FINAL

2013 ANNUAL GROUNDWATER MONITORING REPORT INSTALLATION RESTORATION PROGRAM SITE 40

22 August 2014

Naval Weapons Station Seal Beach
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ACRONYMS

COC	chemical of concern
COD	chemical oxygen demand
DCE	dichloroethene
DO	dissolved oxygen
DON	Department of the Navy
DTSC	Department of Toxic Substances Control
EISB	enhanced in-situ bioremediation
ERSE	extended removal site evaluation
HRC	hydrogen release compound
IRP	Installation Restoration Program
J&E	Johnson and Ettinger
LUC	land use control
MNA	monitored natural attenuation
msl	mean sea level
NAVWPNSTA	Naval Weapons Station
ORP	oxidation reduction potential
PCE	tetrachloroethene
RAP	Remedial Action Plan
ROD	Record of Decision
TCE	trichloroethene
TCG	target cleanup goal
TDS	total dissolved solids
TOC	total organic carbon
VC	vinyl chloride
VOC	volatile organic compound

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1.0 INTRODUCTION

This report provides an overview of site activities conducted in December 2013 associated with enhanced in situ bioremediation (EISB) of groundwater at Installation Restoration Program (IRP) Site 40 at Naval Weapons Station (NAVWPNSTA) Seal Beach, Seal Beach, California. This report includes the presentation and assessment of relevant monitoring data collected during this period. The Site is currently in Monitored Natural Attenuation (MNA) phase and this was the fifth sampling event conducted after the final application of Hydrogen Release Compound (HRC®) in November 2008. A summary of the general status of the project and recommendations based on the conclusions are also provided.

The field activities for this period included groundwater and soil gas monitoring in various wells/locations as well as surface gas emissions monitoring. These activities, along with the dates they were conducted, are listed in Table 1. For this monitoring event (December 2013), chemicals of concern (COCs), including primary COCs tetrachloroethene (PCE) and trichloroethene (TCE), and secondary COCs including cis-1,2-dichloroethene (DCE), and vinyl chloride (VC), were assessed in groundwater samples from monitoring wells MW-40-07, -08, -14, -22, -27, -30, -31 -32, -35, -36, and -37; and injection wells IW-2, -4, -10, and -18. These wells were proposed for annual monitoring based on the Final 2012 Annual Groundwater Monitoring Report, Installation Restoration Program Site 40 (CKY 2013). Most of these wells are key compliance wells located in the central portion of the site where low-level contamination is still being detected.

In addition to routine reporting, Section 4.0 of this report includes a preliminary risk analysis to evaluate the potential for site closure. Recommendations are provided in Section 6.0 for additional site activities to provide data for a risk assessment in support of site closure.

Appendix A includes responses to comments from the regulatory agency representatives on the draft version of the report. Appendix B includes a supplement work plan for the additional fieldwork recommended in Section 6.0. Appendix C includes the laboratory data from the 2013 monitoring event.

2.0 LAND USE CONTROLS

Land use controls (LUC) and their implementation were inspected and reviewed as part of the Navy's Project Review Process in accordance with Naval Weapons Station Seal Beach Instruction 5090.5B, Environmental Aspects and Requirements Review Procedures for Actions, Projects, Business Practices and Land Use (DON 2012). The land use controls for Site 40 are as follows:

- No new groundwater extraction, injection, or drinking water wells shall be installed within the IR Site 40 groundwater plume or associated buffer zone without prior review and written concurrence from the DON [Department of the Navy] and the DTSC [Department of Toxic Substances Control]

- Injection and monitoring wells and associated piping and equipment that are included in the remedial action shall not be altered, disturbed, or removed without the prior review and written concurrence from the DON and DTSC.

- The DON, DTSC, and their authorized agents, employees, contractors, and subcontractors will have the right to:
    - enter the premises to conduct investigations, tests, or surveys;
    - inspect field activities;
    - construct, operate, and maintain the remedial action described in this ROD/RAP [Record of Decision/Remedial Action Plan]; and
    - undertake any other remedial response or remedial action as required or necessary under the

cleanup program.

During the 2013 reporting period, no new groundwater wells were installed in IRP Site 40 or the 500-foot buffer zone, and all existing wells and associated piping were in proper working condition and did not appear to be tampered with or altered. The DON, regulatory agencies, and contractors had full access to the Site to perform monitoring activities as prescribed in the ROD (DON 2004). The LUCs will be inspected and reviewed during the next annual monitoring event and summarized in the 2014 groundwater monitoring report.

3.0 SUMMARY OF DATA

Data from the 2011, 2012, and 2013 sampling events are presented on Figure 1. The analytical data reports from the December 2013 sampling event is included on a CD in Appendix C. Current (December 2013) concentrations and inferred plume delineations for the COCs remaining above target cleanup goals (TCG), cis-1,2-DCE and VC, are presented on Figures 2 and 3, respectively.

3.1 Changes from Previous Monitoring Event

The following changