Delta R.T. -0.01 min
Lab File: AN033132.D
Acq: 1 Apr 2016 6:15 am

Tgt Ion: 61 Resp: 5951

Ion	Ratio	Lower	Upper
61	100		
96	77.4	51.2	91.2
98	48.9	23.7	63.7



Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-3
Lab Order:	C1603076	**Tag Number:**	188,308
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-009A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-4			"Hg		3/29/2016
Lab Vacuum Out	-30			"Hg		3/29/2016
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	0.17	0.15		ppbV	1	4/1/2016 6:54:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/1/2016 6:54:00 PM
Trichloroethene	4.2	0.75		ppbV	5	4/2/2016 4:03:00 PM
Vinyl chloride	0.61	0.15		ppbV	1	4/1/2016 6:54:00 PM
Surr: Bromofluorobenzene	92.0	70-130		%REC	1	4/1/2016 6:54:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-3
Lab Order:	C1603076	**Tag Number:**	188,308
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-009A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	0.93	0.82		ug/m3	1	4/1/2016 6:54:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 6:54:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:54:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 6:54:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 6:54:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:54:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 6:54:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:54:00 PM
Trichloroethene	23	4.0		ug/m3	5	4/2/2016 4:03:00 PM
Vinyl chloride	1.6	0.38		ug/m3	1	4/1/2016 6:54:00 PM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040112.D
Acq On : 1 Apr 2016 6:54 pm
Sample : C1603076-009A
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 01 21:19:47 2016

Vial: 28
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

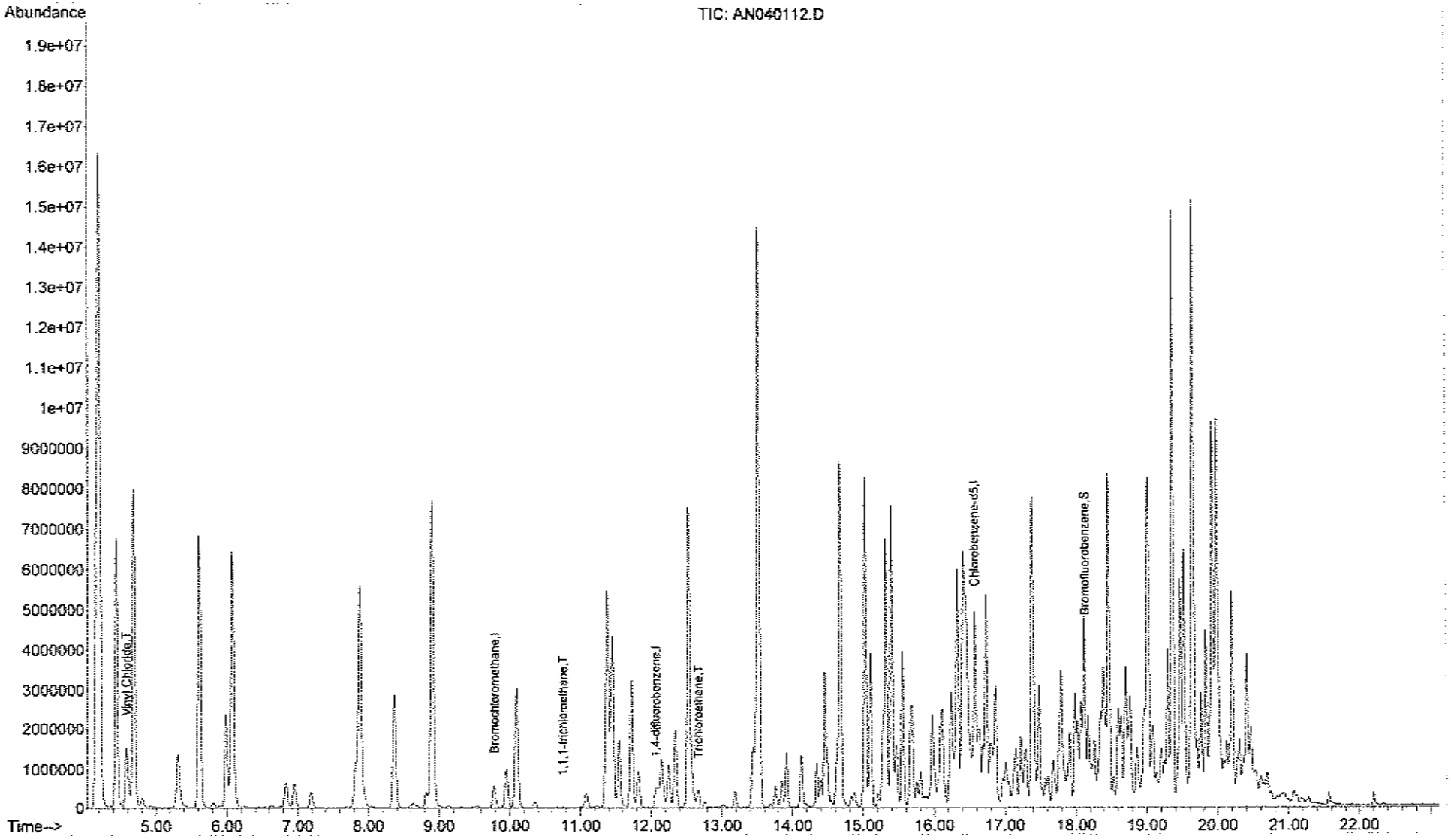
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.79	128	28019	1.00	ppb	-0.01
35) 1,4-difluorobenzene	12.05	114	97134	1.00	ppb	0.00
50) Chlorobenzene-d5	16.56	117	49886	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	29661m	0.92	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 92.00%			
Target Compounds						Qvalue
6) Vinyl Chloride	4.59	62	19252	0.61	ppb	89
36) 1,1,1-trichloroethane	10.75	97	15601	0.17	ppb	98
44) Trichloroethene	12.67	130	148692	3.60	ppb	97

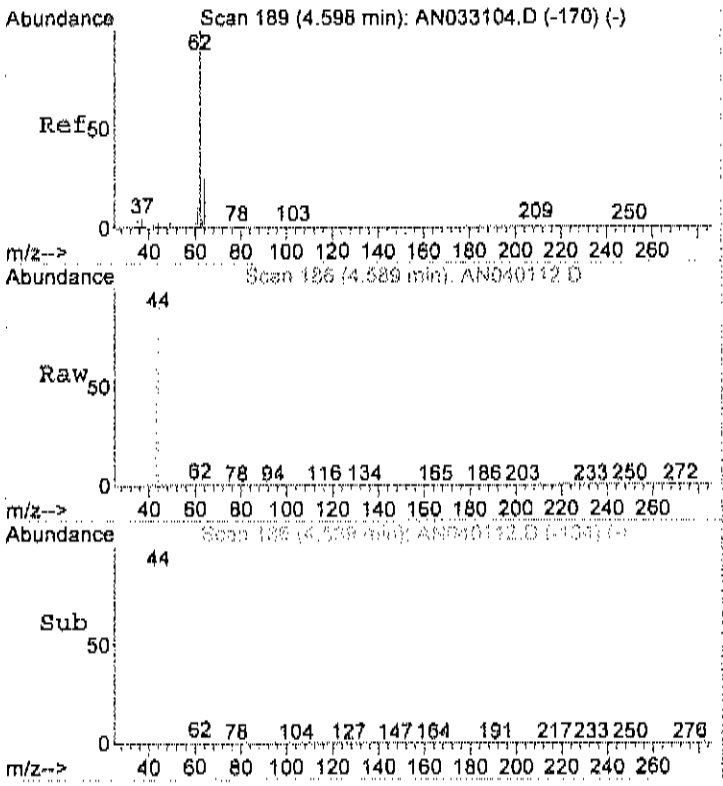
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040112.D Vial: 28
Acq On : 1 Apr 2016 6:54 pm Operator: RJP
Sample : C1603076-009A Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 2 12:28 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration

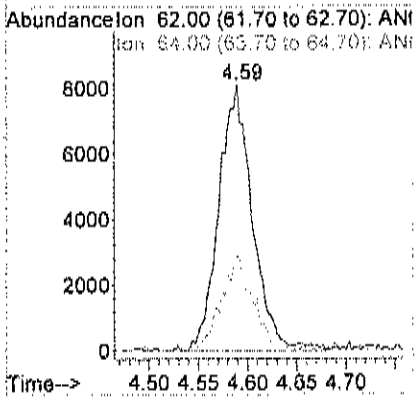


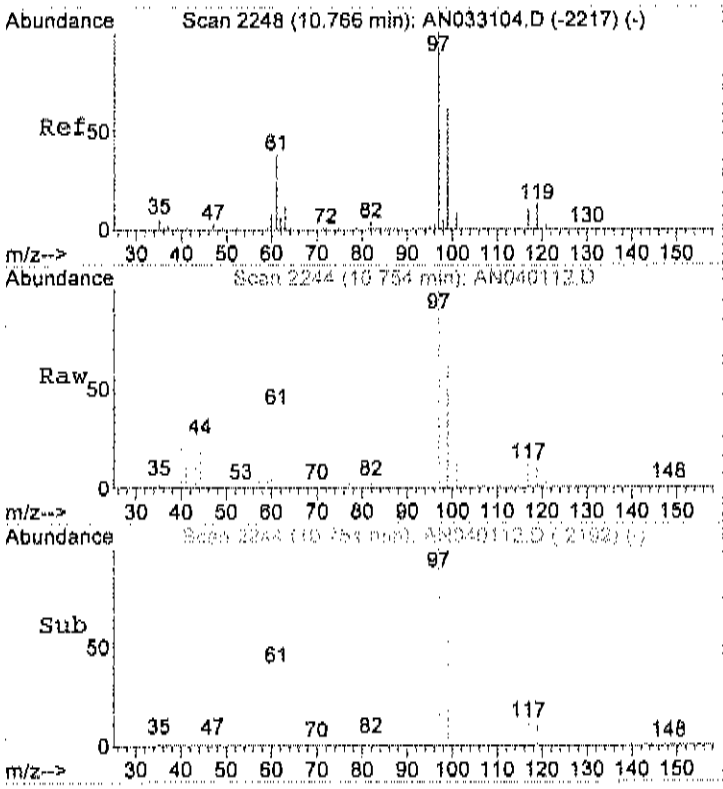


#6
Vinyl Chloride
Concen: 0.61 ppb
RT: 4.59 min Scan# 186
Delta R.T. 0.01 min
Lab File: AN040112.D
Acq: 1 Apr 2016 6:54 pm

Tgt Ion: 62 Resp: 19252

Ion	Ratio	Lower	Upper
62	100		
64	33.4	9.9	69.9

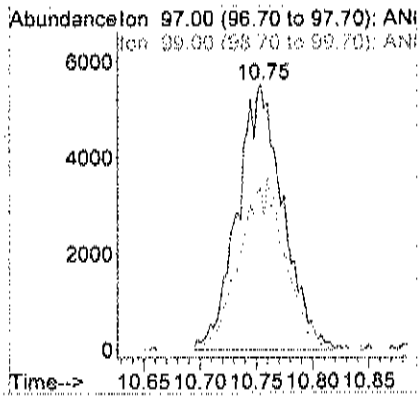


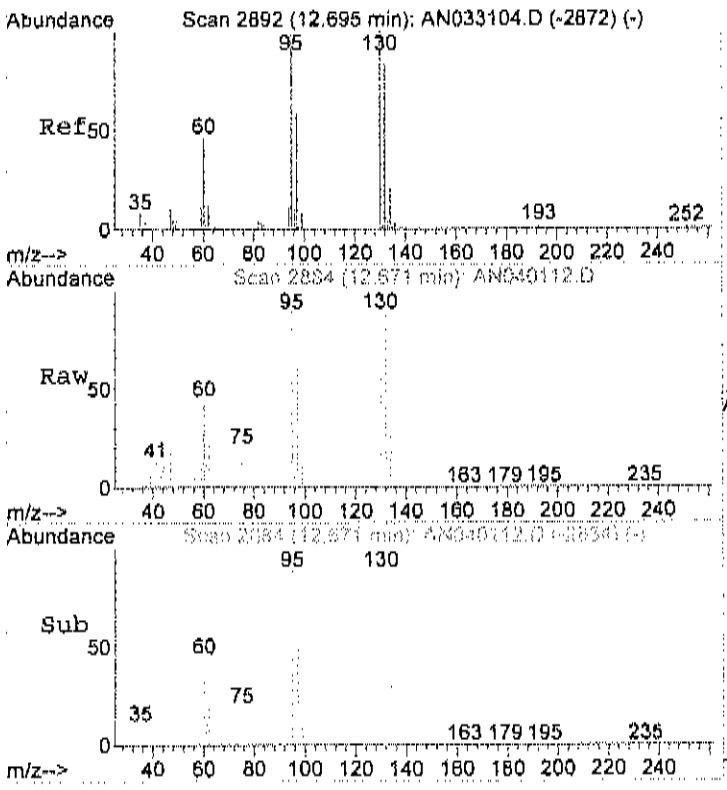


#36
1,1,1-trichloroethane
Concen: 0.17 ppb
RT: 10.75 min Scan# 2244
Delta R.T. 0.01 min
Lab File: AN040112.D
Acq: 1 Apr 2016 6:54 pm

Tgt Ion: 97 Resp: 15601

Ion	Ratio	Lower	Upper
97	100		
99	63.6	45.4	85.4

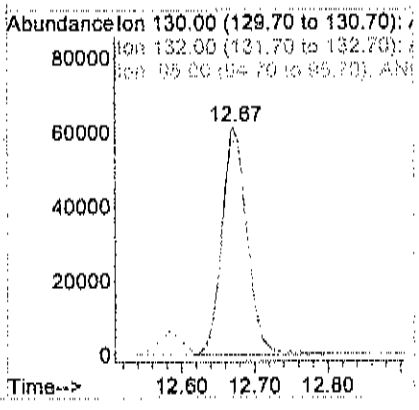




#44
Trichloroethene
Concen: 3.60 ppb
RT: 12.67 min Scan# 2884
Delta R.T. 0.00 min
Lab File: AN040112.D
Acq: 1 Apr 2016 6:54 pm

Tgt Ion:130 Resp: 148692

Ion	Ratio	Lower	Upper
130	100		
132	96.8	76.1	116.1
95	110.3	85.0	125.0



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040209.D Vial: 6
Acq On : 2 Apr 2016 4:03 pm Operator: RJP
Sample : C1603076-009A 5X Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 03 06:12:29 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

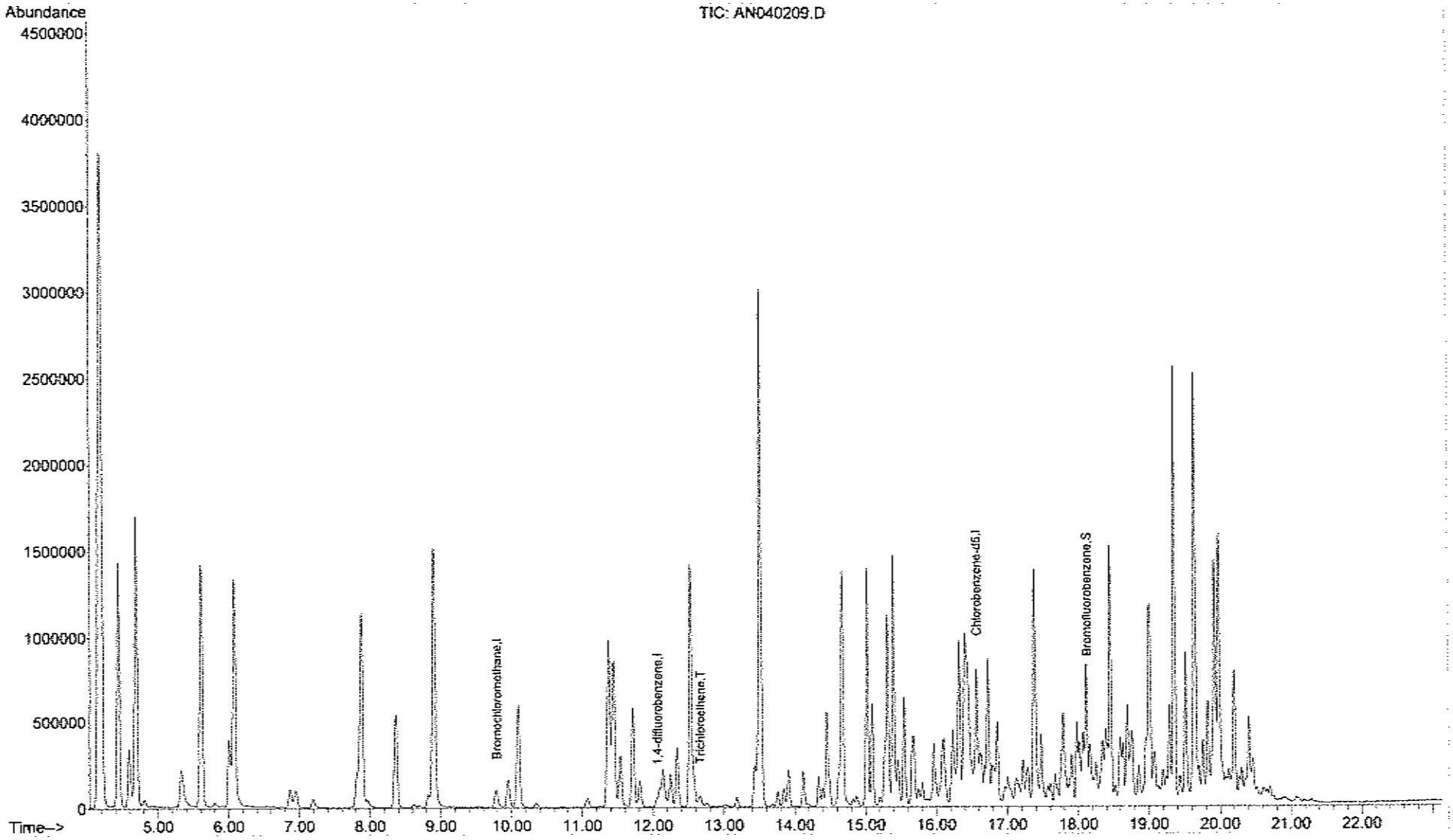
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.80	128	18360	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.05	114	53965	1.00	ppb	0.00
50) Chlorobenzene-d5	16.56	117	40273m	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	29256m	1.13	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 113.00%			
Target Compounds						Qvalue
44) Trichloroethene	12.66	130	19175	0.84	ppb	90

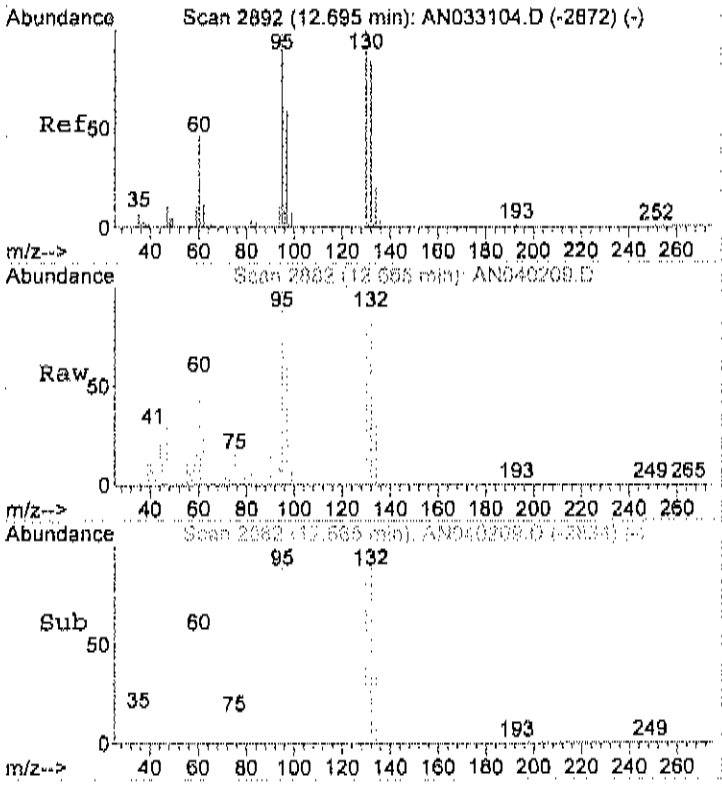
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040209.D Vial: 6
Acq On : 2 Apr 2016 4:03 pm Operator: RJP
Sample : C1603076-009A 5X Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 3 11:45 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 15:30:23 2016
Response via : Initial Calibration

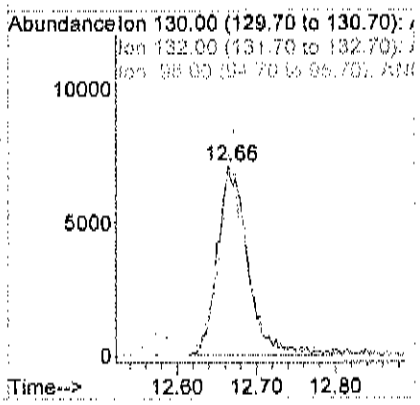




#44
Trichloroethene
Concen: 0.84 ppb
RT: 12.66 min Scan# 2882
Delta R.T. -0.01 min
Lab File: AN040209.D
Acq: 2 Apr 2016 4:03 pm

Tgt Ion:130 Resp: 19175

Ion	Ratio	Lower	Upper
130	100		
132	95.4	76.1	116.1
95	123.6	85.0	125.0



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS DATA

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INITIAL CALIBRATION

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration

Calibration Files
0.04 =AN031612.D 0.10 =AN031611.D 0.15 =AN031610.D
0.30 =AN031609.D 0.50 =AN031608.D 0.75 =AN031607.D

		Compound	0.04	0.10	0.15	0.30	0.50	0.75	Avg	%RSD
1)	I	Bromochloromethane	ISTD							
2)	T	Propylene			1.131	0.916	0.800	0.787	0.810	18.47
3)	T	Freon 12			5.132	4.678	4.218	4.223	4.271	10.16
4)	T	Chloromethane			1.503	1.264	1.102	1.101	1.118	16.44
5)	T	Freon 114			4.240	3.932	3.598	3.582	3.598	9.49
6)	T	Vinyl Chloride	1.719	1.251	1.297	1.175	1.025	1.010	1.125	22.21
7)	T	Butane			1.907	1.462	1.217	1.136	1.285	21.70
8)	T	1,3-butadiene			0.944	1.260	0.745	0.776	0.847	21.16
9)	T	Bromomethane			1.732	1.419	1.456	1.223	1.320	15.58
10)	T	Chloroethane			0.548	0.498	0.458	0.443	0.459	9.89
11)	T	Ethanol			0.466	0.454	0.339	0.316	0.341	22.51
12)	T	Acrolein			0.385	0.346	0.276	0.273	0.290	16.78
13)	T	Vinyl Bromide			1.654	1.410	1.249	1.246	1.298	12.66
14)	T	Freon 11			5.356	4.760	4.368	4.251	4.393	10.46
15)	T	Acetone			0.580	0.446	0.467	0.385	0.432	15.55
16)	T	Pentane			1.399	1.121	0.953	0.938	0.986	19.28
17)	T	Isopropyl alcoh			1.936	1.738	1.419	1.309	1.409	19.82
18)	T	1,1-dichloroeth			1.544	1.424	1.271	1.223	1.283	10.49
19)	T	Freon 113			3.697	3.334	3.051	3.060	3.094	9.58
20)	t	t-Butyl alcohol			2.795	2.640	2.350	2.175	2.248	14.34
21)	T	Methylene chlor			1.287	1.198	1.152	1.112	1.124	7.74
22)	T	Allyl chloride			1.371	1.068	0.996	0.948	0.998	16.47
23)	T	Carbon disulfid			4.365	3.573	3.215	3.276	3.316	14.26
24)	T	trans-1,2-dichl			1.785	1.581	1.489	1.479	1.522	8.00
25)	T	methyl tert-but			3.237	3.087	2.752	2.784	2.881	6.44
26)	T	1,1-dichloroeth			2.501	2.236	2.143	2.145	2.155	7.74
27)	T	Vinyl acetate			2.311	1.977	1.623	1.860	1.869	11.34
28)	T	Methyl Ethyl Ke			0.536	0.469	0.440	0.428	0.461	7.54
29)	T	cis-1,2-dichlor			1.213	1.318	1.253	1.234	1.250	3.55
30)	T	Hexane			1.377	1.268	1.247	1.266	1.308	3.87
31)	T	Ethyl acetate			2.162	1.967	1.682	1.682	1.784	10.28
32)	T	Chloroform			3.438	3.077	2.917	2.874	2.918	8.58
33)	T	Tetrahydrofuran			0.985	0.870	0.782	0.811	0.828	8.85
34)	T	1,2-dichloroeth			1.826	1.794	1.645	1.604	1.641	7.17
35)	I	1,4-difluorobenzene	ISTD							
36)	T	1,1,1-trichloro			1.073	1.013	0.947	0.901	0.939	7.43
37)	T	Cyclohexane			0.412	0.377	0.375	0.379	0.387	3.38
38)	T	Carbon tetrachl	1.514	1.229	1.098	1.027	0.964	0.926	1.048	18.29
39)	T	Benzene			0.968	0.850	0.818	0.806	0.832	6.91
40)	T	Methyl methacry			0.347	0.270	0.242	0.278	0.271	12.09
41)	T	1,4-dioxane			0.218	0.242	0.234	0.211	0.213	9.01
42)	T	2,2,4-trimethyl			1.598	1.466	1.390	1.406	1.453	4.74
43)	T	Heptane			0.333	0.316	0.312	0.326	0.338	5.49
44)	T	Trichloroethene	0.593	0.476	0.419	0.397	0.392	0.393	0.425	15.21
45)	T	1,2-dichloropro			0.331	0.323	0.307	0.291	0.300	6.07
46)	T	Bromodichlorome			0.858	0.765	0.731	0.702	0.734	7.46
47)	T	cis-1,3-dichlor			0.445	0.416	0.389	0.378	0.400	5.47
48)	T	trans-1,3-dichl			0.427	0.366	0.357	0.345	0.359	8.05
49)	T	1,1,2-trichloro			0.395	0.345	0.323	0.317	0.329	8.71
50)	I	Chlorobenzene-d5	ISTD							
51)	T	Toluene			0.656	0.657	0.623	0.664	0.679	5.43

(#) = Out of Range ### Number of calibration levels exceeded format ###

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration

Calibration Files
0.04 =AN031612.D 0.10 =AN031611.D 0.15 =AN031610.D
0.30 =AN031609.D 0.50 =AN031608.D 0.75 =AN031607.D

		Compound	0.04	0.10	0.15	0.30	0.50	0.75	Avg	%RSD
52)	T	Methyl Isobutyl			1.257	1.227	1.174	1.227	1.201	5.80
53)	T	Dibromochlorome			0.954	0.844	0.859	0.850	0.857	4.94
54)	T	Methyl Butyl Ke			1.113	1.133	0.978	1.026	1.068	7.36
55)	T	1,2-dibromoetha			1.023	0.886	0.837	0.798	0.845	9.38
56)	T	Tetrachloroethy	0.981	0.712	0.625	0.622	0.586	0.599	0.648	19.03
57)	T	Chlorobenzene			0.989	0.894	0.875	0.855	0.891	4.61
58)	T	1,1,1,2-tetrach			0.688	0.700	0.664	0.649	0.666	3.94
59)	T	Ethylbenzene			1.179	1.069	1.076	1.097	1.165	6.41
60)	T	m&p-xylene			0.862	0.818	0.830	0.822	0.925	11.55
61)	T	Nonane			0.537	0.452	0.455	0.474	0.552	16.56
62)	T	Styrene			0.616	0.546	0.553	0.568	0.644	13.48
63)	T	Bromoform			0.471	0.450	0.440	0.442	0.463	4.51
64)	T	o-xylene			1.102	0.918	1.093	1.016	1.109	9.78
65)	T	Cumene			1.528	1.180	1.102	1.083	1.299	13.89
66)	S	Bromofluorobenz	0.602	0.608	0.592	0.601	0.592	0.614	0.643	9.58
67)	T	1,1,2,2-tetrach			1.606	1.289	1.081	1.068	1.140	18.58
68)	T	Propylbenzene			1.653	1.450	1.274	1.157	1.379	13.20
69)	T	2-Chlorotoluene			1.115	0.938	0.930	0.834	1.004	10.36
70)	T	4-ethyltoluene			1.437	1.277	1.046	1.000	1.183	12.64
71)	T	1,3,5-trimethyl			1.760	1.512	1.301	1.240	1.416	11.59
72)	T	1,2,4-trimethyl			1.647	1.374	1.172	1.119	1.224	15.92
73)	T	1,3-dichloroben			0.958	0.839	0.718	0.663	0.778	11.85
74)	T	benzyl chloride			1.256	1.055	1.074	1.101	1.110	8.22
75)	T	1,4-dichloroben			0.854	0.804	0.638	0.633	0.733	11.05
76)	T	1,2,3-trimethyl			1.944	1.737	1.429	1.376	1.510	14.35
77)	T	1,2-dichloroben			1.394	1.099	0.940	0.846	0.954	21.55
78)	T	1,2,4-trichloro			0.693	0.719	0.677	0.622	0.720	10.92
79)	T	Naphthalene			1.699	1.607	1.503	1.407	1.494	11.86
80)	T	Hexachloro-1,3-			1.959	1.831	1.660	1.766	1.754	7.91

(#) = Out of Range ### Number of calibration levels exceeded format ###

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031603.D
Acq On : 16 Mar 2016 6:50 pm
Sample : A1UG_2.0
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:19:00 2016

Vial: 2
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.79	128	39696	1.00	ppb		-0.01
35) 1,4-difluorobenzene	12.05	114	119341	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	65204	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.13	95	48331	1.15	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 115.00%				
Target Compounds							Qvalue
2) Propylene	4.14	41	52720	1.77	ppb	#	100
3) Freon 12	4.19	85	300982	1.82	ppb		100
4) Chloromethane	4.39	50	75653	1.85	ppb		90
5) Freon 114	4.39	85	252561	1.79	ppb		99
6) Vinyl Chloride	4.58	62	71454	1.80	ppb		89
7) Butane	4.68	43	84007	1.71	ppb		95
8) 1,3-butadiene	4.69	39	60171	1.98	ppb		88
9) Bromomethane	5.03	94	88794	1.75	ppb		93
10) Chloroethane	5.20	64	31848	1.90	ppb	#	85
11) Ethanol	5.34	45	22162	1.89	ppb	#	66
12) Acrolein	5.93	56	19963m	1.92	ppb		
13) Vinyl Bromide	5.54	106	90315	1.77	ppb		96
14) Freon 11	5.80	101	311834	1.84	ppb		99
15) Acetone	6.02	58	31506	2.05	ppb	#	82
16) Pentane	6.06	42	64025	1.75	ppb		99
17) Isopropyl alcohol	6.13	45	95378	1.89	ppb	#	46
18) 1,1-dichloroethene	6.56	96	90887	1.81	ppb		89
19) Freon 113	6.75	101	218149	1.79	ppb		96
20) t-Butyl alcohol	6.87	59	153022	1.79	ppb	#	73
21) Methylene chloride	7.04	84	81781	1.83	ppb		92
22) Allyl chloride	7.00	41	75821	2.00	ppb		88
23) Carbon disulfide	7.19	76	229469	1.81	ppb		97
24) trans-1,2-dichloroethene	7.97	61	109677	1.86	ppb		90
25) methyl tert-butyl ether	8.01	73	217092	1.92	ppb		96
26) 1,1-dichloroethane	8.39	63	155890	1.83	ppb		99
27) Vinyl acetate	8.41	43	139082	1.80	ppb		99
28) Methyl Ethyl Ketone	8.92	72	35109	1.95	ppb	#	100
29) cis-1,2-dichloroethene	9.33	61	95640	1.86	ppb		93
30) Hexane	8.90	57	103745	1.97	ppb		96
31) Ethyl acetate	9.51	43	132681	1.93	ppb		96
32) Chloroform	9.94	83	209422	1.84	ppb		98
33) Tetrahydrofuran	10.15	42	59093	1.80	ppb		85
34) 1,2-dichloroethane	11.07	62	118759	1.86	ppb		87
36) 1,1,1-trichloroethane	10.75	97	211952	1.92	ppb		100
37) Cyclohexane	11.44	56	95560	2.08	ppb		90
38) Carbon tetrachloride	11.39	117	221613	1.95	ppb		97
39) Benzene	11.36	78	193181	1.98	ppb		98
40) Methyl methacrylate	12.91	41	62212	1.99	ppb	#	80
41) 1,4-dioxane	12.99	88	48143	1.87	ppb		97
42) 2,2,4-trimethylpentane	12.18	57	351781	2.00	ppb		98
43) Heptane	12.53	43	86114	2.04	ppb		88
44) Trichloroethene	12.67	130	95479	2.05	ppb		99
45) 1,2-dichloropropane	12.79	63	67226	1.91	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031603.D
Acq On : 16 Mar 2016 6:50 pm
Sample : A1UG_2.0
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:19:00 2016

Vial: 2
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.11	83	168164	1.95	ppb	99
47)	cis-1,3-dichloropropene	13.89	75	96193	2.09	ppb	100
48)	trans-1,3-dichloropropene	14.62	75	81400	1.94	ppb	92
49)	1,1,2-trichloroethane	14.93	97	73046	1.93	ppb	98
51)	Toluene	14.67	92	95859	2.10	ppb	98
52)	Methyl Isobutyl Ketone	13.82	43	161205	1.95	ppb	98
53)	Dibromochloromethane	15.60	129	111719m	1.98	ppb	
54)	Methyl Butyl Ketone	15.11	43	145361	1.95	ppb	97
55)	1,2-dibromoethane	15.85	107	103573	1.91	ppb	97
56)	Tetrachloroethylene	15.66	164	77730	1.98	ppb	98
57)	Chlorobenzene	16.61	112	114609	2.01	ppb	89
58)	1,1,1,2-tetrachloroethane	16.71	131	83929	1.85	ppb	98
59)	Ethylbenzene	16.85	91	163580	2.13	ppb	98
60)	m&p-xylene	17.04	91	279419	4.64	ppb	97
61)	Nonane	17.38	43	90950	2.59	ppb	98
62)	Styrene	17.46	104	100790	2.36	ppb	89
63)	Bromoform	17.58	173	63866	2.18	ppb	97
64)	o-xylene	17.48	91	162873	2.39	ppb	95
65)	Cumene	18.01	105	197775	2.53	ppb	99
67)	1,1,2,2-tetrachloroethane	17.92	83	129149	1.85	ppb	99
68)	Propylbenzene	18.53	91	209599m	2.74	ppb	
69)	2-Chlorotoluene	18.58	91	145425m	2.28	ppb	
70)	4-ethyltoluene	18.70	105	165088m	2.44	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	184877m	2.18	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	147804	2.03	ppb	98
73)	1,3-dichlorobenzene	19.49	146	99804	2.01	ppb	98
74)	benzyl chloride	19.56	91	137885	2.04	ppb	97
75)	1,4-dichlorobenzene	19.61	146	97347	2.06	ppb	98
76)	1,2,3-trimethylbenzene	19.65	105	180121	1.88	ppb	98
77)	1,2-dichlorobenzene	19.93	146	104274	1.75	ppb	97
78)	1,2,4-trichlorobenzene	21.78	180	115972	2.52	ppb	96
79)	Naphthalene	21.98	128	221487m	2.55	ppb	
80)	Hexachloro-1,3-butadiene	22.06	225	218825	1.78	ppb	95

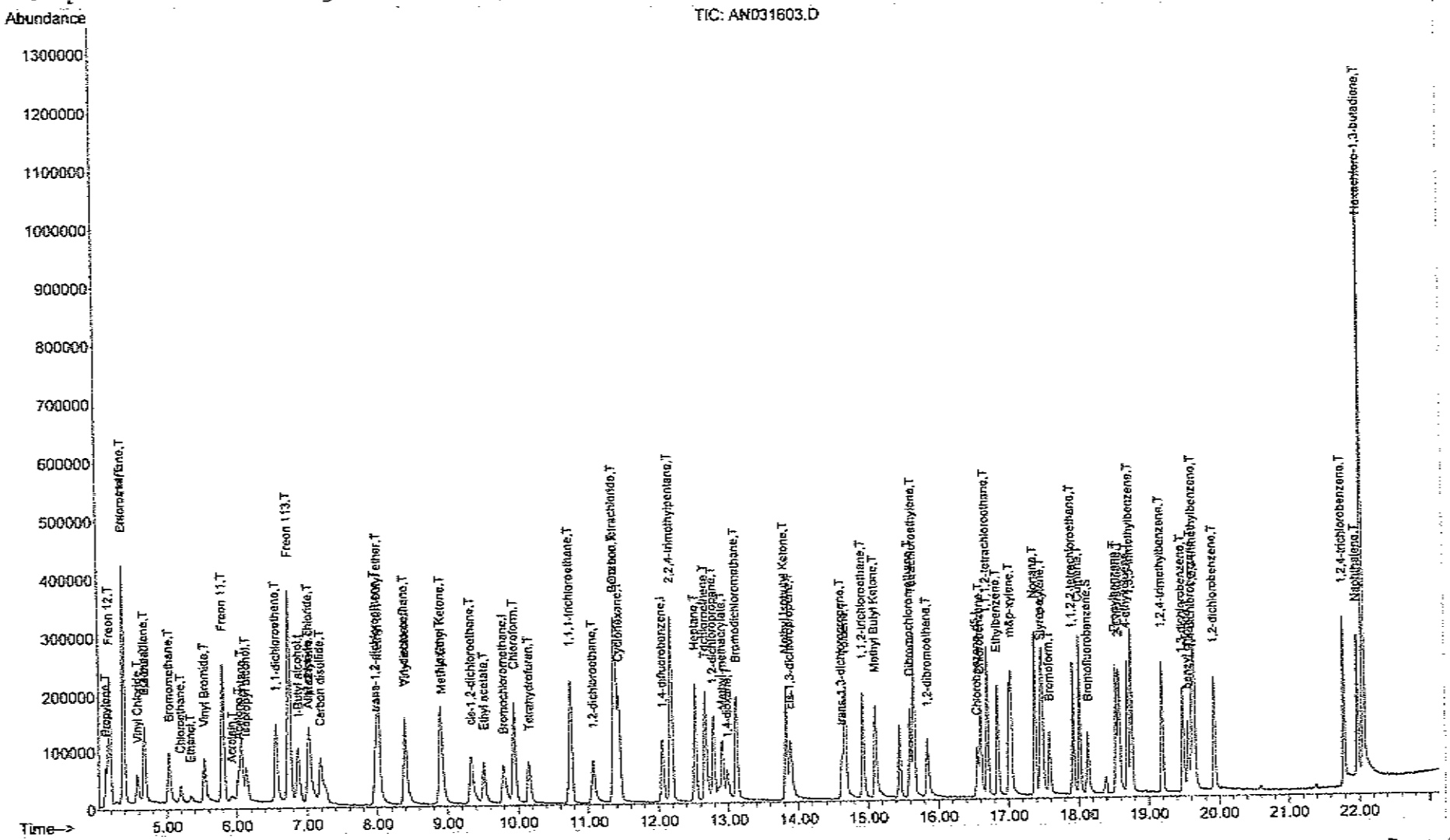
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA\AN031603.D
Acq On : 16 Mar 2016 6:50 pm
Sample : A1UG_2.0
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 9:48 2016

Vial: 2
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031604.D
Acq On : 16 Mar 2016 7:30 pm
Sample : A1UG_1.50
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:18:42 2016

Vial: 3
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.80	128	37388	1.00	ppb		-0.01
35) 1,4-difluorobenzene	12.06	114	125097	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	71425	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.13	95	48889	1.06	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 106.00%				
Target Compounds							Qvalue
2) Propylene	4.13	41	41028	1.46	ppb	#	100
3) Freon 12	4.19	85	229102	1.47	ppb		99
4) Chloromethane	4.39	50	56920	1.48	ppb		93
5) Freon 114	4.39	85	192137	1.45	ppb		100
6) Vinyl Chloride	4.58	62	53313	1.42	ppb		92
7) Butane	4.68	43	62790	1.36	ppb		97
8) 1,3-butadiene	4.69	39	42193	1.48	ppb		82
9) Bromomethane	5.03	94	66997	1.40	ppb		93
10) Chloroethane	5.20	64	24605	1.56	ppb		88
11) Ethanol	5.35	45	15188	1.37	ppb	#	66
12) Acrolein	5.94	56	14959m	1.53	ppb		
13) Vinyl Bromide	5.54	106	68982	1.43	ppb		98
14) Freon 11	5.80	101	235962	1.48	ppb		99
15) Acetone	6.03	58	22358m	1.54	ppb		
16) Pentane	6.07	42	50174	1.45	ppb		88
17) Isopropyl alcohol	6.14	45	68376	1.44	ppb	#	46
18) 1,1-dichloroethene	6.56	96	68884	1.45	ppb	#	89
19) Freon 113	6.75	101	165966	1.44	ppb		97
20) t-Butyl alcohol	6.88	59	113330	1.41	ppb	#	75
21) Methylene chloride	7.04	84	58969m	1.40	ppb		
22) Allyl chloride	7.01	41	49125m	1.38	ppb		
23) Carbon disulfide	7.19	76	165861	1.39	ppb		99
24) trans-1,2-dichloroethene	7.97	61	85565	1.54	ppb		91
25) methyl tert-butyl ether	8.02	73	162235	1.52	ppb		95
26) 1,1-dichloroethane	8.39	63	120712	1.50	ppb		98
27) Vinyl acetate	8.41	43	105982	1.46	ppb		97
28) Methyl Ethyl Ketone	8.92	72	26847	1.58	ppb	#	100
29) cis-1,2-dichloroethene	9.34	61	72635	1.50	ppb		92
30) Hexane	8.90	57	77717	1.57	ppb		97
31) Ethyl acetate	9.52	43	98475	1.52	ppb	#	82
32) Chloroform	9.94	83	161422	1.50	ppb		99
33) Tetrahydrofuran	10.15	42	46658	1.51	ppb		91
34) 1,2-dichloroethane	11.08	62	92764	1.54	ppb		89
36) 1,1,1-trichloroethane	10.75	97	164249	1.42	ppb		98
37) Cyclohexane	11.44	56	70836	1.47	ppb		87
38) Carbon tetrachloride	11.38	117	171139	1.44	ppb		97
39) Benzene	11.37	78	149554	1.46	ppb		99
40) Methyl methacrylate	12.91	41	47301	1.45	ppb	#	83
41) 1,4-dioxane	12.99	88	34749	1.29	ppb		97
42) 2,2,4-trimethylpentane	12.18	57	259886	1.41	ppb		98
43) Heptane	12.53	43	66410	1.50	ppb		89
44) Trichloroethene	12.68	130	73890	1.51	ppb		98
45) 1,2-dichloropropane	12.79	63	53981	1.46	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031604.D
Acq On : 16 Mar 2016 7:30 pm
Sample : A1UG_1.50
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:18:42 2016

Vial: 3
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.11	83	131443	1.45	ppb	98
47)	cis-1,3-dichloropropene	13.89	75	73577	1.52	ppb	98
48)	trans-1,3-dichloropropene	14.63	75	63904	1.46	ppb	93
49)	1,1,2-trichloroethane	14.93	97	60215	1.52	ppb	99
51)	Toluene	14.67	92	76620	1.53	ppb	96
52)	Methyl Isobutyl Ketone	13.83	43	112630	1.24	ppb	97
53)	Dibromochloromethane	15.60	129	89145m	1.44	ppb	
54)	Methyl Butyl Ketone	15.11	43	100523	1.23	ppb	96
55)	1,2-dibromoethane	15.85	107	84426	1.42	ppb	98
56)	Tetrachloroethylene	15.65	164	62278	1.45	ppb	98
57)	Chlorobenzene	16.61	112	93584	1.50	ppb	91
58)	1,1,1,2-tetrachloroethane	16.70	131	67746	1.37	ppb	98
59)	Ethylbenzene	16.85	91	131064	1.56	ppb	97
60)	m&p-xylene	17.04	91	219605	3.33	ppb	97
61)	Nonane	17.38	43	67119	1.74	ppb	99
62)	Styrene	17.46	104	75304	1.61	ppb	91
63)	Bromoform	17.59	173	49198	1.53	ppb	100
64)	o-xylene	17.48	91	129975	1.74	ppb	95
65)	Cumene	18.02	105	143847	1.68	ppb	99
67)	1,1,2,2-tetrachloroethane	17.92	83	102893	1.35	ppb	99
68)	Propylbenzene	18.54	91	146044m	1.74	ppb	
69)	2-Chlorotoluene	18.58	91	109401m	1.57	ppb	
70)	4-ethyltoluene	18.70	105	121465m	1.63	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	142483m	1.53	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	113063	1.42	ppb	95
73)	1,3-dichlorobenzene	19.48	146	75726	1.39	ppb	98
74)	benzyl chloride	19.56	91	105994	1.43	ppb	97
75)	1,4-dichlorobenzene	19.62	146	71922	1.39	ppb	99
76)	1,2,3-trimethylbenzene	19.65	105	141118	1.34	ppb	97
77)	1,2-dichlorobenzene	19.93	146	81574	1.25	ppb	98
78)	1,2,4-trichlorobenzene	21.79	180	77042	1.53	ppb	96
79)	Naphthalene	21.98	128	162805	1.71	ppb	98
80)	Hexachloro-1,3-butadiene	22.06	225	164815	1.22	ppb	95

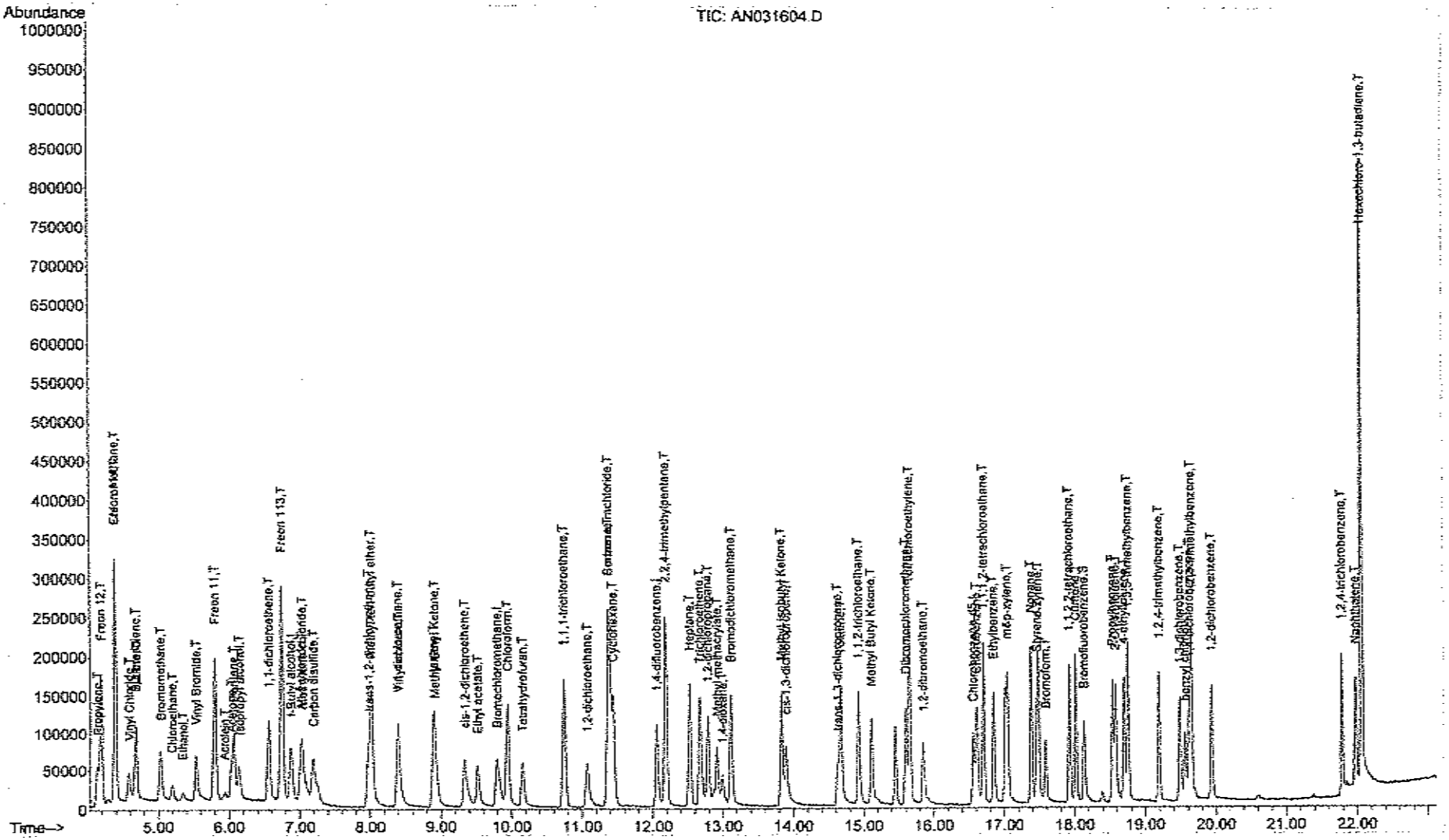
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA\AN031604.D
Acq On : 16 Mar 2016 7:30 pm
Sample : A1UG_1.50
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 9:53 2016

Vial: 3
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031605.D
Acq On : 16 Mar 2016 8:10 pm
Sample : A1UG_1.25
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:18:24 2016

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.80	128	38435	1.00	ppb		0.00
35) 1,4-difluorobenzene	12.06	114	118006	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	66609	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.13	95	50183	1.17	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 117.00%				
Target Compounds							Qvalue
2) Propylene	4.14	41	34125	1.18	ppb	#	100
3) Freon 12	4.19	85	188632	1.18	ppb		99
4) Chloromethane	4.39	50	46990	1.19	ppb		94
5) Freon 114	4.39	85	159182	1.17	ppb		99
6) Vinyl Chloride	4.58	62	44524	1.16	ppb		93
7) Butane	4.68	43	55448	1.16	ppb		94
8) 1,3-butadiene	4.69	39	36591	1.24	ppb		84
9) Bromomethane	5.04	94	55311	1.13	ppb		91
10) Chloroethane	5.20	64	20643	1.27	ppb	#	85
11) Ethanol	5.36	45	13696	1.20	ppb	#	74
12) Acrolein	5.94	56	12410m	1.24	ppb		
13) Vinyl Bromide	5.54	106	56822	1.15	ppb		95
14) Freon 11	5.80	101	194667	1.19	ppb		99
15) Acetone	6.03	58	18687m	1.25	ppb		
16) Pentane	6.07	42	41343m	1.16	ppb		
17) Isopropyl alcohol	6.15	45	57073	1.17	ppb	#	46
18) 1,1-dichloroethene	6.56	96	56328	1.16	ppb		89
19) Freon 113	6.75	101	137846	1.17	ppb		96
20) t-Butyl alcohol	6.88	59	93562	1.13	ppb		93
21) Methylene chloride	7.04	84	50280m	1.16	ppb		
22) Allyl chloride	7.01	41	41687m	1.14	ppb		
23) Carbon disulfide	7.20	76	148023	1.20	ppb		97
24) trans-1,2-dichloroethene	7.97	61	68887	1.21	ppb		94
25) methyl tert-butyl ether	8.03	73	131518	1.20	ppb		94
26) 1,1-dichloroethane	8.39	63	95089	1.15	ppb		97
27) Vinyl acetate	8.41	43	89018m	1.19	ppb		
28) Methyl Ethyl Ketone	8.94	72	21142	1.21	ppb	#	100
29) cis-1,2-dichloroethene	9.34	61	57658	1.16	ppb		90
30) Hexane	8.89	57	62689	1.23	ppb		97
31) Ethyl acetate	9.52	43	78814	1.18	ppb		95
32) Chloroform	9.94	83	128907	1.17	ppb		98
33) Tetrahydrofuran	10.15	42	37821	1.19	ppb		89
34) 1,2-dichloroethane	11.07	62	73032	1.18	ppb		89
36) 1,1,1-trichloroethane	10.75	97	131367	1.20	ppb		99
37) Cyclohexane	11.44	56	57547	1.27	ppb		90
38) Carbon tetrachloride	11.39	117	137163	1.22	ppb		99
39) Benzene	11.37	78	116970	1.21	ppb		99
40) Methyl methacrylate	12.92	41	37863	1.23	ppb	#	83
41) 1,4-dioxane	13.00	88	28574	1.12	ppb		100
42) 2,2,4-trimethylpentane	12.19	57	211404	1.21	ppb		98
43) Heptane	12.53	43	50947	1.22	ppb		92
44) Trichloroethene	12.67	130	57922	1.26	ppb		99
45) 1,2-dichloropropane	12.78	63	41974	1.20	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031605.D
Acq On : 16 Mar 2016 8:10 pm
Sample : A1UG_1.25
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:18:24 2016

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

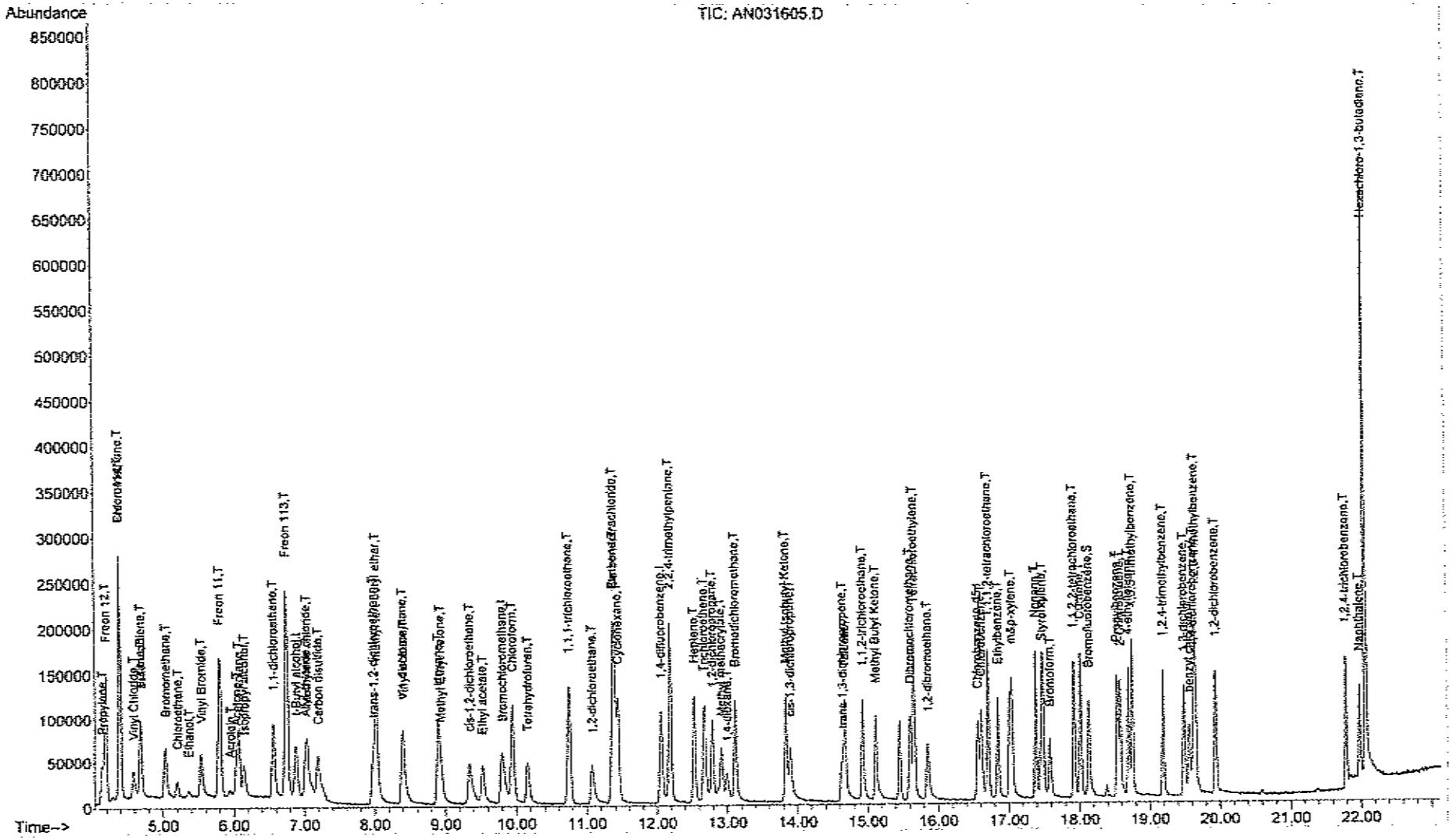
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.11	83	102348	1.20	ppb	99
47)	cis-1,3-dichloropropene	13.90	75	57578	1.26	ppb	99
48)	trans-1,3-dichloropropene	14.63	75	51108	1.23	ppb	92
49)	1,1,2-trichloroethane	14.93	97	46126	1.24	ppb	95
51)	Toluene	14.68	92	56126	1.20	ppb	96
52)	Methyl Isobutyl Ketone	13.83	43	97491m	1.15	ppb	
53)	Dibromochloromethane	15.60	129	67490m	1.17	ppb	
54)	Methyl Butyl Ketone	15.11	43	90049m	1.18	ppb	
55)	1,2-dibromoethane	15.85	107	66367	1.20	ppb	97
56)	Tetrachloroethylene	15.66	164	47939	1.19	ppb	100
57)	Chlorobenzene	16.61	112	73949	1.27	ppb	85
58)	1,1,1,2-tetrachloroethane	16.71	131	54587	1.18	ppb	95
59)	Ethylbenzene	16.85	91	103191	1.32	ppb	98
60)	m&p-xylene	17.04	91	173419	2.81	ppb	97
61)	Nonane	17.38	43	52439	1.46	ppb	98
62)	Styrene	17.46	104	61068	1.40	ppb	92
63)	Bromoform	17.58	173	41297	1.38	ppb	99
64)	o-xylene	17.48	91	99047m	1.42	ppb	
65)	Cumene	18.01	105	119471	1.49	ppb	98
67)	1,1,2,2-tetrachloroethane	17.92	83	87757	1.23	ppb	98
68)	Propylbenzene	18.54	91	112193m	1.43	ppb	
69)	2-Chlorotoluene	18.58	91	92322m	1.42	ppb	
70)	4-ethyltoluene	18.70	105	103814m	1.50	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	120410m	1.39	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	96928	1.30	ppb	96
73)	1,3-dichlorobenzene	19.49	146	67647	1.33	ppb	99
74)	benzyl chloride	19.56	91	93016	1.34	ppb	94
75)	1,4-dichlorobenzene	19.62	146	65798	1.36	ppb	95
76)	1,2,3-trimethylbenzene	19.65	105	117860	1.20	ppb	95
77)	1,2-dichlorobenzene	19.93	146	72700	1.20	ppb	96
78)	1,2,4-trichlorobenzene	21.78	180	62909	1.34	ppb	96
79)	Naphthalene	21.98	128	100472m	1.13	ppb	
80)	Hexachloro-1,3-butadiene	22.06	225	141195	1.12	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031605.D Vial: 4
Acq On : 16 Mar 2016 8:10 pm Operator: RJP
Sample : A1UG_1.25 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 17 9:55 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



AN031605.D A316_1UG.M Thu Apr 07 13:05:38 2016 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031606.D
Acq On : 16 Mar 2016 8:49 pm
Sample : A1UG_1.0
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:18:03 2016

Vial: 5
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.81	128	36682	1.00	ppb		0.00
35) 1,4-difluorobenzene	12.06	114	112843	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	61333	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	16.14	95	39738	1.01	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 101.00%				
Target Compounds							Qvalue
2) Propylene	4.14	41	27277	0.99	ppb	#	100
3) Freon 12	4.19	85	151027	0.99	ppb		99
4) Chloromethane	4.39	50	37602	1.00	ppb		94
5) Freon 114	4.39	85	128023	0.99	ppb		100
6) Vinyl Chloride	4.58	62	36447	0.99	ppb		88
7) Butane	4.68	43	44989	0.99	ppb		96
8) 1,3-butadiene	4.69	39	28499	1.02	ppb		81
9) Bromomethane	5.03	94	46282	0.99	ppb		95
10) Chloroethane	5.21	64	16583	1.07	ppb		100
11) Ethanol	5.36	45	11746	1.08	ppb	#	74
12) Acrolein	5.95	56	9571m	1.00	ppb		
13) Vinyl Bromide	5.54	106	46664	0.99	ppb		96
14) Freon 11	5.80	101	154925	0.99	ppb		98
15) Acetone	6.04	58	14328m	1.01	ppb		
16) Pentane	6.07	42	33653	0.99	ppb		94
17) Isopropyl alcohol	6.15	45	46253	0.99	ppb	#	46
18) 1,1-dichloroethene	6.56	96	46032	0.99	ppb	#	88
19) Freon 113	6.74	101	111420	0.99	ppb		96
20) t-Butyl alcohol	6.88	59	78078	0.99	ppb	#	77
21) Methylene chloride	7.04	84	40970	0.99	ppb		97
22) Allyl chloride	7.02	41	33103m	0.95	ppb		
23) Carbon disulfide	7.20	76	116250	0.99	ppb		96
24) trans-1,2-dichloroethene	7.99	61	54958	1.01	ppb		94
25) methyl tert-butyl ether	8.03	73	103598	0.99	ppb		93
26) 1,1-dichloroethane	8.40	63	77856	0.99	ppb		99
27) Vinyl acetate	8.43	43	61972	0.87	ppb		96
28) Methyl Ethyl Ketone	8.94	72	16500	0.99	ppb	#	100
29) cis-1,2-dichloroethene	9.35	61	46977	0.99	ppb		92
30) Hexane	8.90	57	48164	0.99	ppb		94
31) Ethyl acetate	9.52	43	62899	0.99	ppb		94
32) Chloroform	9.94	83	104226	0.99	ppb		98
33) Tetrahydrofuran	10.15	42	29839	0.99	ppb		89
34) 1,2-dichloroethane	11.09	62	58404	0.99	ppb		89
36) 1,1,1-trichloroethane	10.75	97	104507	1.00	ppb		97
37) Cyclohexane	11.45	56	43452	1.00	ppb		89
38) Carbon tetrachloride	11.39	117	107492	1.00	ppb		98
39) Benzene	11.36	78	91969	1.00	ppb		98
40) Methyl methacrylate	12.91	41	29340	0.99	ppb	#	83
41) 1,4-dioxane	13.00	88	24261	1.00	ppb		100
42) 2,2,4-trimethylpentane	12.18	57	166364	1.00	ppb		99
43) Heptane	12.53	43	39883	1.00	ppb		93
44) Trichloroethene	12.67	130	44026	1.00	ppb		97
45) 1,2-dichloropropane	12.79	63	33334	1.00	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031606.D
Acq On : 16 Mar 2016 8:49 pm
Sample : A1UG_1.0
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:18:03 2016

Vial: 5
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

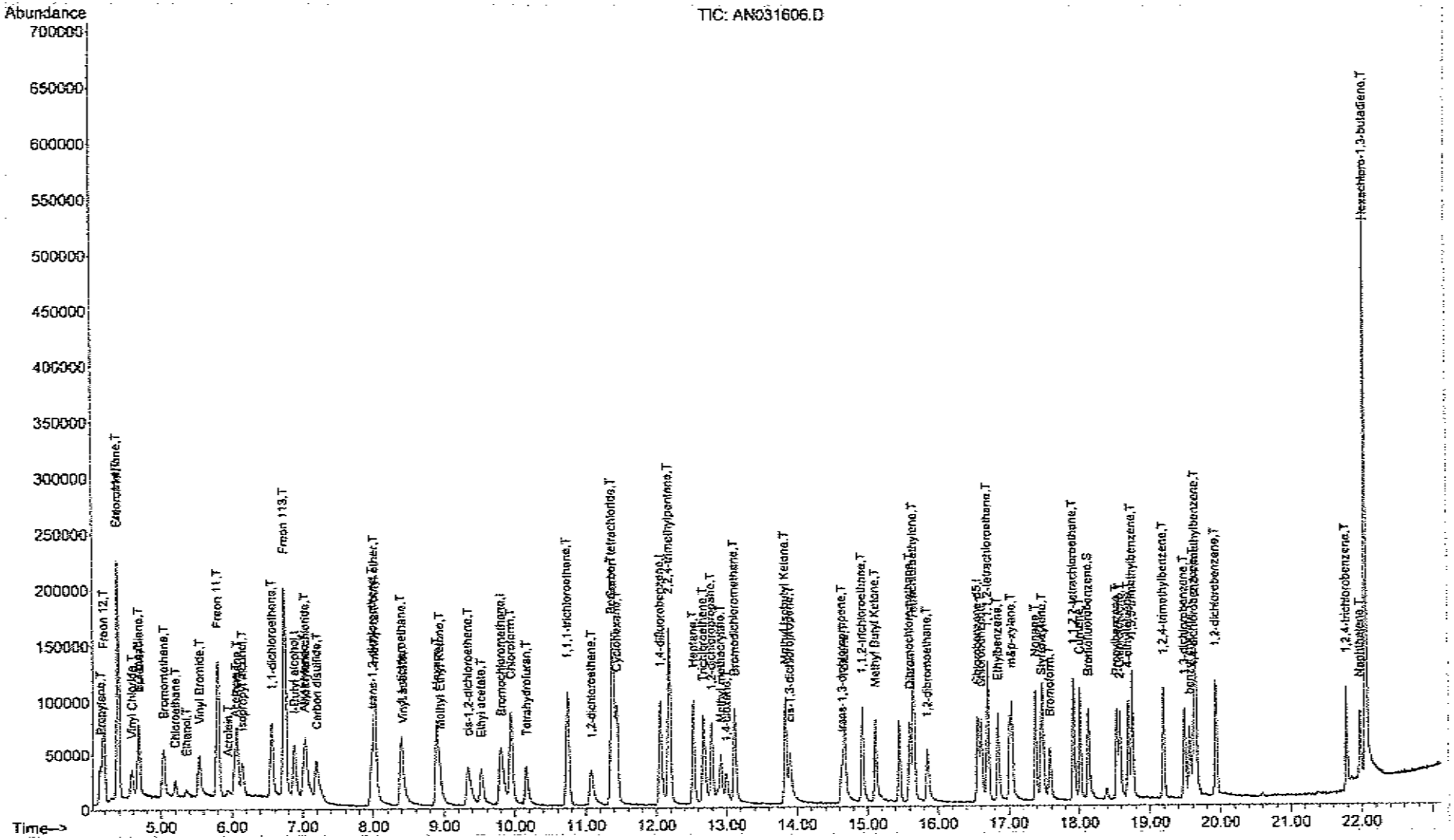
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	81385	1.00	ppb	99
47)	cis-1,3-dichloropropene	13.90	75	43288	0.99	ppb	98
48)	trans-1,3-dichloropropene	14.63	75	39100	0.99	ppb	92
49)	1,1,2-trichloroethane	14.93	97	35639	1.00	ppb	97
51)	Toluene	14.68	92	43216	1.01	ppb	99
52)	Methyl Isobutyl Ketone	13.83	43	77557	1.00	ppb	97
53)	Dibromochloromethane	15.60	129	52061m	0.98	ppb	
54)	Methyl Butyl Ketone	15.11	43	70973	1.01	ppb	97
55)	1,2-dibromoethane	15.86	107	51366	1.01	ppb	95
56)	Tetrachloroethylene	15.66	164	37193	1.01	ppb	98
57)	Chlorobenzene	16.61	112	53911	1.01	ppb	89
58)	1,1,1,2-tetrachloroethane	16.70	131	42883	1.01	ppb	95
59)	Ethylbenzene	16.85	91	72637	1.01	ppb	98
60)	m&p-xylene	17.04	91	114219	2.02	ppb	94
61)	Nonane	17.38	43	33317	1.01	ppb	98
62)	Styrene	17.46	104	40542	1.01	ppb	90
63)	Bromoform	17.58	173	27823	1.01	ppb	99
64)	o-xylene	17.48	91	66836	1.04	ppb	91
65)	Cumene	18.02	105	74125	1.01	ppb	99
67)	1,1,2,2-tetrachloroethane	17.92	83	65967	1.01	ppb	99
68)	Propylbenzene	18.53	91	72561m	1.01	ppb	
69)	2-Chlorotoluene	18.58	91	59363m	0.99	ppb	
70)	4-ethyltoluene	18.70	105	64669m	1.01	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	81111m	1.01	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	68998	1.01	ppb	98
73)	1,3-dichlorobenzene	19.48	146	46992	1.01	ppb	99
74)	benzyl chloride	19.56	91	75652	1.19	ppb	97
75)	1,4-dichlorobenzene	19.61	146	44723	1.01	ppb	98
76)	1,2,3-trimethylbenzene	19.65	105	90793	1.01	ppb	96
77)	1,2-dichlorobenzene	19.93	146	56239	1.01	ppb	97
78)	1,2,4-trichlorobenzene	21.78	180	42066	0.97	ppb	95
79)	Naphthalene	21.98	128	80682	0.99	ppb	97
80)	Hexachloro-1,3-butadiene	22.06	225	116697	1.01	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031606.D Vial: 5
Acq On : 16 Mar 2016 8:49 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 17 10:12 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



AN031606.D A316_1UG.M Thu Apr 07 13:05:42 2016 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031607.D Vial: 6
Acq On : 16 Mar 2016 9:27 pm Operator: RJP
Sample : A1UG_0.75 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:19:18 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.81	128	36429	1.00	ppb		0.00
35) 1,4-difluorobenzene	12.06	114	115405	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	64493	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.13	95	39593	0.95	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 95.00%				
Target Compounds							Qvalue
2) Propylene	4.13	41	21494	0.78	ppb	#	100
3) Freon 12	4.19	85	115393	0.76	ppb		100
4) Chloromethane	4.39	50	30086	0.80	ppb		92
5) Freon 114	4.39	85	97880	0.76	ppb		98
6) Vinyl Chloride	4.58	62	27592	0.76	ppb		91
7) Butane	4.68	43	31050	0.69	ppb		96
8) 1,3-butadiene	4.69	39	21193	0.76	ppb		81
9) Bromomethane	5.04	94	33415	0.72	ppb		90
10) Chloroethane	5.21	64	12103	0.79	ppb		100
11) Ethanol	5.36	45	8634	0.80	ppb	#	72
12) Acrolein	5.97	56	7453m	0.78	ppb		
13) Vinyl Bromide	5.55	106	34036	0.73	ppb		96
14) Freon 11	5.81	101	116153	0.75	ppb		98
15) Acetone	6.05	58	10532m	0.75	ppb		
16) Pentane	6.07	42	25618	0.76	ppb		95
17) Isopropyl alcohol	6.16	45	35764	0.77	ppb	#	46
18) 1,1-dichloroethene	6.57	96	33426	0.72	ppb		89
19) Freon 113	6.74	101	83596	0.75	ppb		97
20) t-Butyl alcohol	6.90	59	59423	0.76	ppb	#	75
21) Methylene chloride	7.04	84	30390	0.74	ppb		89
22) Allyl chloride	7.02	41	25889	0.75	ppb		86
23) Carbon disulfide	7.20	76	89515	0.77	ppb		99
24) trans-1,2-dichloroethene	8.00	61	40410	0.75	ppb		91
25) methyl tert-butyl ether	8.03	73	76069	0.73	ppb		93
26) 1,1-dichloroethane	8.39	63	58606	0.75	ppb		100
27) Vinyl acetate	8.43	43	50830m	0.72	ppb		
28) Methyl Ethyl Ketone	8.95	72	11701	0.71	ppb	#	100
29) cis-1,2-dichloroethene	9.34	61	33727	0.72	ppb		91
30) Hexane	8.90	57	34580	0.72	ppb		97
31) Ethyl acetate	9.53	43	45964	0.73	ppb	#	81
32) Chloroform	9.95	83	78527	0.75	ppb		98
33) Tetrahydrofuran	10.17	42	22163	0.74	ppb		92
34) 1,2-dichloroethane	11.09	62	43826	0.75	ppb		90
36) 1,1,1-trichloroethane	10.75	97	77993	0.73	ppb		98
37) Cyclohexane	11.44	56	32831	0.74	ppb		90
38) Carbon tetrachloride	11.39	117	80127	0.73	ppb		97
39) Benzene	11.37	78	69790	0.74	ppb		98
40) Methyl methacrylate	12.92	41	24037m	0.80	ppb		
41) 1,4-dioxane	13.00	88	18280	0.74	ppb		99
42) 2,2,4-trimethylpentane	12.18	57	121655	0.71	ppb		99
43) Heptane	12.53	43	28219	0.69	ppb		91
44) Trichloroethene	12.68	130	34027	0.75	ppb		99
45) 1,2-dichloropropane	12.79	63	25201	0.74	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031607.D
Acq On : 16 Mar 2016 9:27 pm
Sample : A1UG_0.75
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:19:18 2016

Vial: 6
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	60775	0.73	ppb	100
47)	cis-1,3-dichloropropene	13.90	75	32684	0.73	ppb	96
48)	trans-1,3-dichloropropene	14.63	75	29863	0.74	ppb	90
49)	1,1,2-trichloroethane	14.93	97	27436	0.75	ppb	96
51)	Toluene	14.68	92	32126	0.71	ppb	98
52)	Methyl Isobutyl Ketone	13.83	43	59370	0.73	ppb	99
53)	Dibromochloromethane	15.60	129	41112m	0.74	ppb	
54)	Methyl Butyl Ketone	15.11	43	49642	0.67	ppb	96
55)	1,2-dibromoethane	15.85	107	38588	0.72	ppb	96
56)	Tetrachloroethylene	15.65	164	28969	0.75	ppb	97
57)	Chlorobenzene	16.61	112	41332	0.73	ppb	90
58)	1,1,1,2-tetrachloroethane	16.71	131	31396	0.70	ppb	95
59)	Ethylbenzene	16.85	91	53041	0.70	ppb	99
60)	m&p-xylene	17.04	91	79500	1.33	ppb	92
61)	Nonane	17.38	43	22932	0.66	ppb	95
62)	Styrene	17.46	104	27462	0.65	ppb	91
63)	Bromoform	17.58	173	21394	0.74	ppb	99
64)	o-xylene	17.49	91	49158	0.73	ppb	95
65)	Cumene	18.02	105	52361	0.68	ppb	100
67)	1,1,2,2-tetrachloroethane	17.92	83	51665	0.75	ppb	98
68)	Propylbenzene	18.54	91	55960m	0.74	ppb	
69)	2-Chlorotoluene	18.58	91	40331m	0.64	ppb	
70)	4-ethyltoluene	18.70	105	48368m	0.72	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	59988m	0.71	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	54115	0.75	ppb	96
73)	1,3-dichlorobenzene	19.48	146	32066	0.65	ppb	97
74)	benzyl chloride	19.56	91	53237	0.80	ppb	96
75)	1,4-dichlorobenzene	19.62	146	30624	0.66	ppb	97
76)	1,2,3-trimethylbenzene	19.65	105	66564	0.70	ppb	96
77)	1,2-dichlorobenzene	19.93	146	40900	0.70	ppb	97
78)	1,2,4-trichlorobenzene	21.78	180	30081m	0.66	ppb	
79)	Naphthalene	21.98	128	68066m	0.79	ppb	
80)	Hexachloro-1,3-butadiene	22.06	225	85443	0.70	ppb	95

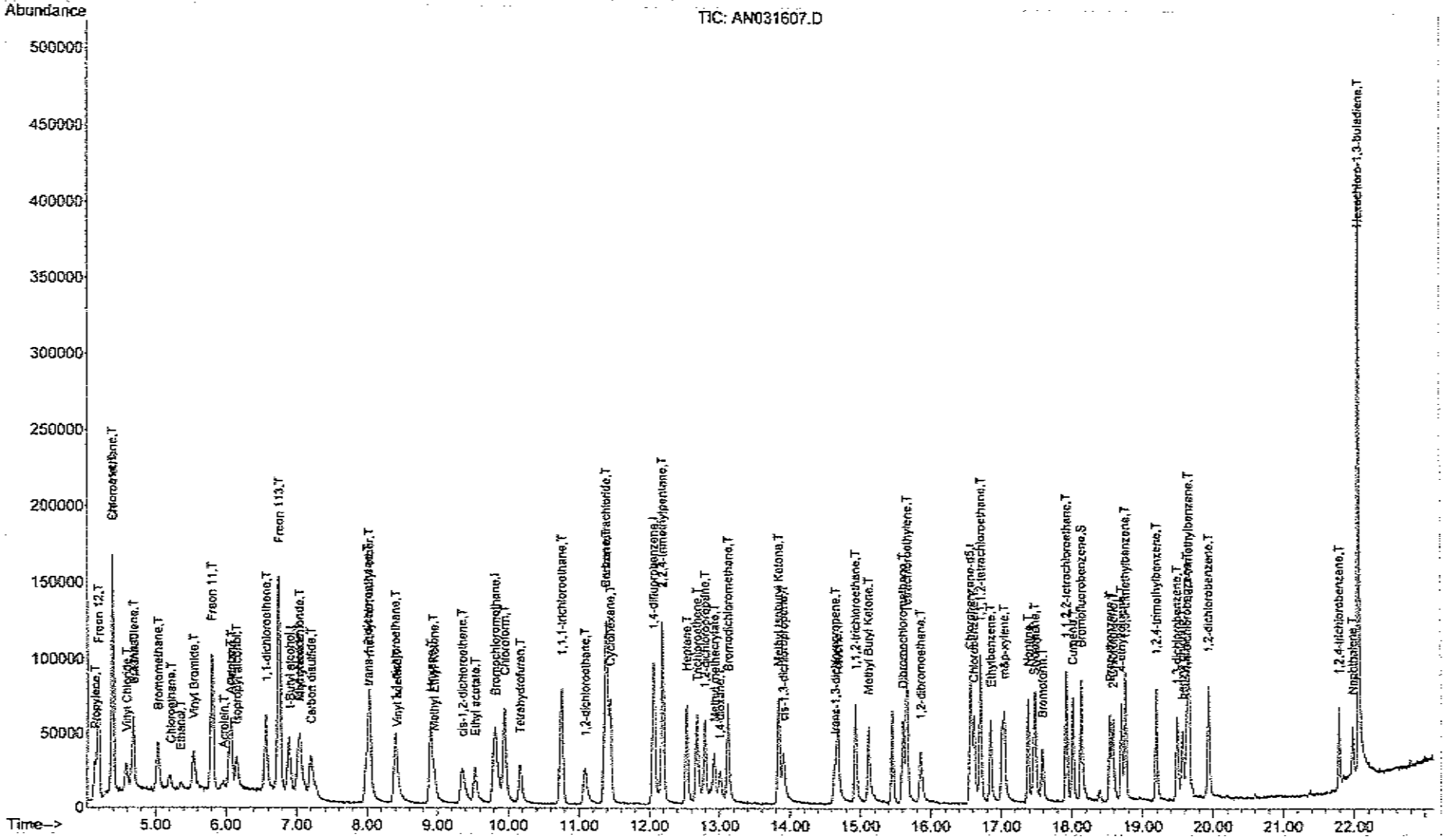
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA\AN031607.D
Acq On : 16 Mar 2016 9:27 pm
Sample : A1UG_0.75
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 10:14 2016

Vial: 6
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031608.D
Acq On : 16 Mar 2016 10:05 pm
Sample : A1UG_0.50
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:19:39 2016

Vial: 7
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.82	128	36080	1.00	ppb		0.01
35) 1,4-difluorobenzene	12.06	114	113070	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	67747	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.14	95	40075	0.92	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 92.00%				
Target Compounds							Qvalue
2) Propylene	4.14	41	14424	0.53	ppb	#	100
3) Freon 12	4.19	85	76085	0.51	ppb		100
4) Chloromethane	4.39	50	19879	0.53	ppb		98
5) Freon 114	4.39	85	64906	0.51	ppb		98
6) Vinyl Chloride	4.59	62	18499	0.51	ppb		92
7) Butane	4.68	43	21962	0.49	ppb		94
8) 1,3-butadiene	4.69	39	13445	0.49	ppb		69
9) Bromomethane	5.04	94	26274	0.57	ppb		97
10) Chloroethane	5.20	64	8256	0.54	ppb	#	86
11) Ethanol	5.37	45	6117	0.57	ppb		98
12) Acrolein	5.97	56	4983m	0.53	ppb		
13) Vinyl Bromide	5.55	106	22539	0.49	ppb		93
14) Freon 11	5.81	101	78802	0.51	ppb		98
15) Acetone	6.06	58	8424	0.60	ppb	#	75
16) Pentane	6.08	42	17198	0.52	ppb		97
17) Isopropyl alcohol	6.16	45	25607	0.56	ppb	#	46
18) 1,1-dichloroethene	6.56	96	22928	0.50	ppb		89
19) Freon 113	6.75	101	55038	0.50	ppb		95
20) t-Butyl alcohol	6.90	59	42395	0.55	ppb	#	73
21) Methylene chloride	7.05	84	20786	0.51	ppb		96
22) Allyl chloride	7.02	41	17969m	0.52	ppb		
23) Carbon disulfide	7.21	76	57993	0.50	ppb		97
24) trans-1,2-dichloroethene	8.02	61	26856	0.50	ppb		89
25) methyl tert-butyl ether	8.03	73	49652	0.48	ppb		91
26) 1,1-dichloroethane	8.41	63	38652	0.50	ppb		100
27) Vinyl acetate	8.44	43	29273	0.42	ppb		94
28) Methyl Ethyl Ketone	8.96	72	7938	0.48	ppb	#	100
29) cis-1,2-dichloroethene	9.36	61	22605	0.48	ppb		95
30) Hexane	8.91	57	22491	0.47	ppb		97
31) Ethyl acetate	9.54	43	30351	0.48	ppb		86
32) Chloroform	9.95	83	52618	0.51	ppb		100
33) Tetrahydrofuran	10.18	42	14113	0.47	ppb		93
34) 1,2-dichloroethane	11.10	62	29673	0.51	ppb		89
36) 1,1,1-trichloroethane	10.75	97	53522	0.51	ppb		99
37) Cyclohexane	11.44	56	21201	0.49	ppb		90
38) Carbon tetrachloride	11.39	117	54492	0.51	ppb		98
39) Benzene	11.37	78	46262	0.50	ppb		100
40) Methyl methacrylate	12.92	41	13663	0.46	ppb	#	73
41) 1,4-dioxane	13.01	88	13214	0.54	ppb		98
42) 2,2,4-trimethylpentane	12.18	57	78609	0.47	ppb		98
43) Heptane	12.53	43	17641	0.44	ppb		89
44) Trichloroethene	12.67	130	22183	0.50	ppb		99
45) 1,2-dichloropropane	12.79	63	17338	0.52	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031608.D
Acq On : 16 Mar 2016 10:05 pm
Sample : A1UG_0.50
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:19:39 2016

Vial: 7
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

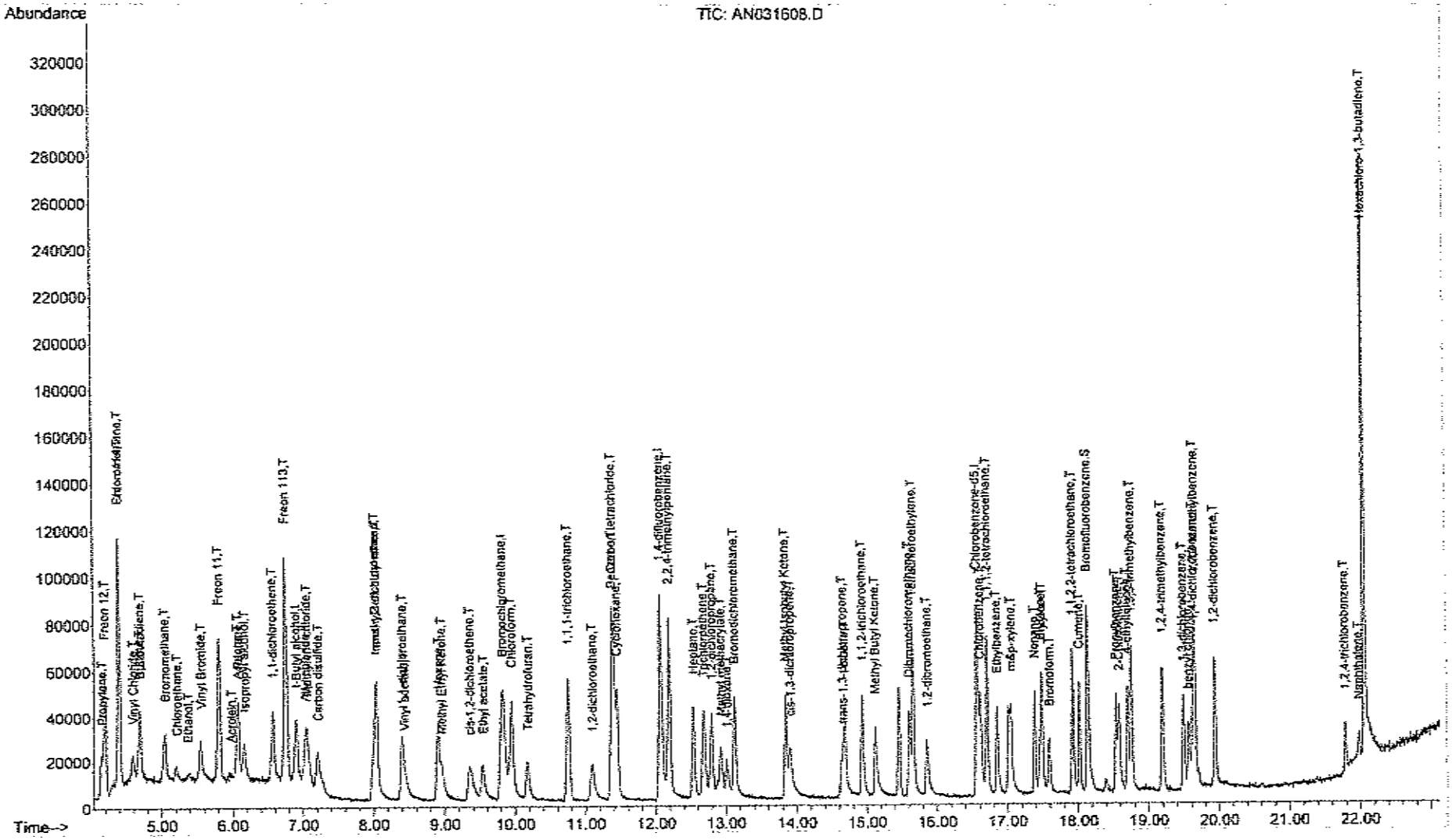
Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	41322	0.51	ppb	98
47)	cis-1,3-dichloropropene	13.90	75	22010	0.50	ppb	96
48)	trans-1,3-dichloropropene	14.64	75	20160	0.51	ppb	93
49)	1,1,2-trichloroethane	14.94	97	18287	0.51	ppb	93
51)	Toluene	14.68	92	21106	0.45	ppb	97
52)	Methyl Isobutyl Ketone	13.84	43	39767	0.46	ppb	98
53)	Dibromochloromethane	15.60	129	29081m	0.50	ppb	
54)	Methyl Butyl Ketone	15.12	43	33116m	0.43	ppb	
55)	1,2-dibromoethane	15.85	107	28353	0.50	ppb	97
56)	Tetrachloroethylene	15.66	164	19835	0.49	ppb	99
57)	Chlorobenzene	16.61	112	29636	0.50	ppb	92
58)	1,1,1,2-tetrachloroethane	16.71	131	22498	0.48	ppb	92
59)	Ethylbenzene	16.85	91	36463	0.46	ppb	98
60)	m&p-xylene	17.05	91	56232	0.90	ppb	95
61)	Nonane	17.38	43	15420	0.42	ppb	94
62)	Styrene	17.47	104	18736	0.42	ppb	90
63)	Bromoform	17.59	173	14908	0.49	ppb	99
64)	o-xylene	17.49	91	37022	0.52	ppb	96
65)	Cumene	18.02	105	37321	0.46	ppb	99
67)	1,1,2,2-tetrachloroethane	17.92	83	36610	0.51	ppb	97
68)	Propylbenzene	18.53	91	41158m	0.54	ppb	
69)	2-Chlorotoluene	18.58	91	31517m	0.48	ppb	
70)	4-ethyltoluene	18.70	105	35420m	0.50	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	44058m	0.50	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	39698	0.52	ppb	96
73)	1,3-dichlorobenzene	19.49	146	24308	0.47	ppb	97
74)	benzyl chloride	19.56	91	36368	0.52	ppb	95
75)	1,4-dichlorobenzene	19.63	146	21600	0.44	ppb	92
76)	1,2,3-trimethylbenzene	19.65	105	48394	0.49	ppb	97
77)	1,2-dichlorobenzene	19.94	146	31844	0.52	ppb	95
78)	1,2,4-trichlorobenzene	21.78	180	22916m	0.48	ppb	
79)	Naphthalene	21.98	128	50904m	0.56	ppb	
80)	Hexachloro-1,3-butadiene	22.06	225	56244	0.44	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA\AN031608.D Vial: 7
Acq On : 16 Mar 2016 10:05 pm Operator: RJP
Sample : A1UG_0.50 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 17 10:15 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031609.D
Acq On : 16 Mar 2016 10:42 pm
Sample : A1UG_0.30
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:19:57 2016

Vial: 8
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.83	128	34240	1.00	ppb		0.02
35) 1,4-difluorobenzene	12.07	114	107427	1.00	ppb		0.01
50) Chlorobenzene-d5	16.57	117	63070	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.14	95	37922	0.93	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 93.00%				
Target Compounds							Qvalue
2) Propylene	4.14	41	9410	0.37	ppb	#	100
3) Freon 12	4.19	85	48050	0.34	ppb		99
4) Chloromethane	4.40	50	12982	0.37	ppb		94
5) Freon 114	4.39	85	40390	0.33	ppb		98
6) Vinyl Chloride	4.59	62	12065	0.35	ppb		84
7) Butane	4.69	43	15019	0.35	ppb		90
8) 1,3-butadiene	4.69	39	12946	0.49	ppb		87
9) Bromomethane	5.04	94	14575	0.33	ppb		90
10) Chloroethane	5.21	64	5112	0.35	ppb		96
11) Ethanol	5.39	45	4660	0.46	ppb		96
12) Acrolein	5.98	56	3558m	0.40	ppb		
13) Vinyl Bromide	5.55	106	14483	0.33	ppb		94
14) Freon 11	5.80	101	48893	0.33	ppb		98
15) Acetone	6.05	58	4586m	0.35	ppb		
16) Pentane	6.08	42	11517	0.36	ppb		97
17) Isopropyl alcohol	6.16	45	17857	0.41	ppb	#	46
18) 1,1-dichloroethene	6.56	96	14624	0.34	ppb	#	86
19) Freon 113	6.76	101	34250	0.33	ppb		99
20) t-Butyl alcohol	6.91	59	27113	0.37	ppb	#	72
21) Methylene chloride	7.07	84	12304	0.32	ppb		86
22) Allyl chloride	7.03	41	10973m	0.34	ppb		
23) Carbon disulfide	7.21	76	36706	0.34	ppb		97
24) trans-1,2-dichloroethene	8.01	61	16238	0.32	ppb		89
25) methyl tert-butyl ether	8.03	73	31713	0.32	ppb		93
26) 1,1-dichloroethane	8.40	63	22970	0.31	ppb		94
27) Vinyl acetate	8.44	43	20303m	0.31	ppb		
28) Methyl Ethyl Ketone	8.97	72	4817	0.31	ppb	#	100
29) cis-1,2-dichloroethene	9.38	61	13539	0.31	ppb		91
30) Hexane	8.90	57	13020	0.29	ppb		96
31) Ethyl acetate	9.54	43	20202	0.34	ppb		89
32) Chloroform	9.95	83	31612	0.32	ppb		98
33) Tetrahydrofuran	10.18	42	8932	0.32	ppb		93
34) 1,2-dichloroethane	11.10	62	18425	0.33	ppb		87
36) 1,1,1-trichloroethane	10.75	97	32638	0.33	ppb		98
37) Cyclohexane	11.44	56	12156	0.29	ppb		89
38) Carbon tetrachloride	11.39	117	33109	0.32	ppb		98
39) Benzene	11.37	78	27379	0.31	ppb		96
40) Methyl methacrylate	12.93	41	8689	0.31	ppb	#	84
41) 1,4-dioxane	13.03	88	7797	0.34	ppb		95
42) 2,2,4-trimethylpentane	12.19	57	47254	0.30	ppb		99
43) Heptane	12.54	43	10173	0.27	ppb		92
44) Trichloroethene	12.69	130	12806	0.31	ppb		97
45) 1,2-dichloropropane	12.79	63	10394	0.33	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031609.D Vial: 8
Acq On : 16 Mar 2016 10:42 pm Operator: RJP
Sample : A1UG_0.30 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:19:57 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	13.13	83	24639	0.32	ppb		100
47)	cis-1,3-dichloropropene	13.91	75	13399	0.32	ppb		98
48)	trans-1,3-dichloropropene	14.64	75	11780	0.31	ppb		93
49)	1,1,2-trichloroethane	14.93	97	11103	0.33	ppb		99
51)	Toluene	14.68	92	12431	0.28	ppb		95
52)	Methyl Isobutyl Ketone	13.84	43	23225	0.29	ppb		96
53)	Dibromochloromethane	15.61	129	15960m	0.29	ppb		
54)	Methyl Butyl Ketone	15.12	43	21434m	0.30	ppb		
55)	1,2-dibromoethane	15.86	107	16758	0.32	ppb		94
56)	Tetrachloroethylene	15.66	164	11766	0.31	ppb		100
57)	Chlorobenzene	16.61	112	16920	0.31	ppb		83
58)	1,1,1,2-tetrachloroethane	16.70	131	13253	0.30	ppb	#	85
59)	Ethylbenzene	16.86	91	20219	0.27	ppb		97
60)	m&p-xylene	17.02	91	30952	0.53	ppb		97
61)	Nonane	17.38	43	8544	0.25	ppb		99
62)	Styrene	17.47	104	10322	0.25	ppb		97
63)	Bromoform	17.58	173	8523	0.30	ppb		95
64)	o-xylene	17.49	91	17375	0.26	ppb		95
65)	Cumene	18.02	105	22320	0.29	ppb		96
67)	1,1,2,2-tetrachloroethane	17.92	83	24384	0.36	ppb		98
68)	Propylbenzene	18.54	91	27429m	0.37	ppb		
69)	2-Chlorotoluene	18.58	91	17751m	0.29	ppb		
70)	4-ethyltoluene	18.70	105	24157m	0.37	ppb		
71)	1,3,5-trimethylbenzene	18.76	105	28602m	0.35	ppb		
72)	1,2,4-trimethylbenzene	19.19	105	25992	0.37	ppb		94
73)	1,3-dichlorobenzene	19.49	146	15874	0.33	ppb		99
74)	benzyl chloride	19.56	91	19958	0.31	ppb		92
75)	1,4-dichlorobenzene	19.62	146	15212	0.33	ppb		96
76)	1,2,3-trimethylbenzene	19.65	105	32866	0.35	ppb		98
77)	1,2-dichlorobenzene	19.94	146	20801	0.36	ppb		96
78)	1,2,4-trichlorobenzene	21.79	180	13610m	0.31	ppb		
79)	Naphthalene	22.14	128	30401m	0.36	ppb		
80)	Hexachloro-1,3-butadiene	22.06	225	34640	0.29	ppb		93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

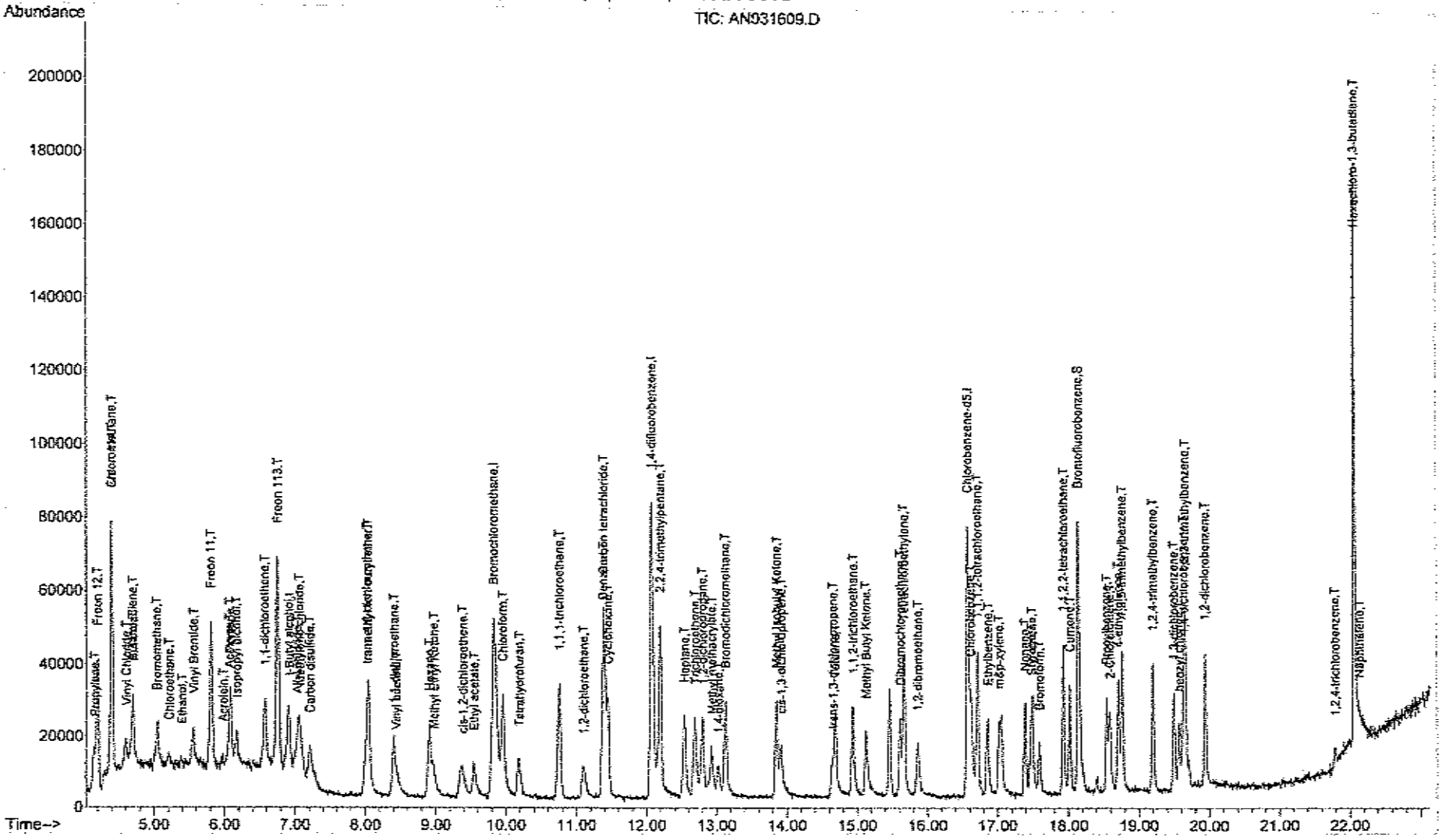
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031609.D
Acq On : 16 Mar 2016 10:42 pm
Sample : A1UG_0.30
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 10:17 2016

Vial: 8
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031610.D
Acq On : 16 Mar 2016 11:18 pm
Sample : A1UG_0.15
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:20:22 2016

Vial: 9
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.83	128	33400	1.00	ppb		0.02
35) 1,4-difluorobenzene	12.07	114	103197	1.00	ppb		0.01
50) Chlorobenzene-d5	16.57	117	62434	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.14	95	36945	0.92	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 92.00%				
Target Compounds							Qvalue
2) Propylene	4.15	41	5667	0.23	ppb	#	100
3) Freon 12	4.19	85	25710	0.18	ppb		100
4) Chloromethane	4.40	50	7532	0.22	ppb		94
5) Freon 114	4.39	85	21243	0.18	ppb		98
6) Vinyl Chloride	4.59	62	6499	0.19	ppb		85
7) Butane	4.68	43	9555	0.23	ppb	#	84
8) 1,3-butadiene	4.70	39	4728m	0.19	ppb		
9) Bromomethane	5.04	94	8678	0.20	ppb		99
10) Chloroethane	5.22	64	2747	0.19	ppb	#	73
11) Ethanol	5.40	45	2336m	0.24	ppb		
12) Acrolein	5.97	56	1928m	0.22	ppb		
13) Vinyl Bromide	5.55	106	8288	0.19	ppb		97
14) Freon 11	5.81	101	26836	0.19	ppb		100
15) Acetone	6.06	58	2908m	0.22	ppb		
16) Pentane	6.08	42	7007	0.23	ppb	#	74
17) Isopropyl alcohol	6.18	45	9697m	0.23	ppb		
18) 1,1-dichloroethene	6.56	96	7737	0.18	ppb	#	87
19) Freon 113	6.75	101	18520	0.18	ppb		96
20) t-Butyl alcohol	6.91	59	14003	0.19	ppb	#	72
21) Methylene chloride	7.06	84	6447	0.17	ppb		84
22) Allyl chloride	7.06	41	6867m	0.22	ppb		
23) Carbon disulfide	7.21	76	21871	0.20	ppb		100
24) trans-1,2-dichloroethene	8.02	61	8942	0.18	ppb		92
25) methyl tert-butyl ether	8.04	73	16217	0.17	ppb		90
26) 1,1-dichloroethane	8.40	63	12529	0.17	ppb		97
27) Vinyl acetate	8.46	43	11579m	0.18	ppb		
28) Methyl Ethyl Ketone	8.98	72	2686	0.18	ppb	#	100
29) cis-1,2-dichloroethene	9.38	61	6078	0.14	ppb		76
30) Hexane	8.91	57	6897	0.16	ppb		97
31) Ethyl acetate	9.55	43	10831	0.19	ppb		92
32) Chloroform	9.95	83	17226	0.18	ppb		96
33) Tetrahydrofuran	10.20	42	4934	0.18	ppb		98
34) 1,2-dichloroethane	11.10	62	9147	0.17	ppb		87
36) 1,1,1-trichloroethane	10.75	97	16611	0.17	ppb		99
37) Cyclohexane	11.45	56	6376	0.16	ppb		88
38) Carbon tetrachloride	11.39	117	16991	0.17	ppb		97
39) Benzene	11.37	78	14982	0.18	ppb		98
40) Methyl methacrylate	12.94	41	5374	0.20	ppb		97
41) 1,4-dioxane	13.03	88	3369	0.15	ppb		91
42) 2,2,4-trimethylpentane	12.19	57	24737	0.16	ppb		98
43) Heptane	12.54	43	5155	0.14	ppb		94
44) Trichloroethene	12.70	130	6486	0.16	ppb		94
45) 1,2-dichloropropane	12.80	63	5119	0.17	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031610.D Vial: 9
Acq On : 16 Mar 2016 11:18 pm Operator: RJP
Sample : A1UG_0.15 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:20:22 2016 Quant Results File: A316_1UG.RES

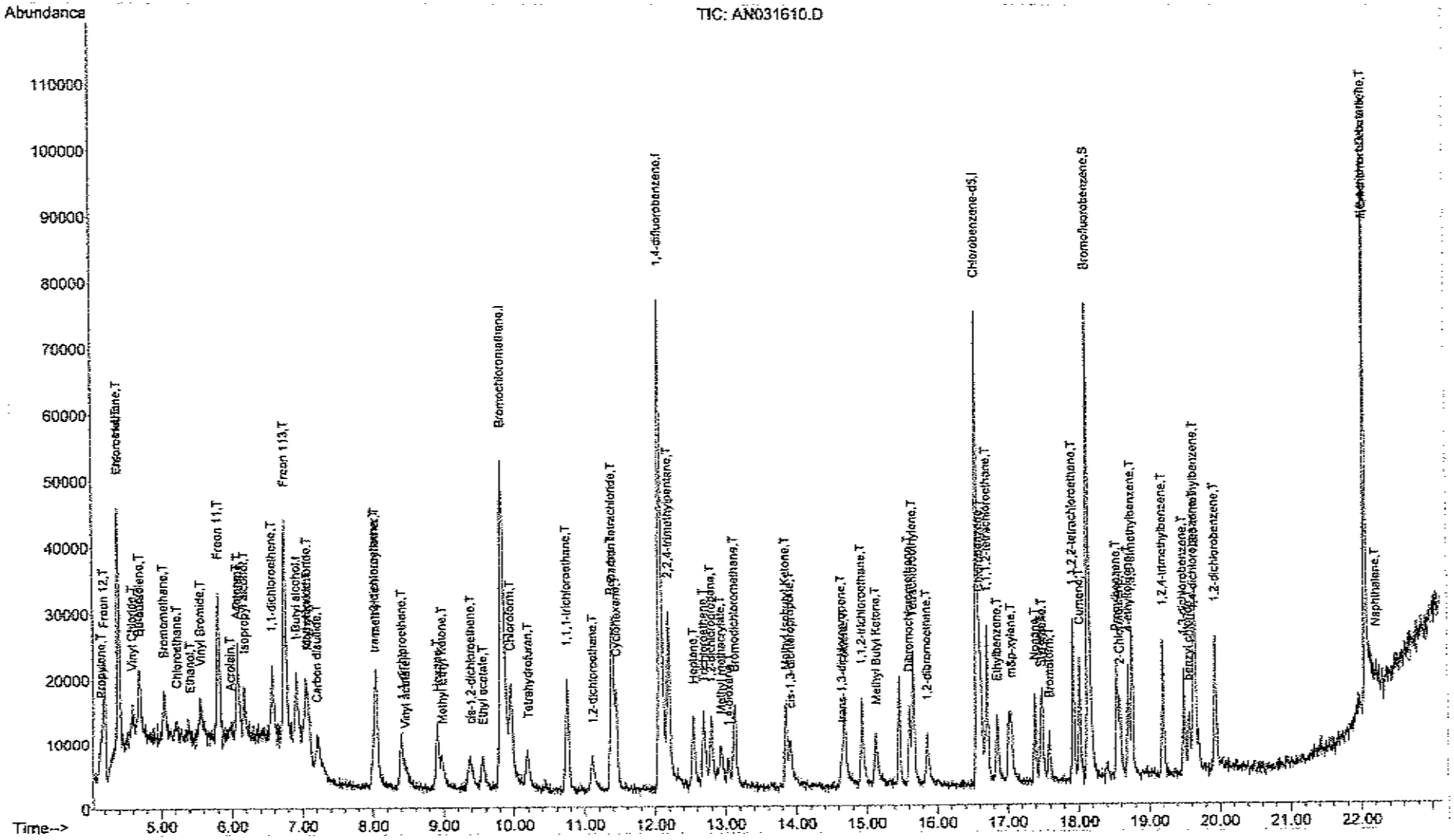
Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	13.12	83	13275	0.18	ppb		97
47)	cis-1,3-dichloropropene	13.91	75	6893	0.17	ppb		96
48)	trans-1,3-dichloropropene	14.64	75	6609	0.18	ppb		94
49)	1,1,2-trichloroethane	14.94	97	6109	0.19	ppb		96
51)	Toluene	14.68	92	6141	0.14	ppb		89
52)	Methyl Isobutyl Ketone	13.85	43	11770	0.15	ppb		98
53)	Dibromochloromethane	15.60	129	8932m	0.17	ppb		
54)	Methyl Butyl Ketone	15.14	43	10426m	0.15	ppb		
55)	1,2-dibromoethane	15.86	107	9583	0.18	ppb		95
56)	Tetrachloroethylene	15.66	164	5857	0.16	ppb		94
57)	Chlorobenzene	16.61	112	9263	0.17	ppb		95
58)	1,1,1,2-tetrachloroethane	16.71	131	6442	0.15	ppb	#	68
59)	Ethylbenzene	16.85	91	11039	0.15	ppb		97
60)	m&p-xylene	17.04	91	16137	0.28	ppb		94
61)	Nonane	17.38	43	5031	0.15	ppb		88
62)	Styrene	17.46	104	5771	0.14	ppb		87
63)	Bromoform	17.58	173	4415	0.16	ppb		96
64)	o-xylene	17.48	91	10324	0.16	ppb		100
65)	Cumene	18.01	105	14312	0.19	ppb		98
67)	1,1,2,2-tetrachloroethane	17.92	83	15040	0.23	ppb		100
68)	Propylbenzene	18.54	91	15476m	0.21	ppb		
69)	2-Chlorotoluene	18.58	91	10441m	0.17	ppb		
70)	4-ethyltoluene	18.70	105	13458m	0.21	ppb		
71)	1,3,5-trimethylbenzene	18.75	105	16481m	0.20	ppb		
72)	1,2,4-trimethylbenzene	19.19	105	15427	0.22	ppb		97
73)	1,3-dichlorobenzene	19.49	146	8974	0.19	ppb		98
74)	benzyl chloride	19.56	91	11759	0.18	ppb		94
75)	1,4-dichlorobenzene	19.62	146	7999	0.18	ppb		92
76)	1,2,3-trimethylbenzene	19.65	105	18207m	0.20	ppb		
77)	1,2-dichlorobenzene	19.94	146	13054	0.23	ppb		92
78)	1,2,4-trichlorobenzene	22.06	180	6492m	0.15	ppb		
79)	Naphthalene	22.21	128	15909m	0.19	ppb		
80)	Hexachloro-1,3-butadiene	22.06	225	18343	0.16	ppb		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA\AN031610.D Vial: 9
Acq On : 16 Mar 2016 11:18 pm Operator: RJP
Sample : A1UG_0.15 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 17 10:18 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



AN031610.D A316_1UG.M Thu Apr 07 13:05:58 2016 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031611.D
Acq On : 16 Mar 2016 11:55 pm
Sample : A1UG_0.10
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:20:37 2016

Vial: 10
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

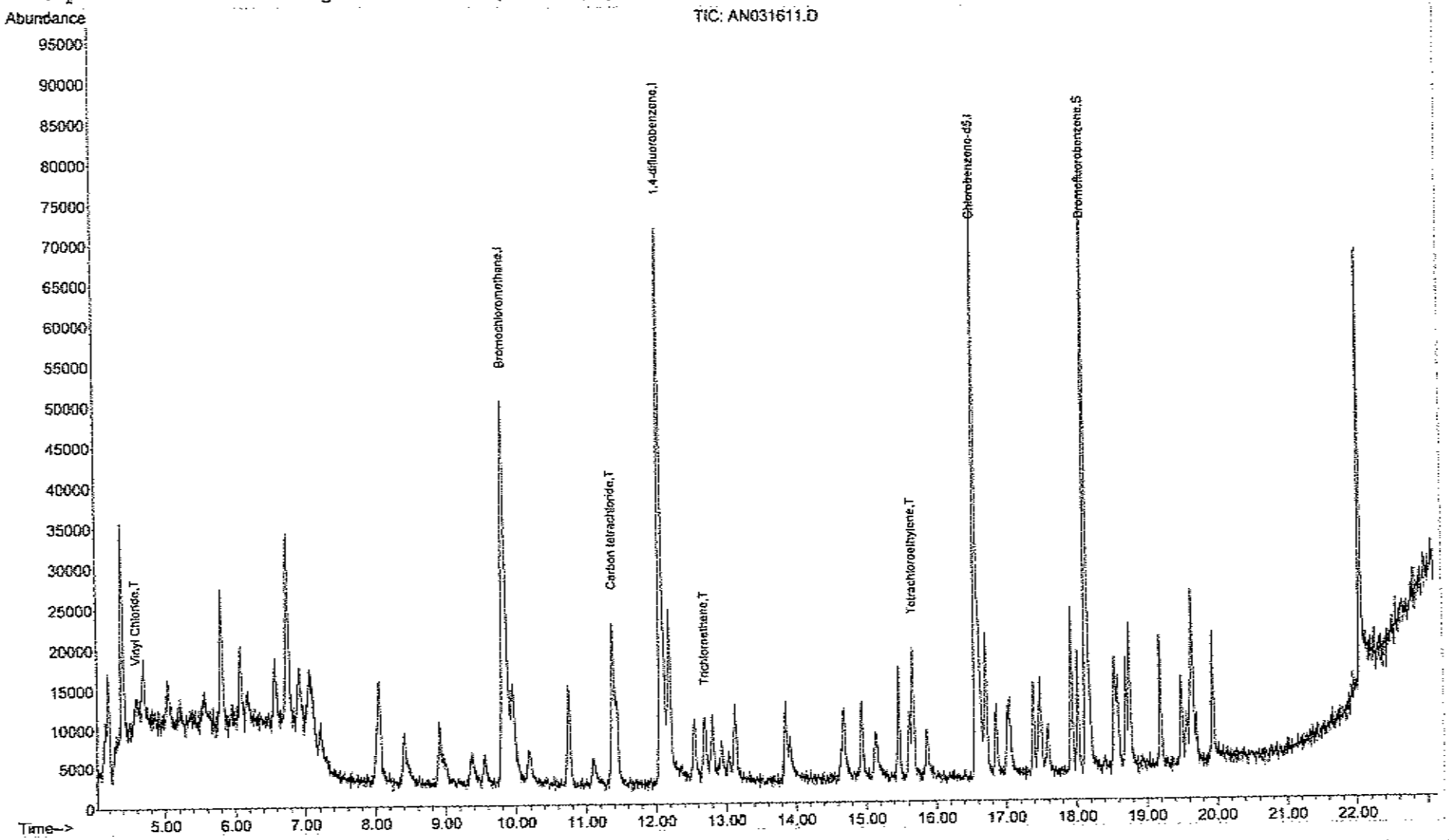
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.84	128	36456m	1.00	ppb	0.03
35) 1,4-difluorobenzene	12.08	114	101173	1.00	ppb	0.02
50) Chlorobenzene-d5	16.57	117	65714	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	39949	0.95	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 95.00%			
Target Compounds						Qvalue
6) Vinyl Chloride	4.59	62	4562	0.12	ppb	86
38) Carbon tetrachloride	11.38	117	12433	0.13	ppb	99
44) Trichloroethene	12.70	130	4819	0.12	ppb	97
56) Tetrachloroethylene	15.66	164	4679m	0.12	ppb	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031611.D Vial: 10
Acq On : 16 Mar 2016 11:55 pm Operator: RJP
Sample : A1UG_0.10 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 17 10:19 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



AN031611.D A316_1UG.M Thu Apr 07 13:06:01 2016 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN031612.D Vial: 11
Acq On : 17 Mar 2016 12:31 am Operator: RJP
Sample : A1UG_0.04 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 17 08:20:59 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 08:17:56 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D
DataAcq Meth : 1UG_RUN

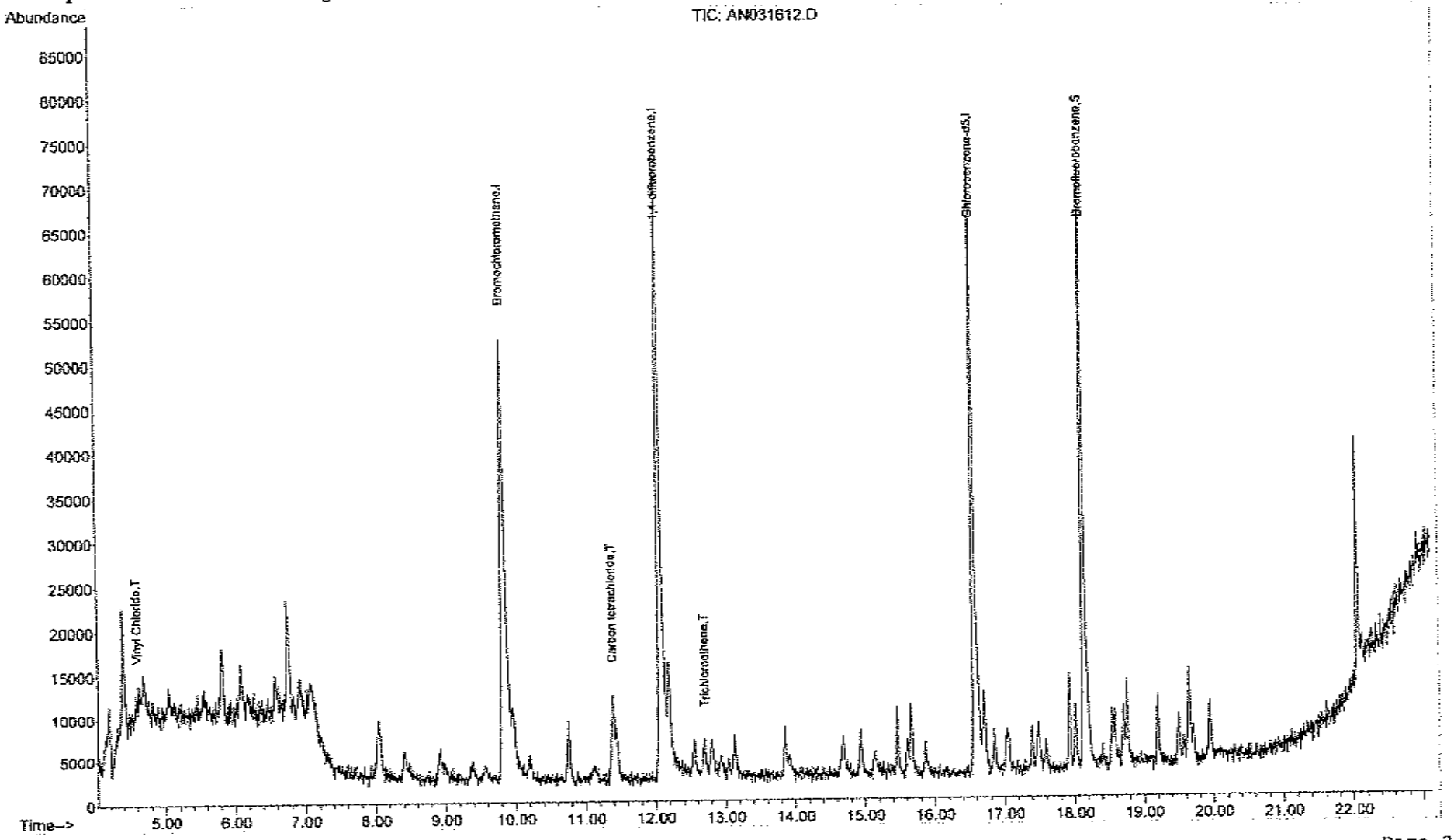
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.83	128	35586m	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.07	114	102709	1.00	ppb	0.02
50) Chlorobenzene-d5	16.57	117	61413	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	36946	0.94	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 94.00%			
Target Compounds						Qvalue
6) Vinyl Chloride	4.59	62	2447	0.07	ppb	93
38) Carbon tetrachloride	11.38	117	6221	0.06	ppb	98
44) Trichloroethene	12.69	130	2436	0.06	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AN031612.D A316_1UG.M Thu Apr 07 13:06:03 2016 MSD1 Page 1

Data File : C:\HPCHEM\1\DATA\AN031612.D
Acq On : 17 Mar 2016 12:31 am
Sample : A1UG_0.04
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 17 10:21 2016

Vial: 11
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AN031606.D



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CALIBRATION VERIFICATION

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA2\AN033104.D Vial: 4
Acq On : 31 Mar 2016 12:19 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	59	0.00
2	T	Propylene	0.810	0.846	-4.4	67	0.00
3	T	Freon 12	4.271	4.834	-13.2	69	0.00
4	T	Chloromethane	1.118	1.376	-23.1	79	0.00
5	T	Freon 114	3.598	4.353	-21.0	73	0.00
6	T	Vinyl Chloride	1.125	1.304	-15.9	77	0.00
7	T	Butane	1.285	1.598	-24.4	76	0.00
8	T	1,3-butadiene	0.847	1.012	-19.5	76	0.00
9	T	Bromomethane	1.320	1.512	-14.5	70	0.00
10	T	Chloroethane	0.459	0.517	-12.6	67	0.00
11	T	Ethanol	0.341	0.320	6.2	58	0.00
12	T	Acrolein	0.290	0.341	-17.6	77	0.00
13	T	Vinyl Bromide	1.298	1.349	-3.9	62	0.00
14	T	Freon 11	4.393	4.944	-12.5	69	0.00
15	T	Acetone	0.432	0.490	-13.4	73	0.00
16	T	Pentane	0.986	0.811	17.7	52	0.00
17	T	Isopropyl alcohol	1.409	1.401	0.6	65	0.00
18	T	1,1-dichloroethene	1.283	1.320	-2.9	62	0.00
19	T	Freon 113	3.094	3.490	-12.8	67	0.00
20	t	t-Butyl alcohol	2.248	2.530	-12.5	70	0.00
21	T	Methylene chloride	1.124	1.049	6.7	55	0.00
22	T	Allyl chloride	0.998	1.190	-19.2	77	0.00
23	T	Carbon disulfide	3.316	3.226	2.7	60	0.00
24	T	trans-1,2-dichloroethene	1.522	1.486	2.4	58	0.00
25	T	methyl tert-butyl ether	2.881	2.890	-0.3	60	0.00
26	T	1,1-dichloroethane	2.155	2.173	-0.8	60	0.00
27	T	Vinyl acetate	1.869	1.540	17.6	53	0.00
28	T	Methyl Ethyl Ketone	0.461	0.408	11.5	53	0.00
29	T	cis-1,2-dichloroethene	1.250	0.936	25.1	43#	0.00
30	T	Hexane	1.308	1.129	13.7	50	0.00
31	T	Ethyl acetate	1.784	1.395	21.8	48#	0.00
32	T	Chloroform	2.918	2.785	4.6	57	0.00
33	T	Tetrahydrofuran	0.828	0.735	11.2	53	0.00
34	T	1,2-dichloroethane	1.641	1.281	21.9	47#	0.00
35	I	1,4-difluorobenzene	1.000	1.000	0.0	43#	0.00
36	T	1,1,1-trichloroethane	0.939	1.159	-23.4	54	0.00
37	T	Cyclohexane	0.387	0.496	-28.2	56	0.00
38	T	Carbon tetrachloride	1.048	1.256	-19.8	57	0.00
39	T	Benzene	0.832	1.005	-20.8	53	0.00
40	T	Methyl methacrylate	0.271	0.298	-10.0	50#	0.00
41	T	1,4-dioxane	0.213	0.252	-18.3	51	0.00
42	T	2,2,4-trimethylpentane	1.453	1.749	-20.4	51	0.00
43	T	Heptane	0.338	0.361	-6.8	44#	0.00
44	T	Trichloroethene	0.425	0.452	-6.4	50	0.00
45	T	1,2-dichloropropane	0.300	0.369	-23.0	54	0.00
46	T	Bromodichloromethane	0.734	0.852	-16.1	51	0.00
47	T	cis-1,3-dichloropropene	0.400	0.494	-23.5	56	0.00
48	T	trans-1,3-dichloropropene	0.359	0.458	-27.6	57	0.00
49	T	1,1,2-trichloroethane	0.329	0.355	-7.9	49#	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA2\AN033104.D
Acq On : 31 Mar 2016 12:19 pm
Sample : A1UG_1.0
Misc : A316_1UG
MS Integration Params: RTEINT.P

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51	T	Toluene	0.679	0.529	22.1	45#	0.00
52	T	Methyl Isobutyl Ketone	1.201	1.101	8.3	52	0.00
53	T	Dibromochloromethane	0.857	0.866	-1.1	61	0.00
54	T	Methyl Butyl Ketone	1.068	0.893	16.4	46#	0.00
55	T	1,2-dibromoethane	0.845	0.958	-13.4	68	0.00
56	T	Tetrachloroethylene	0.648	0.561	13.4	55	0.00
57	T	Chlorobenzene	0.891	0.947	-6.3	64	0.00
58	T	1,1,1,2-tetrachloroethane	0.666	0.767	-15.2	65	0.00
59	T	Ethylbenzene	1.165	1.208	-3.7	61	0.00
60	T	m&p-xylene	0.925	0.902	2.5	58	0.00
61	T	Nonane	0.552	0.600	-8.7	66	0.00
62	T	Styrene	0.644	0.732	-13.7	66	0.00
63	T	Bromoform	0.463	1.053	-127.4#	138	0.00
64	T	o-xylene	1.109	1.288	-16.1	70	0.00
65	T	Cumene	1.299	1.511	-16.3	74	0.00
66	S	Bromofluorobenzene	0.643	0.775	-20.5	71	0.00
67	T	1,1,2,2-tetrachloroethane	1.140	1.326	-16.3	73	0.00
68	T	Propylbenzene	1.379	1.519	-10.2	76	0.00
69	T	2-Chlorotoluene	1.004	1.144	-13.9	70	0.00
70	T	4-ethyltoluene	1.183	1.374	-16.1	78	0.00
71	T	1,3,5-trimethylbenzene	1.416	1.790	-26.4	81	0.00
72	T	1,2,4-trimethylbenzene	1.224	1.518	-24.0	80	0.00
73	T	1,3-dichlorobenzene	0.778	0.989	-27.1	77	0.00
74	T	benzyl chloride	1.110	1.294	-16.6	62	0.00
75	T	1,4-dichlorobenzene	0.733	0.868	-18.4	71	0.00
76	T	1,2,3-trimethylbenzene	1.510	1.910	-26.5	77	0.00
77	T	1,2-dichlorobenzene	0.954	1.182	-23.9	77	0.00
78	T	1,2,4-trichlorobenzene	0.720	0.662	8.1	57	0.00
79	T	Naphthalene	1.494	1.537	-2.9	70	0.00
80	T	Hexachloro-1,3-butadiene	1.754	1.723	1.8	54	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033104.D
Acq On : 31 Mar 2016 12:19 pm
Sample : A1UG_1.0
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 31 12:43:55 2016

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.83	128	21478m	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.08	114	48888	1.00	ppb	0.02
50) Chlorobenzene-d5	16.57	117	36495	1.00	ppb	0.01
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	28268	1.20	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 120.00%			
Target Compounds						Qvalue
2) Propylene	4.14	41	18168	1.04	ppb	# 100
3) Freon 12	4.20	85	103821	1.13	ppb	100
4) Chloromethane	4.40	50	29556m	1.23	ppb	
5) Freon 114	4.40	85	93501	1.21	ppb	91
6) Vinyl Chloride	4.60	62	28017	1.16	ppb	87
7) Butane	4.69	43	34332	1.24	ppb	96
8) 1,3-butadiene	4.70	39	21729m	1.19	ppb	
9) Bromomethane	5.05	94	32471	1.15	ppb	99
10) Chloroethane	5.22	64	11107	1.13	ppb	97
11) Ethanol	5.53	45	6863m	0.94	ppb	
12) Acrolein	6.10	56	7332m	1.18	ppb	
13) Vinyl Bromide	5.57	106	28965	1.04	ppb	96
14) Freon 11	5.82	101	106189	1.13	ppb	98
15) Acetone	6.16	58	10527m	1.14	ppb	
16) Pentane	6.10	42	17420	0.82	ppb	86
17) Isopropyl alcohol	6.30	45	30088m	0.99	ppb	
18) 1,1-dichloroethene	6.59	96	28353	1.03	ppb	90
19) Freon 113	6.76	101	74948	1.13	ppb	94
20) t-Butyl alcohol	7.06	59	54341m	1.13	ppb	
21) Methylene chloride	7.07	84	22522	0.93	ppb	89
22) Allyl chloride	7.06	41	25558m	1.19	ppb	
23) Carbon disulfide	7.23	76	69279	0.97	ppb	98
24) trans-1,2-dichloroethene	8.03	61	31915m	0.98	ppb	
25) methyl tert-butyl ether	8.11	73	62077	1.00	ppb	95
26) 1,1-dichloroethane	8.42	63	46664	1.01	ppb	99
27) Vinyl acetate	8.52	43	33086m	0.82	ppb	
28) Methyl Ethyl Ketone	9.04	72	8766m	0.89	ppb	
29) cis-1,2-dichloroethene	9.38	61	20111	0.75	ppb	96
30) Hexane	8.93	57	24255	0.86	ppb	92
31) Ethyl acetate	9.60	43	29969	0.78	ppb	99
32) Chloroform	9.97	83	59806	0.95	ppb	99
33) Tetrahydrofuran	10.26	42	15794	0.89	ppb	89
34) 1,2-dichloroethane	11.13	62	27519	0.78	ppb	90
36) 1,1,1-trichloroethane	10.77	97	56681m	1.23	ppb	
37) Cyclohexane	11.45	56	24249	1.28	ppb	# 85
38) Carbon tetrachloride	11.40	117	61417m	1.20	ppb	
39) Benzene	11.38	78	49155	1.21	ppb	97
40) Methyl methacrylate	12.95	41	14556	1.10	ppb	# 76
41) 1,4-dioxane	13.08	88	12319	1.19	ppb	99
42) 2,2,4-trimethylpentane	12.20	57	85481m	1.20	ppb	
43) Heptane	12.55	43	17670	1.07	ppb	95
44) Trichloroethene	12.70	130	22115	1.06	ppb	97
45) 1,2-dichloropropane	12.81	63	18046	1.23	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033104.D Vial: 4
Acq On : 31 Mar 2016 12:19 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 31 12:43:55 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

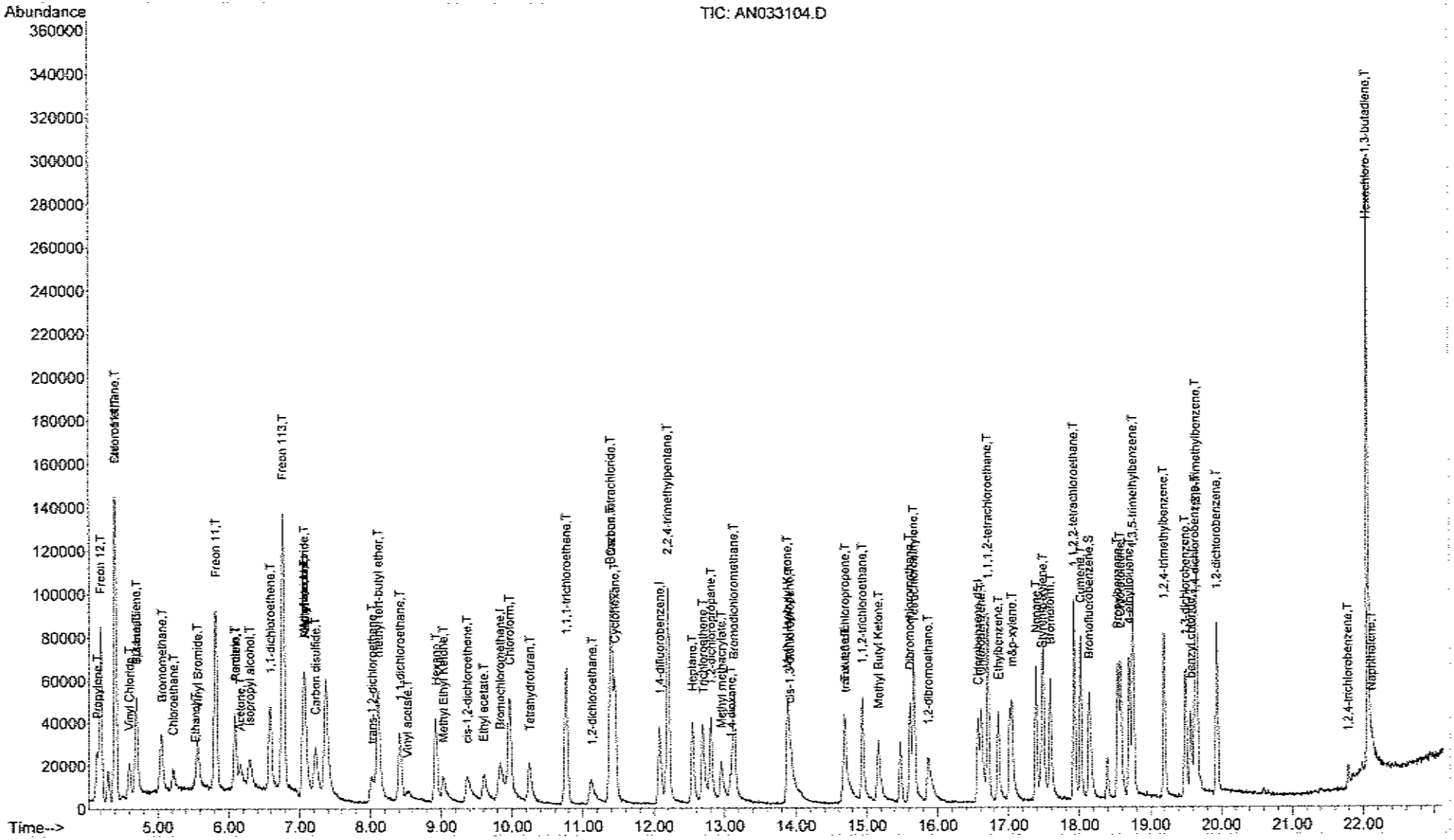
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.13	83	41651m	1.16	ppb	
47)	cis-1,3-dichloropropene	13.92	75	24149	1.24	ppb	97
48)	trans-1,3-dichloropropene	14.71	75	22400m	1.28	ppb	
49)	1,1,2-trichloroethane	14.94	97	17373m	1.08	ppb	
51)	Toluene	14.69	92	19295	0.78	ppb	99
52)	Methyl Isobutyl Ketone	13.88	43	40189	0.92	ppb	97
53)	Dibromochloromethane	15.61	129	31600m	1.01	ppb	
54)	Methyl Butyl Ketone	15.17	43	32594	0.84	ppb	91
55)	1,2-dibromoethane	15.87	107	34960	1.13	ppb	96
56)	Tetrachloroethylene	15.67	164	20482	0.87	ppb	97
57)	Chlorobenzene	16.62	112	34556	1.06	ppb	90
58)	1,1,1,2-tetrachloroethane	16.72	131	27987	1.15	ppb	95
59)	Ethylbenzene	16.86	91	44081	1.04	ppb	100
60)	m&p-xylene	17.05	91	65852	1.95	ppb	96
61)	Nonane	17.39	43	21909	1.09	ppb	94
62)	Styrene	17.47	104	26727	1.14	ppb	89
63)	Bromoform	17.59	173	38427	2.28	ppb	99
64)	o-xylene	17.49	91	46990	1.16	ppb	96
65)	Cumene	18.02	105	55145	1.16	ppb	98
67)	1,1,2,2-tetrachloroethane	17.93	83	48409m	1.16	ppb	
68)	Propylbenzene	18.54	91	55449m	1.10	ppb	
69)	2-Chlorotoluene	18.58	91	41764m	1.14	ppb	
70)	4-ethyltoluene	18.70	105	50153m	1.16	ppb	
71)	1,3,5-trimethylbenzene	18.76	105	65318m	1.26	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	55409	1.24	ppb	93
73)	1,3-dichlorobenzene	19.49	146	36108	1.27	ppb	98
74)	benzyl chloride	19.57	91	47227	1.17	ppb	99
75)	1,4-dichlorobenzene	19.62	146	31681	1.18	ppb	96
76)	1,2,3-trimethylbenzene	19.65	105	69701	1.26	ppb	96
77)	1,2-dichlorobenzene	19.94	146	43140	1.24	ppb	97
78)	1,2,4-trichlorobenzene	21.78	180	24145m	0.92	ppb	
79)	Naphthalene	22.12	128	56077m	1.03	ppb	
80)	Hexachloro-1,3-butadiene	22.06	225	62867	0.98	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033104.D Vial: 4
Acq On : 31 Mar 2016 12:19 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 31 12:46 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



AN033104.D A316_1UG.M Tue Apr 26 14:47:17 2016 MSD1 Page 3

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AN040102.D Vial: 18
Acq On : 1 Apr 2016 12:06 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	55	0.00
2	T	Propylene	0.810	0.860	-6.2	64	0.01
3	T	Freon 12	4.271	5.108	-19.6	68	0.00
4	T	Chloromethane	1.118	1.325	-18.5	71	0.00
5	T	Freon 114	3.598	4.429	-23.1	69	0.00
6	T	Vinyl Chloride	1.125	1.238	-10.0	69	0.00
7	T	Butane	1.285	1.396	-8.6	63	0.00
8	T	1,3-butadiene	0.847	1.054	-24.4	75	0.00
9	T	Bromomethane	1.320	1.586	-20.2	69	0.00
10	T	Chloroethane	0.459	0.543	-18.3	66	0.00
11	T	Ethanol	0.341	0.349	-2.3	60	-0.13
12	T	Acrolein	0.290	0.363	-25.2	77	-0.12
13	T	Vinyl Bromide	1.298	1.449	-11.6	63	0.00
14	T	Freon 11	4.393	5.147	-17.2	67	0.00
15	T	Acetone	0.432	0.484	-12.0	68	-0.09
16	T	Pentane	0.986	0.987	-0.1	59	-0.01
17	T	Isopropyl alcohol	1.409	1.659	-17.7	72	-0.11
18	T	1,1-dichloroethene	1.283	1.351	-5.3	59	-0.01
19	T	Freon 113	3.094	3.971	-28.3	72	0.00
20	t	t-Butyl alcohol	2.248	2.923	-30.0#	76	-0.14
21	T	Methylene chloride	1.124	1.260	-12.1	62	-0.01
22	T	Allyl chloride	0.998	0.900	9.8	55	-0.03
23	T	Carbon disulfide	3.316	3.579	-7.9	62	0.00
24	T	trans-1,2-dichloroethene	1.522	1.525	-0.2	56	0.00
25	T	methyl tert-butyl ether	2.881	3.223	-11.9	63	-0.07
26	T	1,1-dichloroethane	2.155	2.255	-4.6	59	-0.01
27	T	Vinyl acetate	1.869	1.565	16.3	51	-0.07
28	T	Methyl Ethyl Ketone	0.461	0.490	-6.3	60	-0.07
29	T	cis-1,2-dichloroethene	1.250	1.259	-0.7	54	0.00
30	T	Hexane	1.308	1.196	8.6	50	-0.02
31	T	Ethyl acetate	1.784	1.908	-7.0	61	-0.05
32	T	Chloroform	2.918	2.995	-2.6	58	-0.02
33	T	Tetrahydrofuran	0.828	0.855	-3.3	58	-0.07
34	T	1,2-dichloroethane	1.641	1.586	3.4	55	-0.03
35	I	1,4-difluorobenzene	1.000	1.000	0.0	41#	-0.02
36	T	1,1,1-trichloroethane	0.939	1.190	-26.7	52	0.00
37	T	Cyclohexane	0.387	0.481	-24.3	51	0.00
38	T	Carbon tetrachloride	1.048	1.339	-27.8	57	0.00
39	T	Benzene	0.832	1.008	-21.2	50	0.00
40	T	Methyl methacrylate	0.271	0.361	-33.2#	56	-0.01
41	T	1,4-dioxane	0.213	0.274	-28.6	52	-0.06
42	T	2,2,4-trimethylpentane	1.453	1.814	-24.8	50	0.00
43	T	Heptane	0.338	0.359	-6.2	41#	-0.01
44	T	Trichloroethene	0.425	0.509	-19.8	53	-0.01
45	T	1,2-dichloropropane	0.300	0.356	-18.7	49#	-0.02
46	T	Bromodichloromethane	0.734	0.874	-19.1	49#	-0.01
47	T	cis-1,3-dichloropropene	0.400	0.494	-23.5	52	-0.01
48	T	trans-1,3-dichloropropene	0.359	0.474	-32.0#	56	-0.07
49	T	1,1,2-trichloroethane	0.329	0.373	-13.4	48#	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AN040102.D Vial: 18
Acq On : 1 Apr 2016 12:06 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51	T	Toluene	0.679	0.557	18.0	42#	0.00
52	T	Methyl Isobutyl Ketone	1.201	1.409	-17.3	59	-0.04
53	T	Dibromochloromethane	0.857	0.927	-8.2	58	0.00
54	T	Methyl Butyl Ketone	1.068	1.207	-13.0	56	-0.04
55	T	1,2-dibromoethane	0.845	0.973	-15.1	62	-0.01
56	T	Tetrachloroethylene	0.648	0.571	11.9	50	0.00
57	T	Chlorobenzene	0.891	0.974	-9.3	59	0.00
58	T	1,1,1,2-tetrachloroethane	0.666	0.781	-17.3	60	0.00
59	T	Ethylbenzene	1.165	1.154	0.9	52	0.00
60	T	m&p-xylene	0.925	0.859	7.1	49#	0.00
61	T	Nonane	0.552	0.573	-3.8	56	0.00
62	T	Styrene	0.644	0.694	-7.8	56	0.00
63	T	Bromoform	0.463	0.980	-111.7#	115	0.00
64	T	o-xylene	1.109	1.256	-13.3	62	0.00
65	T	Cumene	1.299	1.506	-15.9	66	0.00
66	S	Bromofluorobenzene	0.643	0.691	-7.5	57	0.00
67	T	1,1,2,2-tetrachloroethane	1.140	1.420	-24.6	70	0.00
68	T	Propylbenzene	1.379	1.604	-16.3	72	0.00
69	T	2-Chlorotoluene	1.004	1.104	-10.0	61	0.00
70	T	4-ethyltoluene	1.183	1.394	-17.8	71	0.00
71	T	1,3,5-trimethylbenzene	1.416	1.788	-26.3	72	0.00
72	T	1,2,4-trimethylbenzene	1.224	1.474	-20.4	70	0.00
73	T	1,3-dichlorobenzene	0.778	0.938	-20.6	65	0.00
74	T	benzyl chloride	1.110	1.073	3.3	46#	0.00
75	T	1,4-dichlorobenzene	0.733	0.918	-25.2	67	0.00
76	T	1,2,3-trimethylbenzene	1.510	1.939	-28.4	70	0.00
77	T	1,2-dichlorobenzene	0.954	1.228	-28.7	71	0.00
78	T	1,2,4-trichlorobenzene	0.720	0.627	12.9	49#	0.00
79	T	Naphthalene	1.494	1.654	-10.7	67	0.00
80	T	Hexachloro-1,3-butadiene	1.754	2.142	-22.1	60	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040102.D Vial: 18
Acq On : 1 Apr 2016 12:06 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 12:45:47 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.82	128	20214m	1.00	ppb		0.02
35) 1,4-difluorobenzene	12.06	114	45908	1.00	ppb		0.00
50) Chlorobenzene-d5	16.57	117	32719m	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.14	95	22624	1.07	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 107.00%				
Target Compounds							Qvalue
2) Propylene	4.15	41	17376	1.06	ppb	#	100
3) Freon 12	4.20	85	103246	1.20	ppb		99
4) Chloromethane	4.40	50	26785m	1.19	ppb		
5) Freon 114	4.40	85	89518	1.23	ppb		100
6) Vinyl Chloride	4.60	62	25030	1.10	ppb		89
7) Butane	4.69	43	28227	1.09	ppb		96
8) 1,3-butadiene	4.70	39	21303	1.24	ppb		90
9) Bromomethane	5.04	94	32059	1.20	ppb		96
10) Chloroethane	5.22	64	10984	1.19	ppb		99
11) Ethanol	5.39	45	7055	1.02	ppb	#	80
12) Acrolein	5.98	56	7347	1.25	ppb	#	5
13) Vinyl Bromide	5.56	106	29294	1.12	ppb		97
14) Freon 11	5.81	101	104032	1.17	ppb		98
15) Acetone	6.07	58	9780	1.12	ppb	#	77
16) Pentane	6.08	42	19954	1.00	ppb		97
17) Isopropyl alcohol	6.19	45	33525	1.18	ppb	#	46
18) 1,1-dichloroethene	6.57	96	27316	1.05	ppb		98
19) Freon 113	6.76	101	80263	1.28	ppb		93
20) t-Butyl alcohol	6.92	59	59090	1.30	ppb	#	73
21) Methylene chloride	7.06	84	25478	1.12	ppb		91
22) Allyl chloride	7.03	41	18186	0.90	ppb		80
23) Carbon disulfide	7.22	76	72346	1.08	ppb		98
24) trans-1,2-dichloroethene	8.03	61	30818	1.00	ppb		93
25) methyl tert-butyl ether	8.04	73	65147	1.12	ppb		90
26) 1,1-dichloroethane	8.41	63	45588	1.05	ppb		99
27) Vinyl acetate	8.45	43	31630	0.84	ppb		99
28) Methyl Ethyl Ketone	8.96	72	9904	1.06	ppb	#	100
29) cis-1,2-dichloroethene	9.37	61	25440	1.01	ppb		93
30) Hexane	8.91	57	24173	0.91	ppb		97
31) Ethyl acetate	9.55	43	38569	1.07	ppb		96
32) Chloroform	9.95	83	60541	1.03	ppb		99
33) Tetrahydrofuran	10.18	42	17273	1.03	ppb		89
34) 1,2-dichloroethane	11.10	62	32062	0.97	ppb		88
36) 1,1,1-trichloroethane	10.76	97	54630m	1.27	ppb		
37) Cyclohexane	11.45	56	22079m	1.24	ppb		
38) Carbon tetrachloride	11.39	117	61482m	1.28	ppb		
39) Benzene	11.38	78	46254	1.21	ppb		98
40) Methyl methacrylate	12.93	41	16559	1.33	ppb	#	82
41) 1,4-dioxane	13.02	88	12565m	1.29	ppb		
42) 2,2,4-trimethylpentane	12.20	57	83264m	1.25	ppb		
43) Heptane	12.54	43	16478	1.06	ppb		94
44) Trichloroethene	12.68	130	23365	1.20	ppb		99
45) 1,2-dichloropropane	12.79	63	16364	1.19	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040102.D Vial: 18
Acq On : 1 Apr 2016 12:06 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 12:45:47 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

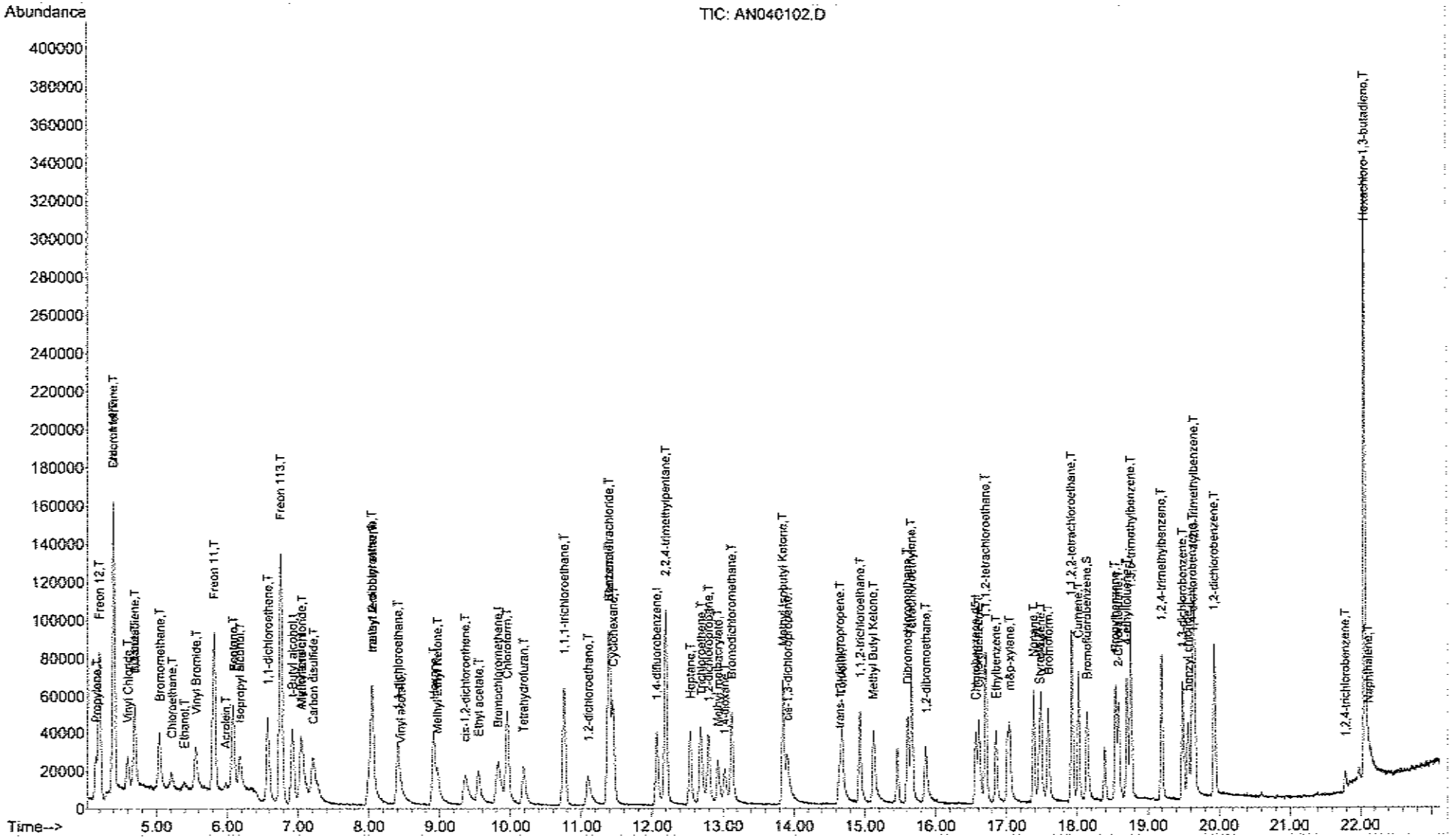
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	40101m	1.19	ppb	
47)	cis-1,3-dichloropropene	13.91	75	22657m	1.23	ppb	
48)	trans-1,3-dichloropropene	14.64	75	21777m	1.32	ppb	
49)	1,1,2-trichloroethane	14.94	97	17117m	1.13	ppb	
51)	Toluene	14.68	92	18210	0.82	ppb	91
52)	Methyl Isobutyl Ketone	13.85	43	46116m	1.17	ppb	
53)	Dibromochloromethane	15.60	129	30338m	1.08	ppb	
54)	Methyl Butyl Ketone	15.12	43	39487	1.13	ppb	93
55)	1,2-dibromoethane	15.86	107	31830m	1.15	ppb	
56)	Tetrachloroethylene	15.66	164	18677	0.88	ppb	96
57)	Chlorobenzene	16.62	112	31861	1.09	ppb	87
58)	1,1,1,2-tetrachloroethane	16.71	131	25554	1.17	ppb	96
59)	Ethylbenzene	16.85	91	37742	0.99	ppb	100
60)	m&p-xylene	17.04	91	56187	1.86	ppb	96
61)	Nonane	17.38	43	18742	1.04	ppb	94
62)	Styrene	17.46	104	22713	1.08	ppb	89
63)	Bromoform	17.59	173	32049	2.12	ppb	100
64)	o-xylene	17.49	91	41105	1.13	ppb	100
65)	Cumene	18.02	105	49282	1.16	ppb	99
67)	1,1,2,2-tetrachloroethane	17.92	83	46449m	1.24	ppb	
68)	Propylbenzene	18.54	91	52486m	1.16	ppb	
69)	2-Chlorotoluene	18.58	91	36127m	1.10	ppb	
70)	4-ethyltoluene	18.70	105	45616m	1.18	ppb	
71)	1,3,5-trimethylbenzene	18.76	105	58514m	1.26	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	48219m	1.20	ppb	
73)	1,3-dichlorobenzene	19.49	146	30703m	1.21	ppb	
74)	benzyl chloride	19.56	91	35105m	0.97	ppb	
75)	1,4-dichlorobenzene	19.62	146	30034	1.25	ppb	98
76)	1,2,3-trimethylbenzene	19.65	105	63436m	1.28	ppb	
77)	1,2-dichlorobenzene	19.94	146	40179m	1.29	ppb	
78)	1,2,4-trichlorobenzene	21.79	180	20515m	0.87	ppb	
79)	Naphthalene	22.12	128	54113m	1.11	ppb	
80)	Hexachloro-1,3-butadiene	22.06	225	70093	1.22	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040102.D Vial: 18
Acq On : 1 Apr 2016 12:06 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 1 12:48 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AN040203.D
Acq On : 2 Apr 2016 12:08 pm
Sample : A1UG_1.0
Misc : A316_1UG
MS Integration Params: RTEINT.P

Vial: 3
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	64	-0.02
2	T	Propylene	0.810	0.985	-21.6	84	0.00
3	T	Freon 12	4.271	5.043	-18.1	78	0.00
4	T	Chloromethane	1.118	1.345	-20.3	83	0.00
5	T	Freon 114	3.598	4.247	-18.0	77	0.00
6	T	Vinyl Chloride	1.125	1.234	-9.7	79	0.00
7	T	Butane	1.285	1.409	-9.6	73	-0.01
8	T	1,3-butadiene	0.847	0.933	-10.2	76	0.00
9	T	Bromomethane	1.320	1.496	-13.3	75	0.00
10	T	Chloroethane	0.459	0.514	-12.0	72	-0.01
11	T	Ethanol	0.341	0.374	-9.7	74	-0.15
12	T	Acrolein	0.290	0.328	-13.1	80	-0.15
13	T	Vinyl Bromide	1.298	1.457	-12.2	73	-0.02
14	T	Freon 11	4.393	4.716	-7.4	71	-0.01
15	T	Acetone	0.432	0.490	-13.4	80	-0.10
16	T	Pentane	0.986	1.026	-4.1	71	-0.02
17	T	Isopropyl alcohol	1.409	1.424	-1.1	72	-0.14
18	T	1,1-dichloroethene	1.283	1.515	-18.1	77	-0.02
19	T	Freon 113	3.094	3.880	-25.4	81	-0.01
20	t	t-Butyl alcohol	2.248	2.364	-5.2	71	-0.16
21	T	Methylene chloride	1.124	1.335	-18.8	76	-0.02
22	T	Allyl chloride	0.998	1.164	-16.6	82	-0.04
23	T	Carbon disulfide	3.316	3.791	-14.3	76	-0.01
24	T	trans-1,2-dichloroethene	1.522	1.709	-12.3	73	-0.03
25	T	methyl tert-butyl ether	2.881	3.446	-19.6	78	-0.08
26	T	1,1-dichloroethane	2.155	2.421	-12.3	73	-0.02
27	T	Vinyl acetate	1.869	2.086	-11.6	79	-0.08
28	T	Methyl Ethyl Ketone	0.461	0.554	-20.2	78	-0.09
29	T	cis-1,2-dichloroethene	1.250	1.436	-14.9	71	-0.03
30	T	Hexane	1.308	1.479	-13.1	72	-0.01
31	T	Ethyl acetate	1.784	2.117	-18.7	79	-0.07
32	T	Chloroform	2.918	2.981	-2.2	67	-0.02
33	T	Tetrahydrofuran	0.828	1.007	-21.6	79	-0.09
34	T	1,2-dichloroethane	1.641	1.643	-0.1	66	-0.04
35	I	1,4-difluorobenzene	1.000	1.000	0.0	54	-0.02
36	T	1,1,1-trichloroethane	0.939	1.138	-21.2	66	-0.02
37	T	Cyclohexane	0.387	0.487	-25.8	68	-0.01
38	T	Carbon tetrachloride	1.048	1.187	-13.3	67	0.00
39	T	Benzene	0.832	0.997	-19.8	66	0.00
40	T	Methyl methacrylate	0.271	0.307	-13.3	63	-0.03
41	T	1,4-dioxane	0.213	0.234	-9.9	58	-0.07
42	T	2,2,4-trimethylpentane	1.453	2.014	-38.6#	73	-0.01
43	T	Heptane	0.338	0.399	-18.0	60	-0.02
44	T	Trichloroethene	0.425	0.504	-18.6	69	-0.01
45	T	1,2-dichloropropane	0.300	0.367	-22.3	67	-0.02
46	T	Bromodichloromethane	0.734	0.877	-19.5	65	-0.01
47	T	cis-1,3-dichloropropene	0.400	0.506	-26.5	71	-0.02
48	T	trans-1,3-dichloropropene	0.359	0.421	-17.3	65	-0.07
49	T	1,1,2-trichloroethane	0.329	0.379	-15.2	64	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AN040203.D Vial: 3
Acq On : 2 Apr 2016 12:08 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51	T	Toluene	0.679	0.582	14.3	63	0.00
52	T	Methyl Isobutyl Ketone	1.201	0.907	24.5	54	-0.04
53	T	Dibromochloromethane	0.857	0.954	-11.3	85	0.00
54	T	Methyl Butyl Ketone	1.068	0.764	28.5	50	-0.05
55	T	1,2-dibromoethane	0.845	1.005	-18.9	91	-0.02
56	T	Tetrachloroethylene	0.648	0.517	20.2	65	0.00
57	T	Chlorobenzene	0.891	1.037	-16.4	90	0.00
58	T	1,1,1,2-tetrachloroethane	0.666	0.752	-12.9	82	-0.01
59	T	Ethylbenzene	1.165	1.295	-11.2	83	0.00
60	T	m&p-xylene	0.925	0.999	-8.0	81	-0.01
61	T	Nonane	0.552	0.667	-20.8	93	0.00
62	T	Styrene	0.644	0.778	-20.8	89	0.00
63	T	Bromoform	0.463	0.896	-93.5#	150#	0.00
64	T	o-xylene	1.109	1.288	-16.1	90	0.00
65	T	Cumene	1.299	1.563	-20.3	98	0.00
66	S	Bromofluorobenzene	0.643	0.711	-10.6	83	0.00
67	T	1,1,2,2-tetrachloroethane	1.140	1.377	-20.8	97	0.00
68	T	Propylbenzene	1.379	1.719	-24.7	110	0.00
69	T	2-Chlorotoluene	1.004	1.253	-24.8	98	0.00
70	T	4-ethyltoluene	1.183	1.500	-26.8	108	0.00
71	T	1,3,5-trimethylbenzene	1.416	1.777	-25.5	102	0.00
72	T	1,2,4-trimethylbenzene	1.224	1.376	-12.4	93	0.00
73	T	1,3-dichlorobenzene	0.778	0.961	-23.5	95	0.00
74	T	benzyl chloride	1.110	1.170	-5.4	72	0.00
75	T	1,4-dichlorobenzene	0.733	0.867	-18.3	90	0.00
76	T	1,2,3-trimethylbenzene	1.510	1.781	-17.9	91	0.00
77	T	1,2-dichlorobenzene	0.954	1.145	-20.0	95	0.00
78	T	1,2,4-trichlorobenzene	0.720	0.532	26.1	59	0.00
79	T	Naphthalene	1.494	1.148	23.2	66	0.00
80	T	Hexachloro-1,3-butadiene	1.754	1.408	19.7	56	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040203.D Vial: 3
Acq On : 2 Apr 2016 12:08 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 03 06:13:09 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.81	128	23340m	1.00	ppb		0.00
35) 1,4-difluorobenzene	12.06	114	60425	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	46554	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.13	95	33085	1.10	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 110.00%				
Target Compounds							Qvalue
2) Propylene	4.15	41	23001	1.22	ppb	#	100
3) Freon 12	4.19	85	117694	1.18	ppb		100
4) Chloromethane	4.39	50	31394	1.20	ppb		91
5) Freon 114	4.39	85	99129	1.18	ppb		98
6) Vinyl Chloride	4.59	62	28806	1.10	ppb		91
7) Butane	4.68	43	32878	1.10	ppb		93
8) 1,3-butadiene	4.69	39	21775	1.10	ppb		79
9) Bromomethane	5.04	94	34909	1.13	ppb		93
10) Chloroethane	5.21	64	11994	1.12	ppb		90
11) Ethanol	5.37	45	8735	1.10	ppb	#	72
12) Acrolein	5.95	56	7667m	1.13	ppb		
13) Vinyl Bromide	5.54	106	34003	1.12	ppb		97
14) Freon 11	5.80	101	110074	1.07	ppb		99
15) Acetone	6.06	58	11425	1.13	ppb	#	72
16) Pentane	6.07	42	23948	1.04	ppb		91
17) Isopropyl alcohol	6.16	45	33227	1.01	ppb	#	46
18) 1,1-dichloroethene	6.57	96	35358	1.18	ppb		100
19) Freon 113	6.75	101	90548	1.25	ppb		92
20) t-Butyl alcohol	6.90	59	55178	1.05	ppb	#	77
21) Methylene chloride	7.05	84	31160	1.19	ppb		91
22) Allyl chloride	7.02	41	27173	1.17	ppb		86
23) Carbon disulfide	7.21	76	88486	1.14	ppb		98
24) trans-1,2-dichloroethene	8.00	61	39889	1.12	ppb		91
25) methyl tert-butyl ether	8.03	73	80441	1.20	ppb		92
26) 1,1-dichloroethane	8.40	63	56508	1.12	ppb		98
27) Vinyl acetate	8.44	43	48681	1.12	ppb		98
28) Methyl Ethyl Ketone	8.95	72	12927	1.20	ppb	#	100
29) cis-1,2-dichloroethene	9.35	61	33508	1.15	ppb		92
30) Hexane	8.91	57	34528	1.13	ppb		95
31) Ethyl acetate	9.53	43	49400	1.19	ppb		96
32) Chloroform	9.95	83	69579	1.02	ppb		99
33) Tetrahydrofuran	10.16	42	23510	1.22	ppb		92
34) 1,2-dichloroethane	11.08	62	38354	1.00	ppb		88
36) 1,1,1-trichloroethane	10.75	97	68741	1.21	ppb		98
37) Cyclohexane	11.44	56	29399m	1.26	ppb		
38) Carbon tetrachloride	11.39	117	71711	1.13	ppb		97
39) Benzene	11.37	78	60241	1.20	ppb		99
40) Methyl methacrylate	12.92	41	18539m	1.13	ppb		
41) 1,4-dioxane	13.01	88	14154	1.10	ppb		100
42) 2,2,4-trimethylpentane	12.19	57	121680m	1.39	ppb		
43) Heptane	12.53	43	24121	1.18	ppb		92
44) Trichloroethene	12.68	130	30434	1.19	ppb		98
45) 1,2-dichloropropane	12.79	63	22191	1.22	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040203.D Vial: 3
Acq On : 2 Apr 2016 12:08 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 03 06:13:09 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

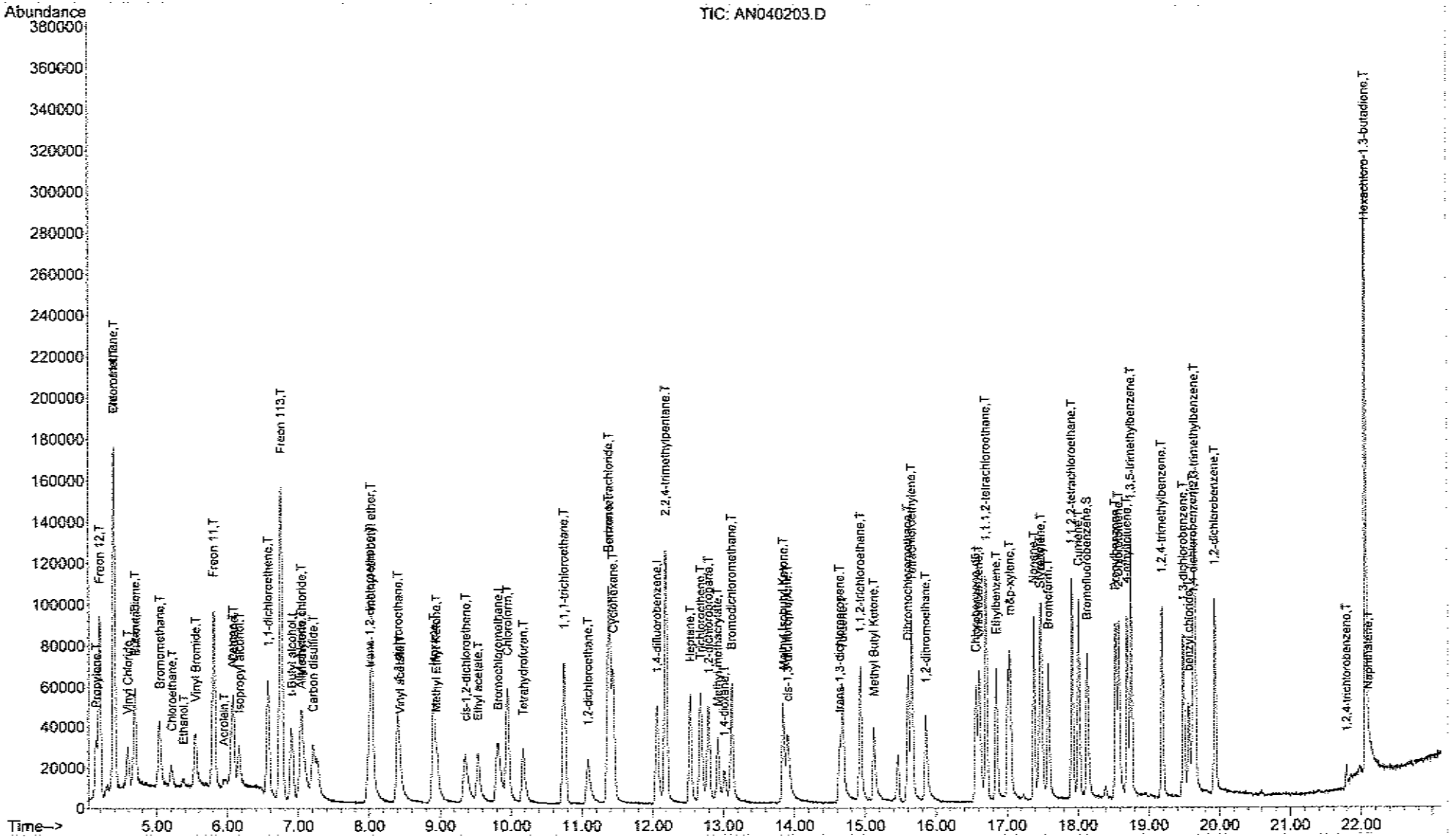
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	52994	1.19	ppb	100
47)	cis-1,3-dichloropropene	13.90	75	30596m	1.27	ppb	
48)	trans-1,3-dichloropropene	14.64	75	25414m	1.17	ppb	
49)	1,1,2-trichloroethane	14.93	97	22894m	1.15	ppb	
51)	Toluene	14.68	92	27083	0.86	ppb	96
52)	Methyl Isobutyl Ketone	13.84	43	42214	0.76	ppb	98
53)	Dibromochloromethane	15.60	129	44419m	1.11	ppb	
54)	Methyl Butyl Ketone	15.12	43	35579	0.72	ppb	96
55)	1,2-dibromoethane	15.85	107	46773	1.19	ppb	96
56)	Tetrachloroethylene	15.66	164	24068	0.80	ppb	100
57)	Chlorobenzene	16.61	112	48270	1.16	ppb	91
58)	1,1,1,2-tetrachloroethane	16.70	131	34997	1.13	ppb	96
59)	Ethylbenzene	16.85	91	60302	1.11	ppb	98
60)	m&p-xylene	17.04	91	93017	2.16	ppb	93
61)	Nonane	17.38	43	31062	1.21	ppb	97
62)	Styrene	17.46	104	36214	1.21	ppb	89
63)	Bromoform	17.59	173	41735	1.94	ppb	99
64)	o-xylene	17.49	91	59958	1.16	ppb	89
65)	Cumene	18.01	105	72750	1.20	ppb	98
67)	1,1,2,2-tetrachloroethane	17.92	83	64100	1.21	ppb	97
68)	Propylbenzene	18.54	91	80019m	1.25	ppb	
69)	2-Chlorotoluene	18.58	91	58353m	1.25	ppb	
70)	4-ethyltoluene	18.70	105	69819m	1.27	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	82710m	1.25	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	64048	1.12	ppb	92
73)	1,3-dichlorobenzene	19.49	146	44739	1.23	ppb	98
74)	benzyl chloride	19.56	91	54469	1.05	ppb	100
75)	1,4-dichlorobenzene	19.62	146	40353	1.18	ppb	95
76)	1,2,3-trimethylbenzene	19.65	105	82929	1.18	ppb	97
77)	1,2-dichlorobenzene	19.94	146	53322	1.20	ppb	94
78)	1,2,4-trichlorobenzene	21.79	180	24786m	0.74	ppb	
79)	Naphthalene	22.11	128	53453m	0.77	ppb	
80)	Hexachloro-1,3-butadiene	22.07	225	65564	0.80	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040203.D Vial: 3
Acq On : 2 Apr 2016 12:08 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 3 6:15 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



AN040203.D A316_1UG.M Tue Apr 26 14:59:50 2016 MSD1 Page 3

GC/MS VOLATILES-WHOLE AIR

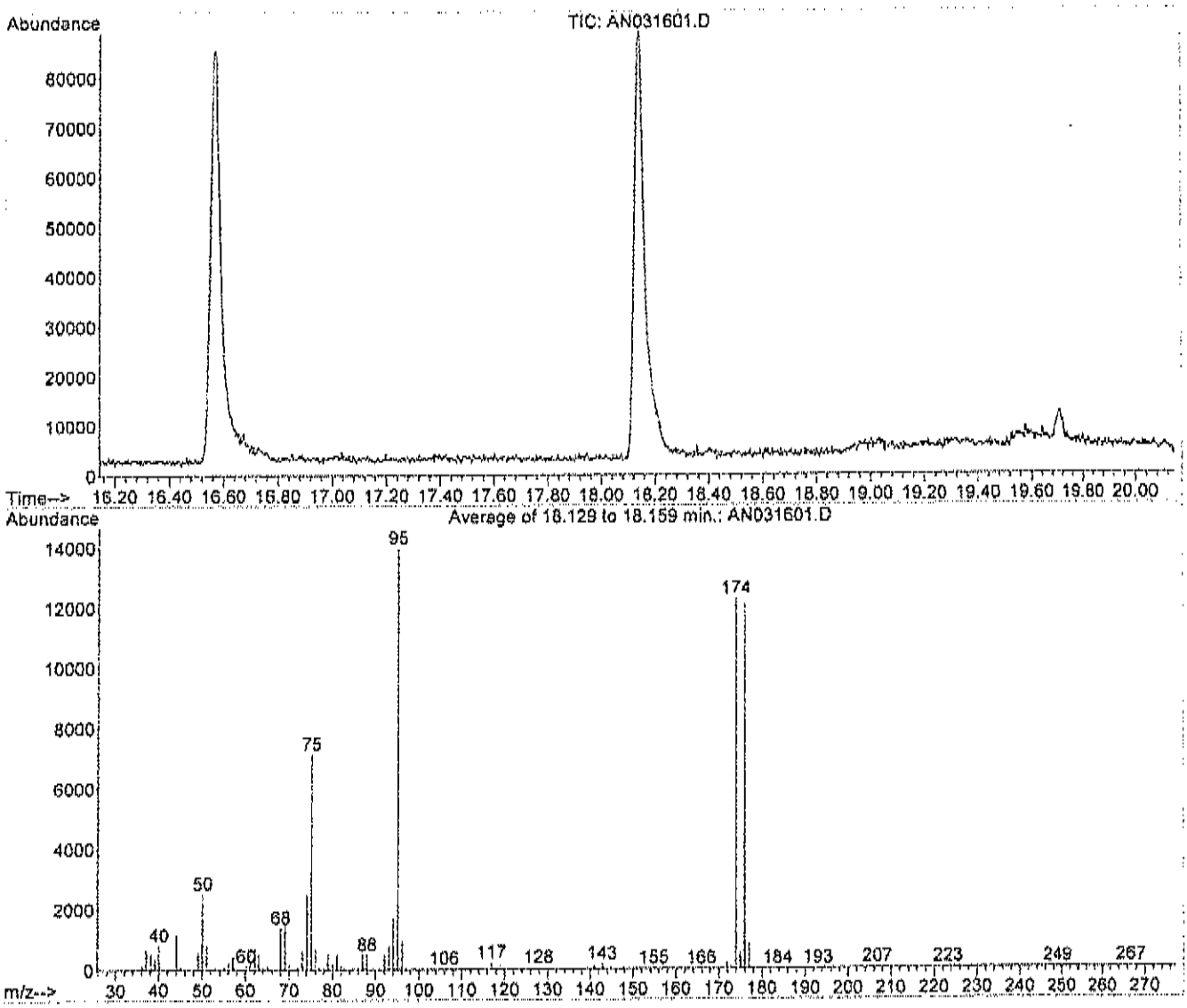
METHOD TO-15

RAW DATA

BFB

Data File : C:\HPCHEM\1\DATA\AN031601.D
Acq On : 16 Mar 2016 5:26 pm
Sample : BFB1UG
Misc : A316_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 1
Operator: RJP
Inst : MSD #1
Multiplr: 1.00



Spectrum Information: Average of 18.129 to 18.159 min.

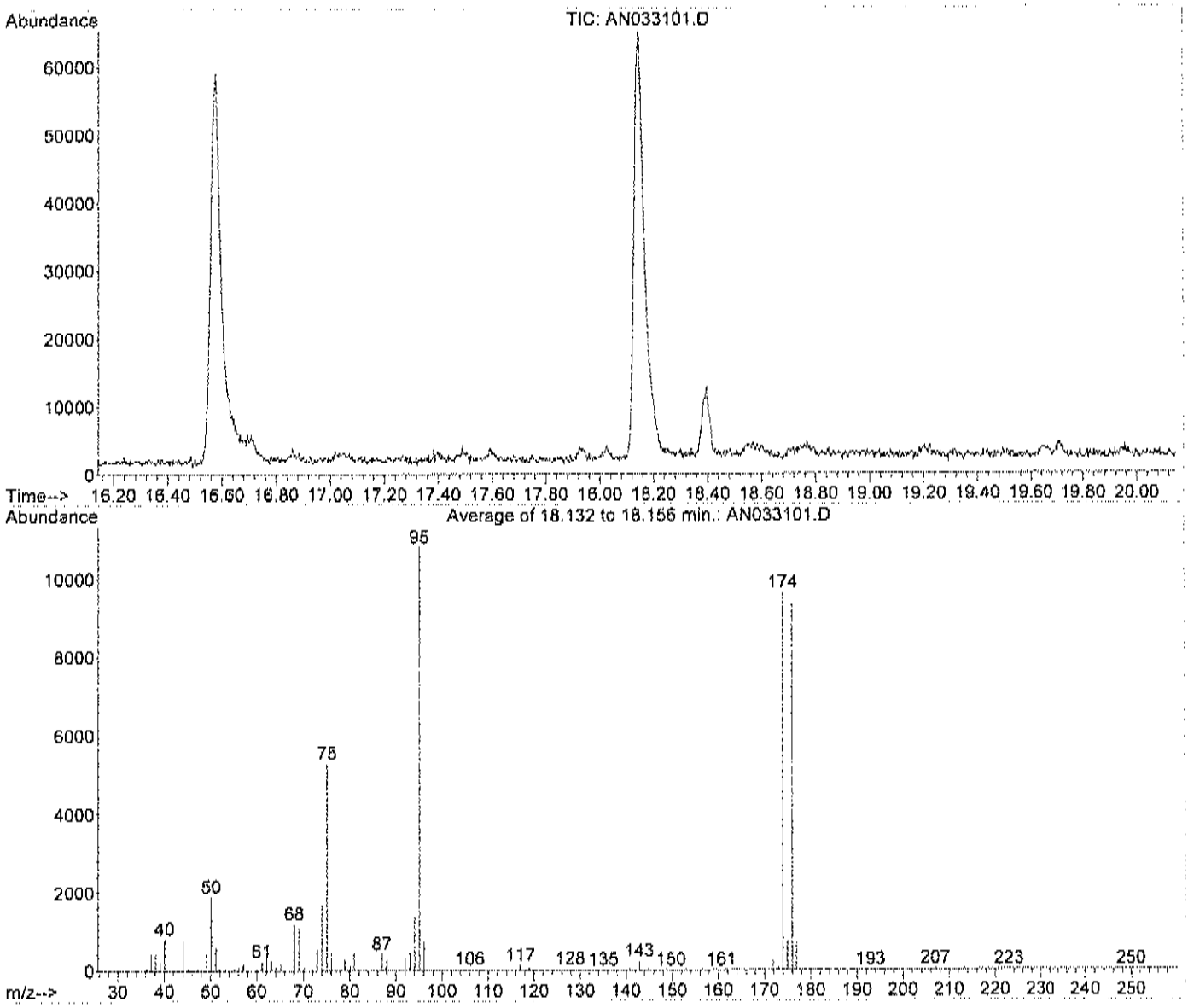
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.0	2513	PASS
75	95	30	66	51.1	7135	PASS
95	95	100	100	100.0	13975	PASS
96	95	5	9	6.7	936	PASS
173	174	0.00	2	0.6	79	PASS
174	95	50	120	87.9	12270	PASS
175	174	4	9	4.1	498	PASS
176	174	95	101	98.5	12090	PASS
177	176	5	9	6.9	829	PASS

AN031601.D A316_1UG.M Thu Apr 07 13:04:45 2016 MSD1

BFB

Data File : C:\HPCHEM\1\DATA2\AN033101.D
Acq On : 31 Mar 2016 9:33 am
Sample : BFB1UG
Misc : A316_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 1
Operator: RJP
Inst : MSD #1
Multiplr: 1.00



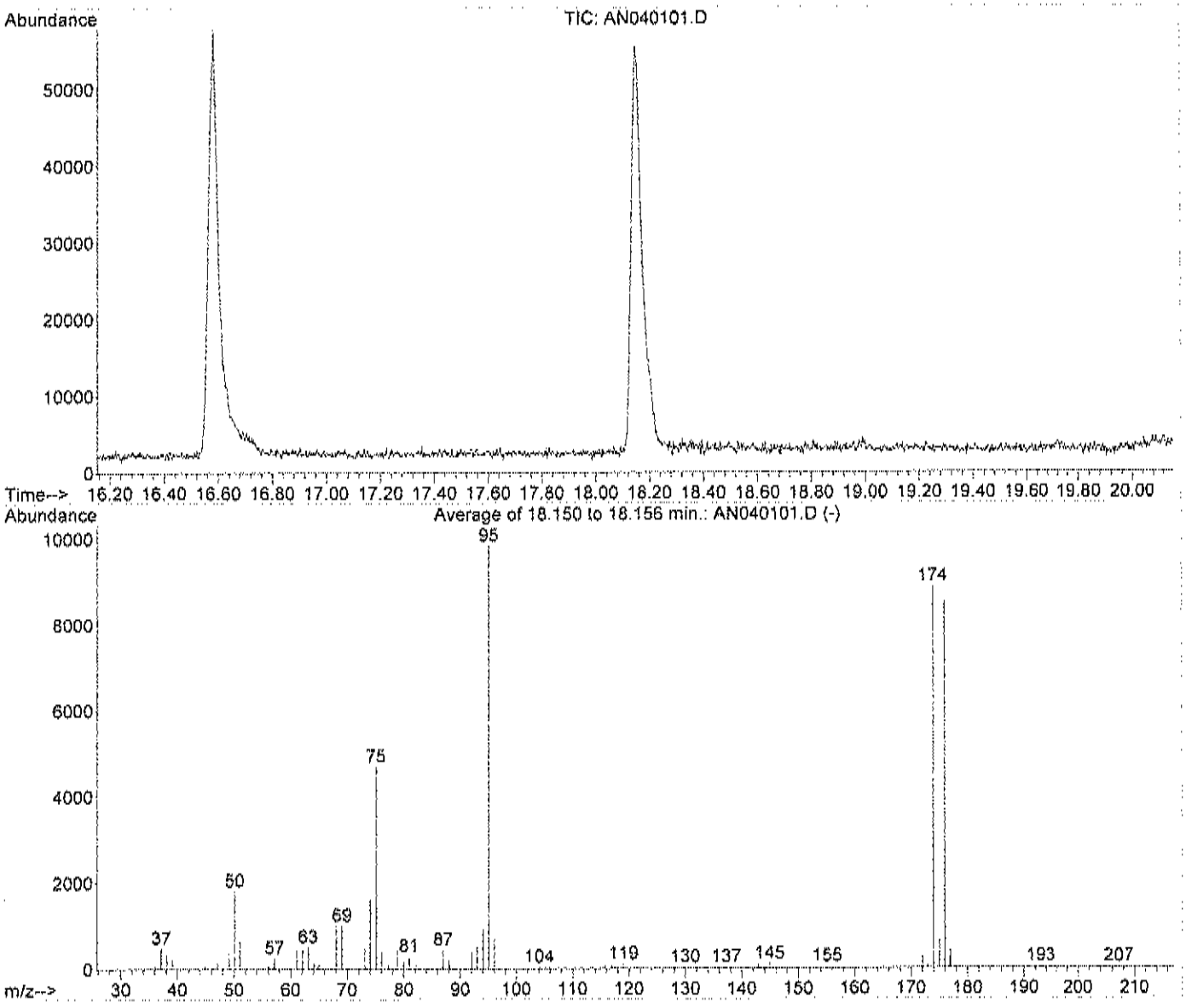
Spectrum Information: Average of 18.132 to 18.156 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.5	1890	PASS
75	95	30	66	49.0	5299	PASS
95	95	100	100	100.0	10811	PASS
96	95	5	9	7.0	757	PASS
173	174	0.00	2	0.7	65	PASS
174	95	50	120	89.2	9645	PASS
175	174	4	9	7.8	750	PASS
176	174	95	101	97.0	9355	PASS
177	176	5	9	7.5	704	PASS

AN033101.D A316_1UG.M Tue Apr 26 14:47:04 2016 MSD1

Data File : C:\HPCHEM\1\DATA\AN040101.D
Acq On : 1 Apr 2016 10:05 am
Sample : BFB1UG
Misc : A316_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 16
Operator: RJP
Inst : MSD #1
Multiplr: 1.00



Spectrum Information: Average of 18.150 to 18.156 min.

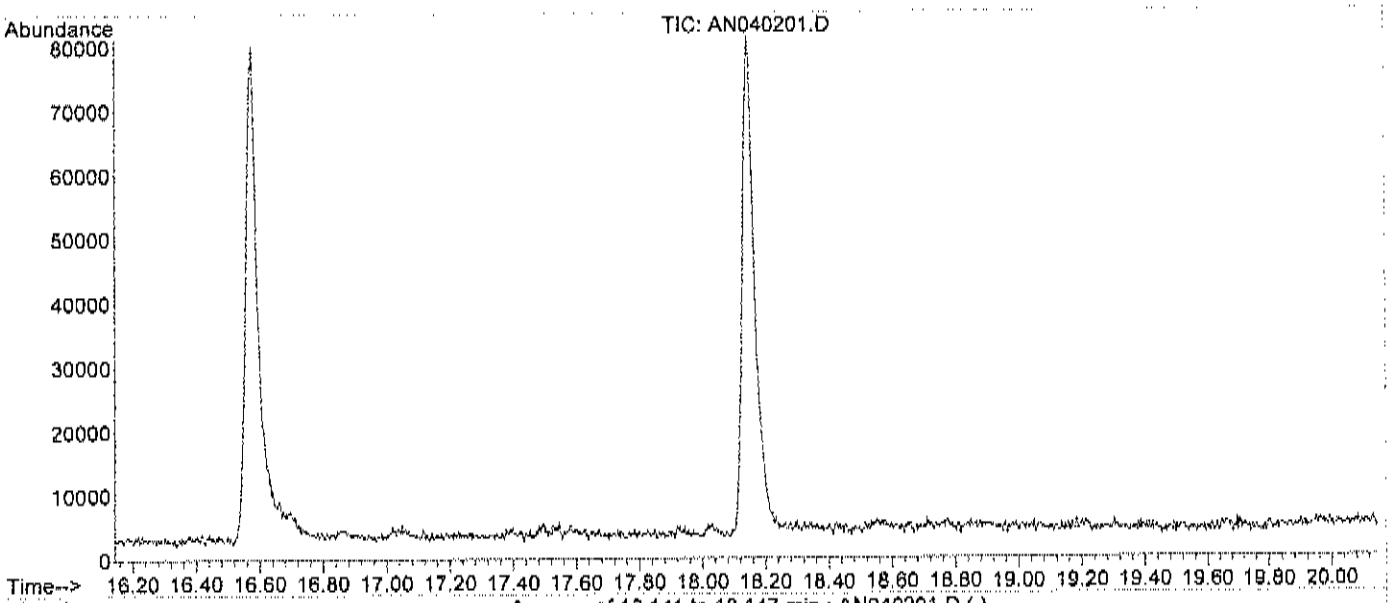
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.6	1827	PASS
75	95	30	66	47.8	4708	PASS
95	95	100	100	100.0	9841	PASS
96	95	5	9	7.0	692	PASS
173	174	0.00	2	0.8	70	PASS
174	95	50	120	90.2	8875	PASS
175	174	4	9	7.4	658	PASS
176	174	95	101	96.4	8557	PASS
177	176	5	9	5.2	443	PASS

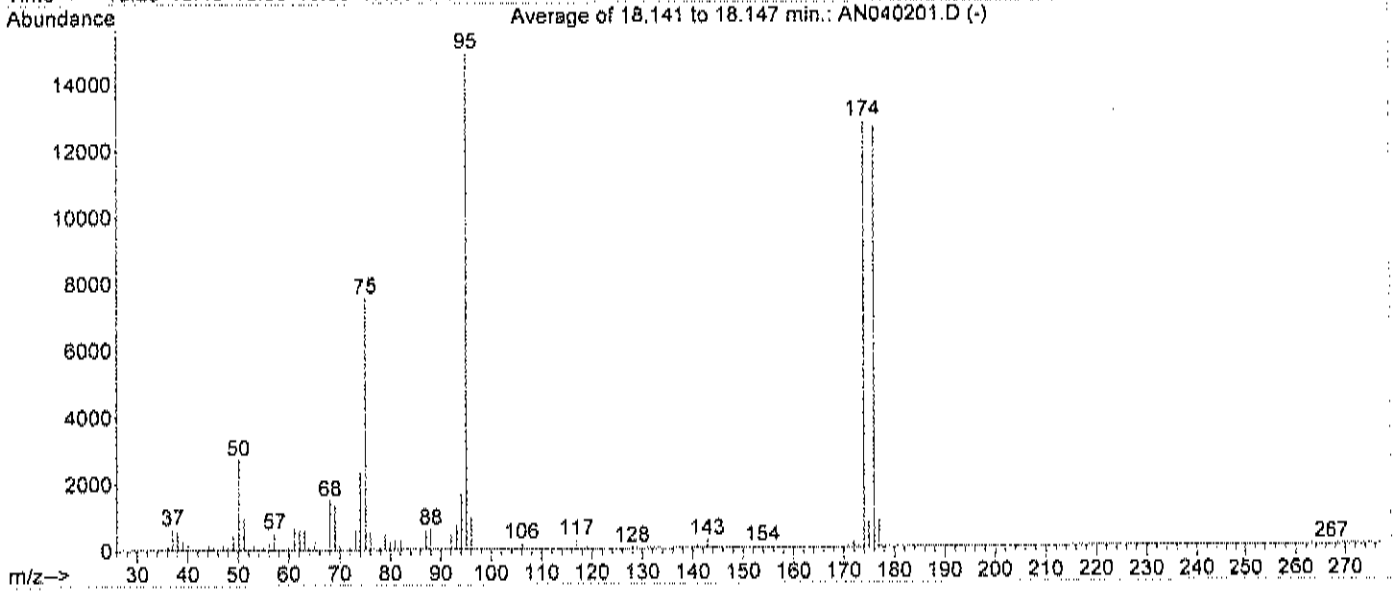
AN040101.D A316_1UG.M Tue Apr 26 14:48:24 2016 MSD1

BFB

Data File : C:\HPCHEM\1\DATA\AN040201.D
Acq On : 2 Apr 2016 10:48 am
Sample : BFB1UG
Misc : A316_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 1
Operator: RJP
Inst : MSD #1
Multiplr: 1.00





Spectrum Information: Average of 18.141 to 18.147 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.2	2718	PASS
75	95	30	66	50.7	7557	PASS
95	95	100	100	100.0	14902	PASS
96	95	5	9	6.7	1000	PASS
173	174	0.00	2	0.2	31	PASS
174	95	50	120	85.9	12799	PASS
175	174	4	9	6.0	772	PASS
176	174	95	101	98.7	12634	PASS
177	176	5	9	6.7	841	PASS

AN040201.D A316_1UG.M Tue Apr 26 14:59:39 2016 MSD1

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

RAW QC DATA

CENTEK LABORATORIES, LLC

Date: *26-Apr-16*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1603074
Project: 575 Colfax FESL SVI

TestCode: 0.25CT-TCE-VC

Sample ID **AMB1UG-033116** SampType: **MBLK** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10817**
Client ID: **ZZZZZ** Batch ID: **R10817** TestNo: **TO-15** Analysis Date: **3/31/2016** SeqNo: **127095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.040	0.040									
Vinyl chloride	< 0.040	0.040									

Sample ID **AMB1UG-040116** SampType: **MBLK** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10818**
Client ID: **ZZZZZ** Batch ID: **R10818** TestNo: **TO-15** Analysis Date: **4/1/2016** SeqNo: **127112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.040	0.040									

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603074
Project: 575 Colfax FESL SVI

TestCode: 0.25CT-TCE-VC

Sample ID	AMB1UG-040116	SampType:	MBLK	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	10818
Client ID:	ZZZZZ	Batch ID:	R10818	TestNo:	TO-15			Analysis Date:	4/1/2016	SeqNo:	127112

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	< 0.040	0.040									

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603074
Project: 575 Colfax FESL SVI

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-040216	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 10819
Client ID: ZZZZZ	Batch ID: R10819	TestNo: TO-15		Analysis Date: 4/2/2016	SeqNo: 127124

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033106.D Vial: 6
Acq On : 31 Mar 2016 1:33 pm Operator: RJP
Sample : AMB1UG-033116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 03:34:38 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

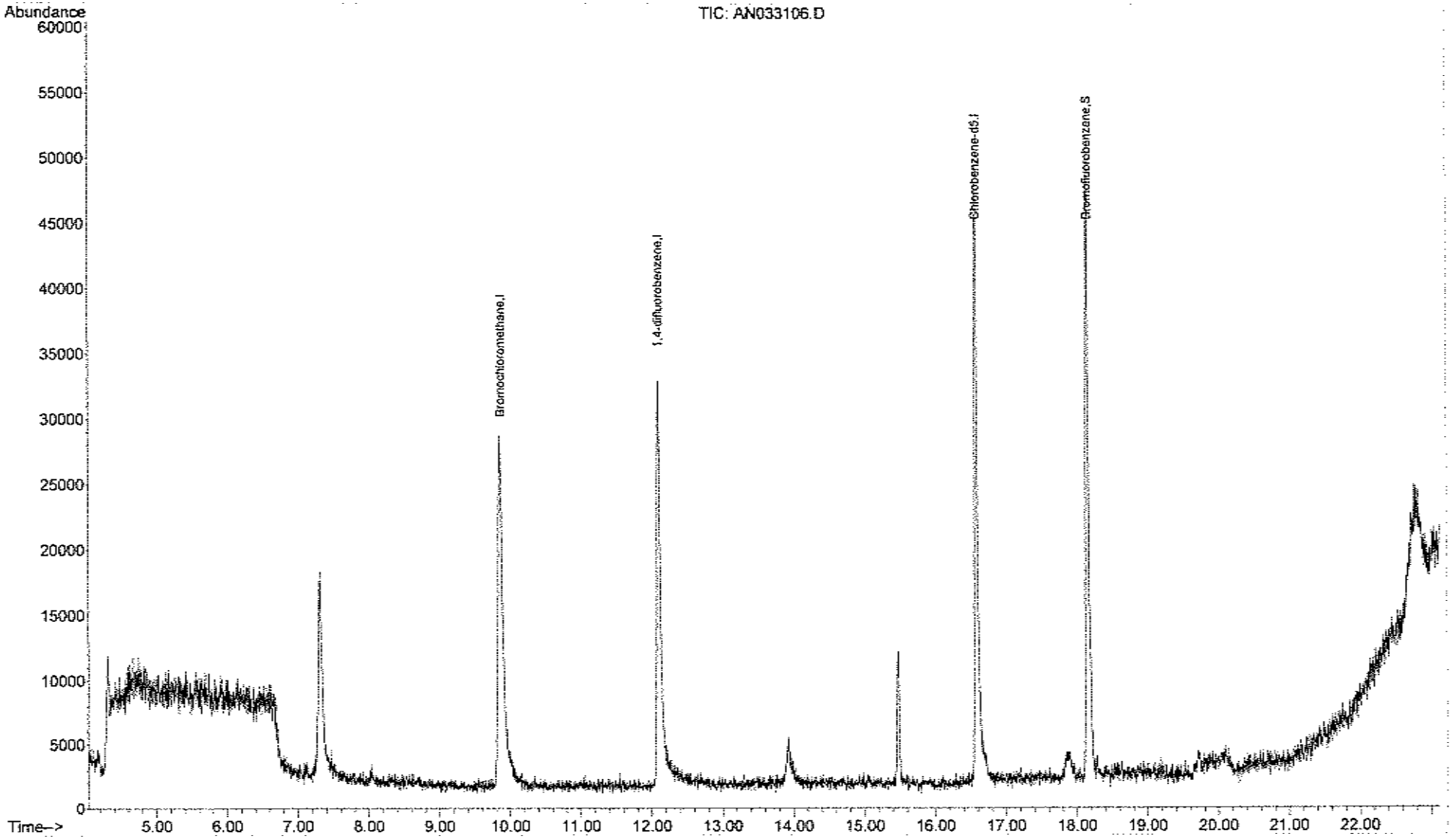
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.86	128	20032m	1.00	ppb	0.05
35) 1,4-difluorobenzene	12.09	114	47930	1.00	ppb	0.04
50) Chlorobenzene-d5	16.57	117	44161	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.15	95	25131	0.88	ppb	0.02
Spiked Amount 1.000	Range 70 - 130		Recovery = 88.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033106.D Vial: 6
Acq On : 31 Mar 2016 1:33 pm Operator: RJP
Sample : AMB1UG-033116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 1 8:08 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040104.D Vial: 20
Acq On : 1 Apr 2016 1:21 pm Operator: RJP
Sample : AMB1UG-040116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 12:01:20 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

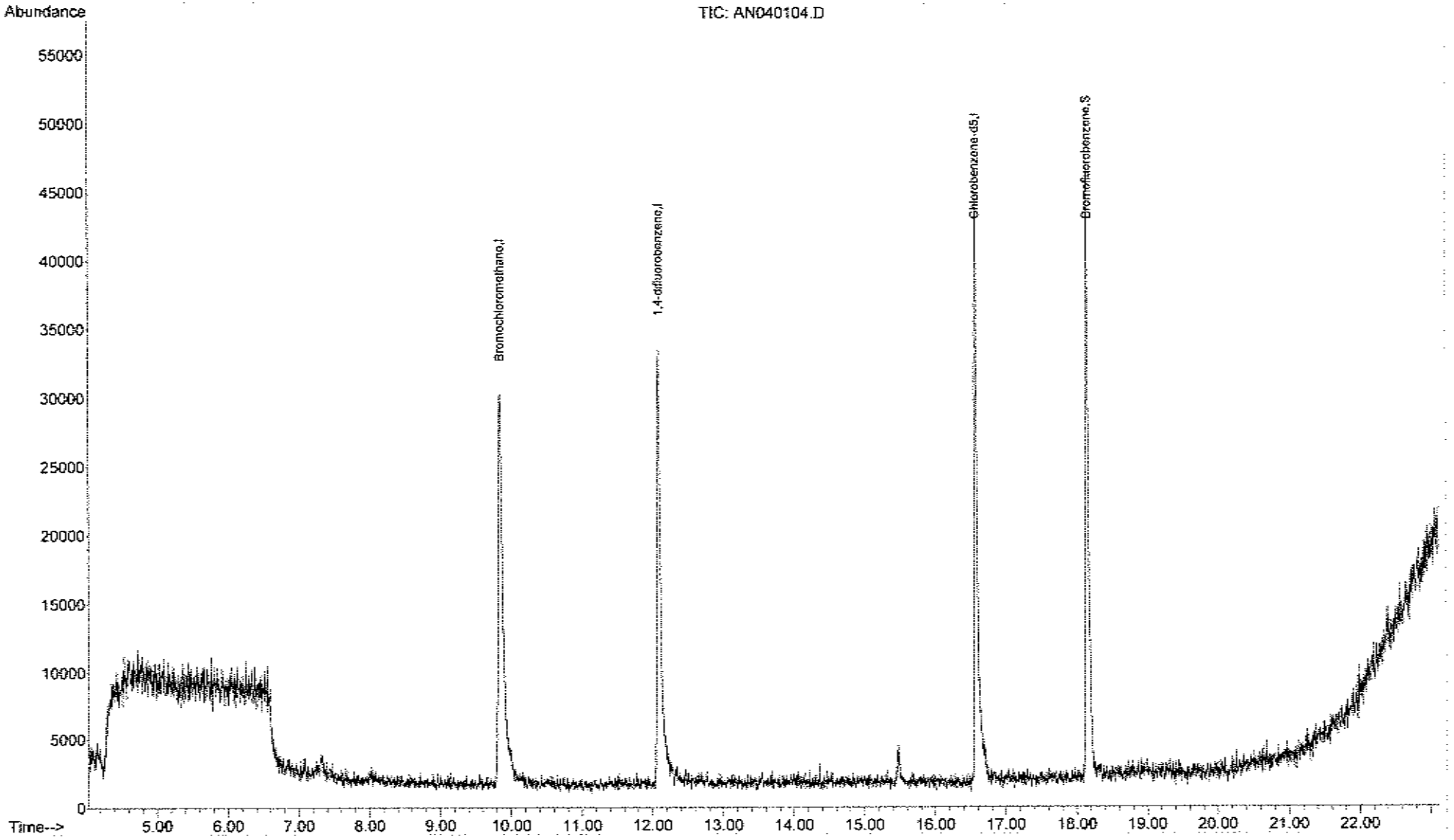
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.86	128	18252	1.00	ppb	0.05
35) 1,4-difluorobenzene	12.09	114	46023	1.00	ppb	0.03
50) Chlorobenzene-d5	16.57	117	41257	1.00	ppb	0.01
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	24184	0.91	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 91.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040104.D Vial: 20
Acq On : 1 Apr 2016 1:21 pm Operator: RJP
Sample : AMB1UG-040116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 2 12:01 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040205.D Vial: 2
Acq On : 2 Apr 2016 1:34 pm Operator: RJP
Sample : AMB1UG-040216 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 14:36:31 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

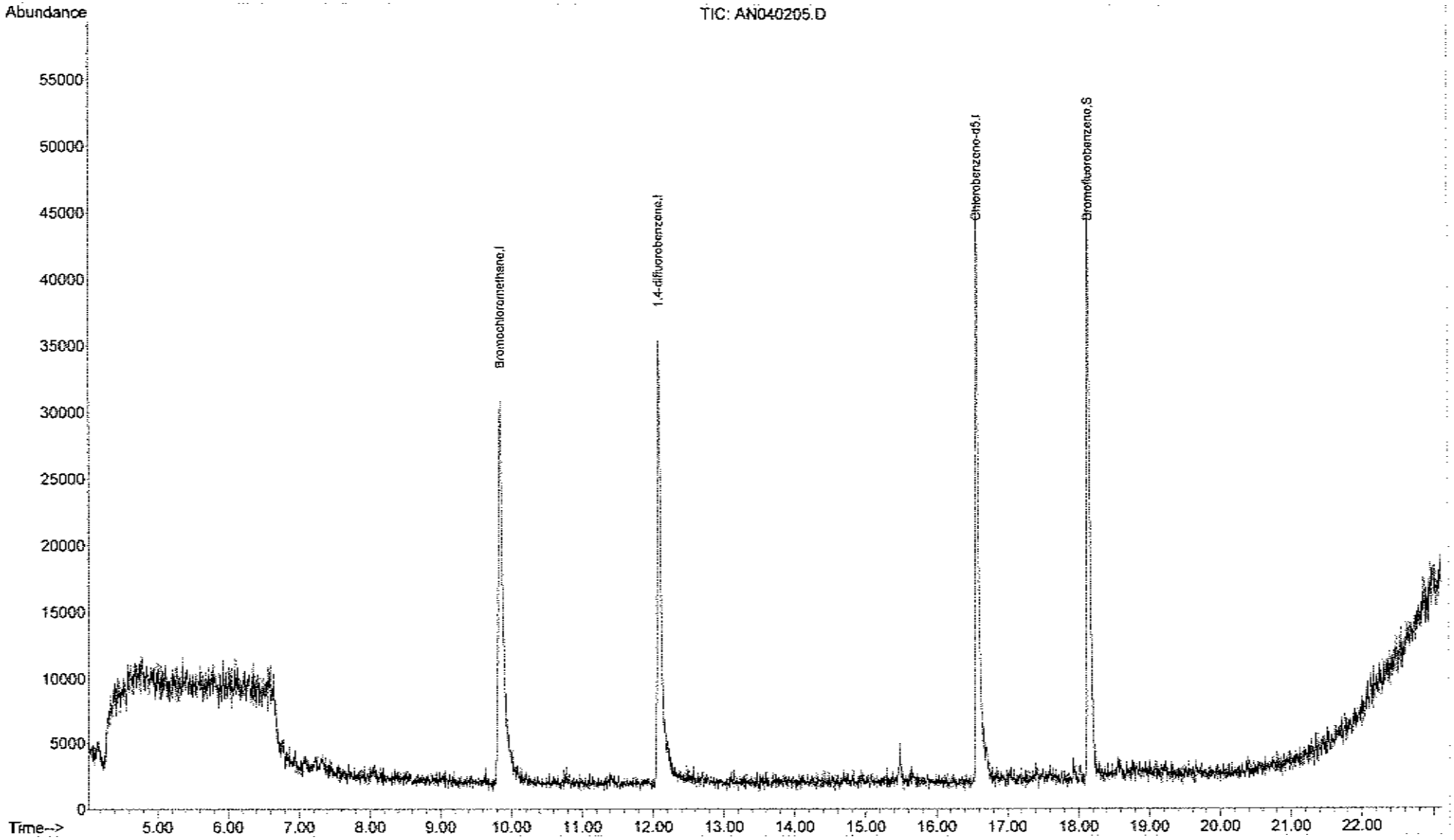
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.85	128	17717	1.00	ppb	0.04
35) 1,4-difluorobenzene	12.08	114	49878	1.00	ppb	0.03
50) Chlorobenzene-d5	16.58	117	41390	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	24022	0.90	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 90.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040205.D Vial: 2
Acq On : 2 Apr 2016 1:34 pm Operator: RJP
Sample : AMB1UG-040216 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 3 11:39 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



CENTEK LABORATORIES, LLC

Date: *26-Apr-16*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1603074
Project: 575 Colfax FESL SVI

TestCode: 0.25CT-TCE-VC

Sample ID **ALCS1UG-033116** SampType: **LCS** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10817**
Client ID: **ZZZZZ** Batch ID: **R10817** TestNo: **TO-15** Analysis Date: **3/31/2016** SeqNo: **127096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.250	0.15	1	0	125	70	130				
1,1-Dichloroethane	1.120	0.15	1	0	112	70	130				
1,1-Dichloroethene	1.120	0.15	1	0	112	70	130				
Chloroethane	1.220	0.15	1	0	122	70	130				
Chloromethane	1.230	0.15	1	0	123	70	130				
cis-1,2-Dichloroethene	1.060	0.15	1	0	106	70	130				
Tetrachloroethylene	0.9200	0.15	1	0	92.0	70	130				
trans-1,2-Dichloroethene	1.050	0.15	1	0	105	70	130				
Trichloroethene	1.110	0.040	1	0	111	70	130				
Vinyl chloride	1.090	0.040	1	0	109	70	130				

Sample ID **ALCS1UG-040116** SampType: **LCS** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10818**
Client ID: **ZZZZZ** Batch ID: **R10818** TestNo: **TO-15** Analysis Date: **4/1/2016** SeqNo: **127113**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.290	0.15	1	0	129	70	130				
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130				
1,1-Dichloroethene	1.100	0.15	1	0	110	70	130				
Chloroethane	1.130	0.15	1	0	113	70	130				
Chloromethane	1.230	0.15	1	0	123	70	130				
cis-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130				
Tetrachloroethylene	0.8800	0.15	1	0	88.0	70	130				
trans-1,2-Dichloroethene	0.9900	0.15	1	0	99.0	70	130				
Trichloroethene	1.230	0.040	1	0	123	70	130				

Qualifiers:

- `.` Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1603074
Project: 575 Colfax FESL SVI

TestCode: 0.25CT-TCE-VC

Sample ID	ALCS1UG-040116	SampType:	LCS	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	10818
Client ID:	ZZZZZ	Batch ID:	R10818	TestNo:	TO-15			Analysis Date:	4/1/2016	SeqNo:	127113

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.100	0.040	1	0	110	70	130				

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603074
Project: 575 Colfax FESL SVI

TestCode: 1ugM3_TO15

Sample ID	ALCS1UG-040216	SampType:	LCS	TestCode:	1ugM3_TO15	Units:	ppbV	Prep Date:		RunNo:	10819
Client ID:	ZZZZZ	Batch ID:	R10819	TestNo:	TO-15			Analysis Date:	4/2/2016	SeqNo:	127125

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.290	0.15	1	0	129	70	130				
1,1-Dichloroethane	1.170	0.15	1	0	117	70	130				
1,1-Dichloroethene	1.200	0.15	1	0	120	70	130				
Chloroethane	1.230	0.15	1	0	123	70	130				
Chloromethane	1.290	0.15	1	0	129	70	130				
cis-1,2-Dichloroethene	1.170	0.15	1	0	117	70	130				
Tetrachloroethylene	0.7800	0.15	1	0	78.0	70	130				
trans-1,2-Dichloroethene	1.180	0.15	1	0	118	70	130				
Trichloroethene	1.260	0.15	1	0	126	70	130				
Vinyl chloride	1.140	0.15	1	0	114	70	130				

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033105.D Vial: 5
Acq On : 31 Mar 2016 12:57 pm Operator: RJP
Sample : ALCS1UG-033116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 31 13:40:26 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.81	128	20235	1.00	ppb		0.00
35) 1,4-difluorobenzene	12.06	114	53595	1.00	ppb		0.00
50) Chlorobenzene-d5	16.57	117	32893	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.14	95	24330	1.15	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 115.00%				
Target Compounds							Qvalue
2) Propylene	4.15	41	18444	1.12	ppb	#	100
3) Freon 12	4.19	85	108188	1.25	ppb		99
4) Chloromethane	4.39	50	27930	1.23	ppb		94
5) Freon 114	4.39	85	86158	1.18	ppb		92
6) Vinyl Chloride	4.59	62	24728	1.09	ppb		91
7) Butane	4.69	43	31576	1.21	ppb		96
8) 1,3-butadiene	4.70	39	19523m	1.14	ppb		
9) Bromomethane	5.04	94	31796	1.19	ppb		91
10) Chloroethane	5.21	64	11361	1.22	ppb		91
11) Ethanol	5.37	45	7949	1.15	ppb	#	68
12) Acrolein	5.96	56	7163	1.22	ppb	#	5
13) Vinyl Bromide	5.55	106	30203	1.15	ppb		95
14) Freon 11	5.80	101	113728	1.28	ppb		99
15) Acetone	6.06	58	9844	1.13	ppb	#	77
16) Pentane	6.08	42	21719	1.09	ppb		87
17) Isopropyl alcohol	6.17	45	24341	0.85	ppb	#	46
18) 1,1-dichloroethene	6.57	96	29016	1.12	ppb	#	88
19) Freon 113	6.75	101	76210	1.22	ppb		96
20) t-Butyl alcohol	6.91	59	26676m	0.59	ppb		
21) Methylene chloride	7.05	84	28772	1.26	ppb		91
22) Allyl chloride	7.03	41	20621	1.02	ppb		78
23) Carbon disulfide	7.21	76	73250	1.09	ppb	#	72
24) trans-1,2-dichloroethene	8.01	61	32178	1.05	ppb		90
25) methyl tert-butyl ether	8.03	73	58777	1.01	ppb		90
26) 1,1-dichloroethane	8.40	63	48777	1.12	ppb		99
27) Vinyl acetate	8.43	43	31192	0.82	ppb		95
28) Methyl Ethyl Ketone	8.95	72	8975	0.96	ppb	#	100
29) cis-1,2-dichloroethene	9.36	61	26728	1.06	ppb		91
30) Hexane	8.91	57	25178	0.95	ppb		97
31) Ethyl acetate	9.54	43	36816	1.02	ppb		92
32) Chloroform	9.95	83	62657	1.06	ppb		97
33) Tetrahydrofuran	10.18	42	15345	0.92	ppb		95
34) 1,2-dichloroethane	11.10	62	34571	1.04	ppb		88
36) 1,1,1-trichloroethane	10.75	97	62789	1.25	ppb		99
37) Cyclohexane	11.44	56	24625	1.19	ppb		87
38) Carbon tetrachloride	11.39	117	71594	1.27	ppb		99
39) Benzene	11.37	78	51637	1.16	ppb		94
40) Methyl methacrylate	12.92	41	13562	0.93	ppb	#	80
41) 1,4-dioxane	13.03	88	4419m	0.39	ppb		
42) 2,2,4-trimethylpentane	12.19	57	99045	1.27	ppb		96
43) Heptane	12.53	43	18239	1.01	ppb		89
44) Trichloroethene	12.68	130	25165	1.11	ppb		98
45) 1,2-dichloropropane	12.79	63	19076	1.19	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033105.D Vial: 5
Acq On : 31 Mar 2016 12:57 pm Operator: RJP
Sample : ALCS1UG-033116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 31 13:40:26 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

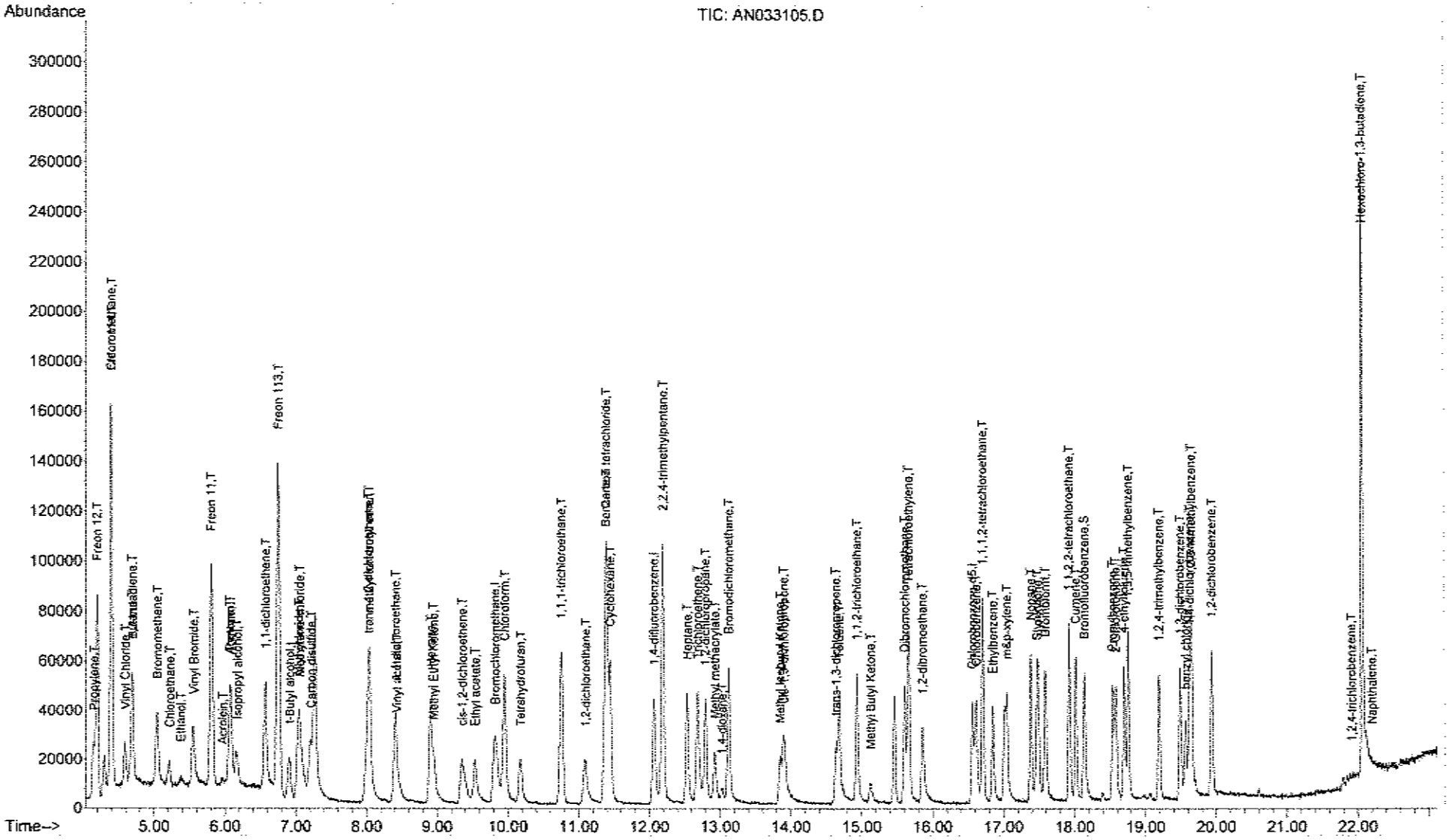
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	49145m	1.25	ppb	
47)	cis-1,3-dichloropropene	13.91	75	25793	1.20	ppb	98
48)	trans-1,3-dichloropropene	14.63	75	22819m	1.19	ppb	
49)	1,1,2-trichloroethane	14.93	97	21714	1.23	ppb	98
51)	Toluene	14.68	92	21405	0.96	ppb	98
52)	Methyl Isobutyl Ketone	13.85	43	14776m	0.37	ppb	
53)	Dibromochloromethane	15.60	129	35353m	1.25	ppb	
54)	Methyl Butyl Ketone	15.12	43	10560m	0.30	ppb	
55)	1,2-dibromoethane	15.86	107	33793	1.22	ppb	96
56)	Tetrachloroethylene	15.65	164	19690	0.92	ppb	96
57)	Chlorobenzene	16.61	112	31204	1.06	ppb	83
58)	1,1,1,2-tetrachloroethane	16.70	131	25628	1.17	ppb	97
59)	Ethylbenzene	16.85	91	37066	0.97	ppb	100
60)	m&p-xylene	17.05	91	57446	1.89	ppb	95
61)	Nonane	17.38	43	17948	0.99	ppb	98
62)	Styrene	17.46	104	22860	1.08	ppb	91
63)	Bromoform	17.59	173	33915	2.23	ppb	99
64)	o-xylene	17.49	91	43063	1.18	ppb	97
65)	Cumene	18.02	105	41100	0.96	ppb	96
67)	1,1,2,2-tetrachloroethane	17.92	83	41344	1.10	ppb	99
68)	Propylbenzene	18.54	91	44805m	0.99	ppb	
69)	2-Chlorotoluene	18.58	91	32571m	0.99	ppb	
70)	4-ethyltoluene	18.70	105	39533m	1.02	ppb	
71)	1,3,5-trimethylbenzene	18.76	105	47412m	1.02	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	35331	0.88	ppb	93
73)	1,3-dichlorobenzene	19.49	146	30675	1.20	ppb	97
74)	benzyl chloride	19.57	91	36429	1.00	ppb	97
75)	1,4-dichlorobenzene	19.62	146	28854	1.20	ppb	98
76)	1,2,3-trimethylbenzene	19.65	105	42402	0.85	ppb	90
77)	1,2-dichlorobenzene	19.93	146	33057	1.05	ppb	96
78)	1,2,4-trichlorobenzene	21.91	180	18692m	0.79	ppb	
79)	Naphthalene	22.21	128	27592m	0.56	ppb	
80)	Hexachloro-1,3-butadiene	22.07	225	53161	0.92	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033105.D Vial: 5
Acq On : 31 Mar 2016 12:57 pm Operator: RJP
Sample : ALCS1UG-033116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 31 13:41 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040103.D Vial: 19
Acq On : 1 Apr 2016 12:45 pm Operator: RJP
Sample : ALCS1UG-040116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 12:01:11 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.82	128	20858m	1.00	ppb		0.01
35) 1,4-difluorobenzene	12.07	114	46019	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	31397	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.14	95	23410	1.16	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 116.00%				
Target Compounds							Qvalue
2) Propylene	4.15	41	19322	1.14	ppb	#	100
3) Freon 12	4.20	85	108917	1.22	ppb		99
4) Chloromethane	4.39	50	28723	1.23	ppb		92
5) Freon 114	4.40	85	87334	1.16	ppb		92
6) Vinyl Chloride	4.59	62	25792	1.10	ppb		91
7) Butane	4.68	43	32939	1.23	ppb		95
8) 1,3-butadiene	4.70	39	21826	1.24	ppb		89
9) Bromomethane	5.04	94	33154	1.20	ppb		90
10) Chloroethane	5.21	64	10827	1.13	ppb		91
11) Ethanol	5.37	45	6602	0.93	ppb		81
12) Acrolein	5.97	56	7177	1.19	ppb	#	5
13) Vinyl Bromide	5.55	106	31182	1.15	ppb		95
14) Freon 11	5.81	101	113643	1.24	ppb		99
15) Acetone	6.06	58	10118	1.12	ppb	#	80
16) Pentane	6.08	42	21700	1.05	ppb		94
17) Isopropyl alcohol	6.16	45	29319	1.00	ppb	#	46
18) 1,1-dichloroethene	6.57	96	29553	1.10	ppb		97
19) Freon 113	6.76	101	80807	1.25	ppb		92
20) t-Butyl alcohol	6.90	59	47591	1.01	ppb	#	72
21) Methylene chloride	7.06	84	26448	1.13	ppb		88
22) Allyl chloride	7.03	41	19899	0.96	ppb		80
23) Carbon disulfide	7.21	76	71647	1.04	ppb		100
24) trans-1,2-dichloroethene	8.01	61	31529	0.99	ppb		96
25) methyl tert-butyl ether	8.03	73	63757	1.06	ppb		90
26) 1,1-dichloroethane	8.40	63	46969	1.04	ppb		99
27) Vinyl acetate	8.44	43	30196	0.77	ppb		99
28) Methyl Ethyl Ketone	8.95	72	9005	0.94	ppb	#	100
29) cis-1,2-dichloroethene	9.36	61	25551	0.98	ppb		89
30) Hexane	8.91	57	24189	0.89	ppb		98
31) Ethyl acetate	9.54	43	39008	1.05	ppb	#	83
32) Chloroform	9.95	83	61018	1.00	ppb		98
33) Tetrahydrofuran	10.18	42	16951	0.98	ppb		94
34) 1,2-dichloroethane	11.10	62	32327	0.94	ppb		90
36) 1,1,1-trichloroethane	10.76	97	55660m	1.29	ppb		
37) Cyclohexane	11.44	56	22700	1.27	ppb	#	81
38) Carbon tetrachloride	11.40	117	63936m	1.33	ppb		
39) Benzene	11.37	78	46168	1.21	ppb		97
40) Methyl methacrylate	12.93	41	17394	1.40	ppb		92
41) 1,4-dioxane	13.02	88	11297	1.16	ppb		98
42) 2,2,4-trimethylpentane	12.19	57	95466m	1.43	ppb		
43) Heptane	12.54	43	16115	1.04	ppb		92
44) Trichloroethene	12.69	130	24104	1.23	ppb		98
45) 1,2-dichloropropane	12.80	63	16131	1.17	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040103.D Vial: 19
Acq On : 1 Apr 2016 12:45 pm Operator: RJP
Sample : ALCS1UG-040116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 12:01:11 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

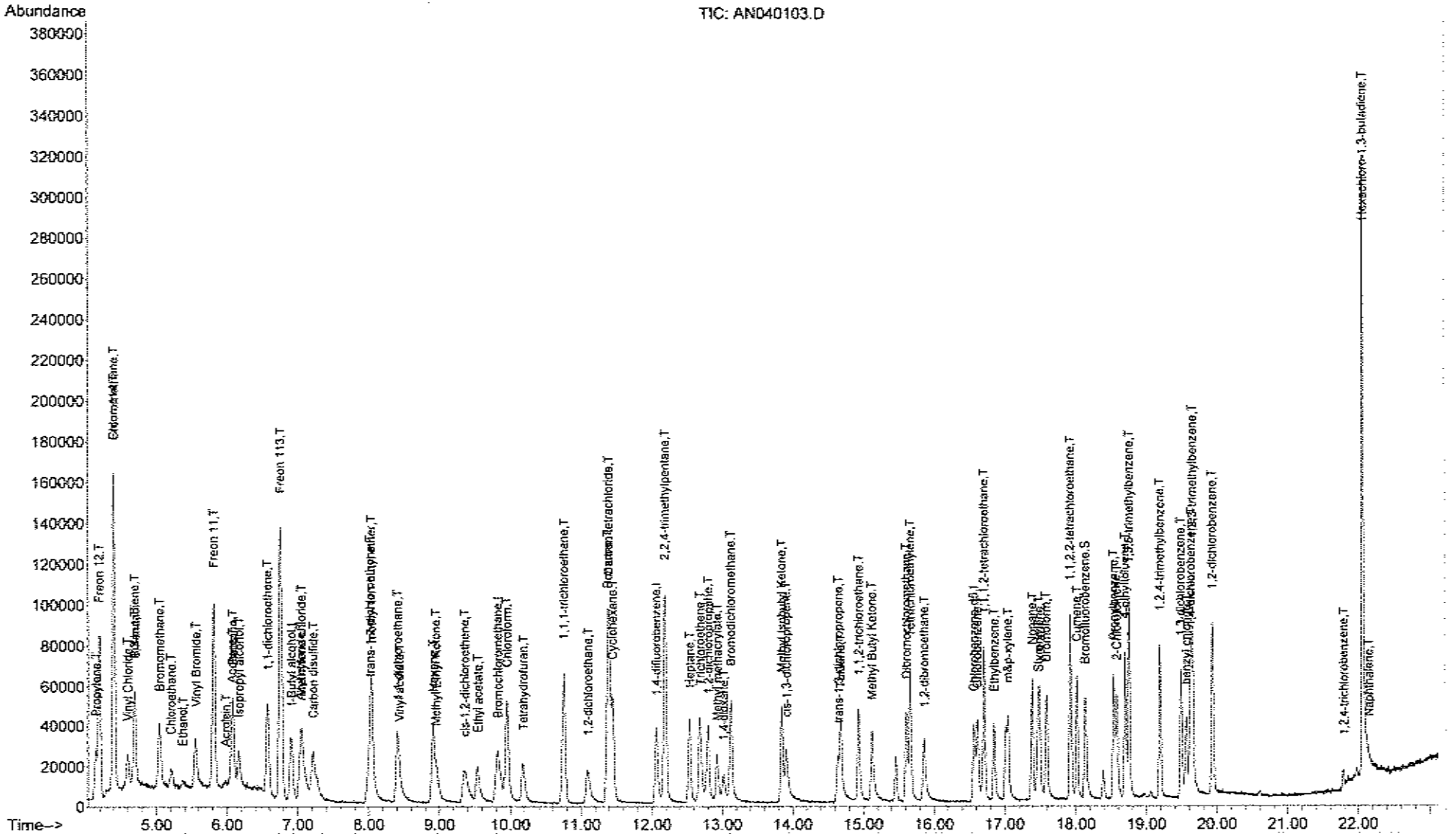
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	41457m	1.23	ppb	
47)	cis-1,3-dichloropropene	13.91	75	22251m	1.21	ppb	
48)	trans-1,3-dichloropropene	14.64	75	20489m	1.24	ppb	
49)	1,1,2-trichloroethane	14.94	97	18169m	1.20	ppb	
51)	Toluene	14.68	92	18586	0.87	ppb	96
52)	Methyl Isobutyl Ketone	13.84	43	39772	1.05	ppb	95
53)	Dibromochloromethane	15.61	129	30463m	1.13	ppb	
54)	Methyl Butyl Ketone	15.12	43	34646	1.03	ppb	94
55)	1,2-dibromoethane	15.86	107	30844m	1.16	ppb	
56)	Tetrachloroethylene	15.66	164	17940	0.88	ppb	99
57)	Chlorobenzene	16.61	112	31424m	1.12	ppb	
58)	1,1,1,2-tetrachloroethane	16.71	131	24183	1.16	ppb	97
59)	Ethylbenzene	16.85	91	36263	0.99	ppb	98
60)	m&p-xylene	17.05	91	53811	1.85	ppb	93
61)	Nonane	17.38	43	18316	1.06	ppb	97
62)	Styrene	17.46	104	22721	1.12	ppb	90
63)	Bromoform	17.58	173	33285	2.29	ppb	99
64)	o-xylene	17.48	91	42165	1.21	ppb	98
65)	Cumene	18.02	105	44417	1.09	ppb	96
67)	1,1,2,2-tetrachloroethane	17.92	83	48140m	1.34	ppb	
68)	Propylbenzene	18.54	91	56112m	1.30	ppb	
69)	2-Chlorotoluene	18.58	91	31555m	1.00	ppb	
70)	4-ethyltoluene	18.70	105	45720m	1.23	ppb	
71)	1,3,5-trimethylbenzene	18.76	105	58743m	1.32	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	48419m	1.26	ppb	
73)	1,3-dichlorobenzene	19.49	146	34715m	1.42	ppb	
74)	benzyl chloride	19.56	91	40041m	1.15	ppb	
75)	1,4-dichlorobenzene	19.62	146	30402m	1.32	ppb	
76)	1,2,3-trimethylbenzene	19.65	105	67485	1.42	ppb	94
77)	1,2-dichlorobenzene	19.93	146	45704	1.53	ppb	97
78)	1,2,4-trichlorobenzene	21.80	180	20891m	0.92	ppb	
79)	Naphthalene	22.15	128	44379m	0.95	ppb	
80)	Hexachloro-1,3-butadiene	22.07	225	64975	1.18	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040103.D Vial: 19
Acq On : 1 Apr 2016 12:45 pm Operator: RJP
Sample : ALCS1UG-040116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 2 12:04 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040204.D Vial: 1
Acq On : 2 Apr 2016 12:58 pm Operator: RJP
Sample : ALCS1UG-040216 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 14:36:13 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.81	128	21348m	1.00	ppb		0.00
35) 1,4-difluorobenzene	12.06	114	52201	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	44220	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.13	95	32006	1.12	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 112.00%				
Target Compounds							Qvalue
2) Propylene	4.14	41	21383	1.24	ppb	#	100
3) Freon 12	4.19	85	112715	1.24	ppb		99
4) Chloromethane	4.39	50	30667	1.29	ppb		94
5) Freon 114	4.39	85	96961	1.26	ppb		98
6) Vinyl Chloride	4.58	62	27465	1.14	ppb		89
7) Butane	4.68	43	31094	1.13	ppb		96
8) 1,3-butadiene	4.69	39	22506	1.25	ppb		84
9) Bromomethane	5.03	94	34108	1.21	ppb		95
10) Chloroethane	5.21	64	12081	1.23	ppb		97
11) Ethanol	5.37	45	8936	1.23	ppb	#	74
12) Acrolein	5.95	56	7589m	1.23	ppb		
13) Vinyl Bromide	5.54	106	32945	1.19	ppb		94
14) Freon 11	5.80	101	108604	1.16	ppb		98
15) Acetone	6.05	58	10100m	1.10	ppb		
16) Pentane	6.07	42	24382	1.16	ppb		93
17) Isopropyl alcohol	6.15	45	32873	1.09	ppb	#	46
18) 1,1-dichloroethene	6.56	96	32833	1.20	ppb		94
19) Freon 113	6.75	101	85460m	1.29	ppb		
20) t-Butyl alcohol	6.89	59	52338	1.09	ppb	#	75
21) Methylene chloride	7.05	84	29910	1.25	ppb		88
22) Allyl chloride	7.02	41	25381	1.19	ppb		84
23) Carbon disulfide	7.21	76	83066	1.17	ppb		98
24) trans-1,2-dichloroethene	7.99	61	38349	1.18	ppb		91
25) methyl tert-butyl ether	8.03	73	74015	1.20	ppb		90
26) 1,1-dichloroethane	8.40	63	53984	1.17	ppb		99
27) Vinyl acetate	8.43	43	46737	1.17	ppb		98
28) Methyl Ethyl Ketone	8.94	72	11871	1.21	ppb	#	100
29) cis-1,2-dichloroethene	9.35	61	31216	1.17	ppb		92
30) Hexane	8.89	57	31529	1.13	ppb		97
31) Ethyl acetate	9.53	43	46407	1.22	ppb		91
32) Chloroform	9.95	83	67143	1.08	ppb		100
33) Tetrahydrofuran	10.17	42	21607	1.22	ppb		93
34) 1,2-dichloroethane	11.09	62	36475	1.04	ppb		90
36) 1,1,1-trichloroethane	10.75	97	63335m	1.29	ppb		
37) Cyclohexane	11.44	56	27045m	1.34	ppb		
38) Carbon tetrachloride	11.39	117	67542	1.23	ppb		97
39) Benzene	11.37	78	55204	1.27	ppb		97
40) Methyl methacrylate	12.91	41	16940m	1.20	ppb		
41) 1,4-dioxane	13.02	88	13230	1.19	ppb		98
42) 2,2,4-trimethylpentane	12.18	57	114159m	1.50	ppb		
43) Heptane	12.53	43	22298	1.27	ppb		94
44) Trichloroethene	12.68	130	27991	1.26	ppb		98
45) 1,2-dichloropropane	12.79	63	18752m	1.20	ppb		

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040204.D Vial: 1
Acq On : 2 Apr 2016 12:58 pm Operator: RJP
Sample : ALCS1UG-040216 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 14:36:13 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

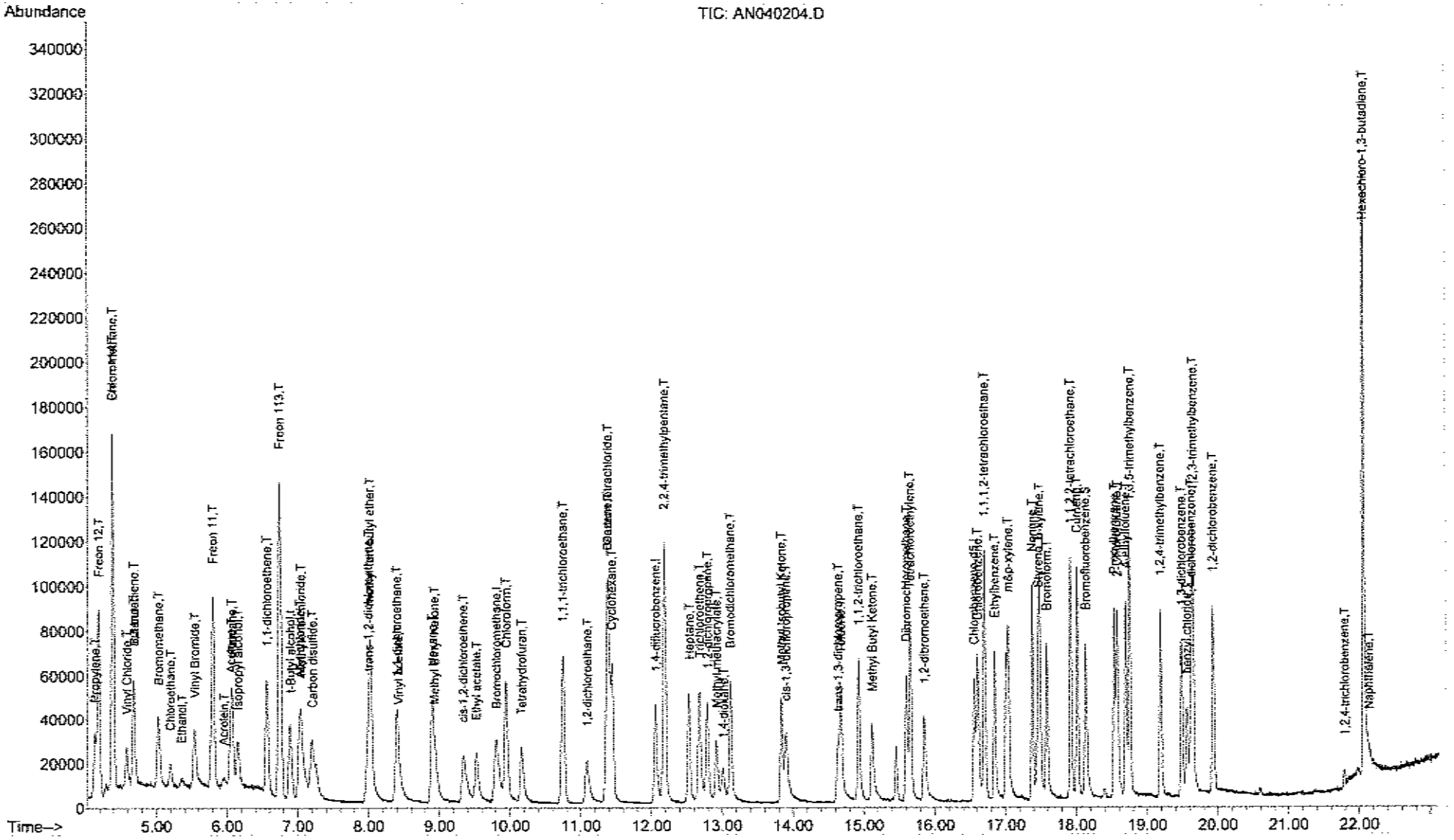
	Compound	R.T.	Qlon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.11	83	44063m	1.15	ppb	
47)	cis-1,3-dichloropropene	13.90	75	25728m	1.23	ppb	
48)	trans-1,3-dichloropropene	14.63	75	24149m	1.29	ppb	
49)	1,1,2-trichloroethane	14.93	97	20773m	1.21	ppb	
51)	Toluene	14.68	92	23774	0.79	ppb	93
52)	Methyl Isobutyl Ketone	13.83	43	39350	0.74	ppb	98
53)	Dibromochloromethane	15.60	129	38789m	1.02	ppb	
54)	Methyl Butyl Ketone	15.12	43	35587	0.75	ppb	91
55)	1,2-dibromoethane	15.85	107	43150	1.15	ppb	98
56)	Tetrachloroethylene	15.66	164	22377	0.78	ppb	97
57)	Chlorobenzene	16.61	112	46561	1.18	ppb	92
58)	1,1,1,2-tetrachloroethane	16.70	131	34745	1.18	ppb	95
59)	Ethylbenzene	16.85	91	61162	1.19	ppb	98
60)	m&p-xylene	17.04	91	98093	2.40	ppb	95
61)	Nonane	17.38	43	28351m	1.16	ppb	
62)	Styrene	17.46	104	36491	1.28	ppb	91
63)	Bromoform	17.58	173	42375	2.07	ppb	99
64)	o-xylene	17.48	91	60218m	1.23	ppb	
65)	Cumene	18.02	105	73127	1.27	ppb	98
67)	1,1,2,2-tetrachloroethane	17.92	83	63040	1.25	ppb	99
68)	Propylbenzene	18.54	91	79403m	1.30	ppb	
69)	2-Chlorotoluene	18.58	91	61383m	1.38	ppb	
70)	4-ethyltoluene	18.70	105	58219m	1.11	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	72962m	1.17	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	57079	1.05	ppb	89
73)	1,3-dichlorobenzene	19.49	146	40130	1.17	ppb	97
74)	benzyl chloride	19.56	91	47079	0.96	ppb	97
75)	1,4-dichlorobenzene	19.62	146	35806	1.10	ppb	95
76)	1,2,3-trimethylbenzene	19.65	105	74548	1.12	ppb	97
77)	1,2-dichlorobenzene	19.93	146	44061	1.04	ppb	95
78)	1,2,4-trichlorobenzene	21.79	180	22866m	0.72	ppb	
79)	Naphthalene	22.13	128	49350m	0.75	ppb	
80)	Hexachloro-1,3-butadiene	22.07	225	58446	0.75	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040204.D Vial: 1
Acq On : 2 Apr 2016 12:58 pm Operator: RJP
Sample : ALCS1UG-040216 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 3 11:39 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



CENTEK LABORATORIES, LLC

Date: *26-Apr-16*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1603074
Project: 575 Colfax FESL SVI

TestCode: 0.25CT-TCE-VC

Sample ID **ALCS1UGD-033116** SampType: **LCSD** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10817**
Client ID: **ZZZZZ** Batch ID: **R10817** TestNo: **TO-15** Analysis Date: **4/1/2016** SeqNo: **127097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.280	0.15	1	0	128	70	130	1.25	2.37	30	
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130	1.12	7.41	30	
1,1-Dichloroethene	1.120	0.15	1	0	112	70	130	1.12	0	30	
Chloroethane	1.250	0.15	1	0	125	70	130	1.22	2.43	30	
Chloromethane	1.210	0.15	1	0	121	70	130	1.23	1.64	30	
cis-1,2-Dichloroethene	1.010	0.15	1	0	101	70	130	1.06	4.83	30	
Tetrachloroethylene	0.9000	0.15	1	0	90.0	70	130	0.92	2.20	30	
trans-1,2-Dichloroethene	1.000	0.15	1	0	100	70	130	1.05	4.88	30	
Trichloroethene	1.150	0.040	1	0	115	70	130	1.11	3.54	30	
Vinyl chloride	1.050	0.040	1	0	105	70	130	1.09	3.74	30	

Sample ID **ALCS1UGD-040116** SampType: **LCSD** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **10818**
Client ID: **ZZZZZ** Batch ID: **R10818** TestNo: **TO-15** Analysis Date: **4/2/2016** SeqNo: **127114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.280	0.15	1	0	128	70	130	1.29	0.778	30	
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130	1.04	0	30	
1,1-Dichloroethene	1.100	0.15	1	0	110	70	130	1.1	0	30	
Chloroethane	1.240	0.15	1	0	124	70	130	1.13	9.28	30	
Chloromethane	1.230	0.15	1	0	123	70	130	1.23	0	30	
cis-1,2-Dichloroethene	0.9400	0.15	1	0	94.0	70	130	0.98	4.17	30	
Tetrachloroethylene	0.8300	0.15	1	0	83.0	70	130	0.88	5.85	30	
trans-1,2-Dichloroethene	0.9600	0.15	1	0	96.0	70	130	0.99	3.08	30	
Trichloroethene	1.210	0.040	1	0	121	70	130	1.23	1.64	30	

Qualifiers:
- `-` Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1603074
Project: 575 Colfax FESL SVI

TestCode: 0.25CT-TCE-VC

Sample ID	ALCS1UGD-040116	SampType:	LCSD	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	10818
Client ID:	ZZZZZ	Batch ID:	R10818	TestNo:	TO-15			Analysis Date:	4/2/2016	SeqNo:	127114

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.070	0.040	1	0	107	70	130	1.1	2.76	30	

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603074
Project: 575 Colfax FESL SVI

TestCode: 1ugM3_TO15

Sample ID **ALCS1UGD-040216** SampType: **LCSD** TestCode: **1ugM3_TO15** Units: **ppbV** Prep Date: RunNo: **10819**
Client ID: **ZZZZZ** Batch ID: **R10819** TestNo: **TO-15** Analysis Date: **4/3/2016** SeqNo: **127130**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.300	0.15	1	0	130	70	130	1.29	0.772	30	
1,1-Dichloroethane	1.170	0.15	1	0	117	70	130	1.17	0	30	
1,1-Dichloroethene	1.110	0.15	1	0	111	70	130	1.2	7.79	30	
Chloroethane	1.090	0.15	1	0	109	70	130	1.23	12.1	30	
Chloromethane	1.190	0.15	1	0	119	70	130	1.29	8.06	30	
cis-1,2-Dichloroethene	1.110	0.15	1	0	111	70	130	1.17	5.26	30	
Tetrachloroethylene	0.8900	0.15	1	0	89.0	70	130	0.78	13.2	30	
trans-1,2-Dichloroethene	1.150	0.15	1	0	115	70	130	1.18	2.58	30	
Trichloroethene	1.220	0.15	1	0	122	70	130	1.26	3.23	30	
Vinyl chloride	1.220	0.15	1	0	122	70	130	1.14	6.78	30	

Qualifiers:

- `.` Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033133.D Vial: 12
Acq On : 1 Apr 2016 6:53 am Operator: RJP
Sample : ALCS1UGD-033116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 07:41:06 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.83	128	22710m	1.00	ppb		0.02
35) 1,4-difluorobenzene	12.07	114	52964	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	34225	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.14	95	25901	1.18	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 118.00%				
Target Compounds							Qvalue
2) Propylene	4.15	41	22423	1.22	ppb	#	100
3) Freon 12	4.20	85	119838	1.24	ppb		100
4) Chloromethane	4.40	50	30837	1.21	ppb		96
5) Freon 114	4.39	85	94564	1.16	ppb		94
6) Vinyl Chloride	4.59	62	26715	1.05	ppb		88
7) Butane	4.69	43	33781	1.16	ppb		98
8) 1,3-butadiene	4.69	39	22465	1.17	ppb		94
9) Bromomethane	5.04	94	36360	1.21	ppb		96
10) Chloroethane	5.21	64	12983	1.25	ppb		94
11) Ethanol	5.37	45	10054	1.30	ppb	#	80
12) Acrolein	5.97	56	7538	1.15	ppb	#	5
13) Vinyl Bromide	5.55	106	32655	1.11	ppb		94
14) Freon 11	5.81	101	115634	1.16	ppb		98
15) Acetone	6.05	58	10361	1.06	ppb	#	86
16) Pentane	6.08	42	21785	0.97	ppb		98
17) Isopropyl alcohol	6.16	45	29904	0.93	ppb	#	46
18) 1,1-dichloroethene	6.57	96	32675	1.12	ppb		91
19) Freon 113	6.75	101	87252	1.24	ppb		94
20) t-Butyl alcohol	6.90	59	54115	1.06	ppb	#	74
21) Methylene chloride	7.05	84	28453	1.11	ppb		89
22) Allyl chloride	7.03	41	21912	0.97	ppb		78
23) Carbon disulfide	7.21	76	77697	1.03	ppb		96
24) trans-1,2-dichloroethene	8.03	61	34621	1.00	ppb		89
25) methyl tert-butyl ether	8.03	73	70378	1.08	ppb		92
26) 1,1-dichloroethane	8.40	63	50964	1.04	ppb		100
27) Vinyl acetate	8.44	43	34292	0.81	ppb		95
28) Methyl Ethyl Ketone	8.96	72	10709	1.02	ppb	#	100
29) cis-1,2-dichloroethene	9.35	61	28746	1.01	ppb		89
30) Hexane	8.91	57	27596	0.93	ppb		97
31) Ethyl acetate	9.53	43	42553	1.05	ppb		93
32) Chloroform	9.95	83	64410	0.97	ppb		98
33) Tetrahydrofuran	10.17	42	18009	0.96	ppb		91
34) 1,2-dichloroethane	11.10	62	35642	0.96	ppb		89
36) 1,1,1-trichloroethane	10.75	97	63644	1.28	ppb		98
37) Cyclohexane	11.45	56	26237	1.28	ppb	#	87
38) Carbon tetrachloride	11.39	117	71132	1.28	ppb		97
39) Benzene	11.37	78	51827	1.18	ppb		97
40) Methyl methacrylate	12.93	41	16708	1.17	ppb	#	82
41) 1,4-dioxane	13.01	88	13693m	1.22	ppb		
42) 2,2,4-trimethylpentane	12.19	57	105470m	1.37	ppb		
43) Heptane	12.54	43	17595	0.98	ppb		89
44) Trichloroethene	12.69	130	25767	1.15	ppb		98
45) 1,2-dichloropropane	12.79	63	18020	1.13	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033133.D Vial: 12
Acq On : 1 Apr 2016 6:53 am Operator: RJP
Sample : ALCS1UGD-033116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 01 07:41:06 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

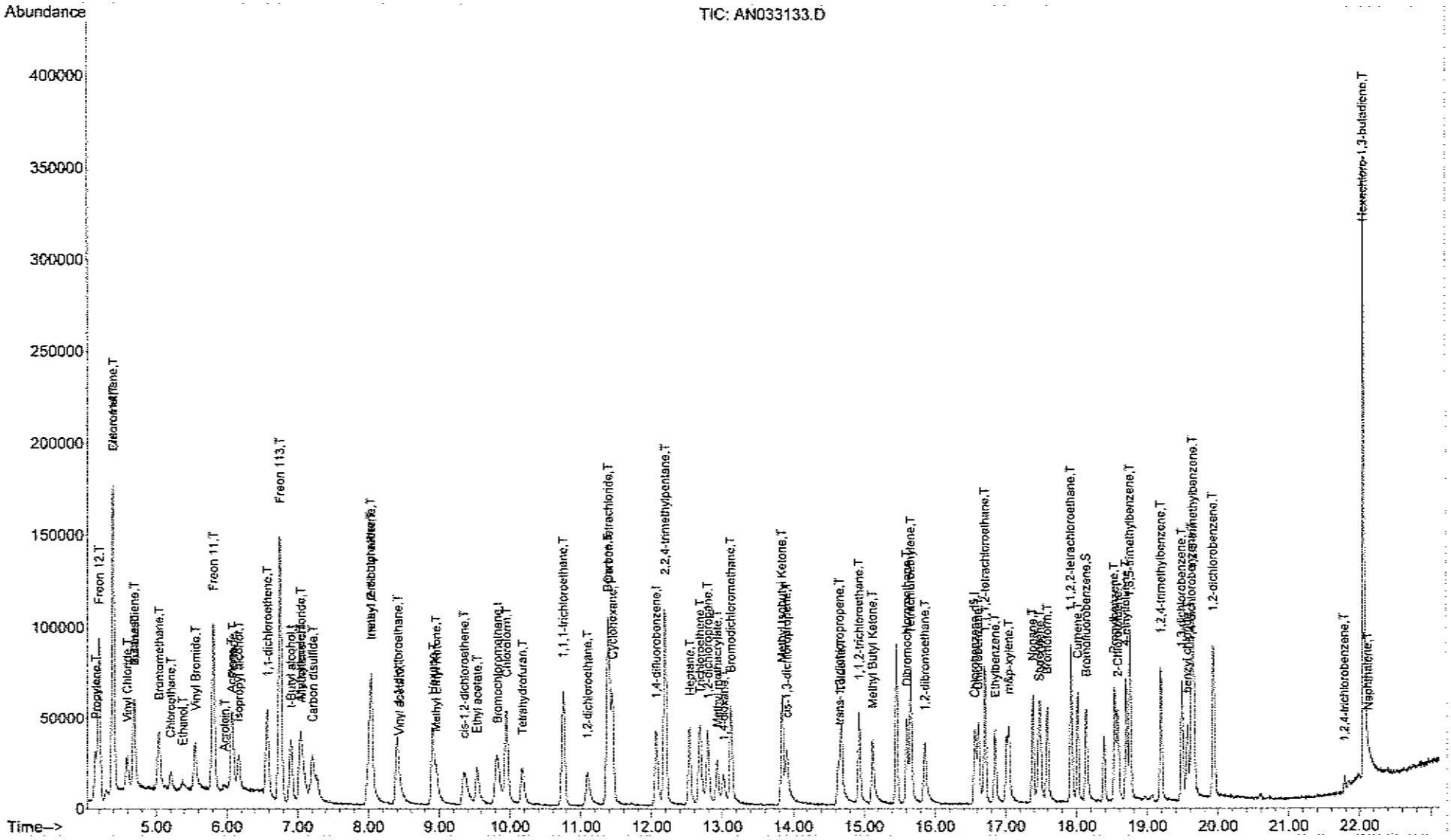
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	49599	1.28	ppb	98
47)	cis-1,3-dichloropropene	13.90	75	25744m	1.22	ppb	
48)	trans-1,3-dichloropropene	14.65	75	22881m	1.20	ppb	
49)	1,1,2-trichloroethane	14.93	97	21315	1.22	ppb	99
51)	Toluene	14.68	92	21010	0.90	ppb	95
52)	Methyl Isobutyl Ketone	13.84	43	52442	1.28	ppb	98
53)	Dibromochloromethane	15.60	129	35795m	1.22	ppb	
54)	Methyl Butyl Ketone	15.12	43	34843	0.95	ppb	95
55)	1,2-dibromoethane	15.86	107	33858m	1.17	ppb	
56)	Tetrachloroethylene	15.66	164	20024	0.90	ppb	96
57)	Chlorobenzene	16.61	112	32547	1.07	ppb	87
58)	1,1,1,2-tetrachloroethane	16.71	131	24656	1.08	ppb	97
59)	Ethylbenzene	16.85	91	36622	0.92	ppb	99
60)	m&p-xylene	17.04	91	53360	1.69	ppb	91
61)	Nonane	17.38	43	19169	1.02	ppb	96
62)	Styrene	17.46	104	22328	1.01	ppb	91
63)	Bromoform	17.59	173	32571	2.06	ppb	98
64)	o-xylene	17.48	91	38663	1.02	ppb	100
65)	Cumene	18.02	105	43545	0.98	ppb	97
67)	1,1,2,2-tetrachloroethane	17.92	83	48358	1.24	ppb	100
68)	Propylbenzene	18.54	91	55777m	1.18	ppb	
69)	2-Chlorotoluene	18.58	91	35032m	1.02	ppb	
70)	4-ethyltoluene	18.70	105	50112m	1.24	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	60516m	1.25	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	51996	1.24	ppb	97
73)	1,3-dichlorobenzene	19.49	146	33657m	1.26	ppb	
74)	benzyl chloride	19.56	91	48542	1.28	ppb	98
75)	1,4-dichlorobenzene	19.62	146	32126m	1.28	ppb	
76)	1,2,3-trimethylbenzene	19.65	105	65042	1.26	ppb	92
77)	1,2-dichlorobenzene	19.93	146	41624m	1.28	ppb	
78)	1,2,4-trichlorobenzene	21.79	180	25407m	1.03	ppb	
79)	Naphthalene	22.13	128	59093m	1.16	ppb	
80)	Hexachloro-1,3-butadiene	22.06	225	73201	1.22	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN033133.D Vial: 12
Acq On : 1 Apr 2016 6:53 am Operator: RJP
Sample : ALCS1UGD-033116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 1 8:10 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040125.D Vial: 3
Acq On : 2 Apr 2016 3:21 am Operator: RJP
Sample : ALCS1UGD-040116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 07:59:55 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.81	128	20437m	1.00	ppb		0.00
35) 1,4-difluorobenzene	12.07	114	45874	1.00	ppb		0.00
50) Chlorobenzene-d5	16.56	117	33404	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.14	95	23229	1.08	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 108.00%				
Target Compounds							Qvalue
2) Propylene	4.15	41	17794	1.07	ppb	#	100
3) Freon 12	4.20	85	106757	1.22	ppb		99
4) Chloromethane	4.39	50	28161	1.23	ppb		94
5) Freon 114	4.39	85	84475	1.15	ppb		93
6) Vinyl Chloride	4.59	62	24511	1.07	ppb		88
7) Butane	4.68	43	30299	1.15	ppb		94
8) 1,3-butadiene	4.69	39	20711	1.20	ppb		87
9) Bromomethane	5.04	94	30593	1.13	ppb		87
10) Chloroethane	5.21	64	11593	1.24	ppb		88
11) Ethanol	5.37	45	7438	1.07	ppb	#	70
12) Acrolein	5.96	56	6489	1.10	ppb	#	5
13) Vinyl Bromide	5.54	106	30312	1.14	ppb		98
14) Freon 11	5.81	101	108818	1.21	ppb		98
15) Acetone	6.06	58	9989	1.13	ppb	#	67
16) Pentane	6.07	42	21958	1.09	ppb		82
17) Isopropyl alcohol	6.16	45	31569	1.10	ppb	#	46
18) 1,1-dichloroethene	6.57	96	28746	1.10	ppb		89
19) Freon 113	6.75	101	75197	1.19	ppb		94
20) t-Butyl alcohol	6.90	59	45185	0.98	ppb	#	73
21) Methylene chloride	7.06	84	25448	1.11	ppb		89
22) Allyl chloride	7.03	41	19430	0.95	ppb		83
23) Carbon disulfide	7.21	76	68931	1.02	ppb		98
24) trans-1,2-dichloroethene	7.99	61	29781	0.96	ppb		89
25) methyl tert-butyl ether	8.03	73	58091	0.99	ppb		89
26) 1,1-dichloroethane	8.40	63	45819	1.04	ppb		98
27) Vinyl acetate	8.44	43	28686	0.75	ppb		98
28) Methyl Ethyl Ketone	8.94	72	8460	0.90	ppb	#	100
29) cis-1,2-dichloroethene	9.35	61	24101	0.94	ppb		89
30) Hexane	8.90	57	22935	0.86	ppb		97
31) Ethyl acetate	9.54	43	37330	1.02	ppb		96
32) Chloroform	9.95	83	58628	0.98	ppb		98
33) Tetrahydrofuran	10.17	42	14842	0.88	ppb		92
34) 1,2-dichloroethane	11.09	62	32732	0.98	ppb		89
36) 1,1,1-trichloroethane	10.75	97	55200m	1.28	ppb		
37) Cyclohexane	11.45	56	22616	1.27	ppb	#	84
38) Carbon tetrachloride	11.40	117	60536m	1.26	ppb		
39) Benzene	11.37	78	46455	1.22	ppb		97
40) Methyl methacrylate	12.93	41	15859	1.28	ppb	#	85
41) 1,4-dioxane	13.01	88	11429	1.17	ppb		100
42) 2,2,4-trimethylpentane	12.19	57	95059	1.43	ppb		97
43) Heptane	12.53	43	16705	1.08	ppb		95
44) Trichloroethene	12.68	130	23579	1.21	ppb		97
45) 1,2-dichloropropane	12.79	63	16910	1.23	ppb		94

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\AN040125.D
Acq On : 2 Apr 2016 3:21 am
Sample : ALCS1UGD-040116
Misc : A316_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 02 07:59:55 2016

Vial: 3
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

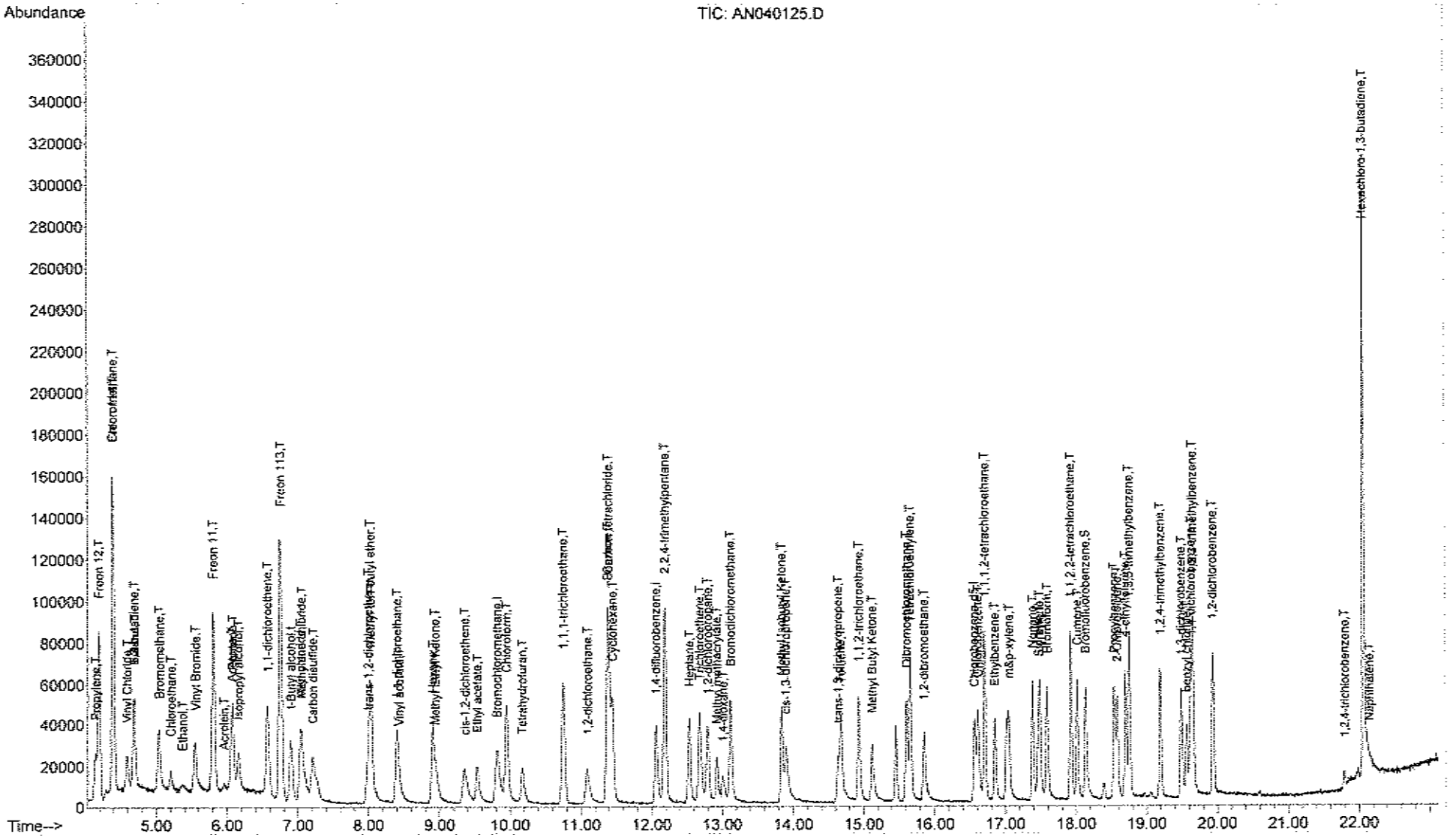
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	42093m	1.25	ppb	
47)	cis-1,3-dichloropropene	13.90	75	23342m	1.27	ppb	
48)	trans-1,3-dichloropropene	14.63	75	26114	1.59	ppb	91
49)	1,1,2-trichloroethane	14.93	97	17907m	1.19	ppb	
51)	Toluene	14.68	92	19046	0.84	ppb	97
52)	Methyl Isobutyl Ketone	13.84	43	40410	1.01	ppb	95
53)	Dibromochloromethane	15.60	129	34742m	1.21	ppb	
54)	Methyl Butyl Ketone	15.12	43	27202	0.76	ppb	91
55)	1,2-dibromoethane	15.85	107	35295	1.25	ppb	95
56)	Tetrachloroethylene	15.66	164	17901	0.83	ppb	97
57)	Chlorobenzene	16.61	112	32123	1.08	ppb	89
58)	1,1,1,2-tetrachloroethane	16.71	131	25427	1.14	ppb	95
59)	Ethylbenzene	16.85	91	36776	0.94	ppb	96
60)	m&p-xylene	17.04	91	58058	1.88	ppb	94
61)	Nonane	17.38	43	17804	0.97	ppb	96
62)	Styrene	17.46	104	23463	1.09	ppb	91
63)	Bromoform	17.59	173	33067	2.14	ppb	99
64)	o-xylene	17.49	91	41443	1.12	ppb	98
65)	Cumene	18.02	105	42342	0.98	ppb	99
67)	1,1,2,2-tetrachloroethane	17.93	83	46433	1.22	ppb	99
68)	Propylbenzene	18.54	91	50147m	1.09	ppb	
69)	2-Chlorotoluene	18.58	91	30598m	0.91	ppb	
70)	4-ethyltoluene	18.70	105	43131m	1.09	ppb	
71)	1,3,5-trimethylbenzene	18.76	105	53436m	1.13	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	43324	1.06	ppb	96
73)	1,3-dichlorobenzene	19.48	146	32101m	1.23	ppb	
74)	benzyl chloride	19.56	91	40921	1.10	ppb	98
75)	1,4-dichlorobenzene	19.62	146	28290	1.16	ppb	94
76)	1,2,3-trimethylbenzene	19.65	105	54000	1.07	ppb	91
77)	1,2-dichlorobenzene	19.93	146	36031	1.13	ppb	96
78)	1,2,4-trichlorobenzene	21.79	180	20383m	0.85	ppb	
79)	Naphthalene	22.15	128	46143m	0.92	ppb	
80)	Hexachloro-1,3-butadiene	22.06	225	63646	1.09	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040125.D Vial: 3
Acq On : 2 Apr 2016 3:21 am Operator: RJP
Sample : ALCS1UGD-040116 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 2 12:07 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040224.D Vial: 21
Acq On : 3 Apr 2016 1:13 am Operator: RJP
Sample : ALCS1UGD-040216 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 03 06:12:44 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.83	128	16685m	1.00	ppb		0.03
35) 1,4-difluorobenzene	12.07	114	39568m	1.00	ppb		0.00
50) Chlorobenzene-d5	16.57	117	28434m	1.00	ppb		0.00
System Monitoring Compounds							
66) Bromofluorobenzene	18.13	95	19428	1.06	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 106.00%				
Target Compounds							Qvalue
2) Propylene	4.15	41	16606	1.23	ppb	#	100
3) Freon 12	4.20	85	90322	1.27	ppb		100
4) Chloromethane	4.40	50	22283m	1.19	ppb		
5) Freon 114	4.39	85	71787m	1.20	ppb		
6) Vinyl Chloride	4.58	62	22812	1.22	ppb		92
7) Butane	4.69	43	25482m	1.19	ppb		
8) 1,3-butadiene	4.69	39	15952	1.13	ppb		64
9) Bromomethane	5.04	94	27027m	1.23	ppb		
10) Chloroethane	5.22	64	8362m	1.09	ppb		
11) Ethanol	5.38	45	7013	1.23	ppb	#	78
12) Acrolein	5.96	56	5600m	1.16	ppb		
13) Vinyl Bromide	5.55	106	23708m	1.09	ppb		
14) Freon 11	5.81	101	96272m	1.31	ppb		
15) Acetone	6.06	58	7670m	1.06	ppb		
16) Pentane	6.08	42	19957	1.21	ppb		89
17) Isopropyl alcohol	6.16	45	22887	0.97	ppb	#	46
18) 1,1-dichloroethene	6.58	96	23753	1.11	ppb		93
19) Freon 113	6.75	101	66199m	1.28	ppb		
20) t-Butyl alcohol	6.90	59	23840	0.64	ppb	#	69
21) Methylene chloride	7.05	84	23481	1.25	ppb	#	86
22) Allyl chloride	7.03	41	18688	1.12	ppb		91
23) Carbon disulfide	7.21	76	63706	1.15	ppb		97
24) trans-1,2-dichloroethene	8.01	61	29171	1.15	ppb		96
25) methyl tert-butyl ether	8.03	73	49301	1.03	ppb		84
26) 1,1-dichloroethane	8.40	63	42150	1.17	ppb		99
27) Vinyl acetate	8.43	43	30164	0.97	ppb		98
28) Methyl Ethyl Ketone	8.95	72	7134	0.93	ppb	#	100
29) cis-1,2-dichloroethene	9.36	61	23080	1.11	ppb		96
30) Hexane	8.90	57	21665	0.99	ppb		94
31) Ethyl acetate	9.54	43	29271	0.98	ppb	#	83
32) Chloroform	9.96	83	53371	1.10	ppb		98
33) Tetrahydrofuran	10.18	42	14438	1.04	ppb		99
34) 1,2-dichloroethane	11.09	62	30054	1.10	ppb		88
36) 1,1,1-trichloroethane	10.75	97	48306m	1.30	ppb		
37) Cyclohexane	11.44	56	19148m	1.25	ppb		
38) Carbon tetrachloride	11.39	117	51845m	1.25	ppb		
39) Benzene	11.37	78	36958m	1.12	ppb		
40) Methyl methacrylate	12.92	41	11930	1.11	ppb	#	85
41) 1,4-dioxane	13.02	88	4854m	0.58	ppb		
42) 2,2,4-trimethylpentane	12.19	57	79575m	1.38	ppb		
43) Heptane	12.54	43	16023	1.20	ppb		97
44) Trichloroethene	12.68	130	20428	1.22	ppb		99
45) 1,2-dichloropropane	12.79	63	13855m	1.17	ppb		

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040224.D Vial: 21
Acq On : 3 Apr 2016 1:13 am Operator: RJP
Sample : ALCS1UGD-040216 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 03 06:12:44 2016 Quant Results File: A316_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Mar 17 10:24:27 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

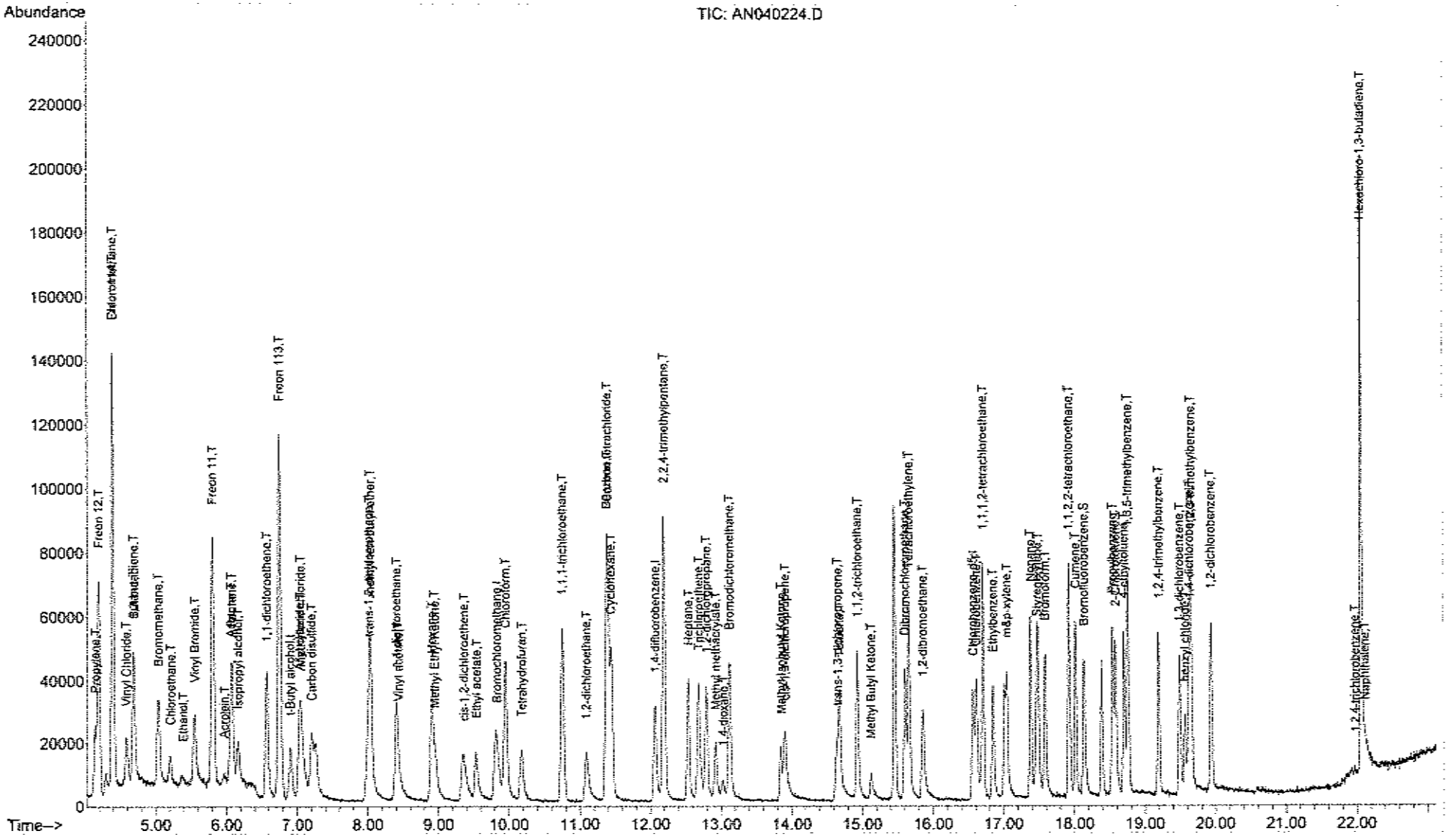
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Bromodichloromethane	13.12	83	40630	1.40	ppb	99
47)	cis-1,3-dichloropropene	13.91	75	17575m	1.11	ppb	
48)	trans-1,3-dichloropropene	14.64	75	17502m	1.23	ppb	
49)	1,1,2-trichloroethane	14.93	97	15918m	1.22	ppb	
51)	Toluene	14.68	92	15999	0.83	ppb	93
52)	Methyl Isobutyl Ketone	13.85	43	16015m	0.47	ppb	
53)	Dibromochloromethane	15.60	129	29038m	1.19	ppb	
54)	Methyl Butyl Ketone	15.12	43	11884m	0.39	ppb	
55)	1,2-dibromoethane	15.86	107	30992	1.29	ppb	95
56)	Tetrachloroethylene	15.66	164	16328	0.89	ppb	99
57)	Chlorobenzene	16.61	112	28766	1.13	ppb	90
58)	1,1,1,2-tetrachloroethane	16.71	131	23282	1.23	ppb	96
59)	Ethylbenzene	16.85	91	32846	0.99	ppb	98
60)	m&p-xylene	17.04	91	50659	1.93	ppb	94
61)	Nonane	17.38	43	17387	1.11	ppb	96
62)	Styrene	17.46	104	19788	1.08	ppb	94
63)	Bromoform	17.59	173	27444	2.09	ppb	96
64)	o-xylene	17.49	91	36160	1.15	ppb	97
65)	Cumene	18.02	105	38606	1.05	ppb	98
67)	1,1,2,2-tetrachloroethane	17.93	83	42851	1.32	ppb	97
68)	Propylbenzene	18.54	91	42675m	1.09	ppb	
69)	2-Chlorotoluene	18.58	91	28750m	1.01	ppb	
70)	4-ethyltoluene	18.70	105	36356m	1.08	ppb	
71)	1,3,5-trimethylbenzene	18.75	105	47475m	1.18	ppb	
72)	1,2,4-trimethylbenzene	19.19	105	33263	0.96	ppb	91
73)	1,3-dichlorobenzene	19.49	146	24776	1.12	ppb	98
74)	benzyl chloride	19.56	91	24061	0.76	ppb	91
75)	1,4-dichlorobenzene	19.62	146	22059	1.06	ppb	97
76)	1,2,3-trimethylbenzene	19.65	105	45073	1.05	ppb	95
77)	1,2-dichlorobenzene	19.93	146	26784	0.99	ppb	97
78)	1,2,4-trichlorobenzene	21.97	180	13922m	0.68	ppb	
79)	Naphthalene	22.12	128	22973m	0.54	ppb	
80)	Hexachloro-1,3-butadiene	22.06	225	38512	0.77	ppb	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AN040224.D Vial: 21
Acq On : 3 Apr 2016 1:13 am Operator: RJP
Sample : ALCS1UGD-040216 Inst : MSD #1
Misc : A316_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 3 11:42 2016 Quant Results File: A316_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Apr 26 14:41:32 2016
Response via : Initial Calibration



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INJECTION LOG

Injection Log

Directory: C:\HPCHEM\1\DATA2

Instrument #: 1
Internal Standard Stock #: A1335
Standard Stock #: 1336
LCS Stock #: 1337

le	Vial	FileName	Multiplier	SampleName	Misc Info Method Ref: EPA TO-1	Injected 1999
3	29	An033037.d	1.	C1603071-003A 40X	A316_1UG	31 Mar 2016 07:37
7	30	An033038.d	1.	C1603071-004A 10X	A316_1UG	31 Mar 2016 08:14
8	31	An033039.d	1.	C1603062-002A 540X	A316_1UG	31 Mar 2016 08:50
9		An033040.d	1.	No MS or GC data present		
0	1	An033101.d	1.	BFB1UG	A316_1UG	31 Mar 2016 09:33
1	2	An033102.d	1.	A1UG	A316_1UG	31 Mar 2016 10:56
2	3	An033103.d	1.	A1UG	A316_1UG	31 Mar 2016 11:38
3	4	An033104.d	1.	A1UG_1.0	A316_1UG	31 Mar 2016 12:19
4	5	An033105.d	1.	ALCS1UG-033116	A316_1UG	31 Mar 2016 12:57
5	6	An033106.d	1.	AMB1UG-033116	A316_1UG	31 Mar 2016 13:33
6	7	An033107.d	1.	WAC033116A	A316_1UG	31 Mar 2016 14:15
7	8	An033108.d	1.	WAC033116B	A316_1UG	31 Mar 2016 14:52
8	9	An033109.d	1.	WAC033116C	A316_1UG	31 Mar 2016 15:30
9	10	An033110.d	1.	WAC033116D	A316_1UG	31 Mar 2016 16:07
0	11	An033111.d	1.	WAC033116E	A316_1UG	31 Mar 2016 16:44
1	12	An033112.d	1.	WAC033116F	A316_1UG	31 Mar 2016 17:27
2	1	An033113.d	1.	C1603064-002A 270X	A316_1UG	31 Mar 2016 18:04
3	2	An033114.d	1.	C1603064	A316_1UG -004A 81X	31 Mar 2016 18:43
4	3	An033115.d	1.	C1603064-004A 810X	A316_1UG	31 Mar 2016 19:19
5	4	An033116.d	1.	C1603064-007A 540X	A316_1UG	31 Mar 2016 19:55
6	5	An033117.d	1.	C1603064-009A 270X	A316_1UG	31 Mar 2016 20:32
7	6	An033118.d	1.	C1603064-003A 270X	A316_1UG	31 Mar 2016 21:08
8	7	An033119.d	1.	C1603064-006A 540X	A316_1UG	31 Mar 2016 21:45
9	8	An033120.d	1.	C1603064-008A 270X	A316_1UG	31 Mar 2016 22:22
0	2	An033121.d	1.	C1603075-004A	A316_1UG	31 Mar 2016 23:01
1	2	An033122.d	1.	C1603075-004A MS	A316_1UG	31 Mar 2016 23:43
2	2	An033123.d	1.	C1603075-004A MSD	A316_1UG	1 Apr 2016 00:25
3	3	An033124.d	1.	C1603075-002A	A316_1UG	1 Apr 2016 01:04
4	4	An033125.d	1.	C1603075-005A	A316_1UG	1 Apr 2016 01:43
5	5	An033126.d	1.	C1603074-001A	A316_1UG	1 Apr 2016 02:22
6	6	An033127.d	1.	C1603074-003A	A316_1UG	1 Apr 2016 03:00
7	7	An033128.d	1.	C1603074-005A	A316_1UG	1 Apr 2016 03:39
8	8	An033129.d	1.	C1603076-001A	A316_1UG	1 Apr 2016 04:18
9	9	An033130.d	1.	C1603076-004A	A316_1UG	1 Apr 2016 04:57
0	10	An033131.d	1.	C1603076-006A	A316_1UG	1 Apr 2016 05:36
1	11	An033132.d	1.	C1603076-008A	A316_1UG	1 Apr 2016 06:15
2	12	An033133.d	1.	ALCS1UGD-033116	A316_1UG	1 Apr 2016 06:53
3	13	An033134.d	1.	C1603075-001A	A316_1UG	1 Apr 2016 08:10
4	14	An033135.d	1.	C1603075-003A	A316_1UG	1 Apr 2016 08:49
5	15	An033136.d	1.	C1604001-001A	A316_1UG	1 Apr 2016 09:28
6		An033137.d	1.	No MS or GC data present		

Injection Log

Directory: C:\HPChem\1\DATA

Instrument # 1
Internal Standard Stock # A134935
Standard Stock # 134936
LCS Stock # 134937
Method Ref: EPA TO-15 / Jan. 1999

ne	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
	16	An040101.d	1.	BFB1UG	A316_1UG	1 Apr 2016 10:05
	18	An040102.d	1.	A1UG_1.0	A316_1UG	1 Apr 2016 12:06
	19	An040103.d	1.	ALCS1UG-040116	A316_1UG	1 Apr 2016 12:45
	20	An040104.d	1.	AMB1UG-040116	A316_1UG	1 Apr 2016 13:21
	21	An040105.d	1.	C1603075-001A 2X	A316_1UG	1 Apr 2016 13:59
	22	An040106.d	1.	C1603074-002A	A316_1UG	1 Apr 2016 14:58
	23	An040107.d	1.	C1603074-004A	A316_1UG	1 Apr 2016 15:39
	24	An040108.d	1.	C1603076-003A	A316_1UG	1 Apr 2016 16:18
	25	An040109.d	1.	C1603076-005A	A316_1UG	1 Apr 2016 16:57
0	26	An040110.d	1.	C1603076-002A	A316_1UG	1 Apr 2016 17:36
1	27	An040111.d	1.	C1603076-007A	A316_1UG	1 Apr 2016 18:15
2	28	An040112.d	1.	C1603076-009A	A316_1UG	1 Apr 2016 18:54
3	49	An040113.d	1.	C1603089-001A	A316_1UG	1 Apr 2016 19:33
4	21	An040114.d	1.	C1603089-002A	A316_1UG	1 Apr 2016 20:12
5	22	An040115.d	1.	C1603089-003A	A316_1UG	1 Apr 2016 20:51
6	23	An040116.d	1.	C1603089-004A	A316_1UG	1 Apr 2016 21:30
7	24	An040117.d	1.	C1603089-005A	A316_1UG	1 Apr 2016 22:09
8	25	An040118.d	1.	C1603089-006A	A316_1UG	1 Apr 2016 22:48
9	26	An040119.d	1.	C1603089-007A	A316_1UG	1 Apr 2016 23:27
0	27	An040120.d	1.	C1603089-008A	A316_1UG	2 Apr 2016 00:06
1	28	An040121.d	1.	C1603089-009A	A316_1UG	2 Apr 2016 00:45
2	29	An040122.d	1.	C1603089-010A	A316_1UG	2 Apr 2016 01:24
3	1	An040123.d	1.	C1603089-011A	A316_1UG	2 Apr 2016 02:03
4	2	An040124.d	1.	C1603089-012A	A316_1UG	2 Apr 2016 02:42
5	3	An040125.d	1.	ALCS1UGD-040116	A316_1UG	2 Apr 2016 03:21
6	4	An040126.d	1.	C1603079-001A	A316_1UG	2 Apr 2016 04:00
7	5	An040127.d	1.	C1603079-002A	A316_1UG	2 Apr 2016 04:39
8	6	An040128.d	1.	C1603079-003A	A316_1UG	2 Apr 2016 05:18
9	7	An040129.d	1.	C1603079-004A	A316_1UG	2 Apr 2016 05:57
0	8	An040130.d	1.	C1603079-005A	A316_1UG	2 Apr 2016 06:36
1	9	An040131.d	1.	C1603079-006A	A316_1UG	2 Apr 2016 07:15
2	10	An040132.d	1.	C1603078-001A	A316_1UG	2 Apr 2016 07:54
3	11	An040133.d	1.	C1603078-002A	A316_1UG	2 Apr 2016 08:33
4	12	An040134.d	1.	C1603078-003A	A316_1UG	2 Apr 2016 09:12
5	13	An040135.d	1.	C1603078-003A DUP	A316_1UG	2 Apr 2016 09:50
6		An040136.d	1.	No MS or GC data present		
7	1	An040201.d	1.	BFB1UG	A316_1UG	2 Apr 2016 10:48
8	2	An040202.d	1.	A1UG	A316_1UG	2 Apr 2016 11:29
9	3	An040203.d	1.	A1UG_1.0	A316_1UG	2 Apr 2016 12:08
0	1	An040204.d	1.	ALCS1UG-040216	A316_1UG	2 Apr 2016 12:58
1	2	An040205.d	1.	AMB1UG-040216	A316_1UG	2 Apr 2016 13:34
2	3	An040206.d	1.	C1603078-004A	A316_1UG	2 Apr 2016 14:13
3	4	An040207.d	1.	C1603074-002A 10X	A316_1UG	2 Apr 2016 14:50
4	5	An040208.d	1.	C1603074-004A 90X	A316_1UG	2 Apr 2016 15:27
5	6	An040209.d	1.	C1603076-009A 5X	A316_1UG	2 Apr 2016 16:03
6	7	An040210.d	1.	C1603079-001A 10X	A316_1UG	2 Apr 2016 16:40
7	8	An040211.d	1.	C1603079-002A 10X	A316_1UG	2 Apr 2016 17:17
8	9	An040212.d	1.	C1603079-003A 10X	A316_1UG	2 Apr 2016 17:53
9	10	An040213.d	1.	C1603079-004A 10X	A316_1UG	2 Apr 2016 18:30
0	11	An040214.d	1.	C1603079-005A 10X	A316_1UG	2 Apr 2016 19:06
1	12	An040215.d	1.	C1603079-006A 10X	A316_1UG	2 Apr 2016 19:43
2	13	An040216.d	1.	C1603078-001A 10X	A316_1UG	2 Apr 2016 20:19
3	14	An040217.d	1.	C1603078-001A 40X	A316_1UG	2 Apr 2016 20:56
4	15	An040218.d	1.	C1603078-002A 10X	A316_1UG	2 Apr 2016 21:32
5	16	An040219.d	1.	C1603078	A316_1UG -002A 40X	2 Apr 2016 22:08

Injection Log

Directory: C:\HPChem\1\DATA

Instrument # 1
Internal Standard Stock # A134535
Standard Stock # 134536
Misc Info # 134537
Method Ref: EPA TO-15 / Jan. 1999

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
56	17	An040220.d	1.	C1603078-003A 10X	A316_1UG	2 Apr 2016 22:45
57	18	An040221.d	1.	C1603078-003A 40X	A316_1UG	2 Apr 2016 23:21
58	19	An040222.d	1.	C1603078-004A 10X	A316_1UG	2 Apr 2016 23:58
59	20	An040223.d	1.	C1603078-004A 40X	A316_1UG	3 Apr 2016 00:34
60	21	An040224.d	1.	ALCS1UGD-040216	A316_1UG	3 Apr 2016 01:13
61	22	An040225.d	1.	C1603092-001A	A316_1UG	3 Apr 2016 01:52
62	23	An040226.d	1.	C1603092-002A	A316_1UG	3 Apr 2016 02:31
63	24	An040227.d	1.	C1603092-003A	A316_1UG	3 Apr 2016 03:10
64	25	An040228.d	1.	C1603092-004A	A316_1UG	3 Apr 2016 03:49
65	26	An040229.d	1.	C1603092-005A	A316_1UG	3 Apr 2016 04:28
66	27	An040230.d	1.	C1603092-006A	A316_1UG	3 Apr 2016 05:07
67	28	An040231.d	1.	C1603092-007A	A316_1UG	3 Apr 2016 05:46
68	29	An040232.d	1.	C1603092-008A	A316_1UG	3 Apr 2016 06:25
69	30	An040233.d	1.	C1603092-009A	A316_1UG	3 Apr 2016 07:03
70	31	An040234.d	1.	C1603092-010A	A316_1UG	3 Apr 2016 07:42
71	32	An040235.d	1.	C1603092-012A	A316_1UG	3 Apr 2016 08:21
72	33	An040236.d	1.	C1603092-015A	A316_1UG	3 Apr 2016 09:00
73		An040237.d	1.	No MS or GC data present		
74	1	An040301.d	1.	BFB1UG	A316_1UG	3 Apr 2016 09:42
75	2	An040302.d	1.	A1UG_1.0	A316_1UG	3 Apr 2016 11:40
76	3	An040303.d	1.	ALCS1UG-040316	A316_1UG	3 Apr 2016 12:29
77	4	An040304.d	1.	AMB1UG-040316	A316_1UG	3 Apr 2016 13:47
78	1	An040305.d	1.	WAC040316A	A316_1UG	3 Apr 2016 14:24
79	2	An040306.d	1.	WAC040316B	A316_1UG	3 Apr 2016 15:01
80	3	An040307.d	1.	WAC040316C	A316_1UG	3 Apr 2016 15:38
81	4	An040308.d	1.	WAC040316D	A316_1UG	3 Apr 2016 16:15
82	5	An040309.d	1.	WAC040316E	A316_1UG	3 Apr 2016 16:52
83	6	An040310.d	1.	C1603078-002A 90X	A316_1UG	3 Apr 2016 17:28
84	7	An040311.d	1.	C1603092-013A	A316_1UG	3 Apr 2016 18:07
85	8	An040312.d	1.	C1603092-013A MS	A316_1UG	3 Apr 2016 18:49
86	9	An040313.d	1.	C1603092-013A MSD	A316_1UG	3 Apr 2016 19:32
87	10	An040314.d	1.	C1603092-016A	A316_1UG	3 Apr 2016 20:11
88	11	An040315.d	1.	C1603092-017A	A316_1UG	3 Apr 2016 20:50
89	12	An040316.d	1.	C1603092-018A	A316_1UG	3 Apr 2016 21:29
90	13	An040317.d	1.	C1603092-019A	A316_1UG	3 Apr 2016 22:09
91	14	An040318.d	1.	C1603092-012A 10X	A316_1UG	3 Apr 2016 22:45
92	15	An040319.d	1.	C1603091-005A	A316_1UG	3 Apr 2016 23:24
93	16	An040320.d	1.	C1603091-005A MS	A316_1UG	4 Apr 2016 00:06
94	17	An040321.d	1.	C1603091-005A MSD	A316_1UG	4 Apr 2016 00:49
95	18	An040322.d	1.	C1603091-001A	A316_1UG	4 Apr 2016 01:28
96	19	An040323.d	1.	C1603091-002A	A316_1UG	4 Apr 2016 02:08
97	20	An040324.d	1.	C1603091-003A	A316_1UG	4 Apr 2016 02:47
98	21	An040325.d	1.	C1603091-004A	A316_1UG	4 Apr 2016 03:26
99	22	An040326.d	1.	C1603091-006A	A316_1UG	4 Apr 2016 04:06
00	23	An040327.d	1.	C1603091-007A	A316_1UG	4 Apr 2016 04:45
01		An040328.d	1.	No MS or GC data present		
02	28	An040401.d	1.	BFB1UG	A316_1UG	4 Apr 2016 09:00
03	29	An040402.d	1.	A1UG_1.0	A316_1UG	4 Apr 2016 09:37
04	30	An040403.d	1.	ALCS1UG-040416	A316_1UG	4 Apr 2016 10:16
05	31	An040404.d	1.	AMB1UG-040416	A316_1UG	4 Apr 2016 10:52
06	32	An040405.d	1.	C1603092-017A 40X	A316_1UG	4 Apr 2016 11:46
07	33	An040406.d	1.	C1603076-003A RE	A316_1UG	4 Apr 2016 12:25
08	34	An040407.d	1.	C1603076-005A RE	A316_1UG	4 Apr 2016 14:00
09	35	An040408.d	1.	C1603076-002A RE	A316_1UG	4 Apr 2016 14:39
10	36	An040409.d	1.	C1603076-007A RE	A316_1UG	4 Apr 2016 15:18

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS LOG

Centek Laboratories, LLC

GC/MS Calibration Standards Logbook

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Finial Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-1201	1/15/16	1/22/16	TO15 APH	A1188	1ppm	1.5	30	50	MD	
A-1202	↓	↓	TO15 UG APH	A1201	50ppb	0.9	45	1	↓	
A-1203	1/15/16	1/15/17	TO15 MIX	"	1ppm	LINDE TO15 MIX		1ppm	MD	
A-1204	1/18/16	1/18/17	LCS TO15	"	A0534 STD IS NOW LCS			1ppm	L.L.	
A-1205	1/18/16	1/25/16	TO15 IS	A1174	1ppm	1.5	30	50ppb	MD	
A-1206			LCS	A1204						
A-1207			STD	A1203						
A-1208			TO15 FORM	A0974	11.5ppm	0.20	45			
A-1209			SILOX	~~A1564~~ A0065	A0065/500ppb	3.0	30			
A-1210			SULF	A0276	1ppm	1.5		500ppb		
A-1211			H2S	A0265	10ppm					
A-1212			TO15 4PCH	9519	1ppm	1.5	30	50ppb		
A-1213			4PCHS	A1212	50ppb	3.0		5ppb		
A-1214			TO15 UG IS	A1205		0.9	45	1ppb		
A-1215			STD	A1207						
A-1216			LCS	A1206						
A-1217	1/25/16	2/1/16	TO15 IS	A1174	1ppm	1.5	30	50ppb	MD	
A-1218			~~STD~~	A1203						
A-1219			LCS	A1204						
A-1220			4PCH	9519						
A-1221			4PCHS	A1220	50ppb	3.0	30	5		

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Centek Laboratories, LLC

GC/MS Calibration Standards Logbook

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Finial Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-1285	2/29/16	3/7/16	TO15 H_2S	A0269	10 ppm	1.5	30	500	WD	
A-1286	↓	↓	TO15 14G IS	A1277	50 ppb	0.9	45	1	↓	
A-1287			STD	A1278	↓	↓	↓	↓	↓	
A-1288	↓	↓	↓ LCS	A1279	↓	↓	↓	↓	↓	
A-1289	3/1/16	3/1/17	TO15 IS	FF-4969	LINDE		2100 psig	1 ppm	WD	
A-1290	3/7/16	3/14/16	TO15 IS	A1289	1 ppm	1.5	30	50	WD	
A-1291	↓	↓	STD	A1203	↓	↓	↓	↓	↓	
A-1292			LCS	A1204						
A-1293			4PCH	9519	↓	↓	↓	↓		
A-1294			4PCHS	A1293	50 ppb	3.0	30	5		
A-1295			FORM	A0974	11.5 ppm	0.20	45	50		
A-1296			SIOX	A1088 / A1089	500 ppb	3.0	30	50		
A-1297			SUF	A0270	1 ppm	1.5	30	50		
A-1298			↓ H_2S	A0269	10 ppm	1.5	30	500		
A-1299			TO15 14G IS	A1290	50 ppb	0.9	45	1		
A-1300			STD	A1291	↓	↓	↓	↓	↓	
A-1301	↓	↓	↓ LCS	A1292	↓	↓	↓	↓		
A-1302	3/14/16	3/21/16	TO15 IS	A1289	1 ppm	1.5	30	50	WD	
A-1303			STD	A1203	↓	↓	↓	↓	↓	
A-1304			LCS	A1204						
A-1305	↓	↓	↓ 4PCH	9519	↓	↓	↓	↓	↓	

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Centek Laboratories, LLC

GC/MS Calibration Standards Logbook

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Finial Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-1306	3/14/16	3/21/16	TO15 4PCH5	A1305	50 ppb	3.0	30	5	WA	
A-1307	↓	↓	FORM	A0974	11.5 ppm	0.20	45	50	↓	
A-1308			SIL X	A1088 / A1089	500 ppb	3.0	30	50		
A-1309			SOLF	A0270	1 ppm	1.5	30	50		
A-1310			H2S	A0269	10 ppm	1.5	30	500		
A-1311			TO15 146 IS	A1302	50 ppb	0.9	45	1		
A-1312			STD	A1303	↓	↓	↓	↓		
A-1313	↓	↓	LCS	A1304	↓	↓	↓	↓	↓	
A-1314	3/21/16	3/28/16	TO15 IS	A1289	1 ppm	1.5	30	50	WD	
A-1315			STD	A1203						
A-1316			LCS	A1204						
A-1317			4PCH	9519	↓	↓	↓	↓		
A-1318			4PCH5	A1317	50 ppb	3.0	30	5		
A-1319			FORM	A0974	11.5 ppm	0.20	45	50		
A-1320			SIL X	A1088 / A1089	500 ppb	3.0	30	50		
A-1321			SOLF	A0270	1 ppm	1.5	30	50		
A-1322			H2S	A0269	10 ppm	1.5	30	500		
A-1323			TO15 146 IS	A1314	50 ppb	0.9	45	1		
A-1324			STD	A1315	↓	↓	↓	↓		
A-1325	↓	↓	LCS	A1316	↓	↓	↓	↓	↓	
A-1326	3/28/16	4/4/16	TO15 IS	A1289	1 ppm	1.5	30	50	WD	

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Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Finial Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-1327	3/28/16	4/4/16	TO15 STD	A1203	1 ppm	1.5	30	50	JA	
A-1328			LCS	A1204						
A-1329			4PCH	9519						
A-1330			4PCHS	A1329	50 ppb	3.0	30	5		
A-1331			FORM	A0974	11.5 ppm	0.20	45	50		
A-1332			SILX	A1088 / A1089	500 ppb	3.0	30	50		
A-1333			SULF	A0270	1 ppm	1.5	30	50		
A-1334			H2S	A0269 / A0271	10 ppm	1.5	30	500		
A-1335			TO15 14G IS	A1326	50 ppb	0.9	45	1		
A-1336			STD	A1327						
A-1337			LCS	A1328						
A-1338	4/4/16	4/11/16	TO15 IS	A1289	1 ppm	1.5	30	50	JA	
A-1339			STD	A1203						
A-1340			LCS	A1204						
A-1341			4PCH	9519						
A-1342			4PCHS	A1341	50 ppb	3.0	30	5		
A-1343			FORM	A0974	11.5 ppm	0.20	45	50		
A-1344			SILX	A1088 / A1089	500 ppb	3.0	30	50		
A-1345			SULF	A0270	1 ppm	1.5	30	50		
A-1346			H2S	A0269	10 ppm	1.5	30	500		
A-1347			TO15 14G IS	A1338	50 ppb	0.9	45	1		

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GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CANISTER CLEANING LOG

Centek Laboratories, LLC

Instrument: Entech 3100

QC Canister Cleaning Logbook

Canister Number	QC Can Number	Number of Cycles	Date	QC Batch Number	Detection Limits	Leak Test 24hr (psig str/stp)	
137	192	30	2.19.16	WAC021916 A	ND 1ug/m3 to 0.25	+ 30	+ 30
83						+	+
1179						+	+
567						+	+
192						+	+
229	205			WAC021916 B		+	+
89						+	+
93						+	+
225						+	+
205						+	+
198	223			WAC021916 C		+	+
286						+	+
553						+	+
1177						+	+
223						+	+
141	128			WAC021916 D		+	+
242						+	+
316						+	+
158						+	+
128						+	+
248	130			WAC021916 E		+	+
460						+	+
94						+	+
239						+	+
130						+	+

Cleaned by: RSP

Form C151

Centek Laboratories, LLC

Instrument: Entech 3100

Canister Number	QC Can Number	Number of Cycles	Date	QC Batch Number	Detection Limits	Leak Test 24hr (psig str/stp)	
542	106	30	2.19.16	WAC021916 F	1ug/m3+0.25	+ 30	+ 30
245						+	+
226						+	+
322						+	+
106				WAC021916G		+	+
98	363					+	+
100						+	+
367						+	+
571						+	+
363				WAC021916 H		+	+
332	326					+	+
274						+	+
168						+	+
327						+	+
326				WAC021916 I		+	+
231	541					+	+
101						+	+
1190						+	+
157						+	+
541						+	+
						+	+
						+	+
						+	+
						+	+
						+	+

Cleaned by: RJP

Form C151

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Instrument: Entech 3100

Canister Number	QC Can Number	Number of Cycles	Date	QC Batch Number	Detection Limits	Leak Test 24hr (psig str/stp)	
1179	139	20	3/8/16	WAC030816A	1ppb+0.25	+ 30	+ 30
465						+	+
141						+	+
567						+	+
139						+	+
223	366			B		+	+
419						+	+
128						+	+
192						+	+
366						+	+
1183	1193			C		+	+
1188						+	+
136						+	+
286						+	+
1193						+	+
205	138			D		+	+
318						+	+
370						+	+
1182						+	+
138						+	+
142	229			E		+	+
1177						+	+
93						+	+
131						+	+
225						+	+

Cleaned by: RJP Form C151 Page # 149

Centek Laboratories, LLC

QC Canister Cleaning Logbook

Instrument: Entech 3100

Canister Number	QC Can Number	Number of Cycles	Date	QC Batch Number	Detection Limits	Leak Test 24hr (psig str/stp)	
1178	89	20	3/8/16	WAC030816F	1/g+0.25	+ 30	+ 30
332						+	+
564						+	+
1195						+	+
89						+	+
484 (1.4)	212			G		+	+
1200						+	+
218						+	+
1204						+	+
212						+	+
214	1201			H		+	+
1198						+	+
1196						+	+
487						+	+
1201						+	+
						+	+
						+	+
						+	+
						+	+
						+	+
						+	+
						+	+
						+	+
						+	+
						+	+

Cleaned by: RSP

Form C151

Page # 150

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021910.D Vial: 5
Acq On : 19 Feb 2016 2:58 pm Operator: RJP
Sample : WAC021916E Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 07:55:01 2016 Quant Results File: A204_1UG.RES

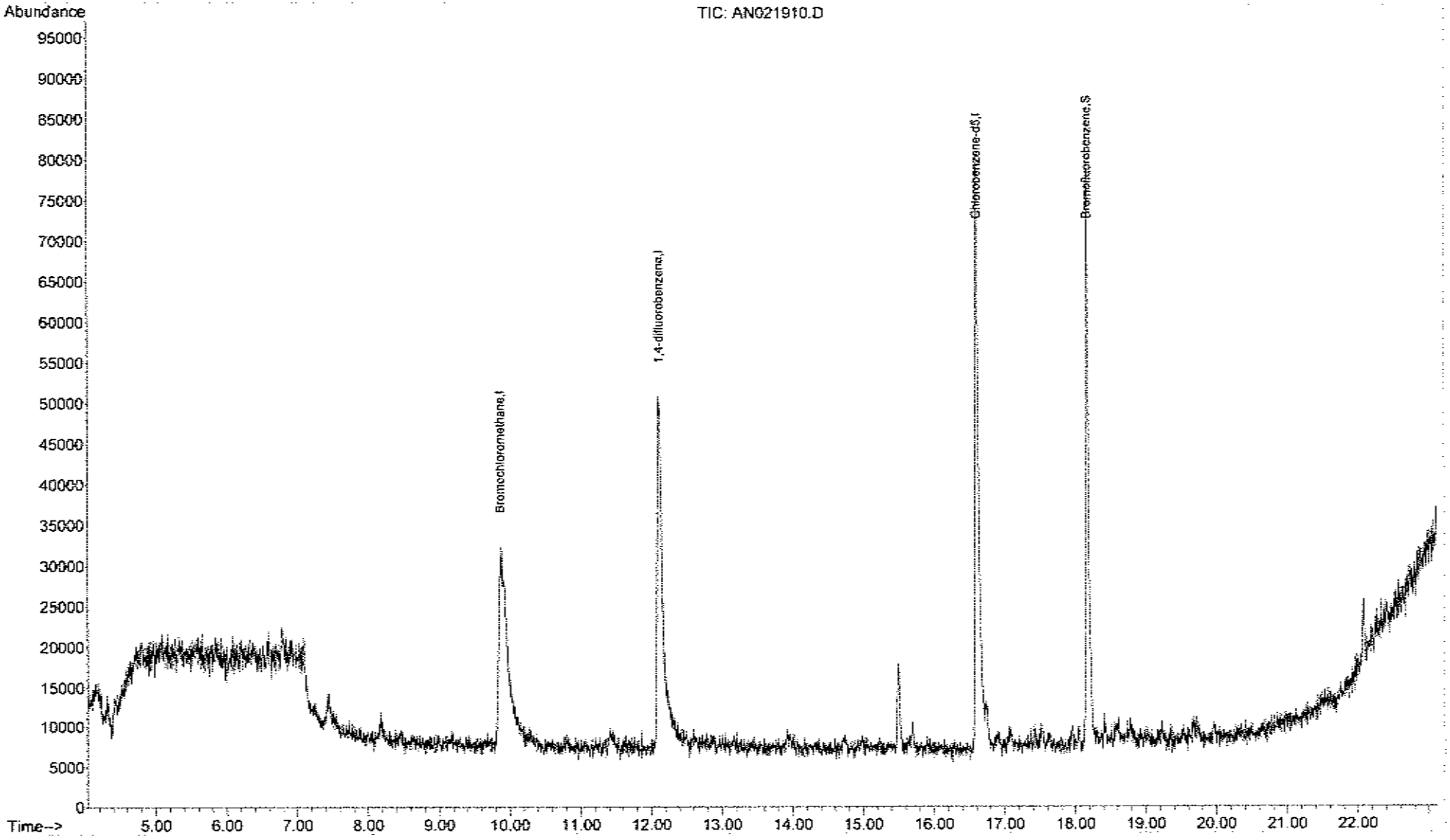
Quant Method : C:\HPCHEM\1\METHODS\A204_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Feb 11 11:13:02 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.87	128	32071m	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.12	114	87046	1.00	ppb	0.03
50) Chlorobenzene-d5	16.60	117	81502	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.17	95	39860m	0.72	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 72.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AN021910.D A316_1UG.M Wed Apr 27 09:43:41 2016 MSD1 Page 1

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021910.D Vial: 5
Acq On : 19 Feb 2016 2:58 pm Operator: RJP
Sample : WAC021916E Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTBINT.P
Quant Time: Feb 22 9:02 2016 Quant Results File: A204_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021911.D Vial: 6
Acq On : 19 Feb 2016 3:36 pm Operator: RJP
Sample : WAC021916F Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 07:55:02 2016 Quant Results File: A204_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A204_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Feb 11 11:13:02 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

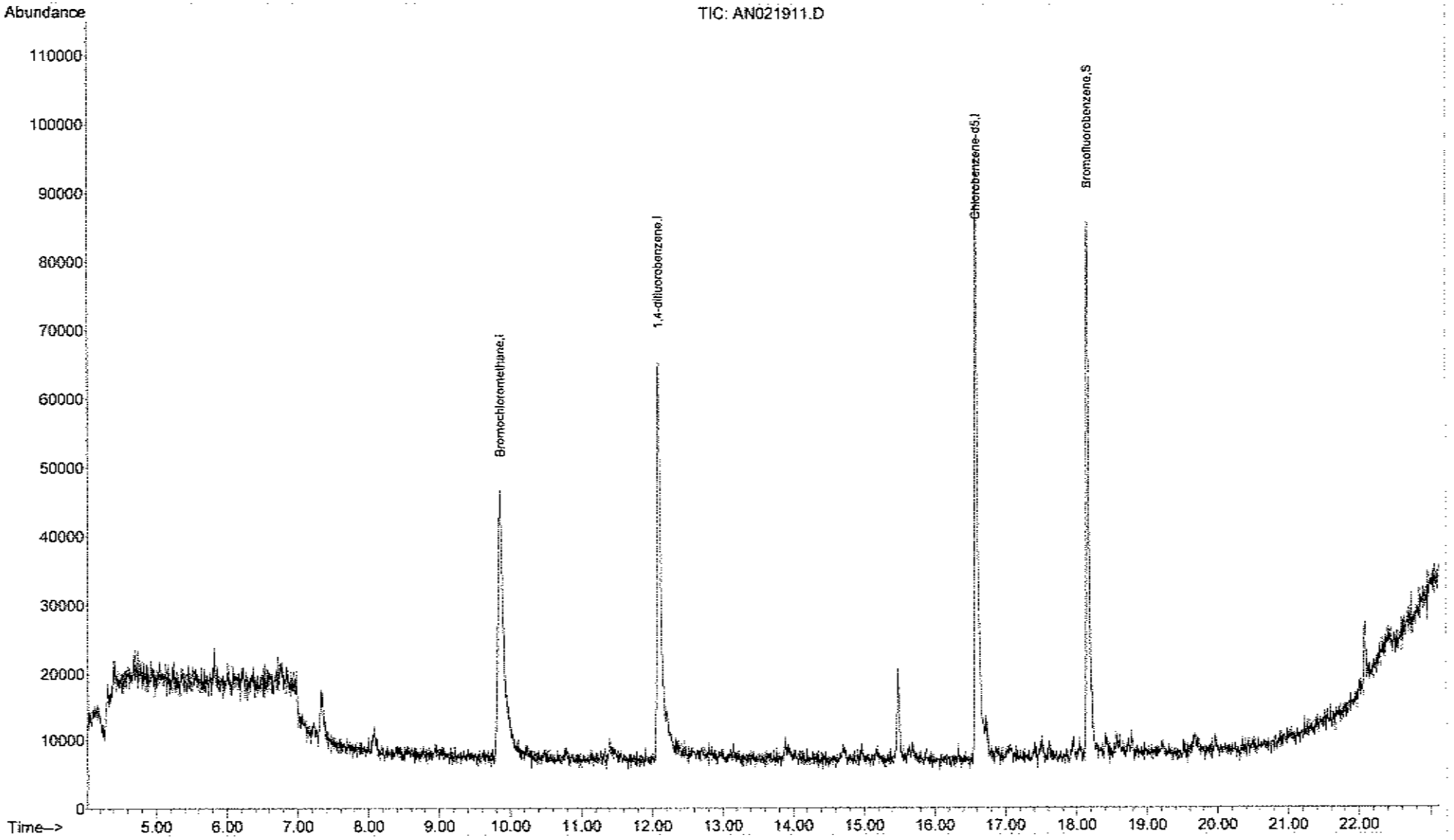
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.87	128	30090	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.10	114	93261	1.00	ppb	0.01
50) Chlorobenzene-d5	16.59	117	83480	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.16	95	40440m	0.71	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 71.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021911.D Vial: 6
Acq On : 19 Feb 2016 3:36 pm Operator: RJP
Sample : WAC021916F Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 9:02 2016 Quant Results File: A204_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021912.D Vial: 1
Acq On : 19 Feb 2016 5:20 pm Operator: RJP
Sample : WAC021916G Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 07:55:03 2016 Quant Results File: A204_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A204_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Feb 11 11:13:02 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

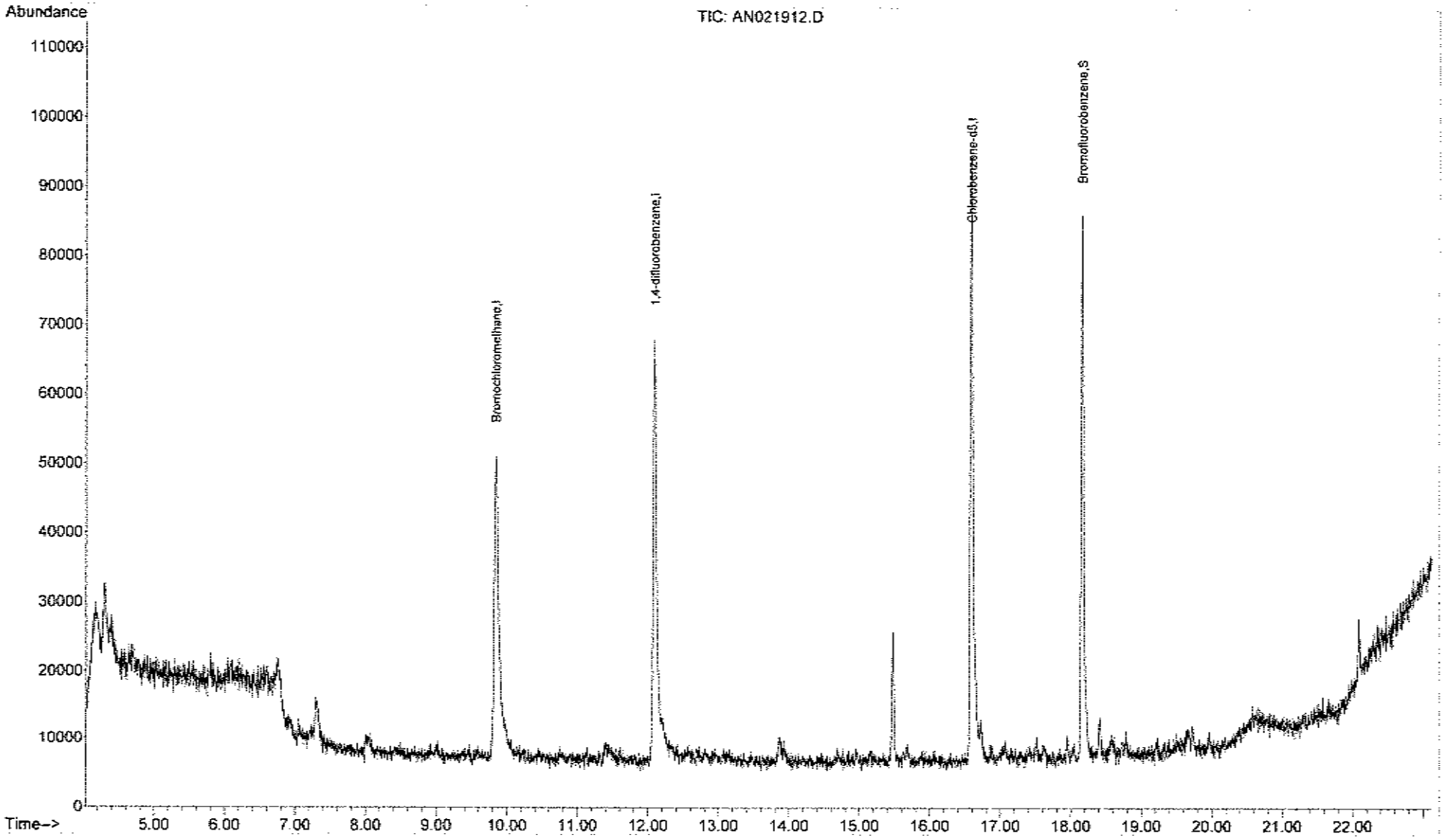
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.84	128	30565	1.00	ppb	-0.02
35) 1,4-difluorobenzene	12.09	114	86165	1.00	ppb	0.00
50) Chlorobenzene-d5	16.59	117	81355	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.16	95	38855m	0.70	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 70.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021912.D Vial: 1
Acq On : 19 Feb 2016 5:28 pm Operator: RJP
Sample : WAC021916G Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 9:02 2016 Quant Results File: A204_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021913.D Vial: 2
Acq On : 19 Feb 2016 6:05 pm Operator: RJP
Sample : WAC021916H Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 07:55:04 2016 Quant Results File: A204_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A204_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Feb 11 11:13:02 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

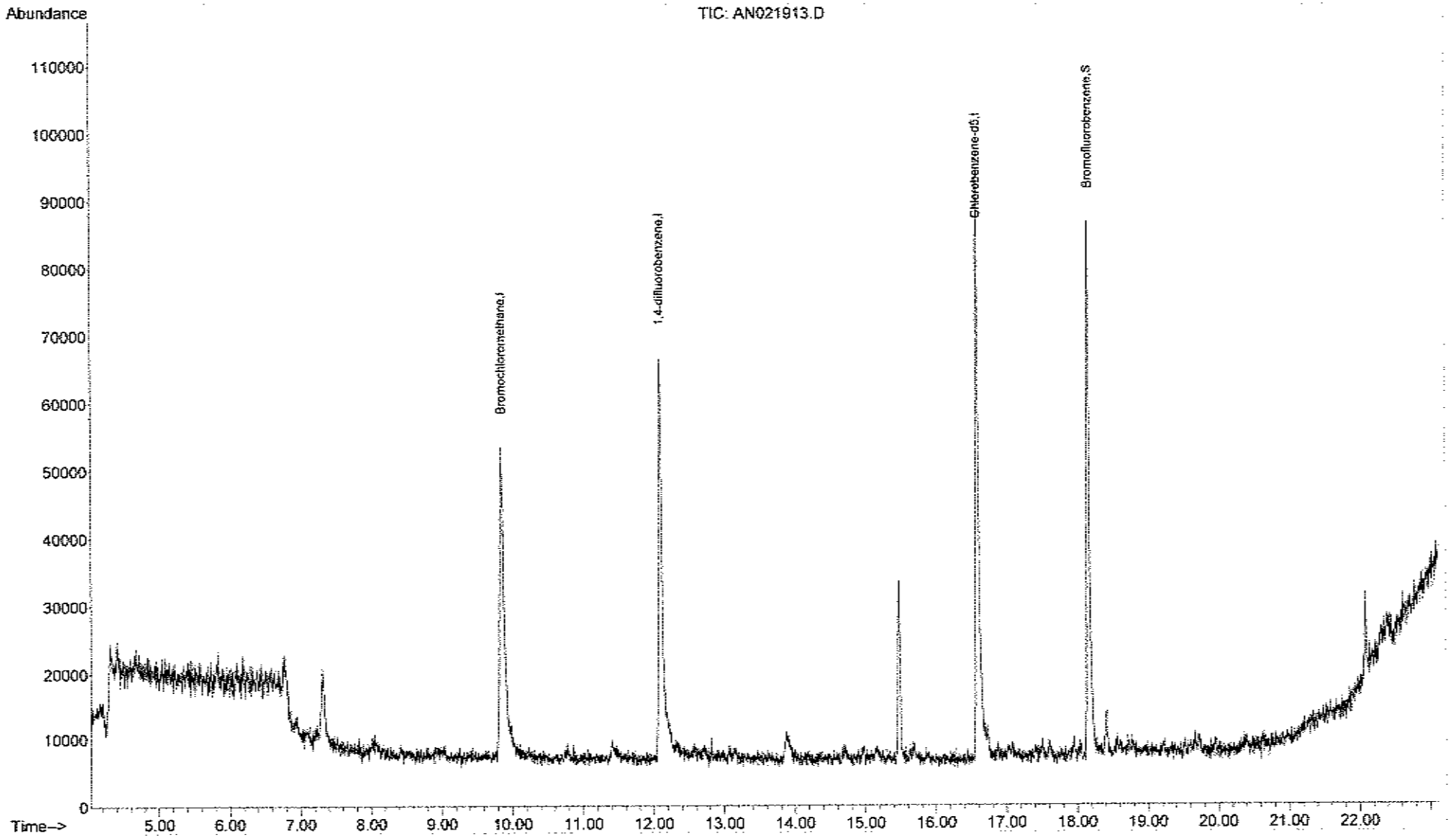
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.85	128	30719	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.09	114	88980	1.00	ppb	0.00
50) Chlorobenzene-d5	16.58	117	82754	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.16	95	42155m	0.75	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 75.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021913.D Vial: 2
Acq On : 19 Feb 2016 6:05 pm Operator: RJP
Sample : WAC021916H Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 9:02 2016 Quant Results File: A204_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



AN021913.D A316_1UG.M Wed Apr 27 09:43:51 2016 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021914.D Vial: 3
Acq On : 19 Feb 2016 6:43 pm Operator: RJP
Sample : WAC021916I Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 07:55:05 2016 Quant Results File: A204_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A204_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Feb 11 11:13:02 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

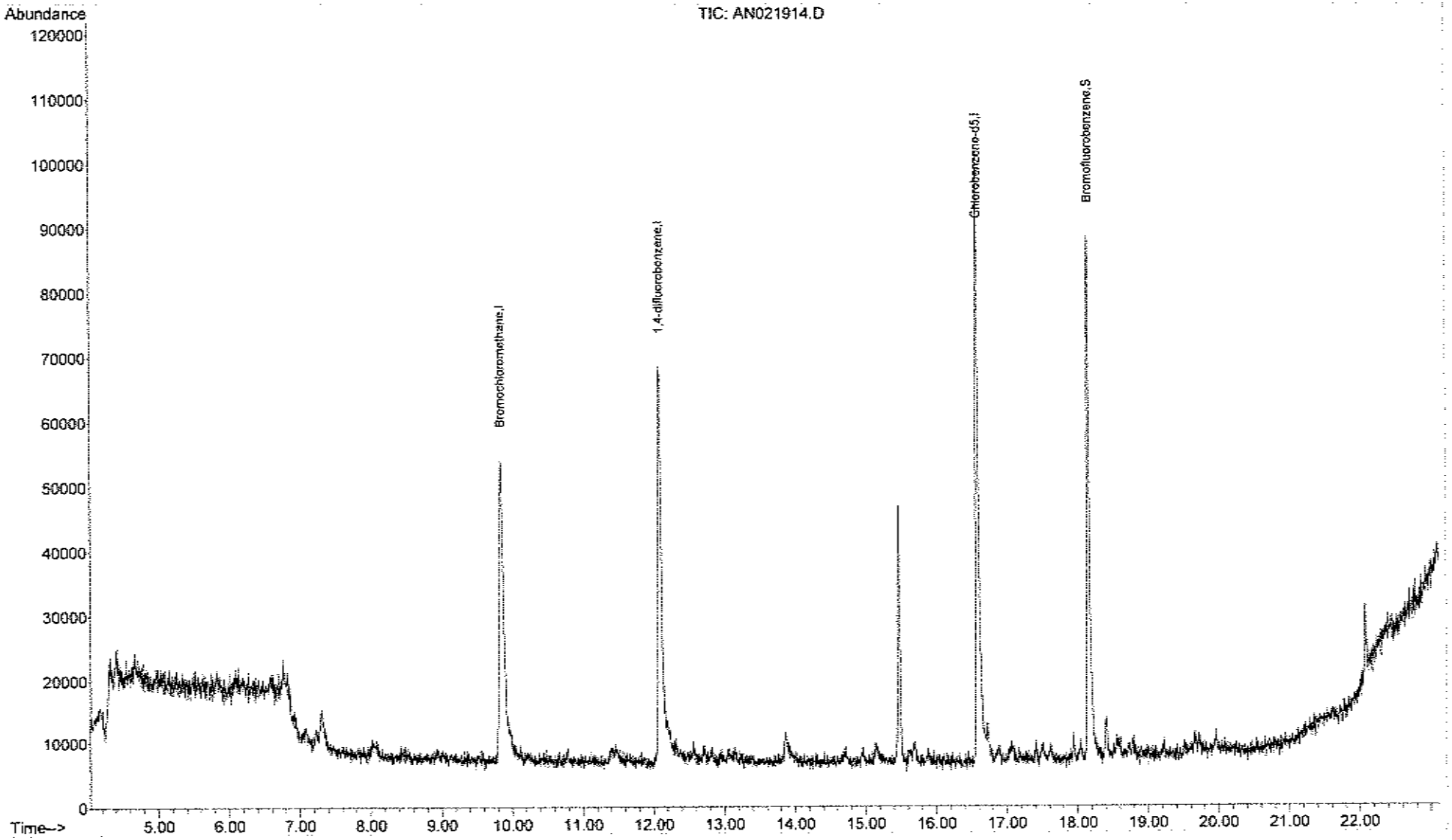
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.85	128	30896	1.00	ppb	-0.01
35) 1,4-difluorobenzene	12.09	114	90545	1.00	ppb	0.00
50) Chlorobenzene-d5	16.58	117	83125	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.16	95	41130m	0.73	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 73.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021914.D Vial: 3
Acq On : 19 Feb 2016 6:43 pm Operator: RJP
Sample : WAC021916I Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 9:03 2016 Quant Results File: A204_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021915.D Vial: 4
Acq On : 19 Feb 2016 7:20 pm Operator: RJP
Sample : WAC021916J Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 07:55:06 2016 Quant Results File: A204_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A204_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Feb 11 11:13:02 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

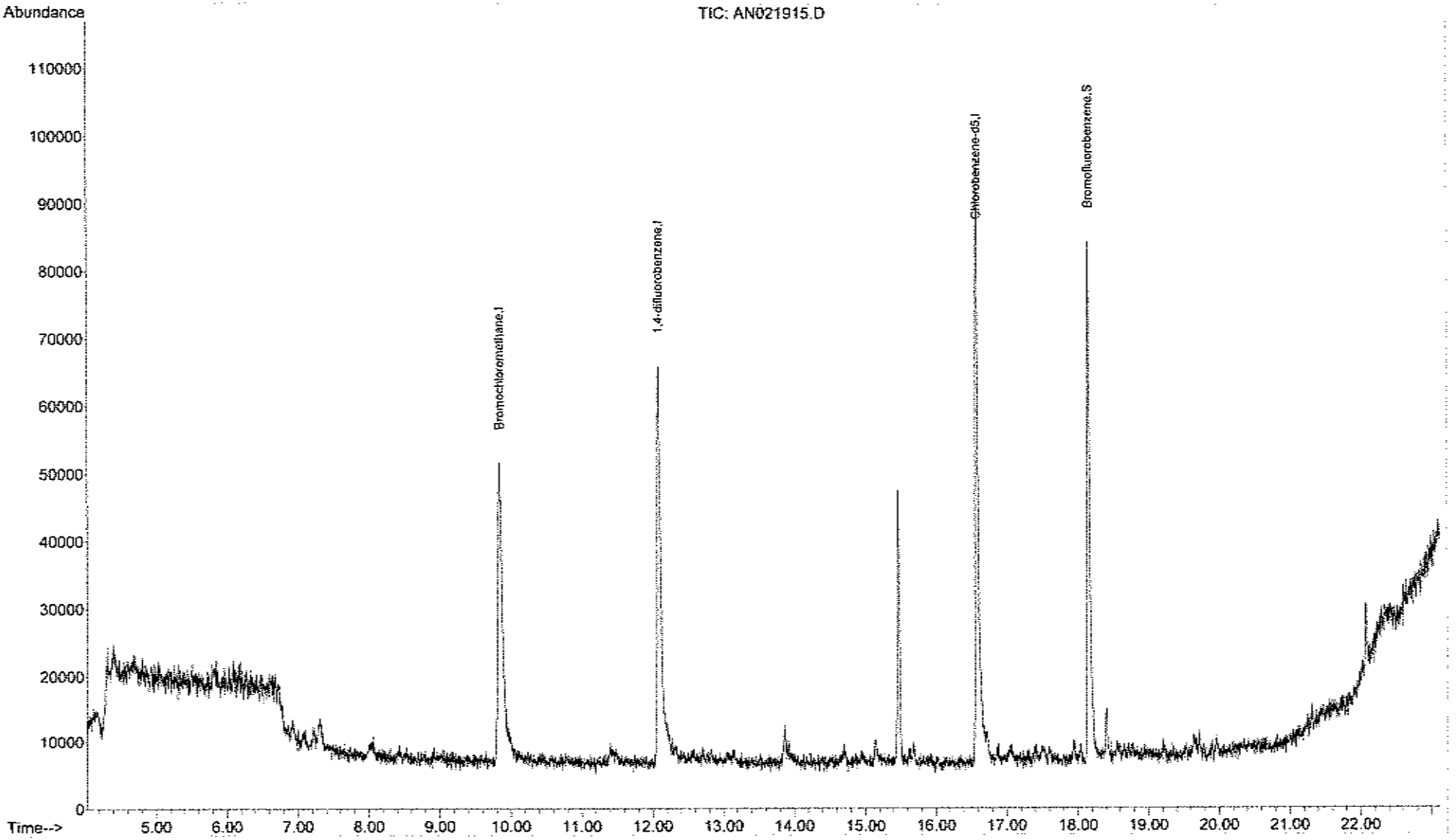
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.85	128	29544	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.09	114	84494	1.00	ppb	0.00
50) Chlorobenzene-d5	16.58	117	79265	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.16	95	39870m	0.74	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 74.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021915.D Vial: 4
Acq On : 19 Feb 2016 7:20 pm Operator: RJP
Sample : WAC021916J Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 9:03 2016 Quant Results File: A204_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021916.D Vial: 5
Acq On : 19 Feb 2016 7:57 pm Operator: RJP
Sample : WAC021916K Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 07:55:07 2016 Quant Results File: A204_1UG.RES

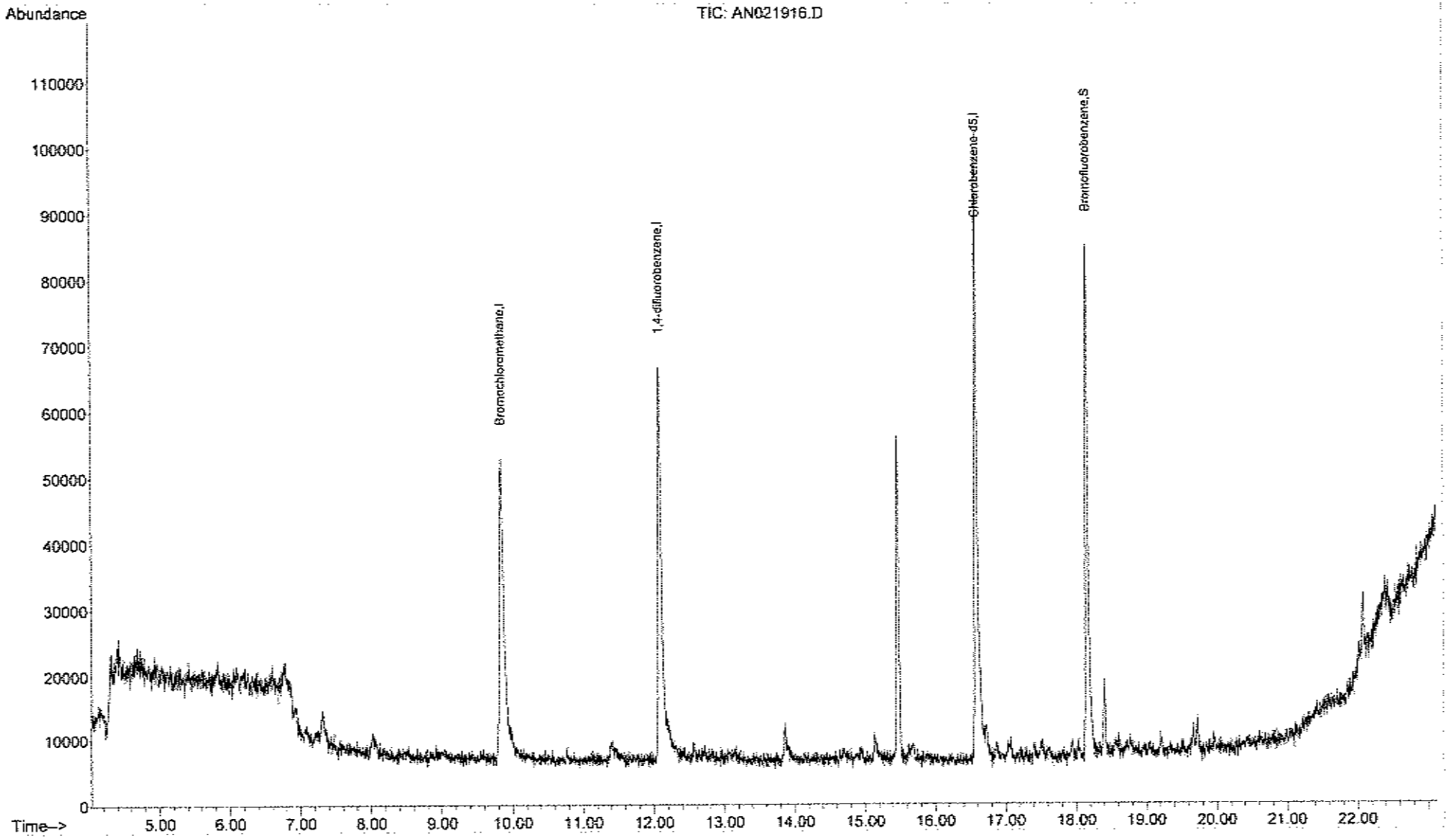
Quant Method : C:\HPCHEM\1\METHODS\A204_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Feb 11 11:13:02 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.84	128	29343	1.00	ppb	-0.02
35) 1,4-difluorobenzene	12.10	114	88390	1.00	ppb	0.00
50) Chlorobenzene-d5	16.59	117	80484	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	18.15	95	40271m	0.73	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 73.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA2\2016FEB\AN021916.D Vial: 5
Acq On : 19 Feb 2016 7:57 pm Operator: RJP
Sample : WAC021916K Inst : MSD #1
Misc : A204_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 22 9:03 2016 Quant Results File: A204_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030805.D Vial: 5
Acq On : 8 Mar 2016 2:56 pm Operator: RJP
Sample : WAC030816A Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 09 10:51:24 2016 Quant Results File: A307_1UG.RES

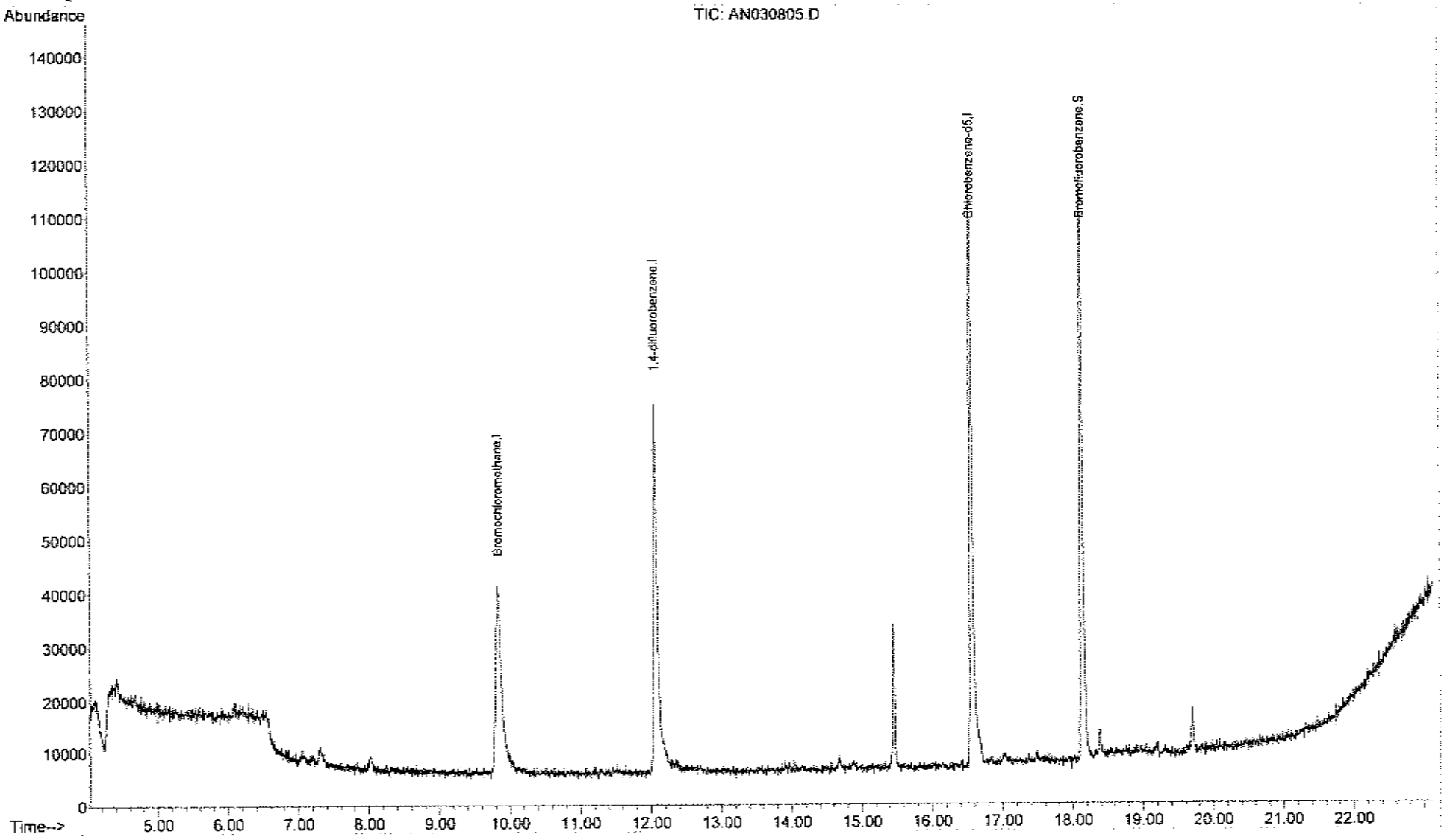
Quant Method : C:\HPCHEM\1\METHODS\A307_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 08 11:08:59 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.83	128	25136	1.00	ppb	0.06
35) 1,4-difluorobenzene	12.07	114	116173	1.00	ppb	0.03
50) Chlorobenzene-d5	16.56	117	102380	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	63120	0.83	ppb	0.02
Spiked Amount 1.000	Range 70 - 130		Recovery = 83.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA2\AN030805.D Vial: 5
Acq On : 8 Mar 2016 2:56 pm Operator: RJP
Sample : WAC030816A Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 14 10:17 2016 Quant Results File: A307_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030806.D
Acq On : 8 Mar 2016 3:33 pm
Sample : WAC030816B
Misc : A307_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 09 10:51:30 2016

Vial: 6
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A307_1UG.RES

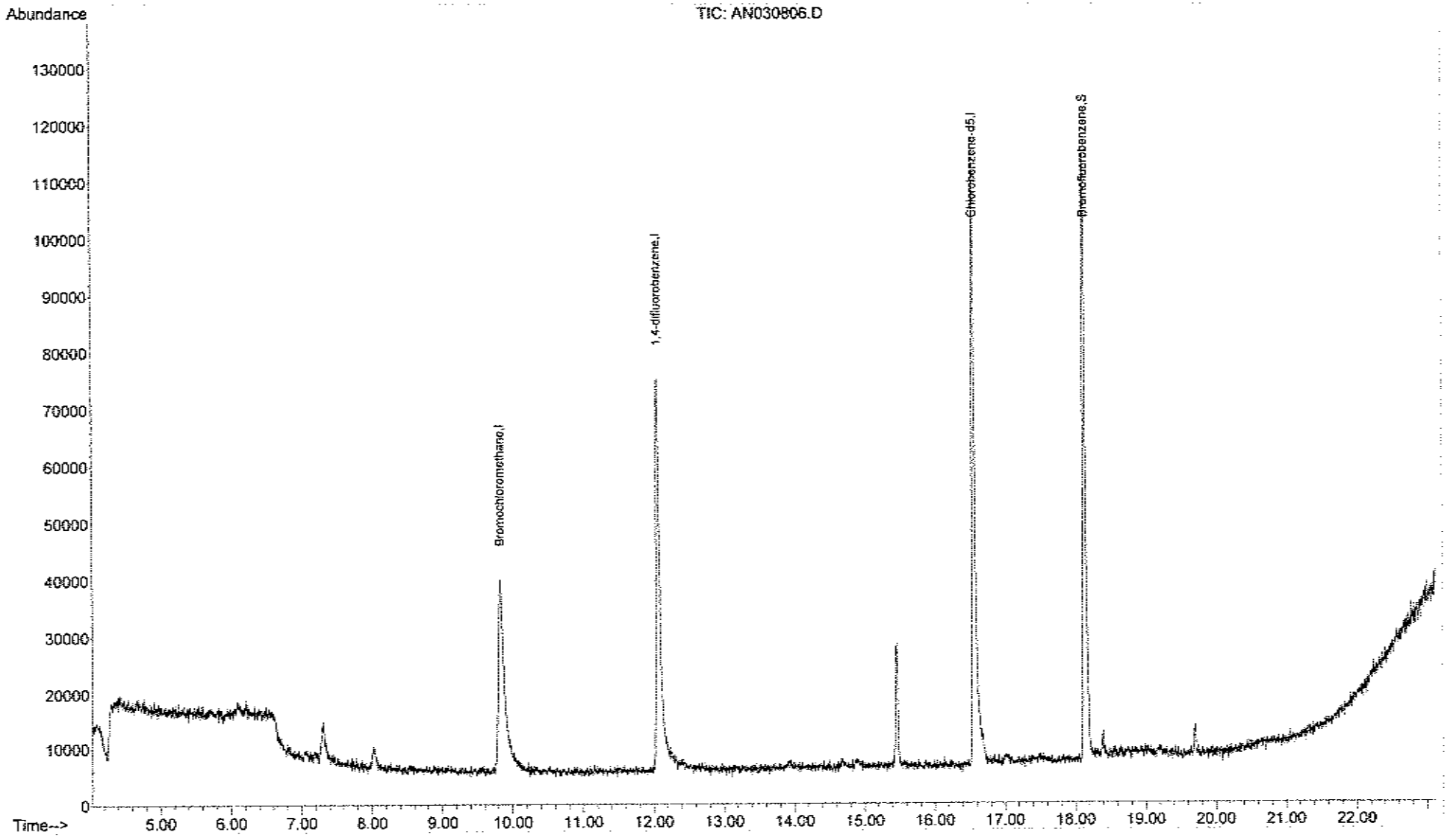
Quant Method : C:\HPCHEM\1\METHODS\A307_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 08 11:08:59 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.83	128	30593m	1.00	ppb	0.05
35) 1,4-difluorobenzene	12.06	114	115546	1.00	ppb	0.02
50) Chlorobenzene-d5	16.56	117	98368	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	60091	0.82	ppb	0.02
Spiked Amount 1.000	Range 70 - 130		Recovery = 82.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA2\AN030806.D Vial: 6
Acq On : 8 Mar 2016 3:33 pm Operator: RJP
Sample : WAC030816B Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 14 10:17 2016 Quant Results File: A307_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030807.D Vial: 7
Acq On : 8 Mar 2016 4:10 pm Operator: RJP
Sample : WAC030816C Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 09 10:51:37 2016 Quant Results File: A307_1UG.RES

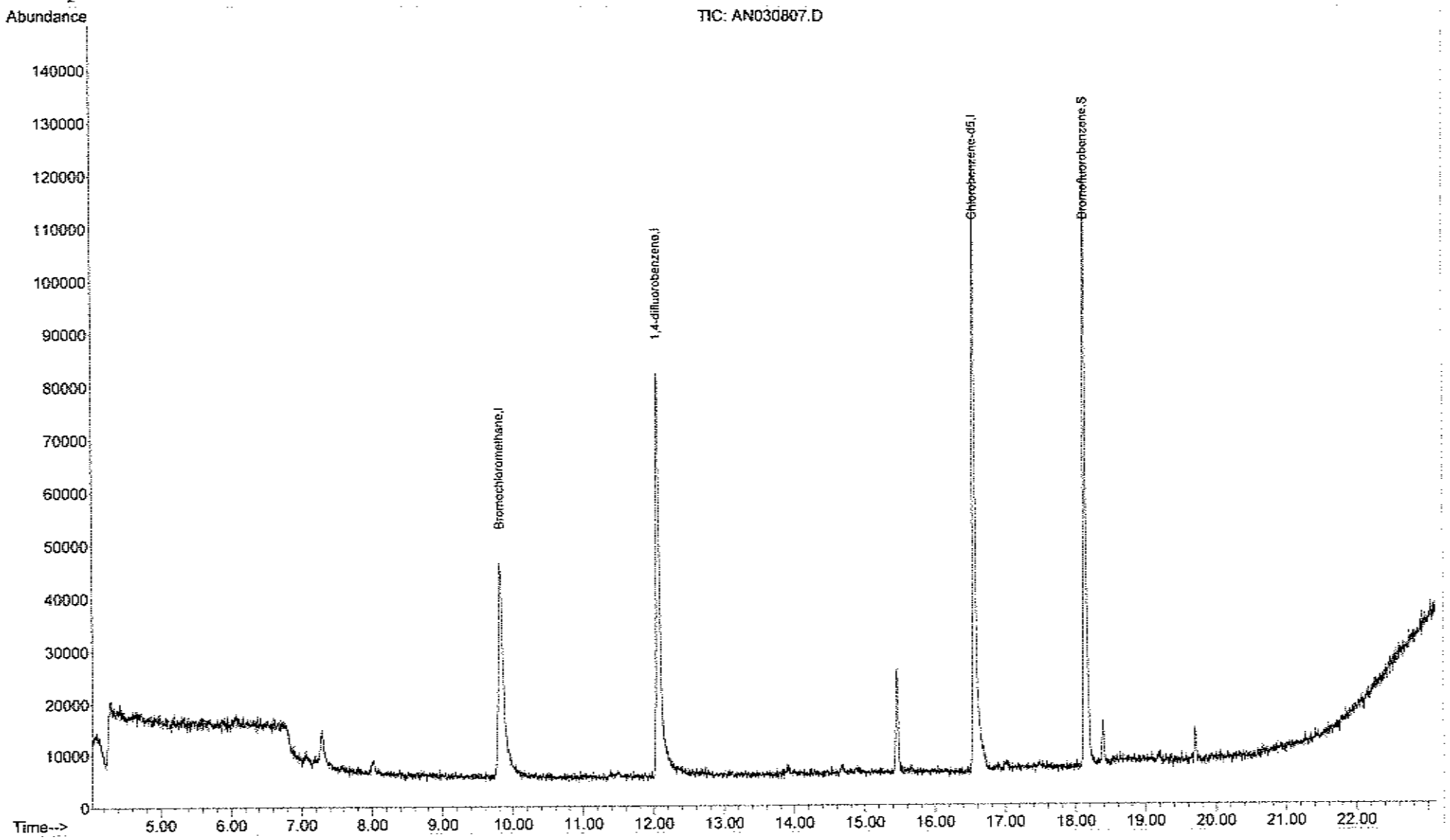
Quant Method : C:\HPCHEM\1\METHODS\A307_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 08 11:08:59 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.82	128	31202m	1.00	ppb	0.04
35) 1,4-difluorobenzene	12.06	114	118323	1.00	ppb	0.02
50) Chlorobenzene-d5	16.56	117	102460	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	63649	0.83	ppb	0.01
Spiked Amount 1.000	Range 70 - 130		Recovery = 83.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA2\AN030807.D Vial: 7
Acq On : 8 Mar 2016 4:10 pm Operator: RJP
Sample : WAC030816C Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 14 10:18 2016 Quant Results File: A307_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030808.D Vial: 8
Acq On : 8 Mar 2016 4:48 pm Operator: RJP
Sample : WAC030816D Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 09 10:51:47 2016 Quant Results File: A307_1UG.RES

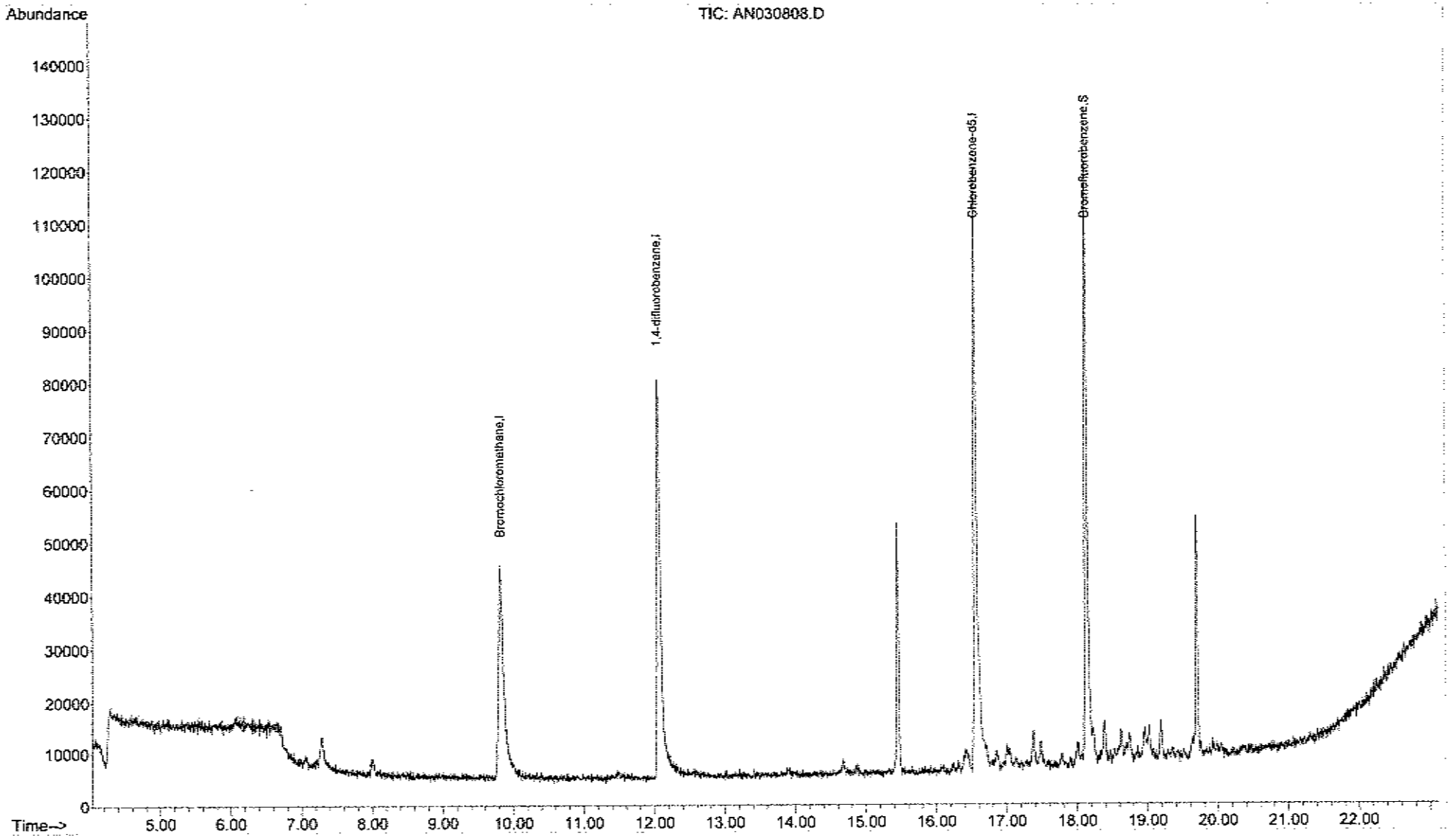
Quant Method : C:\HPCHEM\1\METHODS\A307_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 08 11:08:59 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.83	128	30436m	1.00	ppb	0.05
35) 1,4-difluorobenzene	12.06	114	114980	1.00	ppb	0.02
50) Chlorobenzene-d5	16.56	117	98955	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	61350	0.83	ppb	0.01
Spiked Amount 1.000	Range 70 - 130		Recovery = 83.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AN030808.D A316_1UG.M Wed Apr 27 09:45:00 2016 MSD1 Page 1

Data File : C:\HPCHEM\1\DATA2\AN030808.D Vial: 8
Acq On : 8 Mar 2016 4:48 pm Operator: RJP
Sample : WAC030816D Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 14 10:18 2016 Quant Results File: A307_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030809.D Vial: 9
Acq On : 8 Mar 2016 5:25 pm Operator: RJP
Sample : WAC030816E Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 09 10:51:55 2016 Quant Results File: A307_1UG.RES

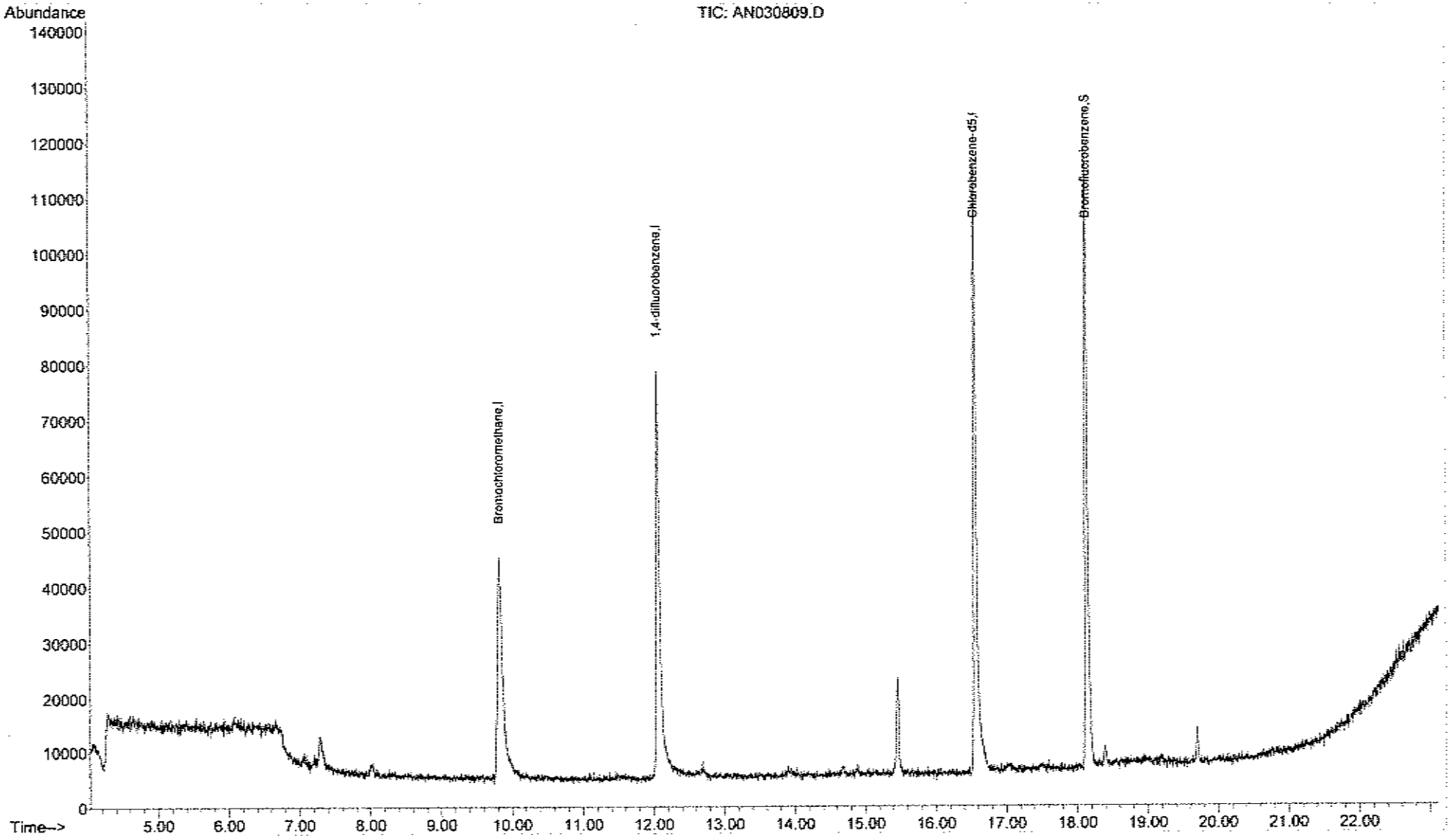
Quant Method : C:\HPCHEM\1\METHODS\A307_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 08 11:08:59 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.82	128	29860m	1.00	ppb	0.05
35) 1,4-difluorobenzene	12.07	114	113615	1.00	ppb	0.03
50) Chlorobenzene-d5	16.56	117	100480	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	60863	0.81	ppb	0.02
Spiked Amount 1.000	Range 70 - 130		Recovery = 81.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA2\AN030809.D Vial: 9
Acq On : 8 Mar 2016 5:25 pm Operator: RJP
Sample : WAC030816E Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 14 10:18 2016 Quant Results File: A307_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030810.D Vial: 10
Acq On : 8 Mar 2016 6:03 pm Operator: RJP
Sample : WAC030816F Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 09 10:52:04 2016 Quant Results File: A307_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A307_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 08 11:08:59 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

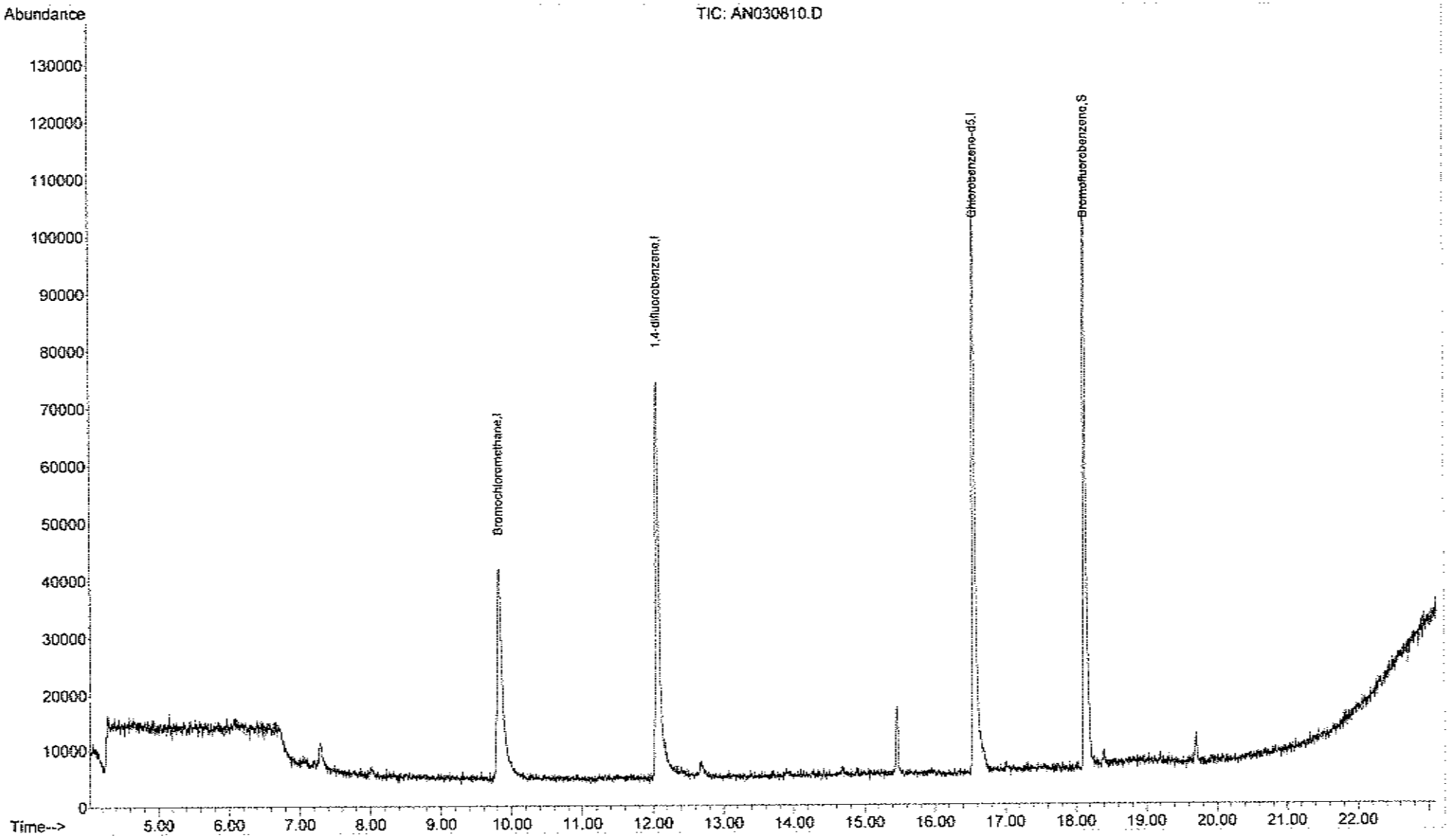
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.83	128	24540	1.00	ppb	0.05
35) 1,4-difluorobenzene	12.07	114	110396	1.00	ppb	0.03
50) Chlorobenzene-d5	16.56	117	94956	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	58532	0.83	ppb	0.01
Spiked Amount 1.000	Range 70 - 130		Recovery = 83.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030810.D Vial: 10
Acq On : 8 Mar 2016 6:03 pm Operator: RJP
Sample : WAC030816F Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 14 10:18 2016 Quant Results File: A307_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



AN030810.D A316_1UG.M Wed Apr 27 09:45:08 2016 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030811.D Vial: 11
Acq On : 8 Mar 2016 6:40 pm Operator: RJP
Sample : WAC030816G Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 09 10:52:16 2016 Quant Results File: A307_1UG.RES

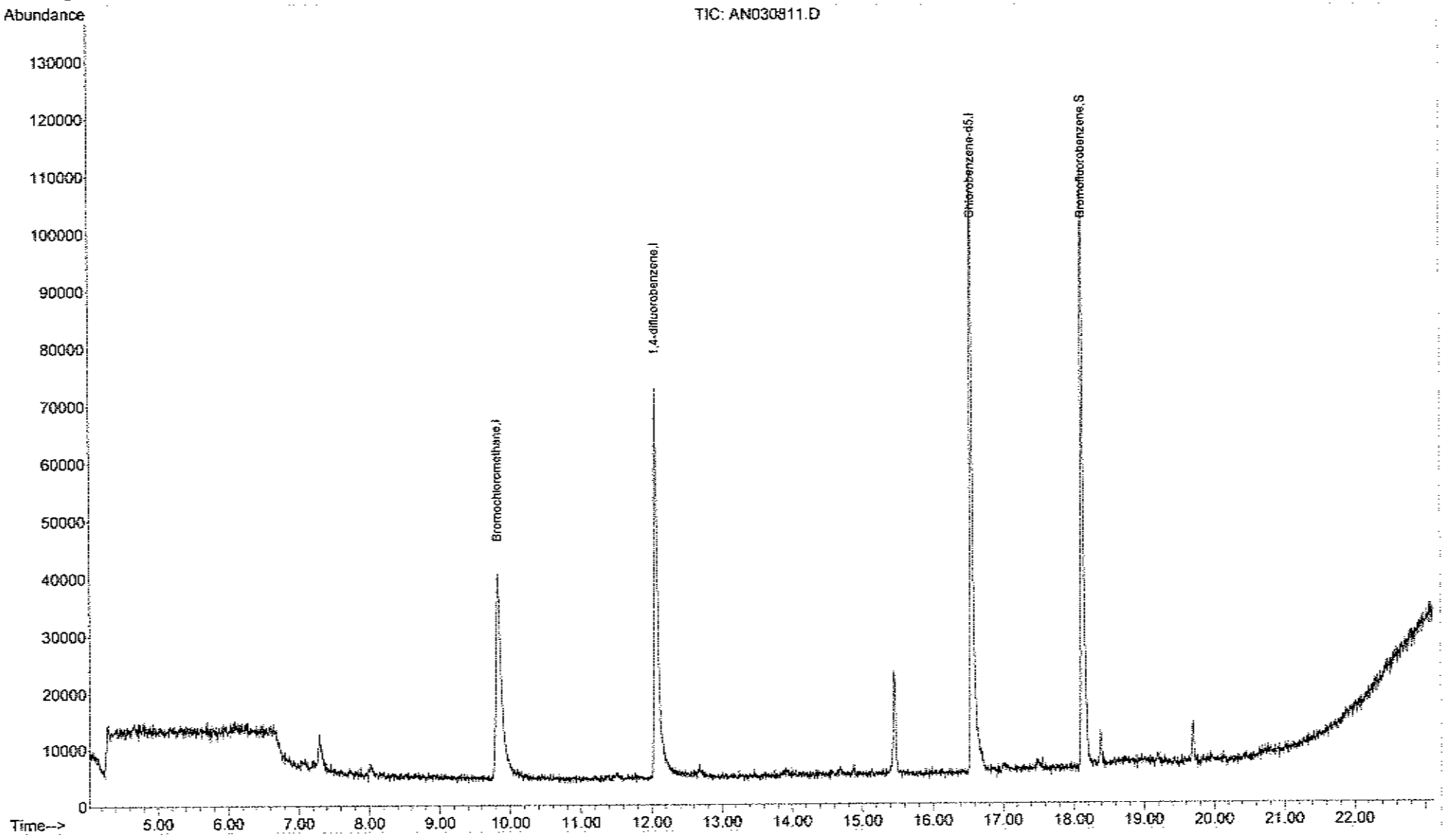
Quant Method : C:\HPCHEM\1\METHODS\A307_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 08 11:08:59 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.82	128	23554	1.00	ppb	0.05
35) 1,4-difluorobenzene	12.07	114	106376	1.00	ppb	0.03
50) Chlorobenzene-d5	16.56	117	94041	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.13	95	57324	0.82	ppb	0.02
Spiked Amount 1.000	Range 70 - 130		Recovery = 82.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : C:\HPCHEM\1\DATA2\AN030811.D Vial: 11
Acq On : 8 Mar 2016 6:40 pm Operator: RJP
Sample : WAC030816G Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 14 10:18 2016 Quant Results File: A307_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030812.D Vial: 12
Acq On : 8 Mar 2016 7:18 pm Operator: RJP
Sample : WAC030816H Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 09 10:52:25 2016 Quant Results File: A307_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A307_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Tue Mar 08 11:08:59 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

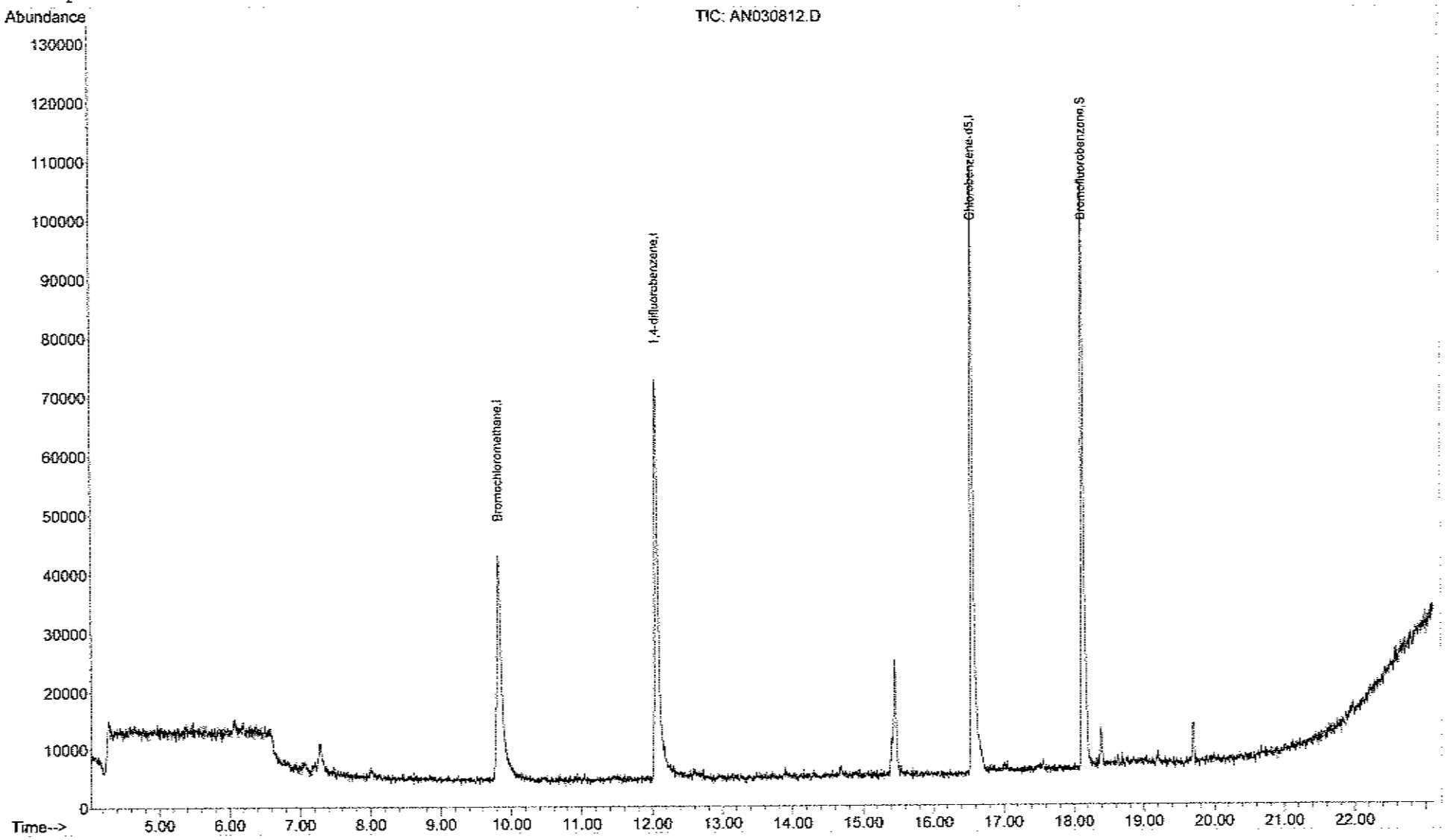
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.82	128	23978	1.00	ppb	0.05
35) 1,4-difluorobenzene	12.06	114	103270	1.00	ppb	0.02
50) Chlorobenzene-d5	16.56	117	93006	1.00	ppb	0.02
System Monitoring Compounds						
66) Bromofluorobenzene	18.14	95	55535	0.80	ppb	0.02
Spiked Amount 1.000	Range 70 - 130		Recovery = 80.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AN030812.D Vial: 12
Acq On : 8 Mar 2016 7:18 pm Operator: RJP
Sample : WAC030816H Inst : MSD #1
Misc : A307_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 14 10:19 2016 Quant Results File: A307_1UG.RES

Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Apr 07 13:07:26 2016
Response via : Initial Calibration



TO-15 Package Review Checklist

Client: LaBella Project: Emerson St. Landfill SDG: C1703057

		YES	NO	NA
Analytical Results	Present and Complete	✓		
TIC's present	Present and Complete	✓		
	Holding Times Met	✓		

Comments: \

Chain-of-Custody	Present and Complete	✓		
Surrogate Recovery	Present and Complete	✓		
	Recoveries within limits	✓		
	Sample(s) reanalyzed			✓
Internal Standards Recovery	Present and Complete	✓		
	Recoveries within limits	✓		
	Sample(s) reanalyzed			✓

Comments:

Lab Control Sample (LCS)	Present and Complete	✓		
	Recoveries within limits	✓		
Lab Control Sample Dupe (LCSD)	Present and Complete	✓		
	Recoveries within limits	✓		
MS/MSD	Present and Complete	✓		✓
	Recoveries within limits	✓		

Comments:

Sample Raw Data	Present and Complete	✓		
	Spectra present for all samples	✓		

Comments:

TO-15 Package Review Checklist

Client: LeBella Project: Emerson St. Landfill SDG: C1703050

		YES	NO	NA
Standards Data				
Initial Calibration Summary	Present and Complete	✓		
	Calibration(s) met criteria	✓		
Continuing Calibration Summary	Present and Complete	✓		
	Calibration(s) met criteria	✓		
Standards Raw Data	Present and Complete	✓		

Comments:

Raw Quality Control Data

Tune Criteria Report	Present and Complete	✓		
Method Blank Data	MB Results <PQL	✓		
	Associated results flagged "B"			✓
LCS sample data	Present and Complete	✓		
LCSD sample data	Present and Complete	✓		
MS/MSD sample data	Present and Complete	✓		

Comments:

Logbooks

Injection Log	Present and Complete	✓		
Standards Log	Present and Complete	✓		
Can Cleaning Log	Present and Complete	✓		
	Raw Data Present	✓		
Calculation sheet	Present and Complete	✓		
IDL's	Present and Complete	✓		
Bottle Order Form	Present and Complete	✓		
Sample Tracking Form	Present and Complete	✓		

Additional Comments:

Section Supervisor: Will Dall Date: 3/25/17

QC Supervisor: [signature] Date:

CENTEK LABORATORIES, LLC
143 Midler Park Drive * Syracuse, NY 13206
Phone (315) 431-9730 * Emergency 24/7 (315) 416-2752
NYSDOH ELAP Certificate No. 11830

Analytical Report

Ann Aquilina
LaBella Associates, P.C.
300 State Street, Suite 201
Rochester, NY 14614

TEL: (585) 454-6110
FAX (585) 454-3066

Wednesday, March 22, 2017
Order No.: C1703050

RE: Former Emerson St Landfill

Dear Ann Aquilina:

Centek Laboratories, LLC received 5 sample(s) on 3/17/2017 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

Centek Laboratories SOP TS-80

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

Sincerely,

William Dobbin
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages. ELAP does not offer certification for the following parameters by this method at present time, they are: 4-ethyltoluene, ethyl acetate, propylene, tetrahydrofuran, 4-PCH, sulfur derived and silcon series compounds.

Centek Laboratories, LLC Terms and Conditions

Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website www.CentekLabs.com. Samples received after 3:00pm are considered to be a part of the next day's business.

Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any dameges of equipment.

Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4 weeks from time of analysis. Standard Electronic Disk Deliverables (EDD) is also available at no additional charge.

Payment Terms

Payment for all purchases shall be due within 30 days from date of invoice. The client agrees to pay a finance charge of 1.5% per month on the overdue balance and cost of collection, including attorney fees, if collection proceedings are necessary. You must have a completed credit application on file to extend credit. Purchase orders or checks information must be submitted for us to release results

Rush Turnaround Samples

Expedited turn around times is available. Please confirm rush turnaround times with Client Services before submitting samples.

Applicable Surcharges for Rush Turnaround Samples:
Same day TAT = 200%
Next business day TAT by Noon = 150%
Next business day TAT by 6:00pm = 100%
Second business day TAT by 6:00pm = 75%
Third business day TAT by 6:00pm = 50%
Fourth business day TAT by 6:00pm = 35%
Fifth business day = Standard

Statement of Confidentiality

Centek Laboratories, LLC is aware of the importance of the confidentiality of results to many of our clients. Your name and data will be held in the strictest of confidence. We will not accept business that may constitute a conflict of interest. We commonly sign Confidential Nondisclosure Agreements with clients prior to beginning work. All research, results and reports will be kept strictly confidential. Secrecy Agreements and Disclosure Statements will be signed for the client if so specified. Results will be provided only to the addressee specified on the Chain of Custody Form submitted with the samples unless law requires release. Written permission is required from the addressee to release results to any other party.

Limitation on Liability

Centek Laboratories, LLC warrants the test results to be accurate to the methodology and sample type for each sample submitted to Centek Laboratories, LLC. In no event shall Centek Laboratories, LLC be liable for direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Centek Laboratories, LLC has been previously advised of the possibility of such damages whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use or performance of the information, services, products and materials available from the laboratory or this site. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you. This is a comprehensive limitation of

liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit and or loss of or damage to property and claims of third parties.

ASP CAT B DELIVERABLE PACKAGE
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CENTEK LABORATORIES, LLC

Date: *29-Mar-17*

CLIENT: LaBella Associates, P.C.
Project: Former Emerson St Landfill
Lab Order: C1703050

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Centek Laboratories, LLC SOP TS-80
Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

NYSDEC ASP samples:
Canisters should be evacuated to a reading of less than or equal to 50 millitorr prior to shipment to sampling personnel. The vacuum in the canister will be field checked prior to sampling, and must read 28" of Hg (±2", vacuum, absolute) before a sample can be collected. After the sample has been collected, the pressure of the canister will be read and recorded again, and must be 5" of Hg (±1", vacuum, absolute) for the sample to be valid. Once received at the laboratory, the canister vacuum should be confirmed to be 5" of Hg,±1". Please record and report the pressure/vacuum of received canisters on the sample receipt paperwork. A pressure/vacuum reading should also be taken just prior to the withdrawal of sample from the canister, and recorded on the sample preparation log sheet. All regulators are calibrated to meet these requirements before they leave the laboratory. However, due to environmental conditions and use of the equipment Centek can not guarantee that this criteria can always be achieved.

Centek Labs - Chain of Custody

Centek Laboratories
143 Midler Park Drive
Syracuse, NY 13206
315-431-9730
www.CentekLabs.com

Vapor Intrusion & IAQ

Site Name: Former Emerson St. landfill
Project: 1770 Emerson
PO#: 210173
Quote # Q- SP 180 8323
Canister Order #:

Detection Limit	Report Level
☐ 5ppbv	☒ Level I
☒ 1ug/M3	☐ Level II
☒ 1ug/M3 +TCE .25	☒ Cat "B" Like

TAT Turnaround Time:	Check One	Rush TAT Surcharge %	Due Date:
5 Business Days	☐	0%	
4 Business Days	☐	25%	
3 Business Days	☐	50%	
2 Business Days	☐	75%	
Next Day by 5pm	☐	100%	
Next Day by Noon	☐	150%	
Same Day	☐	200%	

For Same and Next Day TAT Please Notify Lab

Company: LABELLA - ROCHESTER
Report to: LABELLA A. Aquilina D. Noll
Address: 300 State Street
City, State, Zip Rochester, NY 14614
Email: aaquilina@labellapc.com dnoll@labellapc.com
Phone: 585-295-6299

Company: Check Here If Same: ☒
Invoice to: SAME
Address:
City, State, Zip
Email: ap@labellapc.com
Phone: 585-454-6110

Sample ID	Date Sampled	Canister Number	Regulator Number	Analysis Request	Field Vacuum Start / Stop	Labs Vacuum** Rec'd/Analysis	Comments
770-IAQ-2B	3/12/17	368	259	TO-15 Select list	30 / 7	-7 / -7	
770-IAQ-3B	↓	1176	1170	↓	30 / 5	-5 / -6	
770-IAQ-4B		168	1161		30+ / 10	-9 / -9	
770-outdoor-B		484	251		30+ / ~~5~~	-8 / -8	MS/MSD
770-DupeB		1182	1161		30+ / ~~6~~	-9 / -7	~~MS/MSD~~
					30+ /	/	
					/	/	
					/	/	
					/	/	
					/	/	
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					/	/	

Chain of Custody	Print Name	Signature	Date/Time	Courier: CIRCLE ONE
Sampled by: Ann Aquilina	Ann Aquilina		3/14/17 1800	FedEx UPS Pickup/Dropoff
Relinquished by: Ann Aquilina				**For LAB USE ONLY
Received at Lab by:	NICK MANDARINO		3-17-17	Work Order # C1703050

By signing Centek Labs Chain of Custody, you are accepting Centek Labs Terms and Conditions listed on the reverse side.

CENTEK LABORATORIES, LLC

Date: *29-Mar-17*

CLIENT: LaBella Associates, P.C.
Project: Former Emerson St Landfill
Lab Order: C1703050

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1703050-001A	1770-IAQ-2B	368.259	3/12/2017	3/17/2017
C1703050-002A	1770-IAQ-3B	1176.1170	3/12/2017	3/17/2017
C1703050-003A	1770-IAQ-4B	168.1161	3/12/2017	3/17/2017
C1703050-004A	1770-Outdoor-B	484.251	3/12/2017	3/17/2017
C1703050-005A	1770-Dupe B	1182.1161	3/12/2017	3/17/2017

CENTEK LABORATORIES, LLC

Sample Receipt Checklist

Client Name LABELLA - ROCHESTER

Date and Time Receive 3/17/2017

Work Order Numbe C1703050

Received by NM

Checklist completed by _____ 3-17-17
Signature Date

Reviewed by _____ 3/17/17
Initials Date

Matrix: Carrier name: FedEx Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Presen ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Presen ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☑	

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section be

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

_____

_____

Corrective Action _____

_____

_____

Centek Laboratories, LLC

29-Mar-17

Lab Order: C1703050
Client: LaBella Associates, P.C.
Project: Former Emerson St Landfill

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C1703050-001A	1770-IAQ-2B	3/12/2017	Air	1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/21/2017
C1703050-002A	1770-IAQ-3B			1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/20/2017
				1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/21/2017
C1703050-003A	1770-IAQ-4B			1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/20/2017
				1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/21/2017
C1703050-004A	1770-Outdoor-B			1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/20/2017
				1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/21/2017
C1703050-005A	1770-Dupe B			1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/20/2017
				1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/21/2017
				1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			3/21/2017

Centek Laboratories, LLC

CENTEK LABORATORIES, LLC
Air Quality Testing...It's a Gas
143 Midler Park Drive * Syracuse, NY 13206
TEL: 315-431-9730 * FAX: 315-431-9731

CANISTER ORDER

6323

29-Mar-17

SHIPPED TO:

Company: LaBella Associates, P.C.
Contact: Ann Aquilina
Address: 300 State Street, Suite 201
Rochester, NY 14614
Phone: (585) 454-6110
Quote ID: 0
Project:
PO:

Submitted By:
MadeBy: NM

Ship Date: 2/15/2017
VIA: FedEx Ground
Due Date: 2/17/2017

Bottle Code	Bottle Type	TEST(s)	QTY
MC1400CC	1.4L Mini-Can	1ug/M3 by Method TO15	1
MC1000CC	1L Mini-Can	1ug/M3 by Method TO15	5

Can / Reg ID	Description
1176	1L Mini-Can - 1253 VI
1182	1L Mini-Can - 1237 VI
1170	Time-Set Reg-0795 VI
1161	Time-Set Reg-0674 VI
232	1L Mini-Can - 1163 VI
251	Time-Set Reg - 689 VI
259	Time-Set Reg - 697 VI
168	1L Mini-Can - 1138 VI
268	Time-Set Reg - 706 VI
368	1L Mini-Can - 1317 VI
484	1.4L Mini-Can - 1366 VI

Comments: (5) 1L @ 6hrs, (1) 1.4L @ 6hrs - needs "T" for dupe WAC 020717 A-C, 110316 A-B

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

ANALYTICAL RESULTS

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-2B
Lab Order:	C1703050	**Tag Number:**	368.259
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-7			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
Chloromethane	0.95	0.15		ppbV	1	3/20/2017 10:03:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	3/20/2017 10:03:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/20/2017 10:03:00 PM
Surr: Bromofluorobenzene	99.0	70-130		%REC	1	3/20/2017 10:03:00 PM

Qualifiers:				
	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-2B
Lab Order:	C1703050	**Tag Number:**	368.259
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 10:03:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 10:03:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:03:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 10:03:00 PM
Chloromethane	2.0	0.31		ug/m3	1	3/20/2017 10:03:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:03:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 10:03:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:03:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 10:03:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 10:03:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3B
Lab Order:	C1703050	**Tag Number:**	1176.1170
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-5			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
Chloromethane	0.81	0.15		ppbV	1	3/20/2017 10:45:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	3/20/2017 10:45:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/20/2017 10:45:00 PM
Surr: Bromofluorobenzene	101	70-130		%REC	1	3/20/2017 10:45:00 PM

Qualifiers:

**	Quantitation Limit	,	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3B
Lab Order:	C1703050	**Tag Number:**	1176.1170
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 10:45:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 10:45:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:45:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 10:45:00 PM
Chloromethane	1.7	0.31		ug/m3	1	3/20/2017 10:45:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:45:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 10:45:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:45:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 10:45:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 10:45:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-4B
Lab Order:	C1703050	**Tag Number:**	168.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-9			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
Chloromethane	0.82	0.15		ppbV	1	3/20/2017 11:28:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	3/20/2017 11:28:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/20/2017 11:28:00 PM
Surr: Bromofluorobenzene	96.0	70-130		%REC	1	3/20/2017 11:28:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-4B
Lab Order:	C1703050	**Tag Number:**	168.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 11:28:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 11:28:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 11:28:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 11:28:00 PM
Chloromethane	1.7	0.31		ug/m3	1	3/20/2017 11:28:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 11:28:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 11:28:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 11:28:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 11:28:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 11:28:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor-B
Lab Order:	C1703050	**Tag Number:**	484.251
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-6			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
Chloromethane	0.75	0.15		ppbV	1	3/20/2017 7:50:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	3/20/2017 7:50:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/20/2017 7:50:00 PM
Surr: Bromofluorobenzene	96.0	70-130		%REC	1	3/20/2017 7:50:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor-B
Lab Order:	C1703050	**Tag Number:**	484.251
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 7:50:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 7:50:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 7:50:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 7:50:00 PM
Chloromethane	1.5	0.31		ug/m3	1	3/20/2017 7:50:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 7:50:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 7:50:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 7:50:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 7:50:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 7:50:00 PM

Qualifiers:

**	Quantitation Limit	,	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Dupe B
Lab Order:	C1703050	**Tag Number:**	1182.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-9			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
Chloromethane	0.89	0.15		ppbV	1	3/21/2017 12:10:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	3/21/2017 12:10:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/21/2017 12:10:00 AM
Surr: Bromofluorobenzene	100	70-130		%REC	1	3/21/2017 12:10:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Dupe B
Lab Order:	C1703050	**Tag Number:**	1182.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/21/2017 12:10:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/21/2017 12:10:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/21/2017 12:10:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	3/21/2017 12:10:00 AM
Chloromethane	1.8	0.31		ug/m3	1	3/21/2017 12:10:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/21/2017 12:10:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/21/2017 12:10:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/21/2017 12:10:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/21/2017 12:10:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/21/2017 12:10:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

QUALITY CONTROL SUMMARY

Date: 27-Mar-17

CENTEK LABORATORIES, LLC

QC SUMMARY REPORT
SURROGATE RECOVERIES

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill
Test No: TO-15 **Matrix:** A

Sample ID	BR4FBZ							
ALCS1UG-032017	96.0							
ALCS1UGD-032017	97.0							
AMB1UG-032017	93.0							
C1703050-001A	99.0							
C1703050-002A	101							
C1703050-003A	96.0							
C1703050-004A	96.0							
C1703050-004A MS	98.0							
C1703050-004A MSD	99.0							
C1703050-005A	100							

Acronym		Surrogate	QC Limits
BR4FBZ	=	Bromofluorobenzene	70-130

*** Surrogate recovery outside acceptance limits**

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AO032002.D
Tune Time : 20 Mar 2017 11:14 am

Daily Calibration File : C:\HPCHEM\1\DATA\AO032002.D

			(BFB)	(IS1)	(IS2)	(IS3)
				19677	91887	76086
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
AO032003.D	ALCS1UG-032017		96	18587	86723	73319
AO032004.D	AMB1UG-032017		93	18191	81621	66968
AO032014.D	C1703050-004A		96	13369	59517	48346
AO032015.D	C1703050-004A	MS	98	12965	59084	49891
AO032016.D	C1703050-004A	MSD	99	12927	61212	51251
AO032017.D	C1703050-001A		99	12944	59644	49626
AO032018.D	C1703050-002A		101	13210	60426	51042
AO032019.D	C1703050-003A		96	13112	60666	50616
AO032020.D	C1703050-005A		100	12939	60039	50085
AO032026.D	C1703050-004A	10x	94	14458	67096	55112
AO032027.D	C1703050-001A	10x	92	12952	62172	50174
AO032028.D	C1703050-002A	10x	98	12844	57925	46234
AO032029.D	C1703050-003A	10x	92	11878	56049	45186
AO032030.D	C1703050-005A	10x	91	11444	53989	44090
AO032031.D	ALCS1UGD-032017		97	11608	53720	44926

t - fails 24hr time check * - fails criteria

Created: Mon Mar 27 11:26:49 2017 MSD #1/

CENTEK LABORATORIES, LLC

Date: *27-Mar-17*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID **ALCS1UG-032017** SampType: **LCS** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **ZZZZZ** Batch ID: **R12048** TestNo: **TO-15** Analysis Date: **3/20/2017** SeqNo: **140948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9800	0.15	1	0	98.0	70	130				
1,1-Dichloroethane	0.9700	0.15	1	0	97.0	70	130				
1,1-Dichloroethene	0.9200	0.15	1	0	92.0	70	130				
Chloroethane	1.060	0.15	1	0	106	70	130				
Chloromethane	1.250	0.15	1	0	125	70	130				
cis-1,2-Dichloroethene	0.9400	0.15	1	0	94.0	70	130				
Tetrachloroethylene	1.040	0.15	1	0	104	70	130				
trans-1,2-Dichloroethene	0.9500	0.15	1	0	95.0	70	130				
Trichloroethene	1.000	0.040	1	0	100	70	130				
Vinyl chloride	1.040	0.040	1	0	104	70	130				

Sample ID **ALCS1UGD-032017** SampType: **LCSD** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **ZZZZZ** Batch ID: **R12048** TestNo: **TO-15** Analysis Date: **3/21/2017** SeqNo: **140949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.090	0.15	1	0	109	70	130	0.98	10.6	30	
1,1-Dichloroethane	1.070	0.15	1	0	107	70	130	0.97	9.80	30	
1,1-Dichloroethene	0.9700	0.15	1	0	97.0	70	130	0.92	5.29	30	
Chloroethane	1.290	0.15	1	0	129	70	130	1.06	19.6	30	
Chloromethane	1.400	0.15	1	0	140	70	130	1.25	11.3	30	S
cis-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130	0.94	9.14	30	
Tetrachloroethylene	1.080	0.15	1	0	108	70	130	1.04	3.77	30	
trans-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130	0.95	8.08	30	
Trichloroethene	1.050	0.040	1	0	105	70	130	1	4.88	30	

Qualifiers:
. Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	ALCS1UGD-032017	SampType:	LCSD	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	12048
Client ID:	ZZZZZ	Batch ID:	R12048	TestNo:	TO-15			Analysis Date:	3/21/2017	SeqNo:	140949

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.350	0.040	1	0	135	70	130	1.04	25.9	30	S

Qualifiers:

.	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CENTEK LABORATORIES, LLC

Date: *27-Mar-17*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID **AMB1UG-032017** SampType: **MBLK** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **ZZZZZ** Batch ID: **R12048** TestNo: **TO-15** Analysis Date: **3/20/2017** SeqNo: **140947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.040	0.040									
Vinyl chloride	< 0.040	0.040									

Qualifiers:

.	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CENTEK LABORATORIES, LLC

Date: *27-Mar-17*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID **C1703050-004A MS** SampType: **MS** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **1770-Outdoor-B** Batch ID: **R12048** TestNo: **TO-15** Analysis Date: **3/20/2017** SeqNo: **140955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.030	0.15	1	0	103	70	130				
1,1-Dichloroethane	0.9900	0.15	1	0	99.0	70	130				
1,1-Dichloroethene	0.9300	0.15	1	0	93.0	70	130				
Chloroethane	1.260	0.15	1	0	126	70	130				
Chloromethane	2.100	0.15	1	0.75	135	70	130				S
cis-1,2-Dichloroethene	1.010	0.15	1	0	101	70	130				
Tetrachloroethylene	1.020	0.15	1	0	102	70	130				
trans-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130				
Trichloroethene	1.040	0.040	1	0	104	70	130				
Vinyl chloride	1.200	0.040	1	0	120	70	130				

Sample ID **C1703050-004A MS** SampType: **MSD** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **1770-Outdoor-B** Batch ID: **R12048** TestNo: **TO-15** Analysis Date: **3/20/2017** SeqNo: **140956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.000	0.15	1	0	100	70	130	1.03	2.96	30	
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130	0.99	4.93	30	
1,1-Dichloroethene	0.9100	0.15	1	0	91.0	70	130	0.93	2.17	30	
Chloroethane	1.240	0.15	1	0	124	70	130	1.26	1.60	30	
Chloromethane	1.770	0.15	1	0.75	102	70	130	2.1	17.1	30	
cis-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130	1.01	1.96	30	
Tetrachloroethylene	0.9900	0.15	1	0	99.0	70	130	1.02	2.99	30	
trans-1,2-Dichloroethene	1.000	0.15	1	0	100	70	130	0.98	2.02	30	
Trichloroethene	1.010	0.040	1	0	101	70	130	1.04	2.93	30	

Qualifiers:
. Results reported are not blank corrected
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID **C1703050-004A MS** SampType: **MSD** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **1770-Outdoor-B** Batch ID: **R12048** TestNo: **TO-15** Analysis Date: **3/20/2017** SeqNo: **140956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.240	0.040	1	0	124	70	130	1.2	3.28	30	

Qualifiers:
. Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

Centek Laboratories
IDL Study

1ug/M3 Detection Limit
January 2016

Method TO-15A
Units=ppb

Name	Amount	IDL#1	IDL#2	IDL#3	IDL#4	IDL#5	IDL#6	IDL#7	Average	StdDev	%Rec	IDL
Propylene	0.15	0.16	0.15	0.16	0.14	0.16	0.14	0.16	0.153	0.010	98.1	0.030
Freon 12	0.15	0.18	0.17	0.17	0.17	0.18	0.17	0.17	0.173	0.005	86.8	0.015
Chloromethane	0.15	0.19	0.18	0.16	0.18	0.18	0.2	0.17	0.180	0.013	83.3	0.041
Freon 114	0.15	0.18	0.17	0.17	0.17	0.18	0.17	0.18	0.174	0.005	86.1	0.017
Vinyl Chloride	0.15	0.17	0.16	0.16	0.15	0.16	0.15	0.15	0.157	0.008	95.5	0.024
Butane	0.15	0.18	0.16	0.17	0.18	0.18	0.19	0.19	0.179	0.011	84.0	0.034
1,3-butadiene	0.15	0.21	0.2	0.2	0.22	0.17	0.18	0.23	0.201	0.021	74.5	0.065
Bromomethane	0.15	0.18	0.2	0.21	0.18	0.22	0.16	0.21	0.194	0.021	77.2	0.066
Chloroethane	0.15	0.19	0.19	0.16	0.19	0.19	0.18	0.19	0.184	0.011	81.4	0.036
Ethanol	0.15	0.16	0.16	0.18	0.17	0.19	0.18	0.19	0.176	0.013	85.4	0.040
Acrolein	0.15	0.22	0.17	0.19	0.16	0.18	0.21	0.17	0.186	0.022	80.8	0.070
Vinyl Bromide	0.15	0.17	0.15	0.16	0.16	0.17	0.17	0.17	0.164	0.008	91.3	0.025
Freon 11	0.15	0.18	0.17	0.17	0.18	0.19	0.17	0.18	0.177	0.008	84.7	0.024
Acetone	0.15	0.2	0.17	0.18	0.15	0.15	0.18	0.14	0.167	0.021	89.7	0.067
Pentane	0.15	0.18	0.17	0.18	0.16	0.17	0.2	0.16	0.174	0.014	86.1	0.044
Isopropyl alcohol	0.15	0.22	0.2	0.19	0.2	0.19	0.21	0.19	0.200	0.012	75.0	0.036
1,1-dichloroethene	0.15	0.2	0.17	0.19	0.19	0.19	0.18	0.18	0.186	0.010	80.8	0.031
Freon 113	0.15	0.17	0.16	0.18	0.18	0.18	0.17	0.17	0.173	0.008	86.8	0.024
t-Butyl alcohol	0.15	0.21	0.2	0.2	0.21	0.2	0.2	0.18	0.200	0.010	75.0	0.031
Methylene chloride	0.15	0.2	0.18	0.19	0.18	0.2	0.19	0.17	0.187	0.011	80.2	0.035
Allyl chloride	0.15	0.18	0.17	0.16	0.18	0.18	0.2	0.18	0.179	0.012	84.0	0.038
Carbon disulfide	0.15	0.2	0.17	0.19	0.19	0.2	0.18	0.19	0.189	0.011	79.5	0.034
trans-1,2-dichloroethene	0.15	0.15	0.14	0.14	0.14	0.16	0.14	0.15	0.146	0.008	102.9	0.025
methyl tert-butyl ether	0.15	0.14	0.14	0.14	0.13	0.15	0.14	0.13	0.139	0.007	108.2	0.022
1,1-dichloroethane	0.15	0.17	0.15	0.16	0.15	0.17	0.16	0.16	0.160	0.008	93.8	0.026
Vinyl acetate	0.15	0.14	0.13	0.14	0.13	0.13	0.13	0.12	0.131	0.007	114.1	0.022
Methyl Ethyl Ketone	0.15	0.17	0.17	0.16	0.16	0.15	0.13	0.12	0.151	0.020	99.1	0.061
cis-1,2-dichloroethene	0.15	0.15	0.14	0.16	0.15	0.16	0.15	0.14	0.150	0.008	100.0	0.026
Hexane	0.15	0.12	0.14	0.13	0.13	0.13	0.12	0.12	0.127	0.008	118.0	0.024
Ethyl acetate	0.15	0.16	0.17	0.14	0.15	0.14	0.16	0.13	0.150	0.014	100.0	0.044
Chloroform	0.15	0.16	0.16	0.16	0.16	0.17	0.16	0.17	0.163	0.005	92.1	0.015
Tetrahydrofuran	0.15	0.15	0.13	0.15	0.15	0.15	0.15	0.14	0.146	0.008	102.9	0.025
1,2-dichloroethane	0.15	0.16	0.15	0.16	0.16	0.17	0.16	0.17	0.161	0.007	92.9	0.022
1,1,1-trichloroethane	0.15	0.17	0.16	0.17	0.17	0.16	0.17	0.17	0.167	0.005	89.7	0.015
Cyclohexane	0.15	0.14	0.14	0.14	0.15	0.15	0.14	0.14	0.143	0.005	105.0	0.015
Carbon tetrachloride	0.15	0.13	0.15	0.15	0.15	0.15	0.15	0.16	0.149	0.009	101.0	0.028
Benzene	0.15	0.15	0.16	0.16	0.15	0.16	0.16	0.16	0.157	0.005	95.5	0.015
Methyl methacrylate	0.15	0.15	0.15	0.14	0.14	0.14	0.15	0.11	0.140	0.014	107.1	0.044
1,4-dioxane	0.15	0.18	0.18	0.19	0.18	0.15	0.17	0.12	0.167	0.024	89.7	0.076

Centek Laboratories
IDL Study

1ug/M3 Detection Limit
January 2016

Method TO-15A
Units=ppb

Name	Amount	IDL#1	IDL#2	IDL#3	IDL#4	IDL#5	IDL#6	IDL#7	Average	StdDev	%Rec	IDL
2,2,4-trimethylpentane	0.15	0.15	0.15	0.15	0.16	0.14	0.16	0.15	0.151	0.007	99.1	0.022
Heptane	0.15	0.12	0.13	0.13	0.12	0.13	0.13	0.13	0.127	0.005	118.0	0.015
Trichloroethene	0.15	0.14	0.15	0.14	0.15	0.15	0.14	0.15	0.146	0.005	102.9	0.017
1,2-dichloropropane	0.15	0.16	0.17	0.17	0.16	0.17	0.16	0.16	0.164	0.005	91.3	0.017
Bromodichloromethane	0.15	0.16	0.16	0.16	0.15	0.16	0.17	0.16	0.160	0.006	93.8	0.018
cis-1,3-dichloropropene	0.15	0.13	0.13	0.14	0.14	0.13	0.13	0.13	0.133	0.005	112.9	0.015
trans-1,3-dichloropropene	0.15	0.16	0.13	0.13	0.14	0.14	0.14	0.16	0.143	0.013	105.0	0.039
1,1,2-trichloroethane	0.15	0.16	0.15	0.16	0.15	0.16	0.18	0.17	0.161	0.011	92.9	0.034
Toluene	0.15	0.14	0.14	0.14	0.13	0.16	0.14	0.15	0.143	0.010	105.0	0.030
Methyl Isobutyl Ketone	0.15	0.18	0.18	0.18	0.18	0.16	0.18	0.15	0.173	0.013	86.8	0.039
Dibromochloromethane	0.15	0.16	0.16	0.17	0.18	0.16	0.17	0.18	0.169	0.009	89.0	0.028
Methyl Butyl Ketone	0.15	0.17	0.16	0.18	0.17	0.16	0.17	0.14	0.164	0.013	91.3	0.040
1,2-dibromoethane	0.15	0.16	0.17	0.16	0.16	0.16	0.16	0.17	0.163	0.005	92.1	0.015
Tetrachloroethylene	0.15	0.16	0.17	0.16	0.16	0.16	0.17	0.17	0.164	0.005	91.3	0.017
Chlorobenzene	0.15	0.16	0.16	0.16	0.17	0.15	0.17	0.17	0.163	0.008	92.1	0.024
1,1,1,2-tetrachloroethane	0.15	0.17	0.17	0.17	0.18	0.16	0.18	0.17	0.171	0.007	87.5	0.022
Ethylbenzene	0.15	0.13	0.14	0.14	0.14	0.12	0.14	0.13	0.134	0.008	111.7	0.025
m&p-xylene	0.3	0.25	0.25	0.25	0.23	0.25	0.25	0.25	0.247	0.008	121.4	0.024
Nonane	0.15	0.11	0.11	0.11	0.11	0.1	0.1	0.11	0.107	0.005	140.0	0.015
Styrene	0.15	0.12	0.13	0.13	0.11	0.12	0.13	0.12	0.123	0.008	122.1	0.024
Bromoform	0.15	0.15	0.15	0.16	0.15	0.15	0.17	0.16	0.156	0.008	96.3	0.025
o-xylene	0.15	0.11	0.12	0.12	0.14	0.14	0.12	0.11	0.123	0.013	122.1	0.039
Cumene	0.15	0.12	0.13	0.13	0.12	0.13	0.13	0.13	0.127	0.005	118.0	0.015
Bromofluorobenzene	1	0.88	0.9	0.9	0.87	0.89	0.89	0.9	0.890	0.012	112.4	0.036
1,1,2,2-tetrachloroethane	0.15	0.16	0.16	0.17	0.16	0.17	0.17	0.16	0.164	0.005	91.3	0.017
Propylbenzene	0.15	0.13	0.12	0.13	0.13	0.11	0.13	0.11	0.123	0.010	122.1	0.030
2-Chlorotoluene	0.15	0.13	0.13	0.13	0.14	0.13	0.12	0.13	0.130	0.006	115.4	0.018
4-ethyltoluene	0.15	0.11	0.12	0.12	0.12	0.13	0.13	0.11	0.120	0.008	125.0	0.026
1,3,5-trimethylbenzene	0.15	0.12	0.13	0.14	0.12	0.13	0.13	0.13	0.129	0.007	116.7	0.022
1,2,4-trimethylbenzene	0.15	0.12	0.13	0.12	0.12	0.13	0.12	0.12	0.123	0.005	122.1	0.015
1,3-dichlorobenzene	0.15	0.14	0.14	0.14	0.13	0.14	0.13	0.14	0.137	0.005	109.4	0.015
benzyl chloride	0.15	0.13	0.16	0.13	0.15	0.13	0.15	0.16	0.144	0.014	104.0	0.044
1,4-dichlorobenzene	0.15	0.13	0.11	0.12	0.12	0.12	0.12	0.13	0.121	0.007	123.5	0.022
1,2,3-trimethylbenzene	0.15	0.12	0.11	0.12	0.12	0.12	0.11	0.11	0.116	0.005	129.6	0.017
1,2-dichlorobenzene	0.15	0.13	0.14	0.14	0.14	0.14	0.14	0.13	0.137	0.005	109.4	0.015
1,2,4-trichlorobenzene	0.15	0.1	0.11	0.1	0.11	0.11	0.12	0.1	0.107	0.008	140.0	0.024
Naphthalene	0.15	0.13	0.13	0.14	0.11	0.12	0.14	0.12	0.127	0.011	118.0	0.035
Hexachloro-1,3-butadiene	0.15	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.164	0.005	91.3	0.017

Centek Laboratories
IDL Study

0.25ug/M3 Detection Limit
January 2016

Method TO-15A
Units=ppb

Name	Amount	IDL#1	IDL#2	IDL#3	IDL#4	IDL#5	IDL#6	IDL#7	Average	StdDev	%Rec	IDL
Vinyl Chloride	0.1	0.11	0.11	0.09	0.09	0.1	0.09	0.1	0.099	0.009	101.4	0.028
Carbon tetrachloride	0.1	0.1	0.11	0.08	0.09	0.09	0.09	0.09	0.093	0.010	107.7	0.030
Trichloroethene	0.1	0.1	0.1	0.07	0.08	0.08	0.08	0.08	0.084	0.011	118.6	0.036
Tetrachloroethylene	0.1	0.11	0.12	0.09	0.09	0.1	0.09	0.09	0.099	0.012	101.4	0.038
Naphthalene	0.1	0.09	0.08	0.07	0.06	0.06	0.07	0.06	0.070	0.012	142.9	0.036

GC/MS-Whole Air Calculations

Relative Response Factor (RRF)

$$RRF = \frac{Ax * Cis}{Ais * Cx}$$

where: Ax = area of the characteristic ion for the compound being measured
Ais = area of the characteristic ion for the specific internal standard of the compound being measured
Cx = concentration of the compound being measured (ppbv)
Cis = concentration of the internal standard (ppbv)

Percent Relative Standard Deviation (%RSD)

$$\% RSD = \frac{\text{Standard deviation of RRF values} * 100}{\text{mean RRF}}$$

Percent Difference (%D)

$$\% D = \frac{(RRFc - \text{mean RRFi}) * 100}{\text{mean RRFi}}$$

where: RRFc = relative response factor from the continuing calibration
mean RRFi = mean relative response factor from the initial calibration

Sample Calculations

$$ppbv = \frac{Ax * Is * Df}{Ais * RRF}$$

where: Ax = area of the characteristic ion for the compound being measured
Ais = area of the characteristic ion for the specific internal standard of the compound being measured
Is = Concentration of the internal standard injected (ppbv)
RRF= relative response factor for the compound being measured
Df = Dilution factor

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

SAMPLE DATA

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-2B
Lab Order:	C1703050	**Tag Number:**	368.259
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-7			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
Chloromethane	0.95	0.15		ppbV	1	3/20/2017 10:03:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:03:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	3/20/2017 10:03:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/20/2017 10:03:00 PM
Surr: Bromofluorobenzene	99.0	70-130		%REC	1	3/20/2017 10:03:00 PM

Qualifiers:

**	Quantitation Limit	,	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-2B
Lab Order:	C1703050	**Tag Number:**	368.259
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 10:03:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 10:03:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:03:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 10:03:00 PM
Chloromethane	2.0	0.31		ug/m3	1	3/20/2017 10:03:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:03:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 10:03:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:03:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 10:03:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 10:03:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032017.D Vial: 12
Acq On : 20 Mar 2017 10:03 pm Operator: RJP
Sample : C1703050-001A Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:13 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	12944	1.00	ppb		-0.01
35) 1,4-difluorobenzene	11.93	114	59644	1.00	ppb		0.00
50) Chlorobenzene-d5	16.81	117	49626	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	36870	0.99	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 99.00%				
Target Compounds							Qvalue
3) Freon 12	4.54	85	68820	0.66	ppb		99
4) Chloromethane	4.71	50	14825	0.95	ppb		94
14) Freon 11	6.31	101	33056	0.34	ppb		99
15) Acetone	6.13	58	83585	7.87	ppb	#	1
17) Isopropyl alcohol	6.37	45	53750	1.79	ppb	#	100
21) Methylene chloride	7.10	84	12647	0.64	ppb	#	76
28) Methyl Ethyl Ketone	8.82	72	9629	1.00	ppb	#	1
30) Hexane	9.59	57	27156	0.87	ppb	#	79
31) Ethyl acetate	9.59	43	24699	0.38	ppb		81
37) Cyclohexane	11.83	56	8841	0.26	ppb		93
38) Carbon tetrachloride	11.69	117	4781m	0.08	ppb		
39) Benzene	11.49	78	33042	0.54	ppb		87
42) 2,2,4-trimethylpentane	12.81	57	535754	5.45	ppb		81
43) Heptane	13.12	43	267828	7.14	ppb		98
51) Toluene	14.88	92	324839	7.77	ppb	#	82
58) Ethylbenzene	17.25	91	63176	0.64	ppb		97
59) m&p-xylene	17.43	91	200456	2.39	ppb		98
61) Styrene	17.84	104	40081	0.81	ppb		92
63) o-xylene	17.95	91	74210	0.93	ppb		89
69) 4-ethyltoluene	19.31	105	20627m	0.22	ppb		
70) 1,3,5-trimethylbenzene	19.40	105	17429	0.20	ppb		96
71) 1,2,4-trimethylbenzene	19.88	105	54529	0.67	ppb		99
75) 1,2,3-trimethylbenzene	20.39	105	12572	0.16	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

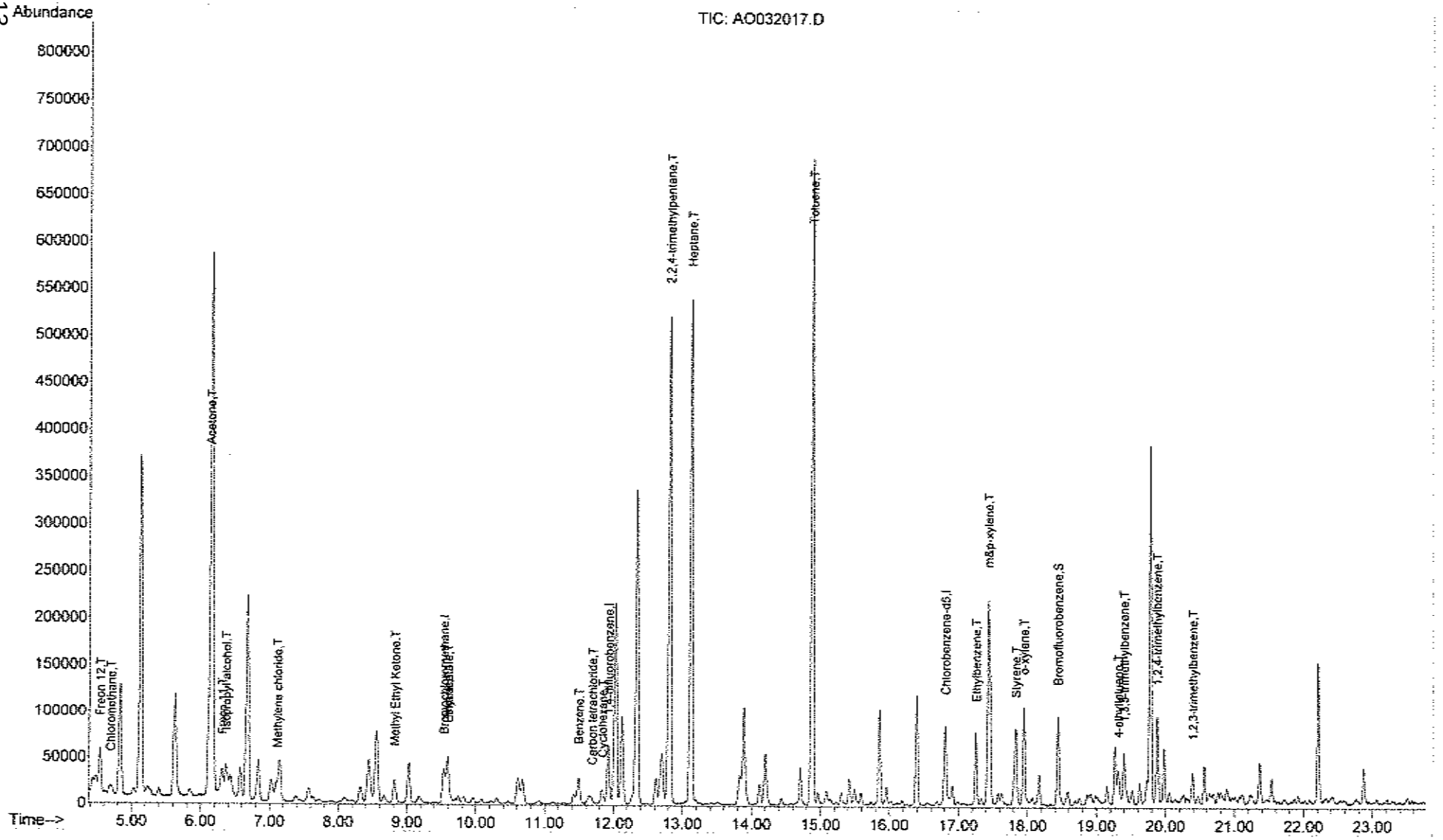
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032017.D
Acq On : 20 Mar 2017 10:03 pm
Sample : C1703050-001A
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:23 2017

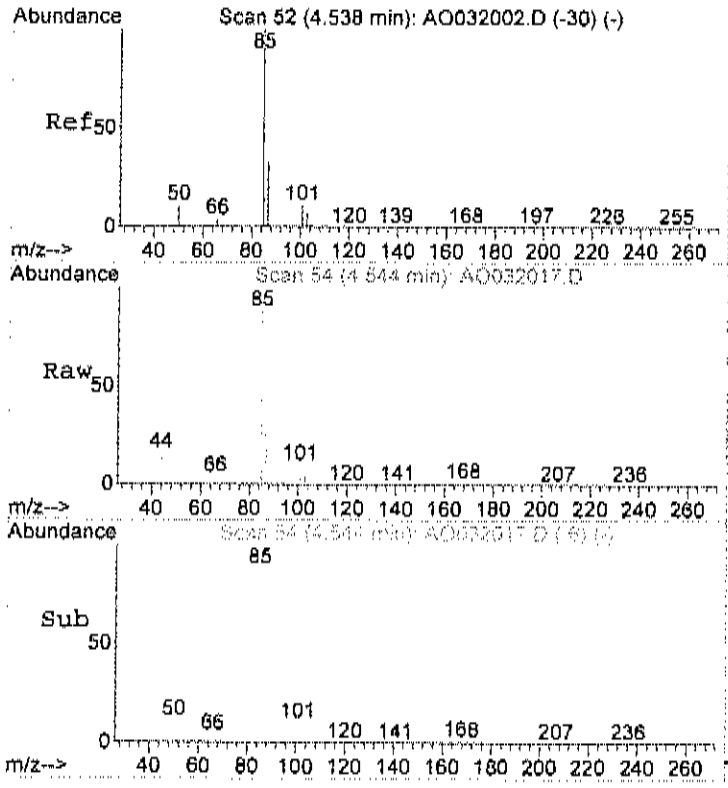
Vial: 12
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration



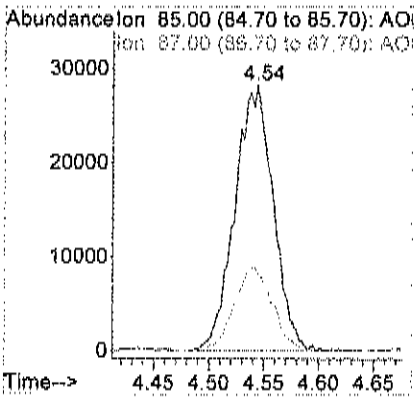
AO032017.D A227_1UG.M Mon Mar 27 11:22:45 2017 MSD1

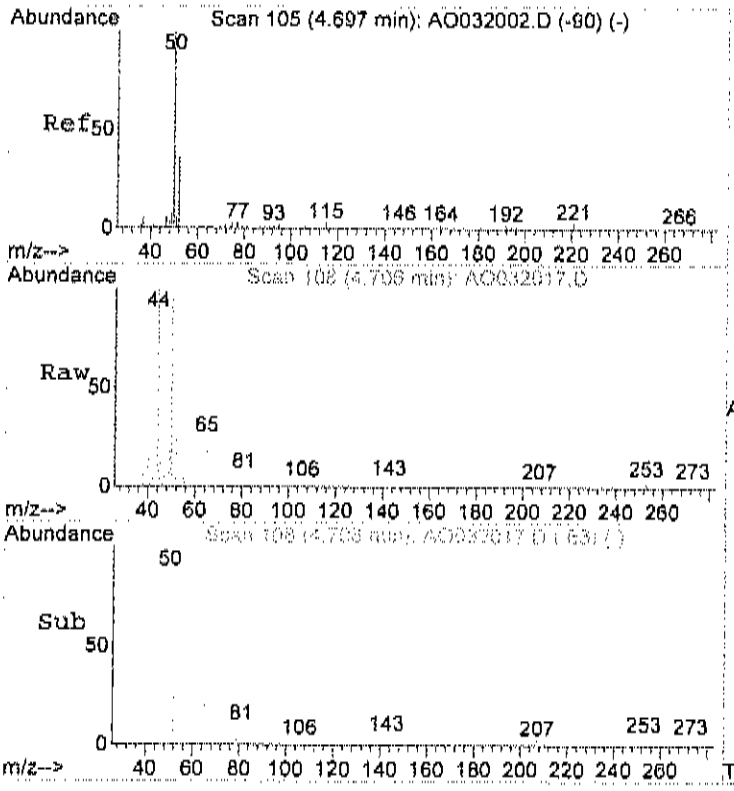


#3
Freon 12
Concen: 0.66 ppb
RT: 4.54 min Scan# 54
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 85 Resp: 68820

Ion	Ratio	Lower	Upper
85	100		
87	31.6	11.3	51.3

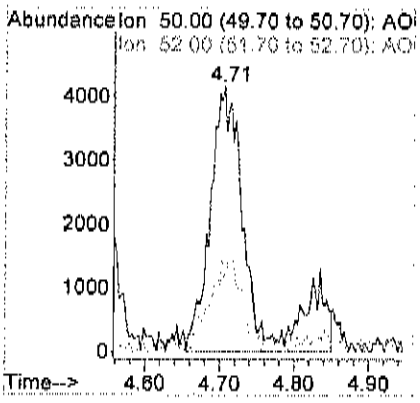


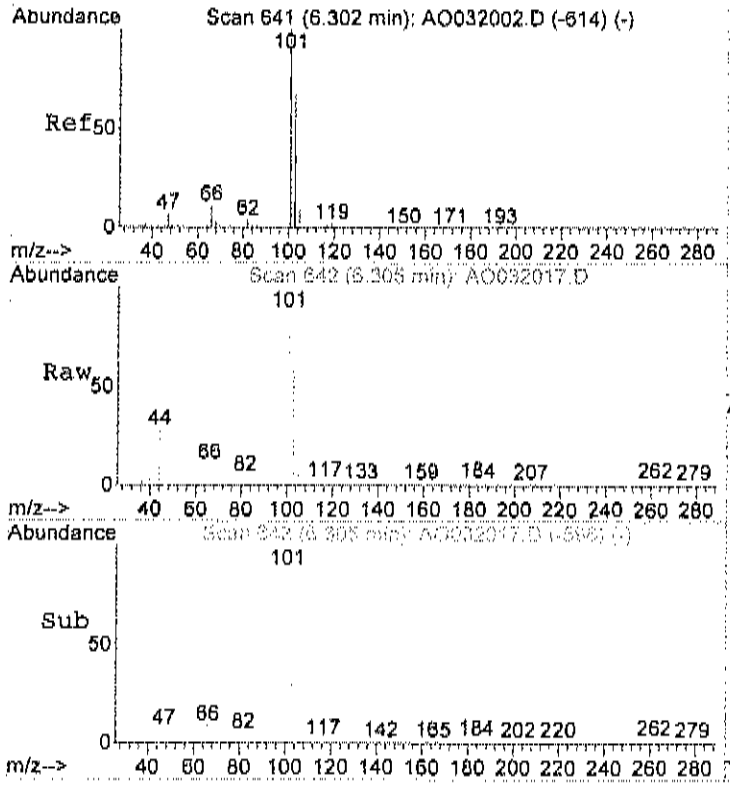


#4
Chloromethane
Concen: 0.95 ppb
RT: 4.71 min Scan# 108
Delta R.T. -0.02 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 50 Resp: 14825

Ion	Ratio	Lower	Upper
50	100		
52	28.7	11.8	51.8

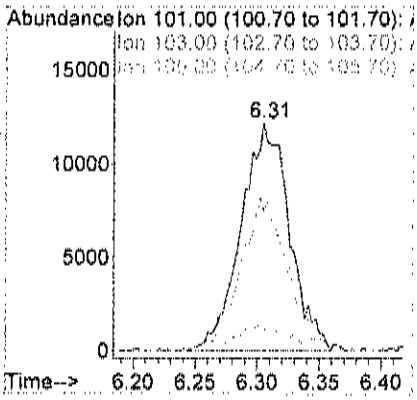


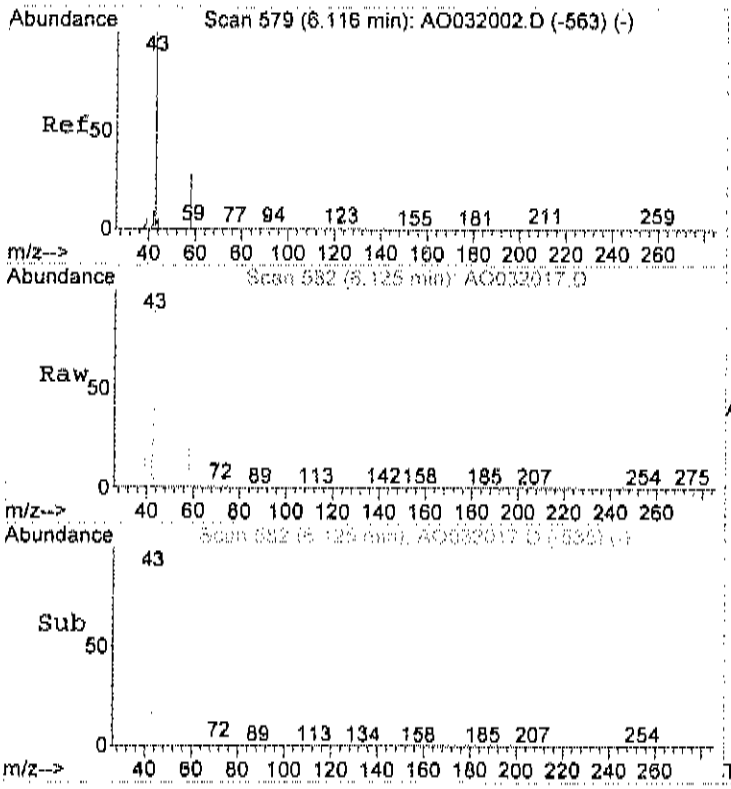


#14
Freon 11
Concen: 0.34 ppb
RT: 6.31 min Scan# 642
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion:101 Resp: 33056

Ion	Ratio	Lower	Upper
101	100		
103	66.5	46.0	86.0
105	12.6	0.0	31.4

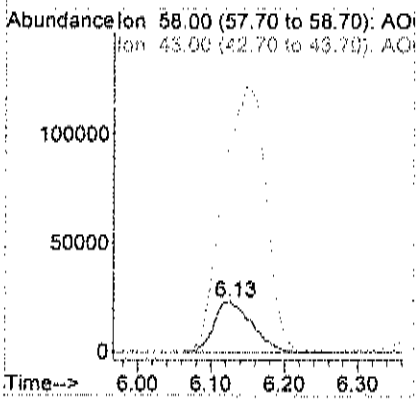


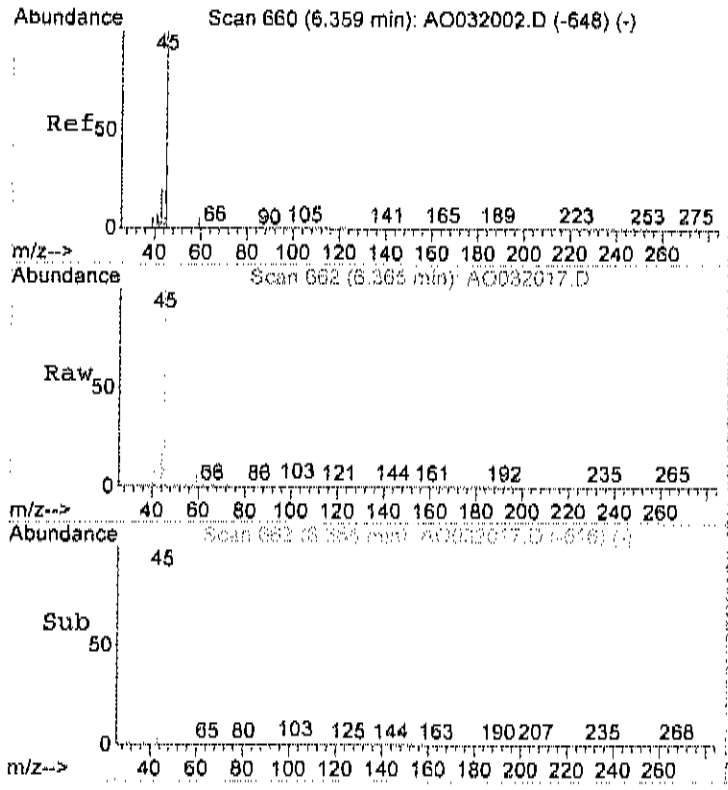


#15
Acetone
Concen: 7.87 ppb
RT: 6.13 min Scan# 582
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 58 Resp: 83585

Ion	Ratio	Lower	Upper
58	100		
43	591.3	263.2	323.2#

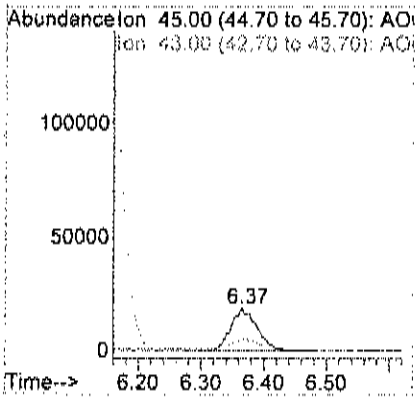


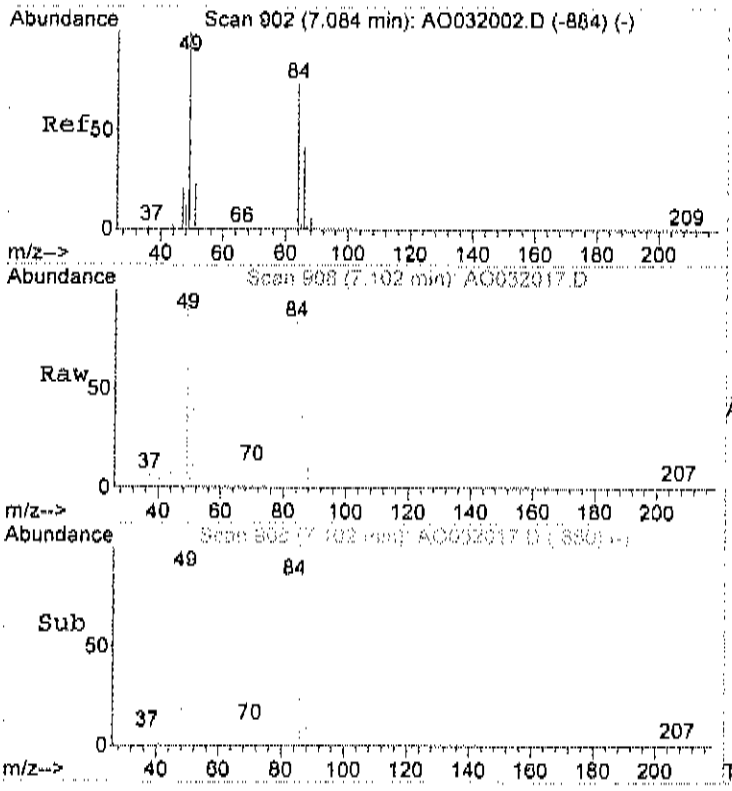


#17
Isopropyl alcohol
Concen: 1.79 ppb
RT: 6.37 min Scan# 662
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 45 Resp: 53750

Ion	Ratio	Lower	Upper
45	100		
43	28.8	0.0	20.0#

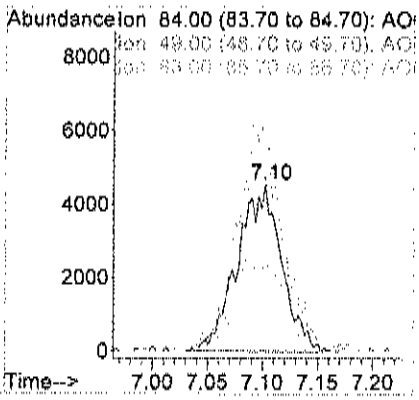


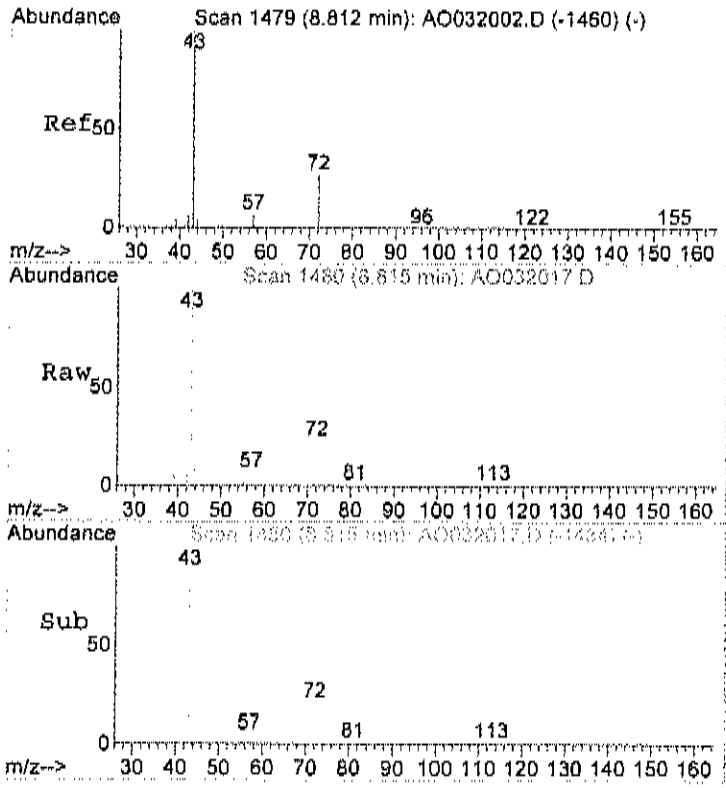


#21
Methylene chloride
Concen: 0.64 ppb
RT: 7.10 min Scan# 908
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 84 Resp: 12647

Ion	Ratio	Lower	Upper
84	100		
49	140.5	86.2	126.2#
86	60.0	36.1	76.1

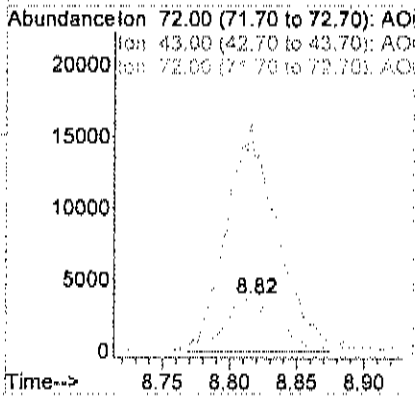


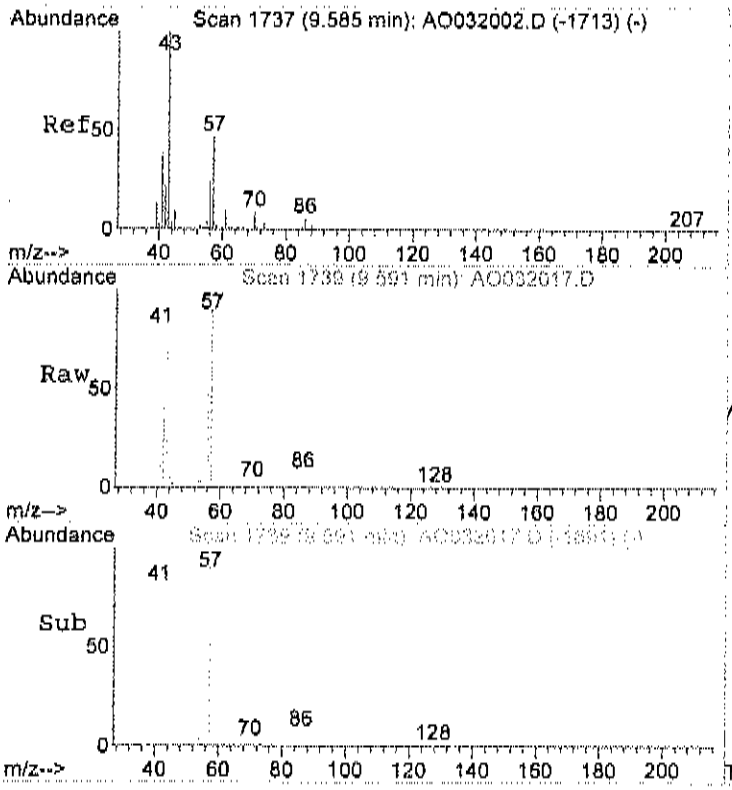


#28
Methyl Ethyl Ketone
Concen: 1.00 ppb
RT: 8.82 min Scan# 1480
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 72 Resp: 9629

Ion	Ratio	Lower	Upper
72	100		
43	0.0	383.1	423.1#
72	100.0	80.0	120.0

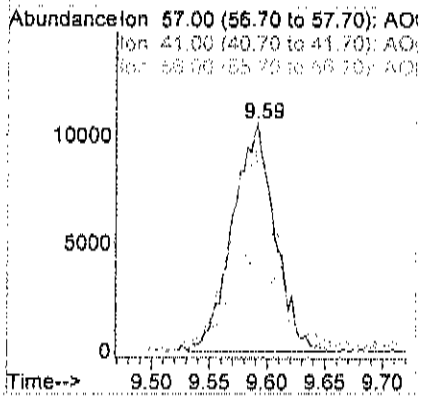


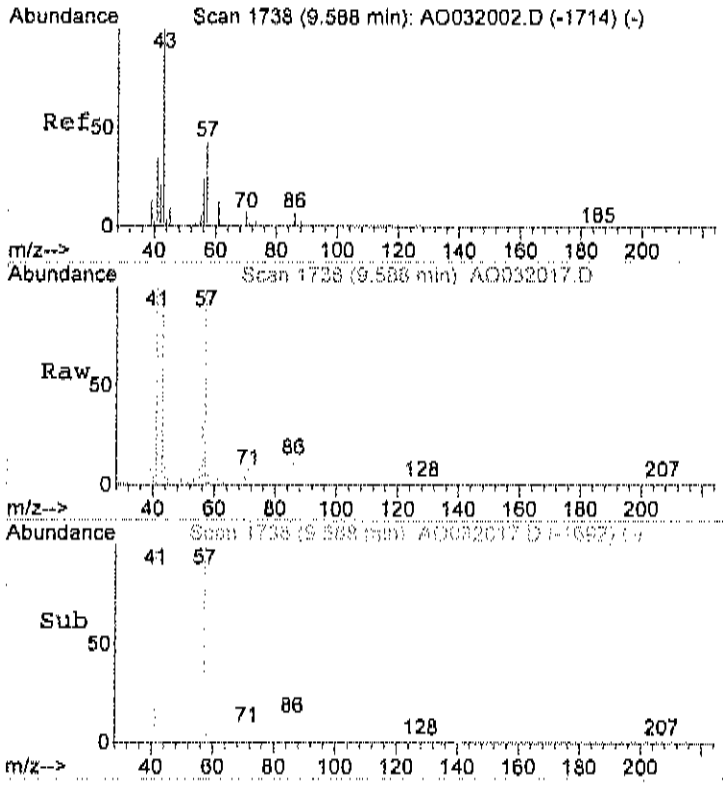


#30
Hexane
Concen: 0.87 ppb
RT: 9.59 min Scan# 1739
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 57 Resp: 27156

Ion	Ratio	Lower	Upper
57	100		
41	104.0	57.7	97.7#
56	54.4	41.0	81.0

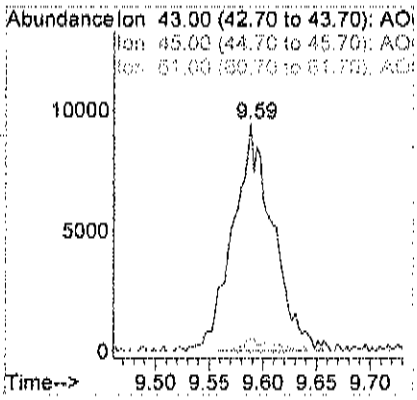


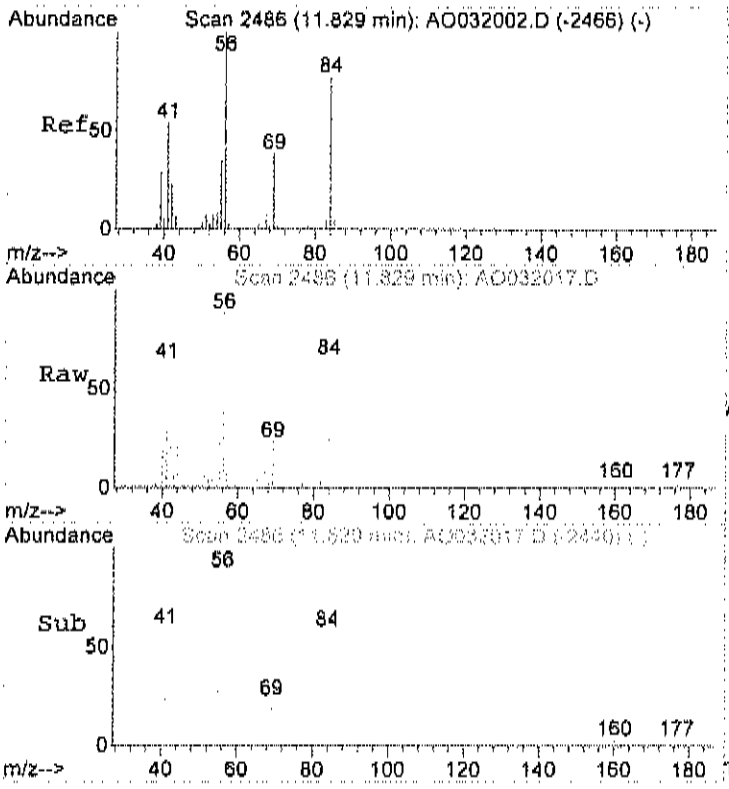


#31
Ethyl acetate
Concen: 0.38 ppb
RT: 9.59 min Scan# 1738
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 43 Resp: 24699

Ion	Ratio	Lower	Upper
43	100		
45	4.7	0.0	31.5
61	3.7	0.0	31.4

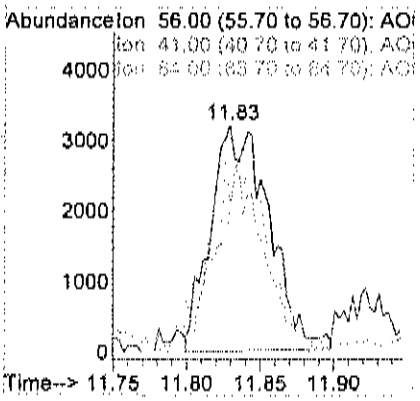


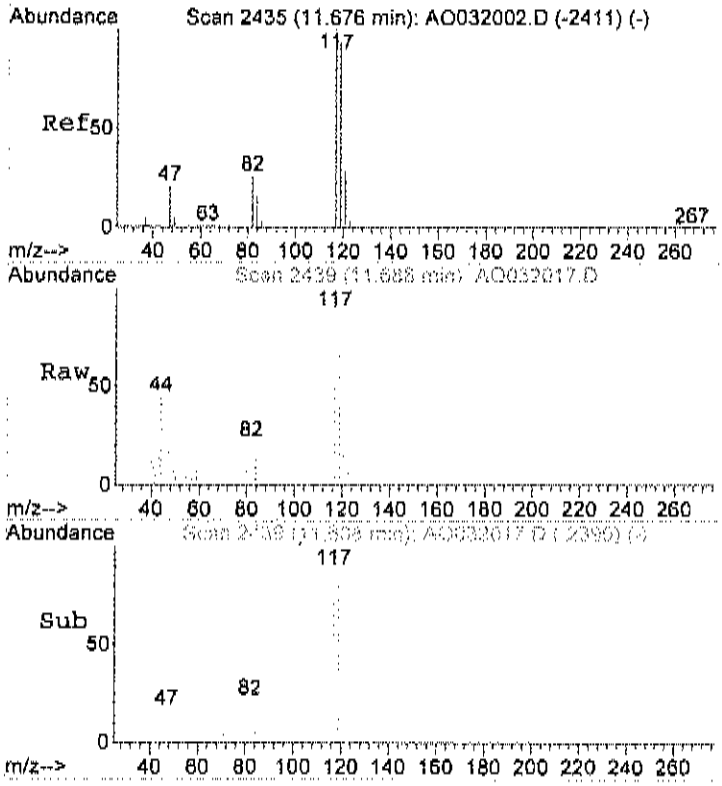


#37
Cyclohexane
Concen: 0.26 ppb
RT: 11.83 min Scan# 2486
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 56 Resp: 8841

Ion	Ratio	Lower	Upper
56	100		
41	71.7	43.2	83.2
84	61.2	64.8	104.8

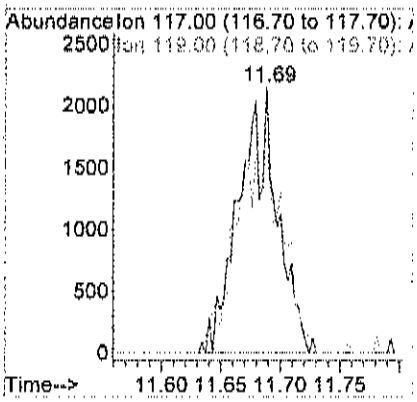


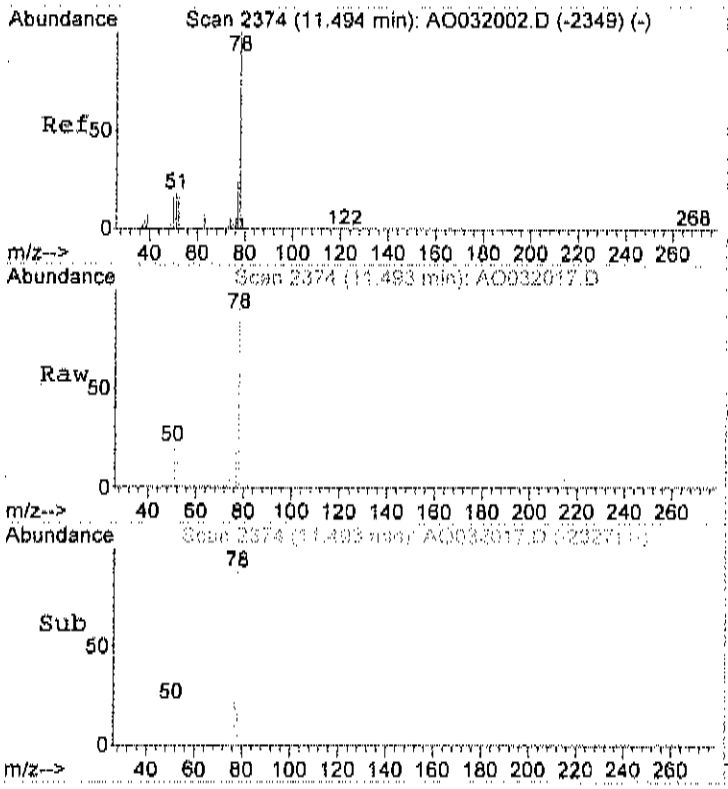


#38
Carbon tetrachloride
Concen: 0.08 ppb m
RT: 11.69 min Scan# 2439
Delta R.T. -0.00 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion:117 Resp: 4781

Ion	Ratio	Lower	Upper
117	100		
119	0.0	74.9	114.9#

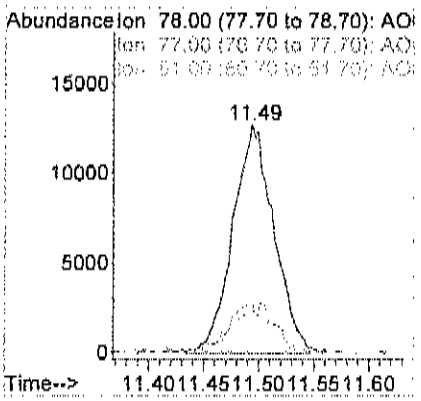


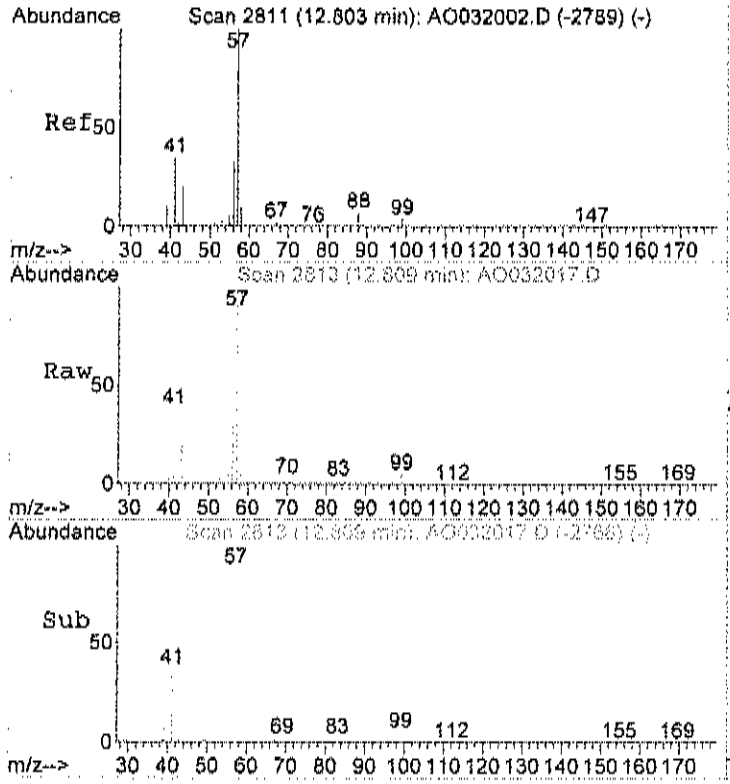


#39
Benzene
Concen: 0.54 ppb
RT: 11.49 min Scan# 2374
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 78 Resp: 33042

Ion	Ratio	Lower	Upper
78	100		
77	25.2	0.0	39.9
51	22.0	0.0	35.8

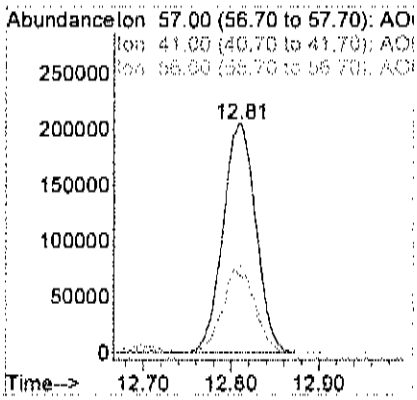


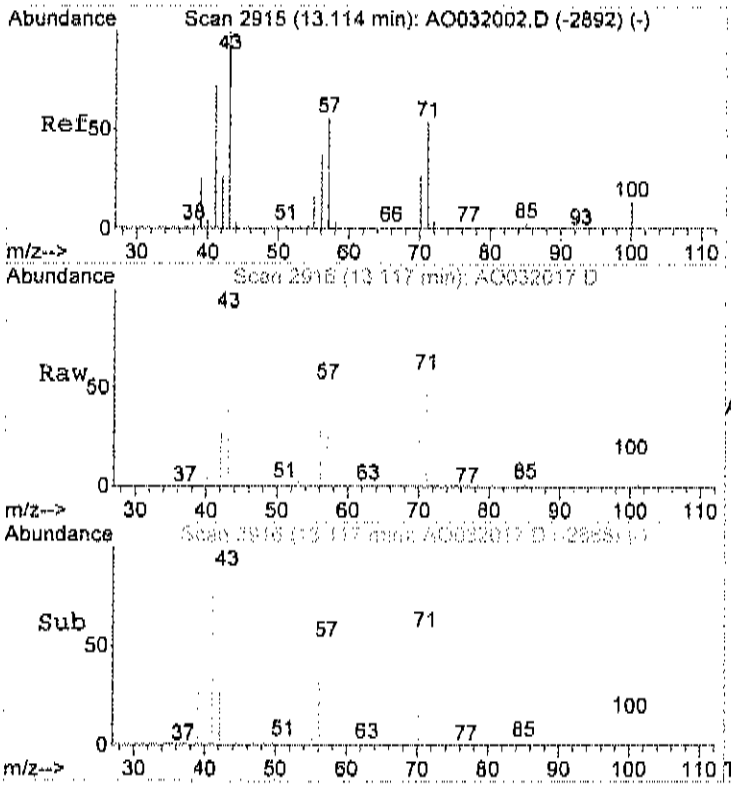


#42
2,2,4-trimethylpentane
Concen: 5.45 ppb
RT: 12.81 min Scan# 2813
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 57 Resp: 535754

Ion	Ratio	Lower	Upper
57	100		
41	37.6	6.1	46.1
56	36.2	7.8	47.8

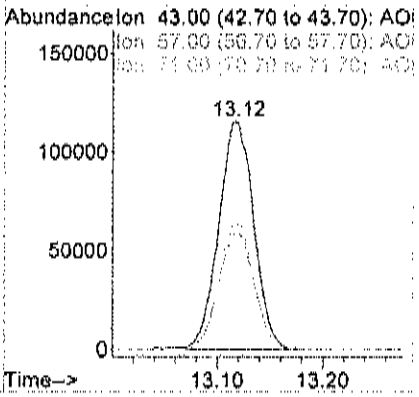


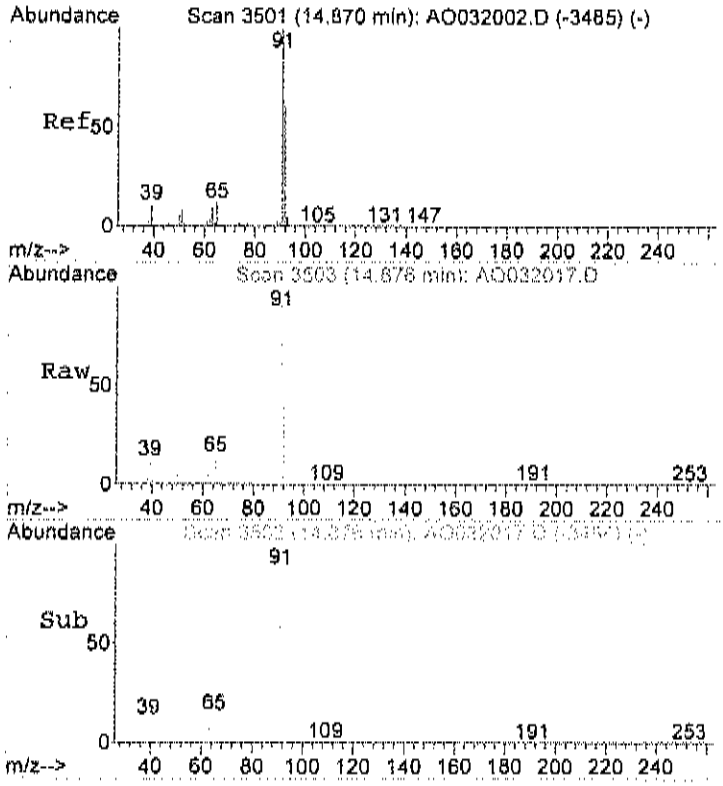


#43
Heptane
Concen: 7.14 ppb
RT: 13.12 min Scan# 2916
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 43 Resp: 267828

Ion	Ratio	Lower	Upper
43	100		
57	51.8	32.6	72.6
71	56.1	37.9	77.9

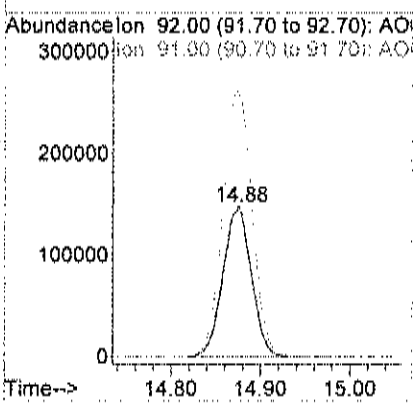


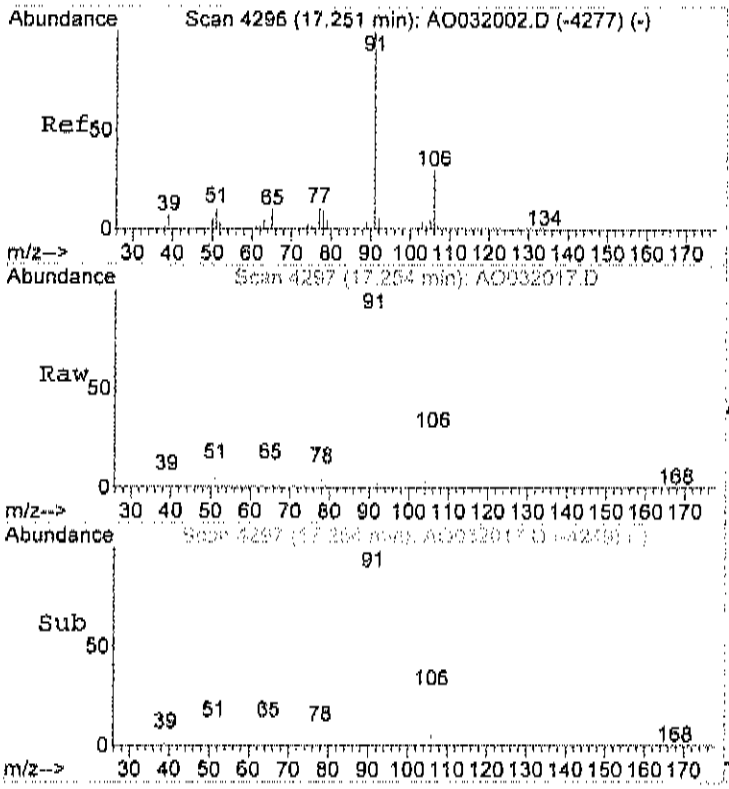


#51
Toluene
Concen: 7.77 ppb
RT: 14.88 min Scan# 3503
Delta R.T. -0.00 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 92 Resp: 324839

Ion	Ratio	Lower	Upper
92	100		
91	102.0	138.8	178.8#

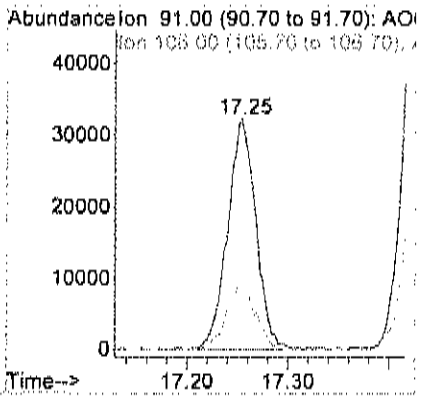


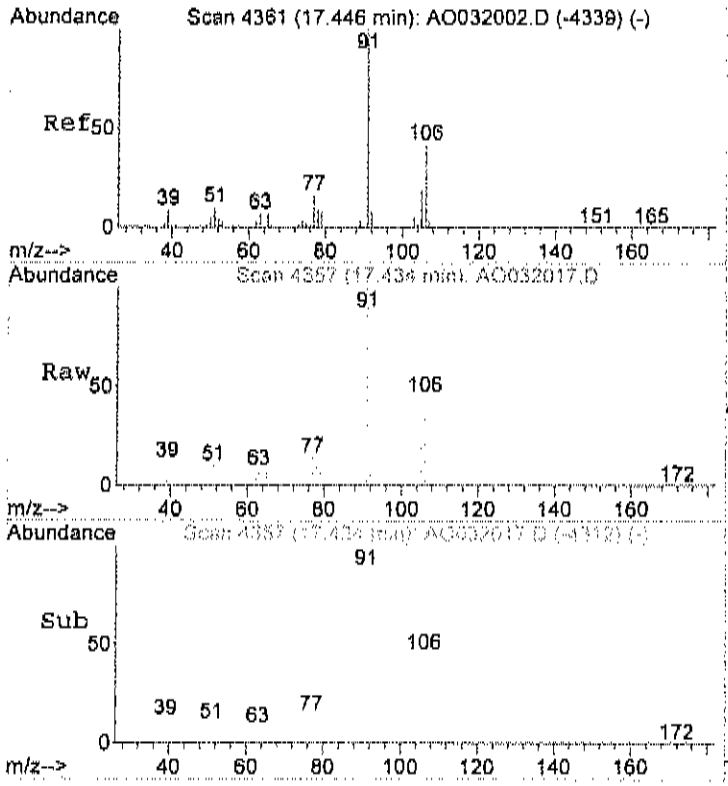


#58
Ethylbenzene
Concen: 0.64 ppb
RT: 17.25 min Scan# 4297
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 91 Resp: 63176

Ion	Ratio	Lower	Upper
91	100		
106	28.6	10.4	50.4

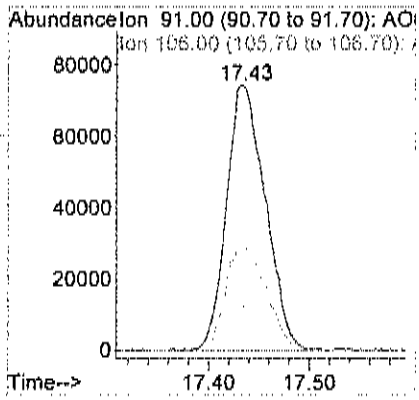


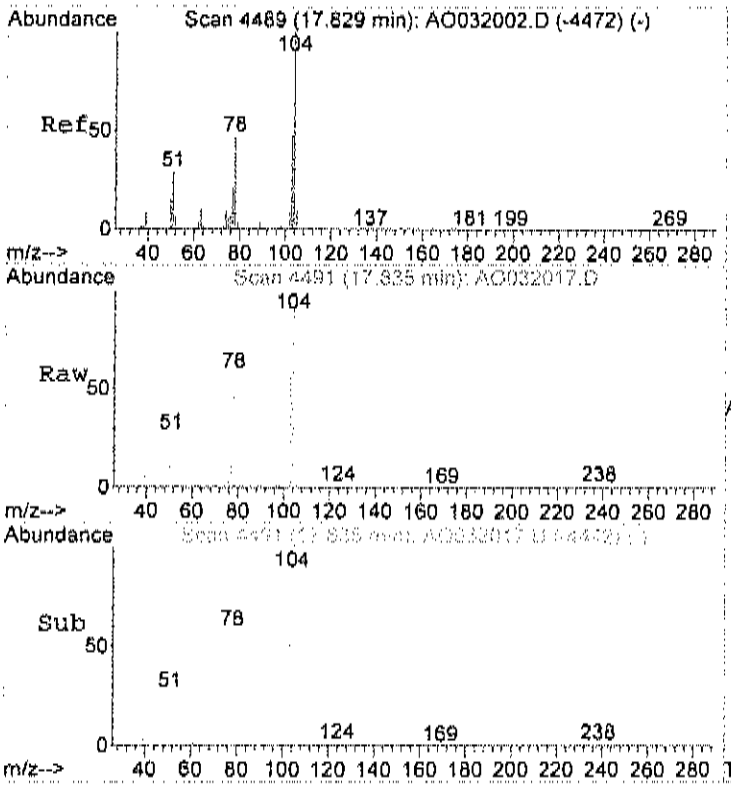


#59
m&p-xylene
Concen: 2.39 ppb
RT: 17.43 min Scan# 4357
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 91 Resp: 200456

Ion	Ratio	Lower	Upper
91	100		
106	42.1	23.5	63.5

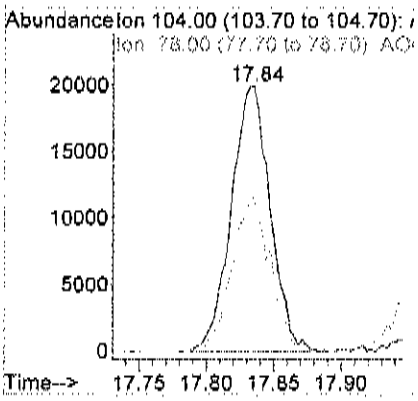


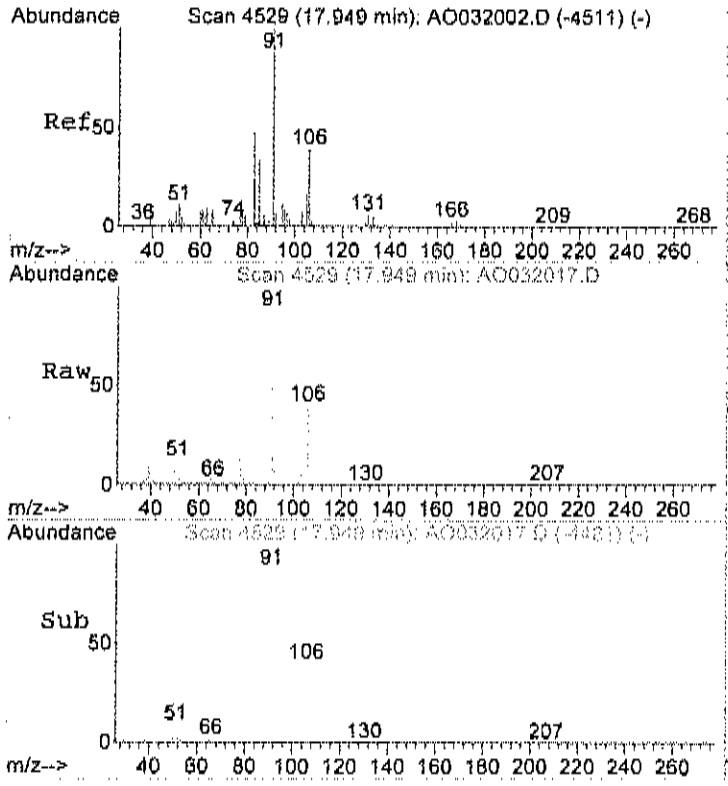


#61
Styrene
Concen: 0.81 ppb
RT: 17.84 min Scan# 4491
Delta R.T. -0.00 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion:104 Resp: 40081

Ion	Ratio	Lower	Upper
104	100		
78	56.6	31.1	71.1

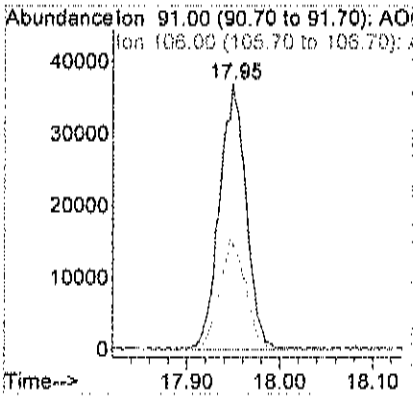


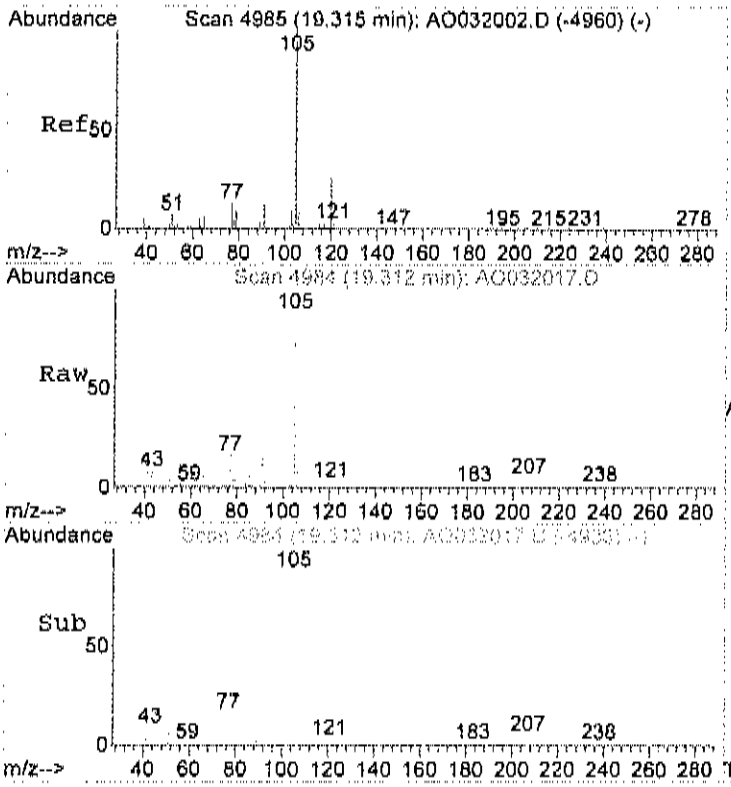


#63
o-xylene
Concen: 0.93 ppb
RT: 17.95 min Scan# 4529
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion: 91 Resp: 74210

Ion	Ratio	Lower	Upper
91	100		
106	40.5	27.7	67.7

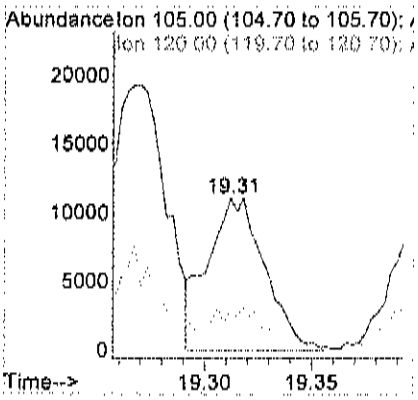


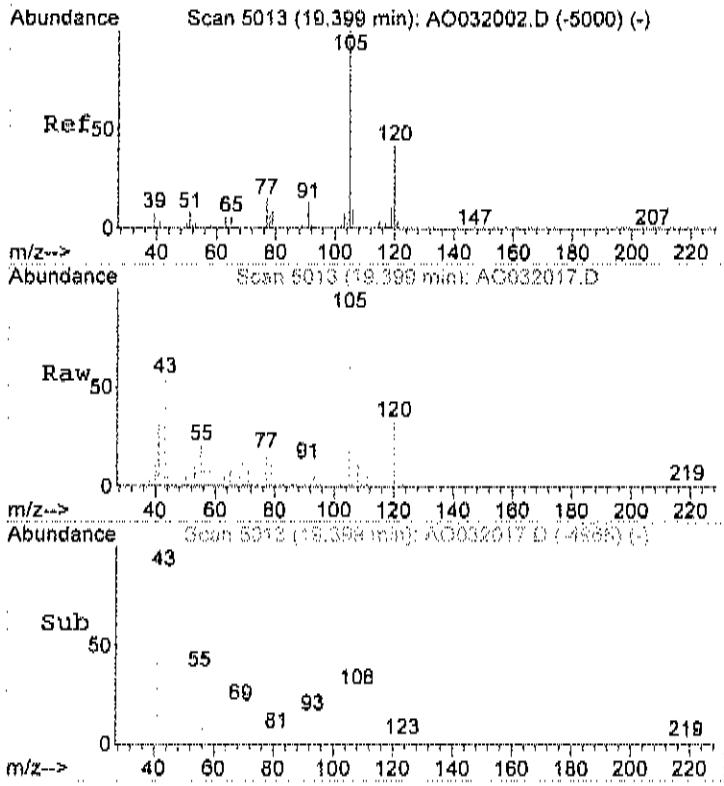


#69
4-ethyltoluene
Concen: 0.22 ppb m
RT: 19.31 min Scan# 4984
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion:105 Resp: 20627

Ion	Ratio	Lower	Upper
105	100		
120	84.1	9.7	49.7#

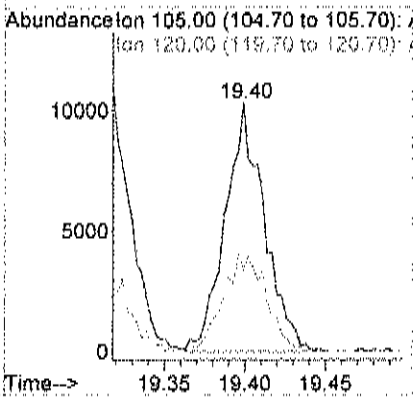


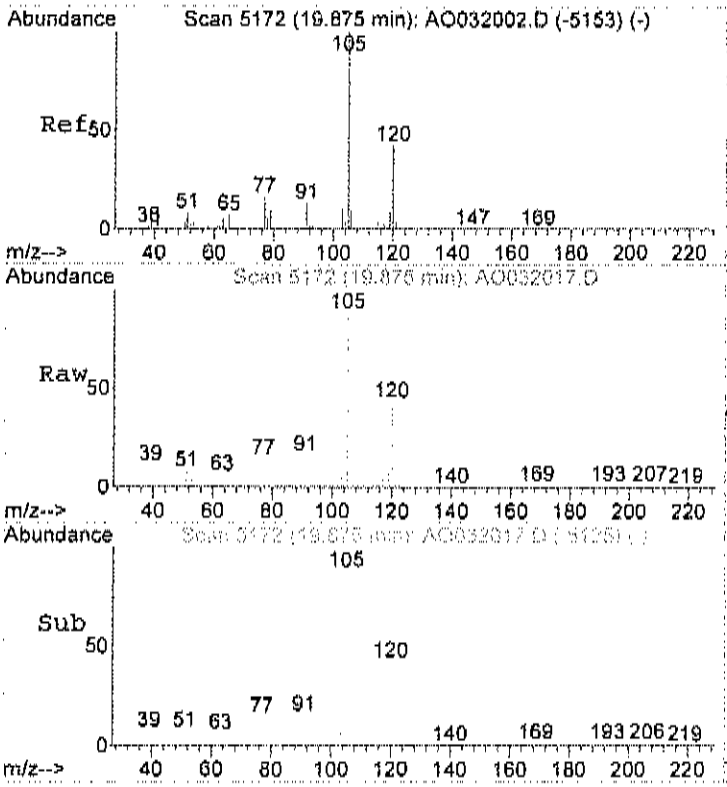


#70
1,3,5-trimethylbenzene
Concen: 0.20 ppb
RT: 19.40 min Scan# 5013
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion:105 Resp: 17429

Ion	Ratio	Lower	Upper
105	100		
120	43.3	25.7	65.7

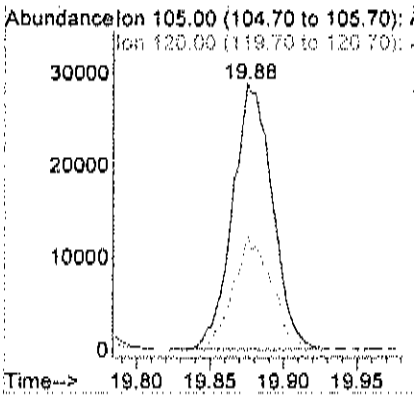


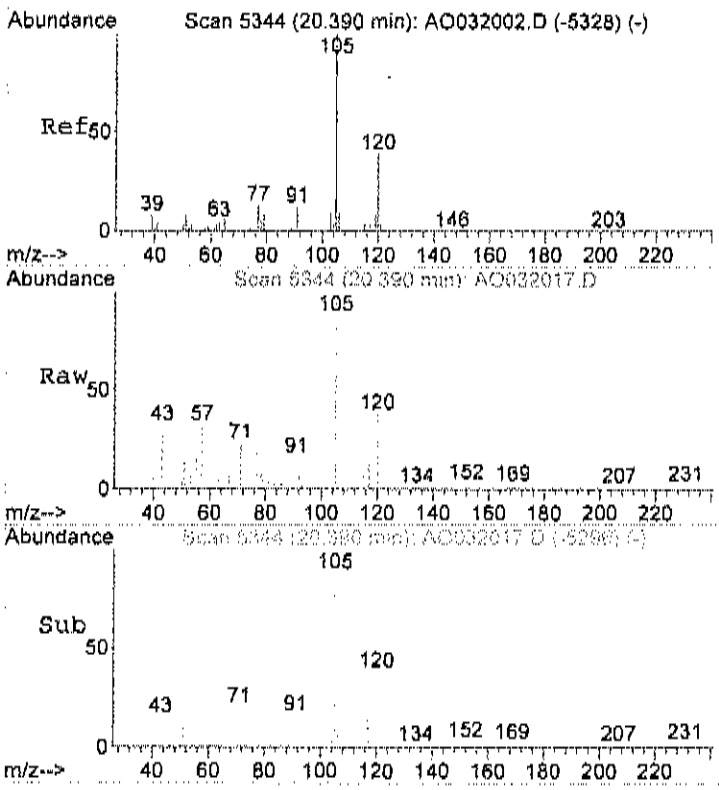


#71
1,2,4-trimethylbenzene
Concen: 0.67 ppb
RT: 19.88 min Scan# 5172
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion:105 Resp: 54529

Ion	Ratio	Lower	Upper
105	100		
120	40.9	20.3	60.3

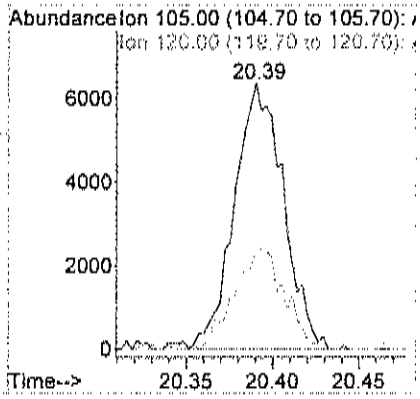




#75
1,2,3-trimethylbenzene
Concen: 0.16 ppb
RT: 20.39 min Scan# 5344
Delta R.T. -0.01 min
Lab File: AO032017.D
Acq: 20 Mar 2017 10:03 pm

Tgt Ion:105 Resp: 12572

Ion	Ratio	Lower	Upper
105	100		
120	38.9	28.3	47.3



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032027.D
Acq On : 21 Mar 2017 4:49 am
Sample : C1703050-001A 10x
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:23 2017

Vial: 22
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.53	128	12952	1.00	ppb	-0.01
35) 1,4-difluorobenzene	11.93	114	62172	1.00	ppb	-0.01
50) Chlorobenzene-d5	16.81	117	50174	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.45	95	34407	0.92	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 92.00%			
Target Compounds						Qvalue
15) Acetone	6.13	58	10219	0.96	ppb	# 1
42) 2,2,4-trimethylpentane	12.81	57	55003	0.54	ppb	84
43) Heptane	13.11	43	26824	0.69	ppb	99
51) Toluene	14.87	92	33611	0.79	ppb	# 84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

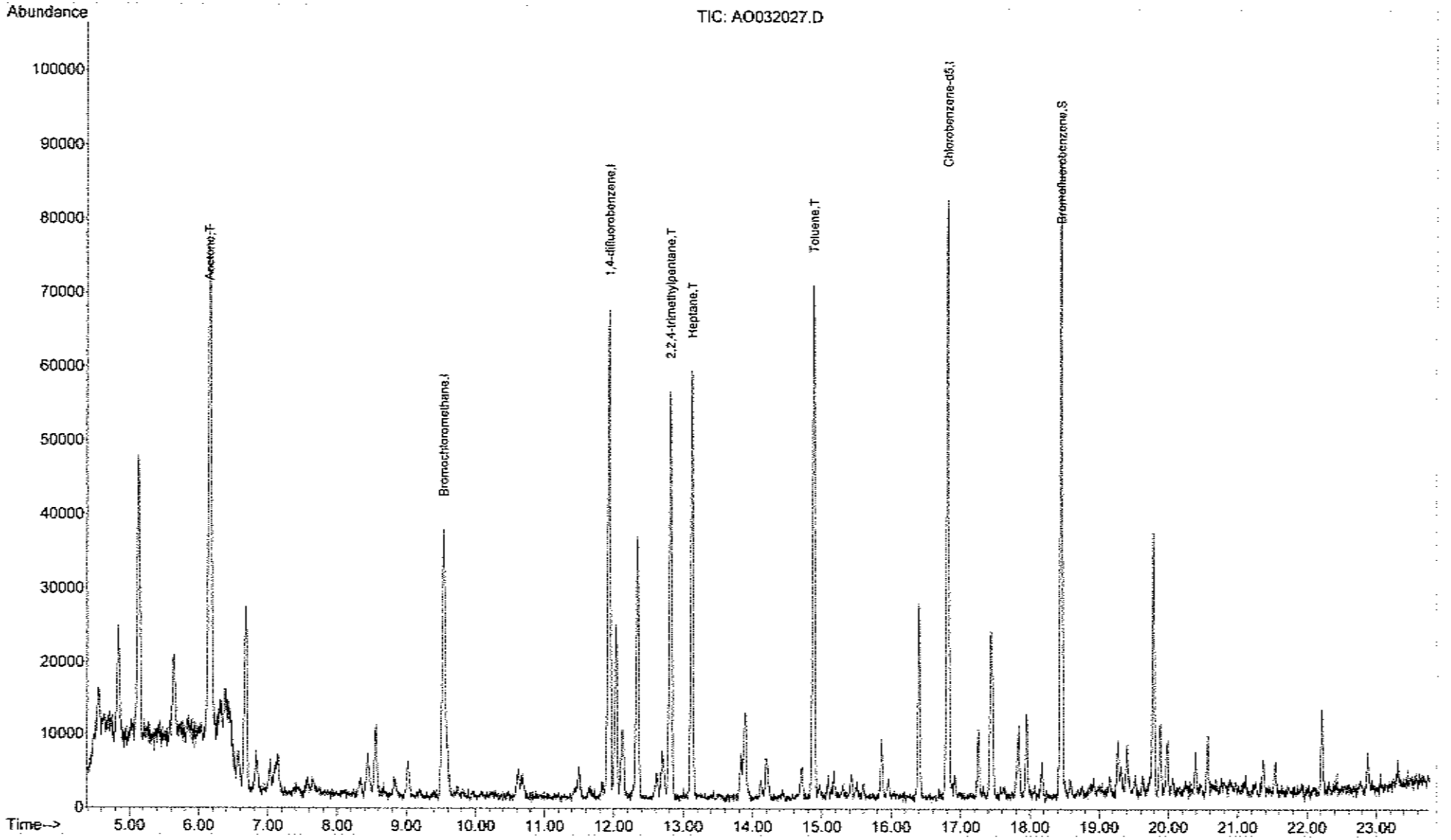
Quantitation Report (QT Reviewed)

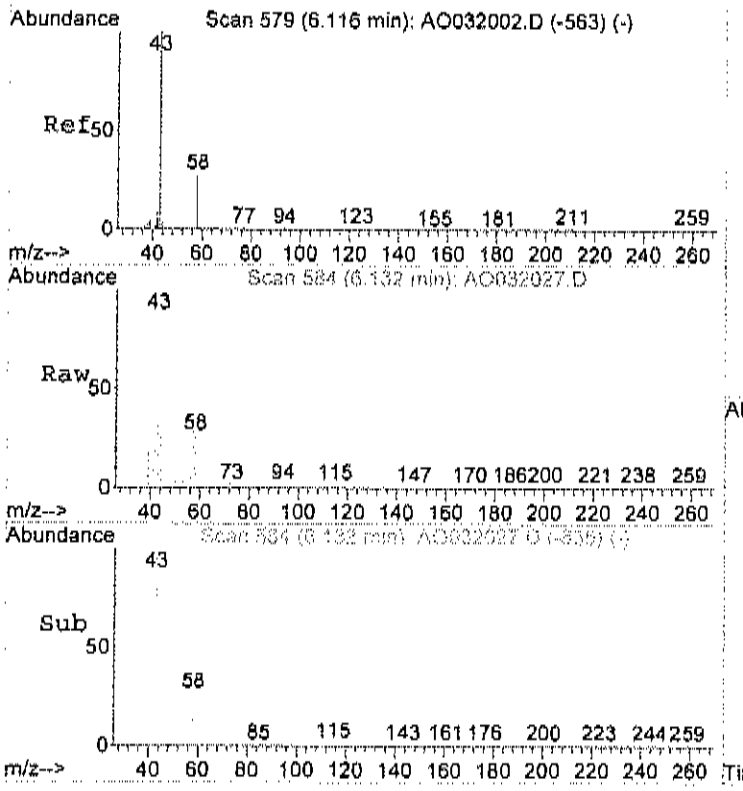
Data File : C:\HPCHEM\1\DATA\AO032027.D
Acq On : 21 Mar 2017 4:49 am
Sample : C1703050-001A 10x
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:18 2017

Vial: 22
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration

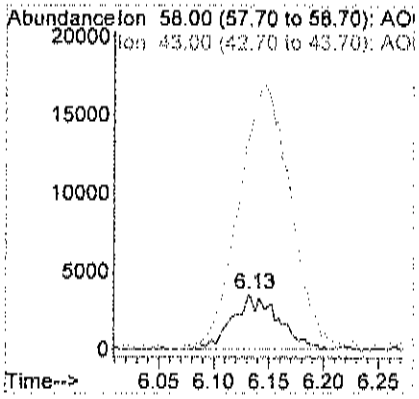


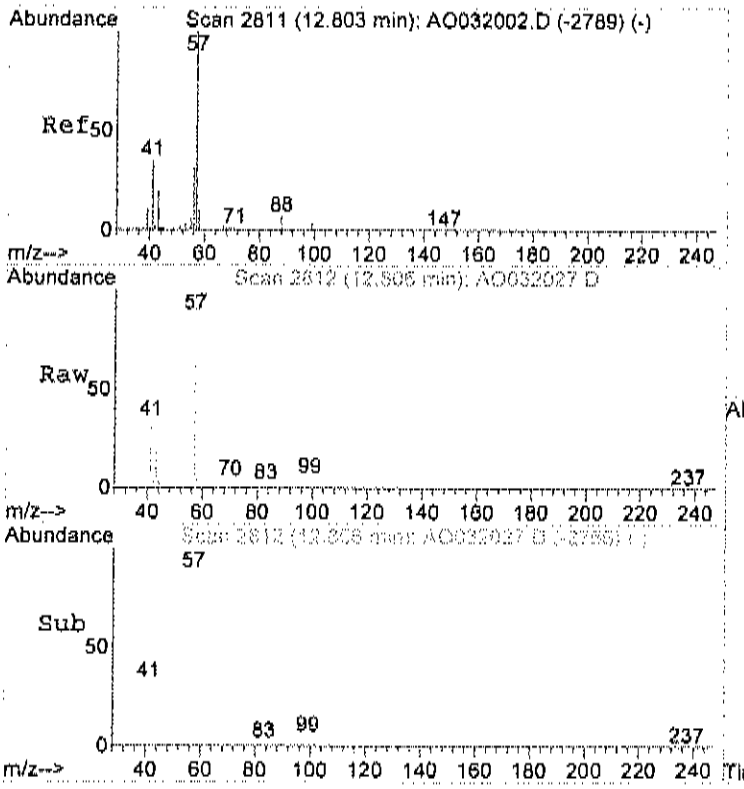


#15
Acetone
Concen: 0.96 ppb
RT: 6.13 min Scan# 584
Delta R.T. -0.00 min
Lab File: AO032027.D
Acq: 21 Mar 2017 4:49 am

Tgt Ion: 58 Resp: 10219

Ion	Ratio	Lower	Upper
58	100		
43	549.3	263.2	323.2#

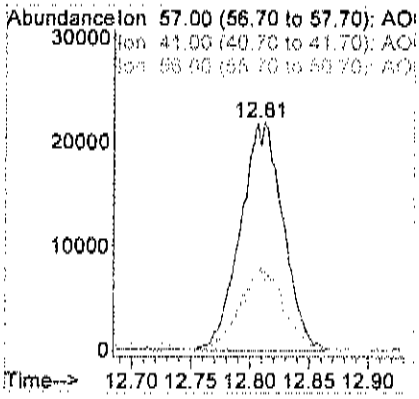


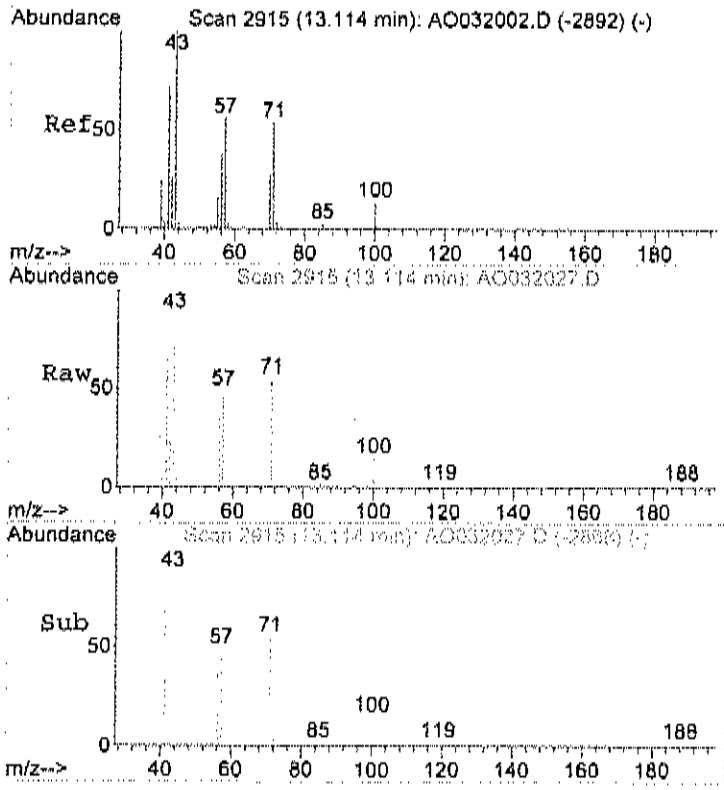


#42
2,2,4-trimethylpentane
Concen: 0.54 ppb
RT: 12.81 min Scan# 2812
Delta R.T. -0.01 min
Lab File: AO032027.D
Acq: 21 Mar 2017 4:49 am

Tgt Ion: 57 Resp: 55003

Ion	Ratio	Lower	Upper
57	100		
41	36.5	6.1	46.1
56	34.4	7.8	47.8

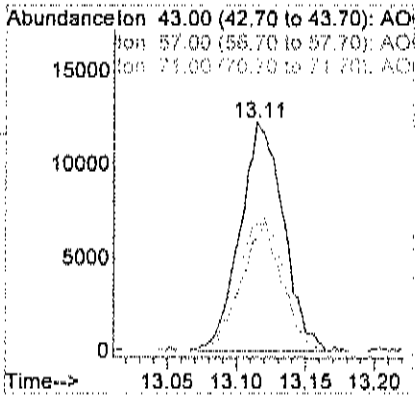


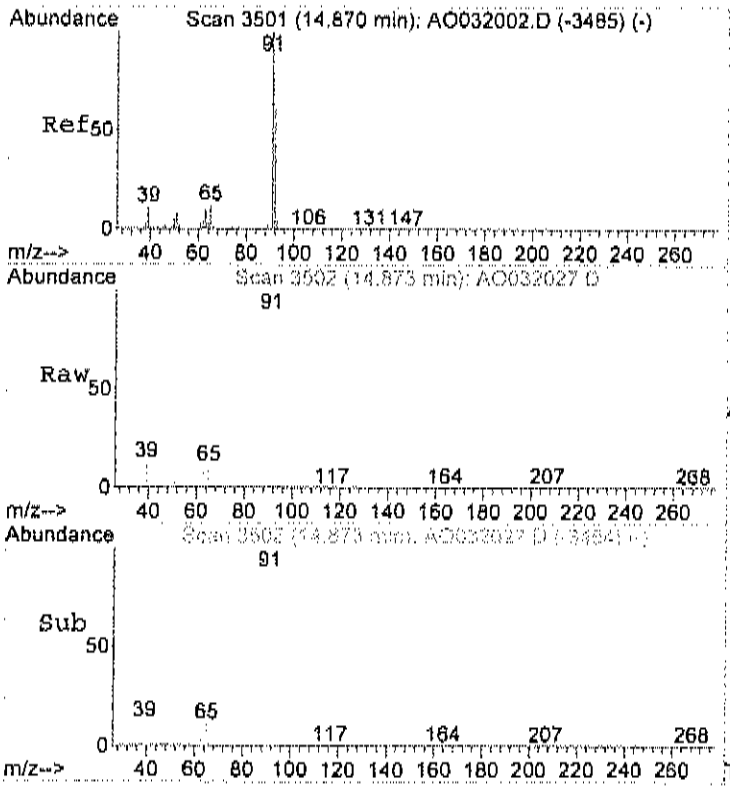


#43
Heptane
Concen: 0.69 ppb
RT: 13.11 min Scan# 2915
Delta R.T. -0.01 min
Lab File: AO032027.D
Acq: 21 Mar 2017 4:49 am

Tgt Ion: 43 Resp: 26824

Ion	Ratio	Lower	Upper
43	100		
57	53.9	32.6	72.6
71	57.7	37.9	77.9

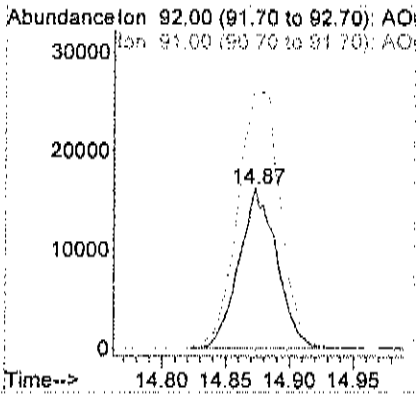




#51
Toluene
Concen: 0.79 ppb
RT: 14.87 min Scan# 3502
Delta R.T. -0.01 min
Lab File: AO032027.D
Acq: 21 Mar 2017 4:49 am

Tgt Ion: 92 Resp: 33611

Ion	Ratio	Lower	Upper
92	100		
91	179.9	138.8	178.8#



Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3B
Lab Order:	C1703050	**Tag Number:**	1176.1170
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-5			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
Chloromethane	0.81	0.15		ppbV	1	3/20/2017 10:45:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 10:45:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	3/20/2017 10:45:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/20/2017 10:45:00 PM
Surr: Bromofluorobenzene	101	70-130		%REC	1	3/20/2017 10:45:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3B
Lab Order:	C1703050	**Tag Number:**	1176.1170
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 10:45:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 10:45:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:45:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 10:45:00 PM
Chloromethane	1.7	0.31		ug/m3	1	3/20/2017 10:45:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:45:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 10:45:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:45:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 10:45:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 10:45:00 PM

Qualifiers:

**	Quantitation Limit
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
JN	Non-routine analyte. Quantitation estimated.
S	Spike Recovery outside accepted recovery limits
.	Results reported are not blank corrected
E	Estimated Value above quantitation range
J	Analyte detected below quantitation limit
ND	Not Detected at the Limit of Detection

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\A0032018.D Vial: 13
Acq On : 20 Mar 2017 10:45 pm Operator: RJP
Sample : C1703050-002A Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:14 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	13210	1.00	ppb		-0.01
35) 1,4-difluorobenzene	11.92	114	60426	1.00	ppb		-0.02
50) Chlorobenzene-d5	16.80	117	51042	1.00	ppb		-0.02
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	38512	1.01	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 101.00%				
Target Compounds							Qvalue
3) Freon 12	4.54	85	72042	0.67	ppb		97
4) Chloromethane	4.71	50	13002	0.81	ppb		92
14) Freon 11	6.30	101	33452	0.34	ppb		100
15) Acetone	6.13	58	74068	6.84	ppb	#	1
17) Isopropyl alcohol	6.37	45	37077	1.21	ppb	#	100
21) Methylene chloride	7.09	84	7217	0.36	ppb	#	68
28) Methyl Ethyl Ketone	8.82	72	7304	0.74	ppb		96
30) Hexane	9.59	57	34259	1.07	ppb	#	80
37) Cyclohexane	11.83	56	7693	0.23	ppb		93
38) Carbon tetrachloride	11.68	117	5168m	0.08	ppb		
39) Benzene	11.50	78	36585	0.59	ppb		84
42) 2,2,4-trimethylpentane	12.81	57	886483	8.90	ppb		86
43) Heptane	13.12	43	250862	6.60	ppb		98
51) Toluene	14.88	92	429794	9.99	ppb	#	83
58) Ethylbenzene	17.25	91	75644	0.74	ppb		96
59) m&p-xylene	17.43	91	259660	3.01	ppb		99
61) Styrene	17.84	104	41199	0.81	ppb		93
63) o-xylene	17.95	91	102415	1.24	ppb		89
69) 4-ethyltoluene	19.31	105	23465m	0.25	ppb		
70) 1,3,5-trimethylbenzene	19.40	105	25962	0.29	ppb		95
71) 1,2,4-trimethylbenzene	19.88	105	82776	0.99	ppb		100
75) 1,2,3-trimethylbenzene	20.39	105	17549	0.22	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

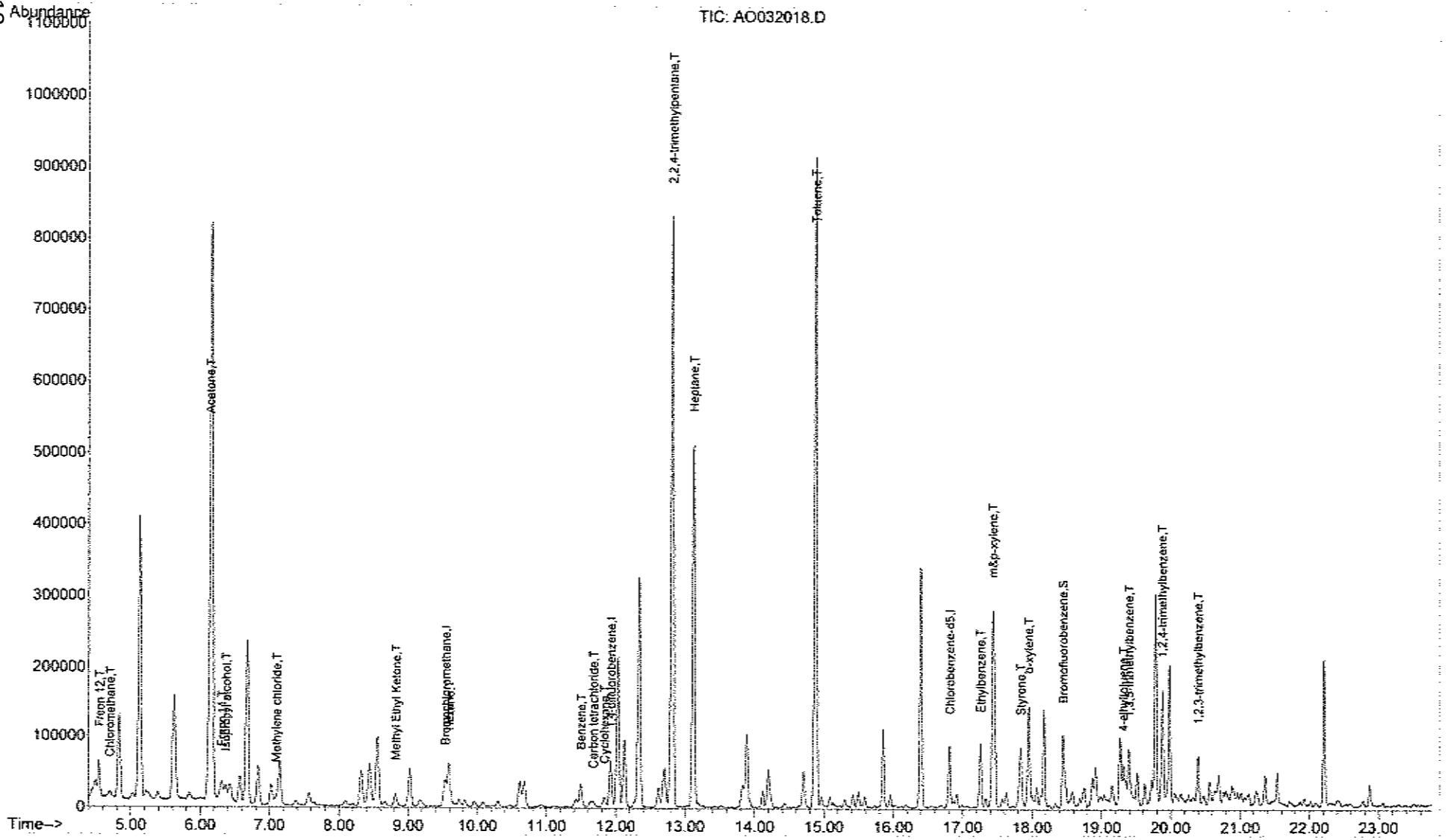
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032018.D
Acq On : 20 Mar 2017 10:45 pm
Sample : C1703050-002A
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:23 2017

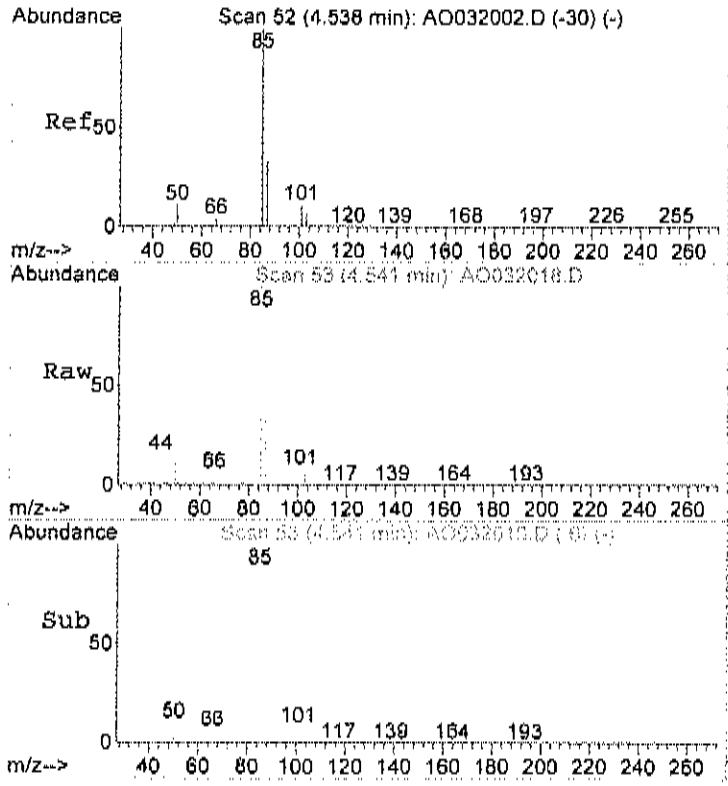
Vial: 13
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration



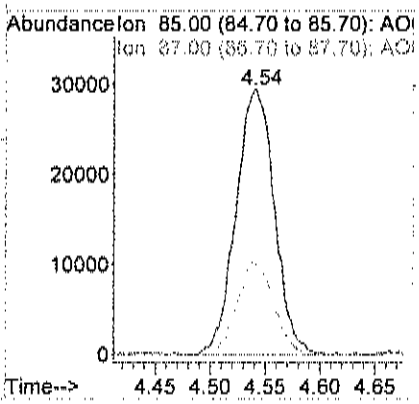
AO032018.D A227_1UG.M Mon Mar 27 11:23:00 2017 MSD1 Page 2

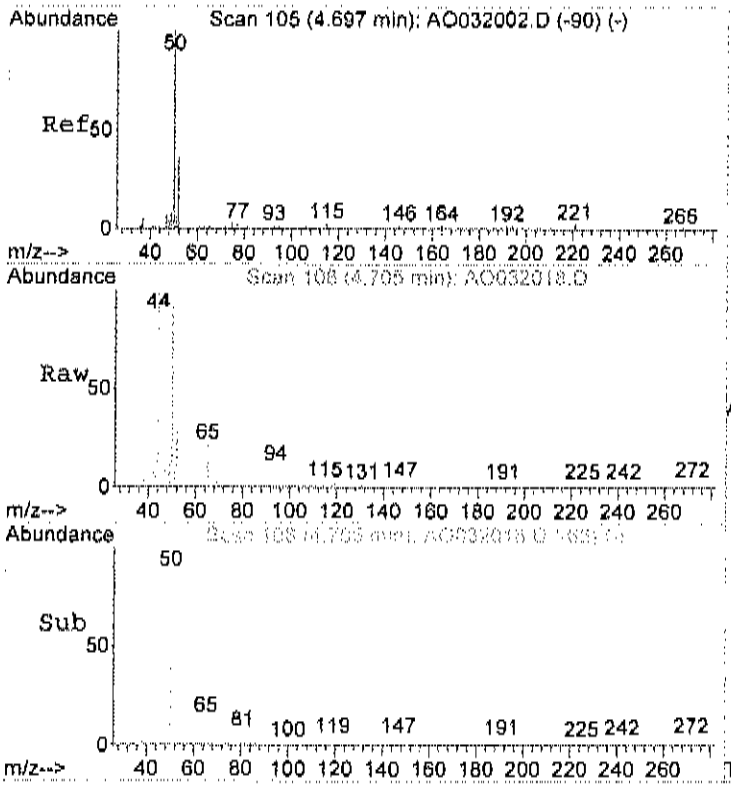


#3
Freon 12
Concen: 0.67 ppb
RT: 4.54 min Scan# 53
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 85 Resp: 72042

Ion	Ratio	Lower	Upper
85	100		
87	33.0	11.3	51.3

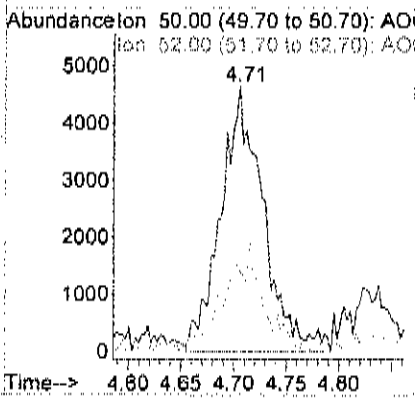


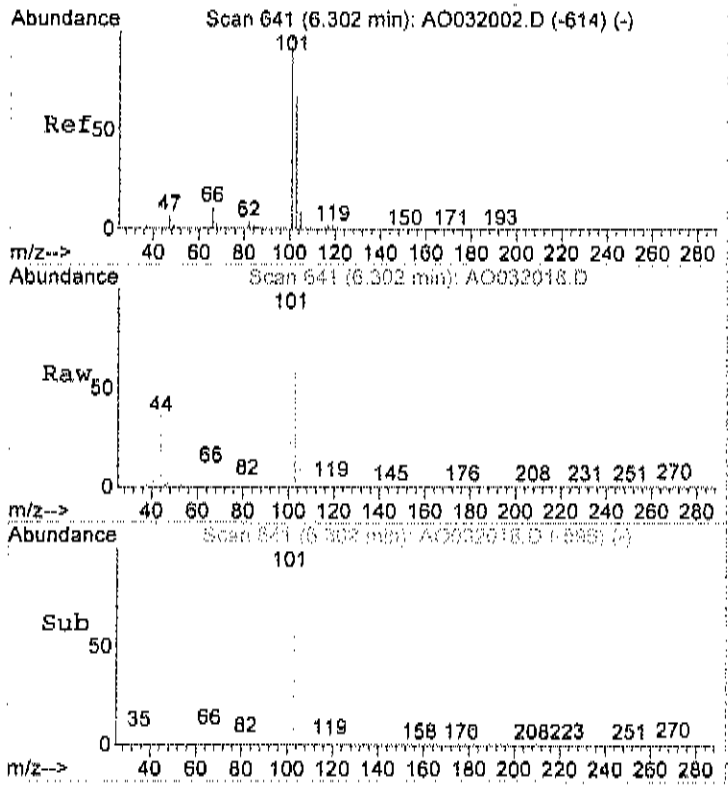


#4
Chloromethane
Concen: 0.81 ppb
RT: 4.71 min Scan# 108
Delta R.T. -0.02 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 50 Resp: 13002

Ion	Ratio	Lower	Upper
50	100		
52	36.3	11.8	51.8

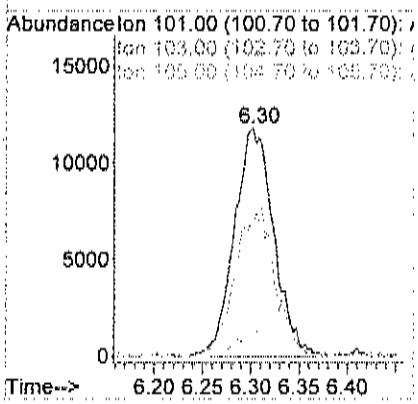


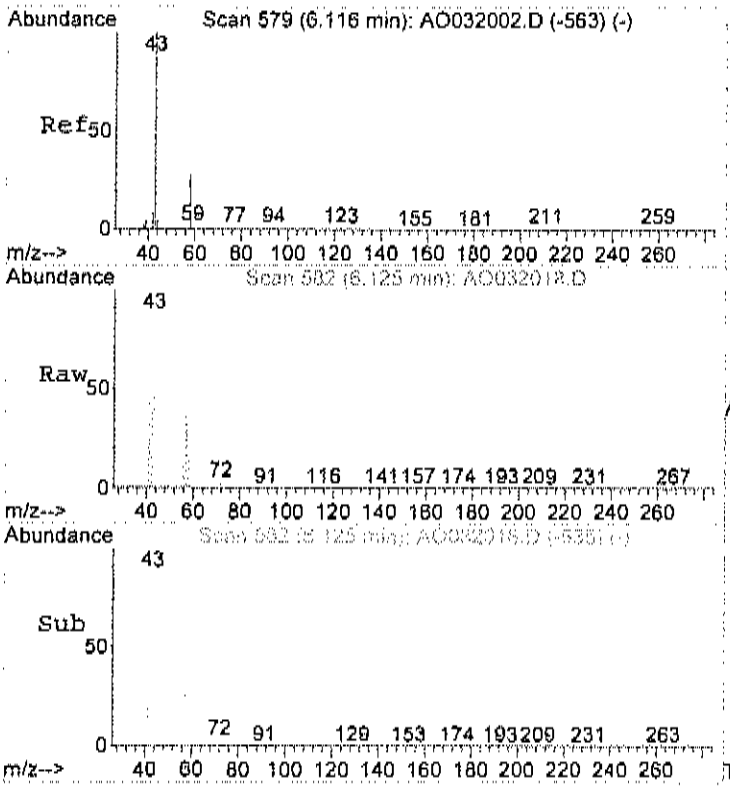


#14
Freon 11
Concen: 0.34 ppb
RT: 6.30 min Scan# 641
Delta R.T. -0.02 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion:101 Resp: 33452

Ion	Ratio	Lower	Upper
101	100		
103	65.6	46.0	86.0
105	11.4	0.0	31.4

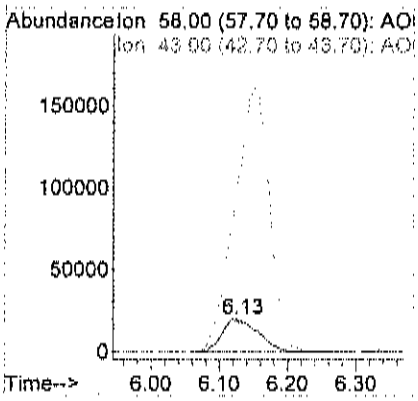


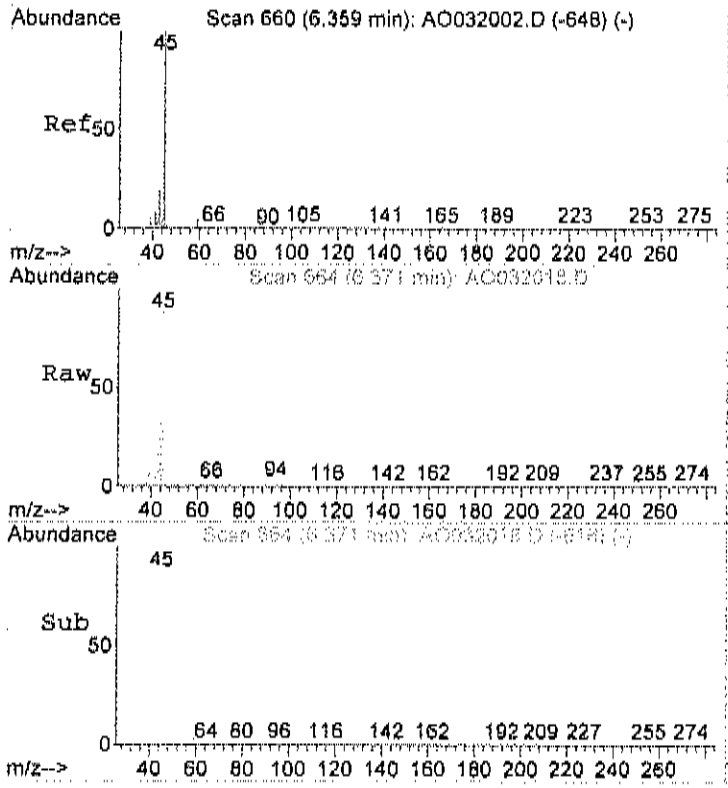


#15
Acetone
Concen: 6.84 ppb
RT: 6.13 min Scan# 582
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 58 Resp: 74068

Ion	Ratio	Lower	Upper
58	100		
43	771.2	263.2	323.2#

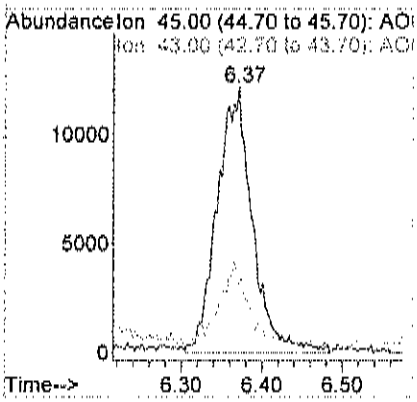


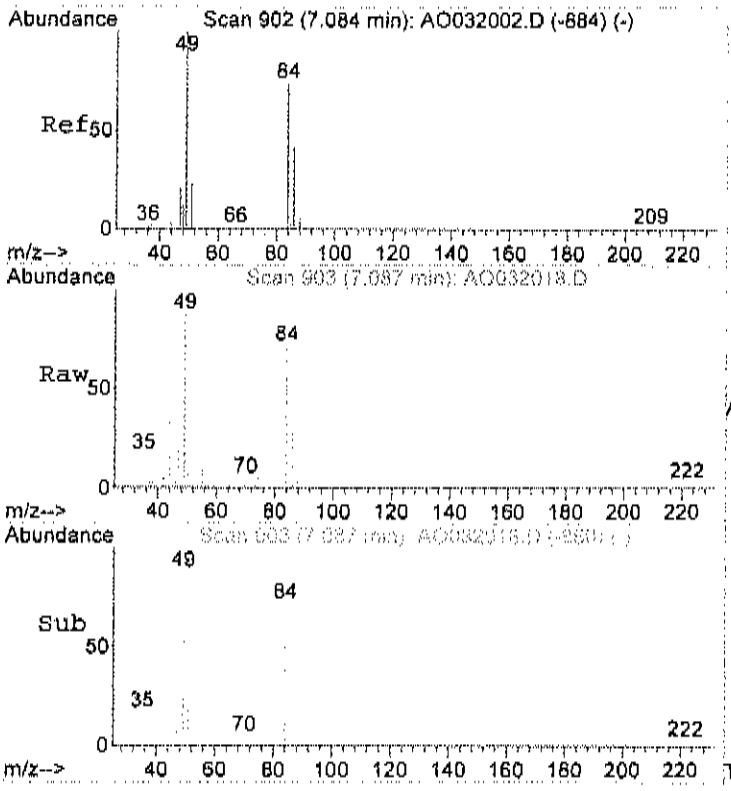


#17
Isopropyl alcohol
Concen: 1.21 ppb
RT: 6.37 min Scan# 664
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 45 Resp: 37077

Ion	Ratio	Lower	Upper
45	100		
43	36.5	0.0	20.0#

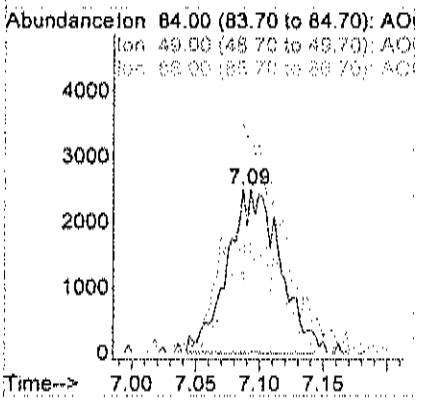


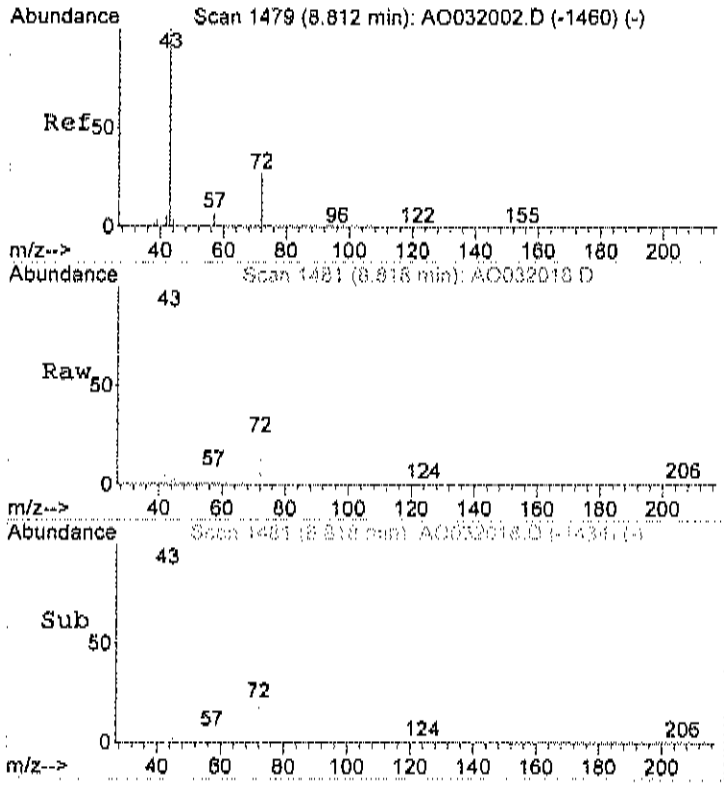


#21
Methylene chloride
Concen: 0.36 ppb
RT: 7.09 min Scan# 903
Delta R.T. -0.02 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 84 Resp: 7217

Ion	Ratio	Lower	Upper
84	100		
49	148.1	86.2	126.2#
86	67.4	36.1	76.1

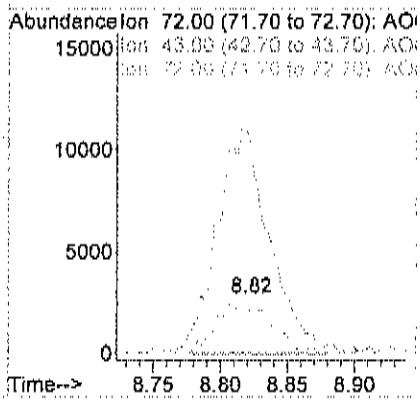


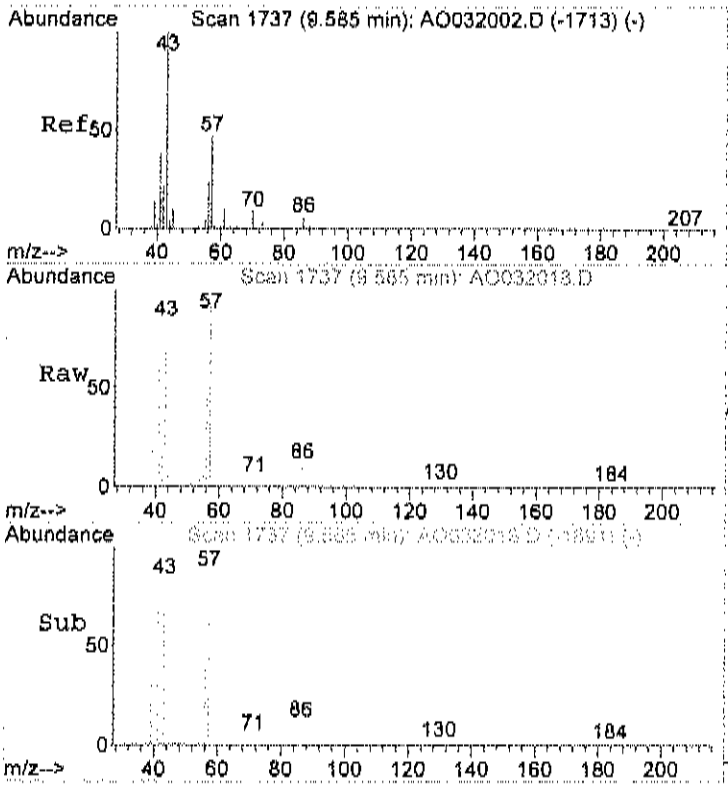


#28
Methyl Ethyl Ketone
Concen: 0.74 ppb
RT: 8.82 min Scan# 1481
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 72 Resp: 7304

Ion	Ratio	Lower	Upper
72	100		
43	415.6	383.1	423.1
72	100.0	80.0	120.0

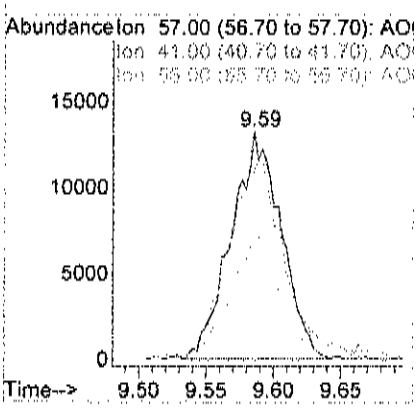


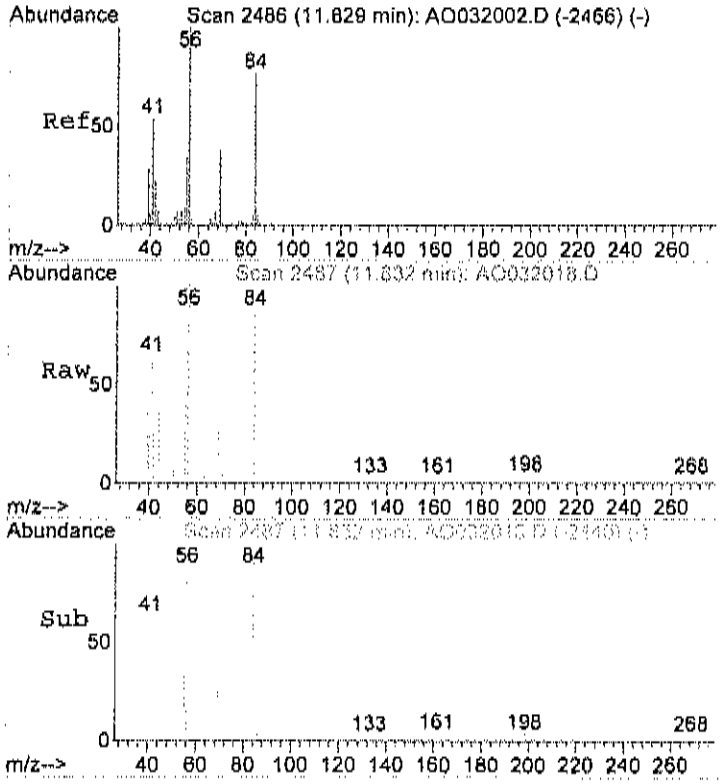


#30
Hexane
Concen: 1.07 ppb
RT: 9.59 min Scan# 1737
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 57 Resp: 34259

Ion	Ratio	Lower	Upper
57	100		
41	104.1	57.7	97.7#
56	56.3	41.0	81.0

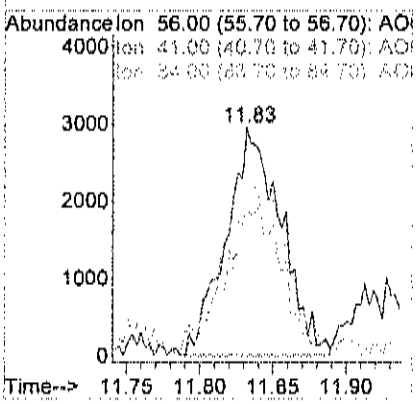


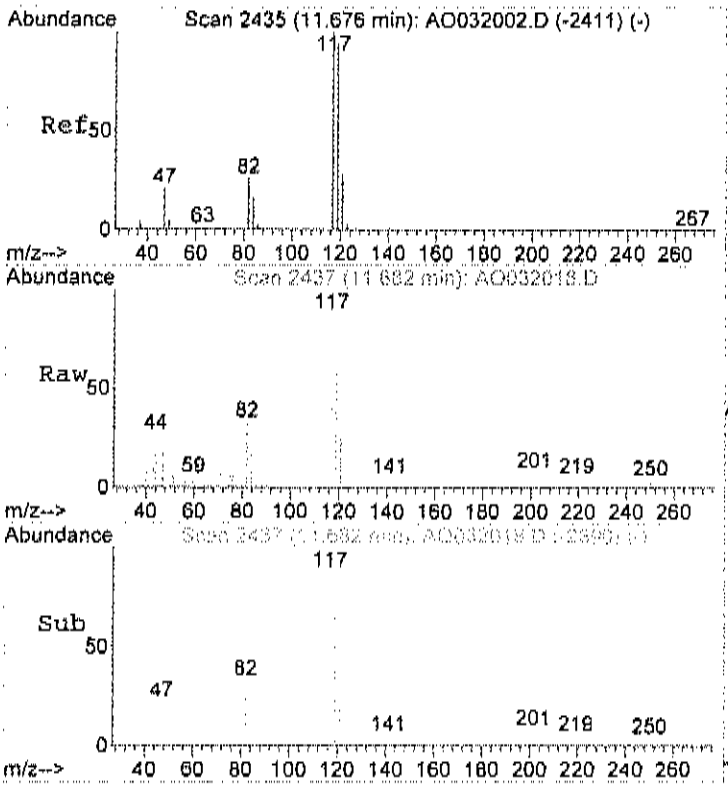


#37
Cyclohexane
Concen: 0.23 ppb
RT: 11.83 min Scan# 2487
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 56 Resp: 7693

Ion	Ratio	Lower	Upper
56	100		
41	72.1	43.2	83.2
84	81.1	64.8	104.8

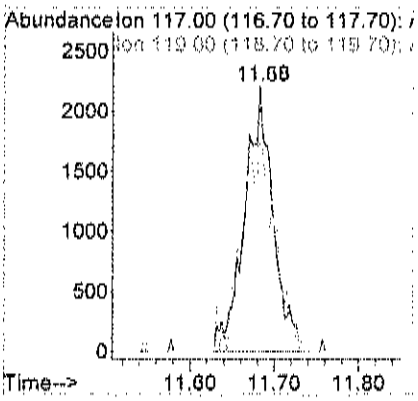


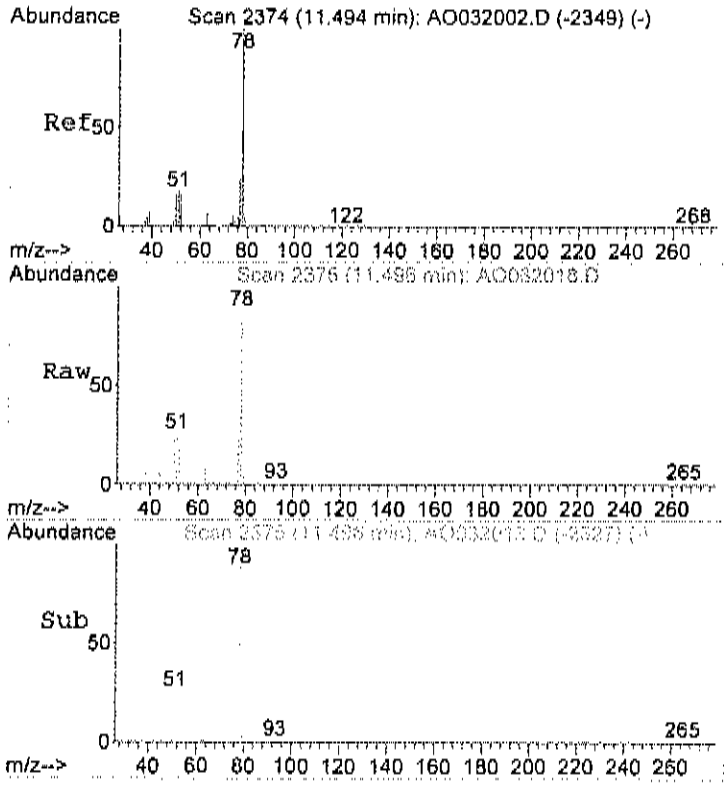


#38
Carbon tetrachloride
Concen: 0.08 ppb m
RT: 11.68 min Scan# 2437
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion:117 Resp: 5168

Ion	Ratio	Lower	Upper
117	100		
119	0.0	74.9	114.9#

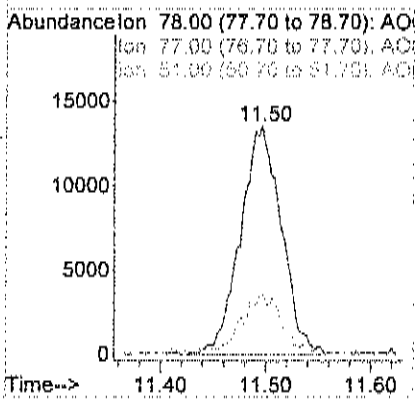


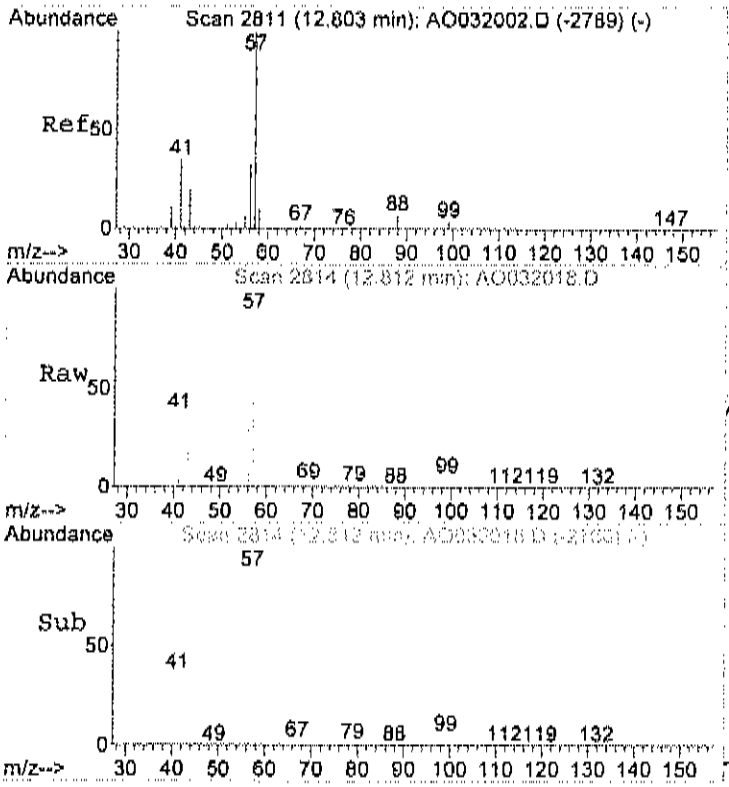


#39
Benzene
Concen: 0.59 ppb
RT: 11.50 min Scan# 2375
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 78 Resp: 36585

Ion	Ratio	Lower	Upper
78	100		
77	27.0	0.0	39.9
51	23.0	0.0	35.8

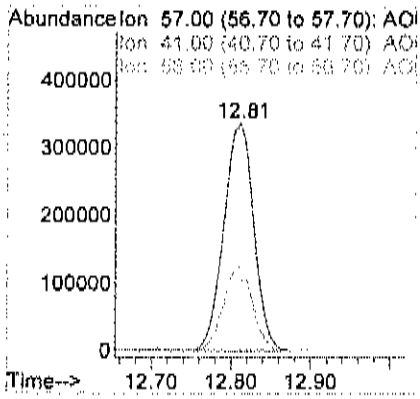


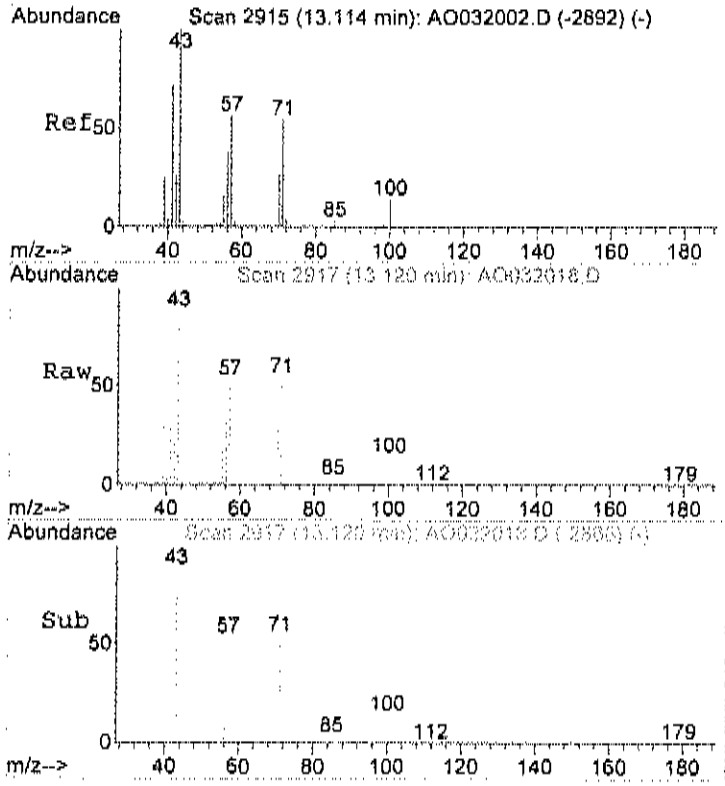


#42
2,2,4-trimethylpentane
Concen: 8.90 ppb
RT: 12.81 min Scan# 2814
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 57 Resp: 886483

Ion	Ratio	Lower	Upper
57	100		
41	36.5	6.1	46.1
56	32.2	7.8	47.8

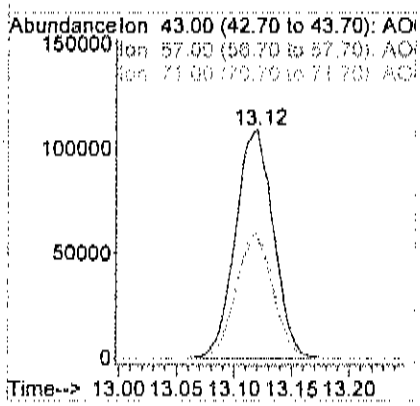


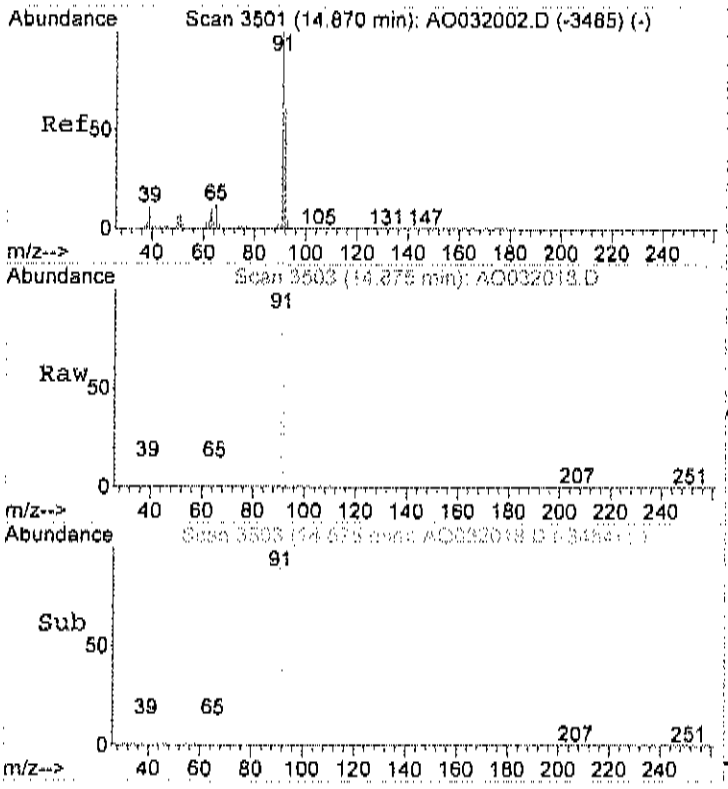


#43
Heptane
Concen: 6.60 ppb
RT: 13.12 min Scan# 2917
Delta R.T. -0.00 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 43 Resp: 250862

Ion	Ratio	Lower	Upper
43	100		
57	52.1	32.6	72.6
71	55.1	37.9	77.9

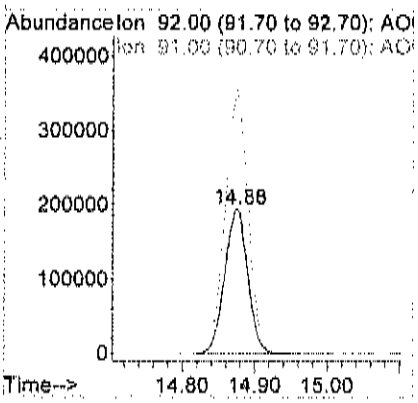


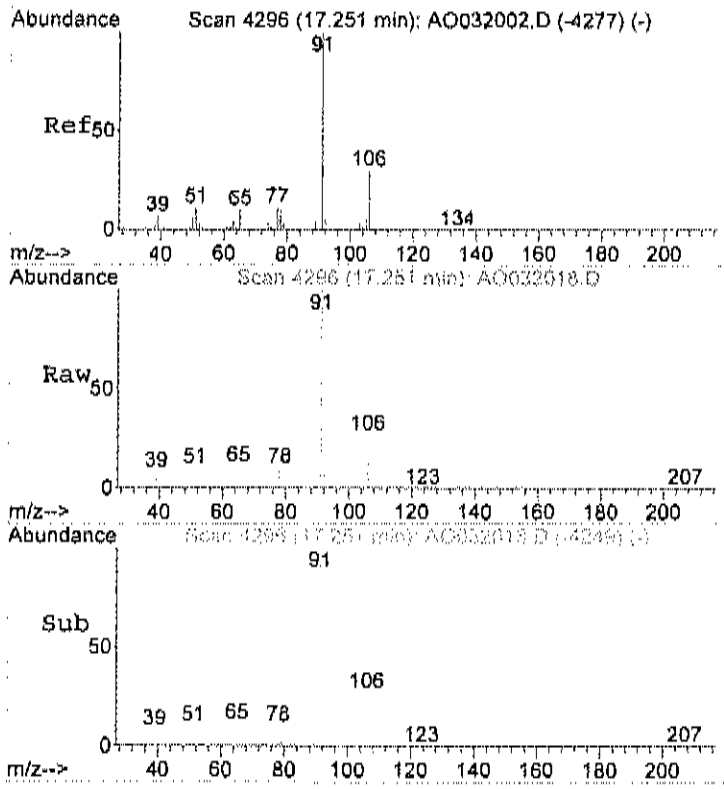


#51
Toluene
Concen: 9.99 ppb
RT: 14.88 min Scan# 3503
Delta R.T. -0.00 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 92 Resp: 429794

Ion	Ratio	Lower	Upper
92	100		
91	181.2	136.8	178.8#

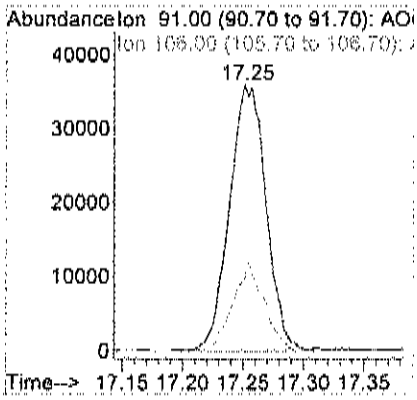


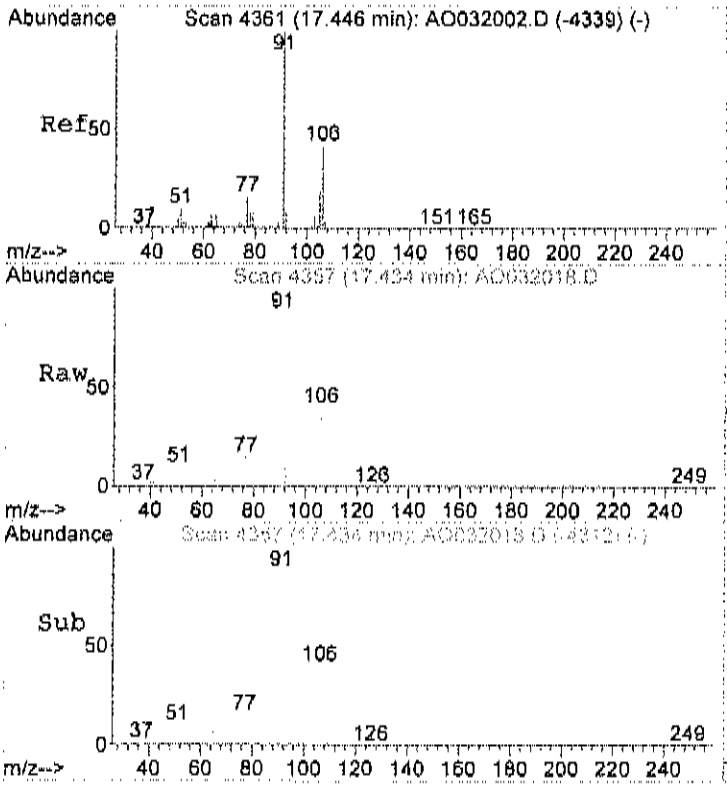


#58
Ethylbenzene
Concen: 0.74 ppb
RT: 17.25 min Scan# 4296
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 91 Resp: 75644

Ion	Ratio	Lower	Upper
91	100		
106	28.4	10.4	50.4

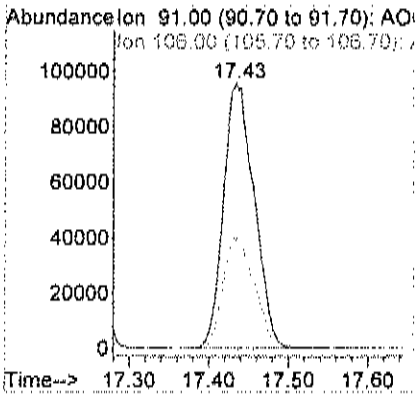


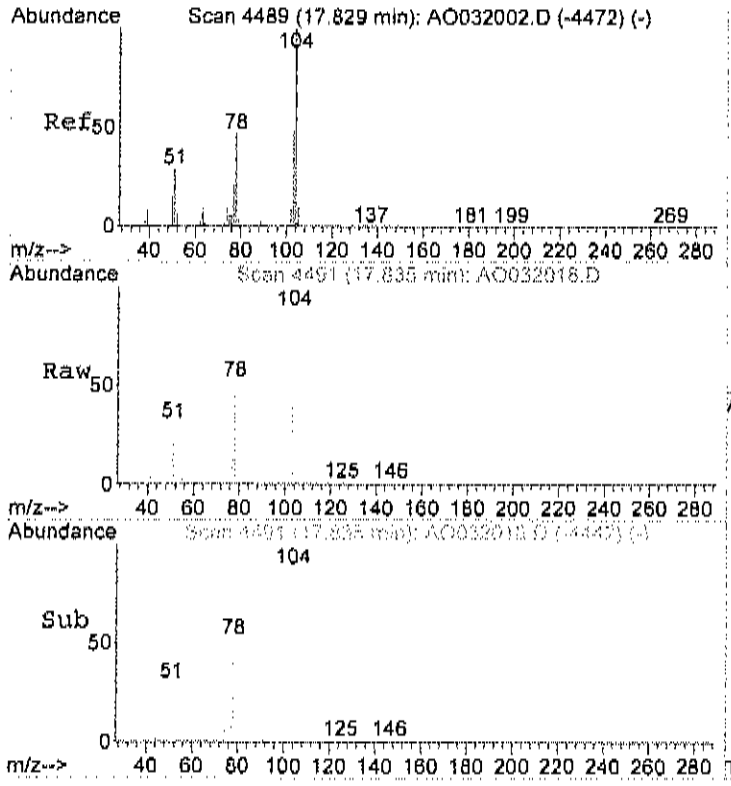


#59
m&p-xylene
Concen: 3.01 ppb
RT: 17.43 min Scan# 4357
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 91 Resp: 259660

Ion	Ratio	Lower	Upper
91	100		
106	42.7	23.5	63.5

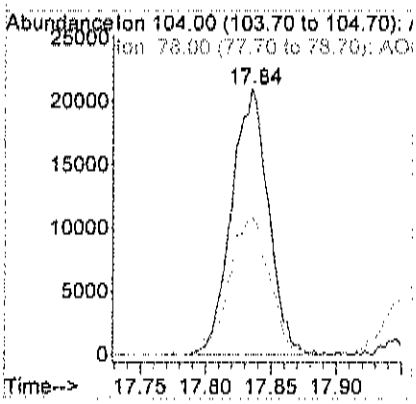


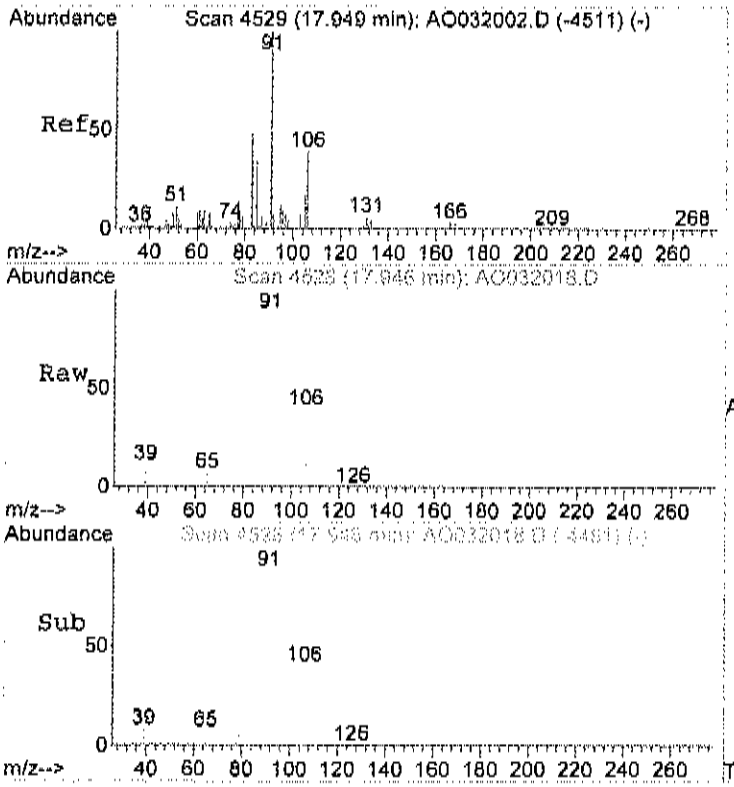


#61
Styrene
Concen: 0.81 ppb
RT: 17.84 min Scan# 4491
Delta R.T. -0.00 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion:104 Resp: 41199

Ion	Ratio	Lower	Upper
104	100		
78	55.9	31.1	71.1

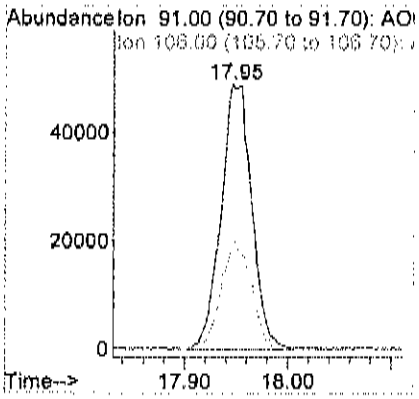


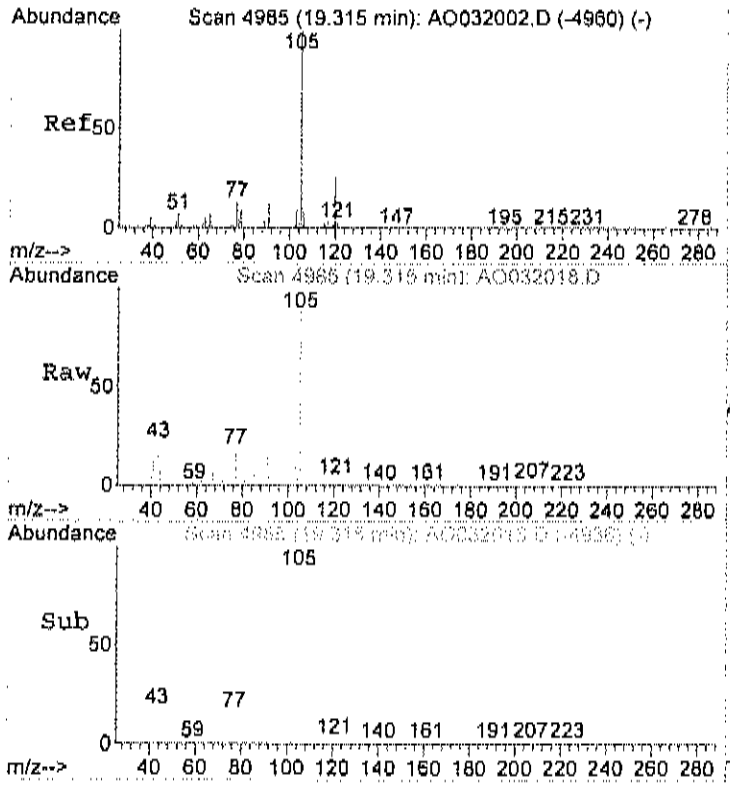


#63
o-xylene
Concen: 1.24 ppb
RT: 17.95 min Scan# 4528
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion: 91 Resp: 102415

Ion	Ratio	Lower	Upper
91	100		
106	40.1	27.7	67.7

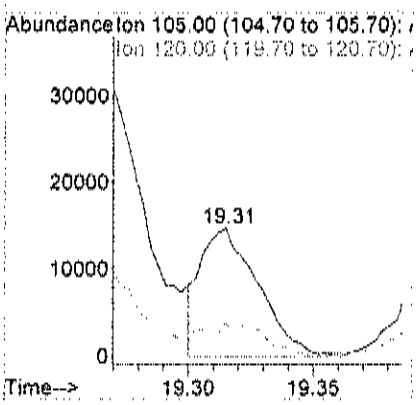


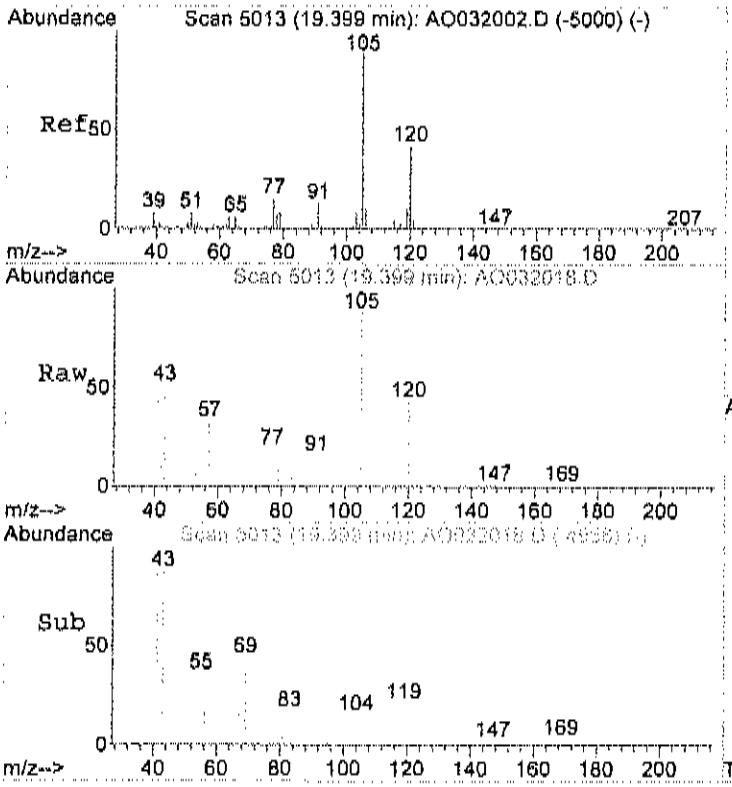


#69
4-ethyltoluene
Concen: 0.25 ppb m
RT: 19.31 min Scan# 4985
Delta R.T. -0.00 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion:105 Resp: 23465

Ion	Ratio	Lower	Upper
105	100		
120	106.1	9.7	49.7#

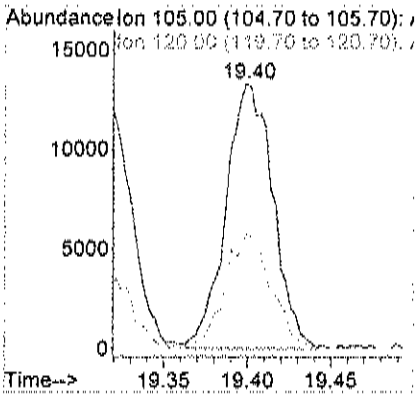


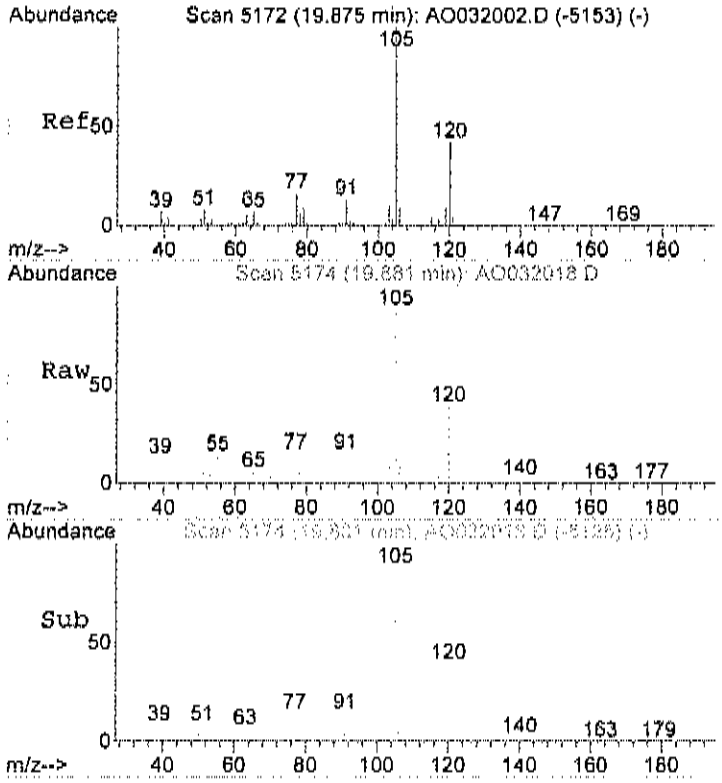


#70
1,3,5-trimethylbenzene
Concen: 0.29 ppb
RT: 19.40 min Scan# 5013
Delta R.T. -0.01 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion:105 Resp: 25962

Ion	Ratio	Lower	Upper
105	100		
120	42.4	25.7	65.7

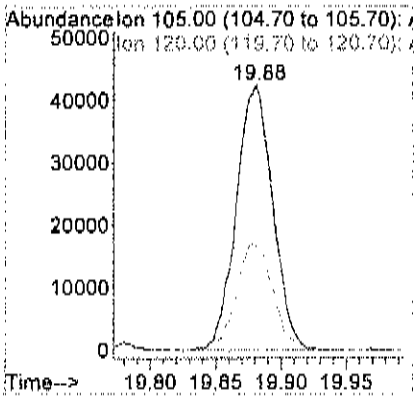


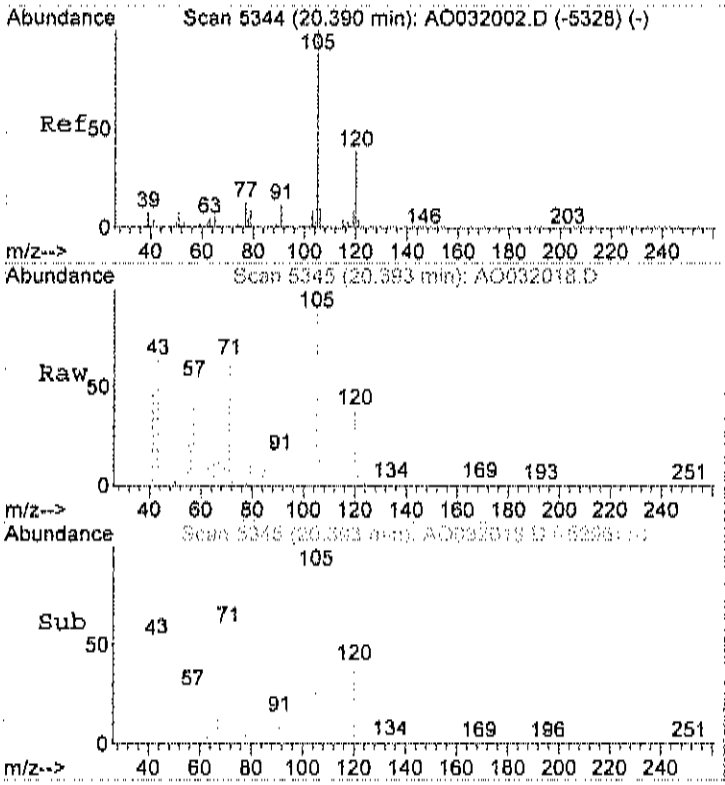


#71
1,2,4-trimethylbenzene
Concen: 0.99 ppb
RT: 19.88 min Scan# 5174
Delta R.T. -0.00 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion:105 Resp: 82776

Ion	Ratio	Lower	Upper
105	100		
120	40.1	20.3	60.3

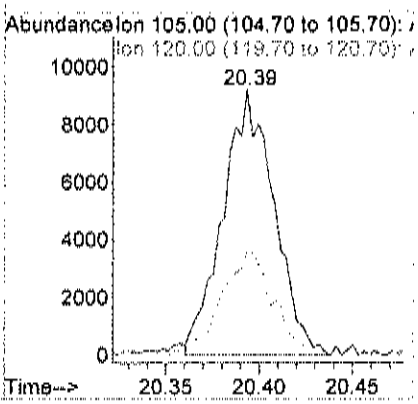




#75
1,2,3-trimethylbenzene
Concen: 0.22 ppb
RT: 20.39 min Scan# 5345
Delta R.T. -0.00 min
Lab File: AO032018.D
Acq: 20 Mar 2017 10:45 pm

Tgt Ion:105 Resp: 17549

Ion	Ratio	Lower	Upper
105	100		
120	38.9	28.3	47.3



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032028.D Vial: 23
Acq On : 21 Mar 2017 5:26 am Operator: RJP
Sample : C1703050-002A 10x Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:24 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.53	128	12844	1.00	ppb	0.00
35) 1,4-difluorobenzene	11.92	114	57925	1.00	ppb	-0.01
50) Chlorobenzene-d5	16.81	117	46234	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.44	95	34037	0.98	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 98.00%			
Target Compounds						Qvalue
15) Acetone	6.14	58	9965	0.95	ppb	# 1
42) 2,2,4-trimethylpentane	12.81	57	85164	0.89	ppb	86
43) Heptane	13.12	43	23875	0.66	ppb	97
51) Toluene	14.87	92	38654	0.99	ppb	# 84

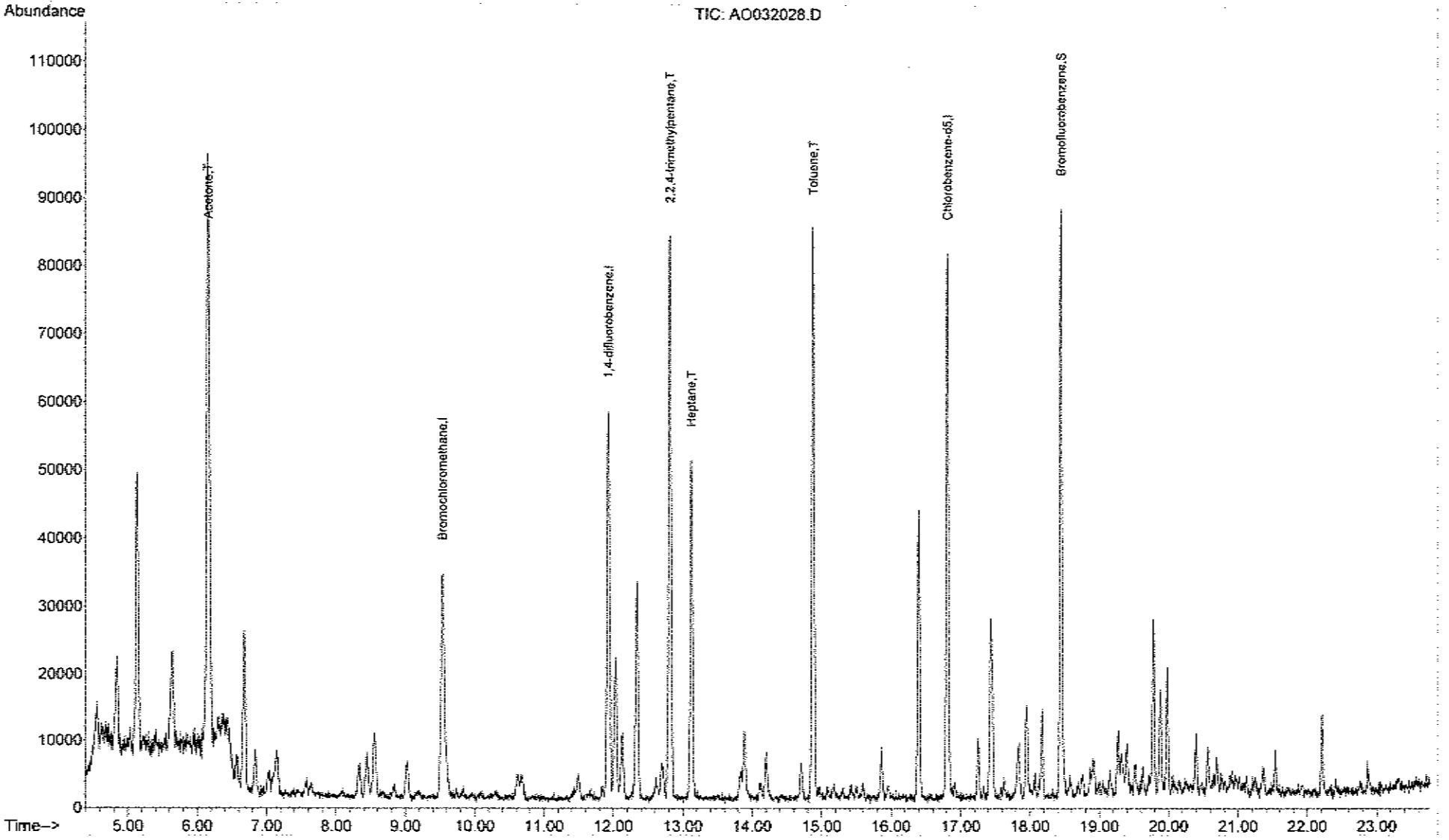
(#) = qualifier out of range (m) = manual integration (+) = signals summed

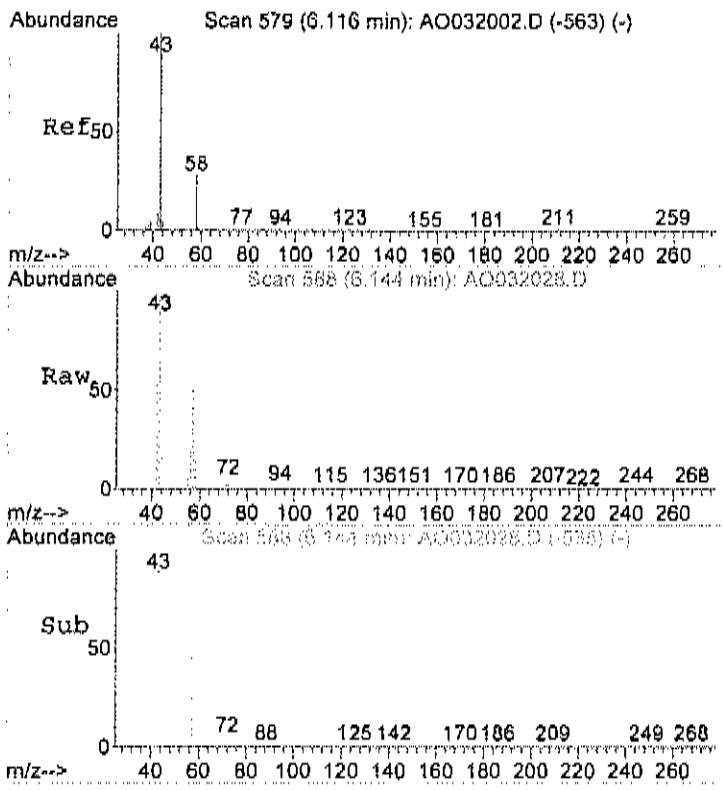
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032028.D
Acq On : 21 Mar 2017 5:26 am
Sample : C1703050-002A 10x
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:19 2017

Vial: 23
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration

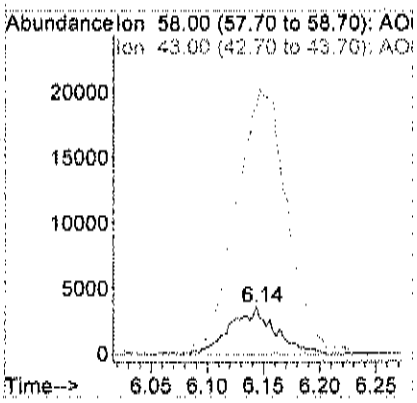


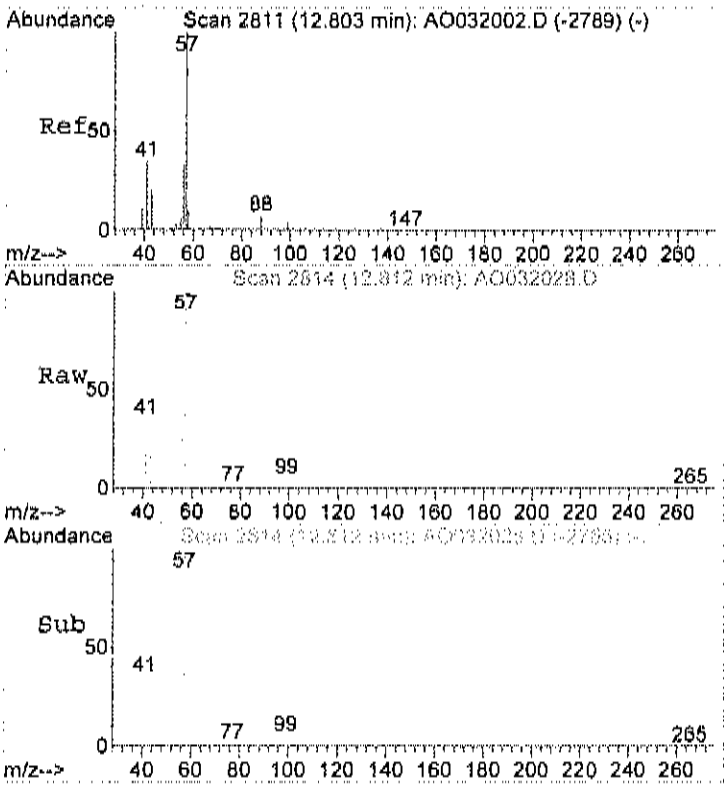


#15
Acetone
Concen: 0.95 ppb
RT: 6.14 min Scan# 588
Delta R.T. 0.01 min
Lab File: AO032028.D
Acq: 21 Mar 2017 5:26 am

Tgt Ion: 58 Resp: 9965

Ion	Ratio	Lower	Upper
58	100		
43	661.0	263.2	323.2#

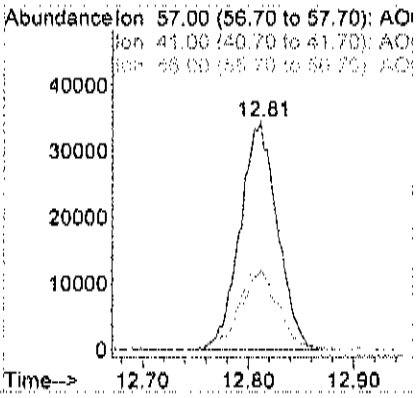


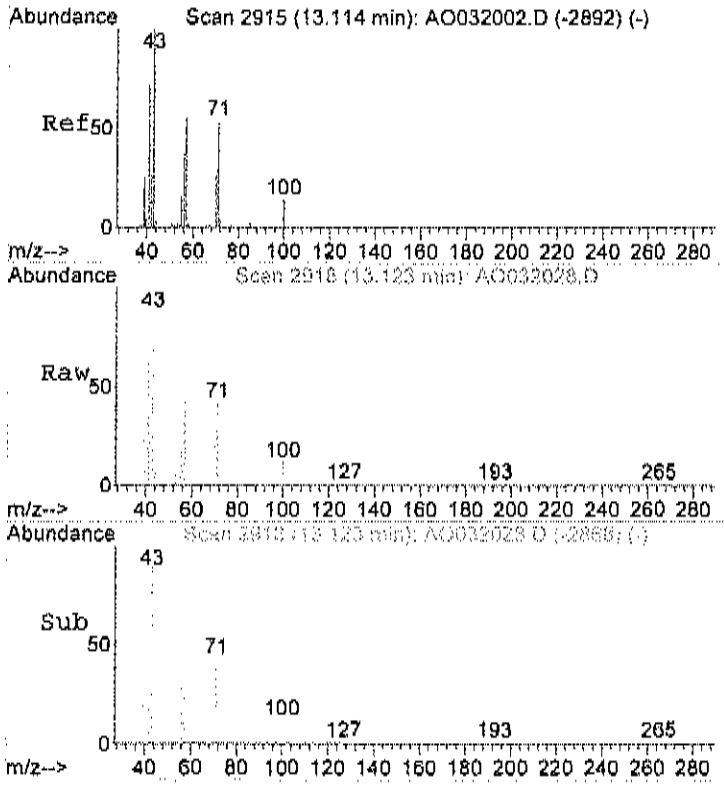


#42
2,2,4-trimethylpentane
Concen: 0.89 ppb
RT: 12.81 min Scan# 2814
Delta R.T. -0.01 min
Lab File: AO032028.D
Acq: 21 Mar 2017 5:26 am

Tgt Ion: 57 Resp: 85164

Ion	Ratio	Lower	Upper
57	100		
41	36.6	6.1	46.1
56	32.0	7.8	47.8

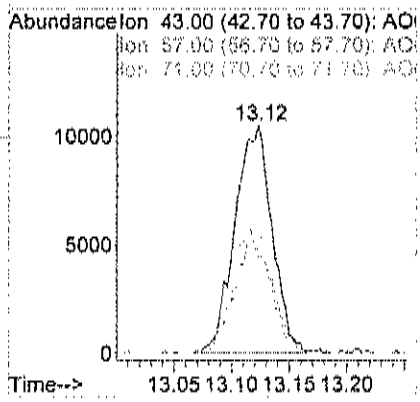


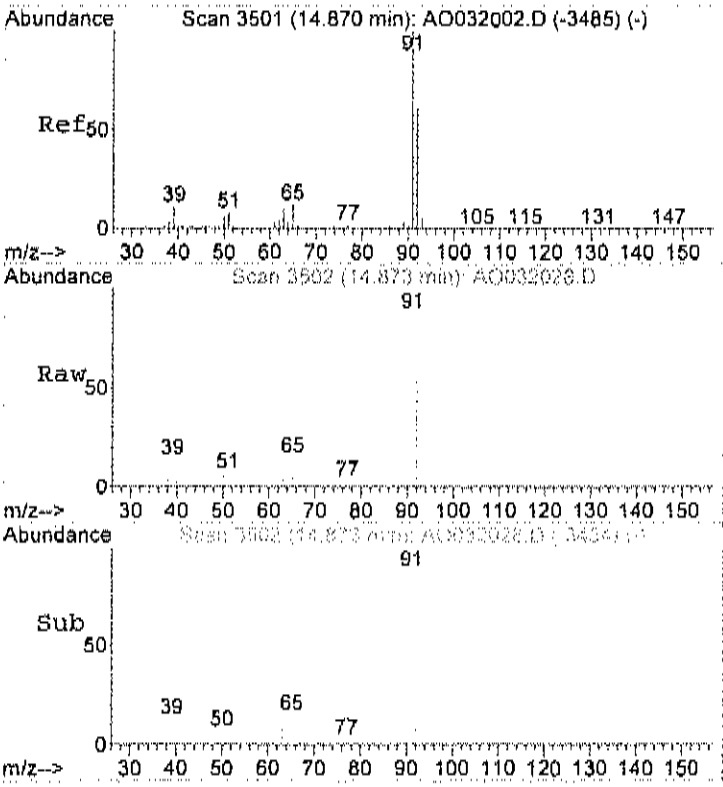


#43.
Heptane
Concen: 0.66 ppb
RT: 13.12 min Scan# 2918
Delta R.T. 0.00 min
Lab File: AO032028.D
Acq: 21 Mar 2017 5:26 am

Tgt Ion: 43 Resp: 23875

Ion	Ratio	Lower	Upper
43	100		
57	51.5	32.6	72.6
71	54.0	37.9	77.9

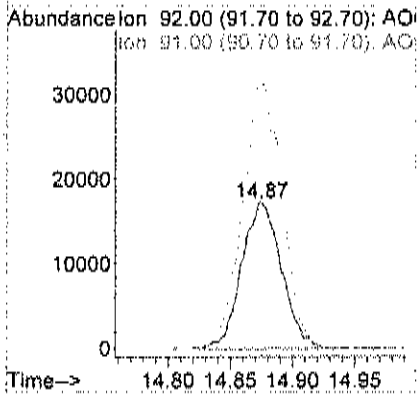




#51
Toluene
Concen: 0.99 ppb
RT: 14.87 min Scan# 3502
Delta R.T. -0.01 min
Lab File: AO032028.D
Acq: 21 Mar 2017 5:26 am

Tgt Ion: 92 Resp: 38654

Ion	Ratio	Lower	Upper
92	100		
91	179.5	138.8	178.8#



Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-4B
Lab Order:	C1703050	**Tag Number:**	168.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-9			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
Chloromethane	0.82	0.15		ppbV	1	3/20/2017 11:28:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 11:28:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	3/20/2017 11:28:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/20/2017 11:28:00 PM
Surr: Bromofluorobenzene	96.0	70-130		%REC	1	3/20/2017 11:28:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-4B
Lab Order:	C1703050	**Tag Number:**	168.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 11:28:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 11:28:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 11:28:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 11:28:00 PM
Chloromethane	1.7	0.31		ug/m3	1	3/20/2017 11:28:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 11:28:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 11:28:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 11:28:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 11:28:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 11:28:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032019.D Vial: 14
Acq On : 20 Mar 2017 11:28 pm Operator: RJP
Sample : C1703050-003A Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:15 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	13112	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.93	114	60666	1.00	ppb		0.00
50) Chlorobenzene-d5	16.80	117	50616	1.00	ppb		-0.01
System Monitoring Compounds							
65) Bromofluorobenzene	18.44	95	36344	0.96	ppb		-0.01
Spiked Amount 1.000	Range 70 - 130		Recovery = 96.00%				
Target Compounds							Qvalue
3) Freon 12	4.54	85	71072	0.67	ppb		97
4) Chloromethane	4.70	50	12991	0.82	ppb		88
14) Freon 11	6.31	101	32307	0.33	ppb		98
15) Acetone	6.11	58	110884	10.31	ppb	#	9
17) Isopropyl alcohol	6.36	45	85218	2.81	ppb	#	100
21) Methylene chloride	7.09	84	7253	0.36	ppb	#	65
28) Methyl Ethyl Ketone	8.81	72	11455	1.17	ppb	#	1
30) Hexane	9.58	57	22474	0.71	ppb	#	79
37) Cyclohexane	11.84	56	5619	0.17	ppb		86
38) Carbon tetrachloride	11.68	117	4466m	0.07	ppb		
39) Benzene	11.50	78	31076	0.50	ppb		88
42) 2,2,4-trimethylpentane	12.81	57	356703	3.57	ppb		83
43) Heptane	13.12	43	108508	2.84	ppb		97
51) Toluene	14.87	92	279320	6.55	ppb	#	83
52) Methyl Isobutyl Ketone	13.82	43	10670	0.28	ppb	#	50
58) Ethylbenzene	17.25	91	53291	0.53	ppb		96
59) m&p-xylene	17.43	91	163734	1.92	ppb		99
61) Styrene	17.83	104	32043	0.63	ppb		91
63) o-xylene	17.95	91	58271	0.71	ppb		88
69) 4-ethyltoluene	19.32	105	13483m	0.14	ppb		
70) 1,3,5-trimethylbenzene	19.40	105	12327	0.14	ppb		96
71) 1,2,4-trimethylbenzene	19.88	105	39156	0.47	ppb		98
75) 1,2,3-trimethylbenzene	20.39	105	9622	0.12	ppb		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

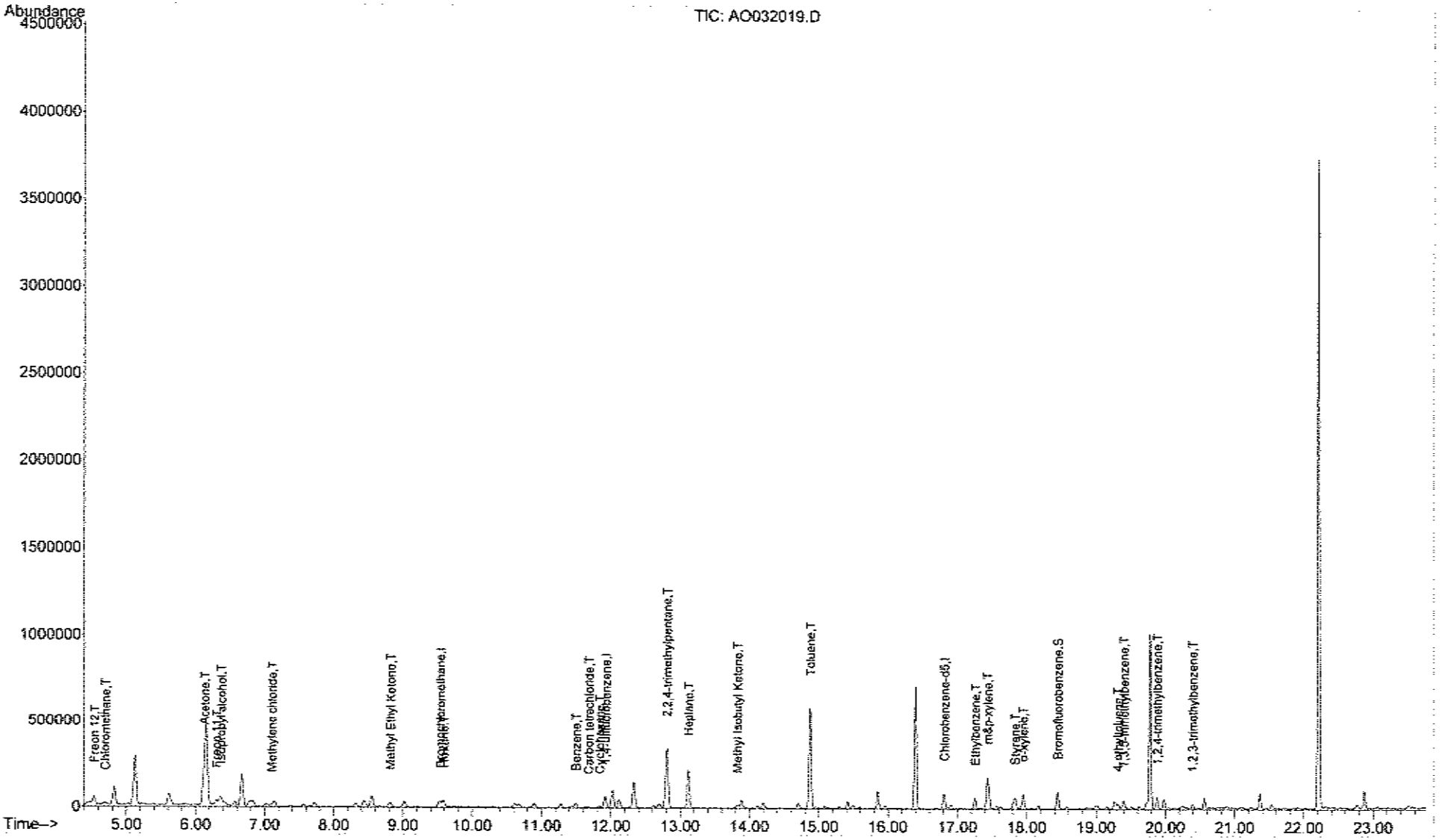
Quantitation Report (QT Reviewed)

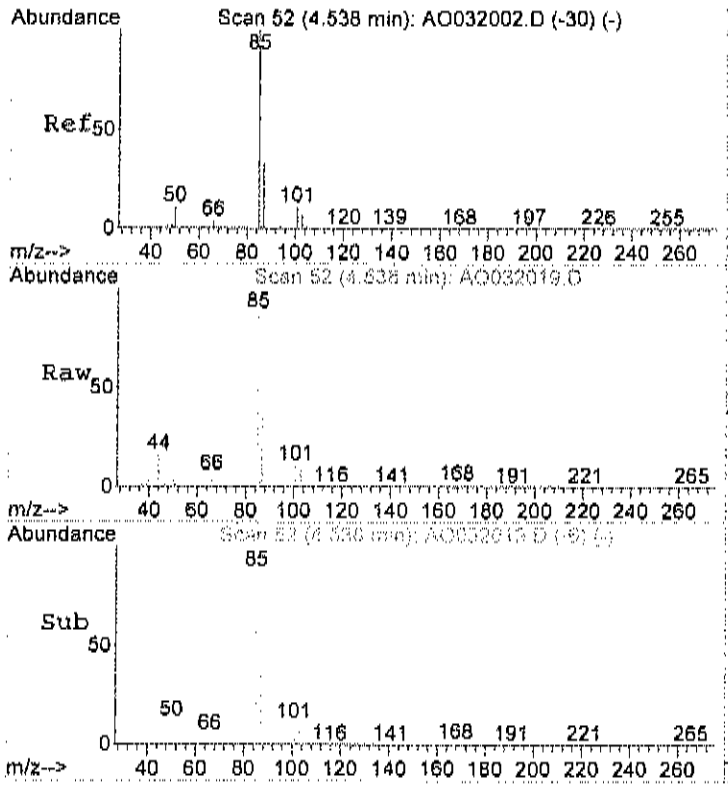
Data File : C:\HPCHEM\1\DATA\AO032019.D
Acq On : 20 Mar 2017 11:28 pm
Sample : C1703050-003A
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:23 2017

Vial: 14
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration

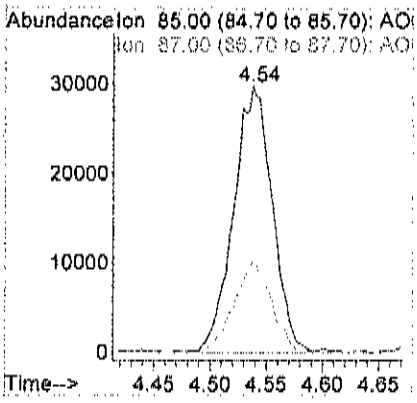


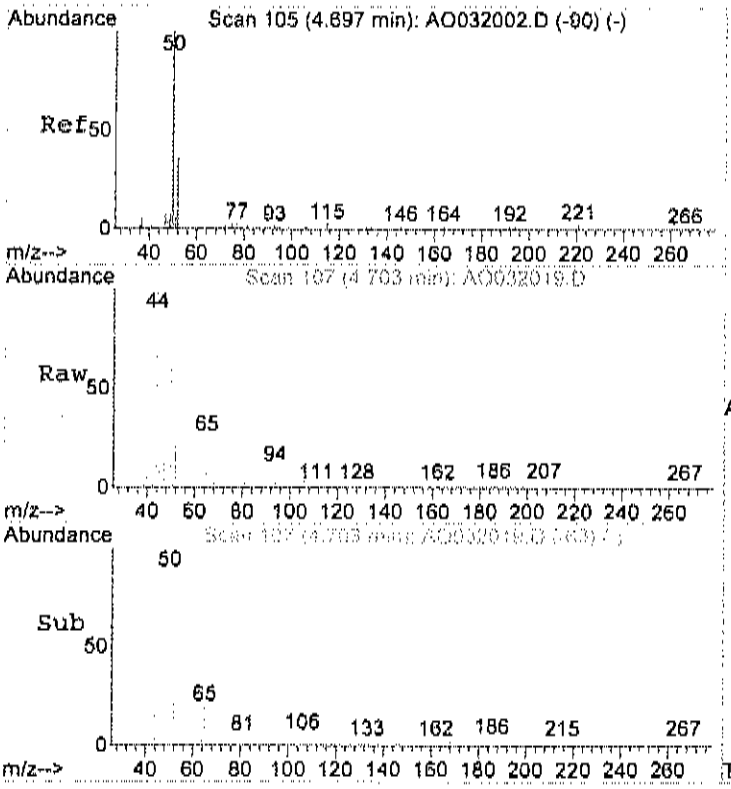


#3
Freon 12
Concen: 0.67 ppb
RT: 4.54 min Scan# 52
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 85 Resp: 71072

Ion	Ratio	Lower	Upper
85	100		
87	33.0	11.3	51.3

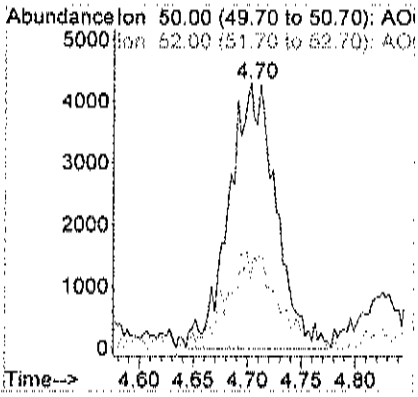


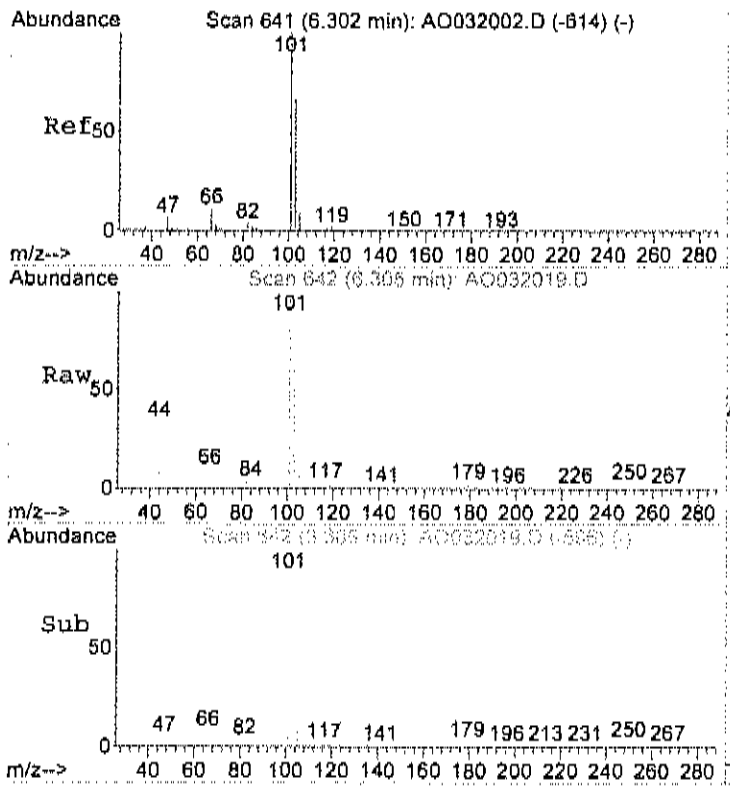


#4
Chloromethane
Concen: 0.82 ppb
RT: 4.70 min Scan# 107
Delta R.T. -0.02 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 50 Resp: 12991

Ion	Ratio	Lower	Upper
50	100		
52	38.4	11.8	51.8

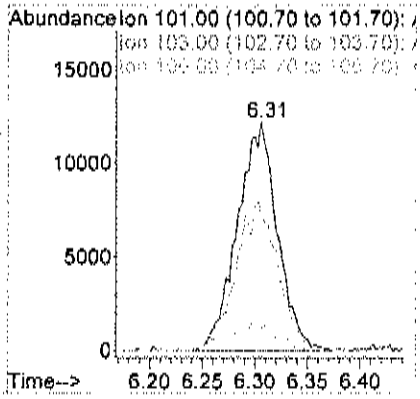


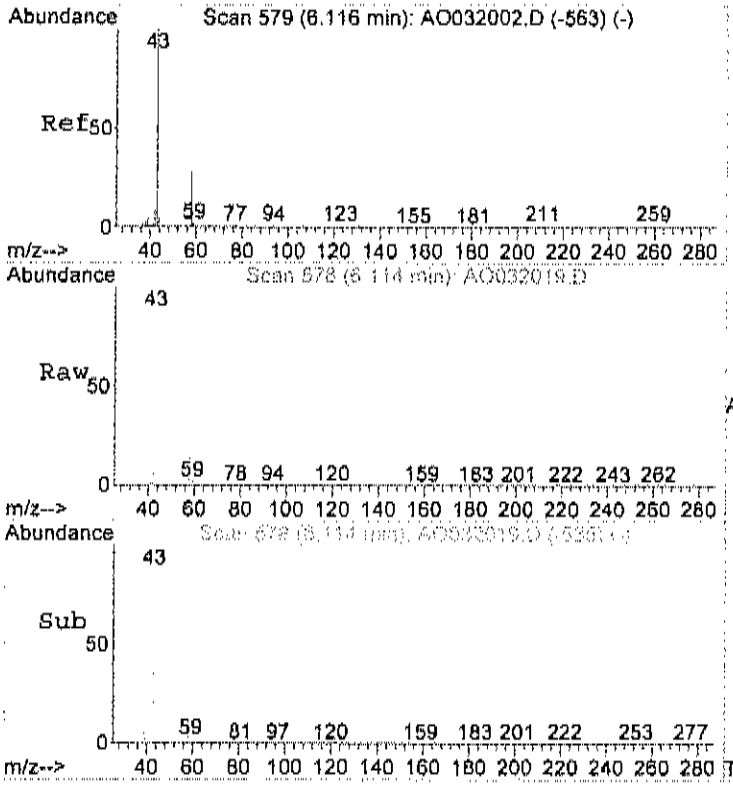


#14
Freon 11
Concen: 0.33 ppb
RT: 6.31 min Scan# 642
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion:101 Resp: 32307

Ion	Ratio	Lower	Upper
101	100		
103	67.9	46.0	86.0
105	12.4	0.0	31.4

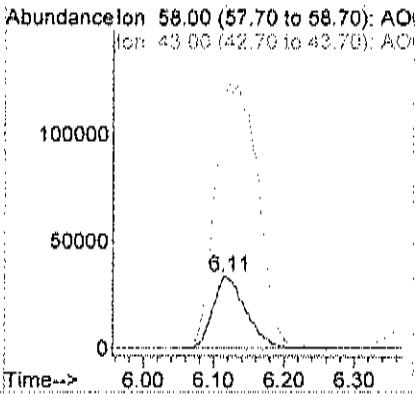


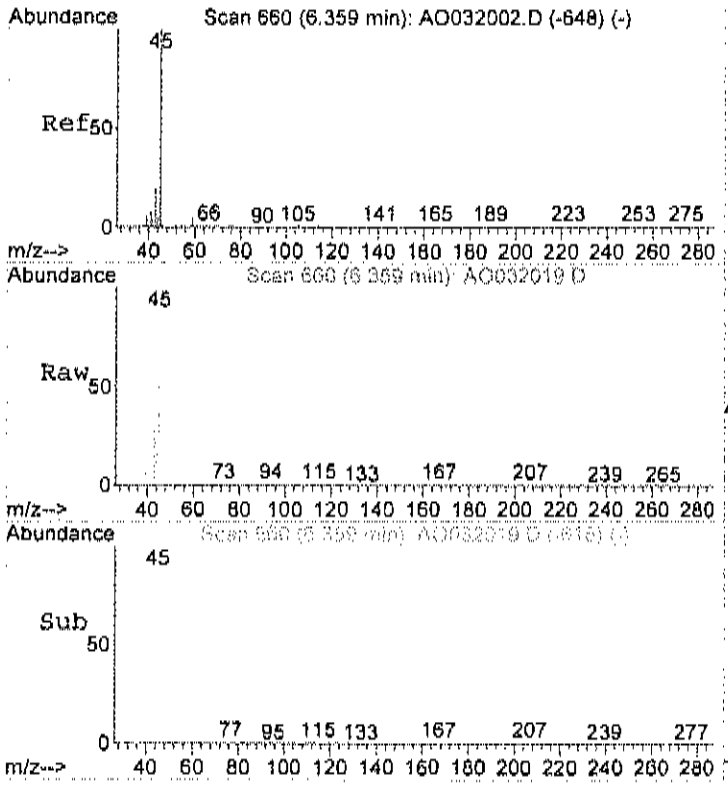


#15
Acetone
Concen: 10.31 ppb
RT: 6.11 min Scan# 578
Delta R.T. -0.02 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 58 Resp: 110884

Ion	Ratio	Lower	Upper
58	100		
43	469.4	263.2	323.2#

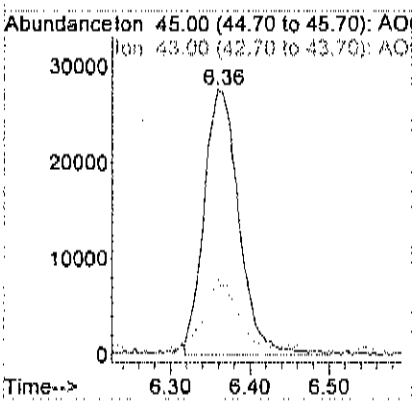


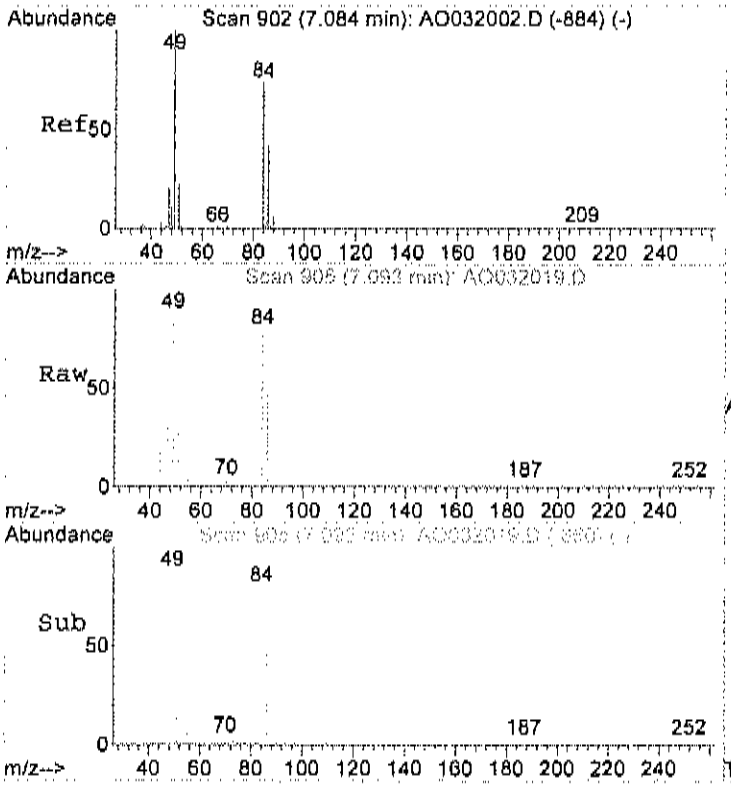


#17
Isopropyl alcohol
Concen: 2.81 ppb
RT: 6.36 min Scan# 660
Delta R.T. -0.02 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 45 Resp: 85218

Ion	Ratio	Lower	Upper
45	100		
43	27.0	0.0	20.0#

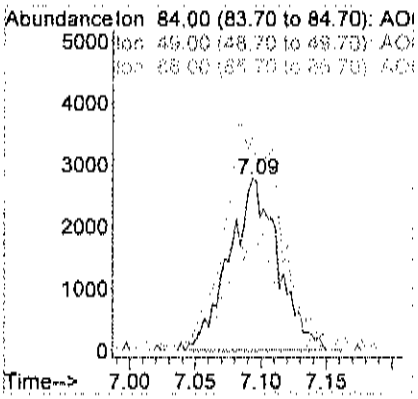


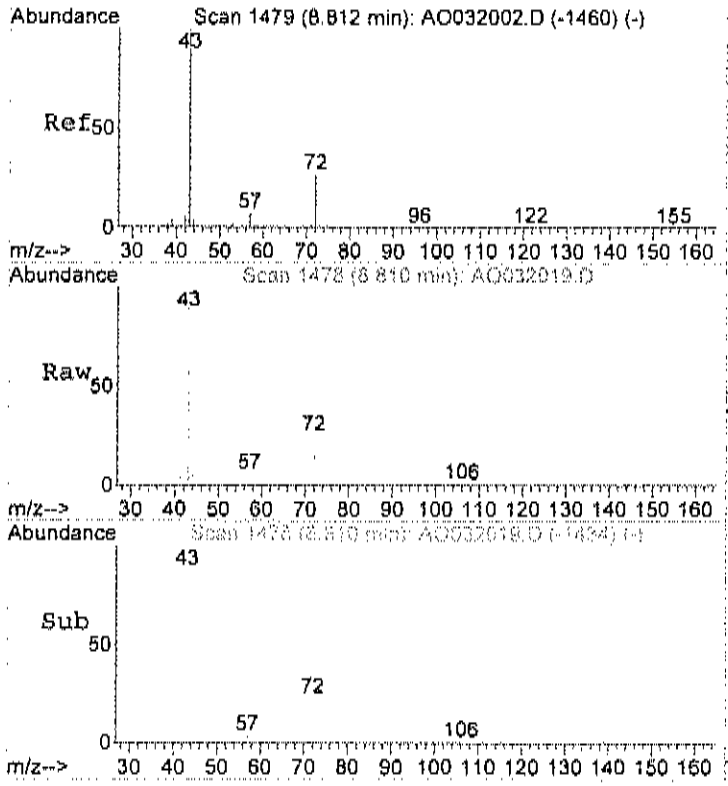


#21
Methylene chloride
Concen: 0.36 ppb
RT: 7.09 min Scan# 905
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 84 Resp: 7253

Ion	Ratio	Lower	Upper
84	100		
49	150.6	86.2	126.2#
86	69.9	36.1	76.1

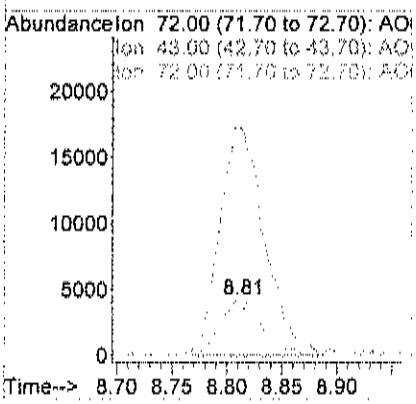


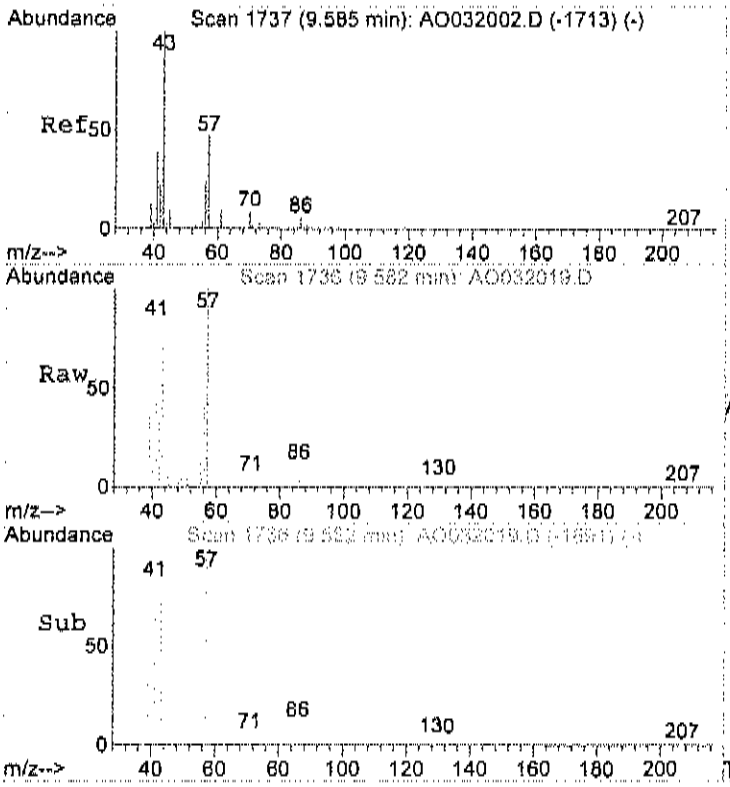


#28
Methyl Ethyl Ketone
Concen: 1.17 ppb
RT: 8.81 min Scan# 1478
Delta R.T. -0.02 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 72 Resp: 11455

Ion	Ratio	Lower	Upper
72	100		
43	0.0	383.1	423.1#
72	100.0	80.0	120.0

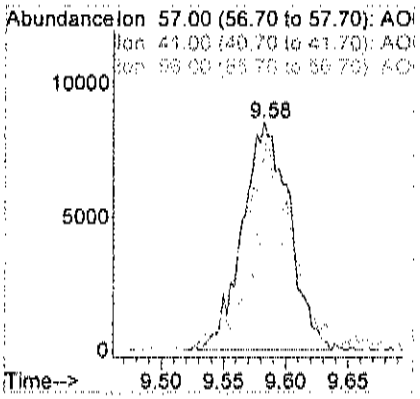


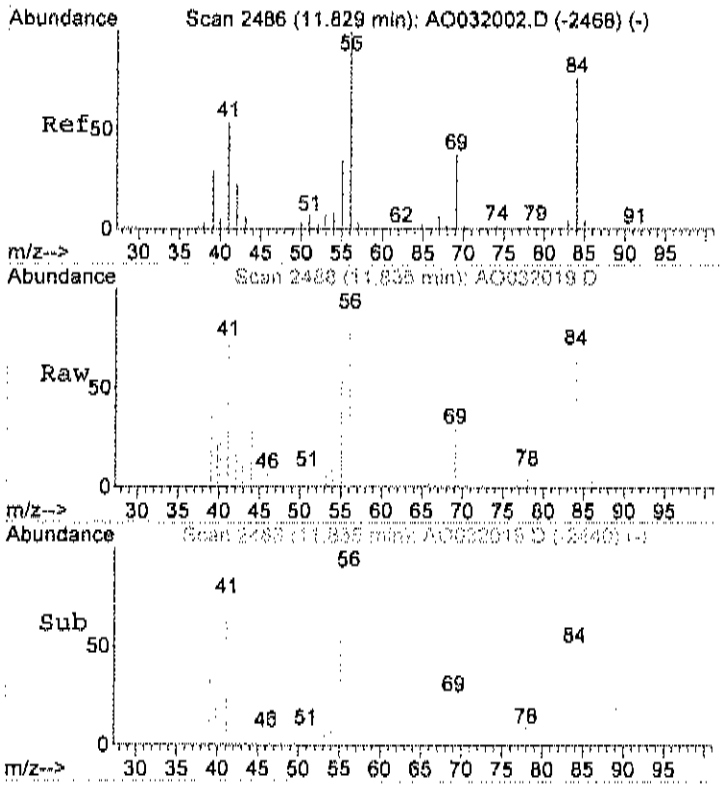


#30
Hexane
Concen: 0.71 ppb
RT: 9.58 min Scan# 1736
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 57 Resp: 22474

Ion	Ratio	Lower	Upper
57	100		
41	104.2	57.7	97.7#
56	54.9	41.0	81.0

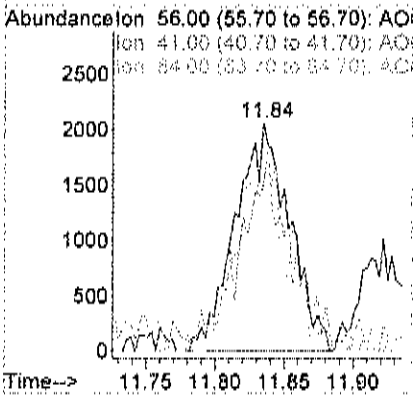


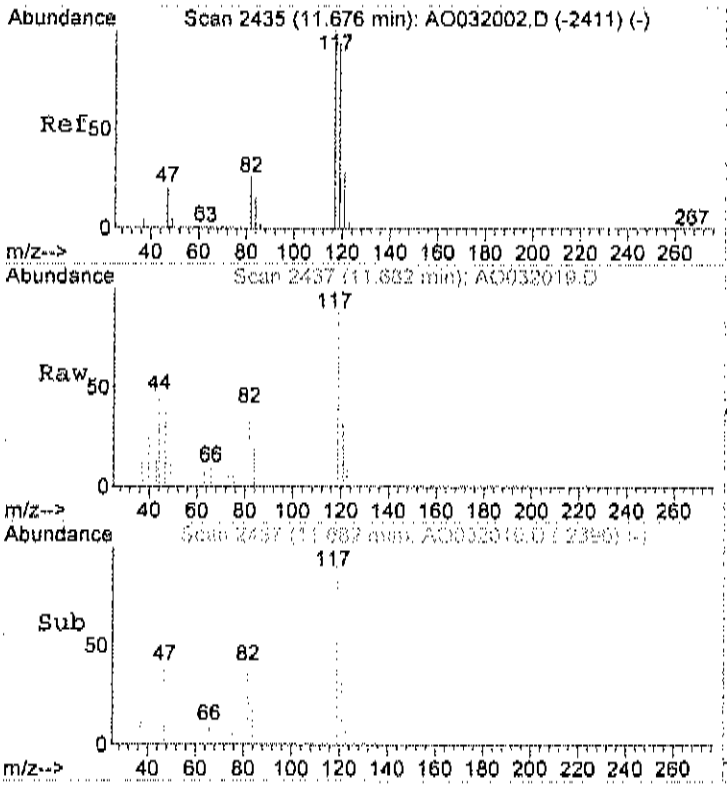


#37
Cyclohexane
Concen: 0.17 ppb
RT: 11.84 min Scan# 2488
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 56 Resp: 5619

Ion	Ratio	Lower	Upper
56	100		
41	83.2	43.2	83.2
84	80.7	64.8	104.8

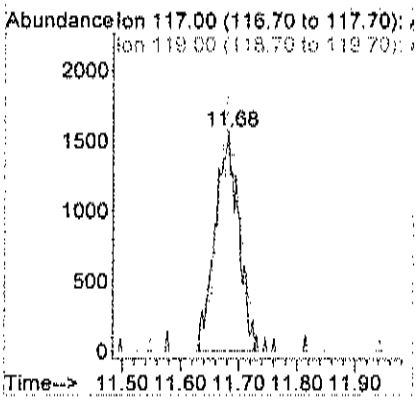


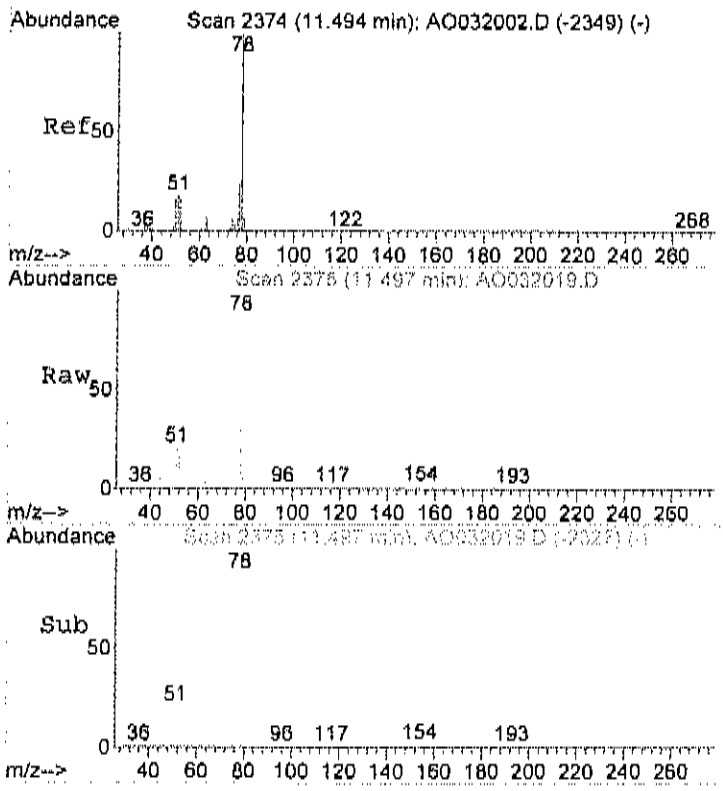


#38
Carbon tetrachloride
Concen: 0.07 ppb m
RT: 11.68 min Scan# 2437
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion:117 Resp: 4466

Ion	Ratio	Lower	Upper
117	100		
119	0.0	74.9	114.9#

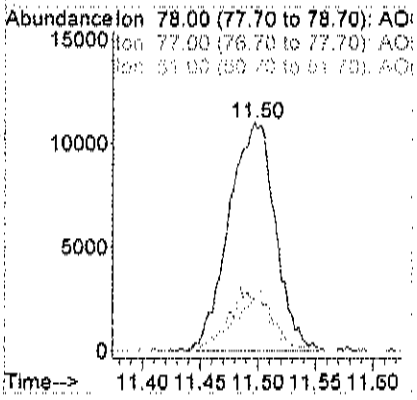


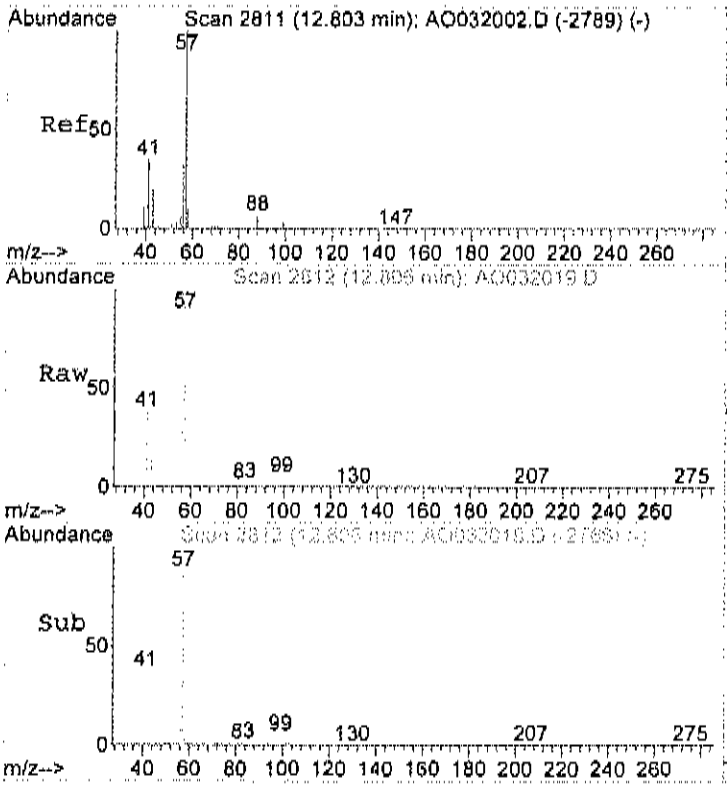


#39
Benzene
Concen: 0.50 ppb
RT: 11.50 min Scan# 2375
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 78 Resp: 31076

Ion	Ratio	Lower	Upper
78	100		
77	24.5	0.0	39.9
51	21.5	0.0	35.8

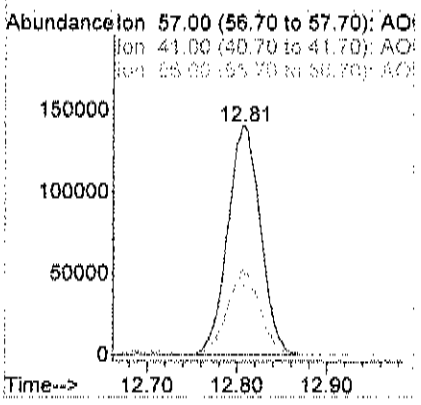


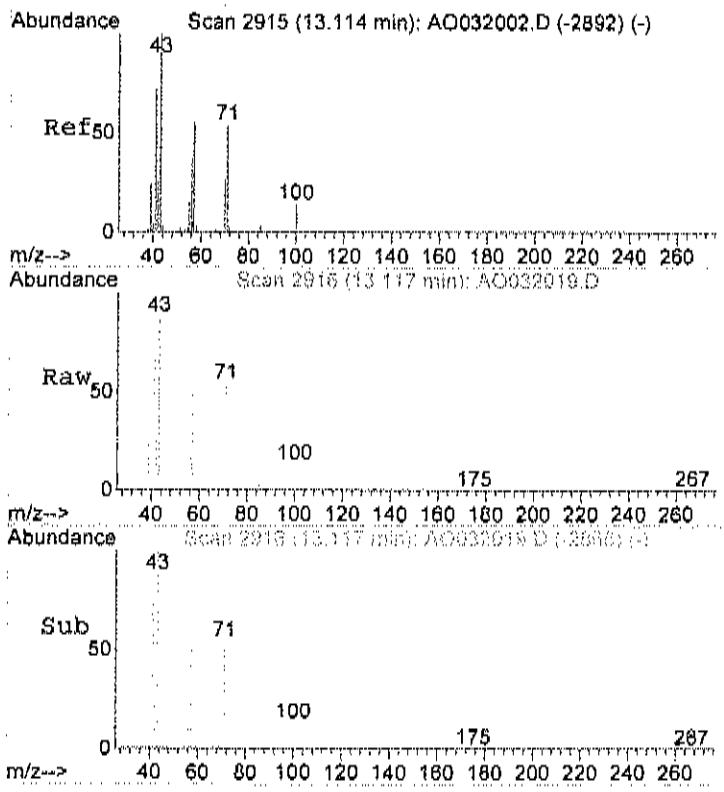


#42
2,2,4-trimethylpentane
Concen: 3.57 ppb
RT: 12.81 min Scan# 2812
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 57 Resp: 356703

Ion	Ratio	Lower	Upper
57	100		
41	39.4	6.1	46.1
56	32.5	7.8	47.8

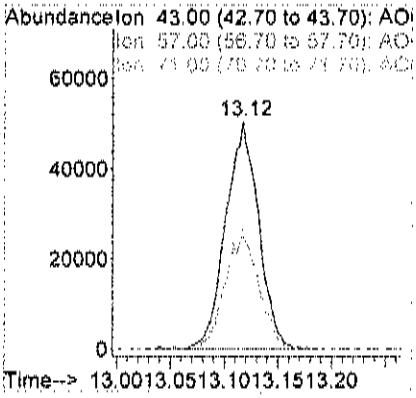


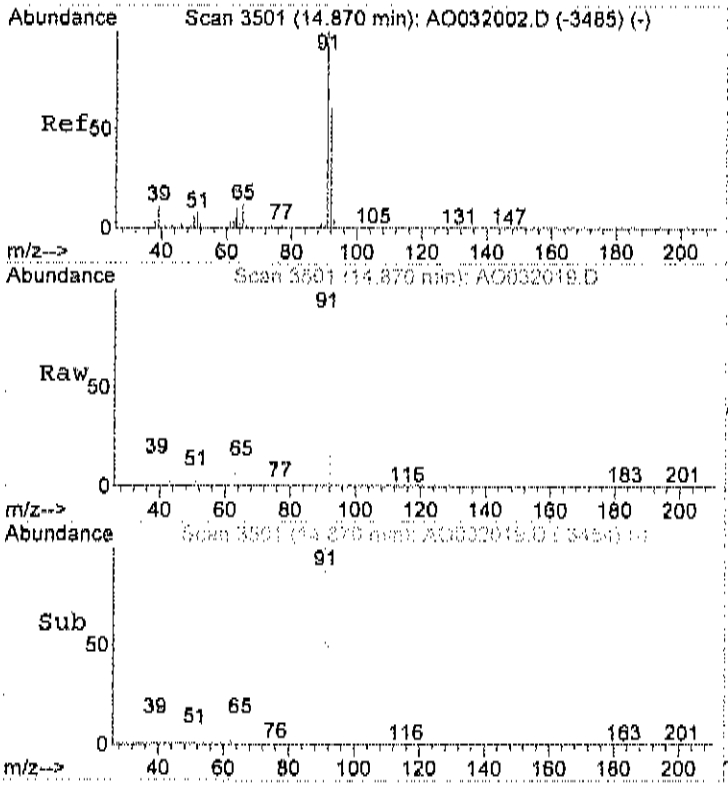


#43
Heptane
Concen: 2.84 ppb
RT: 13.12 min Scan# 2916
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 43 Resp: 108508

Ion	Ratio	Lower	Upper
43	100		
57	52.4	32.6	72.6
71	54.1	37.9	77.9

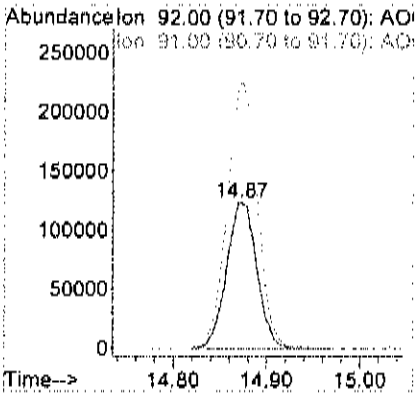


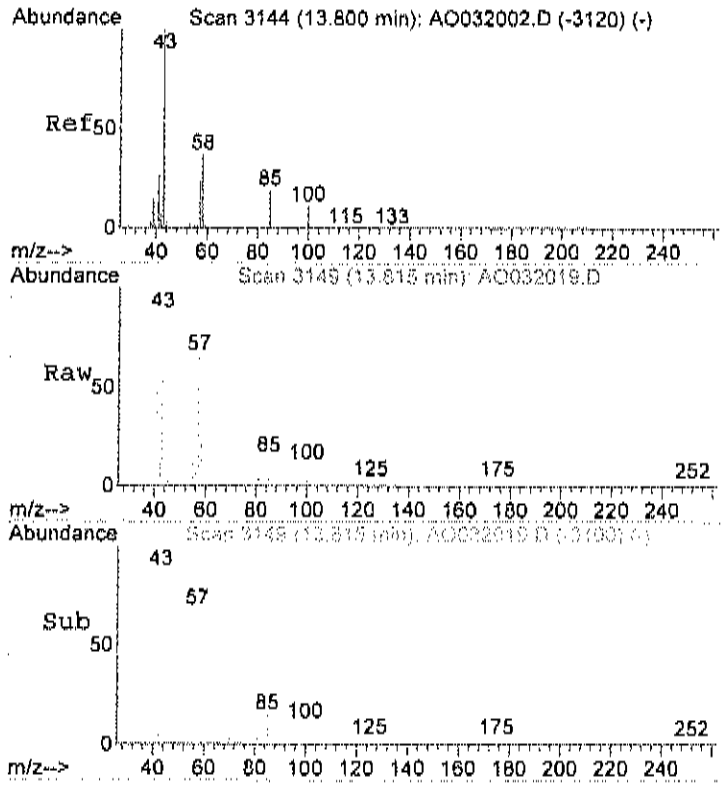


#51
Toluene
Concen: 6.55 ppb
RT: 14.87 min Scan# 3501
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 92 Resp: 279320

Ion	Ratio	Lower	Upper
92	100		
91	180.7	138.8	178.8#

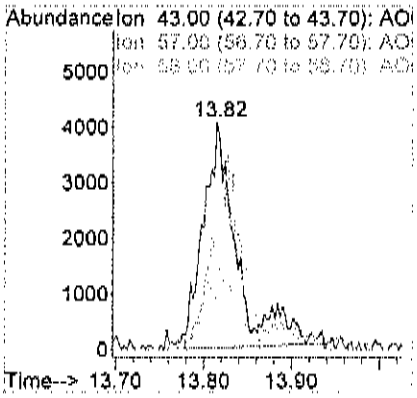


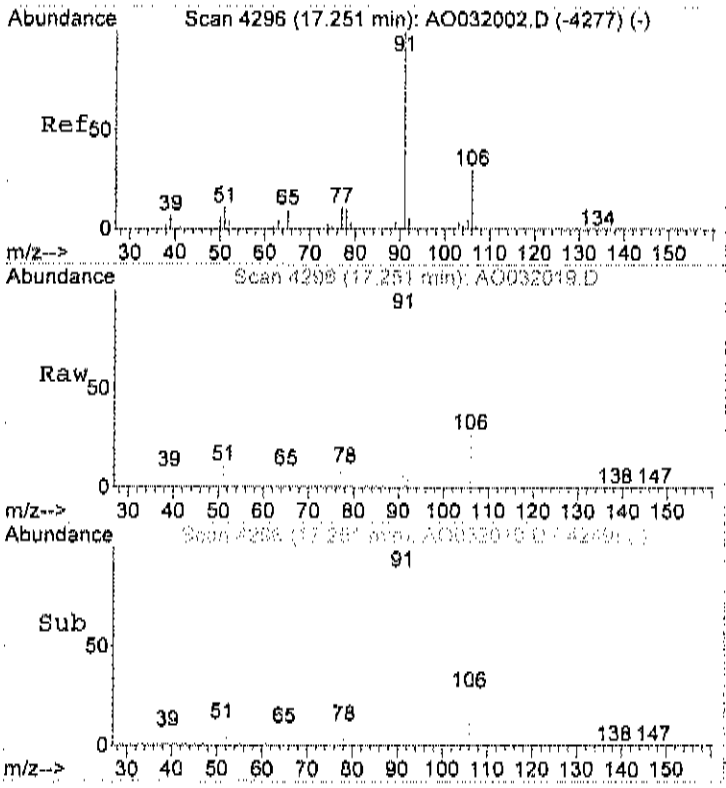


#52
Methyl Isobutyl Ketone
Concen: 0.28 ppb
RT: 13.82 min Scan# 3149
Delta R.T. -0.00 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 43 Resp: 10670

Ion	Ratio	Lower	Upper
43	100		
57	76.7	6.3	46.3#
58	29.2	21.2	61.2

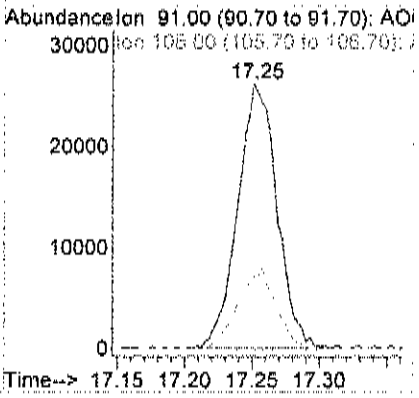


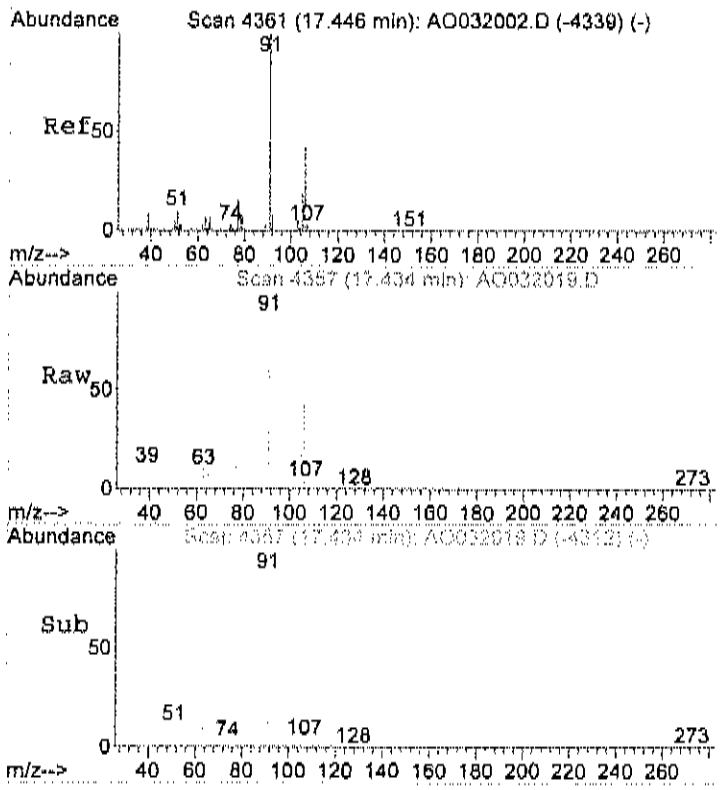


#58
Ethylbenzene
Concen: 0.53 ppb
RT: 17.25 min Scan# 4296
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 91 Resp: 53291

Ion	Ratio	Lower	Upper
91	100		
106	28.4	10.4	50.4

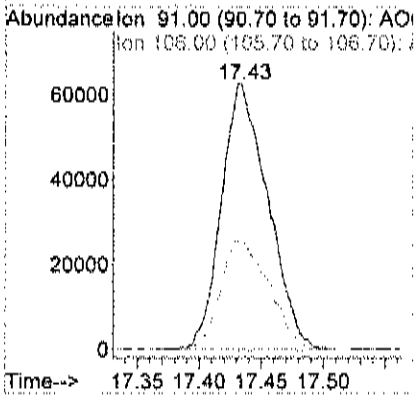


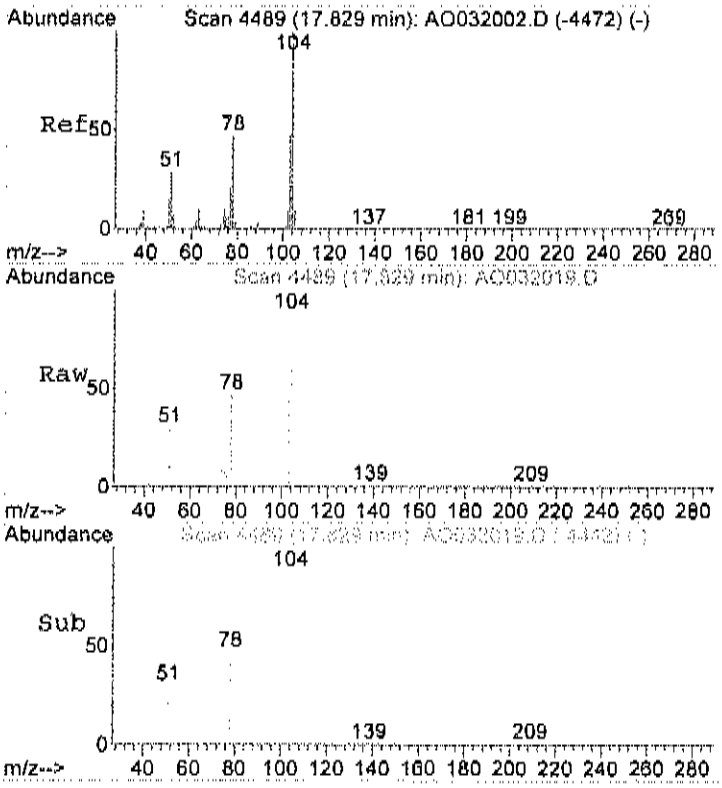


#59
m&p-xylene
Concen: 1.92 ppb
RT: 17.43 min Scan# 4357
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 91 Resp: 163734

Ion	Ratio	Lower	Upper
91	100		
106	43.1	23.5	63.5

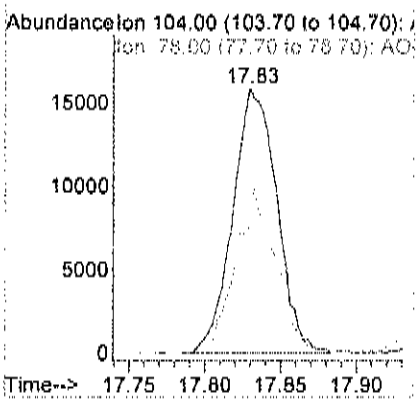


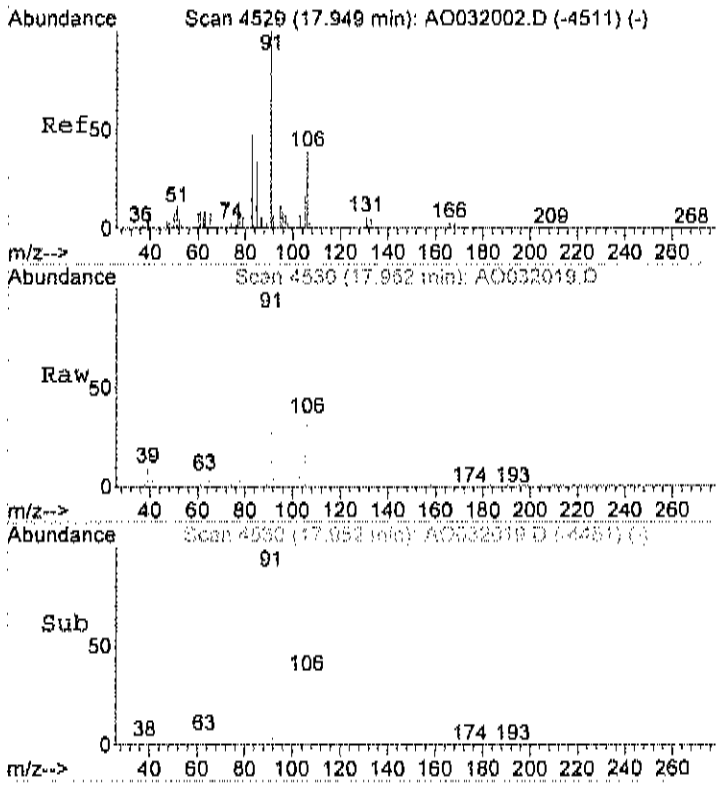


#61
Styrene
Concen: 0.63 ppb
RT: 17.83 min Scan# 4489
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion:104 Resp: 32043

Ion	Ratio	Lower	Upper
104	100		
78	57.0	31.1	71.1

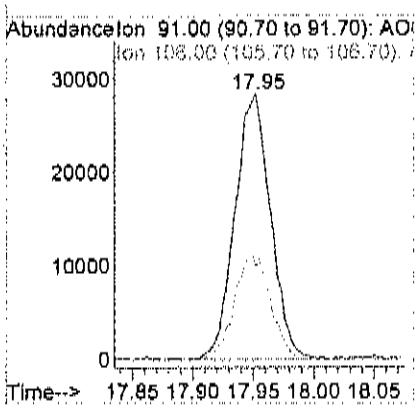


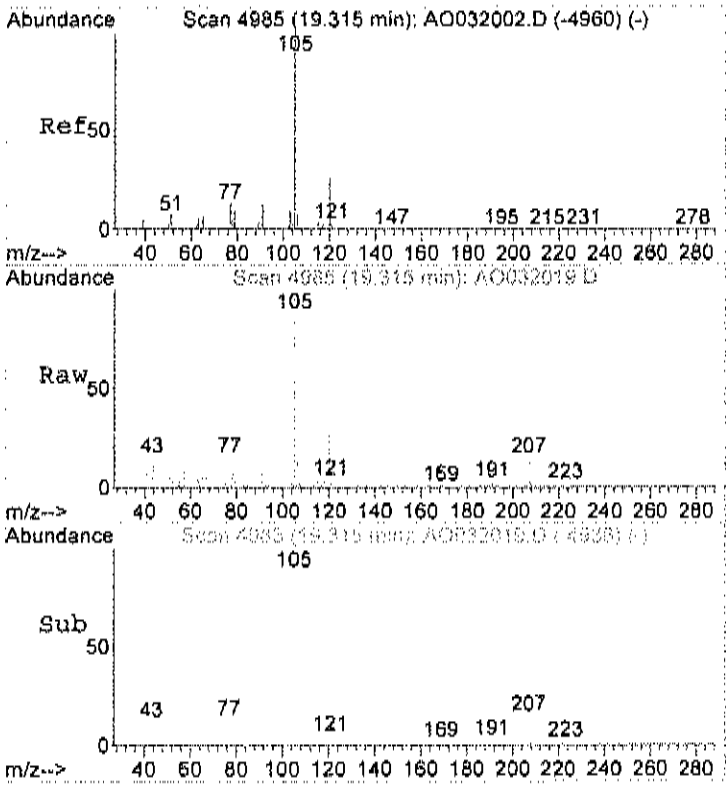


#63
o-xylene
Concen: 0.71 ppb
RT: 17.95 min Scan# 4530
Delta R.T. -0.00 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion: 91 Resp: 58271

Ion	Ratio	Lower	Upper
91	100		
106	39.4	27.7	67.7

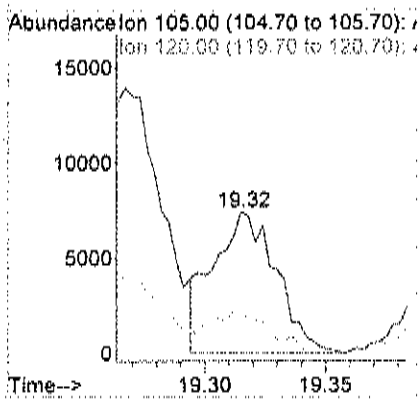


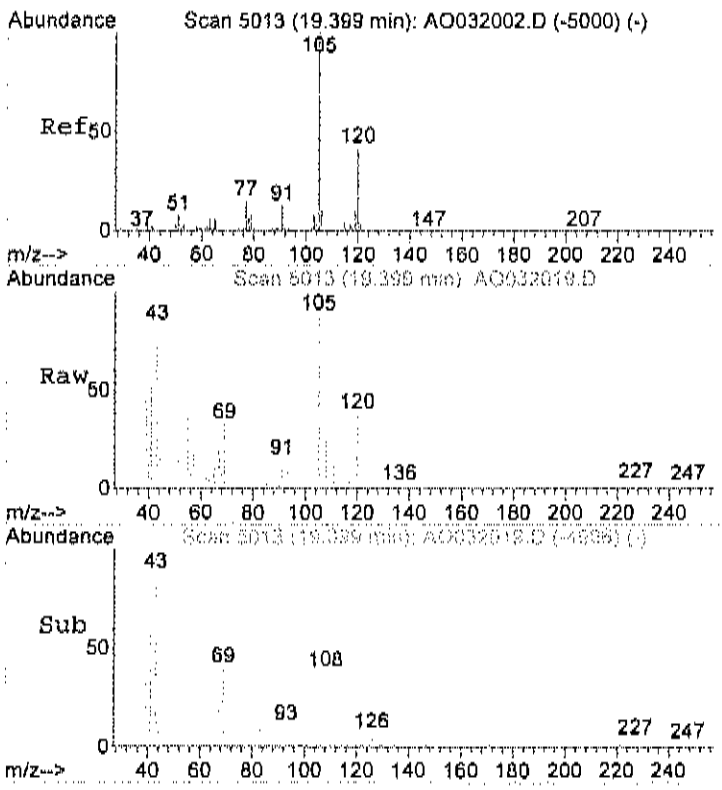


#69
4-ethyltoluene
Concen: 0.14 ppb m
RT: 19.32 min Scan# 4985
Delta R.T. -0.00 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion:105 Resp: 13483

Ion	Ratio	Lower	Upper
105	100		
120	91.3	9.7	49.7#

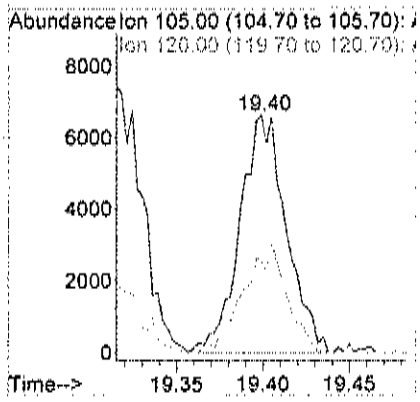


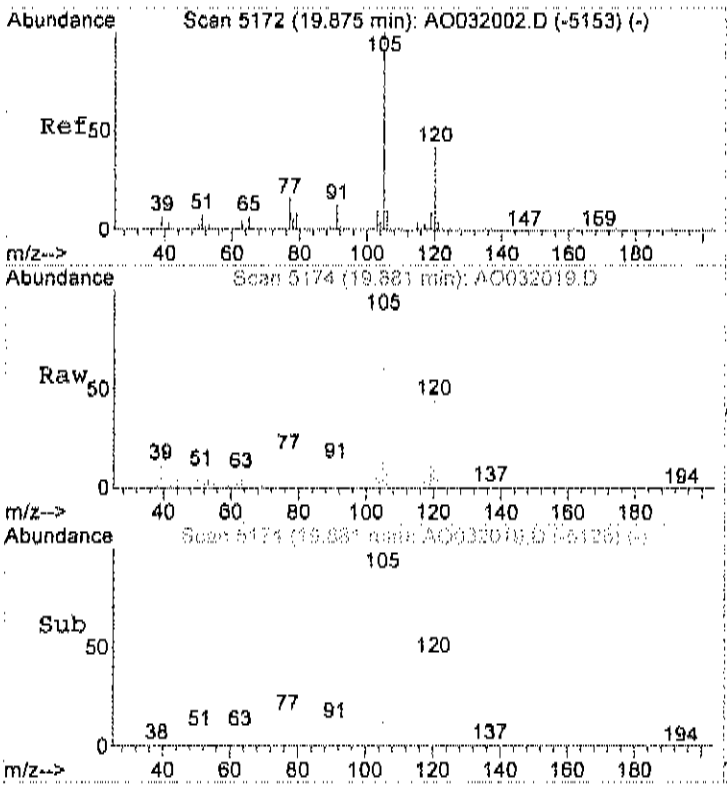


#70
1,3,5-trimethylbenzene
Concen: 0.14 ppb
RT: 19.40 min Scan# 5013
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion:105 Resp: 12327

Ion	Ratio	Lower	Upper
105	100		
120	42.9	25.7	65.7

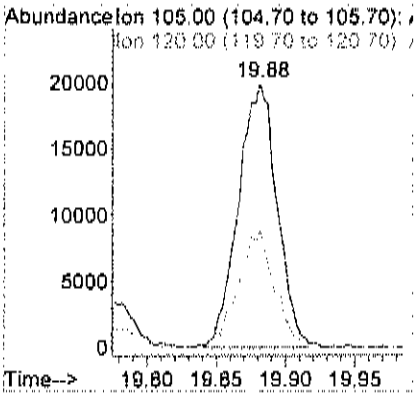


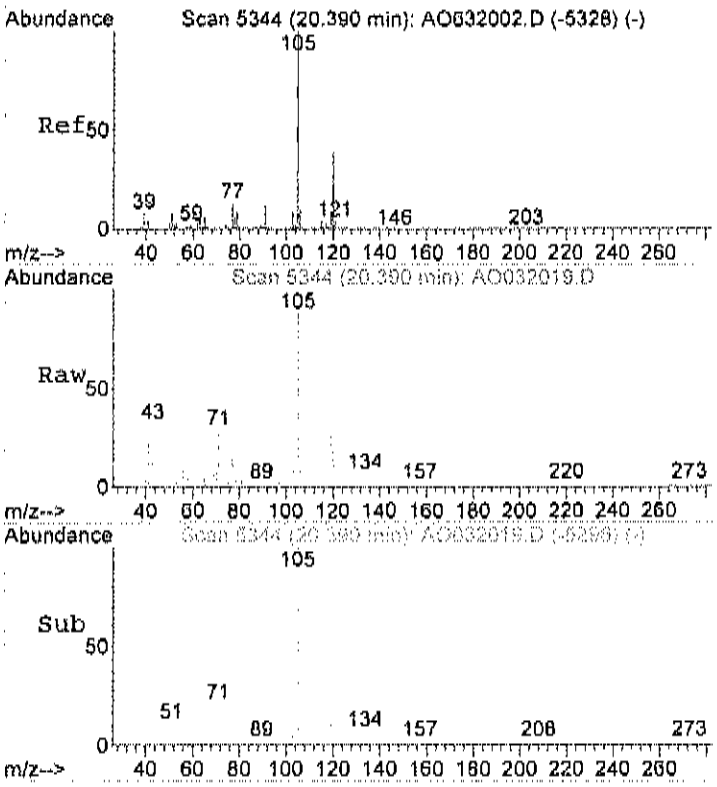


#71
1,2,4-trimethylbenzene
Concen: 0.47 ppb
RT: 19.88 min Scan# 5174
Delta R.T. -0.00 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion:105 Resp: 39156

Ion	Ratio	Lower	Upper
105	100		
120	41.4	20.3	60.3

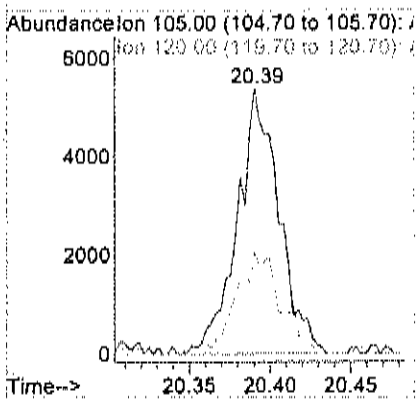




#75
1,2,3-trimethylbenzene
Concen: 0.12 ppb
RT: 20.39 min Scan# 5344
Delta R.T. -0.01 min
Lab File: AO032019.D
Acq: 20 Mar 2017 11:28 pm

Tgt Ion:105 Resp: 9622

Ion	Ratio	Lower	Upper
105	100		
120	41.5	28.3	47.3



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032029.D Vial: 24
Acq On : 21 Mar 2017 6:04 am Operator: RJP
Sample : C1703050-003A 10x Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:25 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.54	128	11878	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.92	114	56049	1.00	ppb		-0.02
50) Chlorobenzene-d5	16.81	117	45186	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.44	95	31210	0.92	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 92.00%				
Target Compounds							Qvalue
15) Acetone	6.13	58	12365	1.27	ppb	#	19
17) Isopropyl alcohol	6.38	45	9930	0.36	ppb	#	100
42) 2,2,4-trimethylpentane	12.81	57	32544	0.35	ppb		84
43) Heptane	13.13	43	10389	0.29	ppb		93
51) Toluene	14.88	92	25494	0.67	ppb	#	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

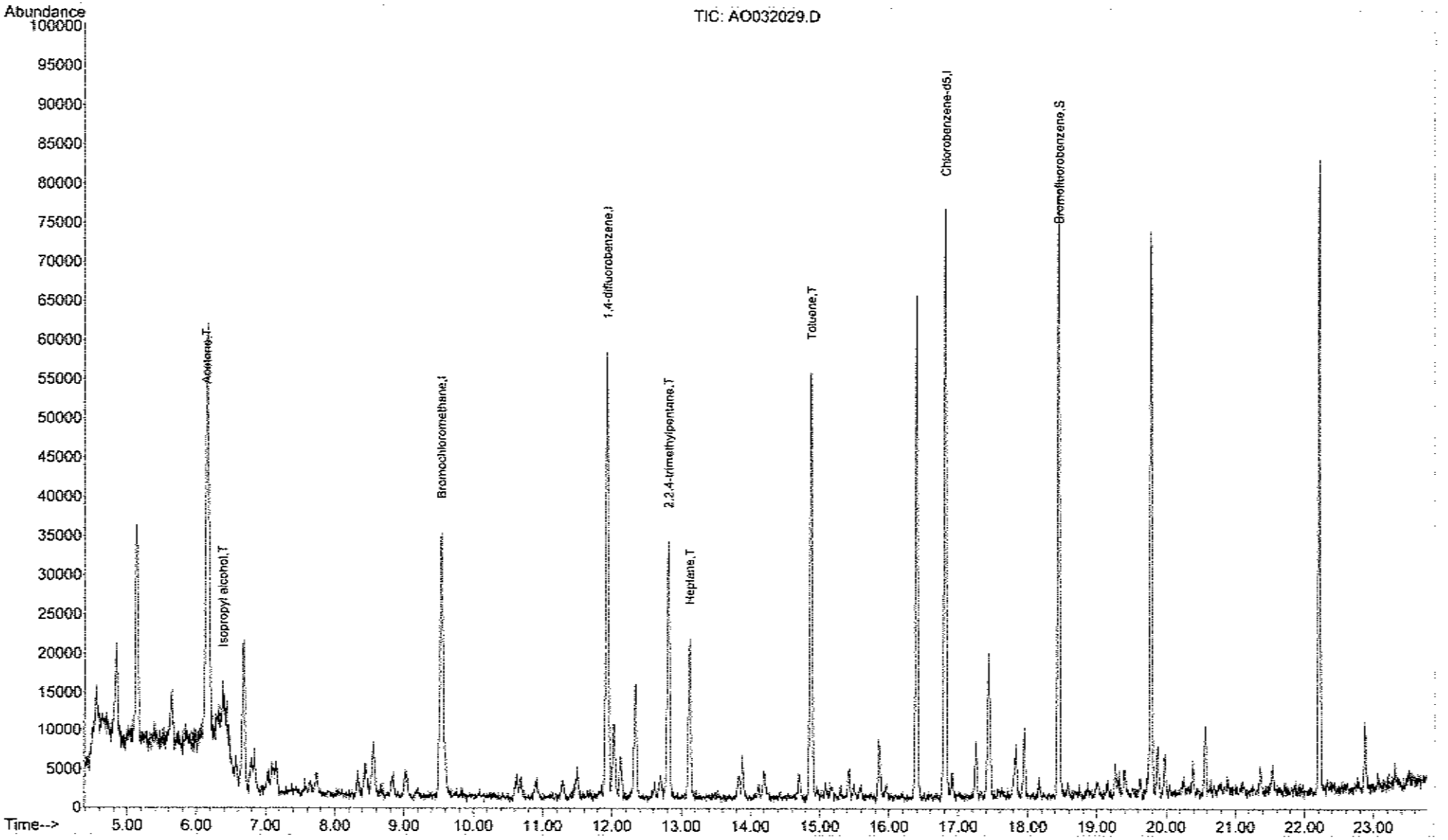
Quantitation Report (QT Reviewed)

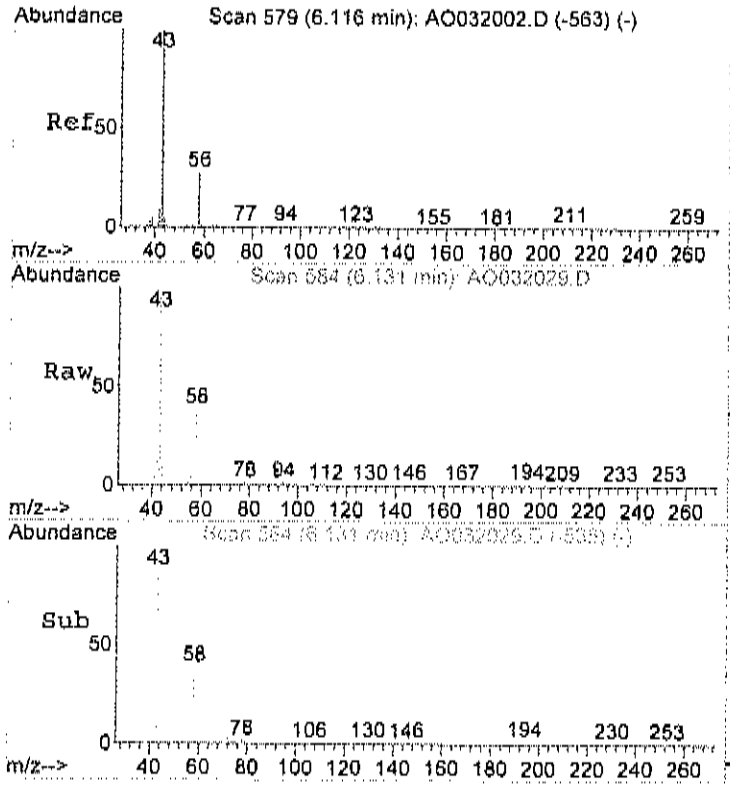
Data File : C:\HPCHEM\1\DATA\AO032029.D
Acq On : 21 Mar 2017 6:04 am
Sample : C1703050-003A 10x
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:19 2017

Vial: 24
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RBS

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration

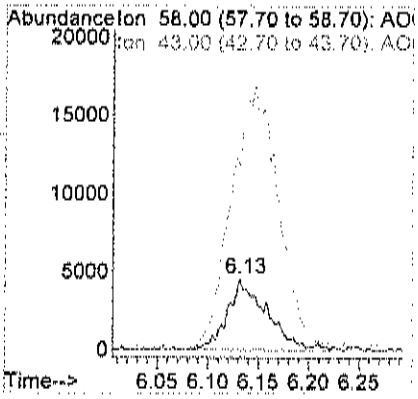


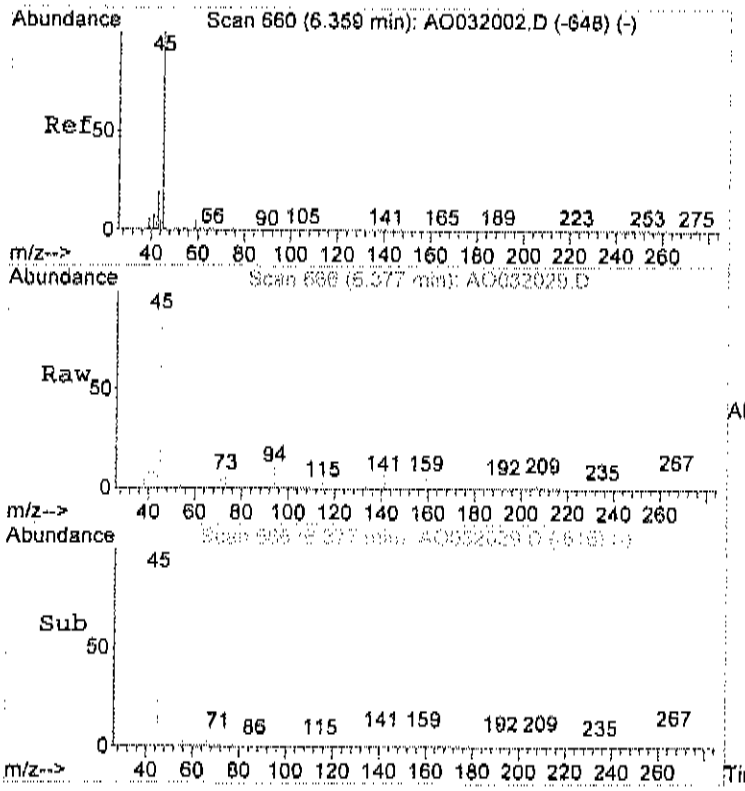


#15
Acetone
Concen: 1.27 ppb
RT: 6.13 min Scan# 584
Delta R.T. -0.00 min
Lab File: AO032029.D
Acq: 21 Mar 2017 6:04 am

Tgt Ion: 58 Resp: 12365

Ion	Ratio	Lower	Upper
58	100		
43	449.9	263.2	323.2#

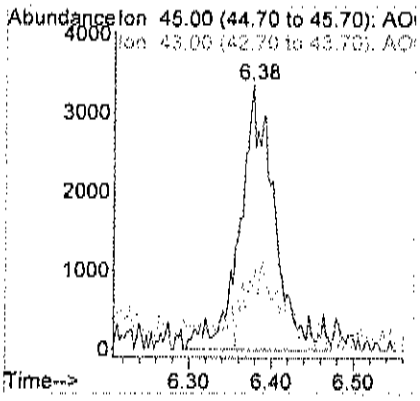


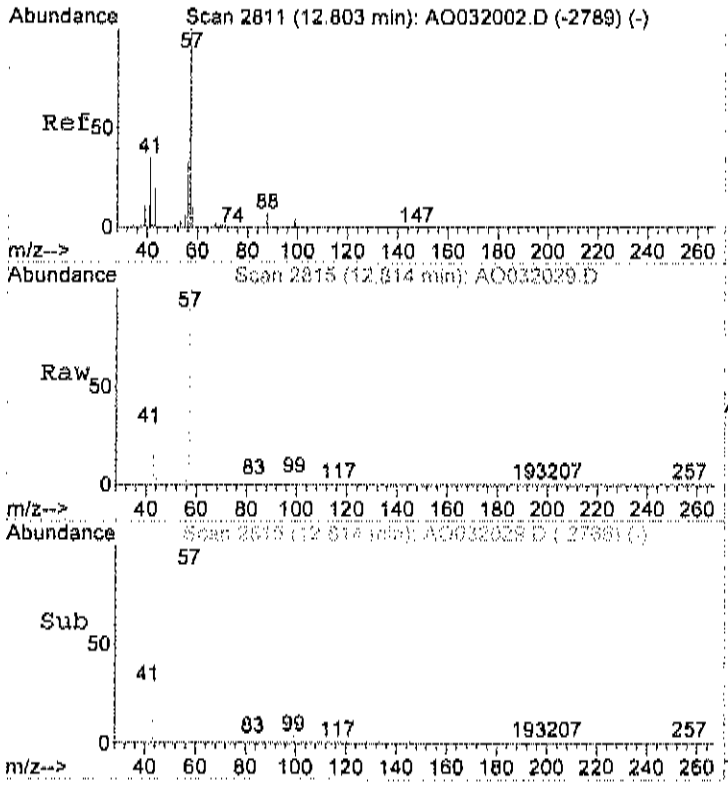


#17
Isopropyl alcohol
Concen: 0.36 ppb
RT: 6.38 min Scan# 666
Delta R.T. -0.00 min
Lab File: AO032029.D
Acq: 21 Mar 2017 6:04 am

Tgt Ion: 45 Resp: 9930

Ion	Ratio	Lower	Upper
45	100		
43	32.3	0.0	20.0#

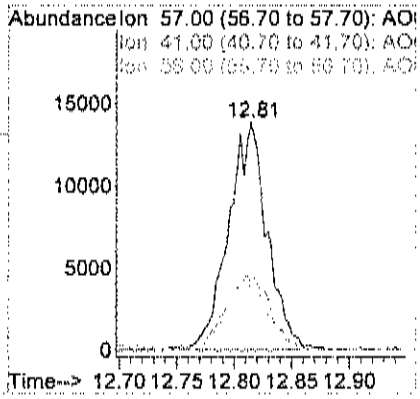


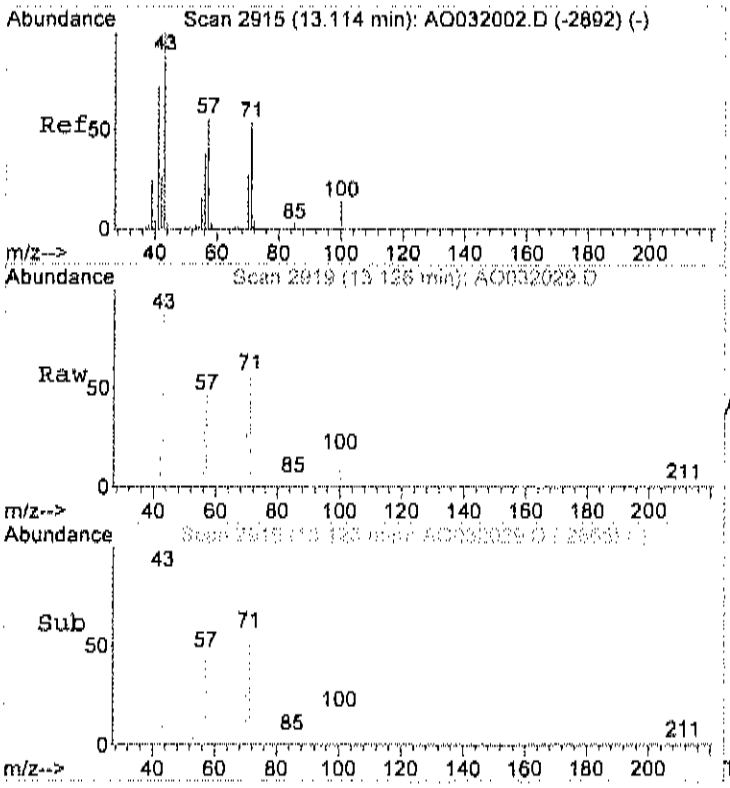


#42
2,2,4-trimethylpentane
Concen: 0.35 ppb
RT: 12.81 min Scan# 2815
Delta R.T. -0.00 min
Lab File: AO032029.D
Acq: 21 Mar 2017 6:04 am

Tgt Ion: 57 Resp: 32544

Ion	Ratio	Lower	Upper
57	100		
41	37.3	6.1	46.1
56	33.7	7.8	47.8

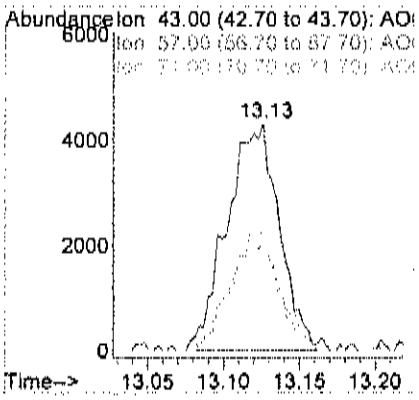


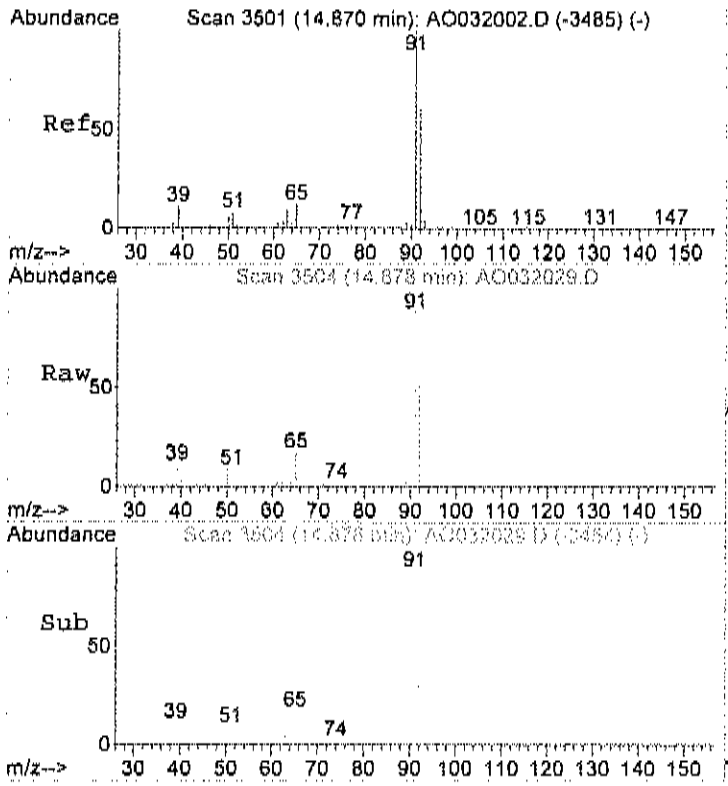


#43
Heptane
Concen: 0.29 ppb
RT: 13.13 min Scan# 2919
Delta R.T. 0.00 min
Lab File: AO032029.D
Acq: 21 Mar 2017 6:04 am

Tgt Ion: 43 Resp: 10389

Ion	Ratio	Lower	Upper
43	100		
57	47.7	32.6	72.6
71	53.0	37.9	77.9

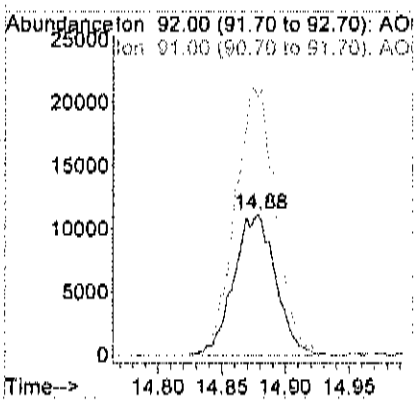




#51
Toluene
Concen: 0.67 ppb
RT: 14.88 min Scan# 3504
Delta R.T. -0.00 min
Lab File: AO032029.D
Acq: 21 Mar 2017 6:04 am

Tgt Ion: 92 Resp: 25494

Ion	Ratio	Lower	Upper
92	100		
91	185.7	138.8	178.8#



Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor-B
Lab Order:	C1703050	**Tag Number:**	484.251
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-6			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
Chloromethane	0.75	0.15		ppbV	1	3/20/2017 7:50:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/20/2017 7:50:00 PM
Trichloroethene	< 0.040	0.040		ppbV	1	3/20/2017 7:50:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/20/2017 7:50:00 PM
Surr: Bromofluorobenzene	96.0	70-130		%REC	1	3/20/2017 7:50:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor-B
Lab Order:	C1703050	**Tag Number:**	484.251
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 7:50:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 7:50:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 7:50:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 7:50:00 PM
Chloromethane	1.5	0.31		ug/m3	1	3/20/2017 7:50:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 7:50:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 7:50:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 7:50:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 7:50:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 7:50:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032014.D Vial: 9
Acq On : 20 Mar 2017 7:50 pm Operator: RJP
Sample : C1703050-004A Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:10 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	13369	1.00	ppb		-0.01
35) 1,4-difluorobenzene	11.93	114	59517	1.00	ppb		-0.01
50) Chlorobenzene-d5	16.80	117	48346	1.00	ppb		-0.01
System Monitoring Compounds							
65) Bromofluorobenzene	18.44	95	34704	0.96	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 96.00%				
Target Compounds							Qvalue
3) Freon 12	4.54	85	56242	0.52	ppb		97
4) Chloromethane	4.71	50	12039	0.75	ppb		92
14) Freon 11	6.31	101	33841	0.34	ppb		99
15) Acetone	6.13	58	60727	5.54	ppb		85
21) Methylene chloride	7.10	84	2924	0.14	ppb	#	80
28) Methyl Ethyl Ketone	8.83	72	2121m	0.21	ppb		
38) Carbon tetrachloride	11.67	117	4668m	0.08	ppb		
39) Benzene	11.50	78	8488	0.14	ppb		89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

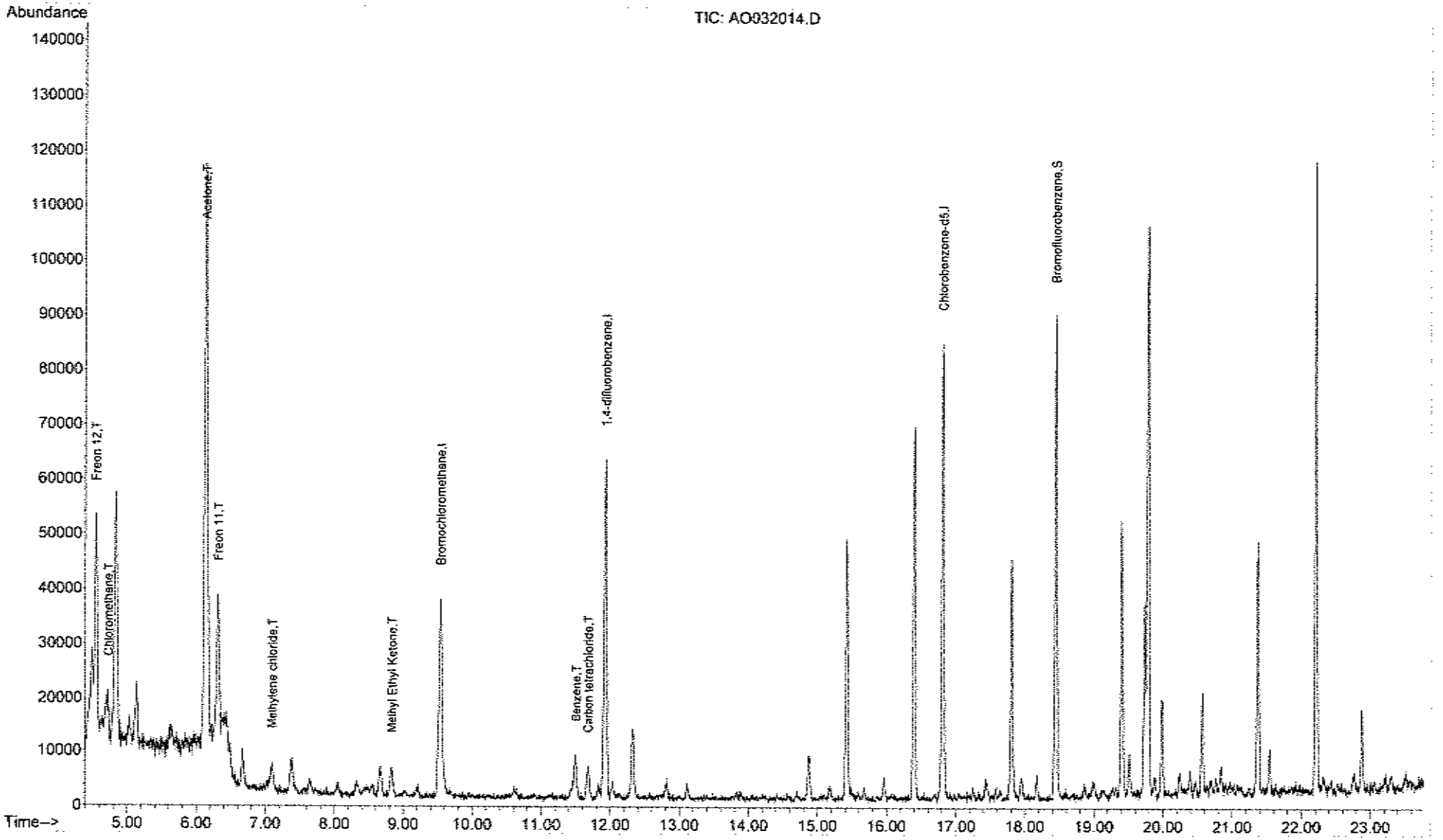
Quantitation Report (QT Reviewed)

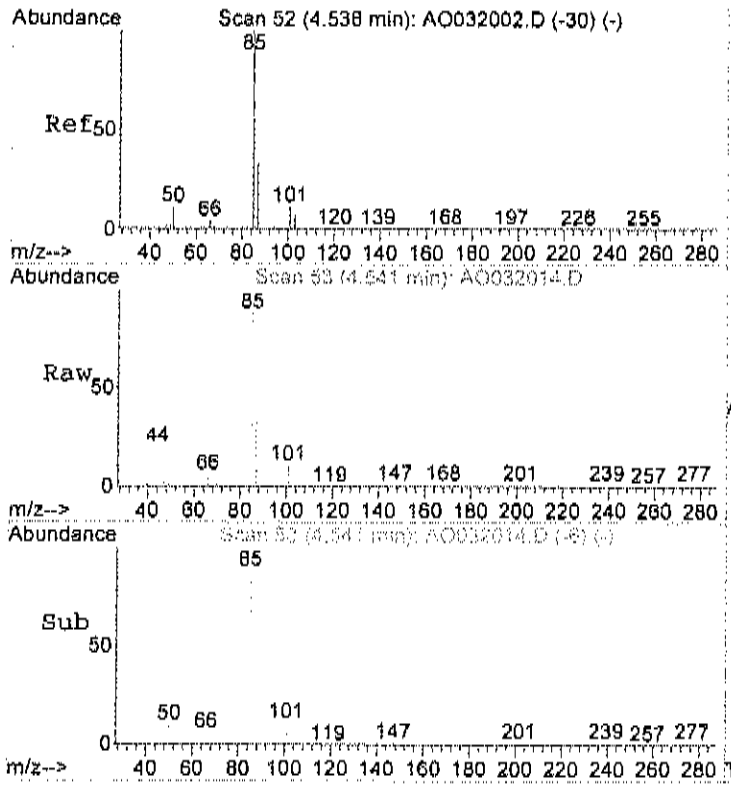
Data File : C:\HPCHEM\1\DATA\AO032014.D
Acq On : 20 Mar 2017 7:50 pm
Sample : C1703050-004A
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:23 2017

Vial: 9
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration

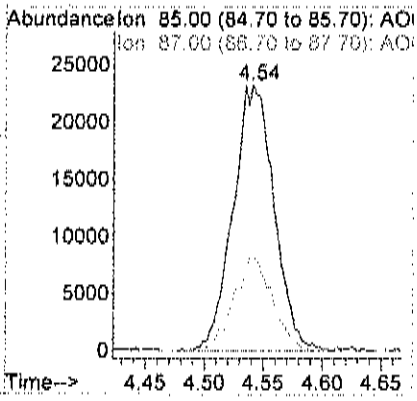


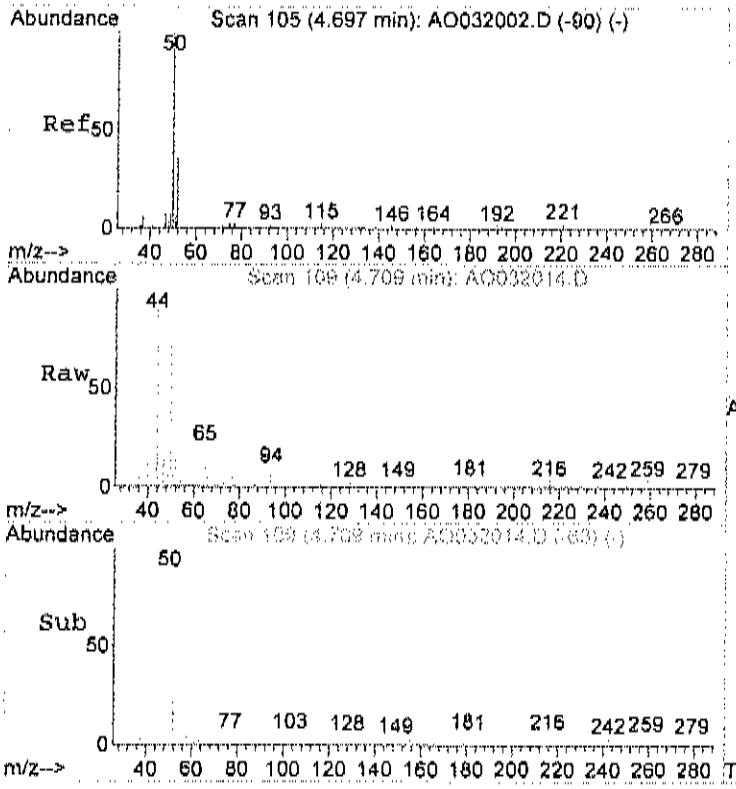


#3
Freon 12
Concen: 0.52 ppb
RT: 4.54 min Scan# 53
Delta R.T. -0.01 min
Lab File: AO032014.D
Acq: 20 Mar 2017 7:50 pm

Tgt Ion: 85 Resp: 56242

Ion	Ratio	Lower	Upper
85	100		
87	33.0	11.3	51.3

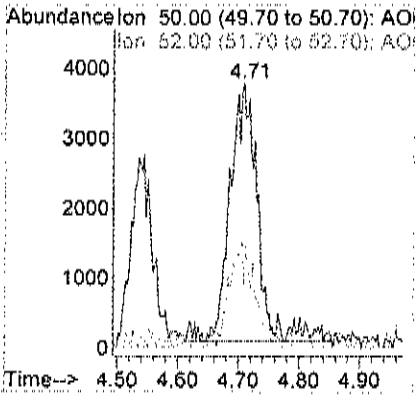


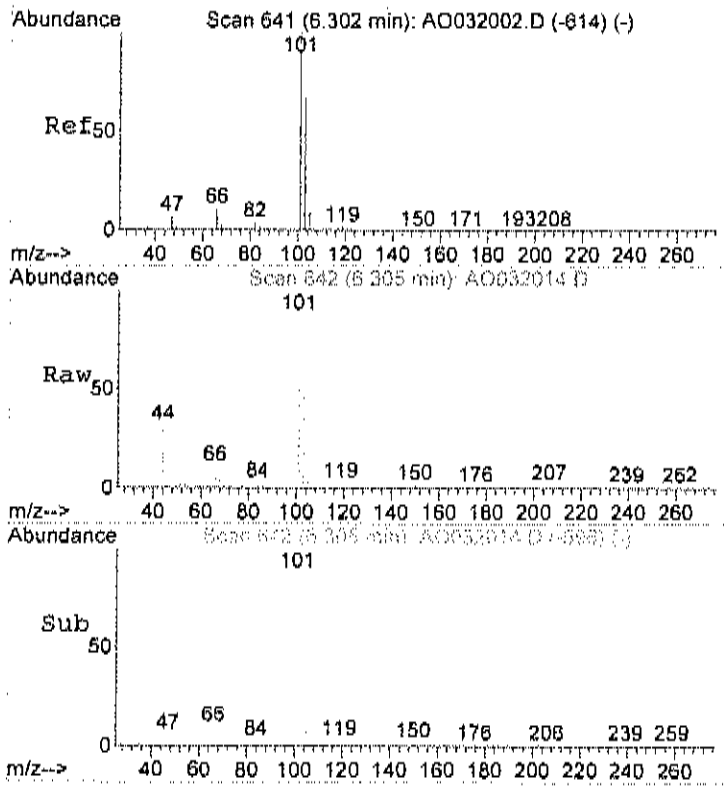


#4
Chloromethane
Concen: 0.75 ppb
RT: 4.71 min Scan# 109
Delta R.T. -0.01 min
Lab File: AO032014.D
Acq: 20 Mar 2017 7:50 pm

Tgt Ion: 50 Resp: 12039

Ion	Ratio	Lower	Upper
50	100		
52	36.1	11.8	51.8

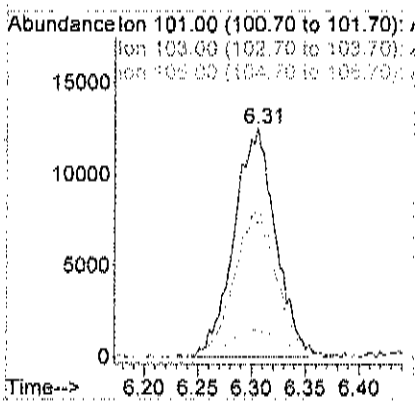


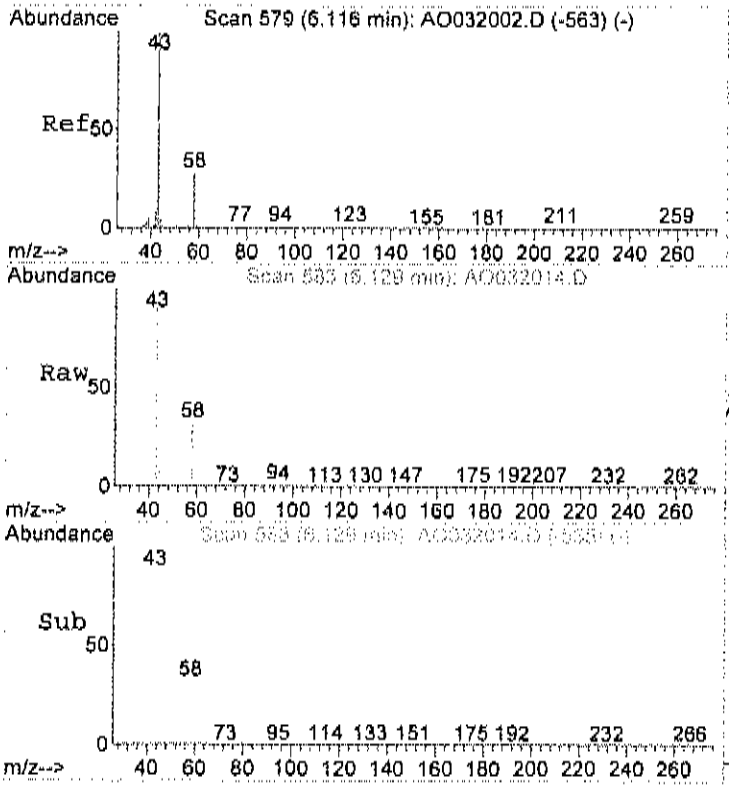


#14
Freon 11
Concen: 0.34 ppb
RT: 6.31 min Scan# 642
Delta R.T. -0.01 min
Lab File: AO032014.D
Acq: 20 Mar 2017 7:50 pm

Tgt Ion:101 Resp: 33841

Ion	Ratio	Lower	Upper
101	100		
103	65.7	46.0	86.0
105	12.8	0.0	31.4

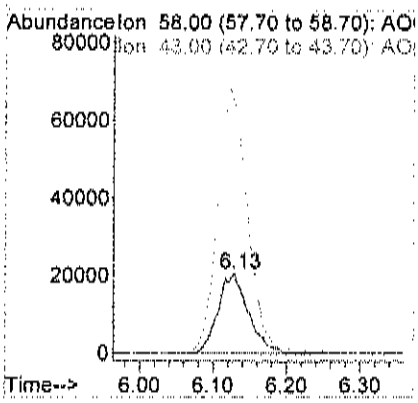


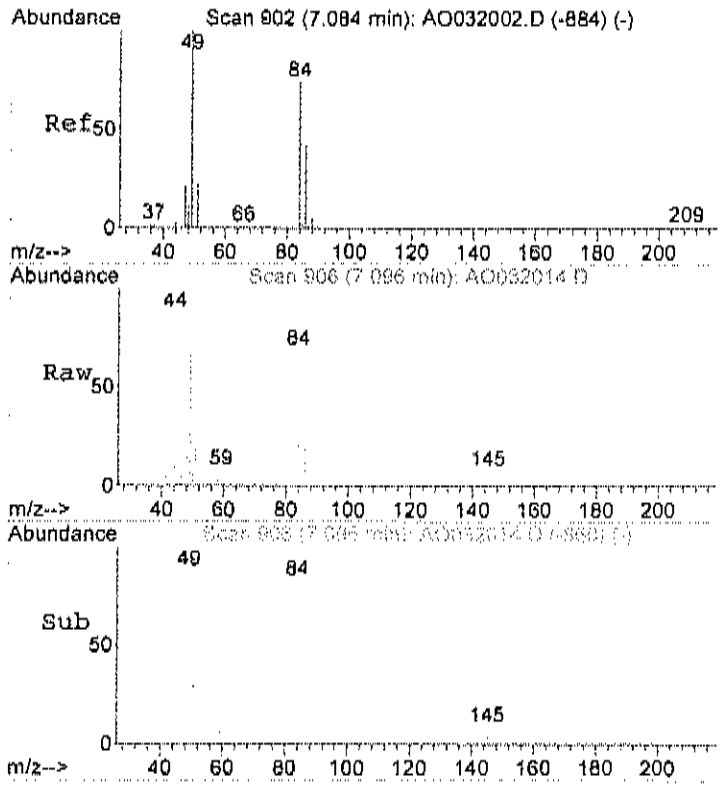


#15
Acetone
Concen: 5.54 ppb
RT: 6.13 min Scan# 583
Delta R.T. -0.01 min
Lab File: AO032014.D
Acq: 20 Mar 2017 7:50 pm

Tgt Ion: 58 Resp: 60727

Ion	Ratio	Lower	Upper
58	100		
43	321.6	263.2	323.2

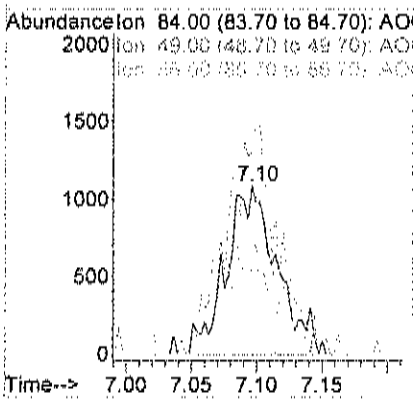


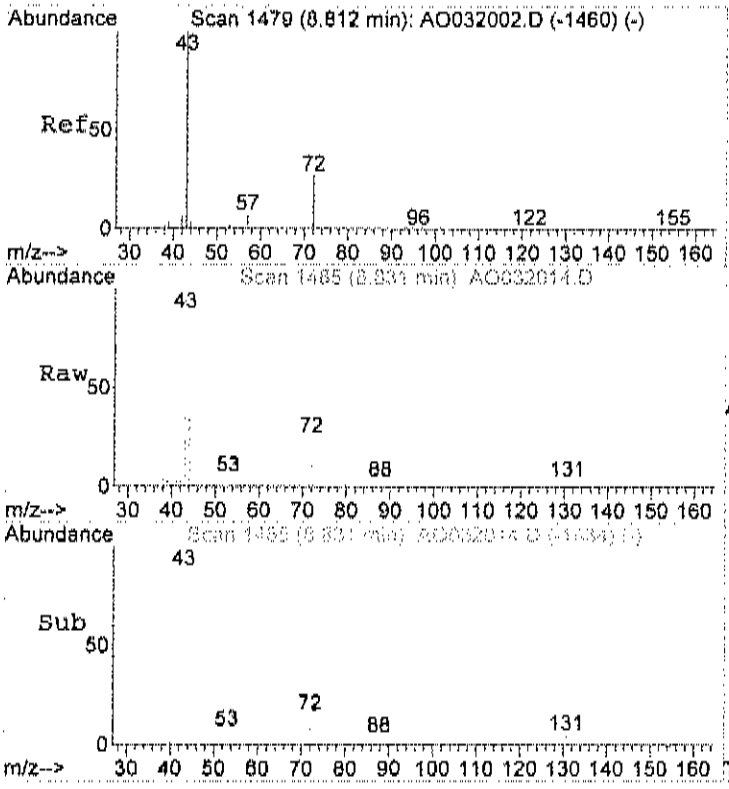


#21
Methylene chloride
Concen: 0.14 ppb
RT: 7.10 min Scan# 906
Delta R.T. -0.01 min
Lab File: AO032014.D
Acq: 20 Mar 2017 7:50 pm

Tgt Ion: 84 Resp: 2924

Ion	Ratio	Lower	Upper
84	100		
49	132.6	86.2	126.2#
86	63.8	36.1	76.1

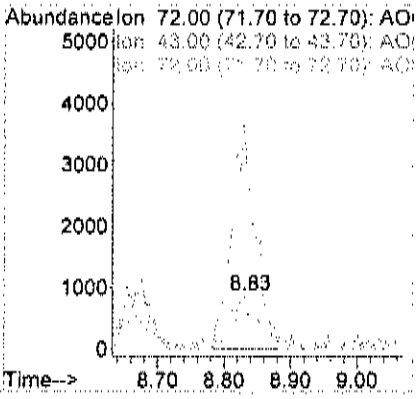


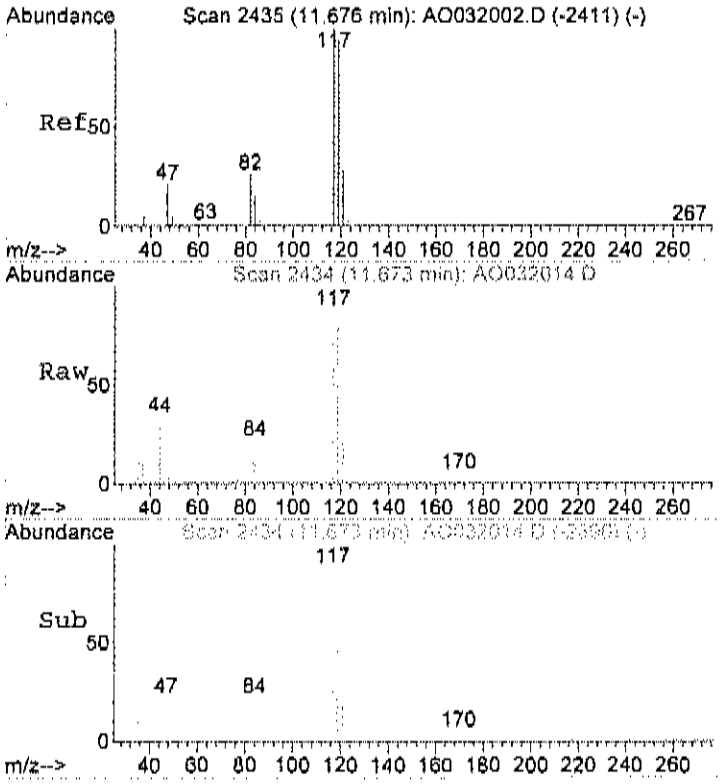


#28
Methyl Ethyl Ketone
Concen: 0.21 ppb m
RT: 8.83 min Scan# 1485
Delta R.T. 0.00 min
Lab File: AO032014.D
Acq: 20 Mar 2017 7:50 pm

Tgt Ion: 72 Resp: 2121

Ion	Ratio	Lower	Upper
72	100		
43	435.7	383.1	423.1#
72	91.7	80.0	120.0

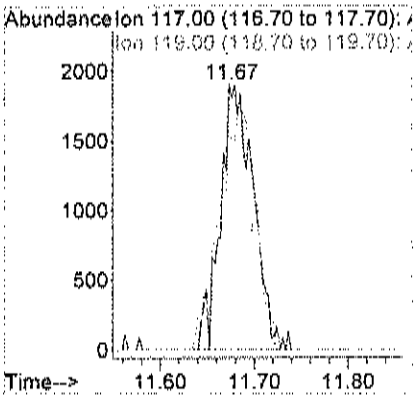


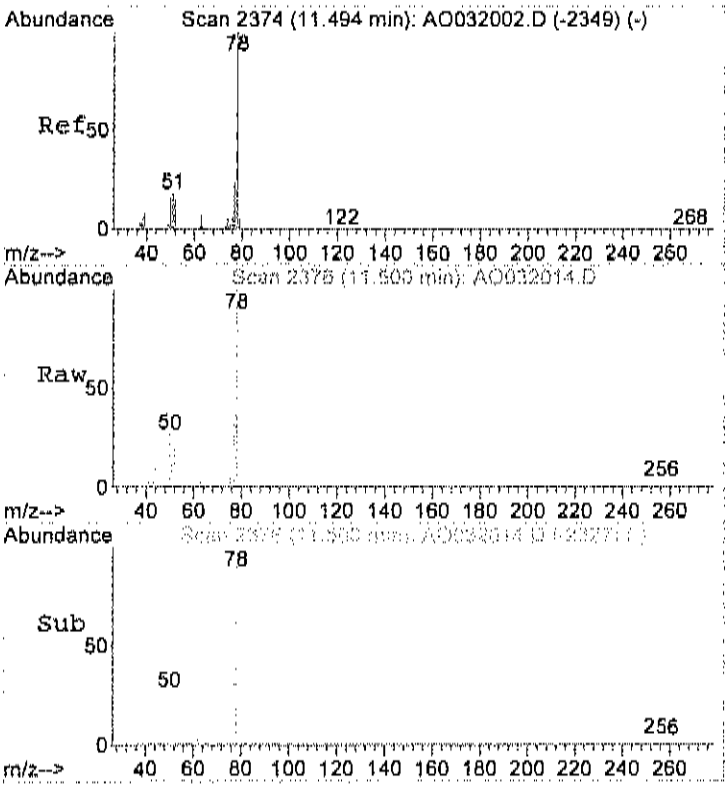


#38
Carbon tetrachloride
Concen: 0.08 ppb m
RT: 11.67 min Scan# 2434
Delta R.T. -0.02 min
Lab File: AO032014.D
Acq: 20 Mar 2017 7:50 pm

Tgt Ion:117 Resp: 4668

Ion	Ratio	Lower	Upper
117	100		
119	0.0	74.9	114.9#

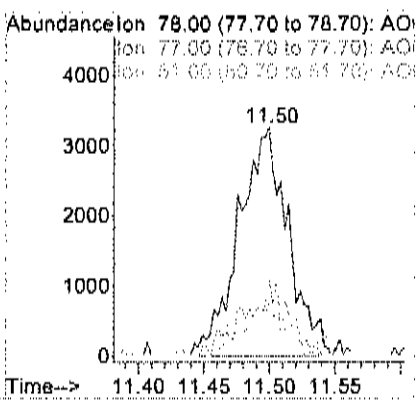




#39
Benzene
Concen: 0.14 ppb
RT: 11.50 min Scan# 2376
Delta R.T. -0.00 min
Lab File: AO032014.D
Acq: 20 Mar 2017 7:50 pm

Tgt Ion: 78 Resp: 8488

Ion	Ratio	Lower	Upper
78	100		
77	24.7	0.0	39.9
51	20.4	0.0	35.8



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\A0032026.D Vial: 21
Acq On : 21 Mar 2017 4:12 am Operator: RJP
Sample : C1703050-004A 10x Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:22 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.53	128	14458	1.00	ppb	-0.01
35) 1,4-difluorobenzene	11.93	114	67096	1.00	ppb	-0.01
50) Chlorobenzene-d5	16.81	117	55112	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.45	95	38591	0.94	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 94.00%			
Target Compounds						Qvalue
15) Acetone	6.14	58	7896	0.67	ppb	# 65

(#) = qualifier out of range (m) = manual integration (+) = signals summed

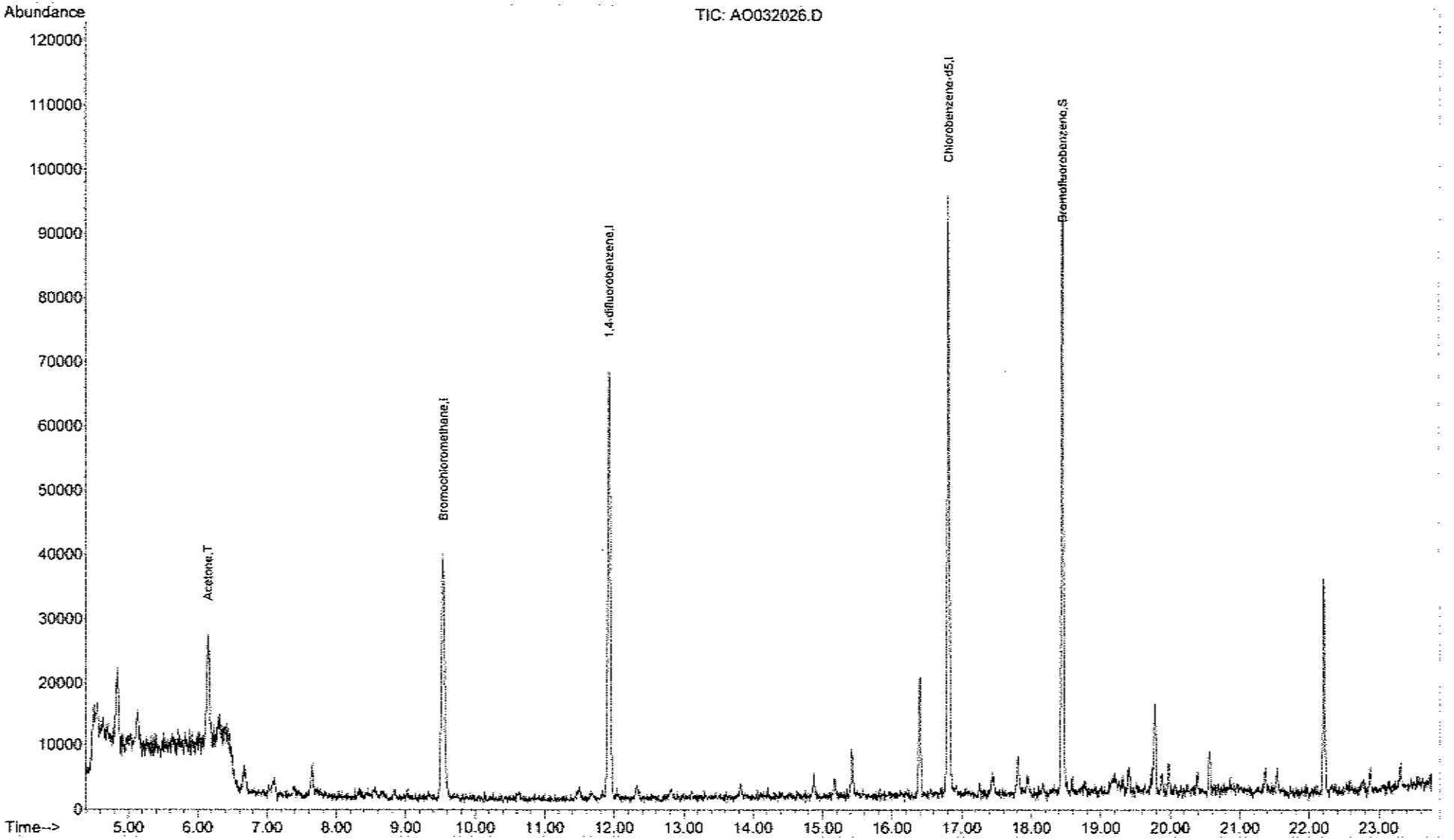
Quantitation Report (QT Reviewed)

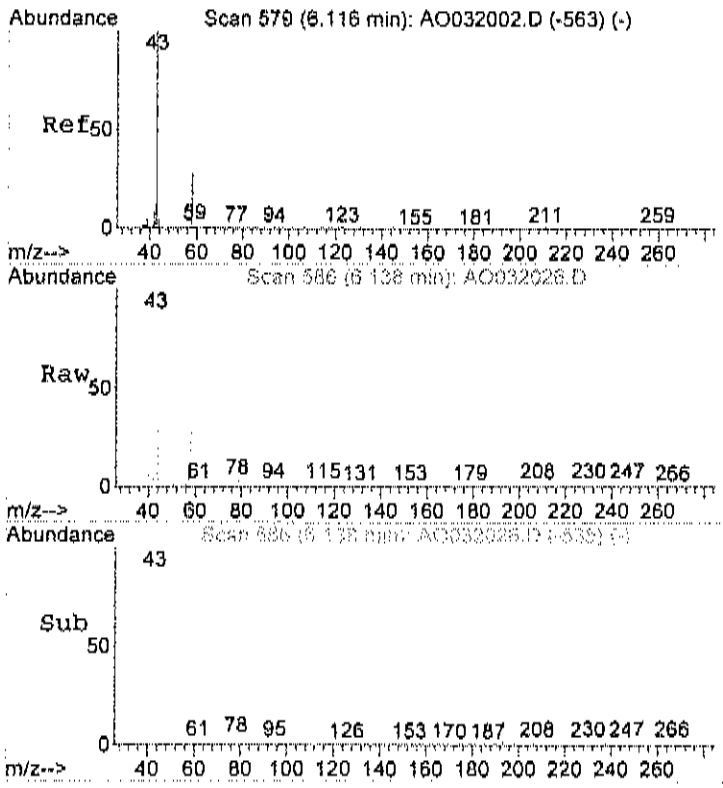
Data File : C:\HPCHEM\1\DATA\AO032026.D
Acq On : 21 Mar 2017 4:12 am
Sample : C1703050-004A 10x
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:17 2017

Vial: 21
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration

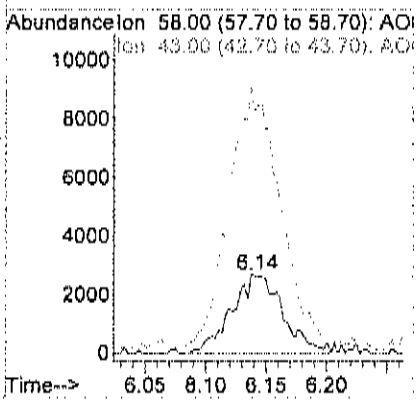




#15
Acetone
Concen: 0.67 ppb
RT: 6.14 min Scan# 586
Delta R.T. 0.00 min
Lab File: AO032026.D
Acq: 21 Mar 2017 4:12 am

Tgt Ion: 58 Resp: 7896

Ion	Ratio	Lower	Upper
58	100		
43	360.1	263.2	323.2#



Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Dupe B
Lab Order:	C1703050	**Tag Number:**	1182.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-9			"Hg		3/17/2017
Lab Vacuum Out	-30			"Hg		3/17/2017
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
Chloromethane	0.89	0.15		ppbV	1	3/21/2017 12:10:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	3/21/2017 12:10:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	3/21/2017 12:10:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	3/21/2017 12:10:00 AM
Surr: Bromofluorobenzene	100	70-130		%REC	1	3/21/2017 12:10:00 AM

Qualifiers:

**	Quantitation Limit	,	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Dupe B
Lab Order:	C1703050	**Tag Number:**	1182.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/21/2017 12:10:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/21/2017 12:10:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/21/2017 12:10:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	3/21/2017 12:10:00 AM
Chloromethane	1.8	0.31		ug/m3	1	3/21/2017 12:10:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/21/2017 12:10:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/21/2017 12:10:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/21/2017 12:10:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/21/2017 12:10:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/21/2017 12:10:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032020.D Vial: 15
Acq On : 21 Mar 2017 12:10 am Operator: RJP
Sample : C1703050-005A Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:16 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	12939	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.92	114	60039	1.00	ppb		-0.02
50) Chlorobenzene-d5	16.81	117	50085	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	37366	1.00	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 100.00%				
Target Compounds							Qvalue
3) Freon 12	4.55	85	69053	0.66	ppb		100
4) Chloromethane	4.71	50	13838	0.89	ppb		98
14) Freon 11	6.31	101	33331	0.34	ppb		97
15) Acetone	6.13	58	94192	8.87	ppb	#	1
17) Isopropyl alcohol	6.37	45	48830	1.63	ppb	#	100
21) Methylene chloride	7.10	84	7321	0.37	ppb	#	76
28) Methyl Ethyl Ketone	8.82	72	7891	0.82	ppb	#	84
30) Hexane	9.59	57	22510	0.72	ppb	#	81
37) Cyclohexane	11.85	56	5520	0.16	ppb		90
38) Carbon tetrachloride	11.68	117	4571m	0.07	ppb		
39) Benzene	11.50	78	29769	0.48	ppb		88
42) 2,2,4-trimethylpentane	12.81	57	355444	3.59	ppb		81
43) Heptane	13.12	43	107528	2.85	ppb		98
51) Toluene	14.88	92	279913	6.63	ppb	#	84
58) Ethylbenzene	17.25	91	53162	0.53	ppb		96
59) m&p-xylene	17.44	91	159463	1.89	ppb		99
61) Styrene	17.84	104	31063	0.62	ppb		88
63) o-xylene	17.95	91	56049	0.69	ppb		88
69) 4-ethyltoluene	19.32	105	14447m	0.16	ppb		
70) 1,3,5-trimethylbenzene	19.40	105	12068	0.14	ppb		93
71) 1,2,4-trimethylbenzene	19.88	105	38812	0.47	ppb		100
75) 1,2,3-trimethylbenzene	20.39	105	10015	0.13	ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

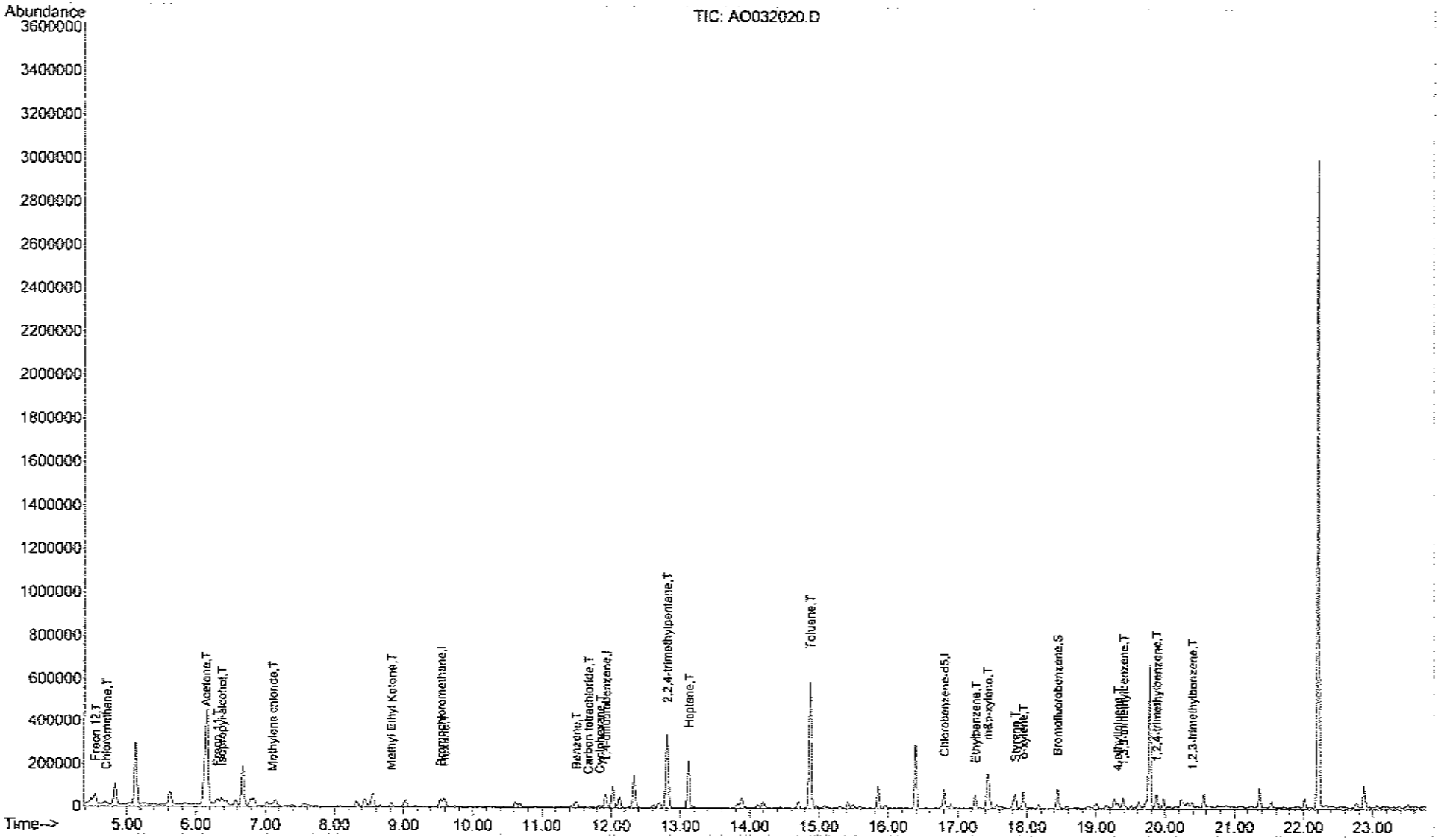
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032020.D
Acq On : 21 Mar 2017 12:10 am
Sample : C1703050-005A
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:24 2017

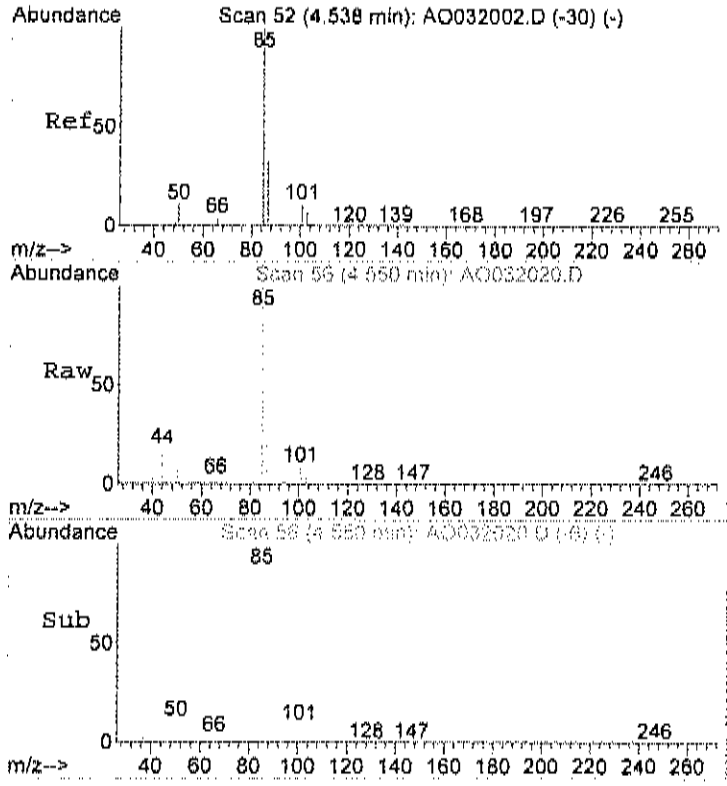
Vial: 15
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration



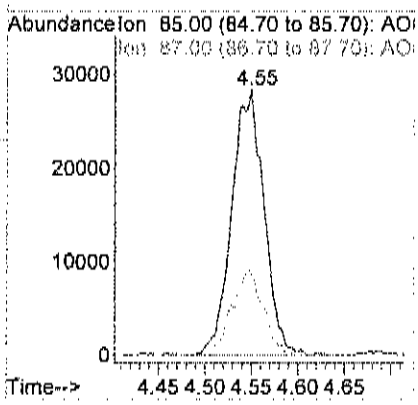
AO032020.D A227_1UG.M Mon Mar 27 11:23:30 2017 MSD1

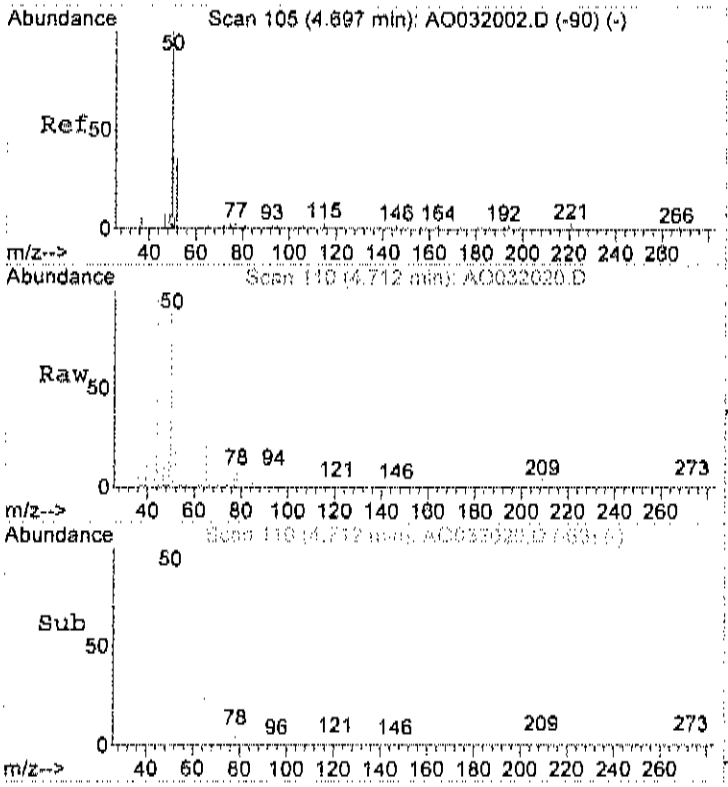


#3
Freon 12
Concen: 0.66 ppb
RT: 4.55 min Scan# 56
Delta R.T. -0.00 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 85 Resp: 69053

Ion	Ratio	Lower	Upper
85	100		
87	31.4	11.3	51.3

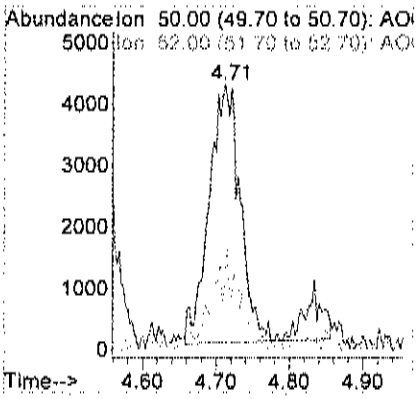


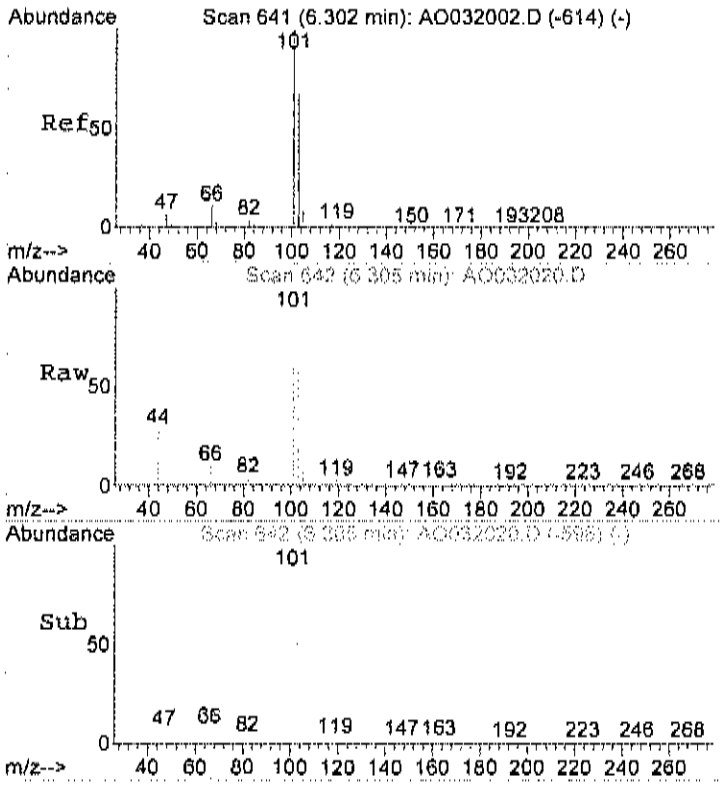


#4
Chloromethane
Concen: 0.89 ppb
RT: 4.71 min Scan# 110
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 50 Resp: 13838

Ion	Ratio	Lower	Upper
50	100		
52	30.6	11.8	51.8

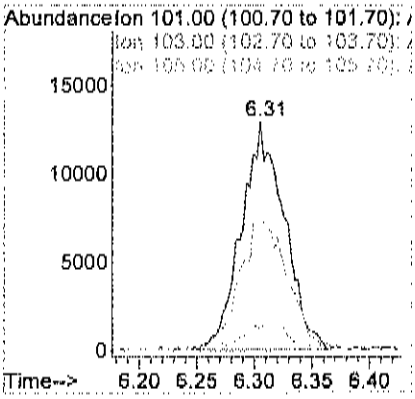


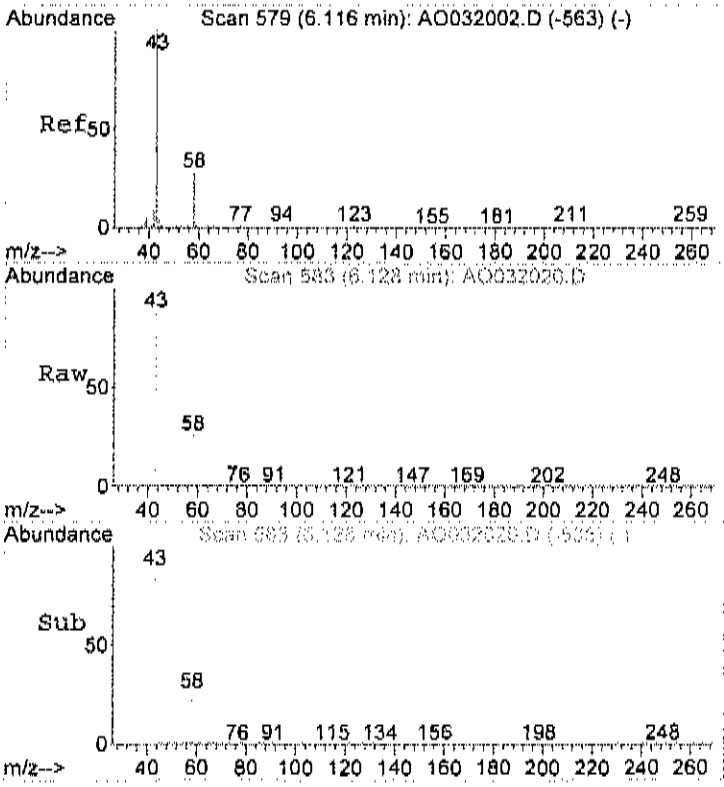


#14
Freon 11
Concen: 0.34 ppb
RT: 6.31 min Scan# 642
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion:101 Resp: 33331

Ion	Ratio	Lower	Upper
101	100		
103	63.9	46.0	86.0
105	12.3	0.0	31.4

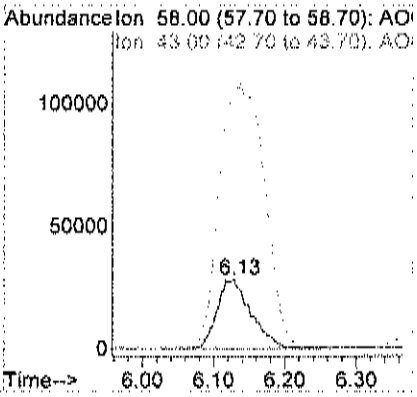


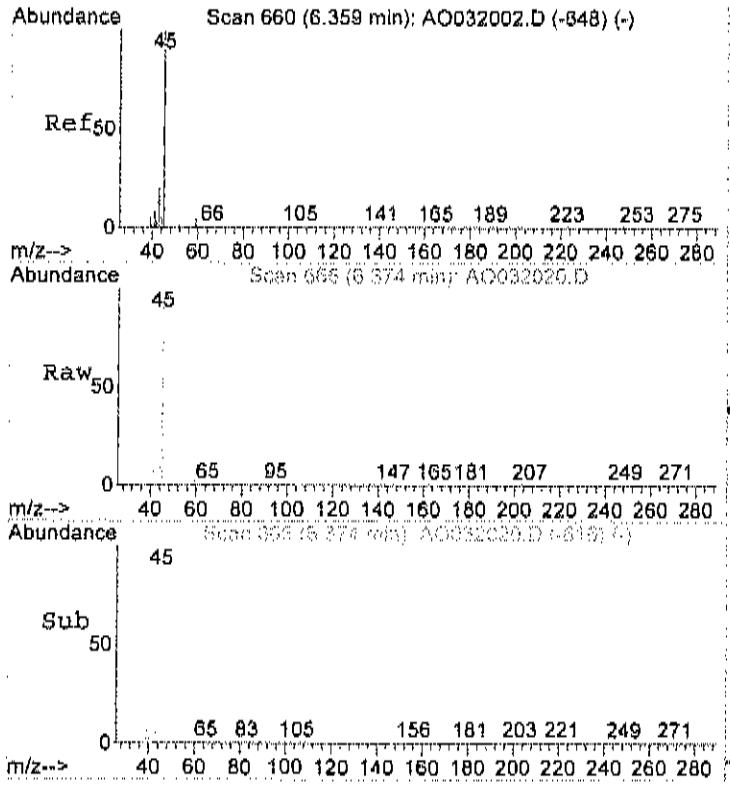


#15
Acetone
Concen: 8.87 ppb
RT: 6.13 min Scan# 583
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 58 Resp: 94192

Ion	Ratio	Lower	Upper
58	100		
43	500.4	263.2	323.2#

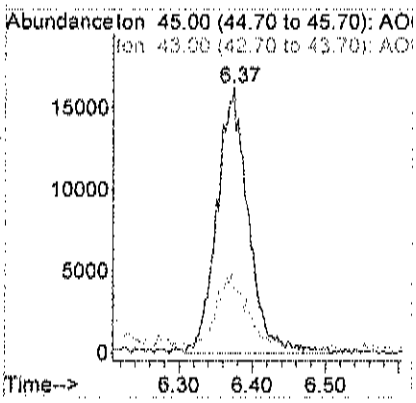


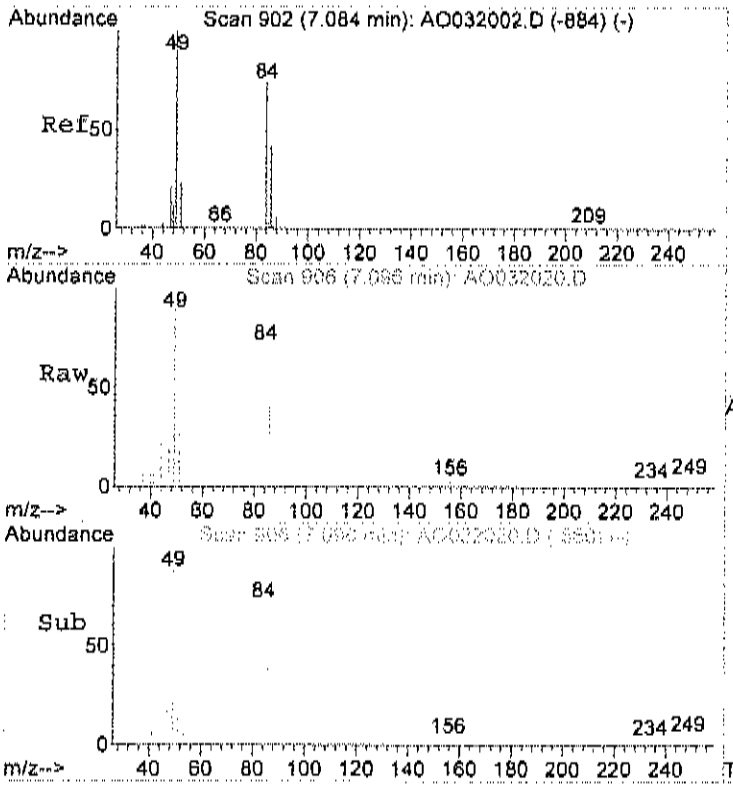


#17
Isopropyl alcohol
Concen: 1.63 ppb
RT: 6.37 min Scan# 665
Delta R.T. -0.00 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 45 Resp: 48830

Ion	Ratio	Lower	Upper
45	100		
43	37.0	0.0	20.0#

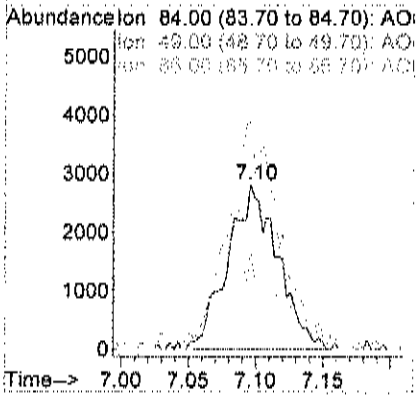


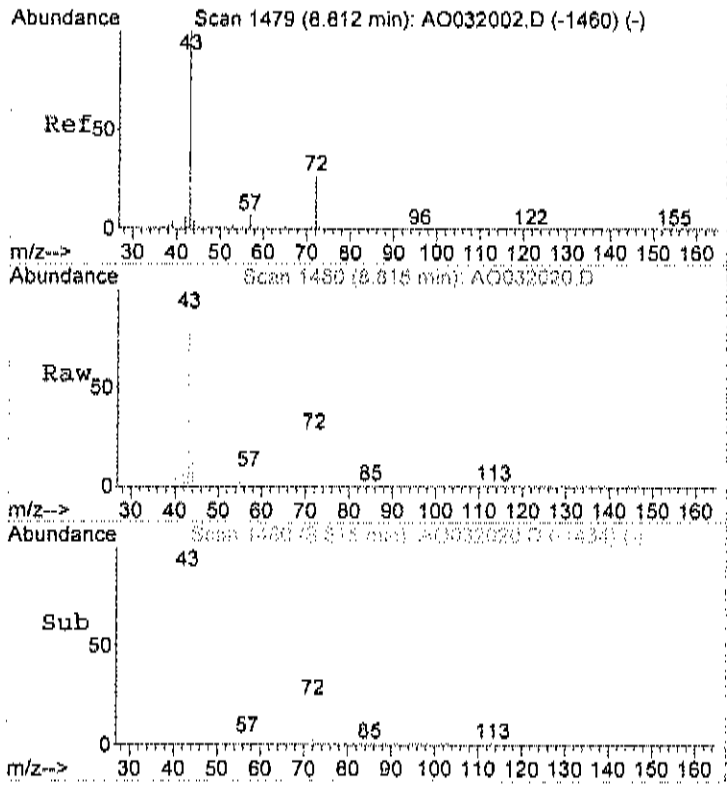


#21
Methylene chloride
Concen: 0.37 ppb
RT: 7.10 min Scan# 906
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 84 Resp: 7321

Ion	Ratio	Lower	Upper
84	100		
49	139.9	86.2	126.2#
86	61.1	36.1	76.1

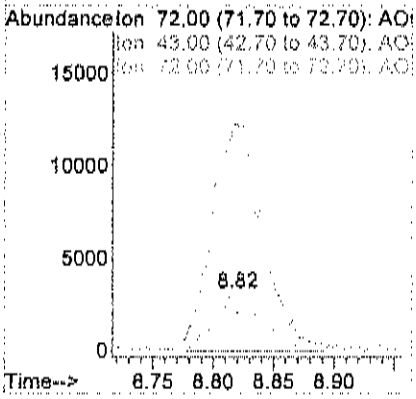


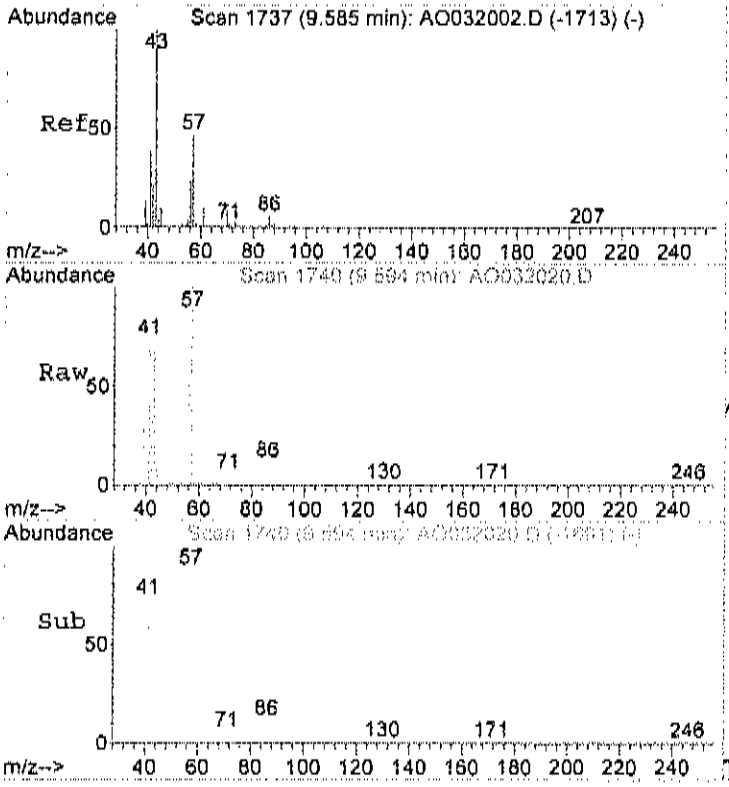


#28
Methyl Ethyl Ketone
Concen: 0.82 ppb
RT: 8.82 min Scan# 1480
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 72 Resp: 7891

Ion	Ratio	Lower	Upper
72	100		
43	451.5	383.1	423.1#
72	100.0	80.0	120.0

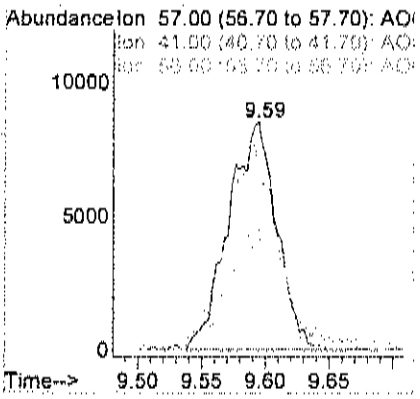


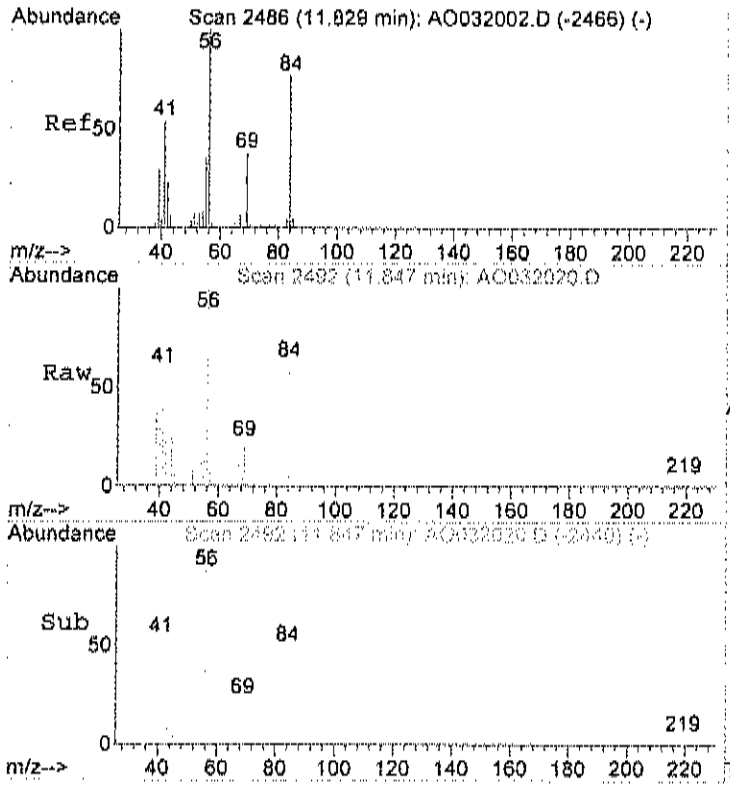


#30
Hexane
Concen: 0.72 ppb
RT: 9.59 min Scan# 1740
Delta R.T. -0.00 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 57 Resp: 22510

Ion	Ratio	Lower	Upper
57	100		
41	102.5	57.7	97.7#
56	55.4	41.0	81.0

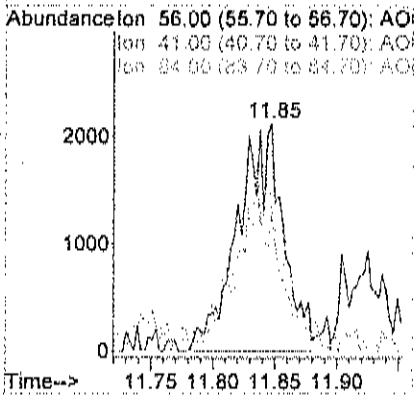


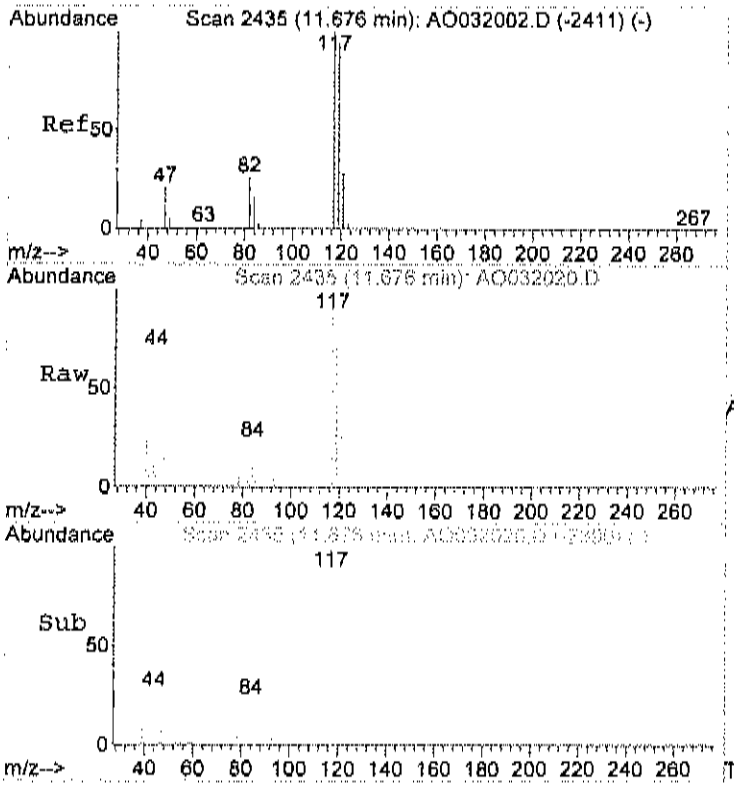


#37
Cyclohexane
Concen: 0.16 ppb
RT: 11.85 min Scan# 2492
Delta R.T. 0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 56 Resp: 5520

Ion	Ratio	Lower	Upper
56	100		
41	70.4	43.2	83.2
84	75.2	64.8	104.8

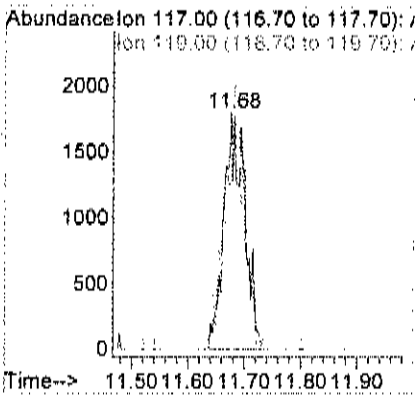


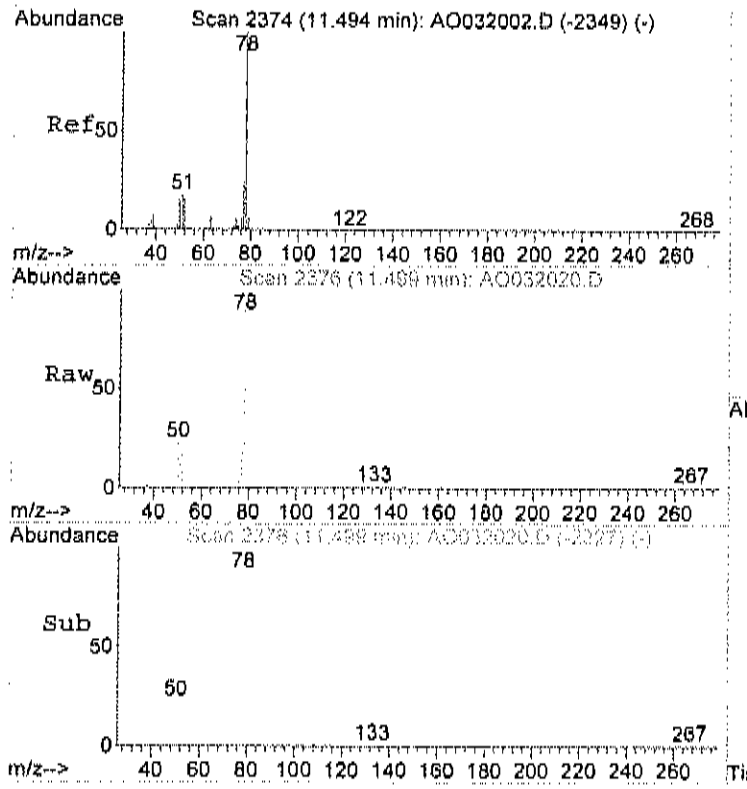


#38
Carbon tetrachloride
Concen: 0.07 ppb m
RT: 11.68 min Scan# 2435
Delta R.T. -0.02 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion:117 Resp: 4571

Ion	Ratio	Lower	Upper
117	100		
119	0.0	74.9	114.9#

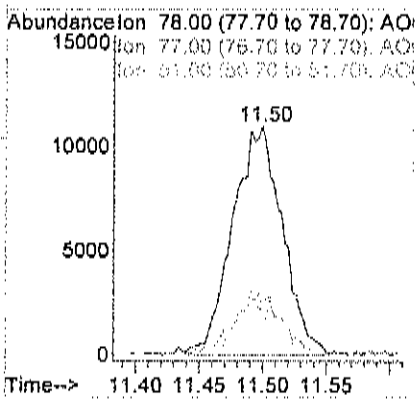


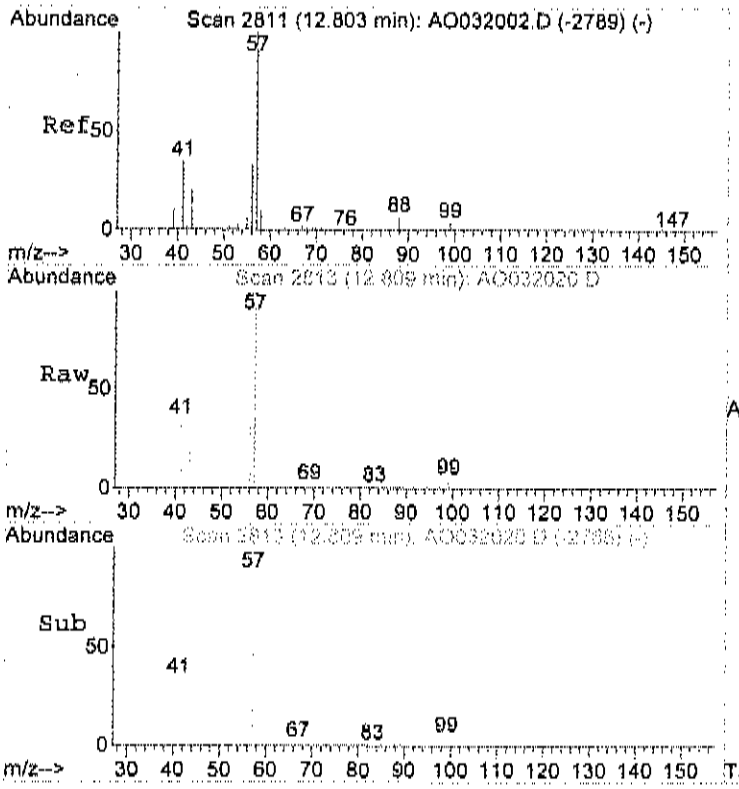


#39
Benzene
Concen: 0.48 ppb
RT: 11.50 min Scan# 2376
Delta R.T. -0.00 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 78 Resp: 29769

Ion	Ratio	Lower	Upper
78	100		
77	26.0	0.0	39.9
51	20.4	0.0	35.8

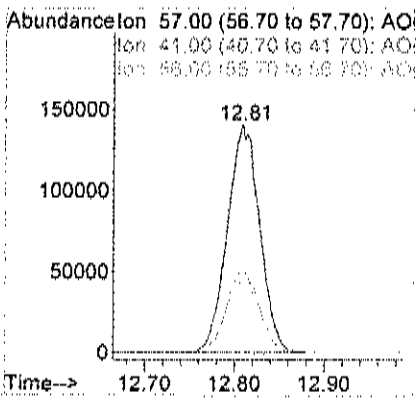


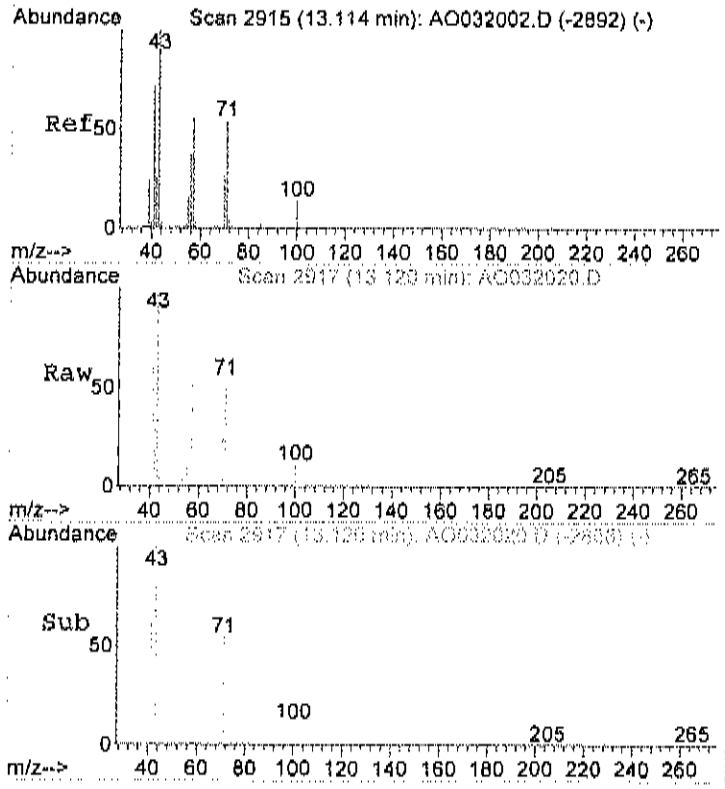


#42
2,2,4-trimethylpentane
Concen: 3.59 ppb
RT: 12.81 min Scan# 2813
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 57 Resp: 355444

Ion	Ratio	Lower	Upper
57	100		
41	39.7	6.1	46.1
56	34.2	7.8	47.8

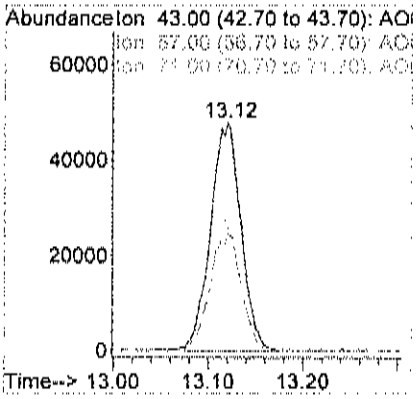


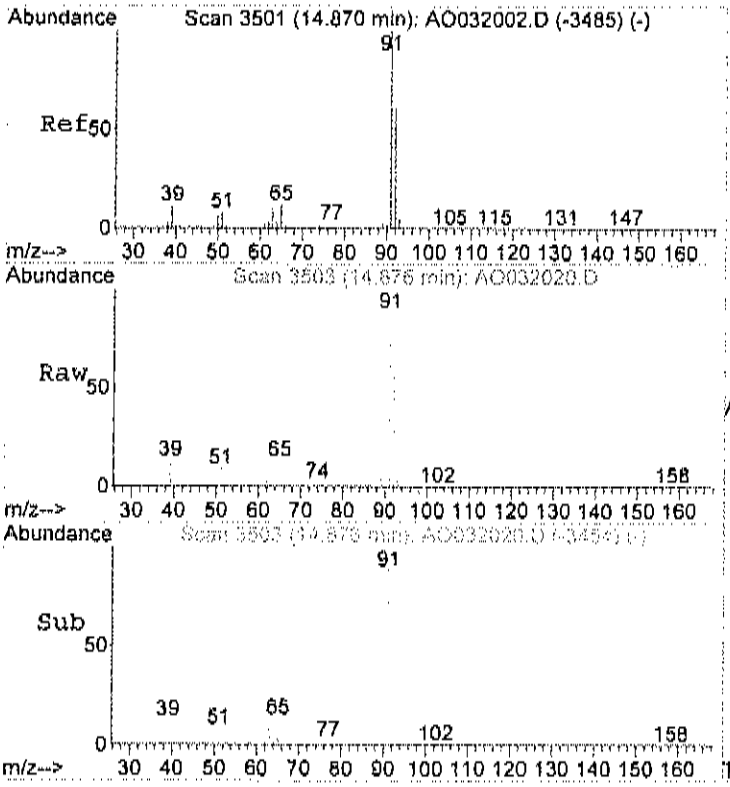


#43
Heptane
Concen: 2.85 ppb
RT: 13.12 min Scan# 2917
Delta R.T. -0.00 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 43 Resp: 107528

Ion	Ratio	Lower	Upper
43	100		
57	52.9	32.6	72.6
71	56.0	37.9	77.9

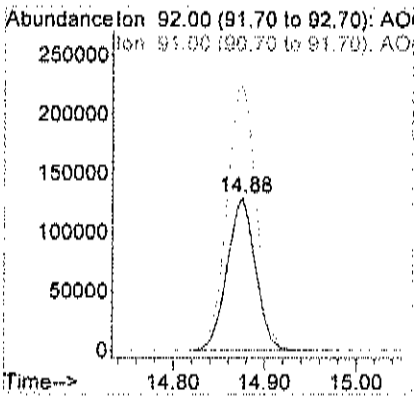


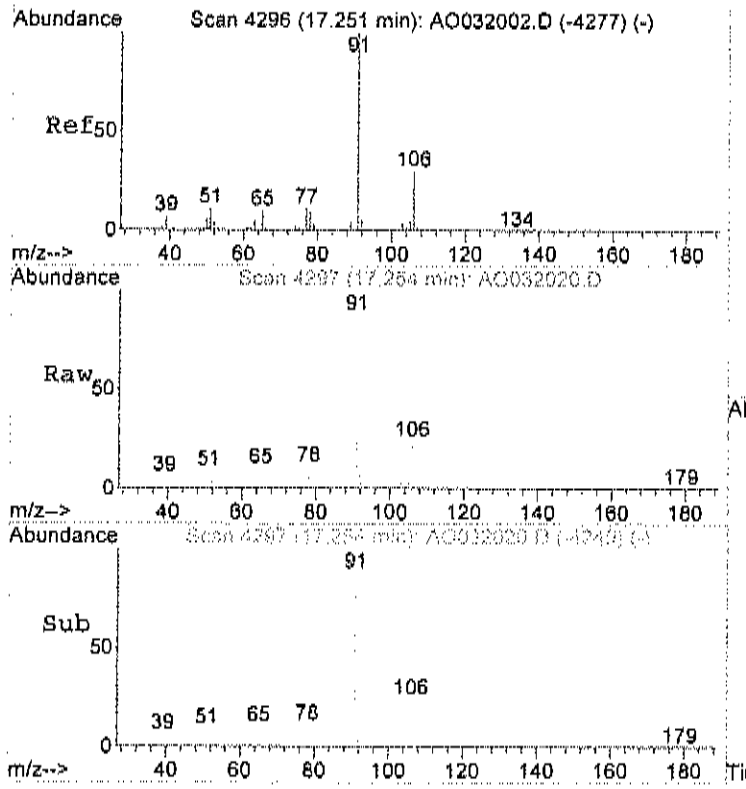


#51
Toluene
Concen: 6.63 ppb
RT: 14.88 min Scan# 3503
Delta R.T. -0.00 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 92 Resp: 279913

Ion	Ratio	Lower	Upper
92	100		
91	180.0	138.8	178.8#

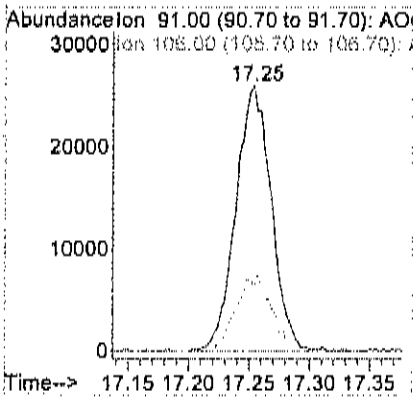


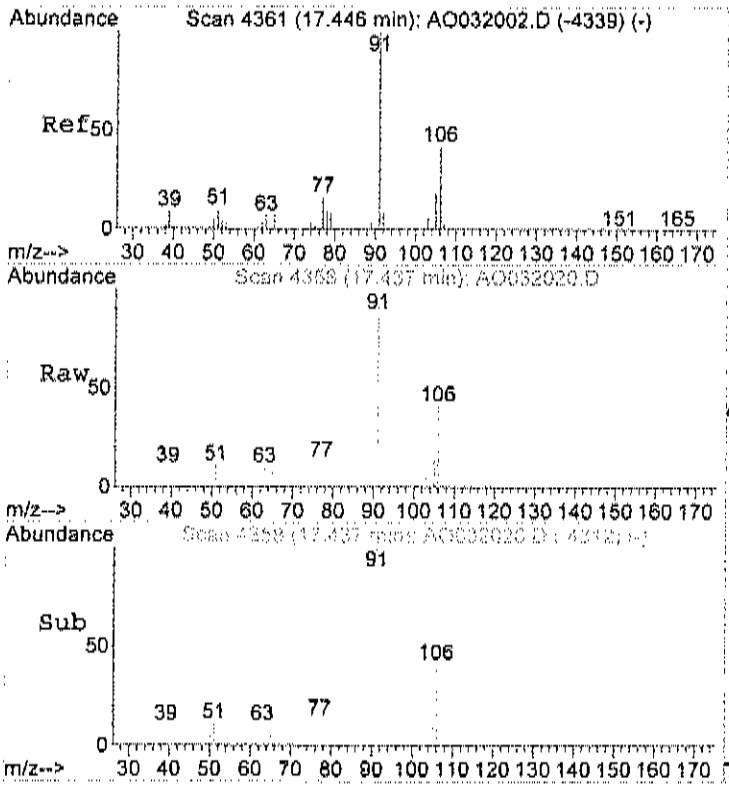


#58
Ethylbenzene
Concen: 0.53 ppb
RT: 17.25 min Scan# 4297
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 91 Resp: 53162

Ion	Ratio	Lower	Upper
91	100		
106	28.2	10.4	50.4

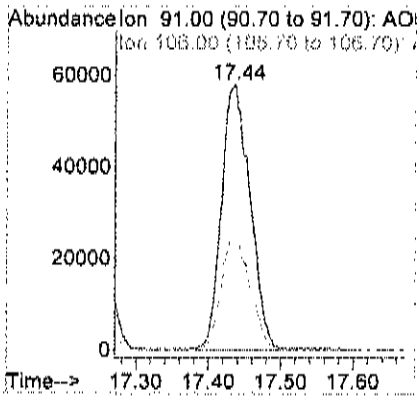


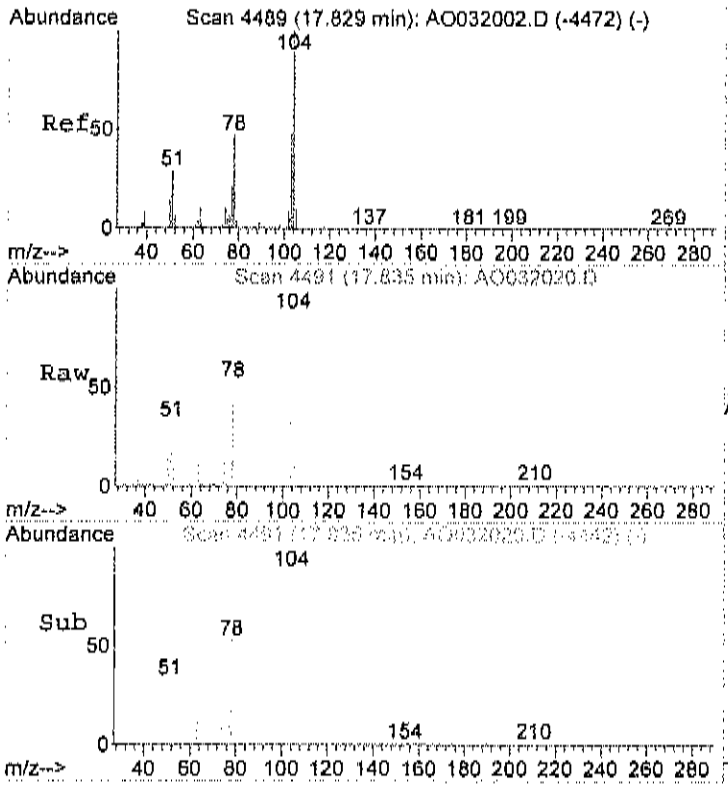


#59
m&p-xylene
Concen: 1.89 ppb
RT: 17.44 min Scan# 4358
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 91 Resp: 159463

Ion	Ratio	Lower	Upper
91	100		
106	42.6	23.5	63.5

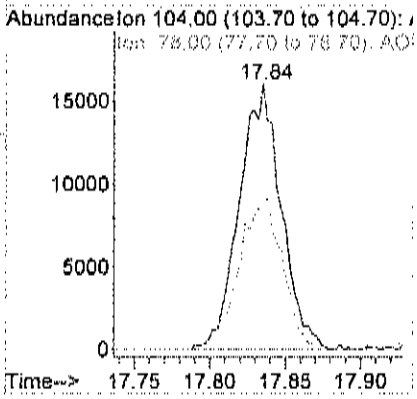


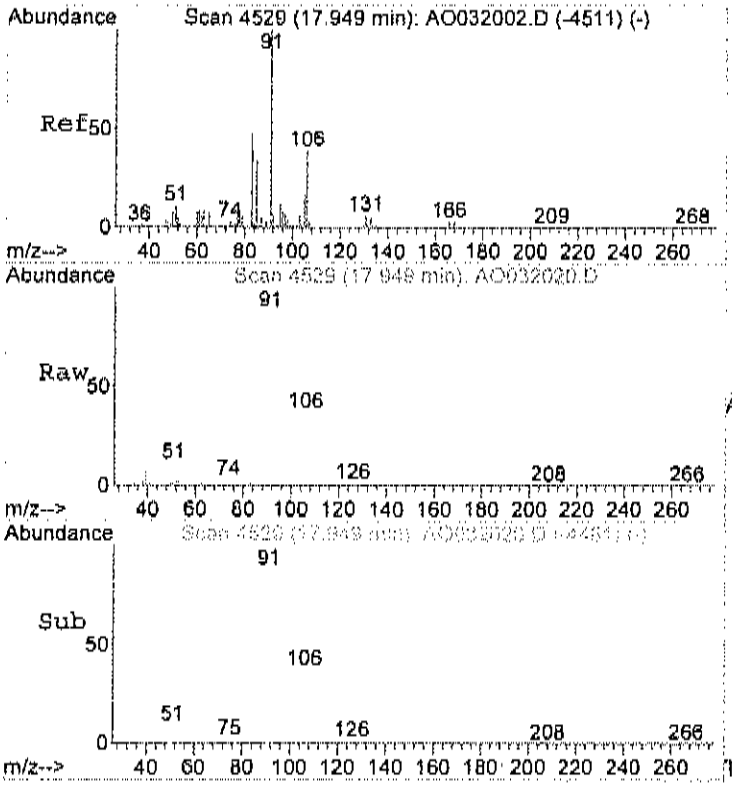


#61
Styrene
Concen: 0.62 ppb
RT: 17.84 min Scan# 4491
Delta R.T. -0.00 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion:104 Resp: 31063

Ion	Ratio	Lower	Upper
104	100		
78	59.4	31.1	71.1

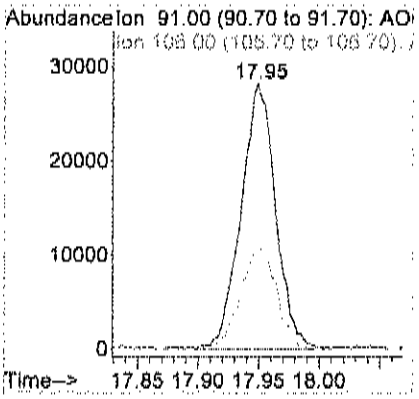


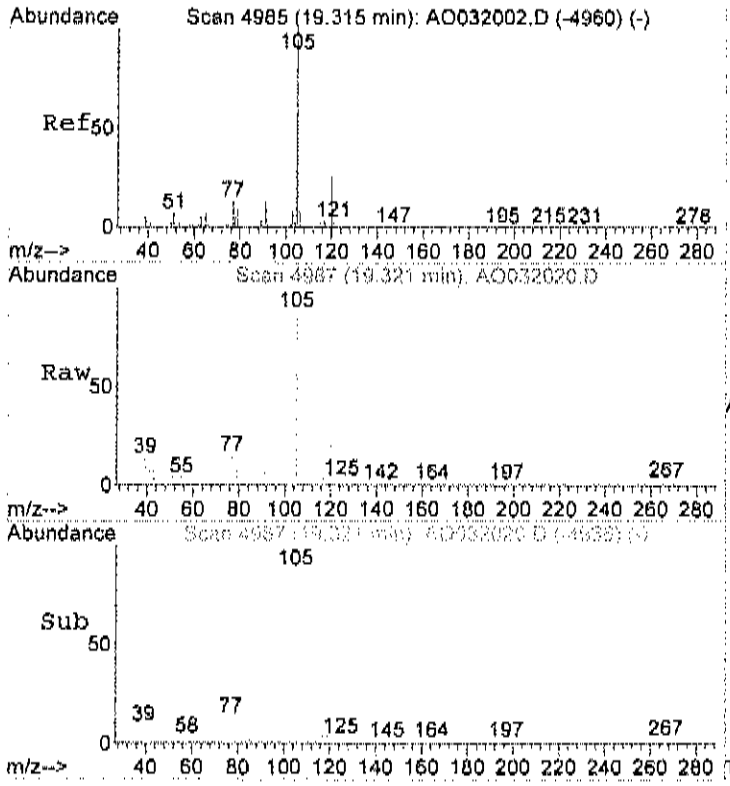


#63
o-xylene
Concen: 0.69 ppb
RT: 17.95 min Scan# 4529
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion: 91 Resp: 56049

Ion	Ratio	Lower	Upper
91	100		
106	39.6	27.7	67.7

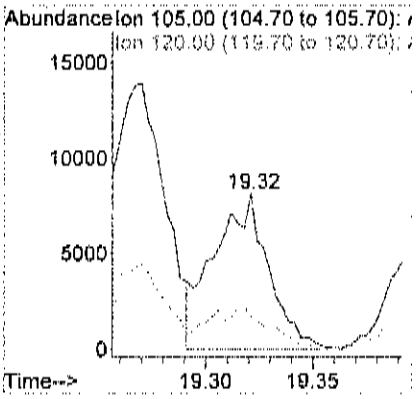


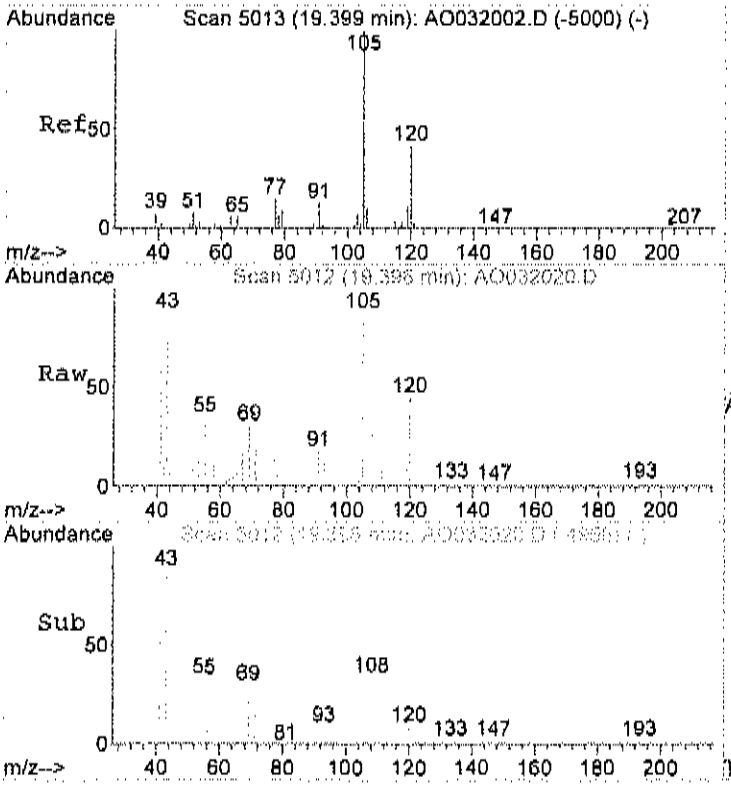


#69
4-ethyltoluene
Concen: 0.16 ppb m
RT: 19.32 min Scan# 4987
Delta R.T. 0.00 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion:105 Resp: 14447

Ion	Ratio	Lower	Upper
105	100		
120	87.3	9.7	49.7#

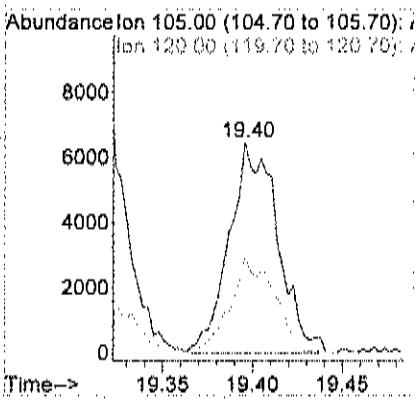


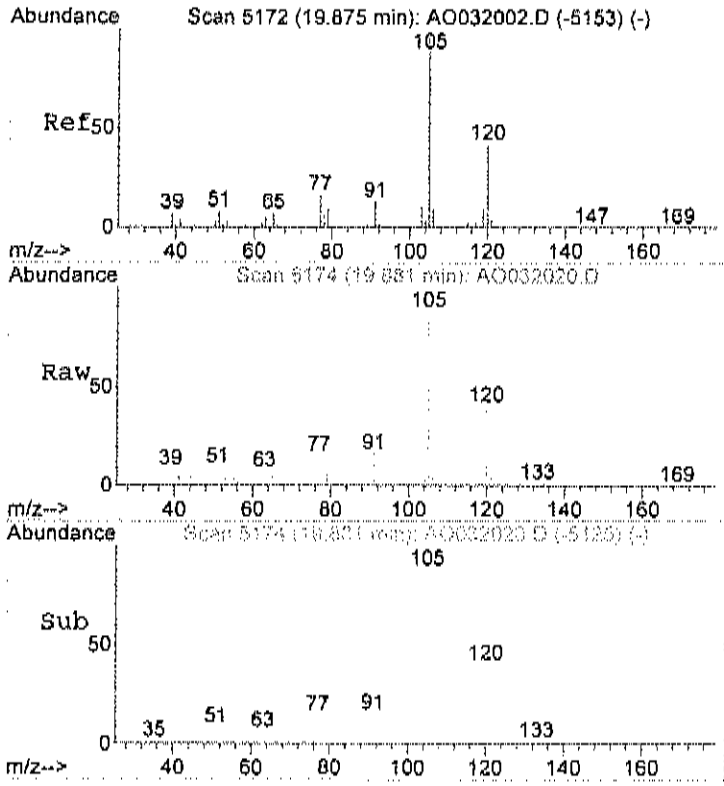


#70
1,3,5-trimethylbenzene
Concen: 0.14 ppb
RT: 19.40 min Scan# 5012
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion:105 Resp: 12068

Ion	Ratio	Lower	Upper
105	100		
120	41.1	25.7	65.7

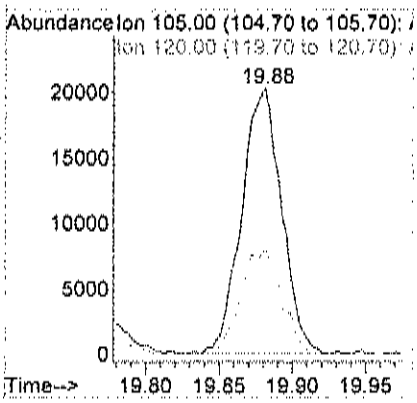


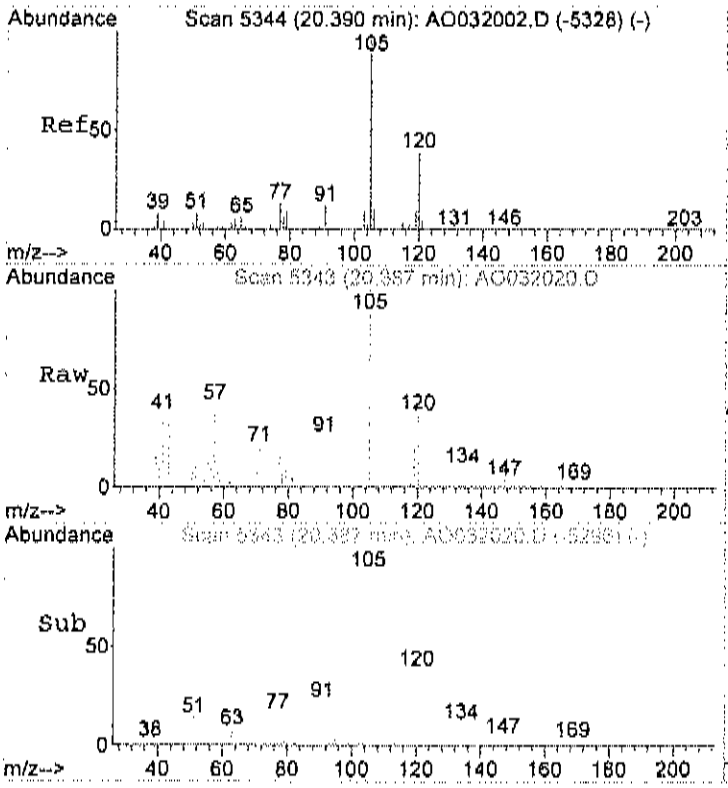


#71
1,2,4-trimethylbenzene
Concen: 0.47 ppb
RT: 19.88 min Scan# 5174
Delta R.T. -0.00 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion:105 Resp: 38812

Ion	Ratio	Lower	Upper
105	100		
120	40.4	20.3	60.3

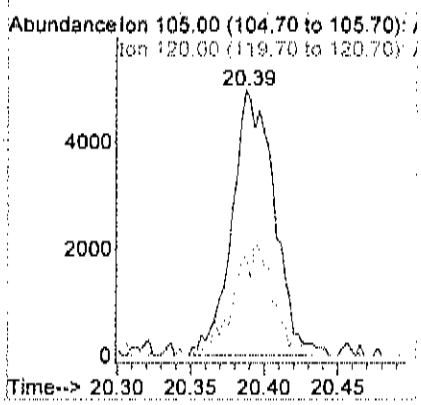




#75
1,2,3-trimethylbenzene
Concen: 0.13 ppb
RT: 20.39 min Scan# 5343
Delta R.T. -0.01 min
Lab File: AO032020.D
Acq: 21 Mar 2017 12:10 am

Tgt Ion:105 Resp: 10015

Ion	Ratio	Lower	Upper
105	100		
120	39.6	28.3	47.3



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032030.D Vial: 25
Acq On : 21 Mar 2017 6:41 am Operator: RJP
Sample : C1703050-005A 10x Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:26 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	11444	1.00	ppb		-0.01
35) 1,4-difluorobenzene	11.92	114	53989	1.00	ppb		-0.01
50) Chlorobenzene-d5	16.81	117	44090	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	29968	0.91	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 91.00%				
Target Compounds							Qvalue
15) Acetone	6.14	58	9681	1.03	ppb	#	1
42) 2,2,4-trimethylpentane	12.81	57	30073	0.34	ppb		80
43) Heptane	13.12	43	8918	0.26	ppb		95
51) Toluene	14.87	92	24114	0.65	ppb	#	81

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AO032030.D A227_1UG.M Mon Mar 27 11:24:06 2017 MSD1 Page 1

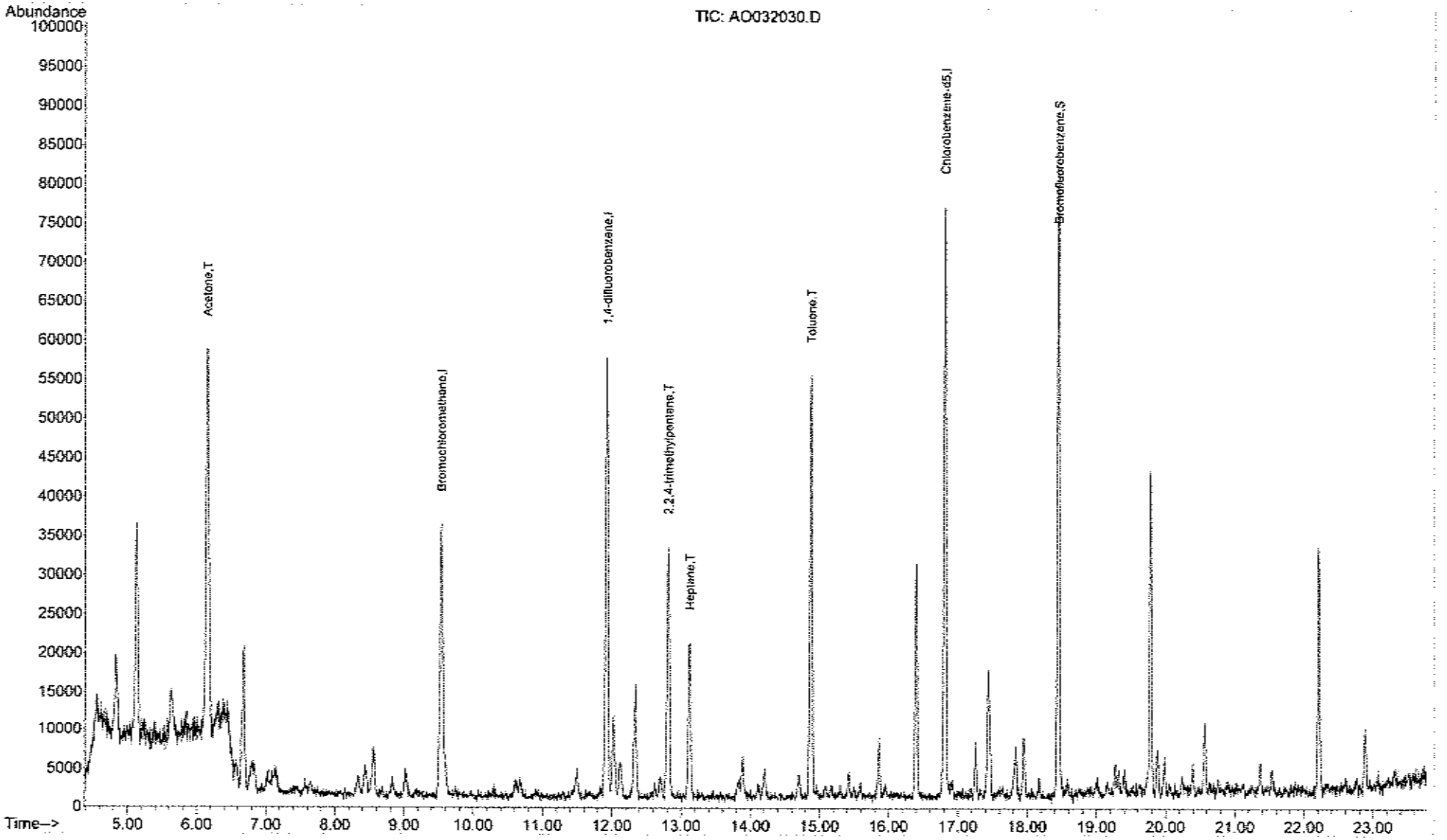
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032030.D
Acq On : 21 Mar 2017 6:41 am
Sample : C1703050-005A 10x
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:20 2017

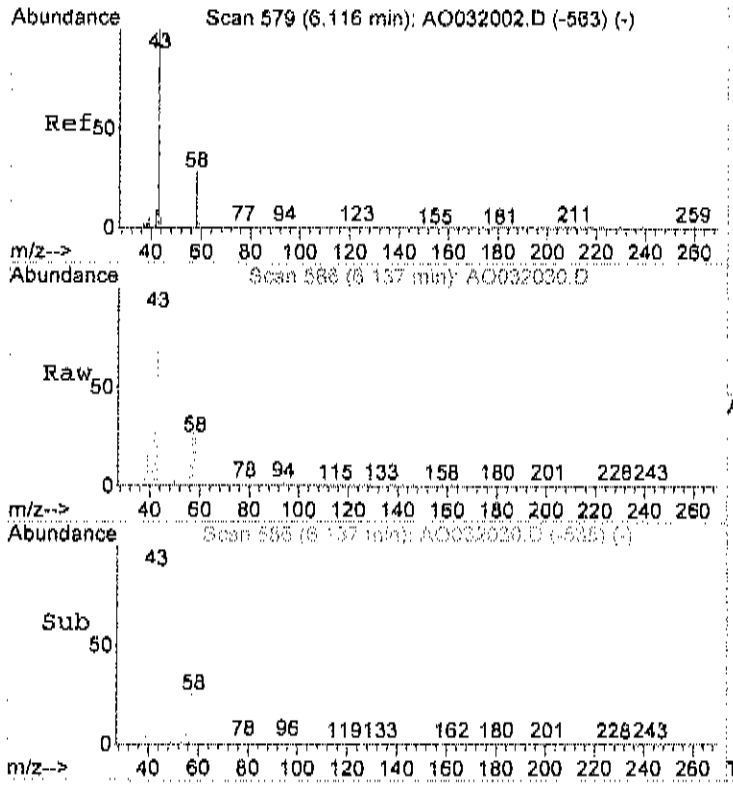
Vial: 25
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration



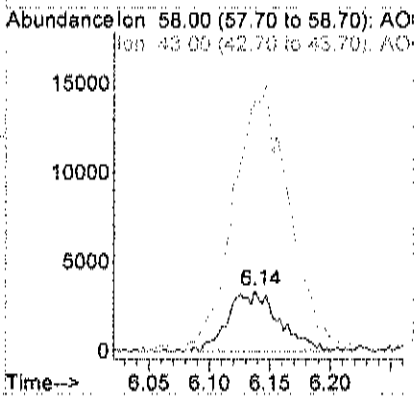
AO032030.D A227_1UG.M Mon Mar 27 11:24:07 2017 MSD1

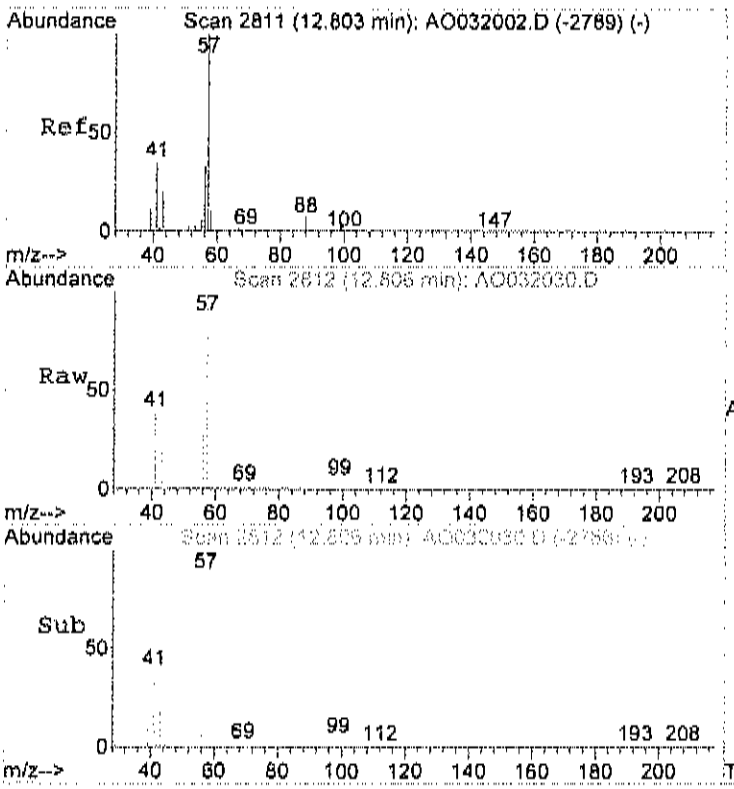


#15
Acetone
Concen: 1.03 ppb
RT: 6.14 min Scan# 586
Delta R.T. 0.00 min
Lab File: AO032030.D
Acq: 21 Mar 2017 6:41 am

Tgt Ion: 58 Resp: 9681

Ion	Ratio	Lower	Upper
58	100		
43	487.8	263.2	323.2#

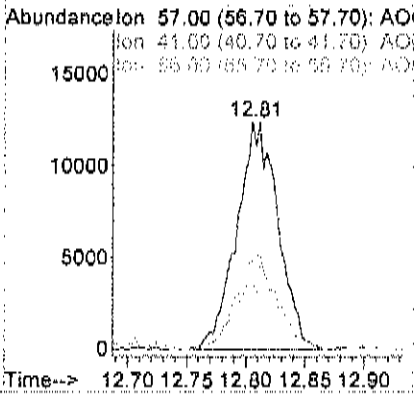


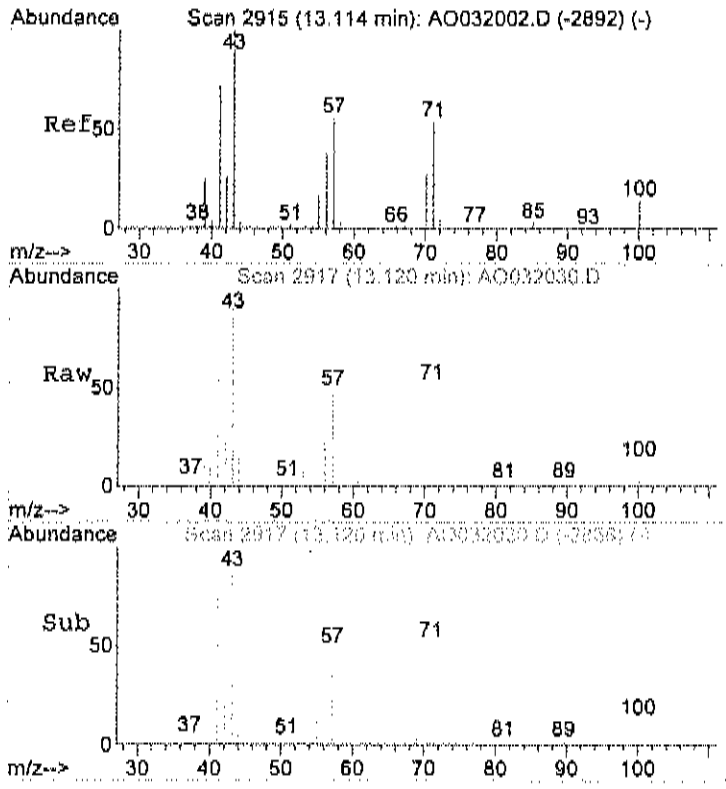


#42
2,2,4-trimethylpentane
Concen: 0.34 ppb
RT: 12.81 min Scan# 2812
Delta R.T. -0.01 min
Lab File: AO032030.D
Acq: 21 Mar 2017 6:41 am

Tgt Ion: 57 Resp: 30073

Ion	Ratio	Lower	Upper
57	100		
41	40.6	6.1	46.1
56	34.6	7.8	47.8

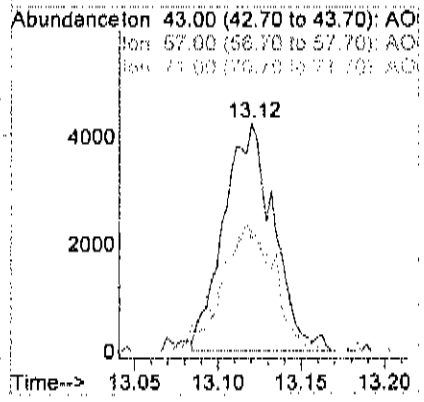


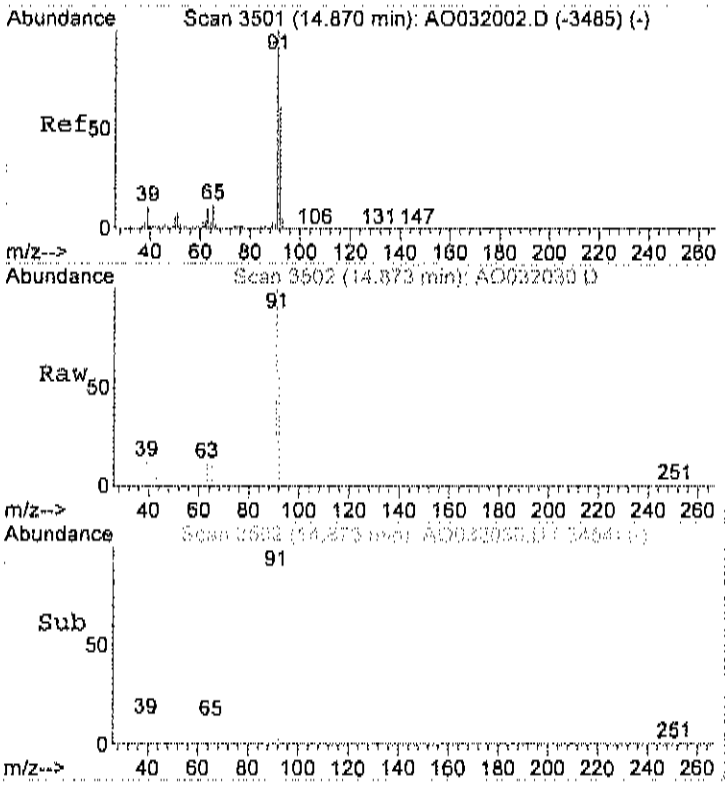


#43
Heptane
Concen: 0.26 ppb
RT: 13.12 min Scan# 2917
Delta R.T. -0.00 min
Lab File: AO032030.D
Acq: 21 Mar 2017 6:41 am

Tgt Ion: 43 Resp: 8918

Ion	Ratio	Lower	Upper
43	100		
57	59.0	32.6	72.6
71	58.3	37.9	77.9

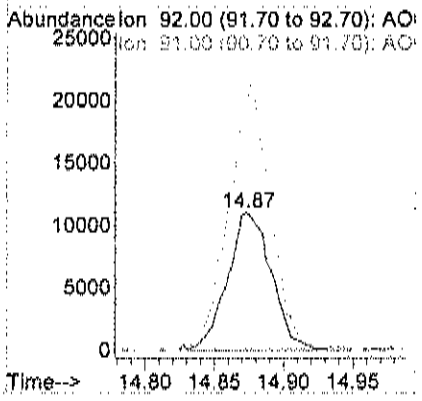




#51
Toluene
Concen: 0.65 ppb
RT: 14.87 min Scan# 3502
Delta R.T. -0.01 min
Lab File: AO032030.D
Acq: 21 Mar 2017 6:41 am

Tgt Ion: 92 Resp: 24114

Ion	Ratio	Lower	Upper
92	100		
91	183.6	138.8	178.8#



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS DATA

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INITIAL CALIBRATION

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration

Calibration Files
0.04 =A0031213.D 0.10 =A0031212.D 0.15 =A0031211.D
0.30 =A0031210.D 0.50 =A0031209.D 0.75 =A0031208.D

		Compound	0.04	0.10	0.15	0.30	0.50	0.75	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene			2.101	2.251	2.012	2.084	1.983	8.43
3)	T	Freon 12			8.592	8.305	8.500	8.276	8.095	4.83
4)	T	Chloromethane			1.106	1.111	1.297	1.275	1.208	6.31
5)	T	Freon 114			6.390	6.033	6.053	6.057	6.032	3.11
6)	T	Vinyl Chloride	2.027	1.985	1.655	1.826	1.663	1.705	1.757	8.13
7)	T	Butane			2.004	2.154	1.875	2.048	1.936	6.46
8)	T	1,3-butadiene			1.292	1.240	1.289	1.249	1.227	3.97
9)	T	Bromomethane			2.502	2.281	2.130	2.249	2.172	7.56
10)	T	Chloroethane			0.897	0.849	0.876	0.765	0.789	9.30
11)	T	Ethanol			0.603	0.611	0.548	0.578	0.573	4.97
12)	T	Acrolein			0.648	0.529	0.601	0.586	0.566	7.89
13)	T	Vinyl Bromide			2.268	2.220	2.148	2.107	2.114	4.26
14)	T	Freon 11			7.429	7.522	7.610	7.689	7.471	3.20
15)	T	Acetone			1.061	0.878	0.711	0.857	0.820	14.05
16)	T	Pentane			1.821	1.013	1.839	1.819	1.770	3.27
17)	T	Isopropyl alcoh			2.948	2.283	2.344	2.218	2.314	11.45
18)	T	1,1-dichloroeth			1.622	1.570	1.576	1.650	1.573	2.93
19)	T	Freon 113			3.229	3.329	3.468	3.622	3.434	3.50
20)	t	t-Butyl alcohol			3.980	3.890	3.984	4.109	4.095	3.54
21)	T	Methylene chlor			1.623	1.552	1.520	1.514	1.519	3.71
22)	T	Allyl chloride			2.137	2.156	2.259	2.228	2.189	2.24
23)	T	Carbon disulfid			4.879	4.760	4.768	4.846	4.764	1.79
24)	T	trans-1,2-dichl			2.676	2.616	2.631	2.726	2.678	1.98
25)	T	methyl tert-but			5.256	5.350	5.280	5.491	5.418	2.41
26)	T	1,1-dichloroeth			3.033	3.270	3.165	3.393	3.249	3.46
27)	T	Vinyl acetate			4.367	4.600	4.309	4.609	4.452	2.58
28)	T	Methyl Ethyl Ke			0.731	0.643	0.711	0.787	0.744	6.63
29)	T	cis-1,2-dichlor			2.515	2.474	2.582	2.562	2.524	1.47
30)	T	Hexane			2.430	2.461	2.374	2.488	2.417	1.78
31)	T	Ethyl acetate			4.854	5.011	4.791	5.168	5.025	3.29
32)	T	Chloroform			4.253	4.319	4.291	4.345	4.298	0.97
33)	T	Tetrahydrofuran			1.862	1.860	1.768	1.761	1.787	2.85
34)	T	1,2-dichloroeth			3.388	3.262	3.319	3.346	3.274	2.23
35)	I	1,4-difluorobenzene	----------ISTD----------							
36)	T	1,1,1-trichloro	0.999		1.036	1.068	1.037	1.019	1.029	2.19
37)	T	Cyclohexane			0.591	0.639	0.582	0.560	0.561	7.41
38)	T	Carbon tetrachl	0.965	0.972	1.013	1.041	1.048	1.052	1.032	3.58
39)	T	Benzene			1.041	1.079	1.009	1.037	1.029	2.41
40)	T	Methyl methacry			0.484	0.502	0.475	0.495	0.497	2.53
41)	T	1,4-dioxane			0.179	0.190	0.199	0.193	0.196	4.27
42)	T	2,2,4-trimethyl			1.607	1.734	1.645	1.652	1.648	2.59
43)	T	Heptane			0.710	0.680	0.618	0.609	0.629	6.85
44)	T	Trichloroethene	0.427	0.464	0.407	0.462	0.453	0.455	0.447	4.10
45)	T	1,2-dichloropro			0.379	0.410	0.403	0.387	0.393	2.52
46)	T	Bromodichlorome			0.986	1.011	0.972	0.962	0.981	1.70
47)	T	cis-1,3-dichlor			0.630	0.689	0.666	0.662	0.667	2.58
48)	T	trans-1,3-dichl			0.649	0.658	0.647	0.660	0.662	1.66
49)	T	1,1,2-trichloro			0.405	0.431	0.429	0.425	0.428	2.40
50)	I	Chlorobenzene-d5	----------ISTD----------							
51)	T	Toluene			0.875	0.841	0.866	0.832	0.843	2.57

(#) = Out of Range ### Number of calibration levels exceeded format ###

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration

Calibration Files
0.04 =A0031213.D 0.10 =A0031212.D 0.15 =A0031211.D
0.30 =A0031210.D 0.50 =A0031209.D 0.75 =A0031208.D

		Compound	0.04	0.10	0.15	0.30	0.50	0.75	Avg	%RSD
52)	T	Methyl Isobutyl			0.779	0.724	0.689	0.740	0.761	5.84
53)	T	Dibromochlorome			0.930	0.925	0.985	0.996	0.984	3.65
54)	T	Methyl Butyl Ke			0.497	0.534	0.567	0.593	0.591	9.33
55)	T	1,2-dibromoetha			0.808	0.793	0.834	0.841	0.833	1.97
56)	T	Tetrachloroethy			0.517	0.509	0.527	0.518	0.514	1.55
57)	T	Chlorobenzene			1.034	1.065	1.079	1.100	1.084	2.37
58)	T	Ethylbenzene			2.014	2.059	2.000	2.024	1.998	1.74
59)	T	m&p-xylene			1.690	1.705	1.676	1.730	1.688	1.66
60)	T	Nonane			1.010	1.014	1.047	1.062	1.017	3.04
61)	T	Styrene			0.951	0.957	0.993	1.002	1.000	3.13
62)	T	Bromoform			0.673	0.686	0.719	0.733	0.728	4.44
63)	T	o-xylene			1.644	1.646	1.614	1.634	1.616	1.76
64)	T	Cumene			2.065	2.055	1.986	2.076	2.036	1.61
65)	S	Bromofluorobenz	0.748	0.732	0.746	0.737	0.749	0.748	0.748	1.39
66)	T	1,1,2,2-tetrach			1.034	1.077	1.058	1.066	1.046	2.04
67)	T	Propylbenzene			0.484	0.484	0.496	0.514	0.500	2.20
68)	T	2-Chlorotoluene			0.496	0.474	0.463	0.460	0.471	2.44
69)	T	4-ethyltoluene			1.842	1.827	1.804	1.933	1.859	2.06
70)	T	1,3,5-trimethyl			1.760	1.742	1.650	1.756	1.731	2.44
71)	T	1,2,4-trimethyl			1.721	1.625	1.580	1.673	1.638	2.66
72)	T	1,3-dichloroben			0.817	0.851	0.830	0.851	0.844	1.61
73)	T	benzyl chloride			0.911	0.909	0.982	1.080	1.050	9.88
74)	T	1,4-dichloroben			0.685	0.710	0.732	0.768	0.755	5.40
75)	T	1,2,3-trimethyl			1.626	1.578	1.515	1.646	1.591	2.61
76)	T	1,2-dichloroben			0.832	0.857	0.803	0.862	0.836	2.33
77)	T	1,2,4-trichloro			0.271	0.240	0.272	0.295	0.306	14.19
78)	T	Naphthalene			0.702	0.674	0.739	0.840	0.843	14.90
79)	T	Hexachloro-1,3-			0.638	0.629	0.648	0.699	0.675	4.52

(#) = Out of Range ### Number of calibration levels exceeded format ###

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031204.D Vial: 4
Acq On : 12 Mar 2017 2:38 pm Operator: RJP
Sample : A1UG_2.0 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:34:47 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	68813	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.93	114	337619	1.00	ppb		0.00
50) Chlorobenzene-d5	16.81	117	290103	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	214856	0.99	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 99.00%				
Target Compounds							Qvalue
2) Propylene	4.47	41	246713	1.80	ppb		94
3) Freon 12	4.54	85	1050189	1.89	ppb		98
4) Chloromethane	4.71	50	163668m	1.91	ppb		
5) Freon 114	4.81	85	802310	1.93	ppb		94
6) Vinyl Chloride	4.93	62	231738	1.96	ppb		91
7) Butane	5.13	43	250738	1.87	ppb		96
8) 1,3-butadiene	5.07	39	161747m	2.02	ppb		
9) Bromomethane	5.36	94	279062	1.95	ppb		93
10) Chloroethane	5.53	64	99956	1.92	ppb	#	74
11) Ethanol	5.63	45	73138m	1.82	ppb		
12) Acrolein	6.00	56	75978	1.96	ppb		91
13) Vinyl Bromide	5.89	106	280087	2.00	ppb		95
14) Freon 11	6.31	101	973754	1.84	ppb		99
15) Acetone	6.13	58	104242	1.85	ppb		86
16) Pentane	6.68	42	237013	1.99	ppb	#	44
17) Isopropyl alcohol	6.37	45	295999	1.96	ppb	#	100
18) 1,1-dichloroethene	6.97	96	213328	2.04	ppb	#	88
19) Freon 113	7.39	101	478373	2.02	ppb		89
20) t-Butyl alcohol	7.01	59	598364	2.13	ppb		94
21) Methylene chloride	7.10	84	203503	1.93	ppb	#	77
22) Allyl chloride	7.23	41	304632	2.01	ppb		87
23) Carbon disulfide	7.45	76	648865	1.97	ppb		86
24) trans-1,2-dichloroethene	8.14	61	375281	1.98	ppb		88
25) methyl tert-butyl ether	8.43	73	767595	2.00	ppb		99
26) 1,1-dichloroethane	8.37	63	453180	1.98	ppb		95
27) Vinyl acetate	8.52	43	611676m	2.00	ppb		
28) Methyl Ethyl Ketone	8.82	72	108494	2.03	ppb		96
29) cis-1,2-dichloroethene	9.34	61	350934	2.03	ppb		88
30) Hexane	9.60	57	334847	2.03	ppb		90
31) Ethyl acetate	9.60	43	703113	1.95	ppb		96
32) Chloroform	9.69	83	590516	1.97	ppb		98
33) Tetrahydrofuran	10.21	42	245519	2.00	ppb		92
34) 1,2-dichloroethane	10.60	62	447318	2.02	ppb		94
36) 1,1,1-trichloroethane	10.93	97	689387	1.93	ppb		96
37) Cyclohexane	11.84	56	349055	1.91	ppb		96
38) Carbon tetrachloride	11.69	117	712021	1.97	ppb		98
39) Benzene	11.50	78	674899	1.95	ppb		91
40) Methyl methacrylate	13.00	41	340346m	1.94	ppb		
41) 1,4-dioxane	12.80	58	139676	2.08	ppb	#	60
42) 2,2,4-trimethylpentane	12.82	57	1098667	1.94	ppb		94
43) Heptane	13.13	43	401594	1.90	ppb		99
44) Trichloroethene	12.78	130	302864	1.95	ppb		87
45) 1,2-dichloropropane	12.49	63	264526	2.03	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031204.D Vial: 4
Acq On : 12 Mar 2017 2:38 pm Operator: RJP
Sample : A1UG_2.0 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:34:47 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	657407	1.95	ppb		97
47)	cis-1,3-dichloropropene	13.77	75	453806	2.00	ppb		96
48)	trans-1,3-dichloropropene	14.37	75	453721	1.99	ppb		95
49)	1,1,2-trichloroethane	14.56	97	289185	1.96	ppb		98
51)	Toluene	14.88	92	471713	1.94	ppb		86
52)	Methyl Isobutyl Ketone	13.81	43	479201	2.24	ppb		96
53)	Dibromochloromethane	15.35	129	583172	1.99	ppb		92
54)	Methyl Butyl Ketone	15.16	43	374592	2.13	ppb		100
55)	1,2-dibromoethane	15.62	107	473341	1.96	ppb		97
56)	Tetrachloroethylene	16.13	164	289877	1.95	ppb		96
57)	Chlorobenzene	16.86	112	626497	1.96	ppb		90
58)	Ethylbenzene	17.26	91	1135760	1.96	ppb		98
59)	m&p-xylene	17.45	91	1896770	3.84	ppb		97
60)	Nonane	18.18	43	558309	1.87	ppb		96
61)	Styrene	17.84	104	584086	1.95	ppb		97
62)	Bromoform	17.54	173	436670	2.01	ppb		98
63)	o-xylene	17.96	91	908570	1.96	ppb		92
64)	Cumene	18.59	105	1164212	1.96	ppb		99
66)	1,1,2,2-tetrachloroethane	17.95	83	587761	1.92	ppb		96
67)	Propylbenzene	19.16	120	291771	1.98	ppb	#	1
68)	2-Chlorotoluene	19.13	126	273190	1.98	ppb	#	1
69)	4-ethyltoluene	19.32	105	1074893	1.98	ppb		99
70)	1,3,5-trimethylbenzene	19.40	105	978716	1.90	ppb		97
71)	1,2,4-trimethylbenzene	19.80	105	937606	1.96	ppb		98
72)	1,3-dichlorobenzene	20.08	146	490916	1.99	ppb		96
73)	benzyl chloride	20.05	91	686385	2.19	ppb		99
74)	1,4-dichlorobenzene	20.15	146	452531	1.96	ppb		95
75)	1,2,3-trimethylbenzene	20.40	105	905669	1.93	ppb		98
76)	1,2-dichlorobenzene	20.57	146	475430	1.95	ppb		97
77)	1,2,4-trichlorobenzene	22.75	180	211860	2.29	ppb		95
78)	Naphthalene	22.89	128	583558	2.27	ppb		94
79)	Hexachloro-1,3-butadiene	23.31	225	405840	2.02	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

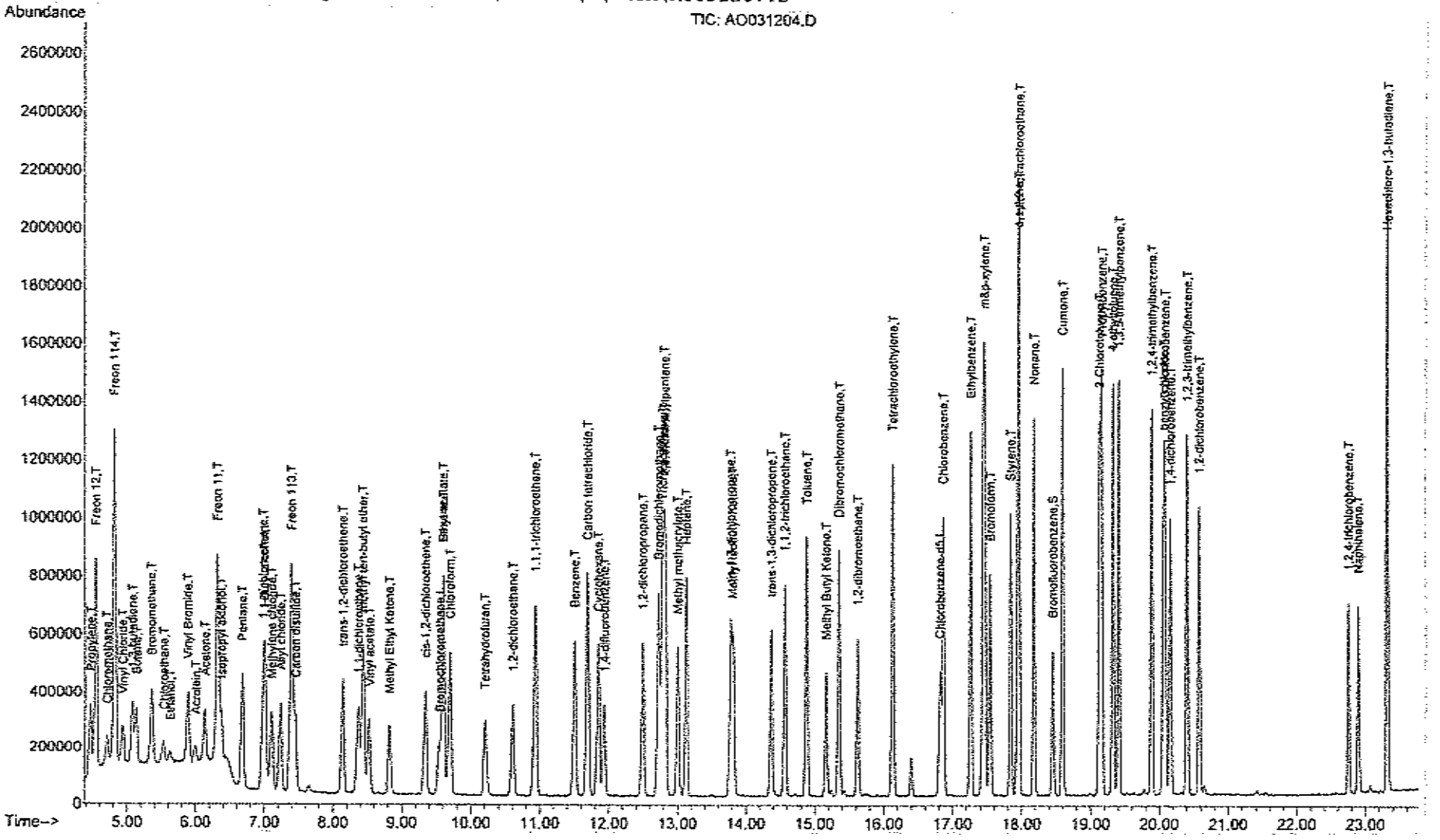
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031204.D
Acq On : 12 Mar 2017 2:38 pm
Sample : A1UG_2.0
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:39 2017

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D



AO031204.D A312_1UG.M Wed Mar 29 11:15:28 2017 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031205.D Vial: 5
Acq On : 12 Mar 2017 3:19 pm Operator: RJP
Sample : A1UG_1.50 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:34:20 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.54	128	68926	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.93	114	332512	1.00	ppb		0.00
50) Chlorobenzene-d5	16.82	117	279685	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.46	95	213377	1.02	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 102.00%				
Target Compounds							Qvalue
2) Propylene	4.48	41	182591	1.33	ppb		94
3) Freon 12	4.55	85	702209	1.40	ppb		97
4) Chloromethane	4.72	50	120233m	1.40	ppb		
5) Freon 114	4.82	85	595965	1.43	ppb		92
6) Vinyl Chloride	4.94	62	166523	1.40	ppb		91
7) Butane	5.13	43	186024	1.39	ppb		88
8) 1,3-butadiene	5.00	39	120391m	1.50	ppb		
9) Bromomethane	5.36	94	208151	1.45	ppb		98
10) Chloroethane	5.53	64	74025	1.42	ppb	#	87
11) Ethanol	5.63	45	56311m	1.40	ppb		
12) Acrolein	6.00	56	55557	1.43	ppb		91
13) Vinyl Bromide	5.89	106	210280	1.50	ppb		96
14) Freon 11	6.31	101	738931	1.39	ppb		99
15) Acetone	6.13	58	73643	1.30	ppb	#	81
16) Pentane	6.68	42	175042	1.47	ppb	#	44
17) Isopropyl alcohol	6.37	45	220863	1.46	ppb	#	100
18) 1,1-dichloroethene	6.98	96	156841	1.50	ppb	#	80
19) Freon 113	7.39	101	350545	1.48	ppb		89
20) t-Butyl alcohol	7.01	59	430156	1.53	ppb		94
21) Methylene chloride	7.11	84	147711	1.40	ppb	#	75
22) Allyl chloride	7.23	41	210603	1.44	ppb		88
23) Carbon disulfide	7.45	76	475332	1.44	ppb		85
24) trans-1,2-dichloroethene	8.14	61	270419	1.43	ppb		88
25) methyl tert-butyl ether	8.43	73	550336	1.43	ppb		98
26) 1,1-dichloroethane	8.37	63	331215	1.44	ppb		97
27) Vinyl acetate	8.53	43	447165m	1.46	ppb		
28) Methyl Ethyl Ketone	8.82	72	77255	1.44	ppb		96
29) cis-1,2-dichloroethene	9.34	61	257469	1.49	ppb		88
30) Hexane	9.60	57	247371	1.50	ppb		91
31) Ethyl acetate	9.60	43	505787	1.40	ppb		98
32) Chloroform	9.69	83	437077	1.46	ppb		99
33) Tetrahydrofuran	10.21	42	180095	1.47	ppb		95
34) 1,2-dichloroethane	10.61	62	327315	1.48	ppb		94
36) 1,1,1-trichloroethane	10.93	97	501169	1.43	ppb		97
37) Cyclohexane	11.85	56	360752	1.45	ppb		95
38) Carbon tetrachloride	11.69	117	521391	1.47	ppb		100
39) Benzene	11.51	78	503948	1.48	ppb		92
40) Methyl methacrylate	13.00	41	256638m	1.48	ppb		
41) 1,4-dioxane	12.80	58	98899	1.49	ppb	#	66
42) 2,2,4-trimethylpentane	12.81	57	797342	1.43	ppb		93
43) Heptane	13.13	43	294536	1.41	ppb		99
44) Trichloroethene	12.78	130	217834	1.42	ppb	#	86
45) 1,2-dichloropropane	12.49	63	196102	1.53	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031205.D Vial: 5
Acq On : 12 Mar 2017 3:19 pm Operator: RJP
Sample : A1UG_1.50 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:34:20 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	481213	1.45	ppb		97
47)	cis-1,3-dichloropropene	13.78	75	335940	1.50	ppb		97
48)	trans-1,3-dichloropropene	14.36	75	330866	1.47	ppb		94
49)	1,1,2-trichloroethane	14.57	97	213355	1.47	ppb		95
51)	Toluene	14.88	92	343916	1.46	ppb	#	85
52)	Methyl Isobutyl Ketone	13.81	43	334910	1.62	ppb		95
53)	Dibromochloromethane	15.35	129	422169	1.50	ppb		94
54)	Methyl Butyl Ketone	15.17	43	273270	1.61	ppb		99
55)	1,2-dibromoethane	15.62	107	348503	1.50	ppb		99
56)	Tetrachloroethylene	16.13	164	215347	1.51	ppb		100
57)	Chlorobenzene	16.86	112	461523	1.50	ppb		91
58)	Ethylbenzene	17.26	91	820910	1.47	ppb		99
59)	m&p-xylene	17.45	91	1405875	2.95	ppb		96
60)	Nonane	18.17	43	416243	1.45	ppb		96
61)	Styrene	17.84	104	432439	1.50	ppb		96
62)	Bromoform	17.54	173	316026	1.51	ppb		99
63)	o-xylene	17.96	91	666699	1.49	ppb		92
64)	Cumene	18.59	105	840612	1.47	ppb		100
66)	1,1,2,2-tetrachloroethane	17.95	83	431842	1.47	ppb		97
67)	Propylbenzene	19.16	120	212421	1.49	ppb	#	1
68)	2-Chlorotoluene	19.13	126	194316	1.46	ppb	#	1
69)	4-ethyltoluene	19.32	105	782154	1.50	ppb		98
70)	1,3,5-trimethylbenzene	19.41	105	725707	1.46	ppb		95
71)	1,2,4-trimethylbenzene	19.88	105	673780	1.46	ppb		98
72)	1,3-dichlorobenzene	20.08	146	356215m	1.50	ppb		
73)	benzyl chloride	20.05	91	472212	1.56	ppb		98
74)	1,4-dichlorobenzene	20.16	146	332418m	1.49	ppb		
75)	1,2,3-trimethylbenzene	20.40	105	666219	1.47	ppb		99
76)	1,2-dichlorobenzene	20.57	146	354351	1.51	ppb		97
77)	1,2,4-trichlorobenzene	22.75	180	145584	1.63	ppb		95
78)	Naphthalene	22.89	128	403852	1.63	ppb		94
79)	Hexachloro-1,3-butadiene	23.31	225	292135	1.51	ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

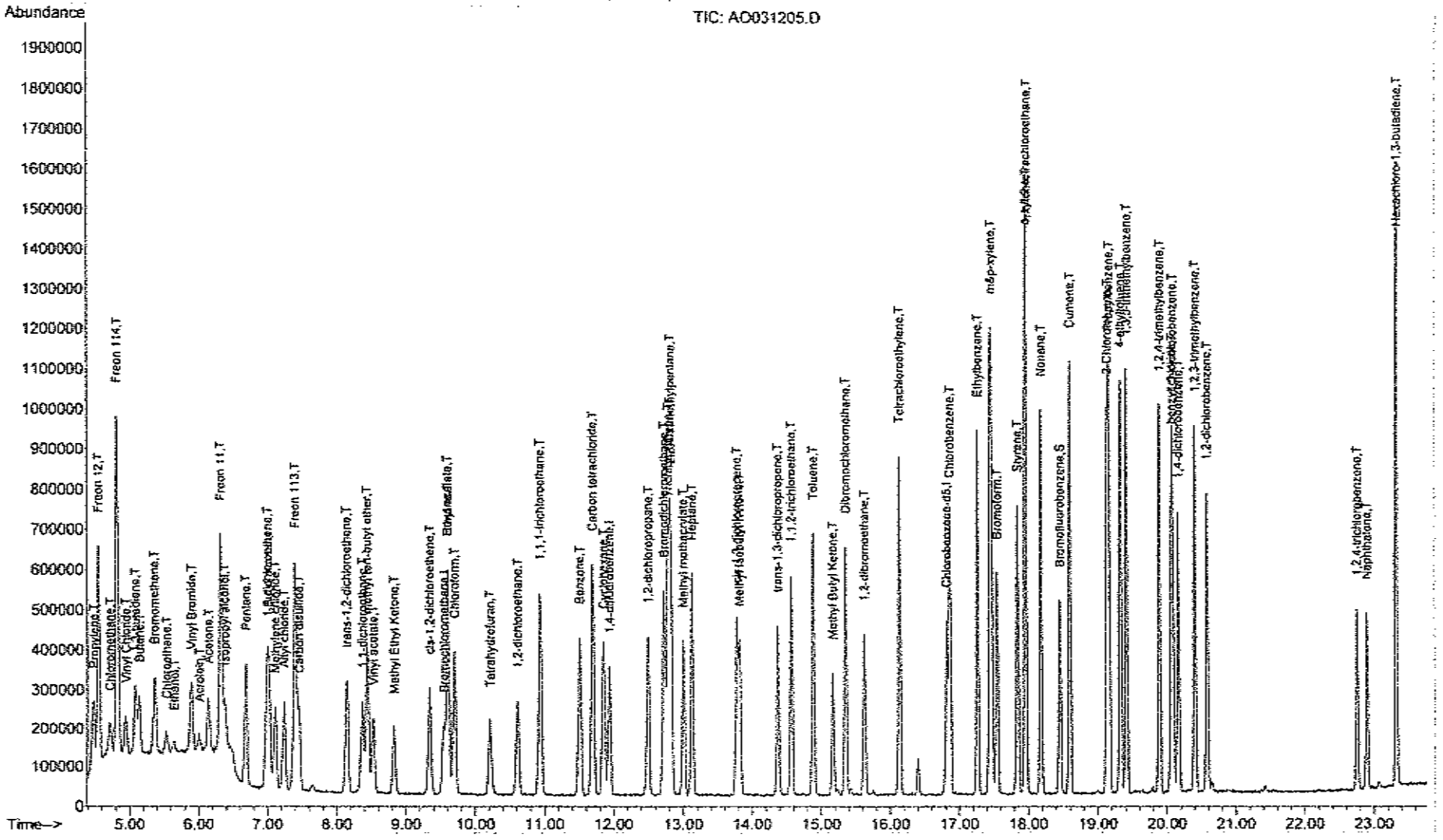
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031205.D
Acq On : 12 Mar 2017 3:19 pm
Sample : A1UG_1.50
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:41 2017

Vial: 5
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031206.D Vial: 6
Acq On : 12 Mar 2017 3:59 pm Operator: RJP
Sample : A1UG_1.25 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:33:49 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.55	128	65597	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.94	114	319232	1.00	ppb		0.00
50) Chlorobenzene-d5	16.81	117	269155	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	206078	1.02	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 102.00%				
Target Compounds							Qvalue
2) Propylene	4.48	41	152443	1.17	ppb		93
3) Freon 12	4.56	85	639978	1.21	ppb		97
4) Chloromethane	4.73	50	103054m	1.26	ppb		
5) Freon 114	4.83	85	499972	1.26	ppb		91
6) Vinyl Chloride	4.95	62	139058	1.23	ppb		87
7) Butane	5.14	43	150870	1.18	ppb		96
8) 1,3-butadiene	5.09	39	97723m	1.28	ppb		
9) Bromomethane	5.37	94	171292	1.25	ppb		95
10) Chloroethane	5.53	64	59499	1.20	ppb	#	64
11) Ethanol	5.64	45	47774m	1.25	ppb		
12) Acrolein	6.01	56	41786	1.13	ppb		98
13) Vinyl Bromide	5.89	106	169006	1.27	ppb		97
14) Freon 11	6.32	101	623694	1.24	ppb		99
15) Acetone	6.14	58	62787	1.17	ppb	#	84
16) Pentane	6.69	42	141667	1.25	ppb	#	39
17) Isopropyl alcohol	6.38	45	182996	1.27	ppb	#	100
18) 1,1-dichloroethene	6.99	96	129185	1.30	ppb	#	88
19) Freon 113	7.39	101	288876	1.28	ppb		89
20) t-Butyl alcohol	7.02	59	344441	1.28	ppb		95
21) Methylene chloride	7.11	84	123077	1.22	ppb	#	78
22) Allyl chloride	7.23	41	180426	1.25	ppb		87
23) Carbon disulfide	7.46	76	389815	1.24	ppb		84
24) trans-1,2-dichloroethene	8.14	61	219994	1.22	ppb		89
25) methyl tert-butyl ether	8.44	73	450748	1.23	ppb		98
26) 1,1-dichloroethane	8.37	63	270962	1.24	ppb		93
27) Vinyl acetate	8.52	43	366824m	1.26	ppb		
28) Methyl Ethyl Ketone	8.83	72	63106	1.24	ppb		96
29) cis-1,2-dichloroethene	9.34	61	205492	1.25	ppb		92
30) Hexane	9.60	57	193943	1.23	ppb		90
31) Ethyl acetate	9.60	43	420136	1.22	ppb		97
32) Chloroform	9.70	83	353942	1.24	ppb		97
33) Tetrahydrofuran	10.21	42	142072	1.21	ppb		91
34) 1,2-dichloroethane	10.61	62	266373	1.26	ppb		93
36) 1,1,1-trichloroethane	10.93	97	408137	1.21	ppb		97
37) Cyclohexane	11.84	56	211847	1.22	ppb		96
38) Carbon tetrachloride	11.69	117	424534	1.24	ppb		100
39) Benzene	11.51	78	411189	1.26	ppb		92
40) Methyl methacrylate	13.00	41	201782	1.21	ppb		96
41) 1,4-dioxane	12.81	58	79930	1.26	ppb	#	74
42) 2,2,4-trimethylpentane	12.82	57	656701	1.23	ppb		94
43) Heptane	13.12	43	240587	1.20	ppb		99
44) Trichloroethene	12.78	130	182671	1.24	ppb		90
45) 1,2-dichloropropane	12.50	63	156169	1.27	ppb		97

(#), = qualifier out of range (m) = manual integration
AO031206.D A312_1UG.M Wed Mar 29 11:15:34 2017 MSD1 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031206.D Vial: 6
Acq On : 12 Mar 2017 3:59 pm Operator: RJP
Sample : A1UG_1.25 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:33:49 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	393213	1.24	ppb		97
47)	cis-1,3-dichloropropene	13.78	75	269123	1.25	ppb		96
48)	trans-1,3-dichloropropene	14.37	75	260575	1.24	ppb		96
49)	1,1,2-trichloroethane	14.57	97	174449	1.25	ppb		98
51)	Toluene	14.88	92	287861	1.27	ppb		89
52)	Methyl Isobutyl Ketone	13.82	43	264897	1.33	ppb		95
53)	Dibromochloromethane	15.35	129	340857	1.26	ppb		93
54)	Methyl Butyl Ketone	15.17	43	212071	1.31	ppb		98
55)	1,2-dibromoethane	15.62	107	279071	1.24	ppb		97
56)	Tetrachloroethylene	16.13	164	173913	1.26	ppb		98
57)	Chlorobenzene	16.86	112	375345	1.27	ppb		89
58)	Ethylbenzene	17.26	91	664997	1.24	ppb		98
59)	m&p-xylene	17.45	91	1136048	2.48	ppb		97
60)	Nonane	18.18	43	344828	1.25	ppb		94
61)	Styrene	17.84	104	344613	1.24	ppb		95
62)	Bromoform	17.54	173	253635	1.26	ppb		98
63)	o-xylene	17.96	91	548521	1.27	ppb		90
64)	Cumene	18.59	105	686774	1.24	ppb		99
66)	1,1,2,2-tetrachloroethane	17.95	83	348254	1.23	ppb		95
67)	Propylbenzene	19.16	120	170075	1.24	ppb	#	1
68)	2-Chlorotoluene	19.13	126	157170	1.22	ppb	#	1
69)	4-ethyltoluene	19.32	105	631776	1.26	ppb		99
70)	1,3,5-trimethylbenzene	19.40	105	587697	1.23	ppb		96
71)	1,2,4-trimethylbenzene	19.88	105	549694	1.24	ppb		98
72)	1,3-dichlorobenzene	20.07	146	289001	1.27	ppb		95
73)	benzyl chloride	20.05	91	379596	1.30	ppb		99
74)	1,4-dichlorobenzene	20.16	146	262734	1.22	ppb		96
75)	1,2,3-trimethylbenzene	20.40	105	537306	1.23	ppb		98
76)	1,2-dichlorobenzene	20.57	146	279075	1.24	ppb		97
77)	1,2,4-trichlorobenzene	22.75	180	113557	1.32	ppb		96
78)	Naphthalene	22.89	128	315056	1.32	ppb		94
79)	Hexachloro-1,3-butadiene	23.32	225	233786	1.25	ppb		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

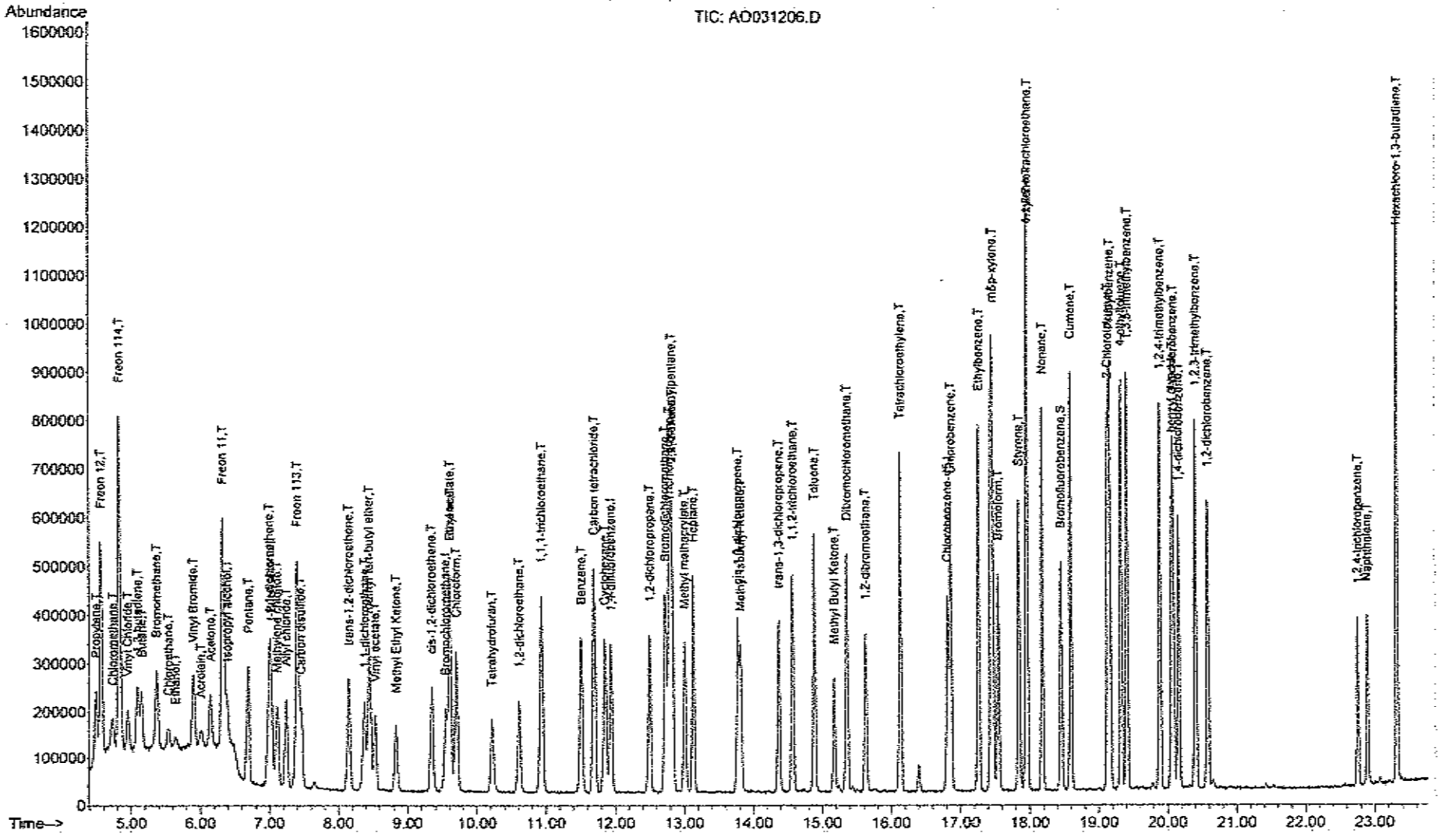
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031206.D
Acq On : 12 Mar 2017 3:59 pm
Sample : A1UG_1.25
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:41 2017

Vial: 6
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D



AO031206.D A312_1UG.M Wed Mar 29 11:15:36 2017 MSD1 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031207.D Vial: 7
Acq On : 12 Mar 2017 4:39 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:33:08 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.54	128	64428	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.94	114	310176	1.00	ppb		0.00
50) Chlorobenzene-d5	16.82	117	264986	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	198187	1.00	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 100.00%				
Target Compounds							Qvalue
2) Propylene	4.48	41	128707	1.01	ppb		92
3) Freon 12	4.55	85	520940	1.00	ppb		97
4) Chloromethane	4.72	50	81722m	1.02	ppb		
5) Freon 114	4.82	85	388680	1.00	ppb		93
6) Vinyl Chloride	4.94	62	110958	1.00	ppb		80
7) Butane	5.14	43	125260	1.00	ppb		98
8) 1,3-butadiene	5.08	39	78206m	1.04	ppb		
9) Bromomethane	5.36	94	134258	1.00	ppb		94
10) Chloroethane	5.53	64	48804	1.00	ppb	#	58
11) Ethanol	5.63	45	37549	1.00	ppb	#	78
12) Acrolein	6.00	56	36307	1.00	ppb		87
13) Vinyl Bromide	5.89	106	131516	1.00	ppb		88
14) Freon 11	6.32	101	495519	1.00	ppb		97
15) Acetone	6.13	58	52858	1.00	ppb		85
16) Pentane	6.68	42	111267	1.00	ppb	#	44
17) Isopropyl alcohol	6.38	45	141615	1.00	ppb	#	100
18) 1,1-dichloroethene	6.99	96	97917	1.00	ppb	#	84
19) Freon 113	7.39	101	221500	1.00	ppb		89
20) t-Butyl alcohol	7.01	59	263179	1.00	ppb		93
21) Methylene chloride	7.11	84	98708	1.00	ppb	#	83
22) Allyl chloride	7.24	41	142042	1.00	ppb		89
23) Carbon disulfide	7.45	76	308644	1.00	ppb		85
24) trans-1,2-dichloroethene	8.14	61	177116	1.00	ppb		84
25) methyl tert-butyl ether	8.44	73	350828	1.00	ppb		98
26) 1,1-dichloroethane	8.37	63	214644	1.00	ppb		95
27) Vinyl acetate	8.52	43	289166m	1.01	ppb		
28) Methyl Ethyl Ketone	8.83	72	50137	1.00	ppb		96
29) cis-1,2-dichloroethene	9.34	61	161927	1.00	ppb		88
30) Hexane	9.60	57	154323	1.00	ppb		88
31) Ethyl acetate	9.60	43	338419	1.00	ppb		97
32) Chloroform	9.70	83	279953	1.00	ppb		99
33) Tetrahydrofuran	10.22	42	114080	1.00	ppb		95
34) 1,2-dichloroethane	10.60	62	206965	1.00	ppb		95
36) 1,1,1-trichloroethane	10.94	97	327953	1.00	ppb		96
37) Cyclohexane	11.84	56	168076	1.00	ppb		93
38) Carbon tetrachloride	11.69	117	331751	1.00	ppb		100
39) Benzene	11.50	78	317871	1.00	ppb		92
40) Methyl methacrylate	13.01	41	154453	0.96	ppb	#	93
41) 1,4-dioxane	12.82	58	61758	1.00	ppb	#	71
42) 2,2,4-trimethylpentane	12.82	57	519195	1.00	ppb		94
43) Heptane	13.12	43	194572	1.00	ppb		98
44) Trichloroethene	12.77	130	143032	1.00	ppb		89
45) 1,2-dichloropropane	12.49	63	119917	1.00	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031207.D Vial: 7
Acq On : 12 Mar 2017 4:39 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:33:08 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	308948	1.00	ppb		98
47)	cis-1,3-dichloropropene	13.77	75	208465	1.00	ppb		96
48)	trans-1,3-dichloropropene	14.37	75	209508	1.00	ppb		98
49)	1,1,2-trichloroethane	14.56	97	135849	1.00	ppb		98
51)	Toluene	14.88	92	222569	1.00	ppb		87
52)	Methyl Isobutyl Ketone	13.82	43	197463	1.01	ppb		96
53)	Dibromochloromethane	15.35	129	267363	1.00	ppb		93
54)	Methyl Butyl Ketone	15.16	43	160534	1.00	ppb		97
55)	1,2-dibromoethane	15.62	107	220830	1.00	ppb		97
56)	Tetrachloroethylene	16.13	164	135500	1.00	ppb		95
57)	Chlorobenzene	16.86	112	291527	1.00	ppb		89
58)	Ethylbenzene	17.26	91	528780	1.00	ppb		99
59)	m&p-xylene	17.45	91	903506	2.00	ppb		96
60)	Nonane	18.17	43	270507	0.99	ppb		96
61)	Styrene	17.84	104	273273	1.00	ppb		96
62)	Bromoform	17.54	173	198715	1.00	ppb		98
63)	o-xylene	17.96	91	424412	1.00	ppb		91
64)	Cumene	18.59	105	543538	1.00	ppb		99
66)	1,1,2,2-tetrachloroethane	17.95	83	279205	1.00	ppb		98
67)	Propylbenzene	19.16	120	134854	1.00	ppb	#	1
68)	2-Chlorotoluene	19.12	126	126348	1.00	ppb	#	1
69)	4-ethyltoluene	19.32	105	495151	1.00	ppb		99
70)	1,3,5-trimethylbenzene	19.41	105	470770	1.00	ppb		95
71)	1,2,4-trimethylbenzene	19.88	105	437731	1.00	ppb		99
72)	1,3-dichlorobenzene	20.08	146	224866m	1.00	ppb		
73)	benzyl chloride	20.05	91	286659	1.00	ppb		98
74)	1,4-dichlorobenzene	20.15	146	209750m	0.99	ppb		
75)	1,2,3-trimethylbenzene	20.40	105	429329	1.00	ppb		98
76)	1,2-dichlorobenzene	20.58	146	222203	1.00	ppb		96
77)	1,2,4-trichlorobenzene	22.75	180	84464	1.00	ppb		95
78)	Naphthalene	22.89	128	234369	1.00	ppb		95
79)	Hexachloro-1,3-butadiene	23.31	225	183776	1.00	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

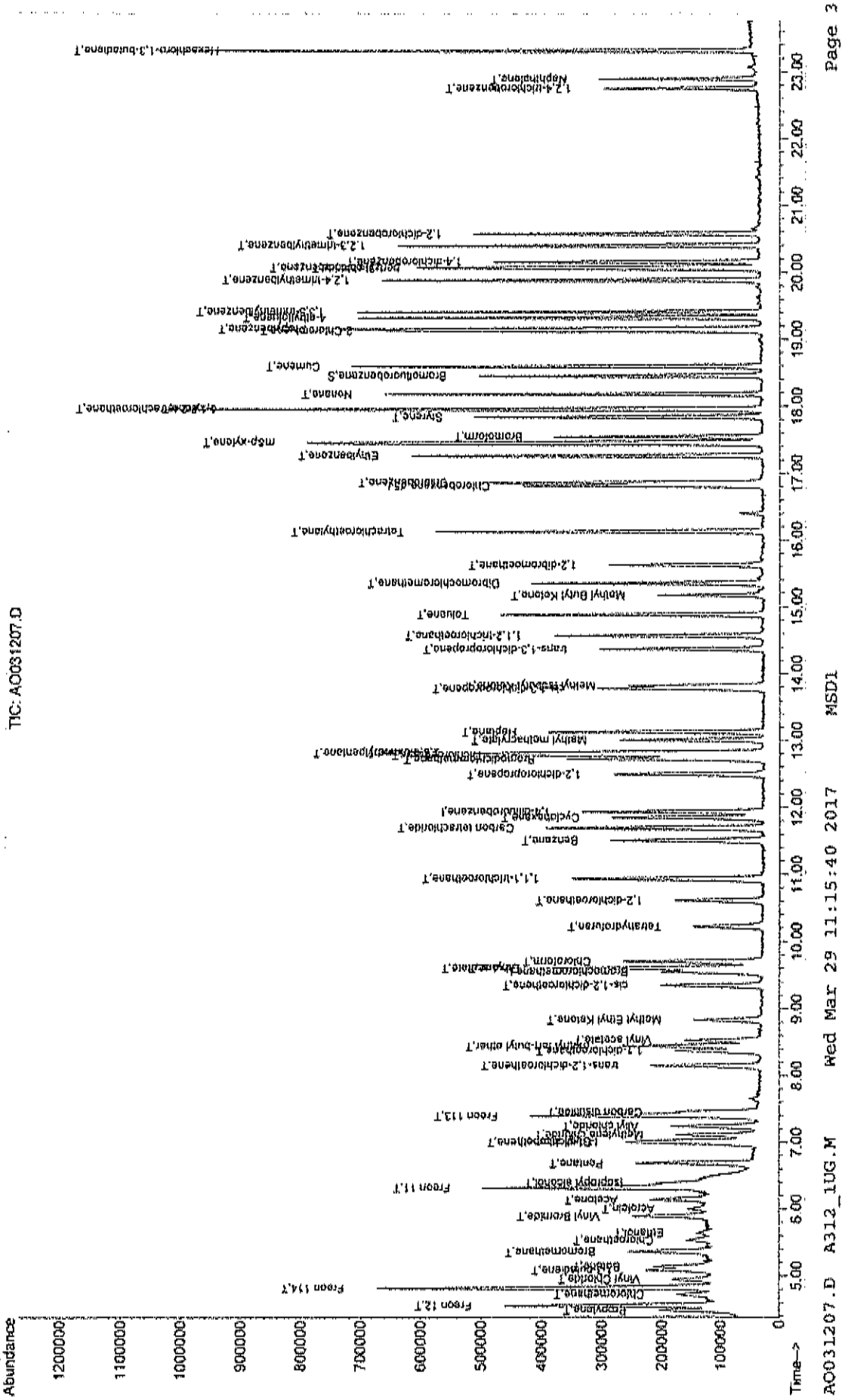
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\A0031207.D
Acq On : 12 Mar 2017 4:39 pm
Sample : A1UG_1.0
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:43 2017

Vial: 7
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\A0031207.D
TIC:A0031207.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031208.D Vial: 8
Acq On : 12 Mar 2017 5:16 pm Operator: RJP
Sample : A1UG_0.75 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:35:18 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.54	128	62821	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.93	114	310977	1.00	ppb		0.00
50) Chlorobenzene-d5	16.81	117	258030	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	193096	1.00	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 100.00%				
Target Compounds							Qvalue
2) Propylene	4.48	41	98190	0.79	ppb		78
3) Freon 12	4.56	85	389927	0.77	ppb		97
4) Chloromethane	4.72	50	60092	0.77	ppb		85
5) Freon 114	4.82	85	285374	0.75	ppb		93
6) Vinyl Chloride	4.94	62	80312	0.74	ppb		91
7) Butane	5.14	43	96475	0.79	ppb		93
8) 1,3-butadiene	5.08	39	58826m	0.80	ppb		
9) Bromomethane	5.36	94	105964	0.81	ppb		90
10) Chloroethane	5.53	64	36060m	0.76	ppb		
11) Ethanol	5.64	45	27228	0.74	ppb	#	69
12) Acrolein	5.99	56	27632m	0.78	ppb		
13) Vinyl Bromide	5.89	106	99259	0.78	ppb		91
14) Freon 11	6.32	101	362271	0.75	ppb		99
15) Acetone	6.14	58	40358	0.78	ppb		96
16) Pentane	6.69	42	85727	0.79	ppb	#	40
17) Isopropyl alcohol	6.38	45	104508	0.76	ppb	#	100
18) 1,1-dichloroethene	6.98	96	77725	0.81	ppb		93
19) Freon 113	7.40	101	170638	0.79	ppb	#	87
20) t-Butyl alcohol	7.02	59	193620	0.75	ppb		96
21) Methylene chloride	7.11	84	71346	0.74	ppb	#	80
22) Allyl chloride	7.23	41	104960	0.75	ppb		88
23) Carbon disulfide	7.45	76	228324	0.76	ppb		82
24) trans-1,2-dichloroethene	8.14	61	128454	0.74	ppb		87
25) methyl tert-butyl ether	8.44	73	258723	0.74	ppb		93
26) 1,1-dichloroethane	8.37	63	159880	0.76	ppb		94
27) Vinyl acetate	8.52	43	217151m	0.78	ppb		
28) Methyl Ethyl Ketone	8.83	72	37076	0.76	ppb	#	1
29) cis-1,2-dichloroethene	9.34	61	120727	0.76	ppb		88
30) Hexane	9.60	57	117215	0.78	ppb		91
31) Ethyl acetate	9.60	43	243481	0.74	ppb		96
32) Chloroform	9.69	83	204700	0.75	ppb		96
33) Tetrahydrofuran	10.21	42	82950	0.74	ppb		91
34) 1,2-dichloroethane	10.60	62	157643	0.78	ppb		95
36) 1,1,1-trichloroethane	10.93	97	237715	0.72	ppb		98
37) Cyclohexane	11.05	56	130649	0.78	ppb		93
38) Carbon tetrachloride	11.69	117	245269	0.74	ppb		99
39) Benzene	11.51	78	241704	0.76	ppb		91
40) Methyl methacrylate	13.00	41	115378	0.71	ppb	#	96
41) 1,4-dioxane	12.80	58	45097	0.73	ppb	#	72
42) 2,2,4-trimethylpentane	12.82	57	385215	0.74	ppb		93
43) Heptane	13.12	43	142138	0.73	ppb		98
44) Trichloroethene	12.78	130	106102	0.74	ppb		89
45) 1,2-dichloropropane	12.50	63	90228	0.75	ppb		97

(#) = qualifier out of range (m) = manual integration
AO031208.D A312_1UG.M Wed Mar 29 11:15:42 2017 MSD1 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031208.D Vial: 8
Acq On : 12 Mar 2017 5:18 pm Operator: RJP
Sample : A1UG_0.75 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:35:18 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	224399	0.72	ppb		98
47)	cis-1,3-dichloropropene	13.78	75	154352	0.74	ppb		96
48)	trans-1,3-dichloropropene	14.37	75	153860	0.73	ppb		96
49)	1,1,2-trichloroethane	14.57	97	99068	0.73	ppb		99
51)	Toluene	14.88	92	160921	0.74	ppb	#	81
52)	Methyl Isobutyl Ketone	13.82	43	143220	0.75	ppb		94
53)	Dibromochloromethane	15.35	129	192660	0.74	ppb		93
54)	Methyl Butyl Ketone	15.17	43	114739	0.73	ppb		95
55)	1,2-dibromoethane	15.62	107	162725	0.76	ppb		98
56)	Tetrachloroethylene	16.13	164	100250	0.76	ppb		97
57)	Chlorobenzene	16.86	112	212921	0.75	ppb		88
58)	Ethylbenzene	17.26	91	391774	0.76	ppb		98
59)	m&p-xylene	17.45	91	669530	1.52	ppb		96
60)	Nonane	18.17	43	205570	0.77	ppb		92
61)	Styrene	17.84	104	193840	0.73	ppb		95
62)	Bromoform	17.54	173	141927	0.73	ppb		97
63)	o-xylene	17.95	91	316189	0.77	ppb		91
64)	Cumene	18.59	105	401761	0.76	ppb		99
66)	1,1,2,2-tetrachloroethane	17.95	83	206331	0.76	ppb		96
67)	Propylbenzene	19.16	120	99384	0.76	ppb	#	1
68)	2-Chlorotoluene	19.13	126	80951	0.72	ppb	#	1
69)	4-ethyltoluene	19.32	105	374024	0.78	ppb		97
70)	1,3,5-trimethylbenzene	19.40	105	339912	0.74	ppb		97
71)	1,2,4-trimethylbenzene	19.88	105	323837	0.76	ppb		100
72)	1,3-dichlorobenzene	20.08	146	164633	0.75	ppb		96
73)	benzyl chloride	20.05	91	209052	0.75	ppb		99
74)	1,4-dichlorobenzene	20.16	146	148648	0.72	ppb		95
75)	1,2,3-trimethylbenzene	20.40	105	318549	0.76	ppb		98
76)	1,2-dichlorobenzene	20.57	146	166869	0.77	ppb		98
77)	1,2,4-trichlorobenzene	22.75	180	57147	0.69	ppb		94
78)	Naphthalene	22.89	128	162608	0.71	ppb		93
79)	Hexachloro-1,3-butadiene	23.31	225	135259	0.76	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

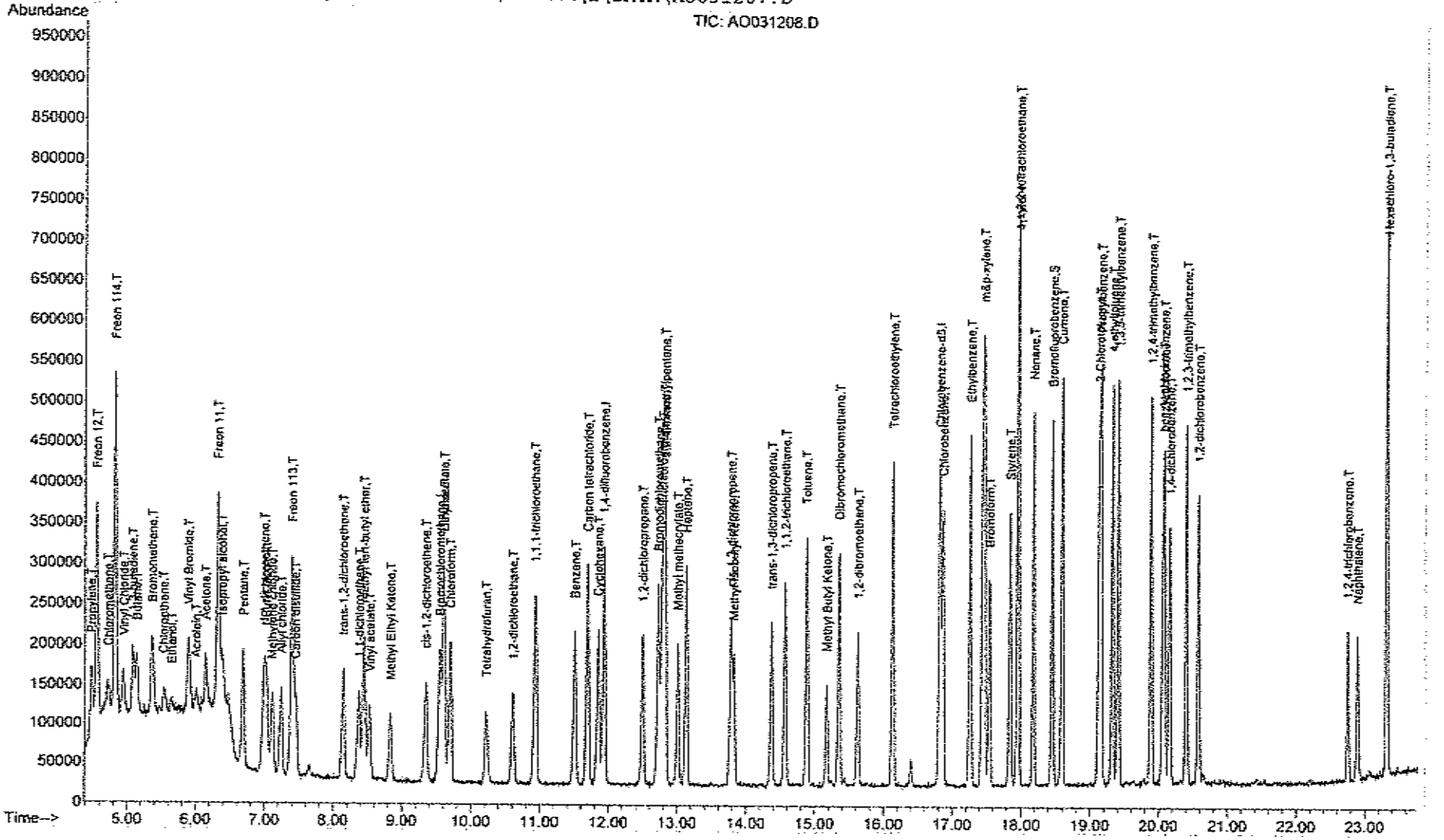
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031208.D
Acq On : 12 Mar 2017 5:18 pm
Sample : A1UG_0.75
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:44 2017

Vial: 8
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031209.D Vial: 9
Acq On : 12 Mar 2017 5:56 pm Operator: RJP
Sample : A1UG_0.50 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:35:50 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.54	128	63330	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.93	114	302631	1.00	ppb		0.00
50) Chlorobenzene-d5	16.81	117	255077	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	191096	1.00	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 100.00%				
Target Compounds							Qvalue
2) Propylene	4.48	41	63725m	0.51	ppb		
3) Freon 12	4.56	85	269149	0.53	ppb		97
4) Chloromethane	4.72	50	41069m	0.52	ppb		
5) Freon 114	4.82	85	191668	0.50	ppb		91
6) Vinyl Chloride	4.94	62	52646	0.48	ppb		77
7) Butane	5.13	43	59364	0.48	ppb	#	72
8) 1,3-butadiene	5.08	39	40806m	0.55	ppb		
9) Bromomethane	5.36	94	67440	0.51	ppb		98
10) Chloroethane	5.53	64	27744	0.58	ppb	#	27
11) Ethanol	5.63	45	17360	0.47	ppb	#	72
12) Acrolein	6.00	56	19031	0.53	ppb	#	69
13) Vinyl Bromide	5.89	106	68007	0.53	ppb		96
14) Freon 11	6.31	101	240957	0.49	ppb		99
15) Acetone	6.14	58	22516	0.43	ppb	#	60
16) Pentane	6.68	42	58217	0.53	ppb	#	51
17) Isopropyl alcohol	6.37	45	74228	0.53	ppb	#	100
18) 1,1-dichloroethene	6.98	96	49903	0.52	ppb		90
19) Freon 113	7.39	101	109806	0.50	ppb		88
20) t-Butyl alcohol	7.03	59	126139	0.49	ppb	#	92
21) Methylene chloride	7.11	84	48145	0.50	ppb	#	80
22) Allyl chloride	7.24	41	71530	0.51	ppb		86
23) Carbon disulfide	7.45	76	150982	0.50	ppb		80
24) trans-1,2-dichloroethene	8.14	61	83318	0.48	ppb		88
25) methyl tert-butyl ether	8.44	73	167186	0.47	ppb		95
26) 1,1-dichloroethane	8.37	63	100224	0.48	ppb		91
27) Vinyl acetate	8.52	43	136429m	0.49	ppb		
28) Methyl Ethyl Ketone	8.82	72	22506	0.46	ppb	#	92
29) cis-1,2-dichloroethene	9.35	61	81746	0.51	ppb		87
30) Hexane	9.60	57	75178	0.50	ppb		93
31) Ethyl acetate	9.61	43	151705	0.46	ppb		98
32) Chloroform	9.69	83	135865	0.49	ppb		99
33) Tetrahydrofuran	10.23	42	55981	0.50	ppb		95
34) 1,2-dichloroethane	10.61	62	105104	0.52	ppb		97
36) 1,1,1-trichloroethane	10.92	97	156889	0.49	ppb		97
37) Cyclohexane	11.84	56	88027	0.54	ppb		90
38) Carbon tetrachloride	11.69	117	158643	0.49	ppb		98
39) Benzene	11.51	78	152684	0.49	ppb		89
40) Methyl methacrylate	13.00	41	71928	0.46	ppb	#	96
41) 1,4-dioxane	12.81	58	30080	0.50	ppb		77
42) 2,2,4-trimethylpentane	12.81	57	248981	0.49	ppb		92
43) Heptane	13.13	43	93514	0.49	ppb		98
44) Trichloroethene	12.78	130	68619	0.49	ppb		88
45) 1,2-dichloropropane	12.49	63	60943	0.52	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031209.D Vial: 9
Acq On : 12 Mar 2017 5:56 pm Operator: RJP
Sample : A1UG_0.50 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:35:50 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	147029	0.49	ppb		95
47)	cis-1,3-dichloropropene	13.78	75	100747	0.50	ppb		94
48)	trans-1,3-dichloropropene	14.37	75	97826	0.48	ppb		92
49)	1,1,2-trichloroethane	14.56	97	64872	0.49	ppb		99
51)	Toluene	14.88	92	110477	0.52	ppb		88
52)	Methyl Isobutyl Ketone	13.82	43	87900	0.47	ppb		95
53)	Dibromochloromethane	15.35	129	125668	0.49	ppb		91
54)	Methyl Butyl Ketone	15.17	43	72354	0.47	ppb		95
55)	1,2-dibromoethane	15.62	107	106360	0.50	ppb		99
56)	Tetrachloroethylene	16.13	164	67231	0.52	ppb		99
57)	Chlorobenzene	16.86	112	137661	0.49	ppb		85
58)	Ethylbenzene	17.26	91	255134	0.50	ppb		96
59)	m&p-xylene	17.44	91	427464	0.98	ppb		97
60)	Nonane	18.17	43	133530	0.51	ppb		94
61)	Styrene	17.84	104	126708	0.48	ppb		96
62)	Bromoform	17.54	173	91643	0.48	ppb		100
63)	o-xylene	17.96	91	205819	0.50	ppb		90
64)	Cumene	18.59	105	253263	0.48	ppb		100
66)	1,1,2,2-tetrachloroethane	17.94	83	134924	0.50	ppb		98
67)	Propylbenzene	19.16	120	63306	0.49	ppb	#	1
68)	2-Chlorotoluene	19.13	126	59000	0.49	ppb	#	1
69)	4-ethyltoluene	19.32	105	230128	0.48	ppb		100
70)	1,3,5-trimethylbenzene	19.41	105	210433	0.46	ppb		97
71)	1,2,4-trimethylbenzene	19.88	105	201502	0.48	ppb		100
72)	1,3-dichlorobenzene	20.08	146	105890	0.49	ppb	#	52
73)	benzyl chloride	20.06	91	125197	0.45	ppb		100
74)	1,4-dichlorobenzene	20.16	146	93351	0.46	ppb	#	49
75)	1,2,3-trimethylbenzene	20.40	105	193195	0.47	ppb		98
76)	1,2-dichlorobenzene	20.58	146	102401	0.48	ppb		95
77)	1,2,4-trichlorobenzene	22.75	180	34657	0.43	ppb		96
78)	Naphthalene	22.89	128	94309	0.42	ppb		92
79)	Hexachloro-1,3-butadiene	23.32	225	82669	0.47	ppb		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

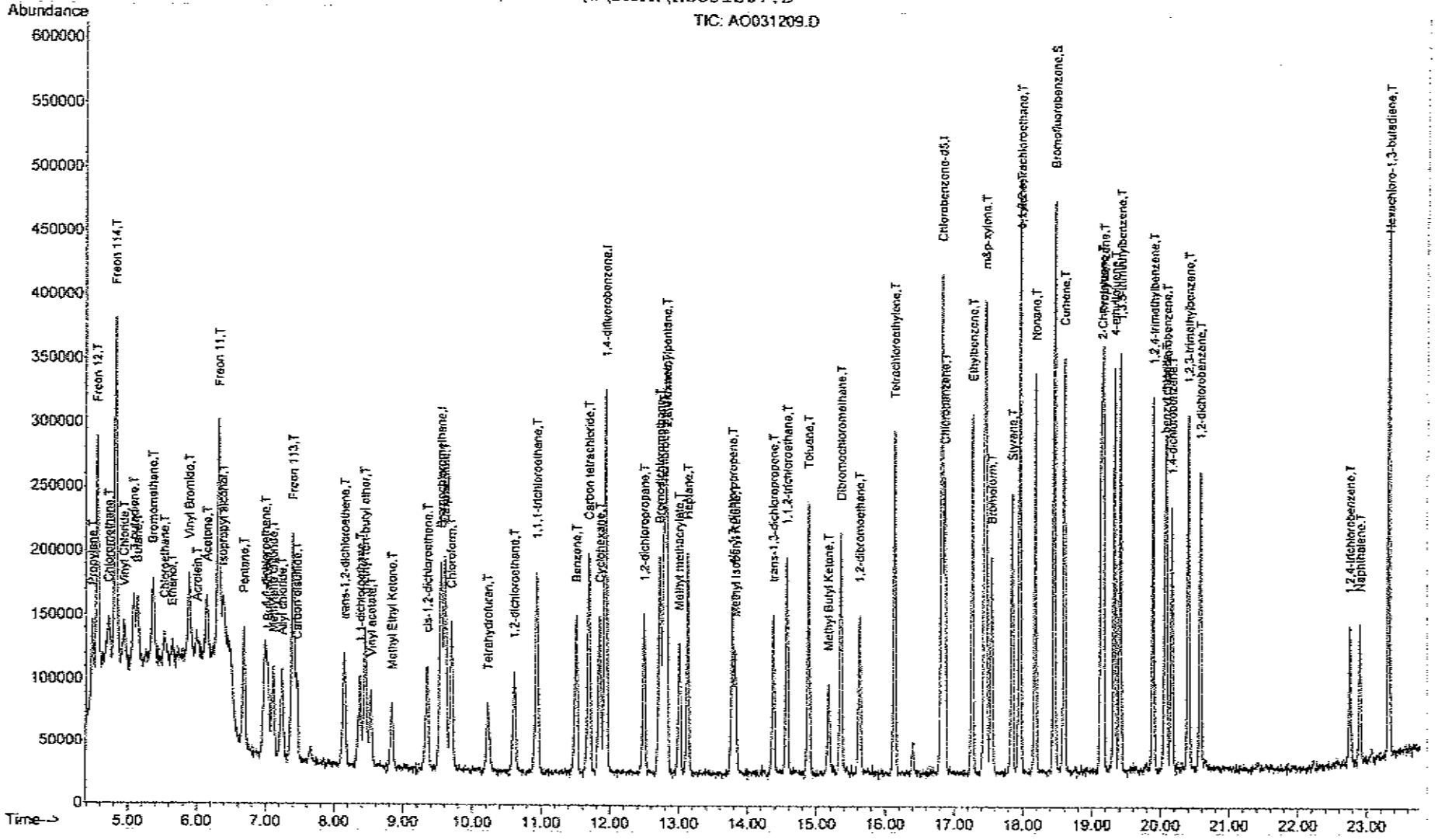
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031209.D
Acq On : 12 Mar 2017 5:56 pm
Sample : A1UG_0.50
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:46 2017

Vial: 9
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D



AO031209.D A312_1UG.M Wed Mar 29 11:15:48 2017 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031210.D Vial: 10
Acq On : 12 Mar 2017 6:33 pm Operator: RJP
Sample : A1UG_0.30 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:36:22 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.54	128	63718	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.94	114	294339	1.00	ppb		0.00
50) Chlorobenzene-d5	16.81	117	255325	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	188070	0.98	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 98.00%				
Target Compounds							Qvalue
2) Propylene	4.49	41	43032m	0.34	ppb		
3) Freon 12	4.55	85	158750	0.31	ppb		96
4) Chloromethane	4.72	50	21245m	0.27	ppb		
5) Freon 114	4.82	85	115324	0.30	ppb		92
6) Vinyl Chloride	4.95	62	34899	0.32	ppb		84
7) Butane	5.14	43	41177	0.33	ppb	#	80
8) 1,3-butadiene	5.08	39	23704m	0.32	ppb		
9) Bromomethane	5.37	94	43605	0.33	ppb		99
10) Chloroethane	5.54	64	16235	0.34	ppb	#	73
11) Ethanol	5.64	45	11679m	0.31	ppb		
12) Acrolein	6.01	56	10108m	0.28	ppb		
13) Vinyl Bromide	5.88	106	42435	0.33	ppb		98
14) Freon 11	6.31	101	143779	0.29	ppb		99
15) Acetone	6.15	58	16785	0.32	ppb	#	59
16) Pentane	6.69	42	34647	0.31	ppb	#	27
17) Isopropyl alcohol	6.39	45	43634	0.31	ppb	#	100
18) 1,1-dichloroethene	6.99	96	30017	0.31	ppb	#	87
19) Freon 113	7.39	101	63638	0.29	ppb		88
20) t-Butyl alcohol	7.03	59	74358	0.29	ppb	#	80
21) Methylene chloride	7.11	84	29668	0.30	ppb	#	81
22) Allyl chloride	7.23	41	41204	0.29	ppb		85
23) Carbon disulfide	7.45	76	90992	0.30	ppb		76
24) trans-1,2-dichloroethene	8.15	61	50012	0.29	ppb		90
25) methyl tert-butyl ether	8.45	73	102273	0.29	ppb		89
26) 1,1-dichloroethane	8.38	63	62508	0.29	ppb		95
27) Vinyl acetate	8.53	43	87924m	0.31	ppb		
28) Methyl Ethyl Ketone	8.84	72	12299	0.25	ppb	#	81
29) cis-1,2-dichloroethene	9.34	61	47283	0.30	ppb		89
30) Hexane	9.60	57	47038	0.31	ppb		86
31) Ethyl acetate	9.61	43	95706	0.29	ppb		98
32) Chloroform	9.70	83	82556	0.30	ppb		100
33) Tetrahydrofuran	10.23	42	35710	0.31	ppb		94
34) 1,2-dichloroethane	10.62	62	62360	0.30	ppb		84
36) 1,1,1-trichloroethane	10.93	97	94275	0.30	ppb		99
37) Cyclohexane	11.05	56	56425	0.35	ppb		86
38) Carbon tetrachloride	11.70	117	91953	0.29	ppb		95
39) Benzene	11.51	78	95246	0.32	ppb		89
40) Methyl methacrylate	13.00	41	44295	0.29	ppb	#	89
41) 1,4-dioxane	12.81	58	16754	0.29	ppb		82
42) 2,2,4-trimethylpentane	12.81	57	153145	0.31	ppb		93
43) Heptane	13.13	43	60054	0.33	ppb		92
44) Trichloroethene	12.78	130	40784	0.30	ppb		87
45) 1,2-dichloropropane	12.49	63	36245	0.32	ppb		96

(#) = qualifier out of range (m) = manual integration
AO031210.D A312_1UG.M Wed Mar 29 11:15:50 2017 MSD1 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031210.D Vial: 10
Acq On : 12 Mar 2017 6:33 pm Operator: RJP
Sample : A1UG_0.30 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:36:22 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	89312	0.30	ppb		98
47)	cis-1,3-dichloropropene	13.77	75	60841	0.31	ppb		94
48)	trans-1,3-dichloropropene	14.36	75	58075	0.29	ppb		98
49)	1,1,2-trichloroethane	14.57	97	38042	0.30	ppb		99
51)	Toluene	14.88	92	64434	0.30	ppb		86
52)	Methyl Isobutyl Ketone	13.82	43	55462	0.29	ppb		91
53)	Dibromochloromethane	15.34	129	70850	0.28	ppb		90
54)	Methyl Butyl Ketone	15.17	43	40934	0.26	ppb		93
55)	1,2-dibromoethane	15.62	107	60713	0.29	ppb		92
56)	Tetrachloroethylene	16.13	164	39014	0.30	ppb		95
57)	Chlorobenzene	16.86	112	81584	0.29	ppb		81
58)	Ethylbenzene	17.26	91	157696	0.31	ppb		98
59)	m&p-xylene	17.45	91	261214	0.60	ppb		96
60)	Nonane	18.17	43	77671	0.30	ppb		97
61)	Styrene	17.84	104	73339	0.28	ppb		88
62)	Bromoform	17.55	173	52535	0.27	ppb		94
63)	o-xylene	17.96	91	126113	0.31	ppb		91
64)	Cumene	18.60	105	157435	0.30	ppb		98
66)	1,1,2,2-tetrachloroethane	17.95	83	82482	0.31	ppb		95
67)	Propylbenzene	19.16	120	37097	0.29	ppb	#	1
68)	2-Chlorotoluene	19.12	126	36313	0.30	ppb	#	1
69)	4-ethyltoluene	19.32	105	139943	0.29	ppb		97
70)	1,3,5-trimethylbenzene	19.41	105	133461	0.29	ppb		92
71)	1,2,4-trimethylbenzene	19.88	105	124458	0.30	ppb		97
72)	1,3-dichlorobenzene	20.08	146	65162	0.30	ppb	#	29
73)	benzyl chloride	20.05	91	69651	0.25	ppb		98
74)	1,4-dichlorobenzene	20.15	146	54396	0.27	ppb	#	25
75)	1,2,3-trimethylbenzene	20.40	105	120856	0.29	ppb		99
76)	1,2-dichlorobenzene	20.58	146	65673	0.31	ppb		96
77)	1,2,4-trichlorobenzene	22.75	180	18401	0.23	ppb		95
78)	Naphthalene	22.89	128	51606	0.23	ppb		95
79)	Hexachloro-1,3-butadiene	23.31	225	48188	0.27	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AO031210.D A312_1UG.M Wed Mar 29 11:15:51 2017 MSD1 Page 2

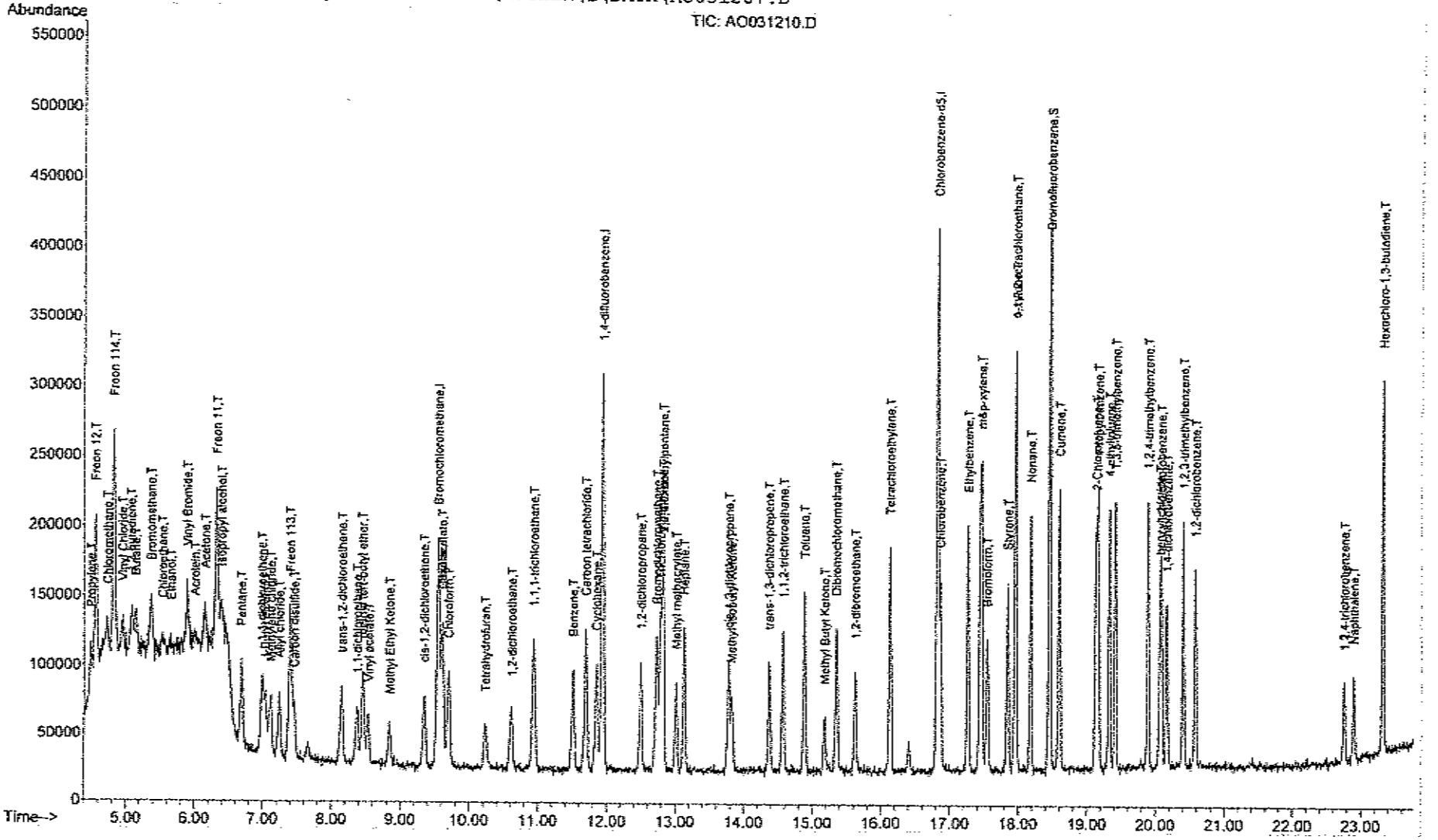
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031210.D
Acq On : 12 Mar 2017 6:33 pm
Sample : A1UG_0.30
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:47 2017

Vial: 10
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D



AO031210.D A312_1UG.M Wed Mar 29 11:15:52 2017 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031211.D
Acq On : 12 Mar 2017 7:10 pm
Sample : A1UG_0.15
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:36:55 2017

Vial: 11
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.55	128	62833	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.94	114	298175	1.00	ppb		0.00
50) Chlorobenzene-d5	16.81	117	246215	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	183691	1.00	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 100.00%				
Target Compounds							Qvalue
2) Propylene	4.49	41	19802m	0.16	ppb		
3) Freon 12	4.56	85	80983	0.16	ppb		99
4) Chloromethane	4.71	50	10421m	0.13	ppb		
5) Freon 114	4.82	85	60227	0.16	ppb		89
6) Vinyl Chloride	4.95	62	15598	0.14	ppb	#	14
7) Butane	5.13	43	18888m	0.15	ppb		
8) 1,3-butadiene	5.08	39	12174m	0.17	ppb		
9) Bromomethane	5.36	94	23577	0.18	ppb		91
10) Chloroethane	5.53	64	8452	0.18	ppb	#	65
11) Ethanol	5.64	45	5679m	0.16	ppb		
12) Acrolein	5.99	56	6107m	0.17	ppb		
13) Vinyl Bromide	5.88	106	21376	0.17	ppb		90
14) Freon 11	6.31	101	70019	0.14	ppb		98
15) Acetone	6.14	58	9997	0.19	ppb	#	71
16) Pentane	6.69	42	17167	0.16	ppb	#	27
17) Isopropyl alcohol	6.39	45	27782	0.20	ppb	#	100
18) 1,1-dichloroethene	6.99	96	15290	0.16	ppb		93
19) Freon 113	7.38	101	30433	0.14	ppb		91
20) t-Butyl alcohol	7.03	59	37516	0.15	ppb	#	92
21) Methylene chloride	7.10	84	15299	0.16	ppb	#	80
22) Allyl chloride	7.23	41	20137	0.15	ppb		84
23) Carbon disulfide	7.45	76	45988	0.15	ppb		91
24) trans-1,2-dichloroethene	8.14	61	25218	0.15	ppb		89
25) methyl tert-butyl ether	8.45	73	49538	0.14	ppb		84
26) 1,1-dichloroethane	8.37	63	28589	0.14	ppb		88
27) Vinyl acetate	8.53	43	41156m	0.15	ppb		
28) Methyl Ethyl Ketone	8.84	72	6885	0.14	ppb		97
29) cis-1,2-dichloroethene	9.34	61	23703	0.15	ppb		87
30) Hexane	9.59	57	22899	0.15	ppb	#	79
31) Ethyl acetate	9.61	43	45744	0.14	ppb		97
32) Chloroform	9.69	83	40084	0.15	ppb		93
33) Tetrahydrofuran	10.24	42	17546	0.16	ppb		93
34) 1,2-dichloroethane	10.60	62	31936	0.16	ppb		75
36) 1,1,1-trichloroethane	10.94	97	46355	0.15	ppb		96
37) Cyclohexane	11.84	56	26436m	0.16	ppb		
38) Carbon tetrachloride	11.69	117	45320	0.14	ppb		97
39) Benzene	11.50	78	46575	0.15	ppb		88
40) Methyl methacrylate	13.00	41	21628	0.14	ppb	#	94
41) 1,4-dioxane	12.82	58	8013	0.13	ppb		81
42) 2,2,4-trimethylpentane	12.82	57	71869	0.14	ppb		87
43) Heptane	13.13	43	31753	0.17	ppb		88
44) Trichloroethene	12.78	130	18220	0.13	ppb	#	81
45) 1,2-dichloropropane	12.50	63	16939	0.15	ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031211.D Vial: 11
Acq On : 12 Mar 2017 7:10 pm Operator: RJP
Sample : A1UG_0.15 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:36:55 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	44097	0.15	ppb		98
47)	cis-1,3-dichloropropene	13.77	75	28156	0.14	ppb		93
48)	trans-1,3-dichloropropene	14.37	75	29021	0.14	ppb		90
49)	1,1,2-trichloroethane	14.56	97	18105	0.14	ppb		95
51)	Toluene	14.88	92	32298	0.16	ppb		90
52)	Methyl Isobutyl Ketone	13.83	43	28755	0.16	ppb		83
53)	Dibromochloromethane	15.34	129	34330	0.14	ppb		92
54)	Methyl Butyl Ketone	15.18	43	18340m	0.12	ppb		
55)	1,2-dibromoethane	15.62	107	29846	0.15	ppb		98
56)	Tetrachloroethylene	16.13	164	19090	0.15	ppb		96
57)	Chlorobenzene	16.86	112	38202	0.14	ppb	#	75
58)	Ethylbenzene	17.26	91	74373	0.15	ppb		100
59)	m&p-xylene	17.44	91	124811	0.30	ppb		95
60)	Nonane	18.18	43	37307	0.15	ppb		92
61)	Styrene	17.84	104	35114	0.14	ppb		91
62)	Bromoform	17.54	173	24855	0.13	ppb		98
63)	o-xylene	17.96	91	60717	0.15	ppb		87
64)	Cumene	18.60	105	76283	0.15	ppb		99
66)	1,1,2,2-tetrachloroethane	17.95	83	38171	0.15	ppb		91
67)	Propylbenzene	19.16	120	17888	0.14	ppb	#	1
68)	2-Chlorotoluene	19.13	126	18307	0.16	ppb	#	1
69)	4-ethyltoluene	19.32	105	68013m	0.15	ppb		
70)	1,3,5-trimethylbenzene	19.41	105	64985m	0.15	ppb		
71)	1,2,4-trimethylbenzene	19.89	105	63544	0.16	ppb		98
72)	1,3-dichlorobenzene	20.08	146	30169	0.14	ppb	#	54
73)	benzyl chloride	20.06	91	33641	0.13	ppb		100
74)	1,4-dichlorobenzene	20.16	146	25295	0.13	ppb	#	47
75)	1,2,3-trimethylbenzene	20.40	105	60066	0.15	ppb		95
76)	1,2-dichlorobenzene	20.57	146	30744	0.15	ppb		95
77)	1,2,4-trichlorobenzene	22.75	180	10001m	0.13	ppb		
78)	Naphthalene	22.89	128	25940m	0.12	ppb		
79)	Hexachloro-1,3-butadiene	23.31	225	23581	0.14	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

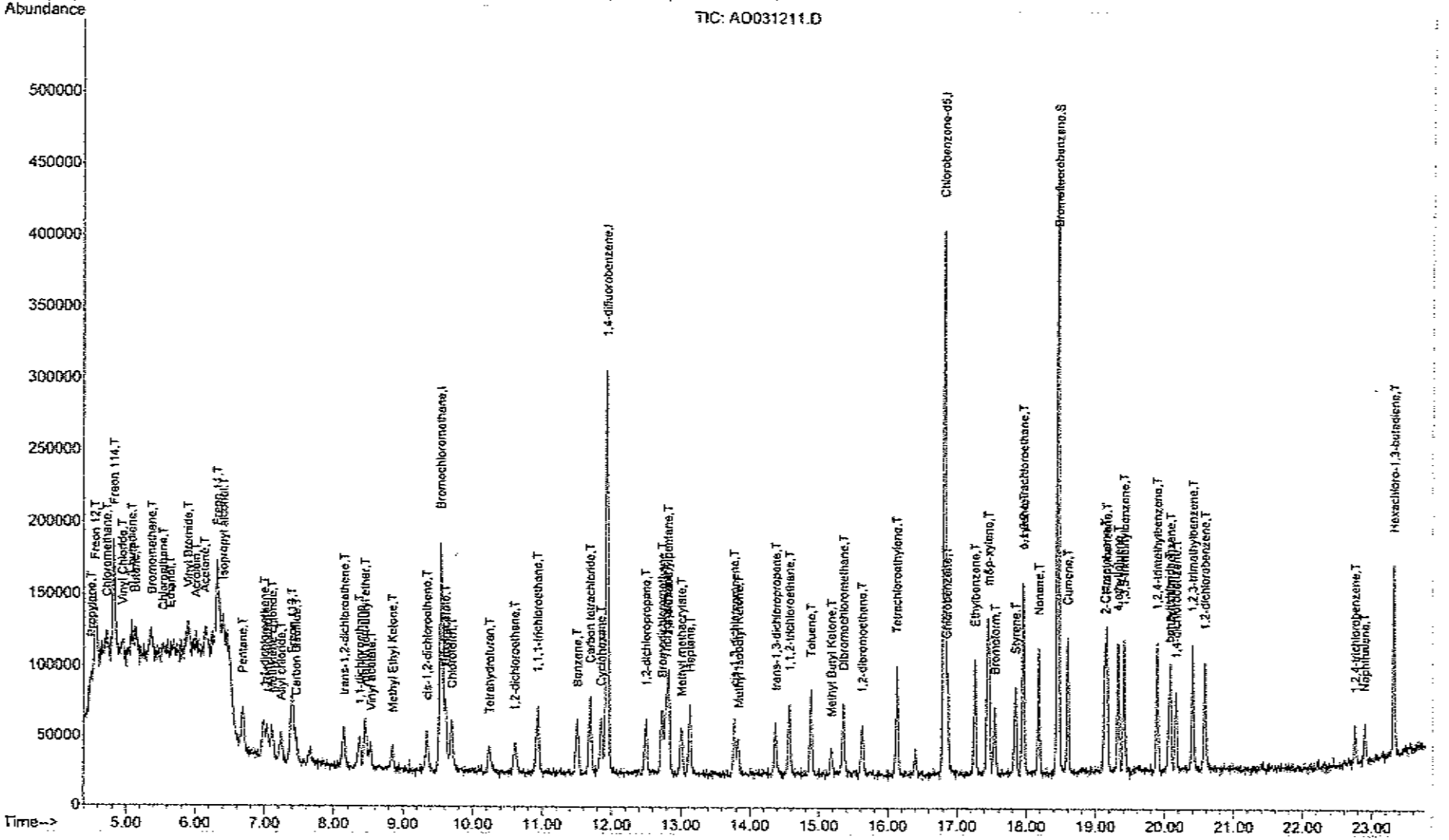
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031211.D
Acq On : 12 Mar 2017 7:10 pm
Sample : A1UG_0.15
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 20:50 2017

Vial: 11
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\A0031212.D Vial: 12
Acq On : 12 Mar 2017 8:54 pm Operator: RJP
Sample : A1UG_0.10 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 21:33:19 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\A0031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.54	128	65737	1.00	ppb	0.00
35) 1,4-difluorobenzene	11.92	114	309843	1.00	ppb	-0.01
50) Chlorobenzene-d5	16.81	117	255362	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.45	95	186957	0.98	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 98.00%			
Target Compounds						Qvalue
6) Vinyl Chloride	4.95	62	13052	0.12	ppb	66
38) Carbon tetrachloride	11.69	117	30105	0.09	ppb	98
44) Trichloroethene	12.77	130	14388	0.10	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AO031212.D A312_1UG.M Wed Mar 29 11:15:58 2017 MSD1 Page 1

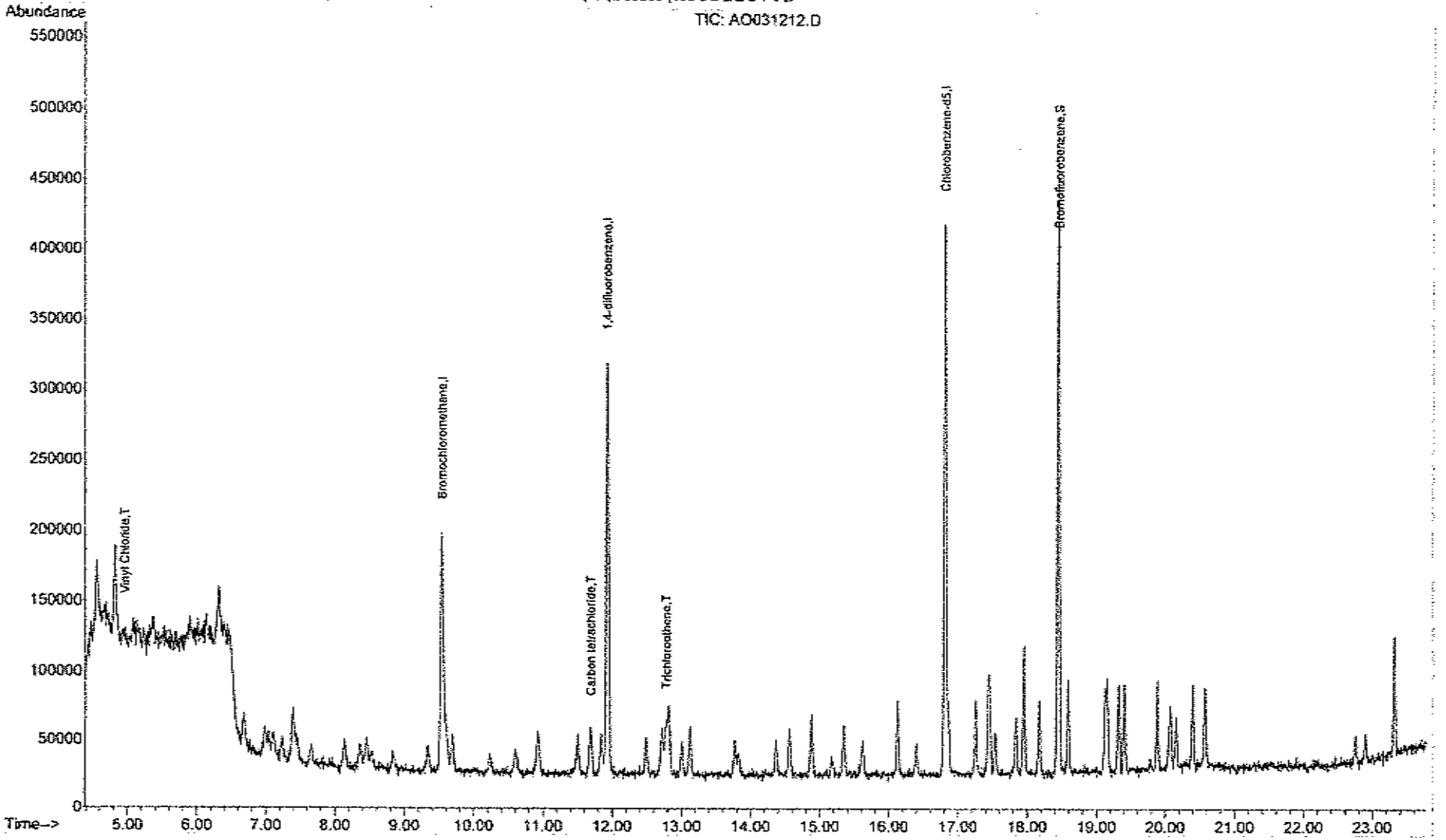
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031212.D
Acq On : 12 Mar 2017 8:54 pm
Sample : A1UG_0.10
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 21:34 2017

Vial: 12
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031213.D Vial: 13
Acq On : 12 Mar 2017 9:30 pm Operator: RJP
Sample : A1UG_0.04 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 12 22:19:55 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Sun Mar 12 20:32:57 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.54	128	62431	1.00	ppb	0.00
35) 1,4-difluorobenzene	11.92	114	299372	1.00	ppb	-0.02
50) Chlorobenzene-d5	16.81	117	246566	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.44	95	184432	1.00	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 100.00%			
Target Compounds						Qvalue
6) Vinyl Chloride	4.94	62	5063	0.05	ppb	# 1
38) Carbon tetrachloride	11.69	117	11557	0.04	ppb	95
44) Trichloroethene	12.76	130	5113	0.04	ppb	# 67

(#) = qualifier out of range (m) = manual integration (+) = signals summed

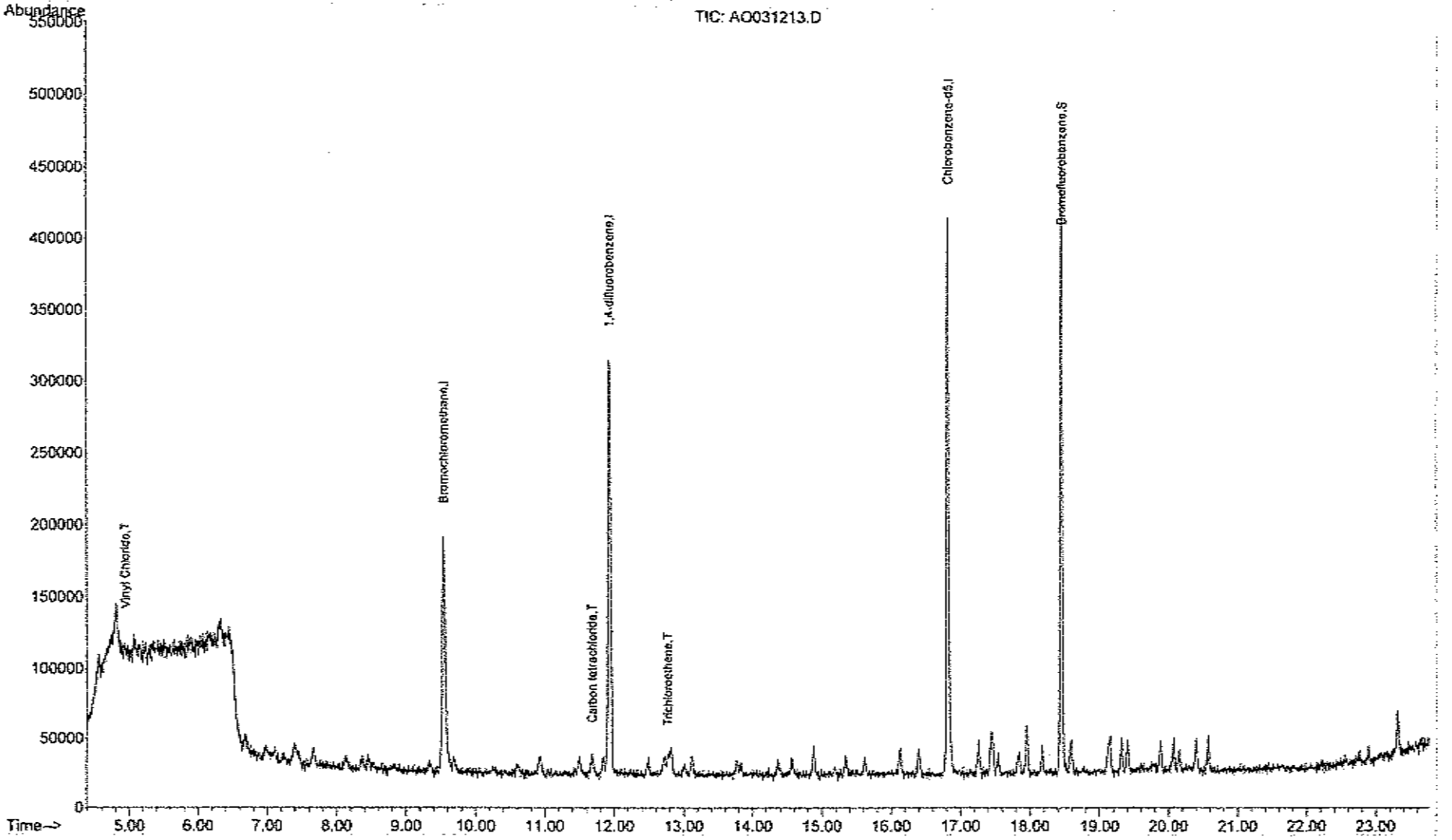
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO031213.D
Acq On : 12 Mar 2017 9:30 pm
Sample : A1UG_0.04
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 12 22:21 2017

Vial: 13
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RBS

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AO031207.D



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CALIBRATION VERIFICATION

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AO032002.D Vial: 3
Acq On : 20 Mar 2017 11:14 am Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	31#	-0.01
2	T	Propylene	1.983	1.678	15.4	26#	-0.02
3	T	Freon 12	8.095	8.630	-6.6	33#	-0.01
4	T	Chloromethane	1.208	1.291	-6.9	31#	-0.02
5	T	Freon 114	6.032	6.642	-10.1	34#	-0.02
6	T	Vinyl Chloride	1.757	1.807	-2.8	32#	-0.02
7	T	Butane	1.936	2.027	-4.7	32#	-0.02
8	T	1,3-butadiene	1.227	1.121	8.6	28#	-0.02
9	T	Bromomethane	2.172	2.424	-11.6	36#	-0.02
10	T	Chloroethane	0.789	0.794	-0.6	32#	-0.02
11	T	Ethanol	0.573	0.670	-16.9	35#	-0.01
12	T	Acrolein	0.566	0.667	-17.8	36#	-0.01
13	T	Vinyl Bromide	2.114	1.884	10.9	28#	-0.02
14	T	Freon 11	7.471	8.442	-13.0	34#	-0.02
15	T	Acetone	0.820	0.740	9.8	28#	-0.02
16	T	Pentane	1.770	1.556	12.1	28#	-0.01
17	T	Isopropyl alcohol	2.314	2.682	-15.9	37#	-0.02
18	T	1,1-dichloroethene	1.573	1.431	9.0	29#	-0.02
19	T	Freon 113	3.434	3.431	0.1	30#	0.00
20	t	t-Butyl alcohol	4.095	4.159	-1.6	31#	-0.01
21	T	Methylene chloride	1.519	1.356	10.7	27#	-0.02
22	T	Allyl chloride	2.189	1.945	11.1	27#	-0.02
23	T	Carbon disulfide	4.764	4.441	6.8	28#	-0.02
24	T	trans-1,2-dichloroethene	2.678	2.529	5.6	28#	-0.02
25	T	methyl tert-butyl ether	5.418	5.048	6.8	28#	-0.02
26	T	1,1-dichloroethane	3.249	3.091	4.9	28#	-0.02
27	T	Vinyl acetate	4.452	5.133	-15.3	35#	-0.02
28	T	Methyl Ethyl Ketone	0.744	0.763	-2.6	30#	-0.02
29	T	cis-1,2-dichloroethene	2.524	2.373	6.0	29#	-0.02
30	T	Hexane	2.417	2.157	10.8	27#	-0.01
31	T	Ethyl acetate	5.025	4.941	1.7	29#	-0.01
32	T	Chloroform	4.298	4.235	1.5	30#	-0.02
33	T	Tetrahydrofuran	1.787	1.674	6.3	29#	-0.02
34	T	1,2-dichloroethane	3.274	3.205	2.1	30#	-0.02
35	I	1,4-difluorobenzene	1.000	1.000	0.0	30#	-0.02
36	T	1,1,1-trichloroethane	1.029	0.987	4.1	28#	-0.02
37	T	Cyclohexane	0.561	0.512	8.7	28#	-0.01
38	T	Carbon tetrachloride	1.032	1.000	3.1	28#	-0.02
39	T	Benzene	1.029	0.995	3.3	29#	0.00
40	T	Methyl methacrylate	0.497	0.496	0.2	29#	-0.02
41	T	1,4-dioxane	0.196	0.239	-21.9	35#	-0.03
42	T	2,2,4-trimethylpentane	1.648	1.575	4.4	28#	-0.02
43	T	Heptane	0.629	0.573	8.9	27#	0.00
44	T	Trichloroethene	0.447	0.448	-0.2	29#	0.00
45	T	1,2-dichloropropane	0.393	0.383	2.5	29#	-0.02
46	T	Bromodichloromethane	0.981	0.949	3.3	28#	0.00
47	T	cis-1,3-dichloropropene	0.667	0.633	5.1	28#	-0.02
48	T	trans-1,3-dichloropropene	0.662	0.607	8.3	27#	0.00
49	T	1,1,2-trichloroethane	0.428	0.445	-4.0	30#	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AO032002.D Vial: 3
Acq On : 20 Mar 2017 11:14 am Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51	T	Toluene	0.843	0.856	-1.5	29#	0.00
52	T	Methyl Isobutyl Ketone	0.761	0.967	-27.1	37#	-0.02
53	T	Dibromochloromethane	0.984	0.993	-0.9	28#	0.00
54	T	Methyl Butyl Ketone	0.591	1.022	-72.9#	48#	0.00
55	T	1,2-dibromoethane	0.823	0.850	-3.3	29#	0.00
56	T	Tetrachloroethylene	0.514	0.553	-7.6	31#	-0.02
57	T	Chlorobenzene	1.084	1.126	-3.9	29#	-0.01
58	T	Ethylbenzene	1.998	2.010	-0.6	29#	0.00
59	T	m&p-xylene	1.688	1.705	-1.0	29#	0.00
60	T	Nonane	1.017	0.989	2.8	28#	0.00
61	T	Styrene	1.000	1.010	-1.0	28#	0.00
62	T	Bromoform	0.728	0.783	-7.6	30#	0.00
63	T	o-xylene	1.616	1.674	-3.6	30#	0.00
64	T	Cumene	2.036	2.094	-2.8	29#	0.00
65	S	Bromofluorobenzene	0.748	0.733	2.0	28#	0.00
66	T	1,1,2,2-tetrachloroethane	1.046	1.112	-6.3	30#	0.00
67	T	Propylbenzene	0.500	0.538	-7.6	30#	0.00
68	T	2-Chlorotoluene	0.471	0.470	0.2	28#	0.00
69	T	4-ethyltoluene	1.859	2.003	-7.7	31#	0.00
70	T	1,3,5-trimethylbenzene	1.731	1.798	-3.9	29#	0.00
71	T	1,2,4-trimethylbenzene	1.638	1.720	-5.0	30#	0.00
72	T	1,3-dichlorobenzene	0.844	0.945	-12.0	32#	-0.01
73	T	benzyl chloride	1.050	0.964	8.2	26#	0.00
74	T	1,4-dichlorobenzene	0.755	0.857	-13.5	31#	0.00
75	T	1,2,3-trimethylbenzene	1.591	1.714	-7.7	30#	0.00
76	T	1,2-dichlorobenzene	0.836	0.947	-13.3	32#	0.00
77	T	1,2,4-trichlorobenzene	0.306	0.398	-30.1#	36#	0.00
78	T	Naphthalene	0.843	1.419	-68.3#	46#	0.00
79	T	Hexachloro-1,3-butadiene	0.675	0.836	-23.9	35#	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032002.D
Acq On : 20 Mar 2017 11:14 am
Sample : A1UG_1.0
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:02:59 2017

Vial: 3
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	19677	1.00	ppb		-0.01
35) 1,4-difluorobenzene	11.92	114	91887	1.00	ppb		-0.02
50) Chlorobenzene-d5	16.81	117	76086	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	55761	0.98	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 98.00%				
Target Compounds							Qvalue
2) Propylene	4.46	41	33027	0.85	ppb		84
3) Freon 12	4.54	85	169816	1.07	ppb		96
4) Chloromethane	4.70	50	25395m	1.07	ppb		
5) Freon 114	4.80	85	130685	1.10	ppb		96
6) Vinyl Chloride	4.92	62	35563	1.03	ppb		87
7) Butane	5.12	43	39892	1.05	ppb		98
8) 1,3-butadiene	5.06	39	22064m	0.91	ppb		
9) Bromomethane	5.34	94	47689	1.12	ppb		90
10) Chloroethane	5.51	64	15632	1.01	ppb	#	77
11) Ethanol	5.62	45	13180	1.17	ppb	#	80
12) Acrolein	5.99	56	13117	1.18	ppb		87
13) Vinyl Bromide	5.87	106	37073	0.89	ppb		94
14) Freon 11	6.30	101	166115	1.13	ppb		99
15) Acetone	6.12	58	14563	0.90	ppb	#	57
16) Pentane	6.66	42	30612	0.88	ppb	#	39
17) Isopropyl alcohol	6.36	45	52770	1.16	ppb	#	100
18) 1,1-dichloroethene	6.97	96	28167	0.91	ppb	#	87
19) Freon 113	7.38	101	67511	1.00	ppb		90
20) t-Butyl alcohol	7.00	59	81842	1.02	ppb		96
21) Methylene chloride	7.08	84	26684	0.89	ppb	#	77
22) Allyl chloride	7.22	41	38279	0.89	ppb		88
23) Carbon disulfide	7.43	76	87387	0.93	ppb		84
24) trans-1,2-dichloroethene	8.12	61	49771	0.94	ppb		89
25) methyl tert-butyl ether	8.42	73	99334	0.93	ppb		93
26) 1,1-dichloroethane	8.35	63	60812	0.95	ppb		94
27) Vinyl acetate	8.51	43	101001	1.15	ppb		91
28) Methyl Ethyl Ketone	8.81	72	15006	1.02	ppb	#	1
29) cis-1,2-dichloroethene	9.32	61	46689	0.94	ppb		87
30) Hexane	9.59	57	42436	0.89	ppb		87
31) Ethyl acetate	9.59	43	97224	0.98	ppb		97
32) Chloroform	9.68	83	83325	0.99	ppb		98
33) Tetrahydrofuran	10.20	42	32944	0.94	ppb		94
34) 1,2-dichloroethane	10.59	62	63072	0.98	ppb		96
36) 1,1,1-trichloroethane	10.92	97	90702	0.96	ppb		98
37) Cyclohexane	11.83	56	47073	0.91	ppb		94
38) Carbon tetrachloride	11.68	117	91902	0.97	ppb		99
39) Benzene	11.49	78	91447	0.97	ppb		91
40) Methyl methacrylate	12.99	41	45534	1.00	ppb		97
41) 1,4-dioxane	12.79	58	21923	1.22	ppb	#	48
42) 2,2,4-trimethylpentane	12.80	57	144692	0.96	ppb		91
43) Heptane	13.11	43	52630	0.91	ppb		98
44) Trichloroethene	12.77	130	41193	1.00	ppb		88
45) 1,2-dichloropropane	12.48	63	35213	0.98	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032002.D
Acq On : 20 Mar 2017 11:14 am
Sample : A1UG_1.0
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:02:59 2017

Vial: 3
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.71	83	87166	0.97	ppb		98
47)	cis-1,3-dichloropropene	13.76	75	58138	0.95	ppb		97
48)	trans-1,3-dichloropropene	14.36	75	55820	0.92	ppb		100
49)	1,1,2-trichloroethane	14.55	97	40897	1.04	ppb		94
51)	Toluene	14.87	92	65145	1.02	ppb		86
52)	Methyl Isobutyl Ketone	13.80	43	73544m	1.27	ppb		
53)	Dibromochloromethane	15.34	129	75536	1.01	ppb		93
54)	Methyl Butyl Ketone	15.15	43	77749m	1.73	ppb		
55)	1,2-dibromoethane	15.61	107	64670	1.03	ppb		99
56)	Tetrachloroethylene	16.12	164	42060	1.08	ppb		99
57)	Chlorobenzene	16.85	112	85635	1.04	ppb		92
58)	Ethylbenzene	17.25	91	152910	1.01	ppb		98
59)	m&p-xylene	17.45	91	259409	2.02	ppb		97
60)	Nonane	18.17	43	75216	0.97	ppb		94
61)	Styrene	17.83	104	76868	1.01	ppb		95
62)	Bromoform	17.53	173	59541	1.08	ppb		98
63)	o-xylene	17.95	91	127334	1.04	ppb		90
64)	Cumene	18.58	105	159357	1.03	ppb		98
66)	1,1,2,2-tetrachloroethane	17.94	83	84630	1.06	ppb		96
67)	Propylbenzene	19.15	120	40919	1.08	ppb	#	1
68)	2-Chlorotoluene	19.11	126	35758	1.00	ppb	#	1
69)	4-ethyltoluene	19.31	105	152383	1.08	ppb		99
70)	1,3,5-trimethylbenzene	19.40	105	136814	1.04	ppb		97
71)	1,2,4-trimethylbenzene	19.88	105	130846	1.05	ppb		99
72)	1,3-dichlorobenzene	20.07	146	71910m	1.12	ppb		
73)	benzyl chloride	20.05	91	73349	0.92	ppb		96
74)	1,4-dichlorobenzene	20.15	146	65206m	1.14	ppb		
75)	1,2,3-trimethylbenzene	20.39	105	130448	1.08	ppb		100
76)	1,2-dichlorobenzene	20.57	146	72082	1.13	ppb		98
77)	1,2,4-trichlorobenzene	22.74	180	30308m	1.30	ppb		
78)	Naphthalene	22.89	128	107997	1.68	ppb		95
79)	Hexachloro-1,3-butadiene	23.31	225	63576	1.24	ppb		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

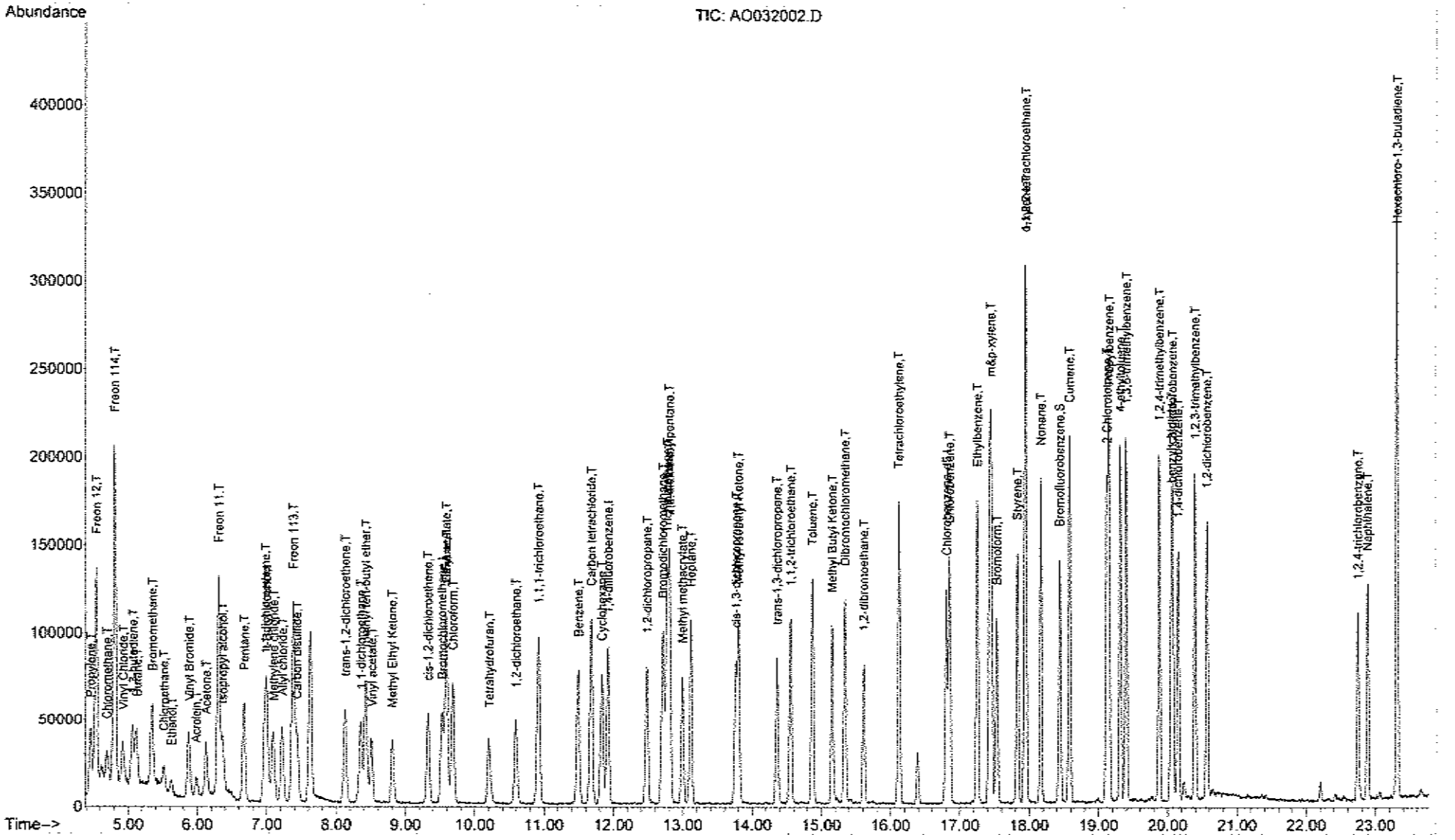
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032002.D
Acq On : 20 Mar 2017 11:14 am
Sample : A1UG_1.0
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 21 9:34 2017

Vial: 3
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration



GC/MS VOLATILES-WHOLE AIR

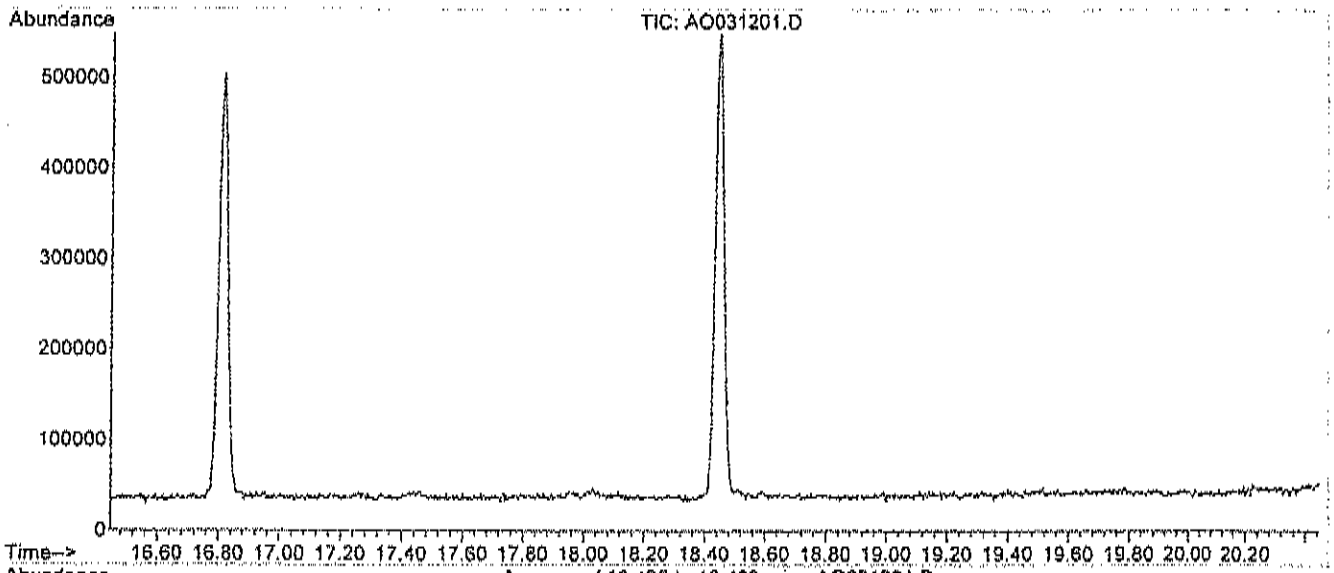
METHOD TO-15

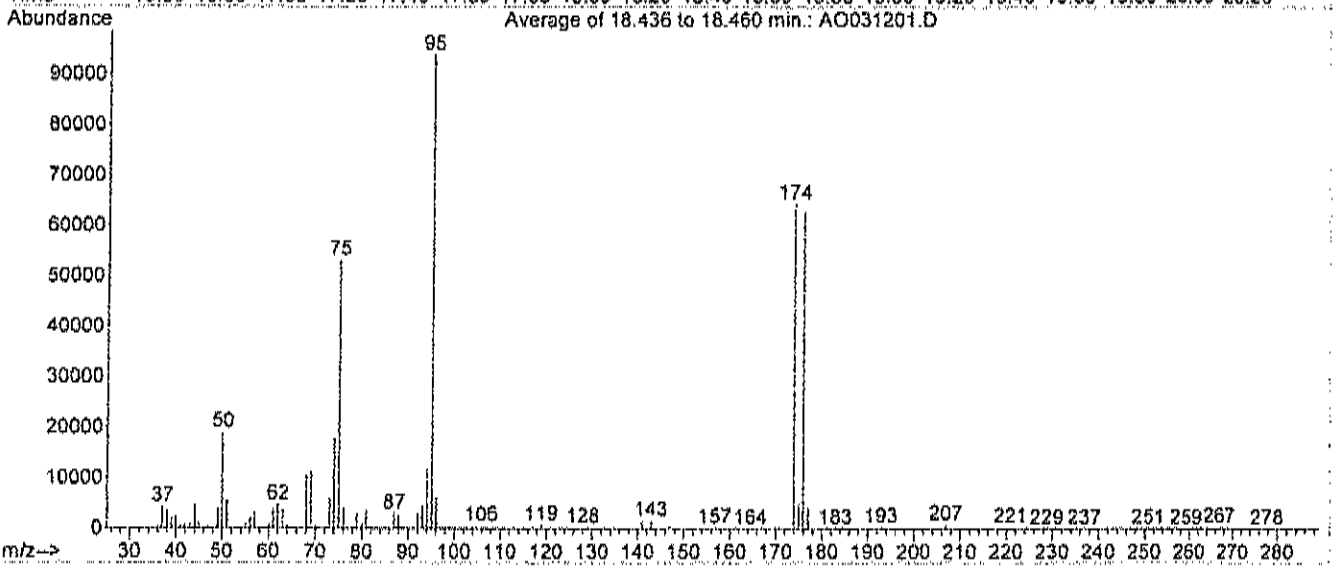
RAW DATA

BFB

Data File : C:\HPCHEM\1\DATA\AO031201.D
Acq On : 12 Mar 2017 12:01 pm
Sample : BFB1UG
Misc : A311_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 1
Operator: RJP
Inst : MSD #1
Multiplr: 1.00





Spectrum Information: Average of 18.436 to 18.460 min.

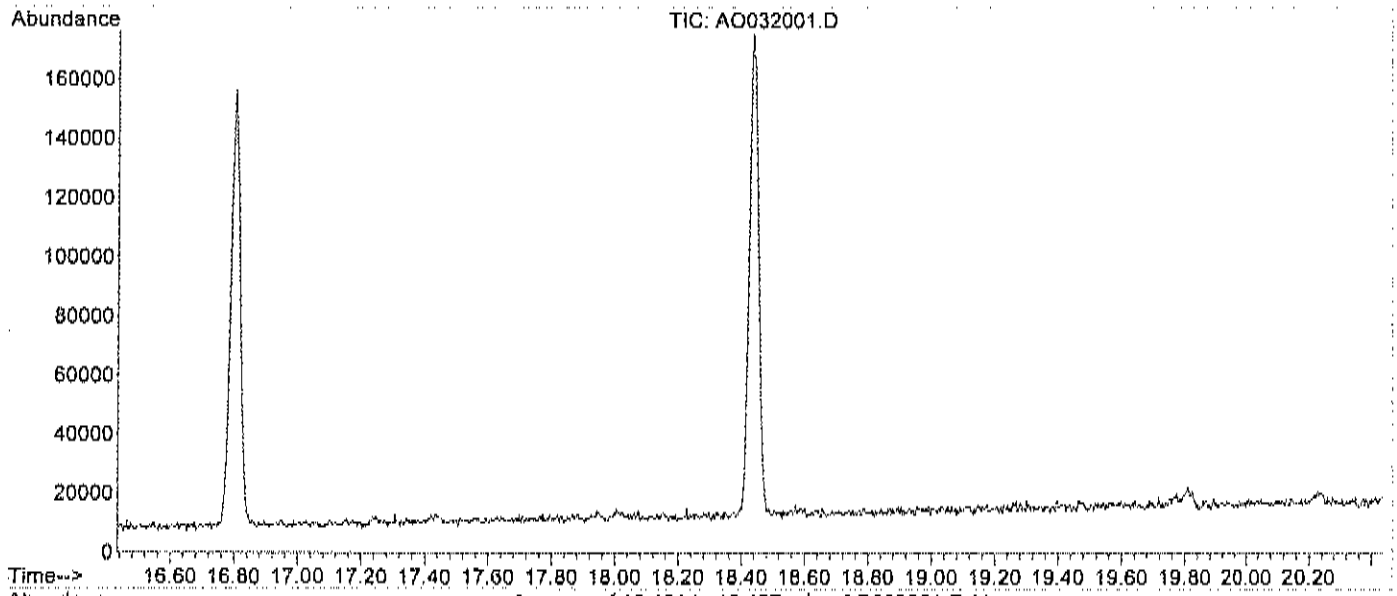
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	20.3	19036	PASS
75	95	30	66	56.6	53175	PASS
95	95	100	100	100.0	93941	PASS
96	95	5	9	6.5	6138	PASS
173	174	0.00	2	0.1	81	PASS
174	95	50	120	68.6	64409	PASS
175	174	4	9	7.7	4942	PASS
176	174	95	101	97.4	62720	PASS
177	176	5	9	6.5	4049	PASS

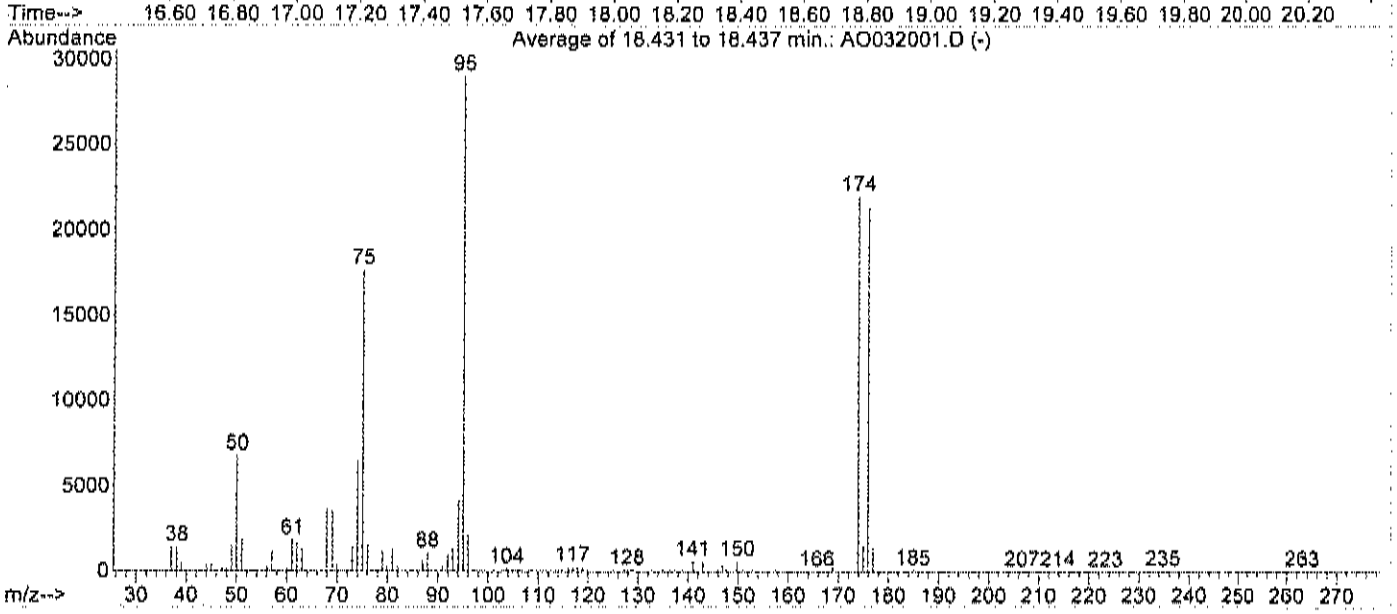
AO031201.D A312_1UG.M Wed Mar 29 11:14:45 2017 MSD1

BFB

Data File : C:\HPCHEM\1\DATA\AO032001.D
Acq On : 20 Mar 2017 8:45 am
Sample : BFB1UG
Misc : A312_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 1
Operator: RJP
Inst : MSD #1
Multiplr: 1.00





Spectrum Information: Average of 18.431 to 18.437 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	23.4	6809	PASS
75	95	30	66	61.0	17722	PASS
95	95	100	100	100.0	29045	PASS
96	95	5	9	7.5	2184	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	75.8	22005	PASS
175	174	4	9	7.0	1532	PASS
176	174	95	101	96.9	21312	PASS
177	176	5	9	6.4	1354	PASS

AO032001.D A227_1UG.M Mon Mar 27 11:25:48 2017 MSD1

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

RAW QC DATA

CENTEK LABORATORIES, LLC

Date: *27-Mar-17*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	AMB1UG-032017	SampType:	MBLK	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	12048
Client ID:	ZZZZZ	Batch ID:	R12048	TestNo:	TO-15			Analysis Date:	3/20/2017	SeqNo:	140947

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.040	0.040									
Vinyl chloride	< 0.040	0.040									

Qualifiers:

.	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032004.D
Acq On : 20 Mar 2017 12:30 pm
Sample : AMB1UG-032017
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:01 2017

Vial: 5
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.54	128	18191	1.00	ppb	0.00
35) 1,4-difluorobenzene	11.92	114	81621	1.00	ppb	-0.02
50) Chlorobenzene-d5	16.81	117	66968	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.44	95	46438	0.93	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 93.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

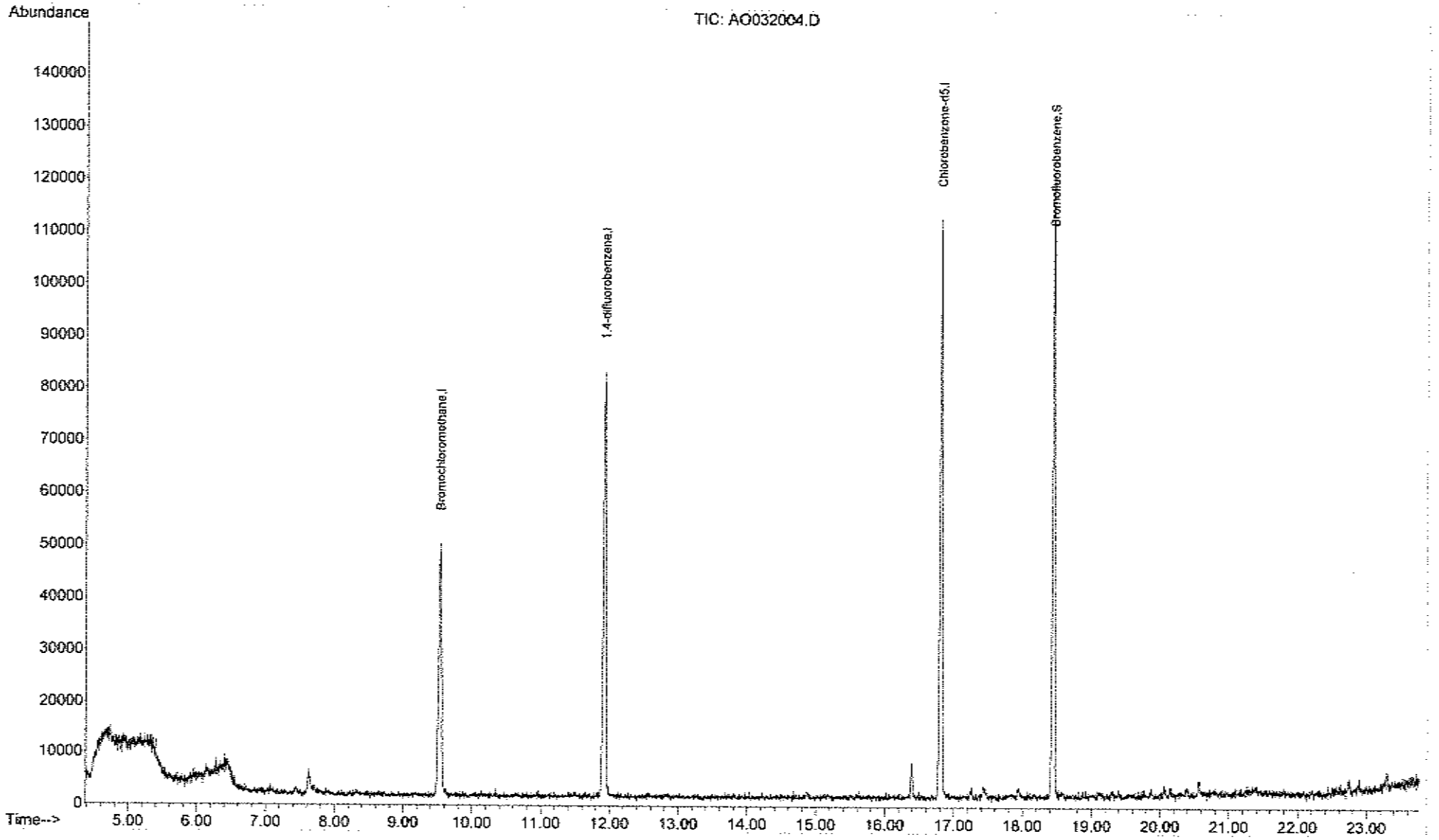
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032004.D
Acq On : 20 Mar 2017 12:30 pm
Sample : AMB1UG-032017
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 14:28 2017

Vial: 5
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration



AO032004.D A227_1UG.M Mon Mar 27 11:24:50 2017 MSD1

CENTEK LABORATORIES, LLC

Date: *27-Mar-17*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID **C1703050-004A MS** SampType: **MS** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **1770-Outdoor-B** Batch ID: **R12048** TestNo: **TO-15** Analysis Date: **3/20/2017** SeqNo: **140955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.030	0.15	1	0	103	70	130				
1,1-Dichloroethane	0.9900	0.15	1	0	99.0	70	130				
1,1-Dichloroethene	0.9300	0.15	1	0	93.0	70	130				
Chloroethane	1.260	0.15	1	0	126	70	130				
Chloromethane	2.100	0.15	1	0.75	135	70	130				S
cis-1,2-Dichloroethene	1.010	0.15	1	0	101	70	130				
Tetrachloroethylene	1.020	0.15	1	0	102	70	130				
trans-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130				
Trichloroethene	1.040	0.040	1	0	104	70	130				
Vinyl chloride	1.200	0.040	1	0	120	70	130				

Sample ID **C1703050-004A MS** SampType: **MSD** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **1770-Outdoor-B** Batch ID: **R12048** TestNo: **TO-15** Analysis Date: **3/20/2017** SeqNo: **140956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.000	0.15	1	0	100	70	130	1.03	2.96	30	
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130	0.99	4.93	30	
1,1-Dichloroethene	0.9100	0.15	1	0	91.0	70	130	0.93	2.17	30	
Chloroethane	1.240	0.15	1	0	124	70	130	1.26	1.60	30	
Chloromethane	1.770	0.15	1	0.75	102	70	130	2.1	17.1	30	
cis-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130	1.01	1.96	30	
Tetrachloroethylene	0.9900	0.15	1	0	99.0	70	130	1.02	2.99	30	
trans-1,2-Dichloroethene	1.000	0.15	1	0	100	70	130	0.98	2.02	30	
Trichloroethene	1.010	0.040	1	0	101	70	130	1.04	2.93	30	

Qualifiers:
- . Results reported are not blank corrected
- E Estimated Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limit
- ND Not Detected at the Limit of Detection
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	C1703050-004A MS	SampType:	MSD	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	12048
Client ID:	1770-Outdoor-B	Batch ID:	R12048	TestNo:	TO-15			Analysis Date:	3/20/2017	SeqNo:	140956

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.240	0.040	1	0	124	70	130	1.2	3.28	30	

Qualifiers:

.	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032015.D
Acq On : 20 Mar 2017 8:36 pm
Sample : C1703050-004A MS
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:11 2017

Vial: 10
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	12965	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.93	114	59084	1.00	ppb		0.00
50) Chlorobenzene-d5	16.80	117	49891	1.00	ppb		-0.01
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	36740	0.98	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 98.00%				
Target Compounds							Qvalue
2) Propylene	4.48	41	28259	1.10	ppb		70
3) Freon 12	4.55	85	145466	1.39	ppb		98
4) Chloromethane	4.71	50	32913m	2.10	ppb		
5) Freon 114	4.82	85	92458	1.18	ppb		86
6) Vinyl Chloride	4.94	62	27374	1.20	ppb		88
7) Butane	5.14	43	44821	1.79	ppb	#	85
8) 1,3-butadiene	5.08	39	23458m	1.47	ppb		
9) Bromomethane	5.36	94	33815	1.20	ppb		90
10) Chloroethane	5.53	64	12894	1.26	ppb	#	79
11) Ethanol	5.63	45	12234	1.65	ppb		83
12) Acrolein	6.00	56	10412	1.42	ppb		89
13) Vinyl Bromide	5.89	106	32515	1.19	ppb		95
14) Freon 11	6.31	101	169477	1.75	ppb		98
15) Acetone	6.13	58	68457	6.44	ppb	#	74
16) Pentane	6.67	42	23703	1.03	ppb	#	36
17) Isopropyl alcohol	6.38	45	35632	1.19	ppb	#	100
18) 1,1-dichloroethene	6.99	96	18919	0.93	ppb	#	81
19) Freon 113	7.39	101	48226	1.08	ppb		88
20) t-Butyl alcohol	7.02	59	33602	0.63	ppb	#	90
21) Methylene chloride	7.11	84	21517	1.09	ppb	#	72
22) Allyl chloride	7.23	41	26795	0.94	ppb		86
23) Carbon disulfide	7.44	76	61052	0.99	ppb		81
24) trans-1,2-dichloroethene	8.13	61	34015	0.98	ppb		88
25) methyl tert-butyl ether	8.44	73	60973	0.87	ppb		86
26) 1,1-dichloroethane	8.36	63	41710	0.99	ppb		95
27) Vinyl acetate	8.51	43	51146m	0.89	ppb		
28) Methyl Ethyl Ketone	8.82	72	10973	1.14	ppb	#	86
29) cis-1,2-dichloroethene	9.33	61	32908	1.01	ppb		86
30) Hexane	9.59	57	31542	1.01	ppb		84
31) Ethyl acetate	9.60	43	63636	0.98	ppb		94
32) Chloroform	9.69	83	59912	1.08	ppb		97
33) Tetrahydrofuran	10.21	42	19700	0.85	ppb		94
34) 1,2-dichloroethane	10.60	62	47299	1.11	ppb		99
36) 1,1,1-trichloroethane	10.93	97	62391	1.03	ppb		97
37) Cyclohexane	11.84	56	32048	0.97	ppb		94
38) Carbon tetrachloride	11.69	117	66318	1.09	ppb		99
39) Benzene	11.50	78	70901	1.17	ppb		90
40) Methyl methacrylate	13.00	41	27013	0.92	ppb	#	92
41) 1,4-dioxane	12.80	58	10092	0.87	ppb		78
42) 2,2,4-trimethylpentane	12.81	57	99120	1.02	ppb		87
43) Heptane	13.11	43	36798	0.99	ppb		99
44) Trichloroethene	12.77	130	27520	1.04	ppb	#	85
45) 1,2-dichloropropane	12.49	63	24899	1.07	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032015.D
Acq On : 20 Mar 2017 8:36 pm
Sample : C1703050-004A MS
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:11 2017

Vial: 10
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	62245	1.07	ppb		100
47)	cis-1,3-dichloropropene	13.77	75	36746	0.93	ppb		98
48)	trans-1,3-dichloropropene	14.36	75	35125	0.90	ppb		96
49)	1,1,2-trichloroethane	14.56	97	26589	1.05	ppb		96
51)	Toluene	14.87	92	46534	1.11	ppb	#	84
52)	Methyl Isobutyl Ketone	13.82	43	30700	0.81	ppb		91
53)	Dibromochloromethane	15.34	129	47736	0.97	ppb		91
54)	Methyl Butyl Ketone	15.16	43	23689	0.80	ppb		91
55)	1,2-dibromoethane	15.62	107	41615	1.01	ppb		97
56)	Tetrachloroethylene	16.12	164	26038	1.02	ppb		98
57)	Chlorobenzene	16.86	112	54851	1.01	ppb		88
58)	Ethylbenzene	17.25	91	101068	1.01	ppb		96
59)	m&p-xylene	17.45	91	171389	2.03	ppb		94
60)	Nonane	18.17	43	52462	1.03	ppb		89
61)	Styrene	17.83	104	46904	0.94	ppb		89
62)	Bromoform	17.53	173	35633	0.98	ppb		97
63)	o-xylene	17.95	91	81698	1.01	ppb		90
64)	Cumene	18.58	105	95674	0.94	ppb		98
66)	1,1,2,2-tetrachloroethane	17.95	83	51559	0.99	ppb		98
67)	Propylbenzene	19.15	120	23644	0.95	ppb	#	1
68)	2-Chlorotoluene	19.12	126	21156	0.90	ppb	#	1
69)	4-ethyltoluene	19.31	105	88185	0.95	ppb		95
70)	1,3,5-trimethylbenzene	19.40	105	81022	0.94	ppb		97
71)	1,2,4-trimethylbenzene	19.88	105	76530	0.94	ppb		99
72)	1,3-dichlorobenzene	20.07	146	39144	0.93	ppb		96
73)	benzyl chloride	20.05	91	32264	0.62	ppb		97
74)	1,4-dichlorobenzene	20.16	146	36837	0.98	ppb		98
75)	1,2,3-trimethylbenzene	20.39	105	73076	0.92	ppb		100
76)	1,2-dichlorobenzene	20.57	146	39067	0.94	ppb		96
77)	1,2,4-trichlorobenzene	22.75	180	15483	1.01	ppb		95
78)	Naphthalene	22.89	128	38752	0.92	ppb		92
79)	Hexachloro-1,3-butadiene	23.31	225	33176	0.99	ppb		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

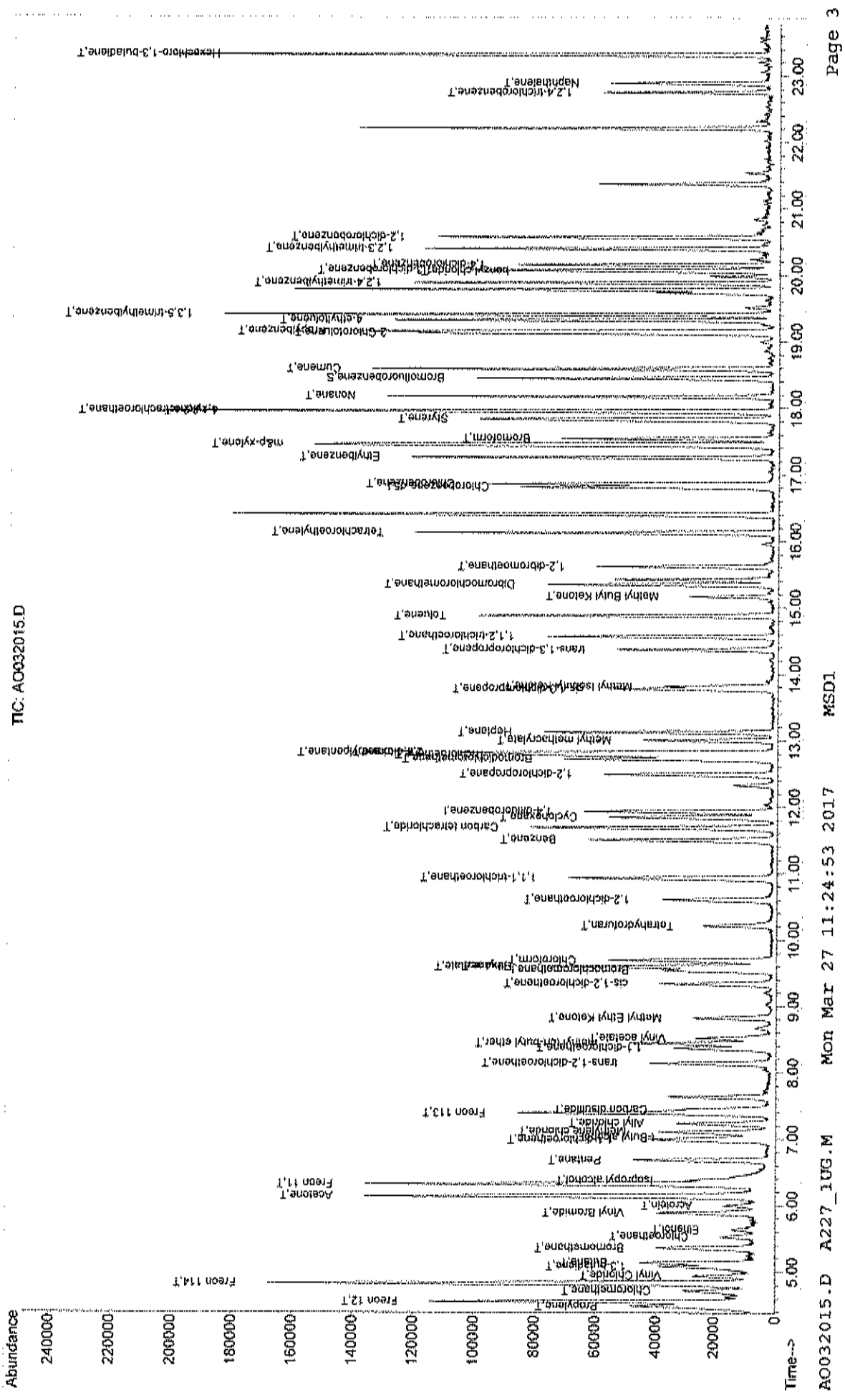
Data File : C:\HPCHEM\1\DATA\A0032015.D
Acq On : 20 Mar 2017 8:36 pm
Sample : C1703050-004A MS
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 14:30 2017

Vial: 10
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration

TIC: A0032015.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032016.D Vial: 11
Acq On : 20 Mar 2017 9:22 pm Operator: RJP
Sample : C1703050-004A MSD Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:12 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	12927	1.00	ppb		-0.02
35) 1,4-difluorobenzene	11.92	114	61212	1.00	ppb		-0.02
50) Chlorobenzene-d5	16.81	117	51251	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.45	95	37767	0.99	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 99.00%				
Target Compounds							Qvalue
2) Propylene	4.47	41	26431	1.03	ppb	#	62
3) Freon 12	4.55	85	145314	1.39	ppb		97
4) Chloromethane	4.71	50	27689m	1.77	ppb		
5) Freon 114	4.81	85	101216	1.30	ppb		91
6) Vinyl Chloride	4.93	62	28079	1.24	ppb		90
7) Butane	5.13	43	40136	1.60	ppb		94
8) 1,3-butadiene	5.07	39	20622m	1.30	ppb		
9) Bromomethane	5.35	94	37149	1.32	ppb		90
10) Chloroethane	5.52	64	12646	1.24	ppb	#	74
11) Ethanol	5.63	45	12999	1.76	ppb		85
12) Acrolein	5.99	56	10096	1.38	ppb		100
13) Vinyl Bromide	5.88	106	37384	1.37	ppb		93
14) Freon 11	6.31	101	169481	1.75	ppb		99
15) Acetone	6.13	58	57800	5.45	ppb	#	82
16) Pentane	6.67	42	24417	1.07	ppb	#	45
17) Isopropyl alcohol	6.37	45	37226	1.24	ppb	#	100
18) 1,1-dichloroethene	6.98	96	18555	0.91	ppb	#	77
19) Freon 113	7.38	101	47673	1.07	ppb	#	86
20) t-Butyl alcohol	7.02	59	37124	0.70	ppb	#	95
21) Methylene chloride	7.10	84	22212	1.13	ppb	#	66
22) Allyl chloride	7.22	41	26682	0.94	ppb		87
23) Carbon disulfide	7.44	76	62425	1.01	ppb		79
24) trans-1,2-dichloroethene	8.14	61	34678	1.00	ppb		86
25) methyl tert-butyl ether	8.43	73	62382	0.89	ppb		86
26) 1,1-dichloroethane	8.36	63	43666	1.04	ppb		95
27) Vinyl acetate	8.52	43	52326m	0.91	ppb		
28) Methyl Ethyl Ketone	8.82	72	11044	1.15	ppb	#	91
29) cis-1,2-dichloroethene	9.33	61	33645	1.03	ppb		85
30) Hexane	9.59	57	31052	0.99	ppb		83
31) Ethyl acetate	9.59	43	64991	1.00	ppb		95
32) Chloroform	9.68	83	59922	1.08	ppb		99
33) Tetrahydrofuran	10.21	42	20938	0.91	ppb		93
34) 1,2-dichloroethane	10.60	62	47434	1.12	ppb		99
36) 1,1,1-trichloroethane	10.92	97	62798	1.00	ppb		96
37) Cyclohexane	11.84	56	30967	0.90	ppb		95
38) Carbon tetrachloride	11.68	117	64840	1.03	ppb		99
39) Benzene	11.49	78	68477	1.09	ppb		89
40) Methyl methacrylate	13.00	41	27316	0.90	ppb	#	93
41) 1,4-dioxane	12.81	58	9733	0.81	ppb		88
42) 2,2,4-trimethylpentane	12.81	57	99924	0.99	ppb		89
43) Heptane	13.12	43	37522	0.97	ppb		95
44) Trichloroethene	12.77	130	27696	1.01	ppb	#	85
45) 1,2-dichloropropane	12.49	63	22963	0.96	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032016.D
Acq On : 20 Mar 2017 9:22 pm
Sample : C1703050-004A MSD
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:12 2017

Vial: 11
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

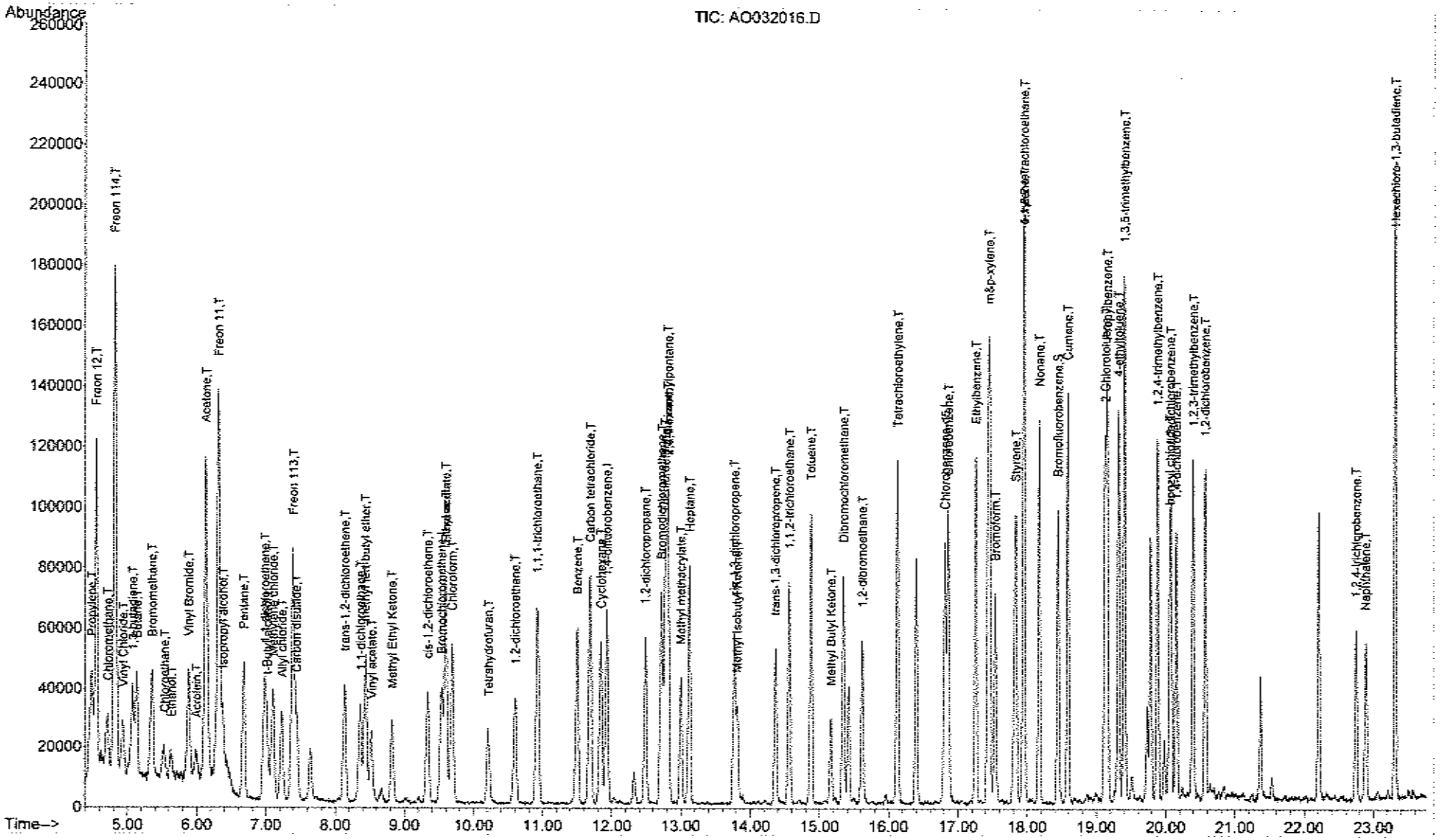
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	61414	1.02	ppb		96
47)	cis-1,3-dichloropropene	13.77	75	38178	0.93	ppb		95
48)	trans-1,3-dichloropropene	14.36	75	35216	0.87	ppb		96
49)	1,1,2-trichloroethane	14.56	97	26816	1.02	ppb		99
51)	Toluene	14.87	92	45325	1.05	ppb	#	81
52)	Methyl Isobutyl Ketone	13.82	43	28029	0.72	ppb		94
53)	Dibromochloromethane	15.35	129	49199	0.98	ppb		95
54)	Methyl Butyl Ketone	15.16	43	25142	0.83	ppb		93
55)	1,2-dibromoethane	15.62	107	42135	1.00	ppb		97
56)	Tetrachloroethylene	16.12	164	26101	0.99	ppb		96
57)	Chlorobenzene	16.85	112	55122	0.99	ppb		86
58)	Ethylbenzene	17.26	91	98191	0.96	ppb		98
59)	m&p-xylene	17.44	91	173144	2.00	ppb		94
60)	Nonane	18.17	43	51432	0.99	ppb		91
61)	Styrene	17.83	104	49128	0.96	ppb		93
62)	Bromoform	17.54	173	35668	0.96	ppb		97
63)	o-xylene	17.95	91	83108	1.00	ppb		87
64)	Cumene	18.58	105	99603	0.95	ppb		98
66)	1,1,2,2-tetrachloroethane	17.95	83	53434	1.00	ppb		97
67)	Propylbenzene	19.15	120	24218	0.94	ppb	#	1
68)	2-Chlorotoluene	19.12	126	21522	0.89	ppb	#	1
69)	4-ethyltoluene	19.31	105	91094	0.96	ppb		95
70)	1,3,5-trimethylbenzene	19.40	105	83231	0.94	ppb		96
71)	1,2,4-trimethylbenzene	19.88	105	77381	0.92	ppb		100
72)	1,3-dichlorobenzene	20.08	146	41672	0.96	ppb		96
73)	benzyl chloride	20.05	91	46491m	0.86	ppb		
74)	1,4-dichlorobenzene	20.15	146	37891	0.98	ppb		97
75)	1,2,3-trimethylbenzene	20.40	105	74424	0.91	ppb		98
76)	1,2-dichlorobenzene	20.57	146	40115	0.94	ppb		99
77)	1,2,4-trichlorobenzene	22.74	180	16509	1.05	ppb		94
78)	Naphthalene	22.89	128	40040	0.93	ppb		96
79)	Hexachloro-1,3-butadiene	23.31	225	35010	1.01	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032016.D Vial: 11
Acq On : 20 Mar 2017 9:22 pm Operator: RJP
Sample : C1703050-004A MSD Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 22 14:31 2017 Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration



AO032016.D A227_1UG.M Mon Mar 27 11:24:57 2017 MSD1

CENTEK LABORATORIES, LLC

Date: *27-Mar-17*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID **ALCS1UG-032017** SampType: **LCS** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **ZZZZZ** Batch ID: **R12048** TestNo: **TO-15** Analysis Date: **3/20/2017** SeqNo: **140948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9800	0.15	1	0	98.0	70	130				
1,1-Dichloroethane	0.9700	0.15	1	0	97.0	70	130				
1,1-Dichloroethene	0.9200	0.15	1	0	92.0	70	130				
Chloroethane	1.060	0.15	1	0	106	70	130				
Chloromethane	1.250	0.15	1	0	125	70	130				
cis-1,2-Dichloroethene	0.9400	0.15	1	0	94.0	70	130				
Tetrachloroethylene	1.040	0.15	1	0	104	70	130				
trans-1,2-Dichloroethene	0.9500	0.15	1	0	95.0	70	130				
Trichloroethene	1.000	0.040	1	0	100	70	130				
Vinyl chloride	1.040	0.040	1	0	104	70	130				

Sample ID **ALCS1UGD-032017** SampType: **LCSD** TestCode: **0.25CT-TCE-** Units: **ppbV** Prep Date: RunNo: **12048**
Client ID: **ZZZZZ** Batch ID: R12048 TestNo: **TO-15** Analysis Date: **3/21/2017** SeqNo: **140949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.090	0.15	1	0	109	70	130	0.98	10.6	30	
1,1-Dichloroethane	1.070	0.15	1	0	107	70	130	0.97	9.80	30	
1,1-Dichloroethene	0.9700	0.15	1	0	97.0	70	130	0.92	5.29	30	
Chloroethane	1.290	0.15	1	0	129	70	130	1.06	19.6	30	
Chloromethane	1.400	0.15	1	0	140	70	130	1.25	11.3	30	S
cis-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130	0.94	9.14	30	
Tetrachloroethylene	1.080	0.15	1	0	106	70	130	1.04	3.77	30	
trans-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130	0.95	8.08	30	
Trichloroethene	1.050	0.040	1	0	105	70	130	1	4.88	30	

Qualifiers:
- `.` Results reported are not blank corrected
- J Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	ALCS1UGD-032017	SampType:	LCSD	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	12048
Client ID:	ZZZZZ	Batch ID:	R12048	TestNo:	TO-15			Analysis Date:	3/21/2017	SeqNo:	140949

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.350	0.040	1	0	135	70	130	1.04	25.9	30	S

Qualifiers:

.	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032003.D Vial: 4
Acq On : 20 Mar 2017 11:53 am Operator: RJP
Sample : ALCS1UG-032017 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:00 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.53	128	18587	1.00	ppb		-0.01
35) 1,4-difluorobenzene	11.92	114	86723	1.00	ppb		-0.01
50) Chlorobenzene-d5	16.81	117	73319	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.44	95	52862	0.96	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 96.00%				
Target Compounds							Qvalue
2) Propylene	4.47	41	31330	0.85	ppb		88
3) Freon 12	4.55	85	154264	1.03	ppb		99
4) Chloromethane	4.72	50	28145m	1.25	ppb		
5) Freon 114	4.81	85	126458	1.13	ppb		90
6) Vinyl Chloride	4.94	62	33874	1.04	ppb		89
7) Butane	5.12	43	38325	1.07	ppb		97
8) 1,3-butadiene	5.07	39	29243	1.28	ppb		92
9) Bromomethane	5.36	94	49442	1.22	ppb		85
10) Chloroethane	5.53	64	15497	1.06	ppb	#	83
11) Ethanol	5.66	45	11196	1.05	ppb	#	75
12) Acrolein	6.01	56	12119	1.15	ppb		98
13) Vinyl Bromide	5.88	106	47236	1.20	ppb		95
14) Freon 11	6.31	101	172231	1.24	ppb		100
15) Acetone	6.15	58	12677	0.83	ppb	#	69
16) Pentane	6.67	42	29834	0.91	ppb	#	42
17) Isopropyl alcohol	6.40	45	46160	1.07	ppb	#	100
18) 1,1-dichloroethene	6.97	96	26895	0.92	ppb	#	84
19) Freon 113	7.39	101	62828	0.98	ppb		89
20) t-Butyl alcohol	7.04	59	69180	0.91	ppb	#	96
21) Methylene chloride	7.10	84	26060	0.92	ppb	#	77
22) Allyl chloride	7.22	41	37344	0.92	ppb		88
23) Carbon disulfide	7.44	76	85393	0.96	ppb		85
24) trans-1,2-dichloroethene	8.13	61	47196	0.95	ppb		89
25) methyl tert-butyl ether	8.44	73	94076	0.93	ppb		94
26) 1,1-dichloroethane	8.35	63	58761	0.97	ppb		96
27) Vinyl acetate	8.52	43	72442m	0.88	ppb		
28) Methyl Ethyl Ketone	8.84	72	14112	1.02	ppb	#	92
29) cis-1,2-dichloroethene	9.33	61	44227	0.94	ppb		88
30) Hexane	9.59	57	41566	0.93	ppb		88
31) Ethyl acetate	9.60	43	91740	0.98	ppb		96
32) Chloroform	9.68	83	78996	0.99	ppb		99
33) Tetrahydrofuran	10.22	42	30958	0.93	ppb		94
34) 1,2-dichloroethane	10.60	62	60781	1.00	ppb		96
36) 1,1,1-trichloroethane	10.93	97	87473	0.98	ppb		98
37) Cyclohexane	11.84	56	46408	0.95	ppb		93
38) Carbon tetrachloride	11.69	117	88272	0.99	ppb		98
39) Benzene	11.49	78	88444	0.99	ppb		90
40) Methyl methacrylate	13.00	41	42926	1.00	ppb	#	96
41) 1,4-dioxane	12.80	58	19210	1.13	ppb	#	62
42) 2,2,4-trimethylpentane	12.81	57	138592	0.97	ppb		90
43) Heptane	13.12	43	50039	0.92	ppb		98
44) Trichloroethene	12.77	130	38863	1.00	ppb		86
45) 1,2-dichloropropane	12.49	63	33753	0.99	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032003.D
Acq On : 20 Mar 2017 11:53 am
Sample : ALCS1UG-032017
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:00 2017

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46) Bromodichloromethane	12.72	83	84785	1.00	ppb		100
47) cis-1,3-dichloropropene	13.77	75	54234	0.94	ppb		98
48) trans-1,3-dichloropropene	14.36	75	54947	0.96	ppb		98
49) 1,1,2-trichloroethane	14.56	97	38699	1.04	ppb		98
51) Toluene	14.88	92	60244	0.98	ppb		86
52) Methyl Isobutyl Ketone	13.82	43	70351	1.26	ppb		94
53) Dibromochloromethane	15.34	129	71393	0.99	ppb		92
54) Methyl Butyl Ketone	15.17	43	51845m	1.20	ppb		
55) 1,2-dibromoethane	15.62	107	59924	0.99	ppb		96
56) Tetrachloroethylene	16.12	164	39067	1.04	ppb		100
57) Chlorobenzene	16.86	112	80124	1.01	ppb		90
58) Ethylbenzene	17.25	91	144494	0.99	ppb		97
59) m&p-xylene	17.45	91	251734	2.03	ppb		96
60) Nonane	18.17	43	73372	0.98	ppb		92
61) Styrene	17.83	104	73162	1.00	ppb		95
62) Bromoform	17.54	173	56409	1.06	ppb		98
63) o-xylene	17.95	91	120417	1.02	ppb		89
64) Cumene	18.58	105	150134	1.01	ppb		99
66) 1,1,2,2-tetrachloroethane	17.94	83	80139	1.05	ppb		98
67) Propylbenzene	19.15	120	37257	1.02	ppb	#	1
68) 2-Chlorotoluene	19.12	126	34574	1.00	ppb	#	1
69) 4-ethyltoluene	19.31	105	140340	1.03	ppb		98
70) 1,3,5-trimethylbenzene	19.40	105	127451	1.00	ppb		98
71) 1,2,4-trimethylbenzene	19.88	105	120118	1.00	ppb		99
72) 1,3-dichlorobenzene	20.07	146	67087	1.08	ppb		96
73) benzyl chloride	20.05	91	69080	0.90	ppb		98
74) 1,4-dichlorobenzene	20.15	146	62506	1.13	ppb		98
75) 1,2,3-trimethylbenzene	20.39	105	120306	1.03	ppb		100
76) 1,2-dichlorobenzene	20.56	146	65808	1.07	ppb		98
77) 1,2,4-trichlorobenzene	22.74	180	27753	1.24	ppb		88
78) Naphthalene	22.89	128	83248	1.35	ppb		95
79) Hexachloro-1,3-butadiene	23.31	225	57808	1.17	ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

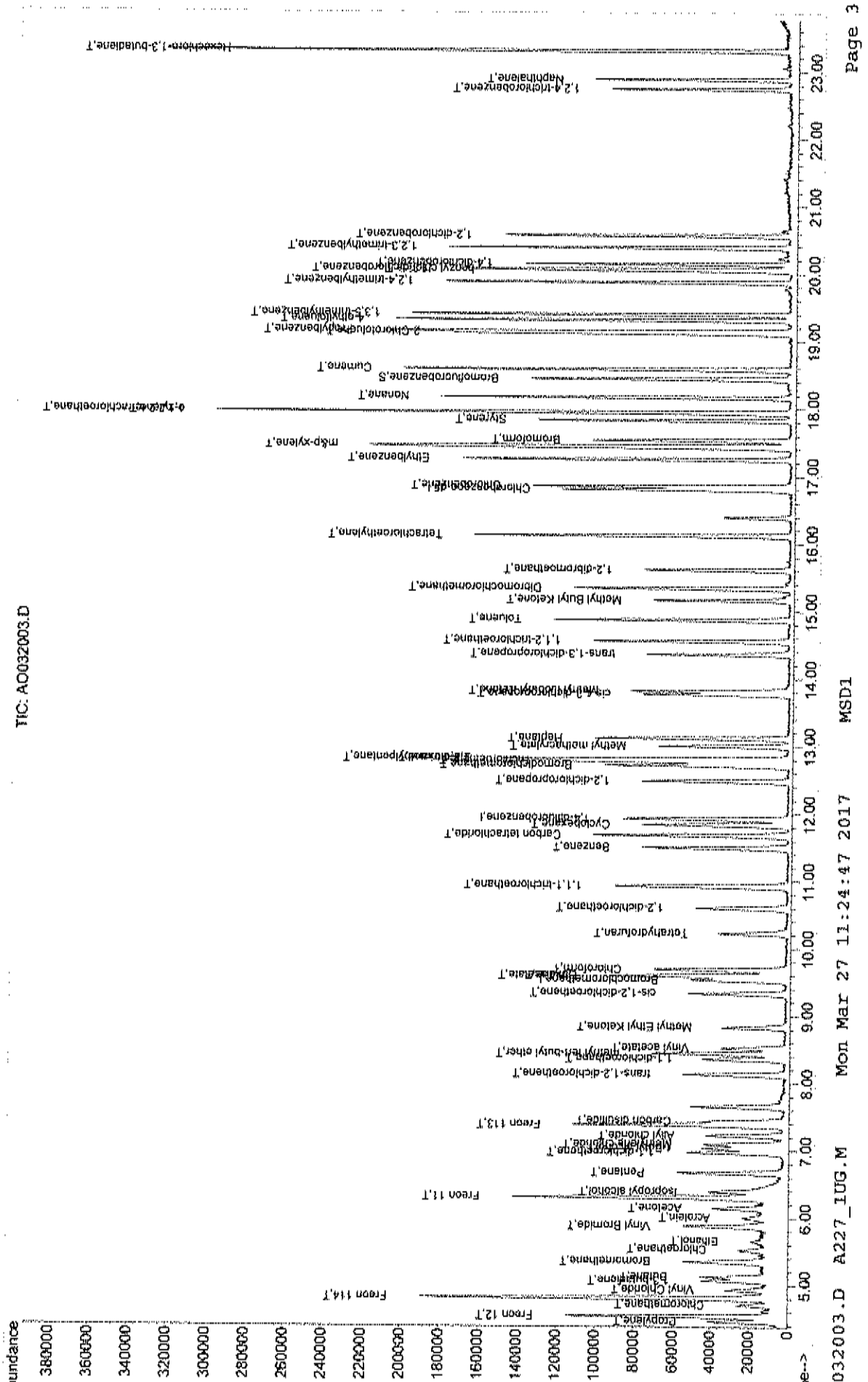
Data File : C:\HPCHEM\1\DATA\AO032003.D
Acq On : 20 Mar 2017 11:53 am
Sample : ALCS1UG-032017
Misc : A312_1UG
MS Integration Params: RTEINT.p
Quant Time: Mar 22 14:28 2017

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration

TIC: AO032003.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032031.D Vial: 26
Acq On : 21 Mar 2017 7:21 am Operator: RJP
Sample : ALCS1UGD-032017 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:27 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	9.54	128	11608m	1.00	ppb		0.00
35) 1,4-difluorobenzene	11.93	114	53720	1.00	ppb		0.00
50) Chlorobenzene-d5	16.81	117	44926	1.00	ppb		0.00
System Monitoring Compounds							
65) Bromofluorobenzene	18.44	95	32608	0.97	ppb		0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 97.00%				
Target Compounds							Qvalue
2) Propylene	4.47	41	21599	0.94	ppb		83
3) Freon 12	4.54	85	126585	1.35	ppb		98
4) Chloromethane	4.71	50	19606m	1.40	ppb		
5) Freon 114	4.81	85	103686	1.48	ppb		89
6) Vinyl Chloride	4.94	62	27631	1.35	ppb		94
7) Butane	5.13	43	28728m	1.28	ppb		
8) 1,3-butadiene	5.07	39	18357m	1.29	ppb		
9) Bromomethane	5.35	94	31419m	1.25	ppb		
10) Chloroethane	5.53	64	11828	1.29	ppb	#	75
11) Ethanol	5.63	45	7894	1.19	ppb		73
12) Acrolein	5.99	56	8962	1.36	ppb		94
13) Vinyl Bromide	5.87	106	35029	1.43	ppb		93
14) Freon 11	6.31	101	148570	1.71	ppb		98
15) Acetone	6.13	58	10526	1.11	ppb	#	72
16) Pentane	6.67	42	19439	0.95	ppb	#	33
17) Isopropyl alcohol	6.38	45	29814	1.11	ppb	#	100
18) 1,1-dichloroethene	6.98	96	17787	0.97	ppb	#	79
19) Freon 113	7.39	101	43179	1.08	ppb		87
20) t-Butyl alcohol	7.02	59	26893	0.57	ppb	#	92
21) Methylene chloride	7.10	84	17914	1.02	ppb	#	73
22) Allyl chloride	7.23	41	24913	0.98	ppb		85
23) Carbon disulfide	7.45	76	56966	1.03	ppb		84
24) trans-1,2-dichloroethene	8.14	61	31969	1.03	ppb		87
25) methyl tert-butyl ether	8.44	73	58712	0.93	ppb		87
26) 1,1-dichloroethane	8.36	63	40365	1.07	ppb		97
27) Vinyl acetate	8.52	43	42697m	0.83	ppb		
28) Methyl Ethyl Ketone	8.82	72	8669	1.00	ppb		95
29) cis-1,2-dichloroethene	9.33	61	30087	1.03	ppb		86
30) Hexane	9.59	57	27363	0.98	ppb		84
31) Ethyl acetate	9.60	43	56834	0.97	ppb		96
32) Chloroform	9.70	83	55916	1.12	ppb		99
33) Tetrahydrofuran	10.22	42	20032	0.97	ppb		94
34) 1,2-dichloroethane	10.59	62	42908	1.13	ppb		96
36) 1,1,1-trichloroethane	10.92	97	60452	1.09	ppb		97
37) Cyclohexane	11.84	56	30092	1.00	ppb		96
38) Carbon tetrachloride	11.69	117	58605	1.06	ppb		99
39) Benzene	11.50	78	58801	1.06	ppb		89
40) Methyl methacrylate	13.00	41	25105	0.94	ppb	#	94
41) 1,4-dioxane	12.81	58	7671	0.73	ppb		93
42) 2,2,4-trimethylpentane	12.81	57	90324	1.02	ppb		87
43) Heptane	13.12	43	32899	0.97	ppb		98
44) Trichloroethene	12.77	130	25190	1.05	ppb	#	80
45) 1,2-dichloropropane	12.49	63	22204	1.05	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032031.D Vial: 26
Acq On : 21 Mar 2017 7:21 am Operator: RJP
Sample : ALC61UGD-032017 Inst : MSD #1
Misc : A312_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 21 09:03:27 2017 Quant Results File: A312_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Bromodichloromethane	12.72	83	58740	1.11	ppb		100
47)	cis-1,3-dichloropropene	13.77	75	35366	0.99	ppb		96
48)	trans-1,3-dichloropropene	14.36	75	31878	0.90	ppb		96
49)	1,1,2-trichloroethane	14.56	97	24546	1.07	ppb		99
51)	Toluene	14.88	92	39166	1.03	ppb	#	82
52)	Methyl Isobutyl Ketone	13.81	43	17978	0.53	ppb		92
53)	Dibromochloromethane	15.34	129	46029	1.04	ppb		92
54)	Methyl Butyl Ketone	15.17	43	16037m	0.60	ppb		
55)	1,2-dibromoethane	15.62	107	39172	1.06	ppb		98
56)	Tetrachloroethylene	16.12	164	25049	1.08	ppb		99
57)	Chlorobenzene	16.86	112	51235	1.05	ppb		87
58)	Ethylbenzene	17.26	91	94417	1.05	ppb		97
59)	m&p-xylene	17.45	91	163012	2.15	ppb		93
60)	Nonane	18.17	43	47832	1.05	ppb		92
61)	Styrene	17.84	104	45856	1.02	ppb		94
62)	Bromoform	17.54	173	32831	1.00	ppb		98
63)	o-xylene	17.95	91	78894	1.09	ppb		89
64)	Cumene	18.59	105	96973	1.06	ppb		98
66)	1,1,2,2-tetrachloroethane	17.95	83	51587	1.10	ppb		97
67)	Propylbenzene	19.15	120	23138	1.03	ppb	#	1
68)	2-Chlorotoluene	19.12	126	22343	1.06	ppb	#	1
69)	4-ethyltoluene	19.32	105	89431	1.07	ppb		95
70)	1,3,5-trimethylbenzene	19.40	105	81609	1.05	ppb		93
71)	1,2,4-trimethylbenzene	19.88	105	74574	1.01	ppb		98
72)	1,3-dichlorobenzene	20.07	146	41378m	1.09	ppb		
73)	benzyl chloride	20.05	91	32847	0.70	ppb		99
74)	1,4-dichlorobenzene	20.15	146	38590m	1.14	ppb		
75)	1,2,3-trimethylbenzene	20.39	105	73090	1.02	ppb		99
76)	1,2-dichlorobenzene	20.57	146	40631	1.08	ppb		99
77)	1,2,4-trichlorobenzene	22.75	180	14239	1.04	ppb		97
78)	Naphthalene	22.89	128	32788	0.87	ppb		93
79)	Hexachloro-1,3-butadiene	23.31	225	32842	1.08	ppb		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AO032031.D A227_1UG.M Mon Mar 27 11:25:00 2017 MSD1 Page 2

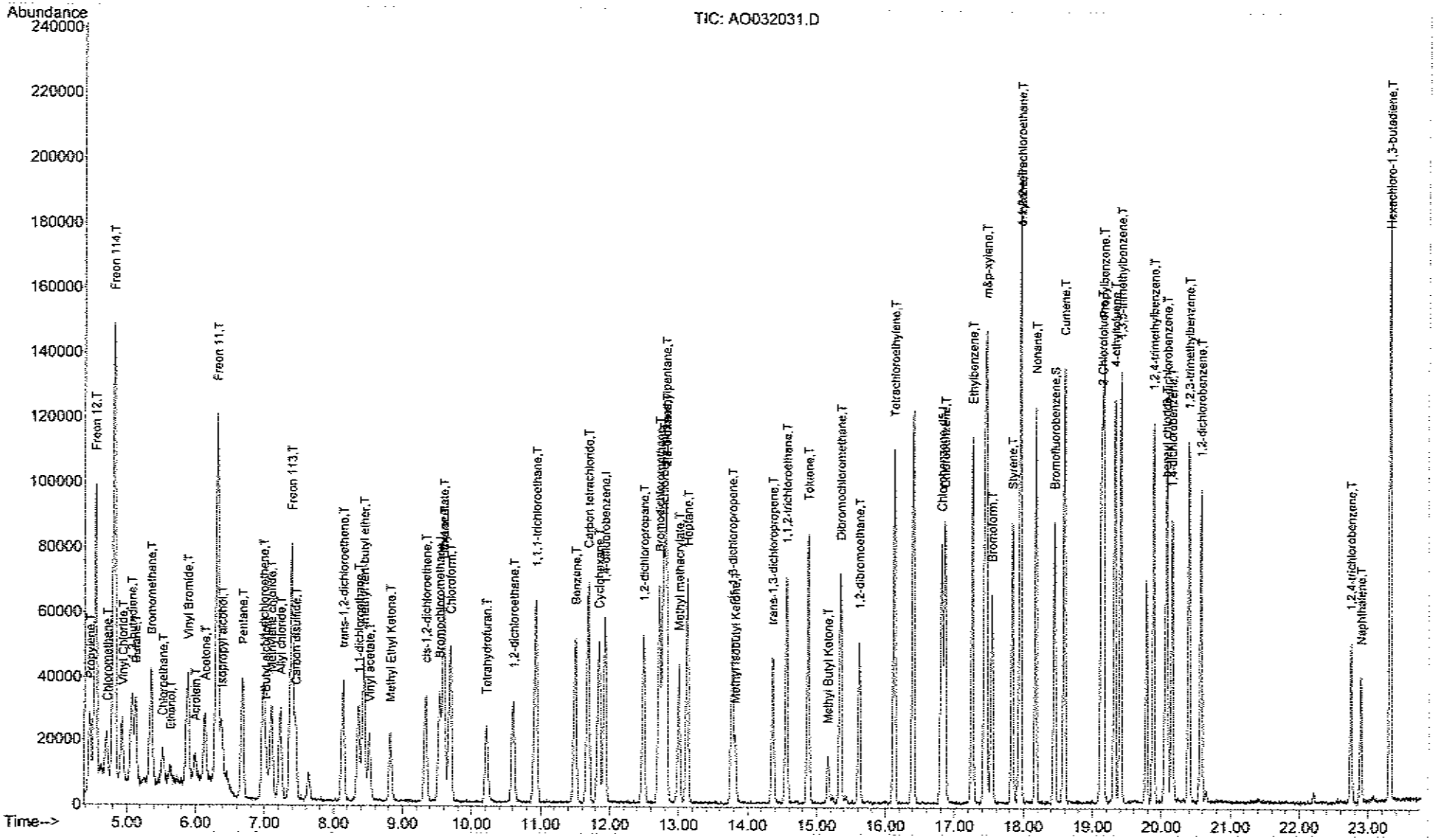
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AO032031.D
Acq On : 21 Mar 2017 7:21 am
Sample : ALCS1UGD-032017
Misc : A312_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 22 15:06 2017

Vial: 26
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A312_1UG.RES

Method : C:\HPCHEM\1\METHODS\A227_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Mar 27 11:22:00 2017
Response via : Initial Calibration



AO032031.D A227_1UG.M Mon Mar 27 11:25:01 2017 MSD1

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INJECTION LOG

Injection Log

Directory: C:\HPCHEM\1\DATA

Turnover #: 1
Internal Standard Stock #: A1513
Standard Stock #: A1514
LCS Stock #: A1515
Method Ref: EPA TO-15 / Jan. 1999

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
111	3	Ao031203.d	1.	A1UG	A312_1UG	12 Mar 2017 13:55
112	4	Ao031204.d	1.	A1UG_2.0	A312_1UG	12 Mar 2017 14:38
113	5	Ao031205.d	1.	A1UG_1.50	A312_1UG	12 Mar 2017 15:19
114	6	Ao031206.d	1.	A1UG_1.25	A312_1UG	12 Mar 2017 15:59
115	7	Ao031207.d	1.	A1UG_1.0	A312_1UG	12 Mar 2017 16:39
116	8	Ao031208.d	1.	A1UG_0.75	A312_1UG	12 Mar 2017 17:18
117	9	Ao031209.d	1.	A1UG_0.50	A312_1UG	12 Mar 2017 17:56
118	10	Ao031210.d	1.	A1UG_0.30	A312_1UG	12 Mar 2017 18:33
119	11	Ao031211.d	1.	A1UG_0.15	A312_1UG	12 Mar 2017 19:10
120	12	Ao031212.d	1.	A1UG_0.10	A312_1UG	12 Mar 2017 20:54
121	13	Ao031213.d	1.	A1UG_0.04	A312_1UG	12 Mar 2017 21:30
122	1	Ao031214.d	1.	AMB1UG_031217	A312_1UG	12 Mar 2017 22:44
123	2	Ao031215.d	1.	IDL1UG #	A312_1UG	12 Mar 2017 23:21
124	3	Ao031216.d	1.	IDL1UG #	A312_1UG	12 Mar 2017 23:58
125	4	Ao031217.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 00:36
126	5	Ao031218.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 01:13
127	6	Ao031219.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 01:50
128	7	Ao031220.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 02:28
129	8	Ao031221.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 03:05
130	9	Ao031222.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 03:42
131	10	Ao031223.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 04:19
132		Ao031224.d	1.	No MS or GC data present		
133	1	Ao031301.d	1.	BFB1UG	A312_1UG	13 Mar 2017 07:34
134	2	Ao031302.d	1.	A1UG_1.0	A312_1UG	13 Mar 2017 08:14
135	3	Ao031303.d	1.	ALCS1UG-031317	A312_1UG	13 Mar 2017 09:12
136	4	Ao031304.d	1.	AMB1UG-031317	A312_1UG	13 Mar 2017 09:48
137	21	Ao031305.d	1.	C1703035-001A	A312_1UG	13 Mar 2017 10:47
138	22	Ao031306.d	1.	C1703035-013A	A312_1UG	13 Mar 2017 11:27
139	23	Ao031307.d	1.	C1703035-013A 10X	A312_1UG	13 Mar 2017 12:04
140	24	Ao031308.d	1.	C1703035-013A 90X	A312_1UG	13 Mar 2017 12:41
141	25	Ao031309.d	1.	C1703035-019A	A312_1UG	13 Mar 2017 13:17
142	26	Ao031310.d	1.	WAC031317A	A312_1UG	13 Mar 2017 13:56
143	27	Ao031311.d	1.	WAC031317B	A312_1UG	13 Mar 2017 14:34
144	28	Ao031312.d	1.	WAC031317C	A312_1UG	13 Mar 2017 15:12
145	29	Ao031313.d	1.	WAC031317D	A312_1UG	13 Mar 2017 15:49
146	30	Ao031314.d	1.	WAC031317E	A312_1UG	13 Mar 2017 16:27
147	31	Ao031315.d	1.	WAC031317F	A312_1UG	13 Mar 2017 17:05
148	1	Ao031316.d	1.	C1703035-004A	A312_1UG	13 Mar 2017 17:45
149	2	Ao031317.d	1.	C1703035-006A	A312_1UG	13 Mar 2017 18:25
150	3	Ao031318.d	1.	C1703035-007A	A312_1UG	13 Mar 2017 19:05
151	4	Ao031319.d	1.	C1703035-008A	A312_1UG	13 Mar 2017 19:46
152	5	Ao031320.d	1.	C1703035-009A	A312_1UG	13 Mar 2017 20:27
153	6	Ao031321.d	1.	C1703035-010A	A312_1UG	13 Mar 2017 21:07
154	7	Ao031322.d	1.	C1703035-011A	A312_1UG	13 Mar 2017 21:47
155	8	Ao031323.d	1.	C1703035-012A	A312_1UG	13 Mar 2017 22:27
156	9	Ao031324.d	1.	C1703035-015A	A312_1UG	13 Mar 2017 23:07
157	10	Ao031325.d	1.	C1703035-016A	A312_1UG	13 Mar 2017 23:47
158	11	Ao031326.d	1.	C1703035-017A	A312_1UG	14 Mar 2017 00:27
159	12	Ao031327.d	1.	C1703035-018A	A312_1UG	14 Mar 2017 01:07
160	13	Ao031328.d	1.	ALCS1UG	A312_1UG	14 Mar 2017 01:47
161	14	Ao031329.d	1.	ALCS1UGD-031317	A312_1UG	14 Mar 2017 02:27
162	15	Ao031330.d	1.	C1703035-004A 10x	A312_1UG	14 Mar 2017 03:03
163	16	Ao031331.d	1.	C1703035-006A 10x	A312_1UG	14 Mar 2017 03:40
164	17	Ao031332.d	1.	C1703035-006A 40x	A312_1UG	14 Mar 2017 04:17
165	18	Ao031333.d	1.	C1703035-007A 10x	A312_1UG	14 Mar 2017 04:54

Injection Log

Directory: C:\HPCHEM\1\DATA

Instrument #: 1
Internal Standard Stock #: A1513
Standard Stock #: A1914
LCS Stock #: A1915
Misc Info: Method Ref: EPA TO-15 / Jan. 1999

ne	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
11	3	Ao031203.d	1.	A1UG	A312_1UG	12 Mar 2017 13:55
12	4	Ao031204.d	1.	A1UG_2.0	A312_1UG	12 Mar 2017 14:38
13	5	Ao031205.d	1.	A1UG_1.50	A312_1UG	12 Mar 2017 15:19
14	6	Ao031206.d	1.	A1UG_1.25	A312_1UG	12 Mar 2017 15:59
15	7	Ao031207.d	1.	A1UG_1.0	A312_1UG	12 Mar 2017 16:39
16	8	Ao031208.d	1.	A1UG_0.75	A312_1UG	12 Mar 2017 17:18
17	9	Ao031209.d	1.	A1UG_0.50	A312_1UG	12 Mar 2017 17:56
18	10	Ao031210.d	1.	A1UG_0.30	A312_1UG	12 Mar 2017 18:33
19	11	Ao031211.d	1.	A1UG_0.15	A312_1UG	12 Mar 2017 19:10
20	12	Ao031212.d	1.	A1UG_0.10	A312_1UG	12 Mar 2017 20:54
21	13	Ao031213.d	1.	A1UG_0.04	A312_1UG	12 Mar 2017 21:30
22	1	Ao031214.d	1.	AMB1UG_031217	A312_1UG	12 Mar 2017 22:44
23	2	Ao031215.d	1.	IDL1UG #	A312_1UG	12 Mar 2017 23:21
24	3	Ao031216.d	1.	IDL1UG #	A312_1UG	12 Mar 2017 23:58
25	4	Ao031217.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 00:36
26	5	Ao031218.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 01:13
27	6	Ao031219.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 01:50
28	7	Ao031220.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 02:28
29	8	Ao031221.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 03:05
30	9	Ao031222.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 03:42
31	10	Ao031223.d	1.	IDL1UG #	A312_1UG	13 Mar 2017 04:19
32		Ao031224.d	1.	No MS or GC data present		
33	1	Ao031301.d	1.	BFB1UG	A312_1UG	13 Mar 2017 07:34
34	2	Ao031302.d	1.	A1UG_1.0	A312_1UG	13 Mar 2017 08:14
35	3	Ao031303.d	1.	ALCS1UG-031317	A312_1UG	13 Mar 2017 09:12
36	4	Ao031304.d	1.	AMB1UG-031317	A312_1UG	13 Mar 2017 09:48
37	21	Ao031305.d	1.	C1703035-001A	A312_1UG	13 Mar 2017 10:47
38	22	Ao031306.d	1.	C1703035-013A	A312_1UG	13 Mar 2017 11:27
39	23	Ao031307.d	1.	C1703035-013A 10X	A312_1UG	13 Mar 2017 12:04
40	24	Ao031308.d	1.	C1703035-013A 90X	A312_1UG	13 Mar 2017 12:41
41	25	Ao031309.d	1.	C1703035-019A	A312_1UG	13 Mar 2017 13:17
42	26	Ao031310.d	1.	WAC031317A	A312_1UG	13 Mar 2017 13:56
43	27	Ao031311.d	1.	WAC031317B	A312_1UG	13 Mar 2017 14:34
44	28	Ao031312.d	1.	WAC031317C	A312_1UG	13 Mar 2017 15:12
45	29	Ao031313.d	1.	WAC031317D	A312_1UG	13 Mar 2017 15:49
46	30	Ao031314.d	1.	WAC031317E	A312_1UG	13 Mar 2017 16:27
47	31	Ao031315.d	1.	WAC031317F	A312_1UG	13 Mar 2017 17:05
48	1	Ao031316.d	1.	C1703035-004A	A312_1UG	13 Mar 2017 17:45
49	2	Ao031317.d	1.	C1703035-006A	A312_1UG	13 Mar 2017 18:25
50	3	Ao031318.d	1.	C1703035-007A	A312_1UG	13 Mar 2017 19:05
51	4	Ao031319.d	1.	C1703035-008A	A312_1UG	13 Mar 2017 19:46
52	5	Ao031320.d	1.	C1703035-009A	A312_1UG	13 Mar 2017 20:27
53	6	Ao031321.d	1.	C1703035-010A	A312_1UG	13 Mar 2017 21:07
54	7	Ao031322.d	1.	C1703035-011A	A312_1UG	13 Mar 2017 21:47
55	8	Ao031323.d	1.	C1703035-012A	A312_1UG	13 Mar 2017 22:27
56	9	Ao031324.d	1.	C1703035-015A	A312_1UG	13 Mar 2017 23:07
57	10	Ao031325.d	1.	C1703035-016A	A312_1UG	13 Mar 2017 23:47
58	11	Ao031326.d	1.	C1703035-017A	A312_1UG	14 Mar 2017 00:27
59	12	Ao031327.d	1.	C1703035-018A	A312_1UG	14 Mar 2017 01:07
60	13	Ao031328.d	1.	ALCS1UG	A312_1UG	14 Mar 2017 01:47
61	14	Ao031329.d	1.	ALCS1UGD-031317	A312_1UG	14 Mar 2017 02:27
62	15	Ao031330.d	1.	C1703035-004A 10x	A312_1UG	14 Mar 2017 03:03
63	16	Ao031331.d	1.	C1703035-006A 10x	A312_1UG	14 Mar 2017 03:40
64	17	Ao031332.d	1.	C1703035-006A 40x	A312_1UG	14 Mar 2017 04:17
65	18	Ao031333.d	1.	C1703035-007A 10x	A312_1UG	14 Mar 2017 04:54

Injection Log

Directory: C:\HPCHEM\1\DATA

Instrument #: 1
Internal Standard Stock #: A1913
Standard Stock #: A1914
LCS Stock #: A1915
Method Ref: EPA TO-15 / Jan. 1999

ine	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
76	16	Ao032021.d	1.	C1703049-002A	A312_1UG	21 Mar 2017 00:53
77	17	Ao032022.d	1.	C1703049-004A	A312_1UG	21 Mar 2017 01:33
78	18	Ao032023.d	1.	C1703049-005A	A312_1UG	21 Mar 2017 02:13
79	19	Ao032024.d	1.	C1703049-001A	A312_1UG	21 Mar 2017 02:54
80	20	Ao032025.d	1.	C1703049-003A	A312_1UG	21 Mar 2017 03:35
81	21	Ao032026.d	1.	C1703050-004A 10x	A312_1UG	21 Mar 2017 04:12
82	22	Ao032027.d	1.	C1703050-001A 10x	A312_1UG	21 Mar 2017 04:49
83	23	Ao032028.d	1.	C1703050-002A 10x	A312_1UG	21 Mar 2017 05:26
84	24	Ao032029.d	1.	C1703050-003A 10x	A312_1UG	21 Mar 2017 06:04
85	25	Ao032030.d	1.	C1703050-005A 10x	A312_1UG	21 Mar 2017 06:41
86	26	Ao032031.d	1.	ALCS1UGD-032017	A312_1UG	21 Mar 2017 07:21
87	27	Ao032032.d	1.	C1703049-002A 10x	A312_1UG	21 Mar 2017 07:59
88	28	Ao032033.d	1.	C1703049-004A 10x	A312_1UG	21 Mar 2017 08:36
89		Ao032034.d	1.	No MS or GC data present		
90	1	Ao032101.d	1.	BFB1UG	A312_1UG	21 Mar 2017 10:11
91	2	Ao032102.d	1.	BFB1UG	A312_1UG	21 Mar 2017 11:32
92	3	Ao032103.d	1.	A1UG_1.0	A312_1UG	21 Mar 2017 12:21
93	4	Ao032104.d	1.	ALCS1UG-032117	A312_1UG	21 Mar 2017 13:01
94	5	Ao032105.d	1.	AMB1UG-032117	A312_1UG	21 Mar 2017 13:38
95	6	Ao032106.d	1.	C1703055-001A 10X	A312_1UG	21 Mar 2017 14:33
96	7	Ao032107.d	1.	C1703055-001A	A312_1UG	21 Mar 2017 15:16
97	8	Ao032108.d	1.	C1703055-001A 40X	A312_1UG	21 Mar 2017 15:54
98	9	Ao032109.d	1.	C1703049-005A 9X	A312_1UG	21 Mar 2017 16:34
99	10	Ao032110.d	1.	C1703049-005A 90X	A312_1UG	21 Mar 2017 17:11
00	11	Ao032111.d	1.	C1703049-001A 10X	A312_1UG	21 Mar 2017 17:49
01	12	Ao032112.d	1.	C1703049-001A 20X	A312_1UG	21 Mar 2017 18:26
02	13	Ao032113.d	1.	C1703049-003A 10X	A312_1UG	21 Mar 2017 19:04
03	14	Ao032114.d	1.	C1703049	A312_1UG -003A 20X	21 Mar 2017 19:41
04		Ao032115.d	1.	No MS or GC data present		
05	1	Ao032301.d	1.	BFB1UG	A312_1UG	23 Mar 2017 08:29
06	3	Ao032302.d	1.	A1UG_1.0	A312_1UG	23 Mar 2017 12:28
07	4	Ao032303.d	1.	ALCS1UG-032317	A312_1UG	23 Mar 2017 13:20
08	5	Ao032304.d	1.	AMB1UG-032317	A312_1UG	23 Mar 2017 13:57
09	21	Ao032305.d	1.	C1703059-010A	A312_1UG	23 Mar 2017 14:45
0	21	Ao032306.d	1.	C1703059-001A	A312_1UG	23 Mar 2017 15:46
1	22	Ao032307.d	1.	C1703059-001A MS	A312_1UG	23 Mar 2017 16:33
2	23	Ao032308.d	1.	C1703059-001A MSD	A312_1UG	23 Mar 2017 17:19
3	22	Ao032309.d	1.	C1703059-002A	A312_1UG	23 Mar 2017 18:00
4	23	Ao032310.d	1.	C1703059-003A	A312_1UG	23 Mar 2017 18:43
5	24	Ao032311.d	1.	C1703059-004A	A312_1UG	23 Mar 2017 19:23
6	25	Ao032312.d	1.	C1703059-005A	A312_1UG	23 Mar 2017 20:03
7	26	Ao032313.d	1.	C1703059-006A	A312_1UG	23 Mar 2017 20:44
8	27	Ao032314.d	1.	C1703059-007A	A312_1UG	23 Mar 2017 21:25
9	28	Ao032315.d	1.	C1703059-008A	A312_1UG	23 Mar 2017 22:05
0	29	Ao032316.d	1.	C1703059-009A	A312_1UG	23 Mar 2017 22:46
1	1	Ao032317.d	1.	C1703065-001A	A312_1UG	23 Mar 2017 23:26
2	2	Ao032318.d	1.	C1703065-002A	A312_1UG	24 Mar 2017 00:08
3	3	Ao032319.d	1.	C1703065-003A	A312_1UG	24 Mar 2017 00:49
4	4	Ao032320.d	1.	C1703066-001A	A312_1UG	24 Mar 2017 01:29
5	5	Ao032321.d	1.	C1703061-003A	A312_1UG	24 Mar 2017 02:09
6	6	Ao032322.d	1.	C1703061-005A	A312_1UG	24 Mar 2017 02:51
7	7	Ao032323.d	1.	C1703061-006A	A312_1UG	24 Mar 2017 03:34
8	8	Ao032324.d	1.	C1703061-008A	A312_1UG	24 Mar 2017 04:17
9	9	Ao032325.d	1.	ALCS1UGD-032317	A312_1UG	24 Mar 2017 04:56
0	10	Ao032326.d	1.	C1703061-001A	A312_1UG	24 Mar 2017 05:37

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS LOG

Centek Laboratories, LLC

GC/MS Calibration Standards Logbook

Std #	Oate Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Finial Vol (psia)	Final Conc (ppb)	Prep by	Chkd
A-A1788	12/22/16	12/29/16	TO15 SILX	A1088 A1089	500ppb	3.0	30	50	LL	
A-1789			SULF	A0270	1 ppm	1.5	30	50		
A-1790			H2S	A0269	10 ppm	1.5	30	500		
A-1791			TO15 1UG IS	A1782	50 ppb	0.9	45	1		
A-1792			STD	A1783						
A-1793			LCS	A1784						
A-1794	12/29/16	1/5/17	TO15 IS	A1289	1 ppm	1.5	30	50	WD	
A-1795			STD	A1203						
A-1796			LCS	A1204						
A-1797			4PCH	9519						
A-1798			4PCHS	A1797	50 ppb	3.0	30	5		
A-1799			FORM	A0974	11.5 ppm	0.20	45	50		
A-1800			SILOX	A1088 A1089	500 ppb	3.0	30	50		
A-1801			SULF	A0270	1 ppm	1.5	30	50		
A-1802			H2S	A0269	10 ppm	1.5	30	500		
A-1803			TO15 1UG IS	A1794	50 ppb	0.9	45	1		
A-1804			STD	A1795						
A-1805			LCS	A1796						
A-1806	1/5/17	1/5/18	TO15 IS	FF-47206	LINDE		2000psig	1 ppm	WD	
A-1807	1/5/17	1/5/18	STOCK TO15 STD	FF-45347	LINDE		2200psig	1 ppm	WD	
A-1808	1/6/17	1/6/18	TO15 ~~IS~~ LCS	~~A1796~~ A1203	1ppm	~~1.5~~	~~30~~	~~50 ppb~~	M	

A1203 STD IS NOW LCS

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Centek Laboratories, LLC

Centek Laboratories, LLC

GC/MS Calibration Standards Logbook

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Finial Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-1892	3/3/17	3/10/17	TO15 IS	A1906	1ppm	1.5	30	50	MO	
A-1893	↓	↓	STD	A1907	↓	↓	↓	↓	↓	
A-1894			LCS	A1908						
A-1895			4BCH	9519						
A-1896			4BCHS	A1895	50ppb	3.0		5		
A-1897			FORM	A0974	11.5ppm	0.20	45	50		
A-1898			SILOX	A1088/A1089	500ppb	3.0	30			
A-1899			SUL	A0270	1ppm	1.5				
A-1900			H2S	A0269	10ppm	↓	↓	↓		
A-1901			TO15/06 IS	A1892	50ppb	0.5	45	1ppb		
A-1902			STD	A1893					↓	
A-1903	↓	↓	LCS	A1894	↓	↓	↓	↓		
A-1904	3/11/17	3/21/17	TO15 IS	A1906	1ppm	1.5	30	50	MO	
A-1905			STD	A1907						
A-1906			LCS	A1908						
A-1907			4BCH	9519						
A-1908			4BCHS	A1901	50ppb	3.0		5		
A-1909			FORM	A0974	11.5ppm	0.20	45	50		
A-1910			SILOX	A1088/A1089	500ppb	3.0	30			
A-1911			SUL	A0270	1ppm	1.5				
A-1912	↓	↓	H2S	A0269	10ppm	↓	↓	↓	↓	

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Centek Laboratories, LLC

Centek Laboratories, LLC

GC/MS Calibration Standards Logbook

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Finial Vol (psia)	Final Conc (ppb)	Prep by	Chkd
A-A1913	3/11/17	3/21/17	TO15 IOG IS	A1904	50 ppb	0.9	45	1 ppb	MD	
A-A1914	↓	↓	5LD	A1905	↓	↓	↓	↓	↓	
A-A1915	↓	↓	LCS	A1906	↓	↓	↓	↓	↓	
A-										
A-										
A-										
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FORM 153

Page # 15

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CANISTER CLEANING LOG

Centek Laboratories, LLC

QC Canister Cleaning Logbook

Instrument: Entech 3100

Canister Number	Canister Size	QC Can Number	# of Cycles	Int & Date Cleaned	QC Batch Number	Detection Limits	Leak Test 24hr Int & Date	
1202	1.4 L	218	30	11/02/16 RJP	WAC110316A	1 ug/m³ +0.25	+ 30	+ 30 11/03/16 RJP
1321							+ 30	+
1206							+ 30	+
209							+ 30	+
218							+ 30	+
1320		1207			WAC110316B		+ 30	+
1208							+ 30	+
1200							+ 30	+
484							+ 30	+
1207							+ 30	+
216		215			WAC110316C		+ 30	+
1323							+ 30	+
210							+ 30	+
487							+ 30	+
215							+ 30	+
1319		1203			WAC110316D		+ 30	+
485							+ 30	+
483							+ 30	+
1201							+ 30	+
1203							+ 30	+
171	1L	419			WAC110316E		+ 30	+
193							+ 30	+
542							+ 30	+
243							+ 30	+
419							+ 30	+

Form C151

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Centek Laboratories, LLC

QC Canister Cleaning Logbook

Instrument: Entech 3100

Canister Number	Canister Size	QC Can Number	# of Cycles	Int & Date Cleaned	QC Batch Number	Detection Limits	Leak Test 24hr Int & Date	
169	1L	287	20	2/6/17 M	WAC020717A	1ppbv ± 0.25	+ 30	+ 30 2/8/17 M
1182							+ 30	+
1176							+ 30	+
368							+ 30	+
287		↓					+ 30	+
161		247			B		+ 30	+
107							+ 30	+
599							+ 30	+
285							+ 30	+
247		↓					+ 30	+
101		232			C		+ 30	+
107							+ 30	+
243							+ 30	+
556							+ 30	+
232		↓					+ 30	+
351		200			G		+ 30	+
133							+ 30	+
553							+ 30	+
352							+ 30	+
200		↓					+ 30	+
138		316			I		+ 30	+
322							+ 30	+
336							+ 30	+
178							+ 30	+
316		↓					+ 30	+

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016NOV\AN110306.D Vial: 6
Acq On : 3 Nov 2016 12:34 pm Operator: RJP
Sample : WAC110316A Inst : MSD #1
Misc : AO26_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:11:32 2016 Quant Results File: AO26_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AO26_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Oct 27 07:19:53 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

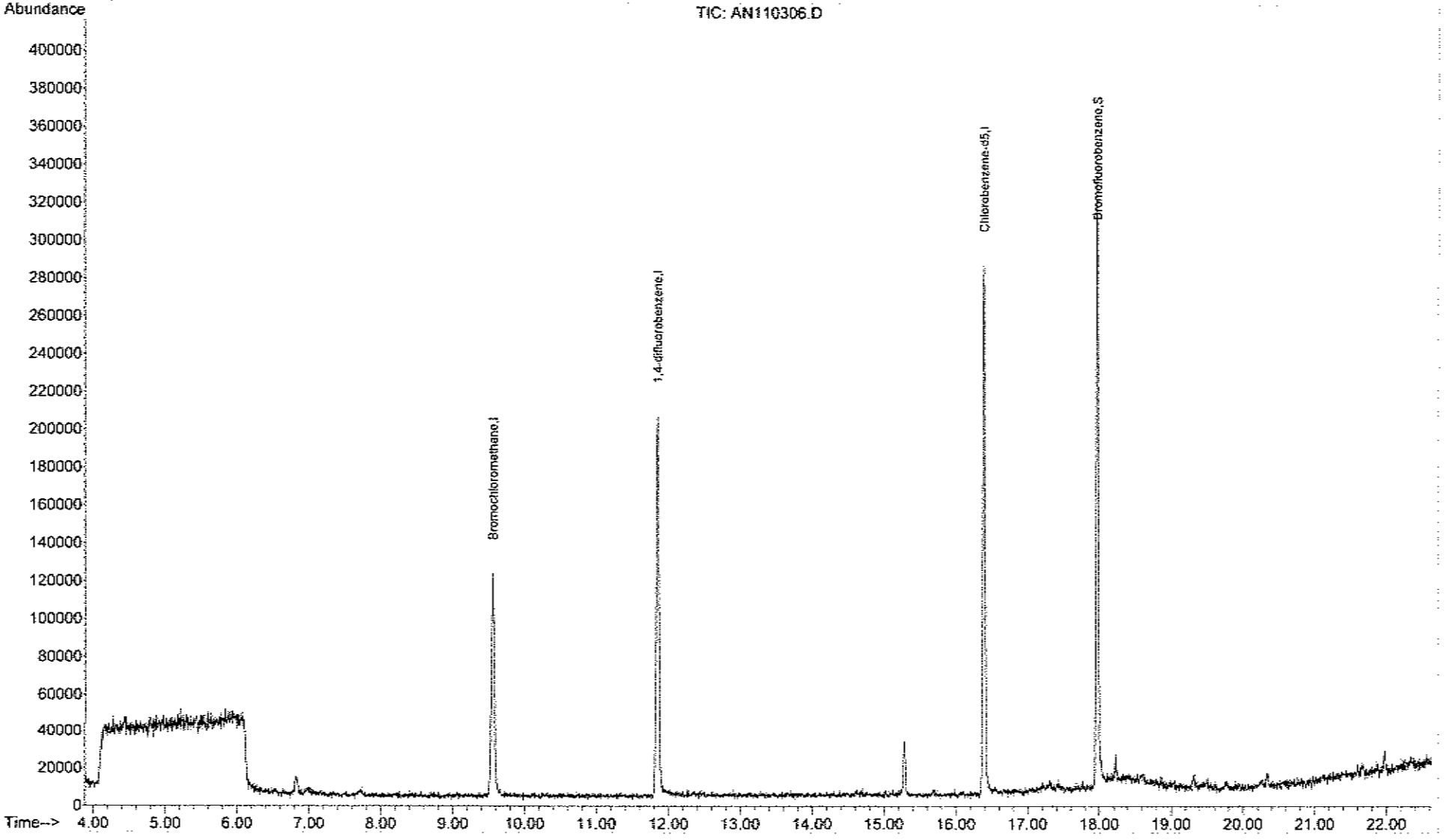
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.55	128	51628	1.00	ppb	0.00
35) 1,4-difluorobenzene	11.85	114	215735	1.00	ppb	0.01
50) Chlorobenzene-d5	16.39	117	192732	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	17.96	95	109128	0.84	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 84.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AN110306.D A312_1UG.M Wed Mar 29 12:29:29 2017 MSD1 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016NOV\AN110306.D Vial: 6
Acq On : 3 Nov 2016 12:34 pm Operator: RJP
Sample : WAC110316A Inst : MSD #1
Misc : AO26_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:11 2016 Quant Results File: AO26_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016NOV\AN110307.D Vial: 7
Acq On : 3 Nov 2016 1:10 pm Operator: RJP
Sample : WAC110316B Inst : MSD #1
Misc : AO26_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 15:11:33 2016 Quant Results File: AO26_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AO26_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Oct 27 07:19:53 2016
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

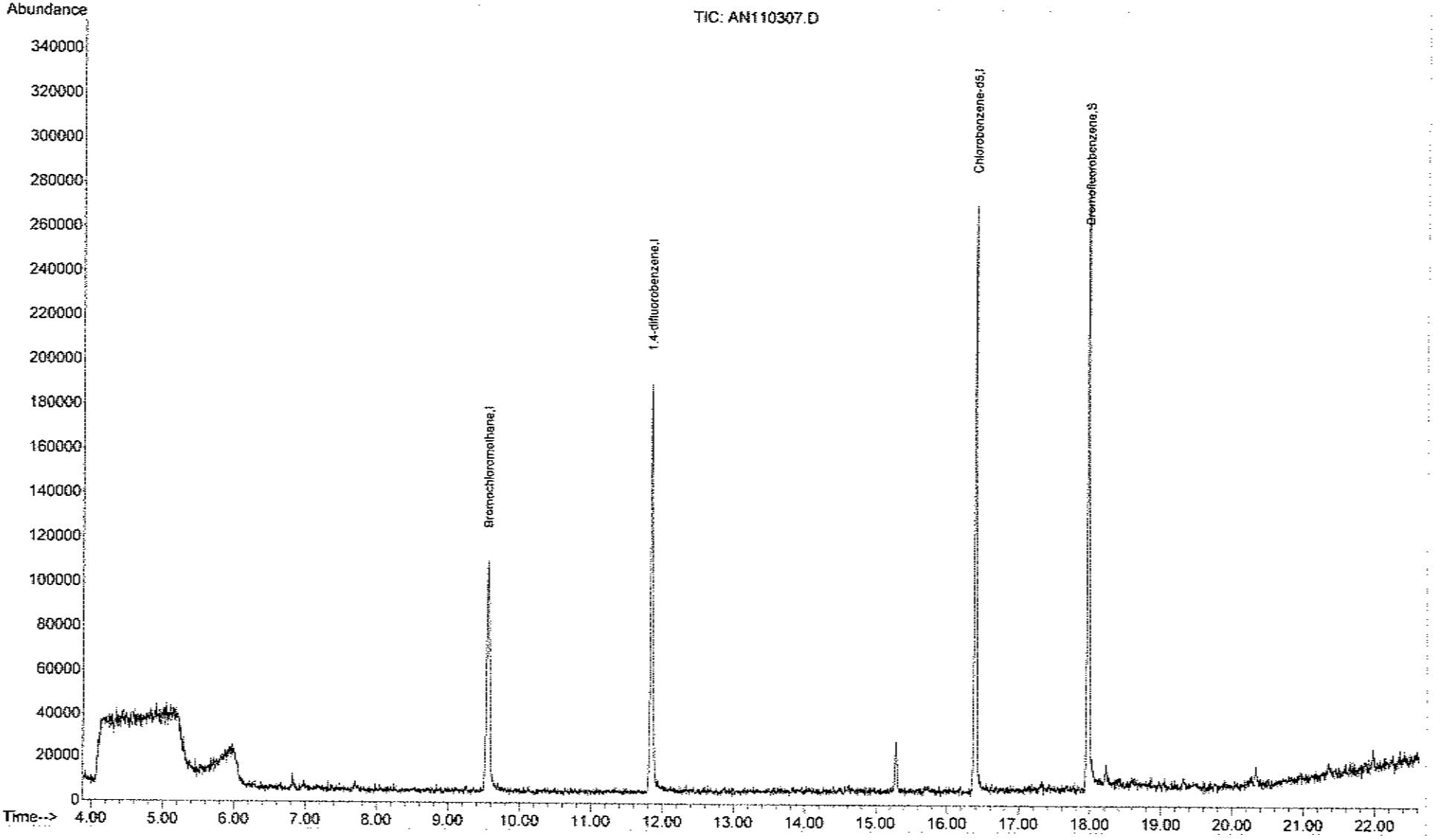
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.56	128	46894	1.00	ppb	0.00
35) 1,4-difluorobenzene	11.84	114	198486	1.00	ppb	0.00
50) Chlorobenzene-d5	16.39	117	177747	1.00	ppb	0.00
System Monitoring Compounds						
66) Bromofluorobenzene	17.96	95	95638	0.80	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 80.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AN110307.D A312_1UG.M Wed Mar 29 12:29:35 2017 MSD1 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\2016NOV\AN110307.D Vial: 7
Acq On : 3 Nov 2016 1:10 pm Operator: RJP
Sample : WAC110316B Inst : MSD #1
Misc : AO26_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 16:11 2016 Quant Results File: AO26_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration



AN110307.D A312_1UG.M Wed Mar 29 12:29:36 2017 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020705.D Vial: 21
Acq On : 7 Feb 2017 1:43 pm Operator: RJP
Sample : WAC020717A Inst : MSD #1
Misc : A120_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 08 06:45:25 2017 Quant Results File: A120_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A120_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Jan 30 16:04:21 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.64	128	37336	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.02	114	142051	1.00	ppb	-0.01
50) Chlorobenzene-d5	16.89	117	122453	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.53	95	71313	0.91	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 91.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AO020705.D A312_1UG.M Wed Mar 29 12:30:36 2017 MSD1 Page 1

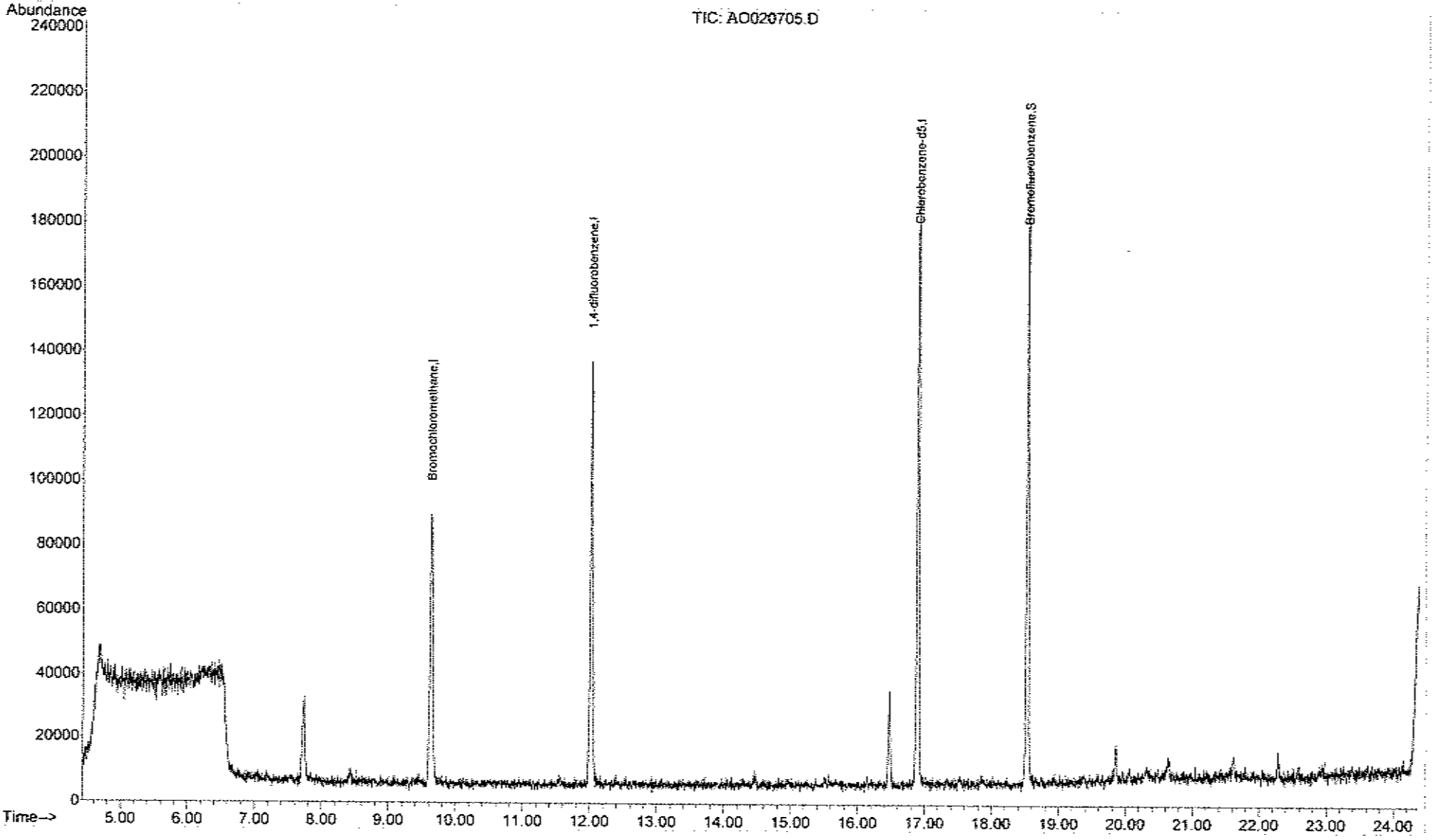
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020705.D
Acq On : 7 Feb 2017 1:43 pm
Sample : WAC020717A
Misc : A120_1UG
MS Integration Params: RTEINT.P
Quant Time: Feb 8 7:46 2017

Vial: 21
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A120_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020706.D Vial: 22
Acq On : 7 Feb 2017 2:21 pm Operator: RJP
Sample : WAC020717B Inst : MSD #1
Misc : A120_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 08 06:45:26 2017 Quant Results File: A120_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A120_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Jan 30 16:04:21 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.64	128	34682	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.03	114	136244	1.00	ppb	0.00
50) Chlorobenzene-d5	16.89	117	114266	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.53	95	65305	0.90	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 90.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AO020706.D A312_1UG.M Wed Mar 29 12:30:39 2017 MSD1 Page 1

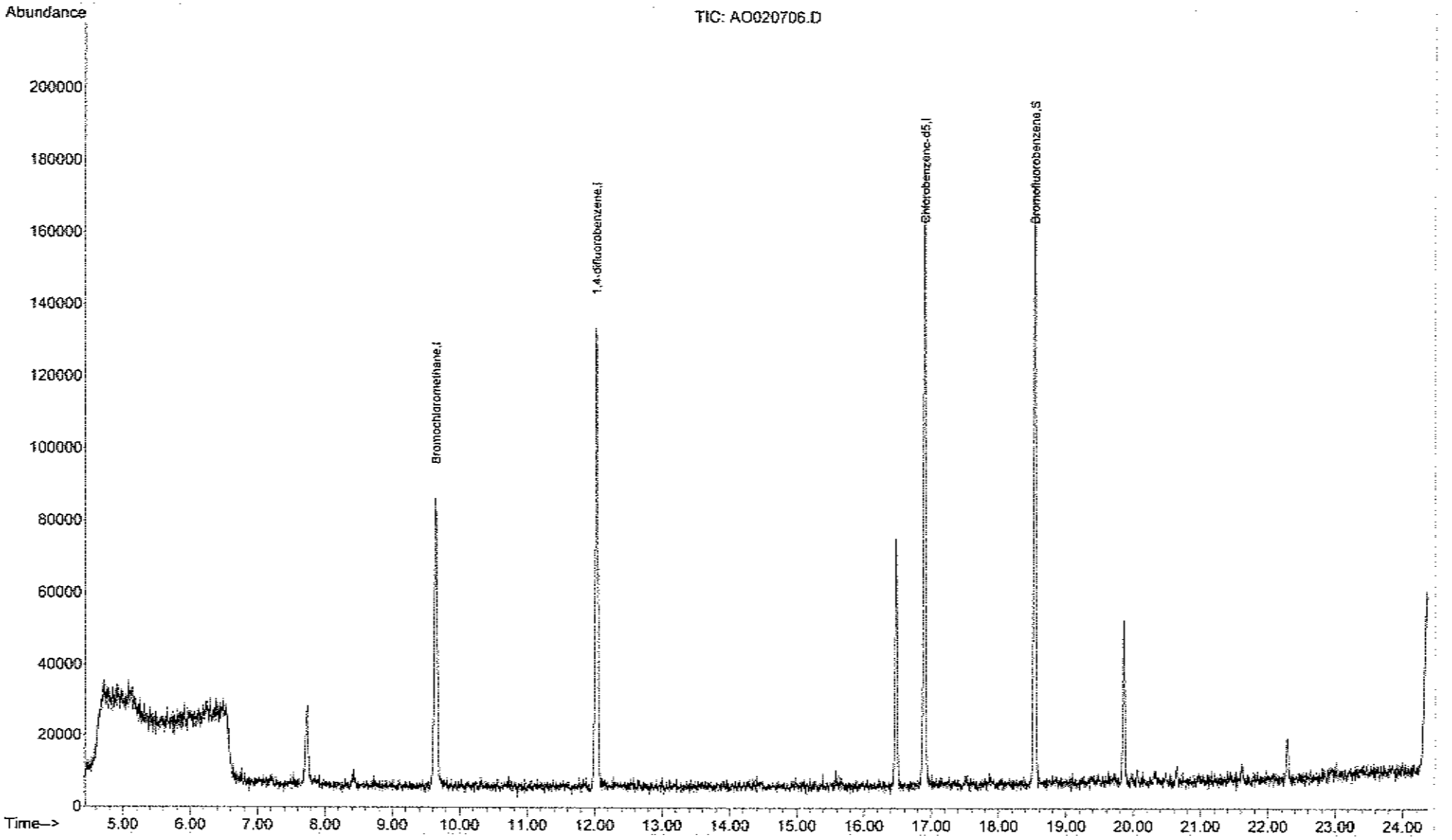
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020706.D
Acq On : 7 Feb 2017 2:21 pm
Sample : WAC020717B
Misc : A120_1UG
MS Integration Params: RTEINT.P
Quant Time: Feb 8 7:46 2017

Vial: 22
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A120_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020707.D Vial: 23
Acq On : 7 Feb 2017 2:59 pm Operator: RJP
Sample : WAC020717C Inst : MSD #1
Misc : A120_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 08 06:45:27 2017 Quant Results File: A120_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A120_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Jan 30 16:04:21 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.63	128	34038	1.00	ppb	-0.01
35) 1,4-difluorobenzene	12.03	114	133940	1.00	ppb	0.00
50) Chlorobenzene-d5	16.90	117	116078	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.53	95	65832	0.89	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 89.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
AO020707.D A312_1UG.M Wed Mar 29 12:30:42 2017 MSD1 Page 1

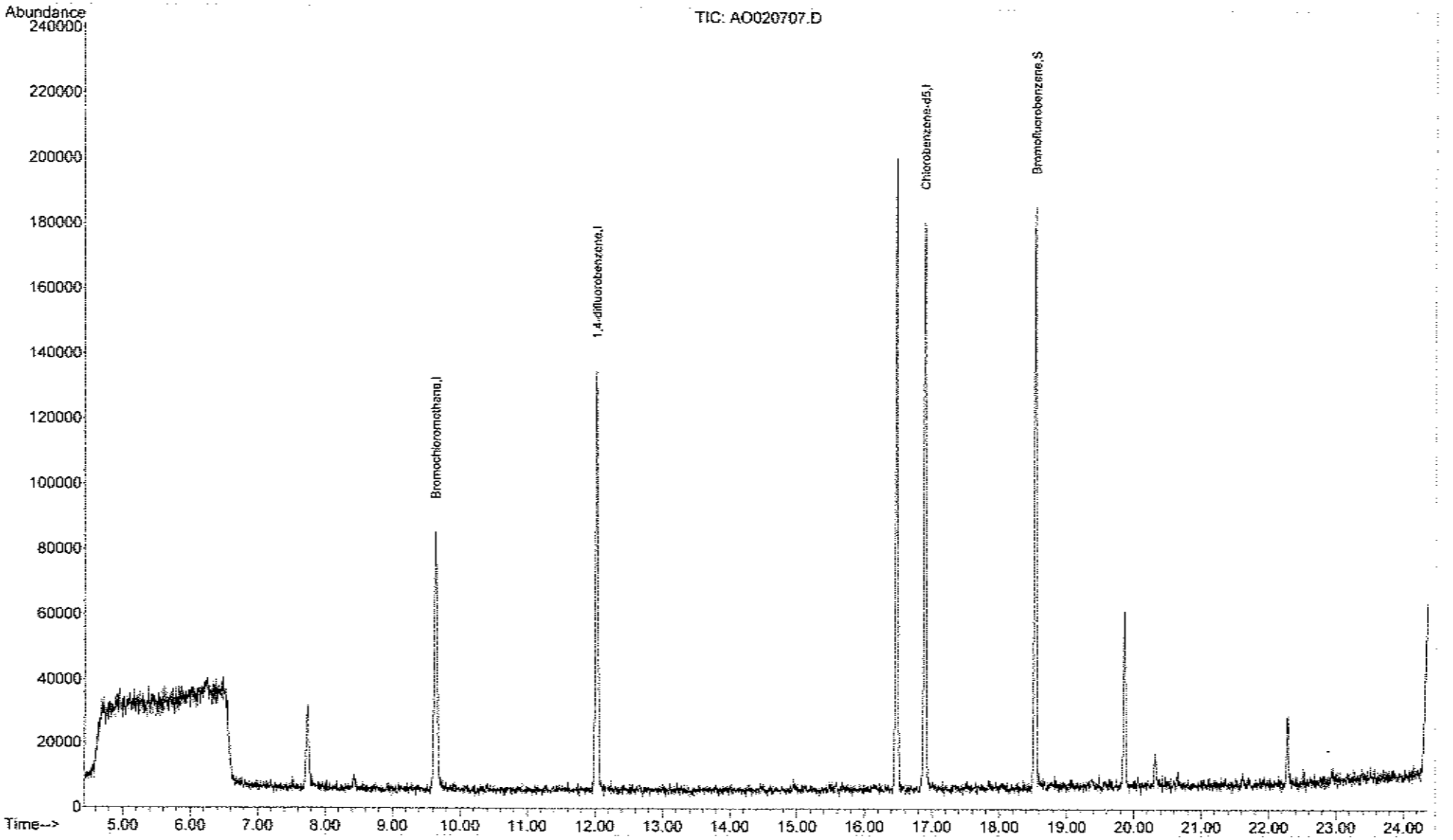
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020707.D
Acq On : 7 Feb 2017 2:59 pm
Sample : WAC020717C
Misc : A120_1UG
MS Integration Params: RTEINT.P
Quant Time: Feb 8 7:46 2017

Vial: 23
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A120_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020711.D Vial: 27
Acq On : 7 Feb 2017 5:32 pm Operator: RJP
Sample : WAC020717G Inst : MSD #1
Misc : A120_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 08 06:45:31 2017 Quant Results File: A120_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A120_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Jan 30 16:04:21 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

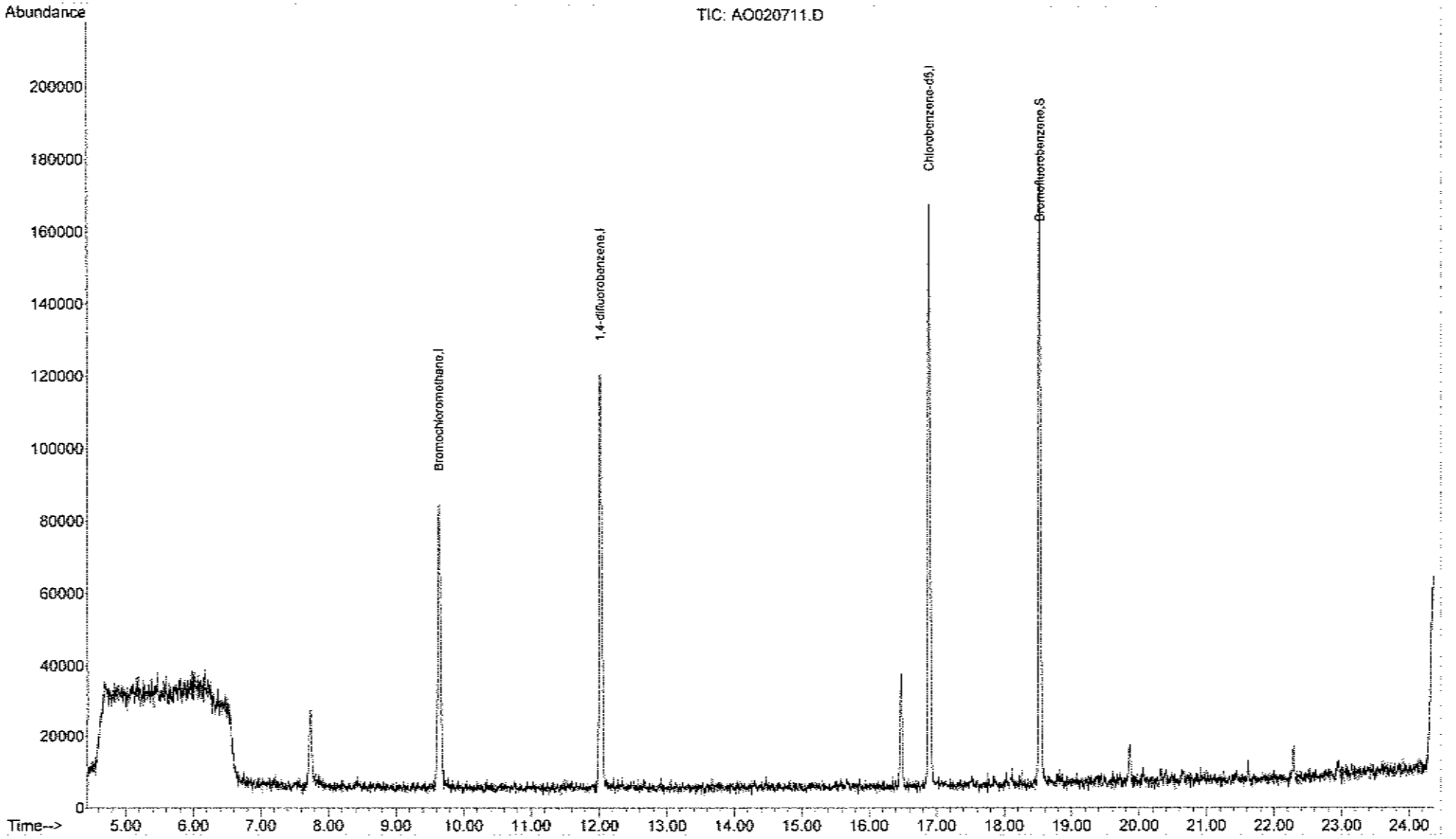
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.64	128	33689	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.03	114	131710	1.00	ppb	0.00
50) Chlorobenzene-d5	16.89	117	110556	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.53	95	63979	0.91	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 91.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020711.D Vial: 27
Acq On : 7 Feb 2017 5:32 pm Operator: RJP
Sample : WAC020717G Inst : MSD #1
Misc : A120_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 8 7:45 2017 Quant Results File: A120_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020713.D Vial: 29
Acq On : 7 Feb 2017 6:48 pm Operator: RJP
Sample : WAC020717I Inst : MSD #1
Misc : A120_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 08 06:45:33 2017 Quant Results File: A120_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A120_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Jan 30 16:04:21 2017
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.63	128	32675	1.00	ppb	-0.01
35) 1,4-difluorobenzene	12.03	114	130872	1.00	ppb	0.00
50) Chlorobenzene-d5	16.90	117	110597	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	18.53	95	62547	0.89	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery = 89.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

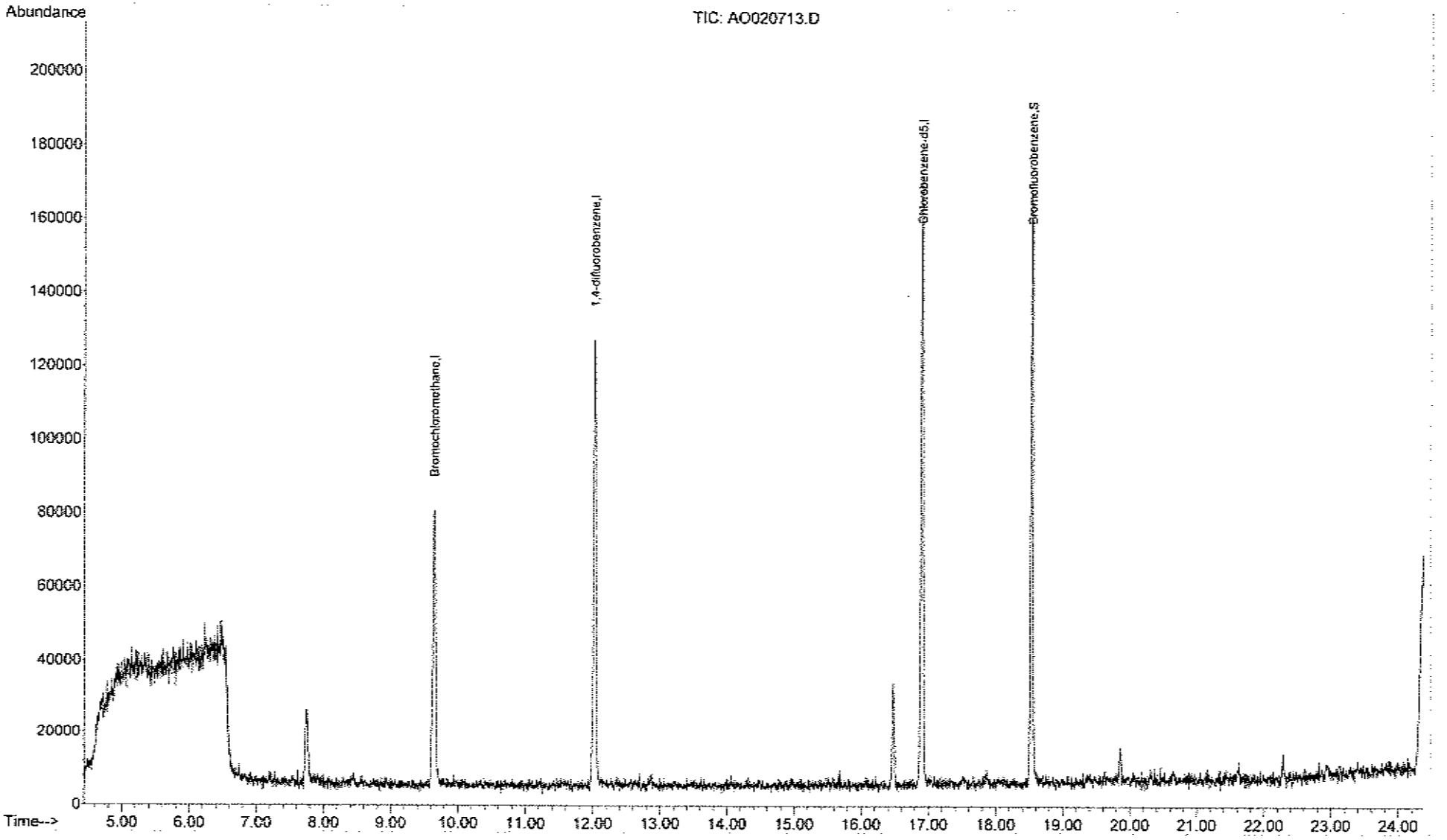
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA2\AO020713.D
Acq On : 7 Feb 2017 6:48 pm
Sample : WAC020717I
Misc : A120_1UG
MS Integration Params: RTEINT.P
Quant Time: Feb 8 7:49 2017

Vial: 29
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A120_1UG.RES

Method : C:\HPCHEM\1\METHODS\A312_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Mar 15 10:58:20 2017
Response via : Initial Calibration



LaBella Associates, D.P.C.
300 State Street

Rochester, New York 14614

Appendix 2

Data Usability Summary Report

DATA USABILITY SUMMARY REPORT

for

LaBella Associates, P.C.

300 State Street

Rochester, NY 14614

FORMER EMERSON LANDFILL
Project 210173
SDG: C1603076
Sampled 3/21/2016

TO-15 AIR SAMPLES

1770-IAQ-1	(C1603076-01)
1770-SVI-1	(C1603076-02)
BLIND DUP 1	(C1603076-03)
1770-OUTDOOR AIR	(C1603076-04)
BLIND DUP 2	(C1603076-05)
1770-IAQ-2	(C1603076-06)
1770-SVI-2	(C1603076-07)
1770-IAQ-3	(C1603076-08)
1770-SVI-3	(C1603076-09)

DATA ASSESSMENT

One data package containing analytical results for nine TO-15 samples was received from LaBella Associates, P.C. on 3Apr16. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Former Emerson Landfill Site, were identified by Chain of Custody documents and traceable through the work of Centek Laboratories, LLC, the laboratory contracted for analysis. The analyses were performed using US EPA Method TO-15 and addressed measurements of ten volatile organic compounds. Laboratory data was evaluated according to the quality assurance / quality control requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP), September 1989, Rev. 07/2005. When the required protocol was not followed, the current EPA Region II Functional Guidelines (SOP HW-31, Rev. #4, October 2006, Volatile Organic Analysis of Ambient Air in Canisters by Method TO-15) was used as a technical reference.

The positive results reported from 1770-IAQ-2 and 1770-IAQ-3 have been qualified as estimations due to high surrogate standard recoveries.

The trichloroethene and tetrachloroethene concentrations found in 1770-SVI-1 and BLIND DUP-2 and the 1,1,1-trichloroethane result from 1770-SVI-3 have been qualified as estimations due to poor internal standard performance.

The results from 1770-IAQ-2 have been qualified as estimations because the canister's vacuum regulator malfunctioned.

CORRECTNESS AND USABILITY

Reported data should be considered technically defensible and completely usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions at the time of sampling have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B Baldwin Date: 12 May 16

James B. Baldwin
DATAVAL, Inc.

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the date of sampling. TO-15 samples must be analyzed within 14 days of collection.

This sample delivery group contained nine TO-15 samples that were collected in 1-liter SUMMA canisters. Sampling was completed on 21Mar16. The canisters were shipped back to the laboratory, via FedEx, on 28Mar16 and were received on 29Mar16. Although the sample canisters were received intact and properly labeled, custody seals were not present on the packaging.

Canister vacuum readings were recorded in the laboratory prior to shipment, in the field prior to and following sampling, and in the laboratory at the time of receipt.

SAMPLE	PRIOR TO SHIPMENT ("Hg)	PRIOR TO SAMPLING ("Hg)	POST SAMPLING ("Hg)	LAB RECEIPT ("Hg)
1770-IAQ-1	-30	-30	-4	-4
1770-SVI-1	-30	-30	-5	-5
BLIND DUP 1	-30	-30	-4	-4
1770-OUTDOOR	-30	-30	-3	-4
BLIND DUP 2	-30	-30	-5	-5
1770-IAQ-2	-30	-30	-9.5	-10
1770-SVI-2	-30	-30	-3	-3
1770-IAQ-3	-30	-30	-7	-7
1770-SVI-3	-30	-30	-4	-4

The final vacuum readings from 1770-SVI-2 and 1770-IAQ-3 fell slightly outside of the ASP limits of -5±1"Hg. These slight deviations do not necessitate data qualifications because vacuum was maintained in each of the canisters and sample volumes were sufficient to complete the necessary analyses.

The final vacuum reading of -10"Hg from 1770-IAQ-2 indicates that the vacuum regulator did not function properly. The results reported from this sample have been qualified as estimations based on this observation.

The analysis of this group of samples was completed between 01Apr16 and 04Apr16, satisfying the ASP holding time limitation.

CANISTER CERTIFICATION

The canisters used for this project were pressure tested at 30 psig for 24 hours. Each canister demonstrated a change ≤0.5 psig over this period.

The canisters were cleaned in five batches. A blank analysis of a clean canister from each batch was free of targeted analyte contamination above the reporting limit.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Trip Blanks monitor sampling activities, sample transport, and storage. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank.

Three method blanks were analyzed with this group of samples. Each of these blanks demonstrated acceptable chromatography and was free of targeted analyte contamination.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

BFB ion abundance criteria was reported from standards run before the initial instrument calibration and prior to the analysis of program samples. Each of these checks satisfied the ASP acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The initial instrument calibration was performed on 04Feb16. Standards of 0.04, 0.15, 0.30, 0.50, 0.75, 1.0, 1.25, 1.50 and 2.0 ppbV were included. Each targeted analyte produced the required levels of instrument response and demonstrated an acceptable degree of linearity during this calibration.

Continuing calibration check standards were analyzed on 31Mar16, 01Apr16 and 02Apr16, prior to the 24-hour periods of instrument operation that included samples from this program. When compared to the initial calibration, an acceptable level of instrument stability was demonstrated by each targeted analyte.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Although surrogate summary sheets were properly prepared, an incorrect acceptance criteria was applied. When compared to the ASP requirements, elevated recoveries were reported for the BFB additions to 1770-IAQ-2 (126%) and 1770-IAQ-3 (128%). The positive results reported from this pair of samples have been qualified as estimations based on these indications of positive bias.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the response of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than 40%. When compared to the preceding calibration check, retention times may not vary by more than 10 seconds.

The laboratory recorded the response of each internal standard addition to this group of samples and the response obtained from the preceding CCV standard. Although the control limits based on the response of the CCV were not reported, they were calculated by this reviewer. When compared to these limits, an unacceptably high response was reported for the 1,4-difluorobenzene additions to 1770-SVI-1, BLIND DUP-1, BLIND DUP-2, 1770-SVI-2 and 1770-SVI-3. The trichloroethene (TCE) and tetrachloroethene (CL4ENE) concentrations found in 1770-SVI-1 and BLIND DUP-2 and the 1,1,1-trichloroethane (111TCA) result from 1770-SVI-3 have been qualified as estimations based on this performance. It is noted that a high internal standard response would produce a negative bias in the associated analyte measurements.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample, prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

Although a sample from this program was not selected for matrix spiking, three pairs of spiked blanks (LCS/LCSD) were analyzed with this group of samples. Each of these spiked blank pairs demonstrated acceptable levels of measurement precision and accuracy.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Although the blind field split duplicate samples included in this delivery group were not identified, the previously reported spiked blanks demonstrated an acceptable level of measurement precision.

REPORTED ANALYTES

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Reference mass spectra were provided to confirm the identification of each analyte that was detected in this group of samples.

SUMMARY OF QUALIFIED DATA

FORMER EMERSON LANDFIL SAMPLED MARCH 2016

		SAMPLING	SUROGATES	INT STD TCE	INT STD CL4ENE	INT STD 111TCA
1770-IAQ-1	(C1603076-01)					
1770-SVI-1	(C1603076-02)			0.97J	5.2J	
BLIND DUP 1	(C1603076-03)					
1770-OUTDOOR AIR	(C1603076-04)					
BLIND DUP 2	(C1603076-05)			1.4J	6.3J	
1770-IAQ-2	(C1603076-06)	ALL J/UJ	ALL POS J			
1770-SVI-2	(C1603076-07)					
1770-IAQ-3	(C1603076-08)		ALL POS J			
1770-SVI-3	(C1603076-09)					0.93J

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	I770-IAQ-I
Lab Order:	C1603076	**Tag Number:**	1183,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:18:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:18:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:18:00 AM
Chloromethane	1.7	0.31		ug/m3	1	4/1/2016 4:18:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 4:18:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 4:18:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/1/2016 4:18:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-SVI-1
Lab Order:	C1603076	**Tag Number:**	1179,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 5:36:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 5:36:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 5:36:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 5:36:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 PM
Tetrachloroethylene	5.2	1.0	J	ug/m3	1	4/1/2016 5:36:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 5:36:00 PM
Trichloroethene	0.67	0.81	J	ug/m3	1	4/1/2016 5:36:00 PM
Vinyl chloride	0.66	0.38		ug/m3	1	4/1/2016 5:36:00 PM

TMS

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 1
Lab Order:	C1603076	**Tag Number:**	419,339
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:18:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:18:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:18:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 4:18:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 4:18:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:18:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 4:18:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/1/2016 4:18:00 PM

Qualifiers:	**	Reporting Limit	. Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits	

Centek Laboratories, LLC

Date: 26-Apr-16

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor Air
Lab Order:	C1603076	**Tag Number:**	192,342
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:57:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:57:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:57:00 AM
Chloromethane	1.6	0.31		ug/m3	1	4/1/2016 4:57:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 4:57:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 4:57:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/1/2016 4:57:00 AM

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	Blind Dup 2
Lab Order:	C1603076	**Tag Number:**	1193,343
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 4:57:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 4:57:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 4:57:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 4:57:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 PM
Tetrachloroethylene	6.3	1.0	J	ug/m3	1	4/1/2016 4:57:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 4:57:00 PM
Trichloroethene	1.4	0.81	J	ug/m3	1	4/1/2016 4:57:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	4/1/2016 4:57:00 PM

Qualifiers:

*	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 26-Apr-16

CLIENT:	LaBella Associates, P.C.	Client Sample ID:	1770-IAQ-2
Lab Order:	C1603076	Tag Number:	564,447
Project:	Emerson Landfill	Collection Date:	3/21/2016
Lab ID:	C1603076-006A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	0.65 J	0.82	J	ug/m3	1	4/1/2016 5:36:00 AM
1,1-Dichloroethane	< 0.61 UJ	0.61		ug/m3	1	4/1/2016 5:36:00 AM
1,1-Dichloroethene	< 0.59 UJ	0.59		ug/m3	1	4/1/2016 5:36:00 AM
Chloroethane	< 0.40 UJ	0.40		ug/m3	1	4/1/2016 5:36:00 AM
Chloromethane	2.0 J	0.31		ug/m3	1	4/1/2016 5:36:00 AM
cis-1,2-Dichloroethene	3.1 J	0.59		ug/m3	1	4/1/2016 5:36:00 AM
Tetrachloroethylene	< 1.0 UJ	1.0		ug/m3	1	4/1/2016 5:36:00 AM
trans-1,2-Dichloroethene	< 0.59 UJ	0.59		ug/m3	1	4/1/2016 5:36:00 AM
Trichloroethene	< 0.21 UJ	0.21		ug/m3	1	4/1/2016 5:36:00 AM
Vinyl chloride	1.8 J	0.10		ug/m3	1	4/1/2016 5:36:00 AM

1770

Qualifiers:
- ** Reporting Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- JN Non-routine analyte. Quantitation estimated.
- S Spike Recovery outside accepted recovery limits
- . Results reported are not blank corrected
- E Value above quantitation range
- J Analyte detected at or below quantitation limits
- ND Not Detected at the Reporting Limit

Centek Laboratories, LLC

Date: 26-Apr-16

CLIENT:	LaBella Associates, P.C.	Client Sample ID:	1770-SVI-2
Lab Order:	C1603076	Tag Number:	89,1166
Project:	Emerson Landfill	Collection Date:	3/21/2016
Lab ID:	C1603076-007A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 6:15:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 6:15:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 6:15:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 6:15:00 PM
cis-1,2-Dichloroethene	3.4	0.59		ug/m3	1	4/1/2016 6:15:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 6:15:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	4/1/2016 6:15:00 PM
Vinyl chloride	1.8	0.38		ug/m3	1	4/1/2016 6:15:00 PM

Qualifiers:

*	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *26-Apr-16*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3
Lab Order:	C1603076	**Tag Number:**	131,297
Project:	Emerson Landfill	**Collection Date:**	3/21/2016
Lab ID:	C1603076-008A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/1/2016 6:15:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 6:15:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 6:15:00 AM
Chloromethane	1.9	0.31	J	ug/m3	1	4/1/2016 6:15:00 AM
cis-1,2-Dichloroethene	0.91	0.59	J	ug/m3	1	4/1/2016 6:15:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 6:15:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:15:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	4/1/2016 6:15:00 AM
Vinyl chloride	0.56	0.10	J	ug/m3	1	4/1/2016 6:15:00 AM

JNS

Qualifiers:

*	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 26-Apr-16

CLIENT:	LaBella Associates, P.C.	Client Sample ID:	I770-SVI-3
Lab Order:	C1603076	Tag Number:	188,308
Project:	Emerson Landfill	Collection Date:	3/21/2016
Lab ID:	C1603076-009A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: RJP
1,1,1-Trichloroethane	0.93 J	0.82		ug/m3	1	4/1/2016 6:54:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/1/2016 6:54:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:54:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/1/2016 6:54:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	4/1/2016 6:54:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:54:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	4/1/2016 6:54:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/1/2016 6:54:00 PM
Trichloroethene	23	4.0		ug/m3	5	4/2/2016 4:03:00 PM
Vinyl chloride	1.6	0.38		ug/m3	1	4/1/2016 6:54:00 PM

Qualifiers:

**	Reporting Limit		Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
N	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Date: 26-Apr-16

CENTEK LABORATORIES, LLC

QC SUMMARY REPORT
SURROGATE RECOVERIES

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill
Test No: TO-15 Matrix: A

Sample ID	BR4FBZ
ALCS1UG-033116	115
ALCS1UG-040116	116
ALCS1UG-040216	112
ALCS1UGD-033116	118
ALCS1UGD-040116	108
ALCS1UGD-040216	106
AMB1UG-033116	88.0
AMB1UG-040116	91.0
AMB1UG-040216	90.0
C1603075-004A MS	116
C1603075-004A MSD	107
C1603076-001A	110
C1603076-002A	88.0
C1603076-003A	117
C1603076-004A	104
C1603076-005A	108
C1603076-006A	126
C1603076-007A	102
C1603076-008A	128
C1603076-009A	92.0

Acronym		Surrogate	QC Limits
BR4FBZ	=	Bromofluorobenzene	70-130

* Surrogate recovery outside acceptance limits

GC/MS QA-QC Check Report

'une File : C:\HPCHEM\1\DATA2\AN033104.D
'une Time : 31 Mar 2016 12:19 pm

'aily Calibration File : C:\HPCHEM\1\DATA2\AN033104.D

			(BFB)	(IS1)	(IS2)	(IS3)
				21478	48888	36495
'ile	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
N033105.D	ALCS1UG-033116	115		20235	53595	32893
N033106.D	AMB1UG-033116	88		20032	47930	44161
N033129.D	C1603076-001A	110		17319	46632	44330
N033130.D	C1603076-004A	104		16741	43872	44391
N033131.D	C1603076-006A	126		18828	58984	31805
N033132.D	C1603076-008A	128		20410	65363	31903
N033133.D	ALCS1UGD-033116	118		22710	52964	34225

t - fails 24hr time check * - fails criteria

Created: Tue Apr 26 15:59:27 2016 MSD #1/

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AN040102.D
Tune Time : 1 Apr 2016 12:06 pm

Daily Calibration File : C:\HPCHEM\1\DATA\AN040102.D

			(BFB)	(IS1)	(IS2)	(IS3)
				20214	45908	32719
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
AN040103.D	ALCS1UG-040116	116		20858	46019	31397
AN040104.D	AMB1UG-040116	91		18252	46023	41257
AN040108.D	C1603076-003A	117		24896	74463*	58495*
AN040109.D	C1603076-005A	108		26433	86881*	45080
AN040110.D	C1603076-002A	88		26432	89168*	49311*
AN040111.D	C1603076-007A	102		27896	94901*	52262*
AN040112.D	C1603076-009A	92		28019	97134*	49886*
AN040125.D	ALCS1UGD-040116	108		20437	45874	33404

t - fails 24hr time check * - fails criteria

Created: Tue Apr 26 16:00:31 2016 MSD #1/

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AN040203.D
Tune Time : 2 Apr 2016 12:08 pm

Daily Calibration File : C:\HPCHEM\1\DATA\AN040203.D

			(BFB)	(IS1)	(IS2)	(IS3)
				23340	60425	46554
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
AN040204.D	ALCS1UG-040216		112	21348	52201	44220
AN040205.D	AMB1UG-040216		90	17717	49878	41390
AN040209.D	C1603076-009A	5X	113	18360	53965	40273
AN040224.D	ALCS1UGD-040216		106	16685	39568	28434

t - fails 24hr time check * - fails criteria

Created: Tue Apr 26 16:01:33 2016 MSD #1/

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AN040402.D
Tune Time : 4 Apr 2016 9:37 am

Daily Calibration File : C:\HPCHEM\1\DATA\AN040402.D

			(BFB)	(IS1)	(IS2)	(IS3)
				22087	49561	31552
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
AN040403.D	ALCS1UG-040416		100	23166	49402	37389
AN040404.D	AMB1UG-040416		82	21865	49252	42435
AN040406.D	C1603076-003A RE		105	19294	43636	39672
AN040407.D	C1603076-005A RE		121	26358	86314*	51558*
AN040408.D	C1603076-002A RE		120	28253	94627*	56547*
AN040409.D	C1603076-007A RE		100	28391	97706*	57357*

not required JRS

t - fails 24hr time check * - fails criteria

Created: Tue Apr 26 16:02:37 2016 MSD #1/

CENTEK LABORATORIES, LLC

Date: 26-Apr-16

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID AMB1UG-033116	SampType: MBLK	TestCode: 0.25CT-TCE-	Units: ppbV	Prep Date:	RunNo: 10817
Client ID: ZZZZZ	Batch ID: R10817	TestNo: TO-15		Analysis Date: 3/31/2016	SeqNo: 127095

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.040	0.040									
Vinyl chloride	< 0.040	0.040									

Sample ID AMB1UG-040116	SampType: MBLK	TestCode: 0.25CT-TCE-	Units: ppbV	Prep Date:	RunNo: 10818
Client ID: ZZZZZ	Batch ID: R10818	TestNo: TO-15		Analysis Date: 4/1/2016	SeqNo: 127112

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.040	0.040									

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	AMB1UG-040116	SampType:	MBLK	TestCode:	0.25CT-TCE-	Units,	ppbV	Prep Date:		RunNo:	10818
Client ID:	ZZZZZ	Batch ID:	R10818	TestNo:	TO-15			Analysis Date:	4/1/2016	SeqNo:	127112

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	< 0.040	0.040									

Qualifiers:
- . Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-040216	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 10819
Client ID: ZZZZZ	Batch ID: R10819	TestNo: TO-15		Analysis Date: 4/2/2016	SeqNo: 127124

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CENTEK LABORATORIES, LLC

Date: 26-Apr-16

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID ALCS1UG-033116 SampType: LCS TestCode: 0.25CT-TCE- Units: ppbV Prep Date: RunNo: 10817
Client ID: ZZZZZ Batch ID: R10817 TestNo: TO-15 Analysis Date: 3/31/2016 SeqNo: 127096

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.250	0.15	1	0	125	70	130				
1,1-Dichloroethane	1.120	0.15	1	0	112	70	130				
1,1-Dichloroethene	1.120	0.15	1	0	112	70	130				
Chloroethane	1.220	0.15	1	0	122	70	130				
Chloromethane	1.230	0.15	1	0	123	70	130				
cis-1,2-Dichloroethene	1.060	0.15	1	0	106	70	130				
Tetrachloroethylene	0.9200	0.15	1	0	92.0	70	130				
trans-1,2-Dichloroethene	1.050	0.15	1	0	105	70	130				
Trichloroethene	1.110	0.040	1	0	111	70	130				
Vinyl chloride	1.090	0.040	1	0	109	70	130				

Sample ID ALCS1UG-040116 SampType: LCS TestCode: 0.25CT-TCE- Units: ppbV Prep Date: RunNo: 10818
Client ID: ZZZZZ Batch ID: R10818 TestNo: TO-15 Analysis Date: 4/1/2016 SeqNo: 127113

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.290	0.15	1	0	129	70	130				
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130				
1,1-Dichloroethene	1.100	0.15	1	0	110	70	130				
Chloroethane	1.130	0.15	1	0	113	70	130				
Chloromethane	1.230	0.15	1	0	123	70	130				
cis-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130				
Tetrachloroethylene	0.8800	0.15	1	0	88.0	70	130				
trans-1,2-Dichloroethene	0.9900	0.15	1	0	99.0	70	130				
Trichloroethene	1.230	0.040	1	0	123	70	130				

Qualifiers:
- . Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	ALCS1UG-040116	SampType:	LCS	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	10818
Client ID:	ZZZZZ	Batch ID:	R10818	TestNo:	TO-15			Analysis Date:	4/1/2016	SeqNo:	127113

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.100	0.040	1	0	110	70	130				

Qualifiers:

.	Results reported are not blank corrected	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected at or below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 1ugM3_TO15

Sample ID ALCS1UG-040216	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 10819
Client ID: ZZZZZ	Batch ID: R10819	TestNo: TO-15		Analysis Date: 4/2/2016	SeqNo: 127125

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.290	0.15	1	0	129	70	130				
1,1-Dichloroethane	1.170	0.15	1	0	117	70	130				
1,1-Dichloroethene	1.200	0.15	1	0	120	70	130				
Chloroethane	1.230	0.15	1	0	123	70	130				
Chloromethane	1.290	0.15	1	0	129	70	130				
cis-1,2-Dichloroethene	1.170	0.15	1	0	117	70	130				
Tetrachloroethylene	0.7800	0.15	1	0	78.0	70	130				
trans-1,2-Dichloroethene	1.180	0.15	1	0	118	70	130				
Trichloroethene	1.260	0.15	1	0	126	70	130				
Vinyl chloride	1.140	0.15	1	0	114	70	130				

Qualifiers:
. Results reported are not blank corrected
J Analyte detected at or below quantitation limits
S Spike Recovery outside accepted recovery limits
E Value above quantitation range
ND Not Detected at the Reporting Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CENTEK LABORATORIES, LLC

Date: 26-Apr-16

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID ALCS1UGD-033116 SampType: LCSD TestCode: 0.25CT-TCE- Units: ppbV Prep Date: RunNo: 10817
Client ID: ZZZZZ Batch ID: R10817 TestNo: TO-15 Analysis Date: 4/1/2016 SeqNo: 127097

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.280	0.15	1	0	128	70	130	1.25	2.37	30	
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130	1.12	7.41	30	
1,1-Dichloroethene	1.120	0.15	1	0	112	70	130	1.12	0	30	
Chloroethane	1.250	0.15	1	0	125	70	130	1.22	2.43	30	
Chloromethane	1.210	0.15	1	0	121	70	130	1.23	1.64	30	
cis-1,2-Dichloroethene	1.010	0.15	1	0	101	70	130	1.06	4.63	30	
Tetrachloroethylene	0.9000	0.15	1	0	90.0	70	130	0.92	2.20	30	
trans-1,2-Dichloroethene	1.000	0.15	1	0	100	70	130	1.05	4.88	30	
Trichloroethene	1.150	0.040	1	0	115	70	130	1.11	3.54	30	
Vinyl chloride	1.050	0.040	1	0	105	70	130	1.09	3.74	30	

Sample ID ALCS1UGD-040116 SampType: LCSD TestCode: 0.25CT-TCE- Units: ppbV Prep Date: RunNo: 10818
Client ID: ZZZZZ Batch ID: R10818 TestNo: TO-15 Analysis Date: 4/2/2016 SeqNo: 127114

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.280	0.15	1	0	128	70	130	1.29	0.778	30	
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130	1.04	0	30	
1,1-Dichloroethene	1.100	0.15	1	0	110	70	130	1.1	0	30	
Chloroethane	1.240	0.15	1	0	124	70	130	1.13	9.28	30	
Chloromethane	1.230	0.15	1	0	123	70	130	1.23	0	30	
cis-1,2-Dichloroethene	0.9400	0.15	1	0	94.0	70	130	0.98	4.17	30	
Tetrachloroethylene	0.8300	0.15	1	0	83.0	70	130	0.88	5.85	30	
trans-1,2-Dichloroethene	0.9600	0.15	1	0	96.0	70	130	0.99	3.08	30	
Trichloroethene	1.210	0.040	1	0	121	70	130	1.23	1.64	30	

Qualifiers:
- . Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 0.25CT-TCE-VC

Sample ID: ALCS1UGD-040116	SampType: LCSD	TestCode: 0.25CT-TCE-	Units: ppbV	Prep Date:	RunNo: 10818
Client ID: ZZZZZ	Batch ID: R10818	TestNo: TO-15		Analysis Date: 4/2/2016	SeqNo: 127114

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.070	0.040	1	0	107	70	130	1.1	2.76	30	

Qualifiers:

- . Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1603076
Project: Emerson Landfill

TestCode: 1ugM3_TO15

Sample ID ALCS1UGD-040216	SampType: LCSD	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 10819
Client ID: ZZZZZ	Batch ID: R10819	TestNo: TO-15		Analysis Date: 4/3/2016	SeqNo: 127130

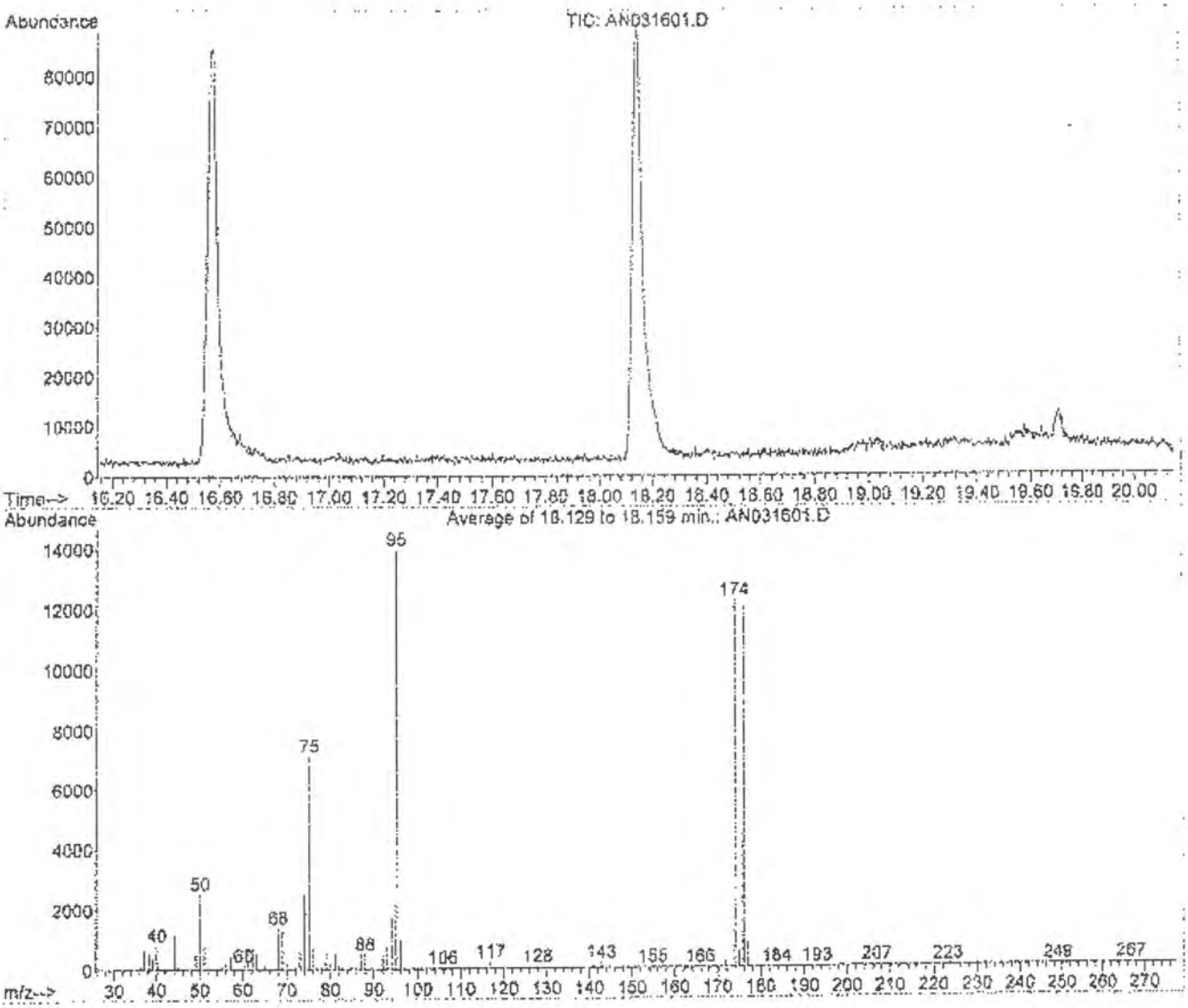
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.300	0.15	1	0	130	70	130	1.29	0.772	30	
1,1-Dichloroethane	1.170	0.15	1	0	117	70	130	1.17	0	30	
1,1-Dichloroethene	1.110	0.15	1	0	111	70	130	1.2	7.79	30	
Chloroethane	1.090	0.15	1	0	109	70	130	1.23	12.1	30	
Chloromethane	1.190	0.15	1	0	119	70	130	1.29	8.06	30	
cis-1,2-Dichloroethene	1.110	0.15	1	0	111	70	130	1.17	5.26	30	
Tetrachloroethylene	0.8900	0.15	1	0	89.0	70	130	0.78	13.2	30	
trans-1,2-Dichloroethene	1.150	0.15	1	0	115	70	130	1.18	2.58	30	
Trichloroethene	1.220	0.15	1	0	122	70	130	1.26	3.23	30	
Vinyl chloride	1.220	0.15	1	0	122	70	130	1.14	6.78	30	

Qualifiers:
- `.` Results reported are not blank corrected
- J Analyte detected at or below quantitation limits
- S Spike Recovery outside accepted recovery limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

BFB

Data File : C:\HPCHEM\1\DATA\AN031601.D
Acq On : 16 Mar 2016 5:26 pm
Sample : BFB1UG
Misc : A316_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 1
Operator: RJP
Inst : MSD #1
Multiplr: 1.00



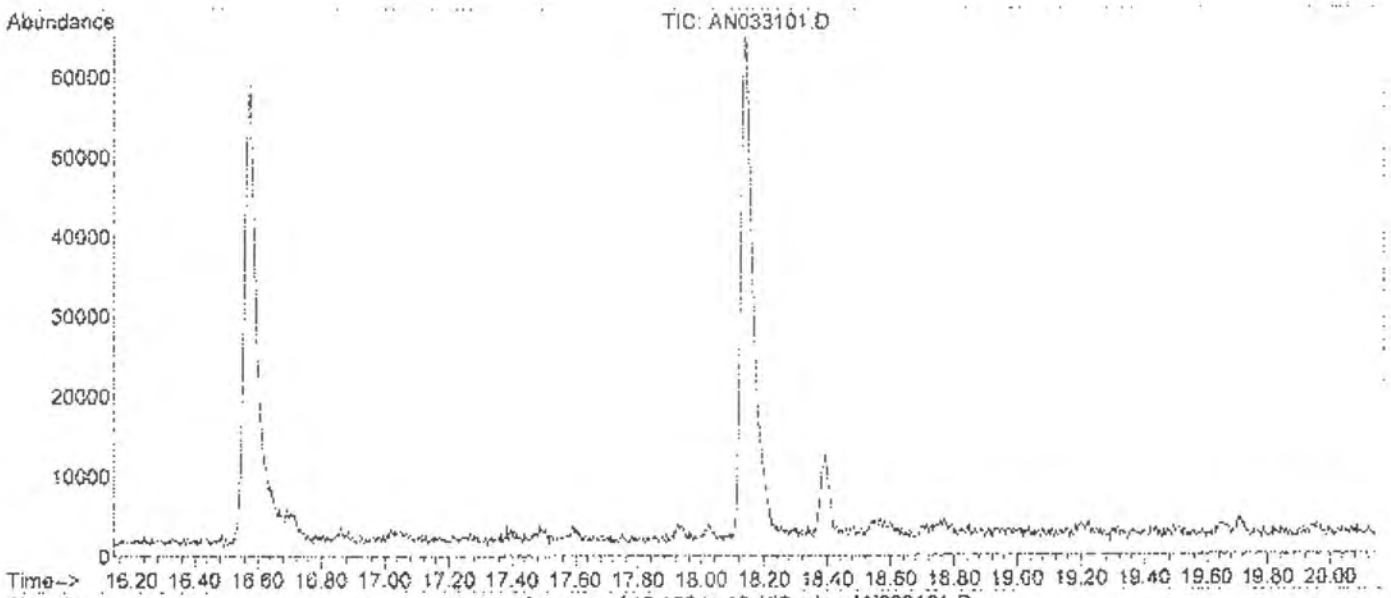
Spectrum Information: Average of 18.129 to 18.159 min.

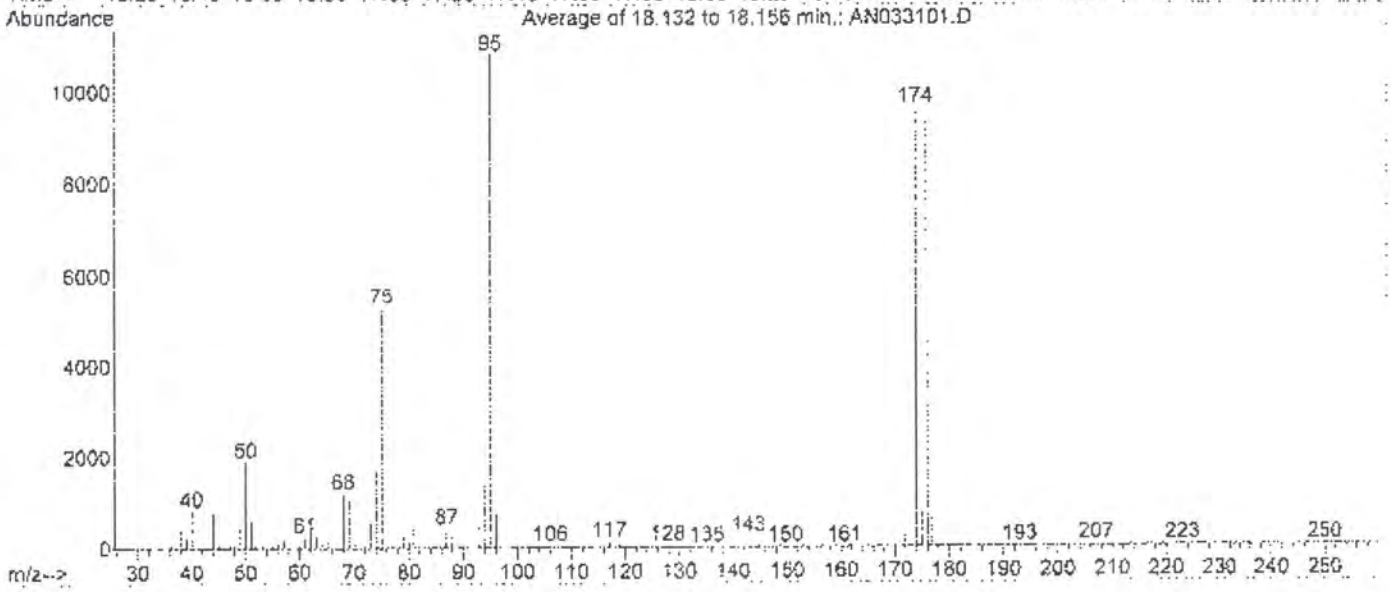
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.0	2513	PASS
75	95	30	66	51.1	7135	PASS
95	95	100	100	100.0	13975	PASS
96	95	5	9	6.7	936	PASS
173	174	0.00	2	0.6	79	PASS
174	95	50	120	87.9	12278	PASS
175	174	4	9	4.1	498	PASS
176	174	95	101	98.5	12090	PASS
177	176	5	9	6.9	829	PASS

BFB

Data File : C:\HPCHEM\1\DATA2\AN033101.D
Acq On : 31 Mar 2016 9:33 am
Sample : BFB1UG
Misc : A316_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 1
Operator: RJP
Inst : MSD #1
Multiplr: 1.00





Spectrum Information: Average of 18.132 to 18.156 min.

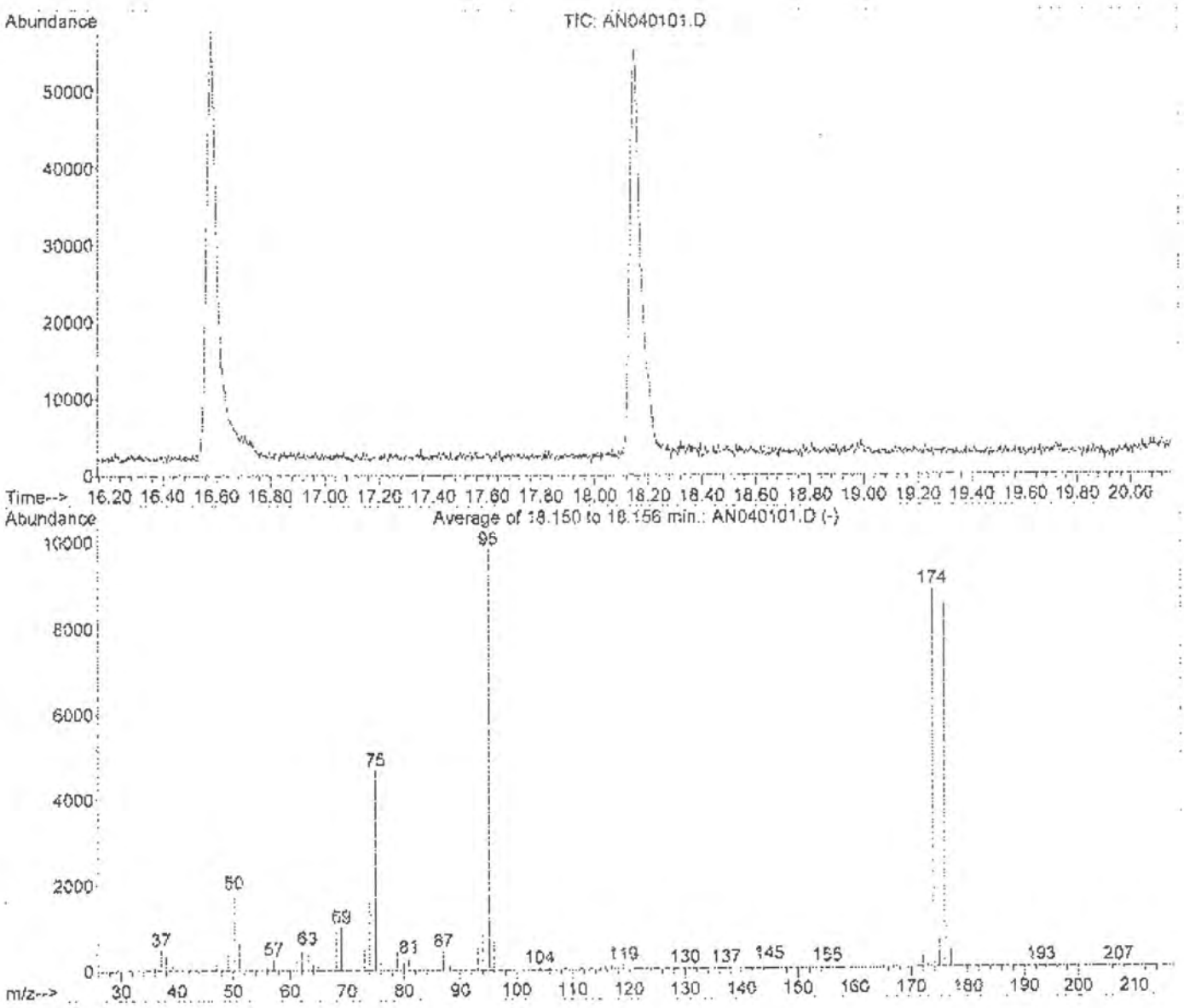
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.5	1890	PASS
75	95	30	66	49.0	5299	PASS
95	95	100	100	100.0	10811	PASS
96	95	5	9	7.0	757	PASS
173	174	0.00	2	0.7	65	PASS
174	95	50	120	89.2	9645	PASS
175	174	4	9	7.8	750	PASS
176	174	95	101	97.0	9355	PASS
177	176	5	9	7.5	704	PASS

AN033101.D A316_1UG.M Tue Apr 26 14:47:04 2016 MSD1

BFB

Data File : C:\HPCHEM\1\DATA\AN040101.D
Acq On : 1 Apr 2016 10:05 am
Sample : BFB1UG
Misc : A316_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 16
Operator: RJP
Inst : MSD #1
Multiplr: 1.00



Spectrum Information: Average of 18.150 to 18.156 min.

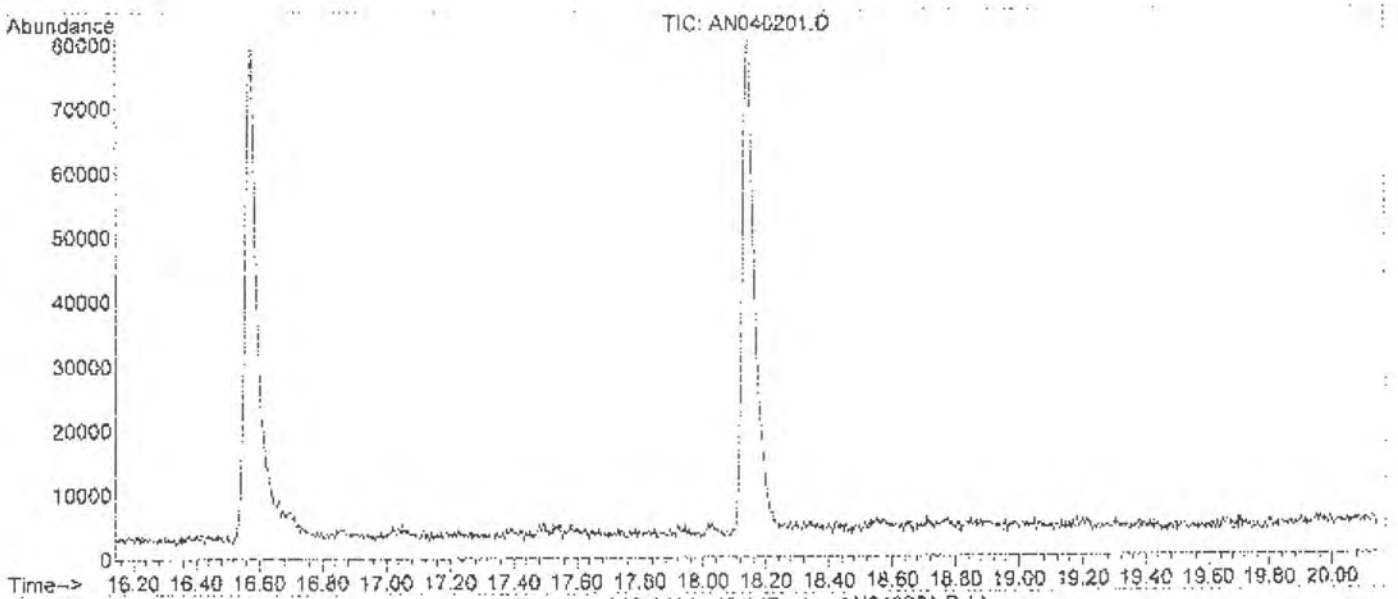
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.6	1827	PASS
75	95	30	66	47.8	4708	PASS
95	95	100	100	100.0	9841	PASS
96	95	5	9	7.0	692	PASS
173	174	0.00	2	0.8	70	PASS
174	95	50	120	90.2	8875	PASS
175	174	4	9	7.4	658	PASS
176	174	95	101	96.4	8557	PASS
177	176	5	9	5.2	443	PASS

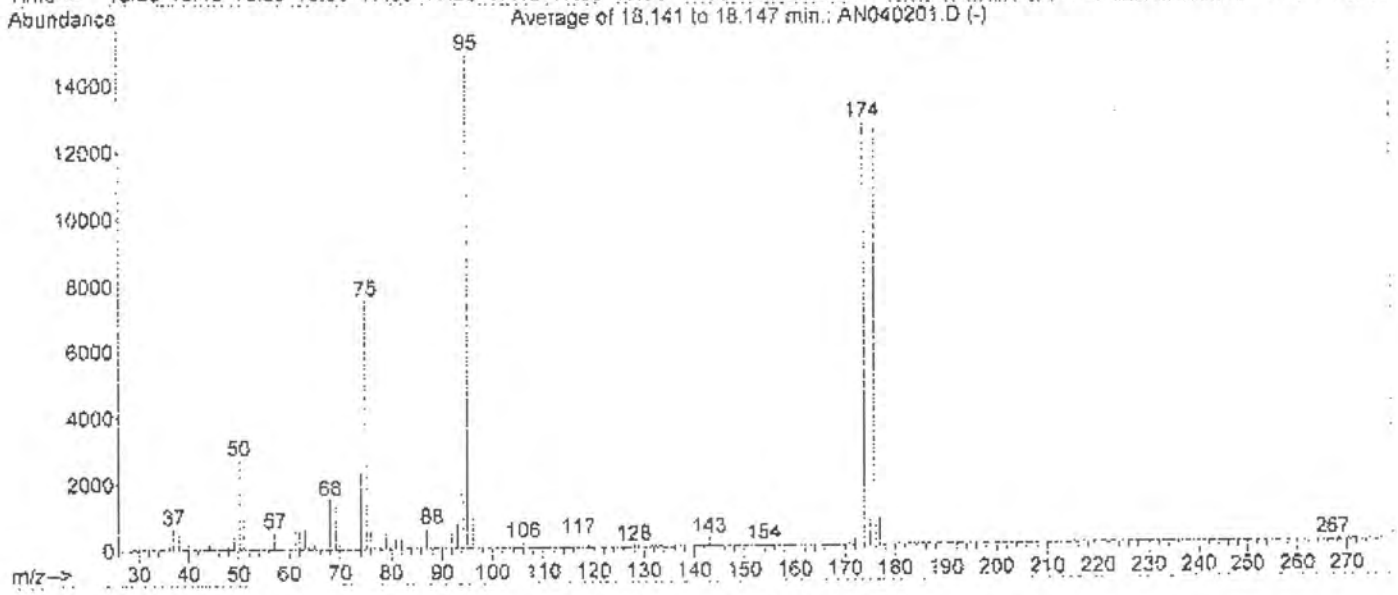
AN040101.D A316_1UG.M Tue Apr 26 14:48:24 2016 MSD1

BFB

Data File : C:\HPCHEM\1\DATA\AN040201.D
Acq On : 2 Apr 2016 10:48 am
Sample : BFB1UG
Misc : A316_1UG
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\A316_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration

Vial: 1
Operator: RJP
Inst : MSD #1
Multiplr: 1.00





Spectrum Information: Average of 18.141 to 18.147 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.2	2718	PASS
75	95	30	66	50.7	7557	PASS
95	95	100	100	100.0	14902	PASS
96	95	5	9	6.7	1000	PASS
173	174	0.00	2	0.2	31	PASS
174	95	50	120	85.9	12799	PASS
175	174	4	9	6.0	772	PASS
176	174	95	101	98.7	12634	PASS
177	176	5	9	6.7	841	PASS

AN040201.D A316_1UG.M Tue Apr 26 14:59:39 2016 MSD1

DATA USABILITY SUMMARY REPORT

for

LaBella Associates, P.C.

300 State Street

Rochester, NY 14614

FORMER EMERSON LANDFILL
Project 210173
SDG: C1703050
Sampled 03/12/2017

TO-15 AIR SAMPLES

1770-IAQ-2B	(C1703050-01)
1770-IAQ-3B	(C1703050-02)
1770-IAQ-4B	(C1703050-03)
1770-OUTDOOR	(C1703050-04)
1770-DupeB	(C1703050-05)

DATA ASSESSMENT

One data package containing analytical results for five TO-15 samples was received from LaBella Associates, P.C. on 31Mar17. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Former Emerson Landfill Site, were identified by Chain of Custody documents and traceable through the work of Centek Laboratories, LLC, the laboratory contracted for analysis. The analyses were performed using US EPA Method TO-15 and addressed measurements of ten volatile organic compounds. Laboratory data was evaluated according to the quality assurance / quality control requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP), September 1989, Rev. 07/2005. When the required protocol was not followed, the current EPA Region II Functional Guidelines (SOP HW-31, Rev. #4, October 2006, Volatile Organic Analysis of Ambient Air in Canisters by Method TO-15) was used as a technical reference.

The results reported from 1770-IAQ-4B and DupeB have been qualified as estimations because the samples were not collected correctly.

The chloromethane results from this project have been qualified as estimations due to a high spiked blank recovery.

CORRECTNESS AND USABILITY

Reported data should be considered technically defensible and completely usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions at the time of sampling have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 02 May 17

James B. Baldwin
DATAVAL, Inc.

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the date of sampling. TO-15 samples must be analyzed within 14 days of collection.

This sample delivery group contained four TO-15 samples that were collected in 1-liter SUMMA canisters and one sample, 1770-OUTDOOR, that was collected in a 1.4-liter canister to facilitate the preparation of MS/MSD samples. Sampling was completed on 12Mar17. The canisters were shipped to the laboratory, via FedEx-Ground, on 14Mar17 and were received on 17Mar17. Although the sample canisters were received intact and properly labeled, custody seals were not present on the packaging.

Canister vacuum readings were recorded in the laboratory prior to shipment, in the field prior to and following sampling, and in the laboratory at the time of receipt and at the time of analysis.

SAMPLE	PRIOR TO SHIPMENT ("Hg)	PRIOR TO SAMPLING ("Hg)	POST SAMPLING ("Hg)	LAB ANALYSIS ("Hg)
1770-IAQ-2B	-30	-30	-7	-7
1770-IAQ-3B	-30	-30	-5	-5
1770-IAQ-4B	-30	-30	-10	-9
1770-OUTDOOR	-30	-30	-6	-6
1770-DupeB	-30	-30	-10	-7

The canister regulators were set in the laboratory to collect 6-hour samples. However, when sampling was completed, the canister for 1770-IAQ-2B had not reached the required end point of -4 to -6 "Hg. Data has not been qualified due to this issue because exceedence was minor. Samples of 1770-IAQ-4B and DupeB were collected for nine hours. Even with this prolonged period of sampling the method end point was not reached. The results from this pair of samples have been qualified as estimations because the samples were not collected correctly.

The vacuum readings recorded after sampling and at the time of analysis indicated that the integrity of each sample had been maintained during this period. The analysis of this group of samples was completed on 20Mar17 and 21Mar17. The ASP holding time limitation was satisfied.

CANISTER CERTIFICATION

The canisters used for this project were pressure tested at 30 psig for 24 hours. Each canister demonstrated a change ≤0.5 psig over this period.

The canisters were cleaned in two batches. A blank analysis of a clean canister from each batch was free of targeted analyte contamination above the laboratory's reporting limit.

BLANKS
Blanks are analyzed to evaluate various sources of sample contamination. Trip Blanks monitor sampling activities, sample transport, and storage. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank.

One method blank was analyzed with this group of samples. This blank demonstrated acceptable chromatography and was free of targeted analyte contamination.

MS TUNING
Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

BFB ion abundance criteria was reported for standards that were analyzed prior to the initial instrument calibration and the analysis of program samples. These checks satisfied the ASP acceptance criteria.

CALIBRATION
Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The initial instrument calibration was performed on 12Mar17. Standards of 0.04, 0.10, 0.15, 0.30, 0.50, 0.75, 1.0, 1.25, 1.50 and 2.0 ppbV were included. Each targeted analyte produced the required levels of instrument response and demonstrated an acceptable degree of linearity during this calibration.

A continuing calibration check standard was analyzed on 20Mar17, prior to the analysis sequence that included the samples from this project. This check demonstrated an acceptable level of instrument stability.

SURROGATES
Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Although surrogate summary sheets were properly prepared, an incorrect acceptance criteria was applied. When compared to the ASP requirements, however, an acceptable recovery was reported for each surrogate addition to this group of samples,

INTERNAL STANDARDS
Internal standards are added to each sample, blank and standard

just prior to injection. Analyte concentrations are calculated relative to the response of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than 40%. When compared to the preceding calibration check, retention times may not vary by more than 10 seconds.

The laboratory recorded the response of each internal standard addition to this group of samples and the response obtained from the preceding CCV standard. Although the control limits based on the response of the CCV were not reported, they were calculated by this reviewer. When compared to these limits, acceptable performance was reported for each internal standard addition to this group of samples. The internal standard retention time of each sample fell within a window of ±10 seconds.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample, prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

1770-OUTDOOR was selected for matrix spiking. Each targeted analyte was added to two volumes of this sample. The recoveries reported for these additions demonstrated acceptable levels of measurement precision and accuracy.

A pair of spiked blanks (LCS/LCSD) was also analyzed with this group of samples. This LCS/LCSD pair produced a high recovery of chloromethane (140%). The chloromethane results from this group of samples have been qualified as estimations based on this indication of positive bias.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

The duplicate sample that was included in this delivery group was not identified. It is noted, however, that the previously addressed spiked samples demonstrated an acceptable level of measurement precision.

REPORTED ANALYTES

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument print outs. Reference mass spectra were provided to confirm the identification of each analyte that was detected in this group of samples.

SUMMARY OF QUALIFIED DATA

FORMER EMERSON LANDFILL SAMPLED MARCH 2017

		SAMPLING	SPIKED BLANK CHLOROMETHANE
1770-IAQ-2B	(C1703050-01)		2.0J
1770-IAQ-3B	(C1703050-02)		1.7J
1770-IAQ-4B	(C1703050-03)	ALL J/UJ	1.7J
1770-OUTDOOR	(C1703050-04)		1.5J
1770-DupeB	(C1703050-05)	ALL J/UJ	1.8J

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-2B
Lab Order:	C1703050	**Tag Number:**	368.259
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 10:03:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 10:03:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:03:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 10:03:00 PM
Chloromethane	2.0	0.31	J	ug/m3	1	3/20/2017 10:03:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:03:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 10:03:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:03:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 10:03:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 10:03:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected	
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit	
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection	
	S	Spike Recovery outside accepted recovery limits			

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-3B
Lab Order:	C1703050	**Tag Number:**	1176.1170
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 10:45:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 10:45:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:45:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 10:45:00 PM
Chloromethane	1.7	0.31	J	ug/m3	1	3/20/2017 10:45:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:45:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 10:45:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 10:45:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 10:45:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 10:45:00 PM

JN S

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-IAQ-4B
Lab Order:	C1703050	**Tag Number:**	168.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 11:28:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 11:28:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 11:28:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 11:28:00 PM
Chloromethane	1.7	0.31	J	ug/m3	1	3/20/2017 11:28:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 11:28:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 11:28:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 11:28:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 11:28:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 11:28:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Outdoor-B
Lab Order:	C1703050	**Tag Number:**	484.251
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/20/2017 7:50:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/20/2017 7:50:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 7:50:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	3/20/2017 7:50:00 PM
Chloromethane	1.5	0.31	J	ug/m3	1	3/20/2017 7:50:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 7:50:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/20/2017 7:50:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/20/2017 7:50:00 PM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/20/2017 7:50:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/20/2017 7:50:00 PM

MS

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected	
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit	
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection	
	S	Spike Recovery outside accepted recovery limits			

Centek Laboratories, LLC

Date: *27-Mar-17*

CLIENT:	LaBella Associates, P.C.	**Client Sample ID:**	1770-Dupe B
Lab Order:	C1703050	**Tag Number:**	1182.1161
Project:	Former Emerson St Landfill	**Collection Date:**	3/12/2017
Lab ID:	C1703050-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		TO-15				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	3/21/2017 12:10:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	3/21/2017 12:10:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	3/21/2017 12:10:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	3/21/2017 12:10:00 AM
Chloromethane	1.8	0.31	J	ug/m3	1	3/21/2017 12:10:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/21/2017 12:10:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/21/2017 12:10:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	3/21/2017 12:10:00 AM
Trichloroethene	< 0.21	0.21		ug/m3	1	3/21/2017 12:10:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/21/2017 12:10:00 AM

TRS

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected	
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit	
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection	
	S	Spike Recovery outside accepted recovery limits			

Date: 27-Mar-17

CENTEK LABORATORIES, LLC

QC SUMMARY REPORT
SURROGATE RECOVERIES

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill
Test No: TO-15 **Matrix:** A

Sample ID	BR4FBZ							
ALCS1UG-032017	96.0							
ALCS1UGD-032017	97.0							
AMB1UG-032017	93.0							
C1703050-001A	99.0							
C1703050-002A	101							
C1703050-003A	96.0							
C1703050-004A	96.0							
C1703050-004A MS	98.0							
C1703050-004A MSD	99.0							
C1703050-005A	100							

Acronym		Surrogate	QC Limits
BR4FBZ	=	Bromofluorobenzene	70-130

* Surrogate recovery outside acceptance limits

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AO032002.D
Tune Time : 20 Mar 2017 11:14 am

Daily Calibration File : C:\HPCHEM\1\DATA\AO032002.D

File	Sample	DL	Surrogate Recovery % (BFB)	Internal Standard Responses (IS1)	(IS2)	(IS3)
				27548	128642	106520
				19677	91887	76086
				11806	55132	45652
AO032003.D	ALCS1UG-032017		96	18587	86723	73319
AO032004.D	AMB1UG-032017		93	18191	81621	66968
AO032014.D	C1703050-004A		96	13369	59517	48346
AO032015.D	C1703050-004A	MS	98	12965	59084	49891
AO032016.D	C1703050-004A	MSD	99	12927	61212	51251
AO032017.D	C1703050-001A		99	12944	59644	49626
AO032018.D	C1703050-002A		101	13210	60426	51042
AO032019.D	C1703050-003A		96	13112	60666	50616
AO032020.D	C1703050-005A		100	12939	60039	50085
AO032026.D	C1703050-004A	10x	94	14458	67096	55112
AO032027.D	C1703050-001A	10x	92	12952	62172	50174
AO032028.D	C1703050-002A	10x	98	12844	57925	46234
AO032029.D	C1703050-003A	10x	92 not required	11878	56049	45186
AO032030.D	C1703050-005A	10x	91 "	11444	53989	44090
AO032031.D	ALCS1UGD-032017		97 "	11608	53720	44926

t - fails 24hr time check * - fails criteria 7/85

Created: Mon Mar 27 11:26:49 2017 MSD #1/

CENTEK LABORATORIES, LLC

Date: *27-Mar-17*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID ALCS1UG-032017	SampType: LCS	TestCode: 0.25CT-TCE-	Units: ppbV	Prep Date:	RunNo: 12048
Client ID: ZZZZZ	Batch ID: R12048	TestNo: TO-15		Analysis Date: 3/20/2017	SeqNo: 140948

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9800	0.15	1	0	98.0	70	130				
1,1-Dichloroethane	0.9700	0.15	1	0	97.0	70	130				
1,1-Dichloroethene	0.9200	0.15	1	0	92.0	70	130				
Chloroethane	1.060	0.15	1	0	106	70	130				
Chloromethane	1.250	0.15	1	0	125	70	130				
cis-1,2-Dichloroethene	0.9400	0.15	1	0	94.0	70	130				
Tetrachloroethylene	1.040	0.15	1	0	104	70	130				
trans-1,2-Dichloroethene	0.9500	0.15	1	0	95.0	70	130				
Trichloroethene	1.000	0.040	1	0	100	70	130				
Vinyl chloride	1.040	0.040	1	0	104	70	130				

Sample ID ALCS1UGD-032017	SampType: LCSD	TestCode: 0.25CT-TCE-	Units: ppbV	Prep Date:	RunNo: 12048
Client ID: ZZZZZ	Batch ID: R12048	TestNo: TO-15		Analysis Date: 3/21/2017	SeqNo: 140949

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.090	0.15	1	0	109	70	130	0.98	10.6	30	
1,1-Dichloroethane	1.070	0.15	1	0	107	70	130	0.97	9.80	30	
1,1-Dichloroethene	0.9700	0.15	1	0	97.0	70	130	0.92	5.29	30	
Chloroethane	1.290	0.15	1	0	129	70	130	1.06	19.6	30	
Chloromethane	1.400	0.15	1	0	140	70	130	1.25	11.3	30	S
cis-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130	0.94	9.14	30	
Tetrachloroethylene	1.080	0.15	1	0	108	70	130	1.04	3.77	30	
trans-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130	0.95	8.08	30	
Trichloroethene	1.050	0.040	1	0	105	70	130	1	4.88	30	

Qualifiers:

.	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	ALCS1UGD-032017	SampType:	LCSD	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	12048
Client ID:	ZZZZZ	Batch ID:	R12048	TestNo:	TO-15			Analysis Date:	3/21/2017	SeqNo:	140949

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.350	0.040	1	0	135	70	130	1.04	25.9	30	S

Qualifiers:

.	Results reported are not blank corrected
J	Analyte detected below quantitation limit
S	Spike Recovery outside accepted recovery limits
E	Estimated Value above quantitation range
ND	Not Detected at the Limit of Detection
H	Holding times for preparation or analysis exceeded
R	RPD outside accepted recovery limits

CENTEK LABORATORIES, LLC

Date: *27-Mar-17*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID AMB1UG-032017 SampType: MBLK TestCode: 0.25CT-TCE- Units: ppbV Prep Date: RunNo: 12048
Client ID: ZZZZZ Batch ID: R12048 TestNo: TO-15 Analysis Date: 3/20/2017 SeqNo: 140947

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
Trichloroethene	< 0.040	0.040									
Vinyl chloride	< 0.040	0.040									

Qualifiers:

.	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CENTEK LABORATORIES, LLC

Date: *27-Mar-17*

ANALYTICAL QC SUMMARY REPORT

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID C1703050-004A MS SampType: MS TestCode: 0.25CT-TCE- Units: ppbV Prep Date: RunNo: 12048
Client ID: 1770-Outdoor-B Batch ID: R12048 TestNo: TO-15 Analysis Date: 3/20/2017 SeqNo: 140955

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.030	0.15	1	0	103	70	130				
1,1-Dichloroethane	0.9900	0.15	1	0	99.0	70	130				
1,1-Dichloroethene	0.9300	0.15	1	0	93.0	70	130				
Chloroethane	1.260	0.15	1	0	126	70	130				
Chloromethane	2.100	0.15	1	0.75	135	70	~~130~~ 135				S
cis-1,2-Dichloroethene	1.010	0.15	1	0	101	70	130				
Tetrachloroethylene	1.020	0.15	1	0	102	70	130				
trans-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130				
Trichloroethene	1.040	0.040	1	0	104	70	130				
Vinyl chloride	1.200	0.040	1	0	120	70	130				

Sample ID C1703050-004A MS SampType: MSD TestCode: 0.25CT-TCE- Units: ppbV Prep Date: RunNo: 12048
Client ID: 1770-Outdoor-B Batch ID: R12048 TestNo: TO-15 Analysis Date: 3/20/2017 SeqNo: 140956

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.000	0.15	1	0	100	70	130	1.03	2.96	30	
1,1-Dichloroethane	1.040	0.15	1	0	104	70	130	0.99	4.93	30	
1,1-Dichloroethene	0.9100	0.15	1	0	91.0	70	130	0.93	2.17	30	
Chloroethane	1.240	0.15	1	0	124	70	130	1.26	1.60	30	
Chloromethane	1.770	0.15	1	0.75	102	70	130	2.1	17.1	30	
cis-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130	1.01	1.96	30	
Tetrachloroethylene	0.9900	0.15	1	0	99.0	70	130	1.02	2.99	30	
trans-1,2-Dichloroethene	1.000	0.15	1	0	100	70	130	0.98	2.02	30	
Trichloroethene	1.010	0.040	1	0	101	70	130	1.04	2.93	30	

Qualifiers:
. Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: LaBella Associates, P.C.
Work Order: C1703050
Project: Former Emerson St Landfill

TestCode: 0.25CT-TCE-VC

Sample ID	C1703050-004A MS	SampType:	MSD	TestCode:	0.25CT-TCE-	Units:	ppbV	Prep Date:		RunNo:	12048
Client ID:	1770-Outdoor-B	Batch ID:	R12048	TestNo:	TO-15			Analysis Date:	3/20/2017	SeqNo:	140956

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.240	0.040	1	0	124	70	130	1.2	3.28	30	

Qualifiers:

- . Results reported are not blank corrected
- J Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

LaBella Associates, D.P.C.
300 State Street

Rochester, New York 14614

Appendix 3

Field Logs

LABELLA Associates, D.P.C.

Soil Vapor Instrusion Sampling Log

Former Emerson Street Landfill
1770 Emerson Street

Project Name: Former Emerson Street Landfill- 1770 Emerson St
Project No: 210173
Sampled By: AA and ED
Date: 21-Mar-16
Weather: ~35 degress overcast
Wind Speed/Direction: from SW less than 5 mph

ID: 1770-SVI-1	
Sub-Slab Pressure: 0.00 "wc	
Canister: 1179	
Regulator: 343	
Helium Tracer in shroud: 60%	
Helium Tracer at point: 0%	
Sub-Slab	
Time	Vacuum Reading ("Hg)
Start 808	30
End 1357	5

ID: 1770-SVI-2	
Sub-Slab Pressure: 0.00 "wc	
Canister: 89	
Regulator: 1166	
Helium Tracer in shroud: 60%	
Helium Tracer at point: 0%	
Sub-Slab	
Time	Vacuum Reading ("Hg)
Start 843	30
End 1450	3

ID: 1770-SVI-3	
Sub-Slab Pressure: -0.006 "wc	
Canister: 188	
Regulator: 308	
Helium Tracer in shroud: 60.8%	
Helium Tracer at point: 0%	
Sub-Slab	
Time	Vacuum Reading ("Hg)
Start 906	30
End 1415	4

ID: 1770-Outdoor Air	
Sub-Slab Pressure: NA "wc	
Canister: 322	
Regulator: 1159	
Helium Tracer in shroud: NA	
Helium Tracer at point: NA	
Outdoor Air	
Time	Vacuum Reading ("Hg)
Start 800	30
End 1353	3

Notes/Activities:
1770-SVI-1 = Blind Dup 2 (canister 1179 regulator 343)

LABELLA Associates, D.P.C.

Soil Gas Testing Log

Former Emerson Street Landfill
1770 Emerson Street

Project Name:	Former Emerson Street Landfill- 1770 Emerson ST
Project No:	210173
Sampled By:	AA and ED
Date:	21-Mar-16
Weather:	~35 degress overcast
Wind Speed/Direction:	from SW less than 5 mph

ID: 1770-IAQ-1	
Sub-Slab Pressure: NA "wc	
Canister: 1183	
Regulator: 339	
Helium Tracer in shroud: NA	
Helium Tracer at point: NA	
Indoor Air	
Time	Vacuum Reading ("Hg)
Start 804	30
End 1335	4

ID: 1770-IAQ-2	
Sub-Slab Pressure: NA "wc	
Canister: 89	
Regulator: 1166	
Helium Tracer in shroud: NA	
Helium Tracer at point: NA	
Indoor Air	
Time	Vacuum Reading ("Hg)
Start 843	29
End 1453	9.5

ID: 1770-IAQ-3	
Sub-Slab Pressure: NA "wc	
Canister: 188	
Regulator: 308	
Helium Tracer in shroud: NA	
Helium Tracer at point: NA	
Indoor Air	
Time	Vacuum Reading ("Hg)
Start 943	30
End 1418	7

Notes/Activities:

1770-IAQ-1 = Blind Dup 1 (canister 419 regulator 339)

LABELLA Associates, D.P.C.

Soil Gas Testing Log

Former Emerson Street Landfill
1770 Emerson Street

Project Name: Former Emerson Street Landfill- 1770 Emerson ST
Project No: 210173
Sampled By: AA
Date: 3/21/20163/12/2017
Weather: ~45 degress overcast
Wind Speed/Direction: from W less than 5 mph

ID: 1770-IAQ-2B	
Sub-Slab Pressure: NA	
Canister: 368	
Regulator: 259	
Helium Tracer in shroud: NA	
Helium Tracer at point: NA	
Indoor Air	
Time	Vacuum Reading ("Hg)
Start 800	30
815	29
910	26
1000	23
1100	19
1230	12.0
1310	9
End 1345	7

ID: 1770-IAQ-3B	
Sub-Slab Pressure: NA	
Canister: 1176	
Regulator: 1170	
Helium Tracer in shroud: NA	
Helium Tracer at point: NA	
Indoor Air	
Time	Vacuum Reading ("Hg)
Start 802	30
815	28.0
910	23
1000	20
1100	15
1230	9.0
1310	6.0
End 1330	5.0

ID: 1770-IAQ-4B	
Sub-Slab Pressure: NA	
Canister: 168	
Regulator: 1161	
Helium Tracer in shroud: NA	
Helium Tracer at point: NA	
Indoor Air	
Time	Vacuum Reading ("Hg)
Start 805	30+
815	30
910	27
1000	25
1100	22
1230	18
1310	15
1345	13
End 1500	10

ID: 1770-Outdoor-B	
Sub-Slab Pressure: NA	
Canister: 484	
Regulator: 251	
Helium Tracer in shroud: NA	
Helium Tracer at point: NA	
Outdoor Air	
Time	Vacuum Reading ("Hg)
Start 804	30+
815	30
1100	18
1310	7
End 1330	6

Notes/Activities:
1770-IAQ-4 = Blind Dup 1 (canister 1182 regulator 1161)

LaBella Associates, D.P.C.
300 State Street

Rochester, New York 14614

Appendix 4

Preliminary Building Assessment and Site Reconnaissance

Site: 1770 Emerson Street (500 Lee Road Building C)
Site Recon Date: October 14, 2010
Consultant: Stantec/Day Team

Summary of Available Historic Records:

- The structure (approximately 12,000 sq. ft.) was built in 1980.
- The building was originally occupied by General Motors, which used the facility as a chemical storage building. Separate areas were designated for Flammable Gas, Oxidizers, Non-Flammable Gas, Acids, Flammable Liquids, Bulk Storage and Shipping and Receiving.
- The parcel is listed as 1770 Emerson Street. The subject building was formerly part of and is currently known as 500 Lee Road, designated as Building C, for business and mail purposes. A new building (not included in this property survey) is under construction to the south of the subject building and will be referred to as 1770 Emerson Street.
- The property was subdivided from the 500 Lee Road property with the property boundary approximately 17' north of the building's north side. Due to the subdivision, the tanks and pump islands depicted on drawing P-2 are located on the adjacent property to the north.

Current Site Use:

- Currently owned by Vampiro Ventures LLC and occupied by New York Commercial Flooring, a flooring warehouse, retailer, and installer; and by Kimmins Coffee Service, a coffee supply and service company.
- New York Commercial Flooring uses approximately 6,000 sq. ft. for offices and flooring warehousing. This tenant intends to move into a new building (not included in this survey) being built to the south of the subject building at 1770 Emerson Street. The warehousing operations store several chemicals, including VOCs in the form of glues and solvents, but generally do not use these on the premises.
- Kimmins Coffee Service uses approximately 6,000 sq. ft. for offices, coffee supply warehousing, and coffee machine and pot servicing and cleaning. The service and cleaning functions use cleaning chemicals.
- Approximately 6 people occupy the flooring warehouse and office areas during weekdays (1 shift). Approximately 8 people occupy the coffee warehouse and office areas during weekdays (1 shift).
- Approximately 5,500 sq. ft. is used for warehousing of flooring and approximately 500 sq. ft. is used as office space for the flooring company. Approximately 5,000 sq. ft. is used as coffee supply warehousing and approximately 1,000 sq. ft. is used as coffee service office space.

Site Recon Observations:

- Chemical storage observed on-site included:
    - Flooring warehouse area - carpet glue storage, vinyl adhesive, epoxy primer, sealant, contact cement, seam sealer, polyurethane
    - Location 8 – Room background - adhesive/sealant storage
    - Location 14 – Gas can storage shelf
    - Location 15 – Chemical storage shelf – polyurethane, caulk, masonry cleaner, contact cement, adhesive, adhesive remover
    - Location 48 – Gasoline storage can - 2 gal plastic
    - Location 57 – Storage shelf with household cleaners
- The foundation system for the building consists of a slab-on-grade concrete floor on caissons (reported by Mr. Chris Leva [owner] to be 16" thick; however, drawing S-1 indicates 8" concrete slab on compacted fill), with masonry walls to 48" high followed by metal walls.
- Floor slab condition was generally good (one floor crack in the flooring warehouse area at Location 30 [<1/8" to 1/4" wide], no heaving observed).
- The building uses ceiling mounted natural gas forced air heat in the warehouses. Office areas are heated separately by ducted heat pump - natural gas and electric.
- According to Drawing P-2, utilities enter the building at the north side, they share a common corridor, and they connect to an off-site Power House building.

Site: 1770 Emerson Street (500 Lee Road Building C)
Site Recon Date: October 14, 2010
Consultant: Stantec/Day Team

- A sewer interceptor vault is located east of the building at the loading dock. The vault is connected to a 30" storm line.
- Pressure and air exchange rates within building were not known by owner or tenant.

List of Observed Floor Penetrations (Potential SVI Locations):

- Electrical conduit (1") (Locations 28,38,50).
- Fire protection (6") (Location 33).
- Toilets (Locations 18,53,56).
- Roof drain downspout (4") (Location 6)
- Floor drains (3",18") (Locations 16,19,23,40).
- Trench drains (3" wide) (Locations 1,9,10,12,58,60)
- Sump (16") (Location 51)
- Sink drain (3") (Location 21)
- Cleanout (3") (Location 24)
- Floor crack (<1/8"-1/4") (Location 30)
- Floor chip (2") (Location 7)
- Expansion joints (1/4") (Location 46).
- Dock lifts (4'x5') (Locations 25,26,27)
- Cut off rebar or bolts (1/2") (Location 47)
- Hole in base of wall - above foundation - penetration to exterior (1'x1') (Location 3)
- Other pipes (1"-3") (Locations 34,35,36,37,39)

Site Recon Meter Readings (Total Readings Collected – 67):

- Total Background Readings Collected = 23
    - Background VOC readings due to operations ranged from 42 to 207 ppb
    - Background Methane readings due to operations were 0%

- Total Floor Penetration Readings Collected = 34
    - VOC readings above background were recorded at:
        - Locations where readings are potentially related to sewer gases:
            - Location 19 – Floor drain = 66 ppb (Background = 61 ppb)
            - Location 21 – Sink drain = 86 ppb (Background = 81 ppb)
            - Location 51 – Floor sump = 124 ppb (Background = 120 ppb)
            - Location 58 – Trench drain = 131 ppb (Background = 120 ppb)
        - Locations where readings are minor (<10% or 50 ppb above background) and presumed to be due to instrument or background variability:
            - Location 3 – Hole in base of wall - above foundation - penetration to exterior = 173 ppb (Background = 127 ppb)
            - Location 46 – Expansion joint = 127 ppb (Background = 120 ppb)
            - Location 47 – Floor penetrations - cut off rebar or bolts = 131 ppb (Background = 120 ppb)
            - Location 50 – Electrical conduit = 125 ppb (Background = 120 ppb)
            - Location 53 – Toilet base = 135 ppb (Background = 132 ppb)
            - Location 56 – Toilet base = 128 ppb (Background = 123 ppb)
        - Note: It is likely that the VOC readings above background at the floor penetration locations listed above are due to equipment sensitivity or site operations; however, potential soil vapor intrusion as a source cannot be ruled out.

- No Methane readings above background were recorded

Submit by Email | Print Form

FORMER EMERSON STREET LANDFILL
SOIL VAPOR INTRUSION
PRELIMINARY BUILDING ASSESSMENT AND SITE RECONAISSANCE

Parcel Information:

Address: 1770 Emerson Street, Rochester, NY (also known as 500 Lee Road Building C)

Owner: Vampiro Ventures LLC

Number of Buildings: 1

Building this Sheet Represents *(fill out one for each building)*: 500 Lee Road Building C

Interviewer Information:

Name: Dorothy Bauch-Barker / Charles Hampton Date/Time Prepared: 10/12/10 12pm

Consultant Firm: Stantec / Day Phone No.: 585-413-5276 / 585-454-0210 x125

Owner/Interviewee Information:

Last Name: Leva First Name: Chris

Address: 454 Lee Road, Rochester, NY 14606

Company: Leva Family Properties

Office Phone: 585-739-0151

Tenant Information (if any):

Tenant Contact Person: New York Commercial Flooring - Diane Springer; Kimmins Coffee Service - Rus Simmons

Address: 500 Lee Road Building C, Rochester, NY

Company: New York Commercial Flooring (will move into building under construction), Kimmins Coffee Service

Office Phone: Diane - 585-647-1200; Rus - 585-967-3700

SECTION I - Building Construction Information

A. Site plans available? *(e.g., foundation construction, utility locations/chases, etc.)*: Yes
If yes, can copies be obtained? Yes, for existing building

B. Does owner have knowledge that ash or solid waste was removed at time of building construction: Yes

If yes, are any documents available? Building C - never heard of any removed per Chas (GM representative)

C. Building Construction

	Construction Type	Finish Type	Sealed	Square Feet
Basement	N/A			
Crawl Space	N/A			
First Floor	Slab on grade, reported by Mr. Chris Leva (owner) to be 16" thick; however, drawing S-1 indicates 8" concrete slab on compacted fill	Concrete	Partially sealed and painted	12,000
Foundation Walls	Masonry ~48" high, then metal			
2nd Floor	N/A			

D. Any additions to building: No
If yes, list dates and locations:

If yes, note variations in construction:

E. Utility/Floor Penetrations

	Location(s)	Size/Description
Electric	28,38,50	Electrical conduit (1")
Gas	N/A	
Water	33	Fire protection (6")
Sewer/Wastewater	18, 53, 56, 6, 21, 24	Toilets; Roof drain downspout (4"); Sink drain (3");Cleanout (3")
Sumps	51	Sump (16")
Floor/Trench Drains	1, 9, 10, 12, 16, 19, 23, 40, 58, 60	Floor drains (3",18"), Trench drains (3" wide)
Dry Well	N/A	
Oil/Water Separators	N/A	
Cracks in Floor	7, 30	Floor crack (<1/8"-1/4"); Floor chip (2")
Expansion Joints	46	Expansion joints (1/4")
Floating Slab	N/A	
Monitoring Points	N/A	
Scales	N/A	
Utility Vaults	N/A	
Elevators	N/A	
Other	3, 25, 26, 27, 34, 35, 36, 37, 39, 47	Dock lifts (4'x5'); Other pipes (1"-3"), Cut off rebar or bolts (1/2"), • Hole in base of wall - above foundation - penetration to exterior (1'x1')

F. Does facility have an on Site septic system? No

If yes, where and size: _____

G. Does facility provide pretreatment of wastewater prior to discharge to sanitary sewer? No

If yes, What type of pretreatment is conducted: _____

H. Is there a vapor barrier associated with the foundation system? No

If yes, indicate type/material, location, thickness, etc.: None shown in available building plans

I. Is there a radon/sub slab soil vapor mitigation system on any portion of the building? No

If yes, describe system and date installed: _____

If yes, Is the system active or passive?

If yes, Is system currently operational?

J. Standing water or wet areas in lower levels? No

If yes, list location and describe: _____

If yes how frequent: No

K. Is the building insulated? Yes

If yes, location(s) and type? Fiberglass - in panel insulation system

L. Are there any settlement issues with the building? No

If yes, describe: _____

M. Are there any cracks in floor slabs (1st floor or basement)? Yes

If yes, location(s), width, etc.? One crack at location 30, ~1/8-1/4" wide; floor chip at location 7 (2")

N. Are there any elevators in the building? No

If yes, describe construction and condition of pit (poured concrete, cinder block, etc.)

Comments:

SECTION II – Heating, Ventilation and Air Conditioning Information

A. Type of heating system(s) used in this building: Forced Hot Air
For each heat system/unit, provide the following:

Unit Type	Unit Location	Areas Heated	Unit Size	Pressurization (neg. vs. positive)	Air Communication with other areas (duct work, doors, etc.)
Natural gas forced air ceiling mounted units	~6 units	Warehouses		Unknown	Yes (doors)
Office areas heated separately by ducted heat pump - natural gas and electric		Offices		Unknown	Yes (doors)

B. Type of fuel used: Natural Gas

If more than one list locations: Natural gas in warehouses and offices and electric in offices

C. Domestic hot water tank fueled by: Natural gas

D. Air conditioning: Central Air

Comments:

Large forced air unit in NE corner of building, auxiliary natural gas burner west of loading dock on north side, air conditioning in offices, ~6 natural gas forced air ceiling mounted units in warehouses

SECTION III – Indoor Air Quality Influence Factors

A. Is there a garage, service area or manufacturing area in building? No

If yes, list all that apply:

1. Does the garage, service or manufacturing areas have separate heating unit/system? No
2. Are petroleum-powered machines or vehicles used or stored within the garage, service area or manufacturing area of building? *(e.g., forklifts, vehicle fleet, lawnmower, etc.)* Yes

If yes, specify:

Propane forklifts, snowblower

B. Are there any current or former USTs, ASTs or Fueling Facilities on the property? No

If yes, specify location: No, but building was GM chemical storage building. The property was subdivided from the 500 Lee Road property with the property boundary approximately 17' north of the building's north side. Due to the subdivision, the tank and pump island depicted on drawing P-2 is located on the adjacent property to the north.

C. Are there any current or former hydraulic lifts at the property? Yes

If yes, locations and note if underground or above ground:

Loading docks - 2 on northeast side, lifts are in floor but do not penetrate bottom of concrete floor
locations 25, 26, 27

D. Are there any current or former petroleum or chemical spills at the Site? No

If yes, specify location, quantity, material and date:

E. Are there any current or former groundwater monitoring wells at the Site? No

If yes, specify location and accessibility:

F. Has the building ever had a fire? No

If yes, When:

G. Is there a maintenance area? Yes

If yes, Where: Two janitor's closets, locations 20,54

H. Are there any parts cleaners used at the site? No

If yes, list location(s) and solvent types:

I. Are there any drum and/or chemical storage areas? Yes

If yes, list location(s) and materials:

See Comments on Page 7

J. Are cleaning products used routinely? Yes

If yes, When & Where: Regular office cleaning, coffee pot cleaning

K. Has painting/staining been done in the last 6 months? No

If yes, When & Where: Painting last performed a year or so ago

L. Is there new carpet, drapes or other textiles within installed within the last year? Yes

If yes, Where & When: Kimmins Coffee Service - new carpet installed a year or so ago in office area

M. Are there air fresheners in office spaces or bathrooms? Yes

If yes, Where & Type: Offices and bathrooms

N. Are there exhaust fans (e.g., break rooms, bathrooms, or other locations)? Yes

If yes, where vented and how often do they run: Bathrooms - fans run as needed, fire hatches - vents opened as needed

O. Has there been a pesticide application on the grounds? No

If yes, When & Type:

P. Is smoking allowed on the property? No

If yes, is it allowed within buildings and where?

Q. Are there odors in the building? Yes

If yes, please describe: Carpet warehousing

R. Are solvents used within the building? No

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, etc.)

If yes, what types of solvents are used:

S. Is groundwater extracted for any purpose (e.g. cooling water, geothermal, etc.)? No

If yes, how many extraction wells, what depths and what is the rate of extraction: _____

T. Are there any air handling units in the building? Yes

If yes, locations, sizes, intakes & exhaust: HVAC, see Section II

U. Are there any doors (overhead/bay or others) that are routinely open? Yes

If yes, note locations, sizes, and approximate times open: Overhead doors open sometimes at northeast, southwest, and east central sides

V. Do any of the building occupants regularly use a dry cleaning service? Yes, wee Kimmins Coffee Service uniform laundry

Based on Information obtained list all potential soil gas entry points and there sizes (e.g., cracks in floor, void space, piping, utility ports, sumps, elevator pits, lifts, drains, etc.).

- Electrical conduit (1") (Locations 28,38,50).
- Fire protection (6") (Location 33).
- Toilets (Locations 18,53,56).
- Roof drain downspout (4") (Location 6)
- Floor drains (3",18") (Locations 16,19,23,40).
- Trench drains (3" wide) (Locations 1,9,10,12,58,60)
- Sump (16") (Location 51)
- Sink drain (3") (Location 21)
- Cleanout (3") (Location 24)
- Floor crack (<1/8"-1/4") (Location 30)
- Floor chip (2") (Location 7)
- Expansion joints (1/4") (Location 46).
- Dock lifts (4'x5') (Locations 25,26,27)
- Cut off rebar or bolts (1/2") (Location 47)
- Hole in base of wall - above foundation - penetration to exterior (1'x1') (Location 3)
- Other pipes (1"-3") (Locations 34,35,36,37,39)

[*Note: See page 12 & 13 for additional information to be collected on each potential soil gas entry point (i.e., photographs, PID and landfill gas measurements, etc.*]

Comments:

Section III Question I:

Flooring warehouse area - carpet glue storage, vinyl adhesive, epoxy primer, sealant, contact cement, seam sealer, polyurethane; Location 8 – Room background - adhesive/sealant storage; 14 – Gas can storage shelf; 15 – Chemical storage shelf – polyurethane, caulk, masonry cleaner, contact cement, adhesive, adhesive remover; 48 – Gasoline storage can - 2 gal plastic; 57 – Storage shelf with household cleaners

Section IV – Occupancy/General Use

Location Use	Occupied (list hours/shifts)	Number of Employees (Full/Part-time)	Approx. Sq. Ft.	Level (basement, 1st Floor, 2nd Floor, etc.)	Brief Summary of Business/ Operations in Area (include additional sheets as necessary)
Office	8am - 5pm M-F	8 Coffee; 6 Flooring	1,000 Coffee; 500 Flooring	1st	Office work
Manufacturing/ Production					
Warehouse/ Storage	8am - 5pm M-F	8 Coffee; 6 Flooring	5,000 Coffee; 5,500 Flooring	1st	Coffee service warehouse and servicing; Flooring warehouse
Garage					
Maintenance					
Conference/ Break Rooms					

Comments:

Instrument Readings:

Mark each location on site sketch where reading was collected and provide a photograph. At a minimum, readings must be collected from all potential soil gas entry points within buildings (e.g., utility vaults, sumps, floor drains, oil/water separators, floor cracks, etc.) and any subsurface features on the exterior (e.g., catch basins, manholes, utility vaults, etc.). In addition, at least one breathing zone location will be measured for each discrete area within buildings.

Location	VOCs	CH4	CO2	O2	CO	H2S	Description & Comments
Units	ppb	%	%	%	ppm	ppm	
1	98	0	0	20.8	0	0	Trench drain, doorway ~ 1ft deep
2	127	0	0	20.8	0	0	Carpet roll room background (for locations 1,3)
3	173	0	0	20.9	0	0	Hole in base of wall - above foundation - penetration to exterior
4	140	0	0	21.1	0	0	Carpet storage area south side background
5	161	0	0	21.1	0	0	Room background (for locations 6,7)
6	158	0	0	21.2	0	0	Roof drain downspout - penetrates floor
7	112	0	0	21.2	0	0	Chip in concrete floor
8	117	0	0	21.2	0	0	Room background - adhesive/sealant storage (for locations 9,10)
9	86	0	0	21.2	0	0	Trench drain in doorway at north end of room
10	95	0	0	21.3	0	0	Trench drain at south end of room
11	108	0	0	21.3	0	0	Room background - vinyl flooring storage (for location 12)
12	82	0	0	21.4	0	0	Trench drain in doorway at north end of room
13	159	0	0	21.4	0	0	Room background - tool storage (for locations 14,15,16)
14	172	0	0	21.5	0	0	Gas can storage shelf
15	1848	0	0	21.5	0	0	Chemical storage shelf– polyurethane, caulk, masonry cleaner, contact cement, adhesive, adhesive remover
16	73	0	0	21.5	0	0	Floor drain - circular
17	61	0	0	21.5	0	0	Bathroom background (for locations 18,19)
18	60	0	0	21.5	0	0	Toilet base
19	66	0	0	21.5	0	0	Floor drain in door frame
20	81	0	0	21.5	0	0	Janitor's closet - room background (for location 21)

Note: dash marks indicate that no reading was taken.

Instrument Readings (Continued):

Mark each location on site sketch where reading was collected and provide a photograph. At a minimum, readings must be collected from all potential soil gas entry points within buildings (e.g., utility vaults, sumps, floor drains, oil/water separators, floor cracks, etc.) and any subsurface features on the exterior (e.g., catch basins, manholes, utility vaults, etc.). In addition, at least one breathing zone location will be measured for each discrete area within buildings.

Location	VOCs	CH4	CO2	O2	CO	H2S	Description & Comments
Units	ppb	%	%	%	ppm	ppm	
21	86	0	0	21.5	0	0	Sink drain in utility sink
22	119	0	0	21.5	0	0	Bathroom background (for locations 23,24)
23	116	0	0	21.5	0	0	Bathroom floor drain
24	70	0	0	21.5	0	0	Bathroom electrical penetration or cleanout
25	38	0	0	21.6	0	0	Below loading dock lift E
26	26	0	0	21.6	0	0	Below loading dock lift W
27	-	-	-	-	-	-	Below west hydraulic lift
28	42	0	0	21.5	0	0	Hydraulic lift control utility conduit penetration
29	94	0	0	21.6	0	0	Room background - loading and storage area (for locations 25,26,28,30)
30	80	0	0	21.6	0	0	Floor crack (<1/8"-1/4")
31	86	0	0	21.6	0	0	Sample storage room (carpet) background
32	42	0	0	21.6	0	0	Electrical room background (for locations 33-40)
33	35	0	0	21.6	0	0	Floor penetration ~ 6" steel pipe - fire protection
34	29	0	0	21.6	0	0	Floor penetration ~ 3" pipe - furnace?
35	36	0	0	21.6	0	0	Floor penetration ~ 2" steel pipe - cut off
36	17	0	0	21.5	0	0	Floor penetration ~ 2" steel pipe cut off w/ concrete cutout
37	28	0	0	21.5	0	0	Floor penetration ~3" steel pipe - cut off
38	40	0	0	21.6	0	0	Floor penetration - electrical conduit
39	30	0	0	21.6	0	0	Floor penetration - utility conduit
40	30	0	0	21.6	0	0	Floor drain

Instrument Readings (Continued):

Mark each location on site sketch where reading was collected and provide a photograph. At a minimum, readings must be collected from all potential soil gas entry points within buildings (e.g., utility vaults, sumps, floor drains, oil/water separators, floor cracks, etc.) and any subsurface features on the exterior (e.g., catch basins, manholes, utility vaults, etc.). In addition, at least one breathing zone location will be measured for each discrete area within buildings.

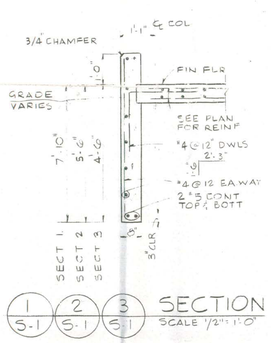
Location	VOCs	CH4	CO2	O2	CO	H2S	Description & Comments
Units	ppb	%	%	%	ppm	ppm	
41	185	0	0.1	21.5	0	0	Office space - room background
42	207	0	0	21.5	0	0	Office space - room background
43	193	0	0.1	21.5	0	0	Furnace room - room background
44	53	0	0	21.3	0	0	Entry way to office - background
45	120	0	0	21.2	1	0	Room background (for locations 46-51,57,58)
46	127	0	0	21.3	0	0	Expansion joint in floor - N/S trending across room
47	131	0	0	21.3	0	0	Floor penetrations - cut off rebar or bolts
48	380	0	0	21.4	0	0	Gasoline storage can - 2 gal plastic
49	1333	0	0	21.4	0	0	Snowblower gas tank
50	125	0	0	21.4	0	0	Electrical conduit - floor penetration
51	124	0	0	21.4	0	0	Floor sump ~ 16" diameter with bolted cover
52	132	0	0	21.4	0	0	Bathroom w/ exhaust fan/vinyl floor - background (for location 53)
53	135	0	0	21.4	0	0	Toilet base
54	131	0	0	21.5	0	0	Janitor closet/hot water boiler background
55	123	0	0	21.5	0	0	Bathroom w/ exhaust fan/vinyl floor - background (for location 56)
56	128	0	0	21.5	0	0	Toilet base
57	138	0	0	21.5	0	0	Storage shelf with household cleaners
58	131	0	0	21.5	0	0	Trench drain
59	129	0	0	21.4	0	0	Room background - repair and cleaning room (for location 60)
60	46	0	0	21.4	0	0	Trench drain

Instrument Readings (Continued):

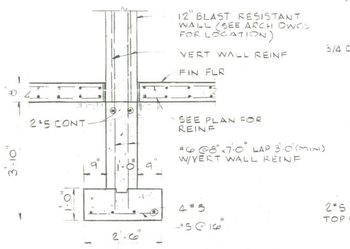
Mark each location on site sketch where reading was collected and provide a photograph. At a minimum, readings must be collected from all potential soil gas entry points within buildings (e.g., utility vaults, sumps, floor drains, oil/water separators, floor cracks, etc.) and any subsurface features on the exterior (e.g., catch basins, manholes, utility vaults, etc.). In addition, at least one breathing zone location will be measured for each discrete area within buildings.

Location	VOCs	CH4	CO2	O2	CO	H2S	Description & Comments
Units	ppb	%	%	%	ppm	ppm	
61	130	0	0	21.4	0	0	Office space, carpeted, finished interior walls background
62	139	0	0	21.4	0	0	Office space, carpeted, finished interior walls background
63	3479	0	0	21.4	0	0	Catch basin (1770) NE Corner of site (tar coated)
64	1640	0	0	21.4	0	0	Catch basin (1770) E-center site (tar coated)
65	40890	0	0	21.4	0	0	Catch basin (1770) NW Corner of site (tar coated)
66	14	0	0	21.5	0	0	Catch basin (building C) E side, dock
67	57	0	0	21.4	0	0	Wastewater vault
68	-	-	-	-	-	-	Interior of vault photograph
69	1	0	0	21.5	0	0	Stormwater catch basin, E side Bldg C
70	-	-	-	-	-	-	North face of Bldg C
71	-	-	-	-	-	-	East face Bldg C
72	-	-	-	-	-	-	Loading dock on east of Bldg C
73	-	-	-	-	-	-	1770 site photo
74	-	-	-	-	-	-	South face bldg C
75	-	-	-	-	-	-	West face bldg C
76							
77							
78							
79							
80							

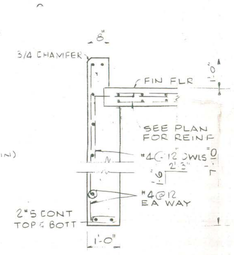
PROJECT NO. SHEET NO.



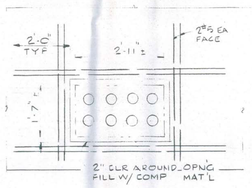
1 2 3 5.1 SECTION
SCALE 1/2"=1'-0"



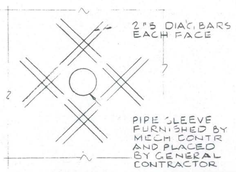
4 5.1 SECTION
SCALE 1/2"=1'-0"



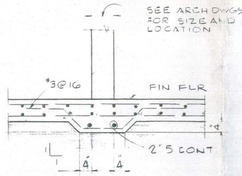
5 5.1 SECTION
SCALE 1/2"=1'-0"



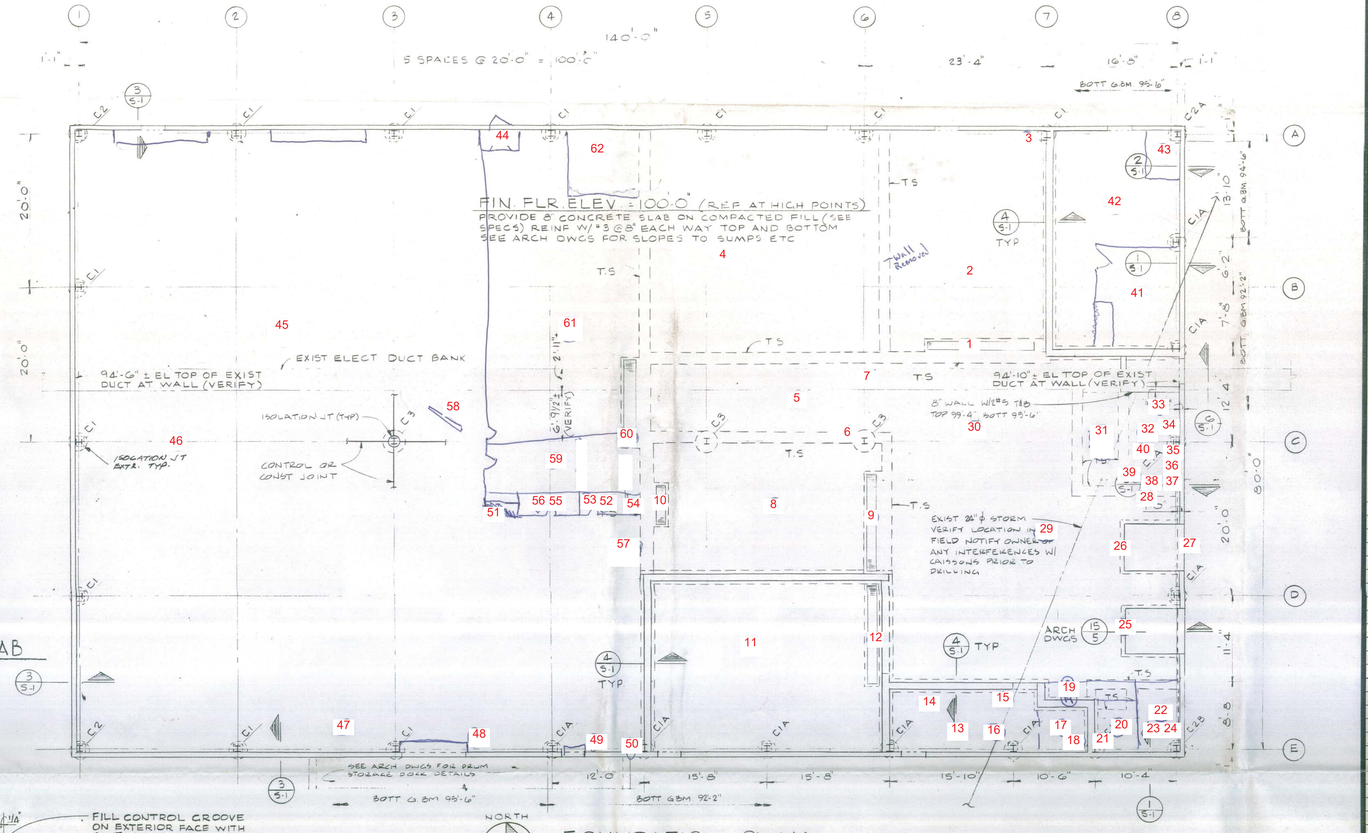
6 5.1 SECTION
SCALE 1/2"=1'-0"

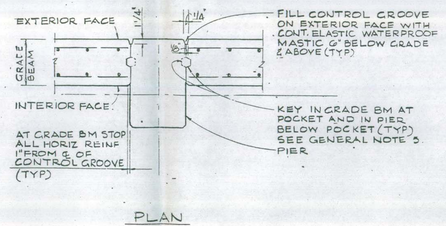


TYP. DET. PIPE THRU CONC. WALL

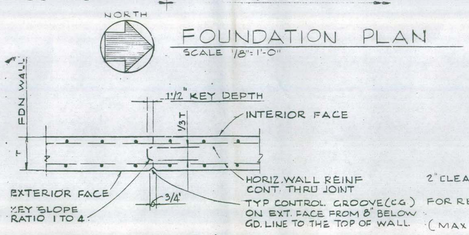


TYP. THICKENED SLAB (T.S) SCALE 1/2"=1'-0"

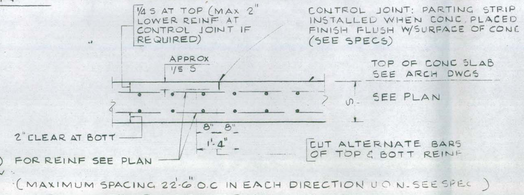




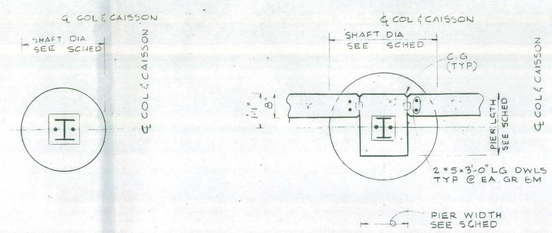
PLAN
TYP. CONTROL GROOVE DET



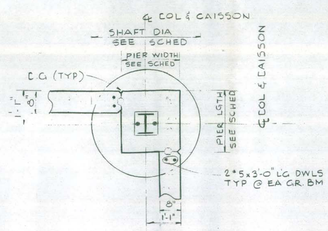
TYP. CONST. JOINT IN FOUNDATION WALLS



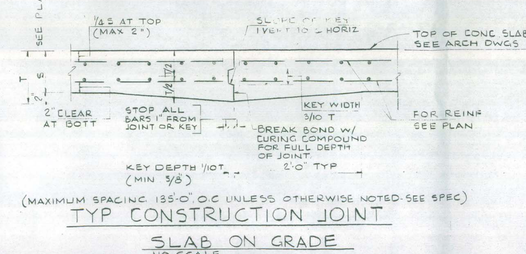
TYP CONTROL JOINT SLAB ON GRADE
NO SCALE



PLAN



PLAN



TYP CONSTRUCTION JOINT SLAB ON GRADE
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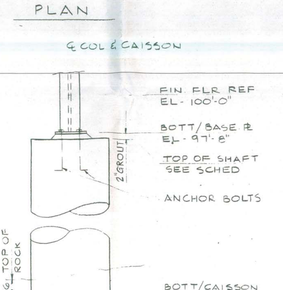
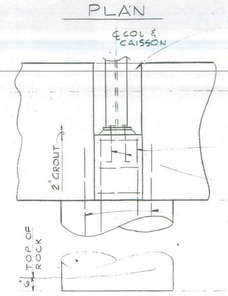
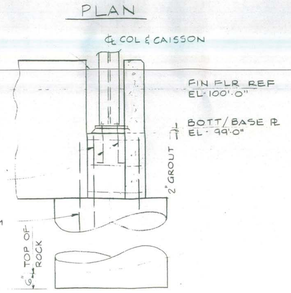


ELEVATION
TYPE I
NO SCALE



ELEVATION
TYPE II
NO SCALE



ELEVATION
TYPE III
NO SCALE

CAISSON SCHEDULE

C3	C2, C2A, C2B	C1, C1A	CAISSON MARK
104	30	59	LOAD (MAX IN KIPS) (INCL. WT OF CAISSON)
I	III	II	TYPE
—	1'-9" x 1'-9"	1'-3" x 1'-9"	SIZE (WIDTH x LENGTH)
—	8"℄6	6"℄6	VERT REINF
—	#3@12" 2/SET	#3@12" 2/SET	TIES
—	8"℄6	6"℄6	DOWELS TO PIER
3'-0"	2'-6"	2'-6"	DIAMETER
97'-6"	1) 95'-6"	1) 95'-6"	TOP ELEVATION
	1) 92'-6" AT C2A 92'-2" AT C2B	1) 92'-2" AT C1A	REMARKS

PIER / SHAFT

GENERAL NOTES

1. ALL CONCRETE WORK, CONSTRUCTION AND REINFORCING DETAILS, SHALL COMPLY WITH THE SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE STANDARD "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318-77."

2. CONCRETE STRENGTH: MINIMUM REQUIRED STRENGTH OF CONCRETE (P.S.I) AT 28 DAYS TO BE AS FOLLOWS:
BELOW GRADE 3000
EXTERIOR WALLS 3500
SEE SPECIFICATIONS FOR REMAINING CONSTRUCTION TYPES.

3. REINFORCING STEEL: SEE SPECIFICATIONS FOR REQUIREMENTS. TENSILE STRESSES (LBS./SQ.IN.) USED IN DESIGN ARE AS FOLLOWS: FOR REINFORCING STEEL BARS:
GRADE 60 - YIELD 60,000 ALLOWABLE 24,000 TO BE USED UNLESS NOTED.
GRADE 40 - YIELD 40,000 ALLOWABLE 20,000 TO BE USED ONLY WHERE SPECIFICALLY CALLED FOR AS FOLLOWS: TIES AND STIRRUPS.

4. CONCRETE PROTECTION FOR REINFORCING STEEL: SEE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY DETAILED.

5. ALL CONSTRUCTION JOINTS SHALL BE KEYED WITH KEY CENTERED ON MEMBER. WHERE THE SIZE OF THE KEY IS NOT SHOWN ON THE DRAWINGS, THE KEY WIDTH SHALL BE ONE THIRD OF THE CROSS SECTION DIMENSION OF THE MEMBER AND THE KEY DEPTH SHALL BE 10% OF THE CROSS SECTION DIMENSION OF THE MEMBER WITH A MINIMUM DIMENSION OF 3/4 INCHES.

6. ALL FOOTINGS ARE TO SET ON ROCK. THE MINIMUM ALLOWABLE BEARING CAPACITY SHALL BE 15000 LBS./S.F. AS ASSUMED IN THE DESIGN.

7. ALL FOOTING DEPTHS AND EXCAVATIONS ARE SUBJECT TO THE APPROVAL OF THE ARCHITECT-ENGINEER'S REPRESENTATIVE WHO SHALL BE CONSULTED WHEN POOR SOIL, WATER, OBSTRUCTIONS, PIPING, ADJACENT SEWERS, EXISTING FOOTINGS, EXCAVATIONS, ETC., ARE ENCOUNTERED.

8. SEE SPECIFICATIONS FOR SETTING OF ANCHOR BOLTS, LEVELING PLATES, COLUMN BASE PLATES, BEAM BEARING PLATES AND FOR PROVIDING AND PLACING OF GROUT BEDS. SEE STRUCTURAL STEEL SHOP DRAWINGS FOR ELEVATION OF LEVELING PLATES, BASE PLATES, BEARING PLATES, LOCATION OF ANCHOR BOLTS AND DIMENSIONS OF GROUT. GROUT THICKNESS INCLUDES THICKNESS OF LEVELING PLATES.

9. PROVIDE POCKETS OR RECESSES AND CONCRETE FILLS FOR COLUMNS AND BEAMS AS REQUIRED AND/OR AS CALLED FOR IN THE SPECIFICATIONS EVEN IF NOT SHOWN ON THE DRAWINGS.

10. PROVIDE RECESS IN TOP OF FOUNDATION WALLS AND GRADE BEAMS AT DOOR OPENINGS, RAMPS, ETC., FOR SUPPORT OF THICKENED FLOOR SLABS AND TO RECEIVE DOOR JAMBS. DEPTH OF RECESS IS TO BE 2 INCHES GREATER THAN THICKNESS OF FLOOR SLAB.

11. PROVIDE HORIZONTAL BENT BARS AT ALL CORNERS AND INTERSECTIONS OF CONCRETE WALLS USING THE SAME SIZE AND SPACING AS FOR HORIZONTAL WALL REINFORCING. USE BENT DOWELS IF NECESSARY TO DEVELOP ANCHORAGE.

12. PROVIDE VERTICAL DOWELS FROM COLUMN AND PIER FOOTINGS TO PIERS AND FROM WALL FOOTINGS TO WALLS, OF SAME SIZE AND SPACING AS VERTICAL REINFORCING AND OFFSET FOR SPLICE AS REQUIRED.

13. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND DETAILS NOT SHOWN OR CALLED FOR. VERIFY ALL EXISTING DIMENSIONS BEFORE PROCEEDING WITH NEW WORK.

14. "AS BUILT" DRAWINGS: SHOW ACTUAL BOTTOM OF FOOTING ELEVATIONS AND OTHER APPROVED DEVIATIONS FROM THE PLANS IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE SPECIFICATIONS.

15. PROVIDE A MINIMUM OF 2 - #5 BARS AROUND EACH SIDE OF ALL OPENINGS IN CONCRETE WALLS, GRADE BEAMS, TUNNEL WALLS, AND SLABS, ETC., WHICH ARE NOT SLEEVED. LENGTH OF BARS ARE TO BE 4'-0" LONGER THAN THE SIZE OF THE OPENING. IF THE OPENING IS NOT DETAILED, ITS LOCATION AND SIZE MUST BE CONTROLLED TO AVOID STRUCTURAL IMPAIRMENT AND IS SUBJECT TO THE APPROVAL OF THE ARCHITECT-ENGINEER.

16. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CORNERS, UNLESS NOTED OTHERWISE.

17. WHERE FOUNDATION WALLS OR GRADE BEAMS ARE BACK - FILLED TO A DIFFERENCE IN ELEVATION GREATER THAN 1'-6". THE WALL OR GRADE BEAM IS TO BE SHORED ON THE SIDE OPPOSITE THE HIGHER ELEVATION OF BACKFILL AND SHORING IS TO REMAIN IN PLACE UNTIL THE FIRST FLOOR SLABS ARE IN PLACE AND PROPERLY CURED.

18. FOR UNDERGROUND MECHANICAL AND ELECTRICAL LINES PASSING THROUGH FOUNDATION WALLS OR GRADE BEAMS, SEE MECHANICAL - ELECTRICAL AND CIVIL DRAWINGS.

DATE	ISSUED FOR	APPROVAL	APPROVAL
6-19-79	CHECKING		
6-18-79	OWNER APPROVAL		
6-20-79	PERMITS		
6-25-79	ALL TRADES BID	[signature]	

Figure 1 - 1770 Emerson Street SVI Site Recon Map (Interior Locations)
Note: Location numbers correspond to photograph numbers at each location and to photoionization detector and landfill gas meter reading locations, where taken.

NO.	DATE	BY	APPROVAL	APPROVAL

REVISIONS

CONTRACT SIGNATURES
FOR THE OWNER
FOR THE CONTRACTOR
CERTIFIED BY
DATE

JOB NO. 79-190

ELLIS/NAEYAERT/GENHEIMER, ASSOC.

GM Plant Engineering & Construction
General Motors Corporation 485 West Milwaukee Avenue Detroit, Michigan 48202

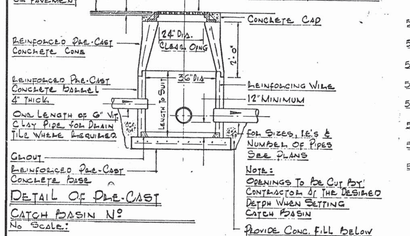
CHEMICAL STORAGE BUILDING
FOR
ROCHESTER PRODUCTS DIVISION
GENERAL MOTORS CORPORATION
ROCHESTER NEW YORK
PROJECT TITLE

FOUNDATION PLAN AND DETAILS
SHEET TITLE

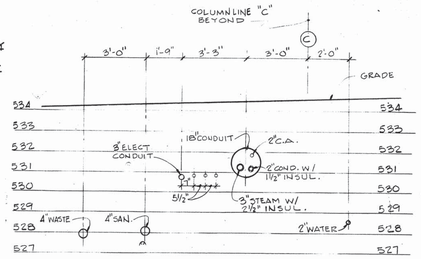
OWNER'S IDENTIFICATION
5149 PROJECT NUMBER
DATE 6-25-79
DRAWN BY F.S
JOB CAPT. G.A.R
S-1 SHEET NUMBER

P.E. & C. 145 REV. 5-79 KME 13 1153 10-78 39624

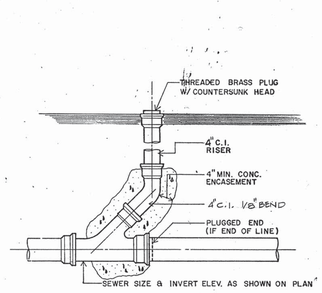
PROJECT NO. SHEET NO.



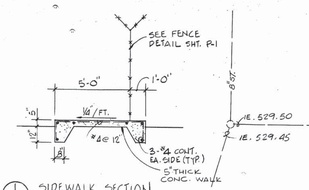
DETAIL OF PRE-CAST CATCH BASIN No.
No Scale.



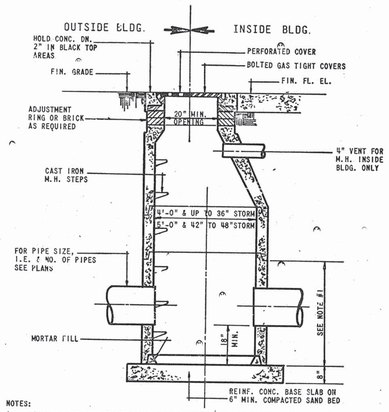
2/P-2 UTILITY SECTION
SCALE: 1"=3'-0"



CLEANOUT DETAIL
NO SCALE

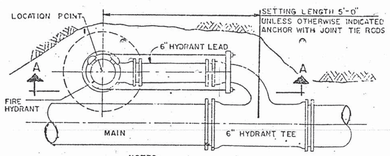


1/P-2 SIDEWALK SECTION
SCALE: ¼"=1'-0"



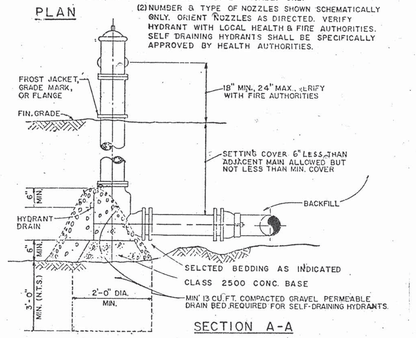
NOTES:
1. WHEN ANY PIPE SIZE EXCEEDS 15" THIS SECTION SHALL BE BRICK OR CONC. BLOCK CONSTRUCTION TO A POINT 12" ABOVE THE TOP OF HIGHEST INLET PIPE.
2. 15'-0" MAX. DEPTH FOR PRE-CAST CONCRETE SECTIONS USE 12" THICK BRICK OR BLOCK WALLS BELOW 15'-0" DEPTHS.
3. ALL STORM SEWERS AT M.H.'S SHALL BE PLACED SO THAT THE O.8 DEPTH POINT IS AT THE SAME ELEV. UNLESS OTHERWISE NOTED ON PLANS.

TYPICAL DETAIL OF PRE-CAST STORM MANHOLE
NO SCALE



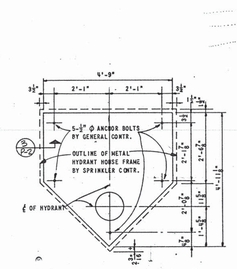
NOTES:
(1) JOINTS SHOWN SCHEMATICALLY ONLY
(2) NUMBER & TYPE OF NOZZLES SHOWN SCHEMATICALLY ONLY. ORIENT NOZZLES AS DIRECTED. VERIFY HYDRANT WITH LOCAL HEALTH & FIRE AUTHORITIES. SELF DRAINING HYDRANTS SHALL BE SPECIFICALLY APPROVED BY HEALTH AUTHORITIES.

PLAN

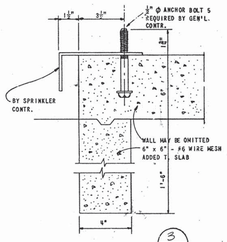


SECTION A-A

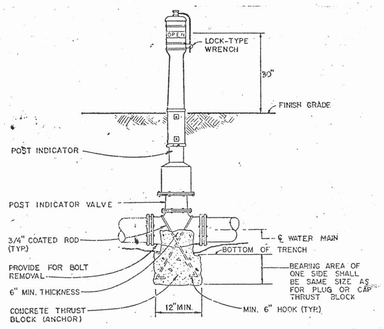
FIRE HYDRANT ASSEMBLY TYPE T



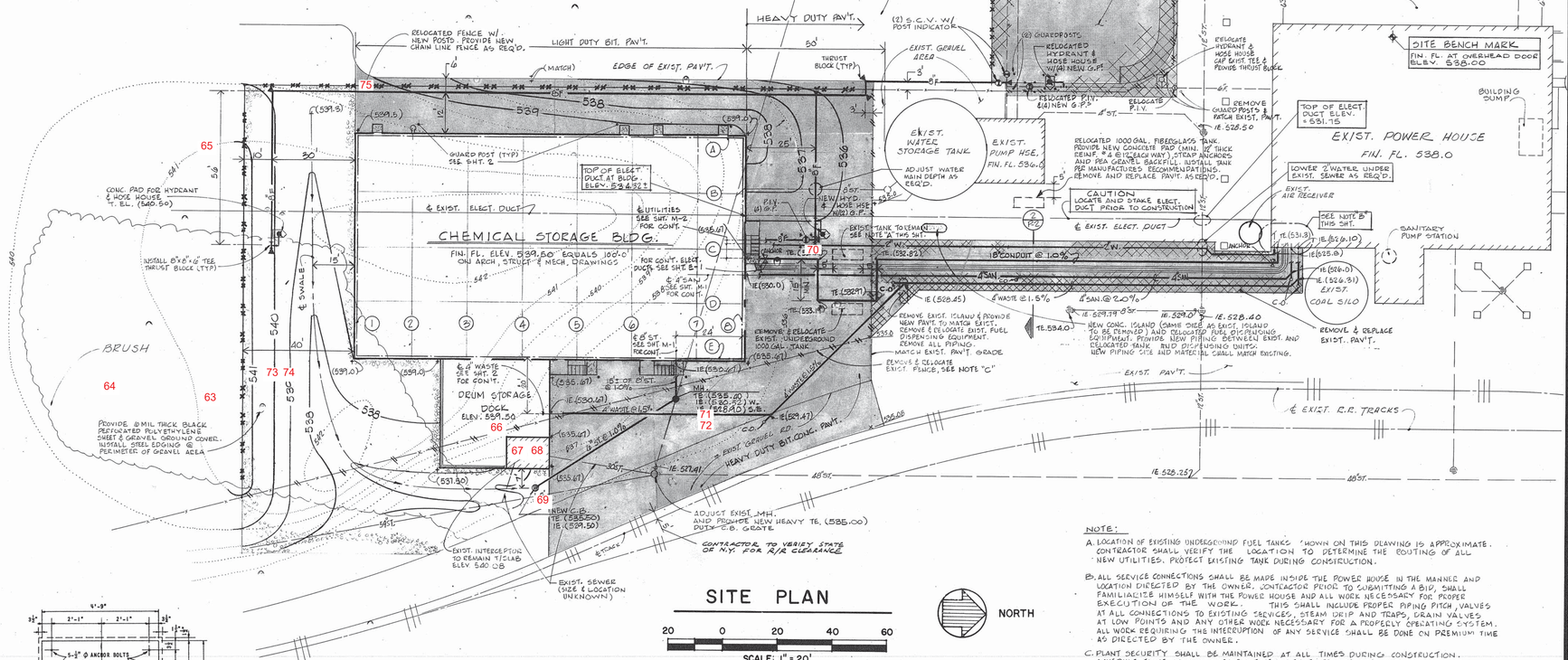
PLAN OF HYDRANT HOUSE FOUNDATION TYPE "A"



3/P-2



POST INDICATOR & VALVE (PIV)
SECTIONAL CONTROL VALVE W/POST INDICATOR



SITE PLAN
20 0 20 40 60
SCALE: 1" = 20'

NORTH

NOTE:

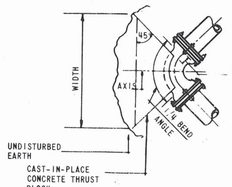
A. LOCATION OF EXISTING UNDERGROUND FUEL TANKS SHOWN ON THIS DRAWING IS APPROXIMATE. CONTRACTOR SHALL VERIFY THE LOCATION TO DETERMINE THE ROUTING OF ALL NEW UTILITIES. PROTECT EXISTING TANK DURING CONSTRUCTION.

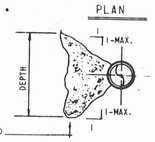
B. ALL SERVICE CONNECTIONS SHALL BE MADE INSIDE THE POWER HOUSE IN THE MANNER AND LOCATION DIRECTED BY THE OWNER. CONTACTOR PRIOR TO SUBMITTING A BID, SHALL FAMILIARIZE HIMSELF WITH THE POWER HOUSE AND ALL WORK NECESSARY FOR PROPER EXECUTION OF THE WORK. THIS SHALL INCLUDE PROPER PIPING PITCH, VALVES AT ALL CONNECTIONS TO EXISTING SERVICES, STEAM DRIP AND TRAPS, DRAIN VALVES AT LOW POINTS AND ANY OTHER WORK NECESSARY FOR A PROPERLY OPERATING SYSTEM. ALL WORK REQUIRING THE INTERRUPTION OF ANY SERVICE SHALL BE DONE ON PREMIUM TIME AS DIRECTED BY THE OWNER.

C. PLANT SECURITY SHALL BE MAINTAINED AT ALL TIMES DUERING CONSTRUCTION. SCHEDULE FENCE REMOVAL WITH PLANT SECURITY TO PROVIDE ADEQUATE PLANT SECURITY.

AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS

PIPE SIZES INCHES	1/4 BEND SQ. FT.	1/8 BEND SQ. FT.	TEES, PLUGS, CAPS, & HYDRANTS SQ. FT.
6	5	3	4
8	8	5	6
10	13	7	9
12	18	10	13
14	25	14	18





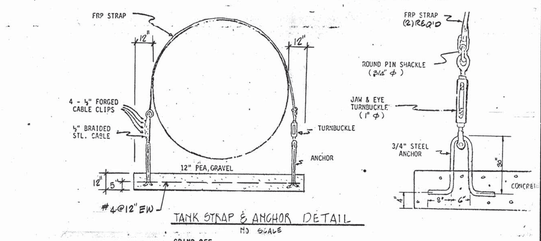
Section

THRUST BLOCK DETAIL
NO SCALE:

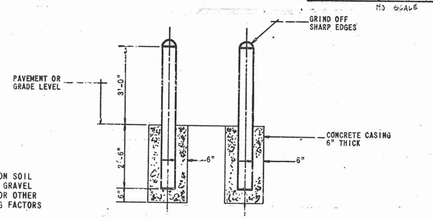
NOTE

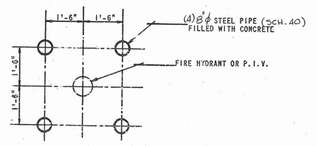
THE ABOVE TABLE BASED ON SOIL EQUIVALENT TO SAND AND GRAVEL CEMENTED WITH CLAY. FOR OTHER SOILS USE THE FOLLOWING FACTORS

SOFT CLAY	4
SAND	2
SAND & GRAVEL	1.33
SHALE	0.4

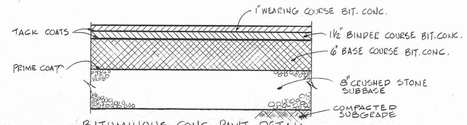


TANK STRAP & ANCHOR DETAIL
NO SCALE

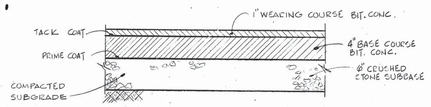




GUARD POSTS



BITUMINOUS CONC. PAV'T. DETAIL
(HEAVY DUTY)
NO SCALE



BITUMINOUS CONC. PAV'T. DETAIL
(LIGHT DUTY)
NO SCALE

DATE	ISSUED FOR	APPROVAL	APPROVAL
6-15-79	CHECKING		
6-18-79	PAYMENT APPROVAL		
6-20-79	PERMITS		
6-25-79	ALL TRADES BID	R. Lagges	Gil Peyton

Figure 2 - 1770 Emerson Street SVI Site Recon Map (Exterior Locations)
Note: Location numbers correspond to photograph numbers at each location and to photoionization detector and landfill gas meter reading locations, where taken.

NO.	DATE	BY	APPROVAL	APPROVAL

REVISIONS

CONTRACT SIGNATURES
FOR THE OWNER
FOR THE CONTRACTOR
CERTIFIED BY
DATE

JOB NO. 79-190

BLUE/NAEYAERT/GENHEIMER, ASSOC.

GM Plant Engineering & Construction

General Motors Corporation 485 West Milwaukee Avenue Detroit, Michigan 48202

CHEMICAL STORAGE BUILDING

FOR

ROCHESTER PRODUCTS DIVISION
GENERAL MOTORS CORPORATION
ROCHESTER NEW YORK
PROJECT TITLE

SITE PLAN AND MISC. DETAILS
SHEET TITLE

OWNER'S IDENTIFICATION	PROJECT NUMBER
	5149
DATE 6-25-79	LR3-1
DRAWN BY D.L.	P-2
JOB CAPT. H.D.	SHEET NUMBER

P.E. & C. 145 REV. 5-78 KBE 19 1153 10-78 3962a

General interior view

General interior view

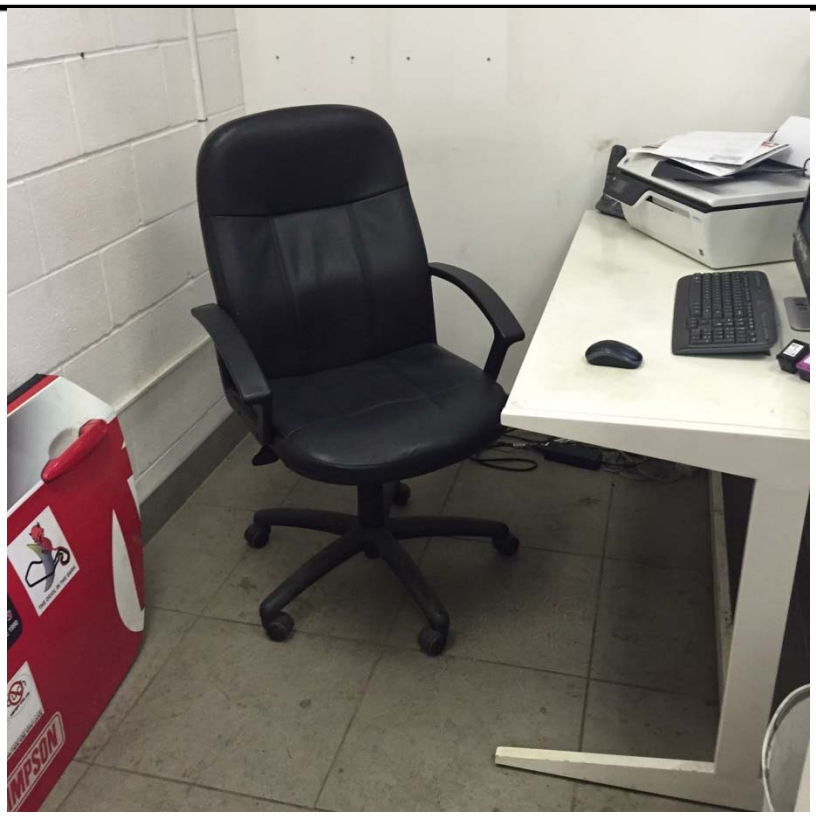
LaBella Associates, D.P.C.
300 State Street

Rochester, New York 14614

Appendix 5

Photograph Log

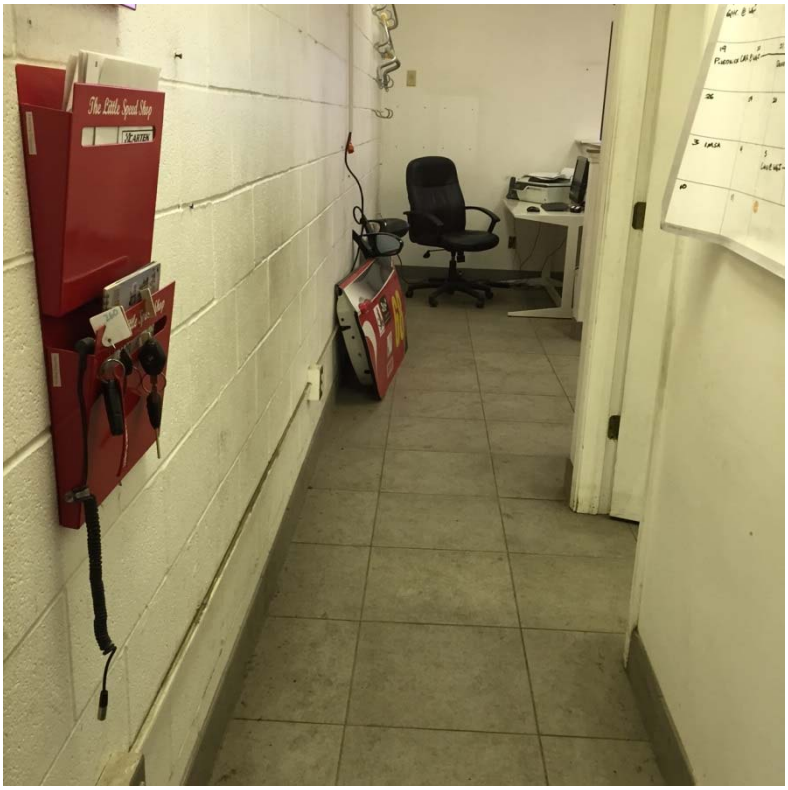
1770 Emerson Street



Office/ reception area in NW corner of building

Office/ reception area in NW corner of building

1770 Emerson Street



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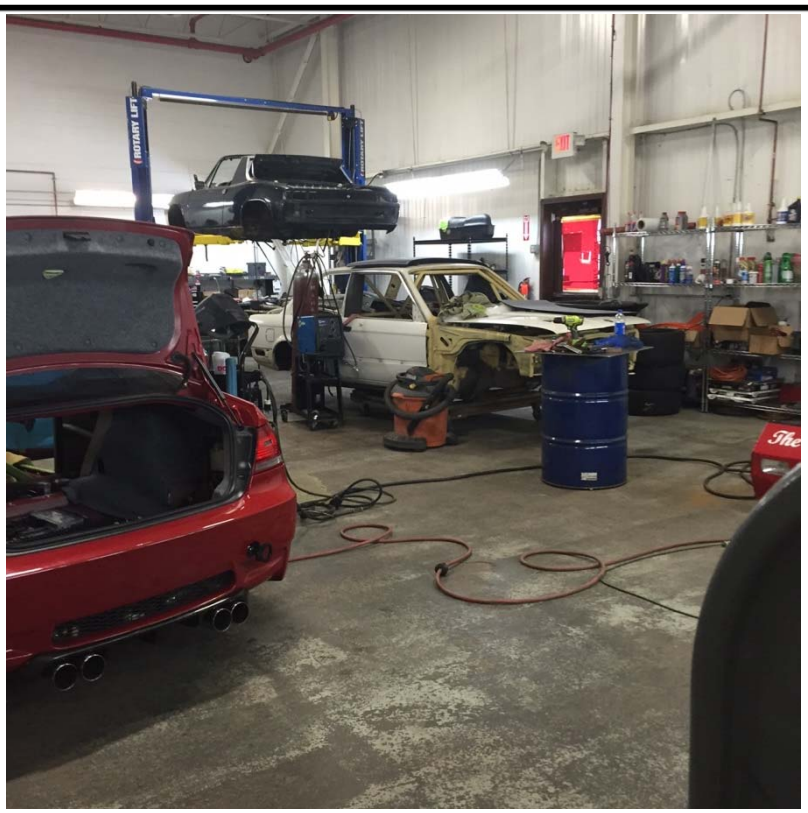
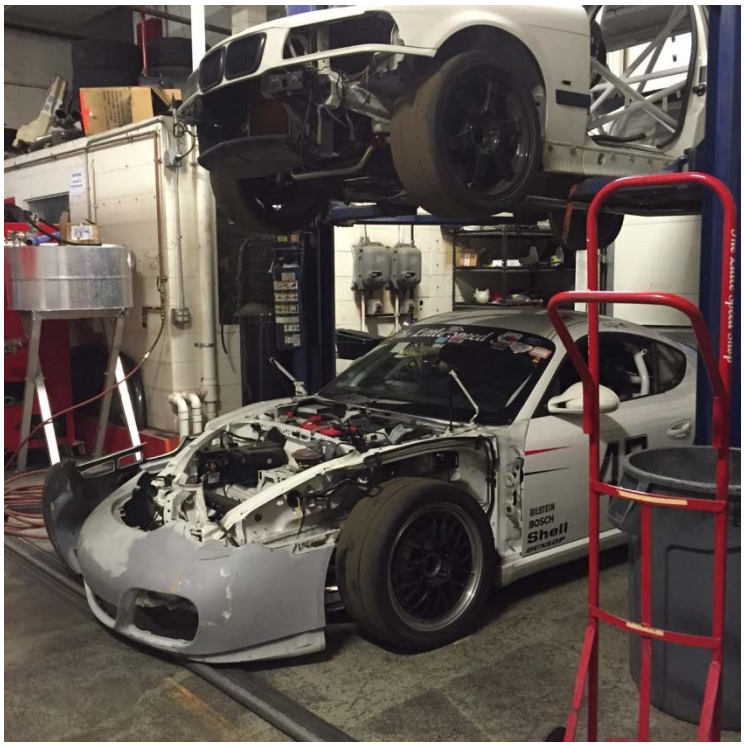
1770 Emerson Street



Automotive repair area- vehicles and drums not removed during sampling



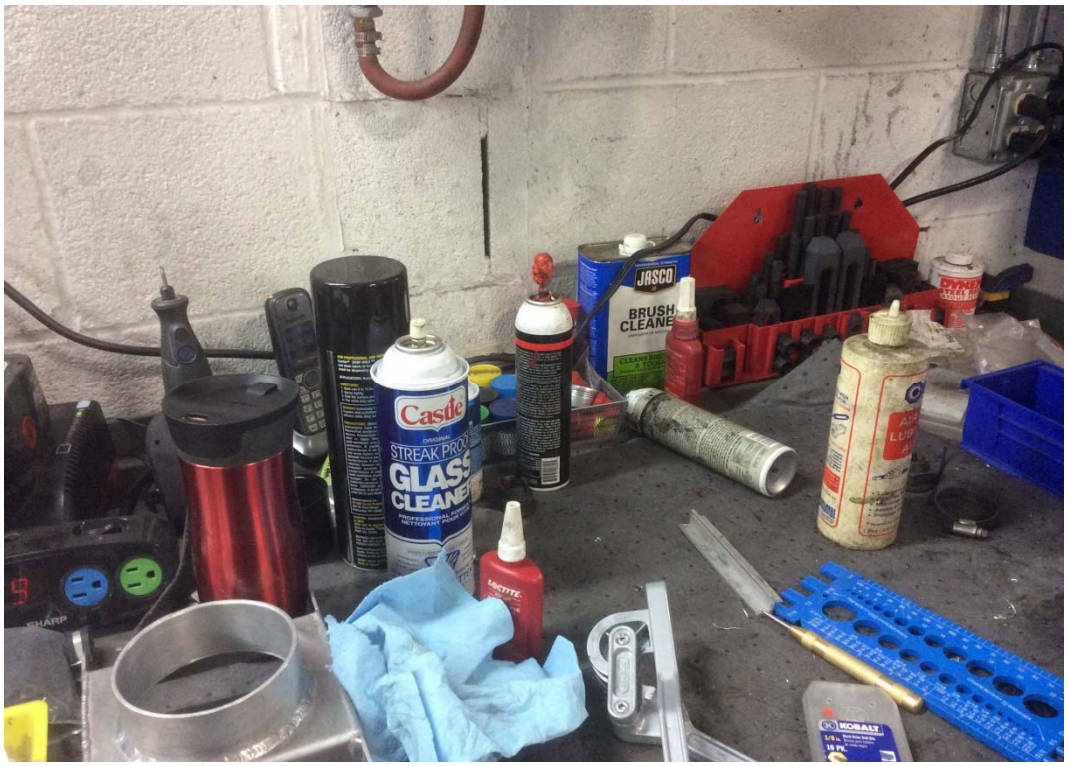
Automotive repair area- vehicles not removed during sampling

1770 Emerson Street

Automotive repair area- waste oil tanks not removed during sampling

Automotive repair area- typical products removed during March 2017 sampling

1770 Emerson Street



Automotive repair area- typical products removed during March 2017 sampling

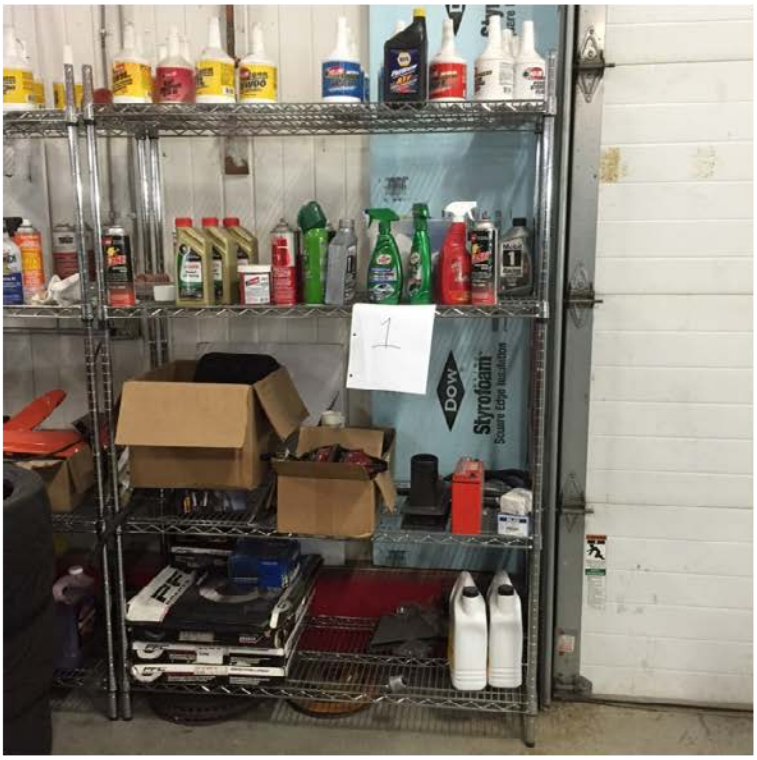
Automotive repair area- typical products removed during March 2017 sampling

1770 Emerson Street

Automotive repair area- typical products removed during March 2017 sampling

Automotive repair area- typical products removed during March 2017 sampling

1770 Emerson Street



Automotive repair area- typical products removed during March 2017 sampling

Automotive repair area- typical products removed during March 2017 sampling

1770 Emerson Street

Automotive repair area- typical products removed during March 2017 sampling

Automotive repair area- all products removed during March 2017 sampling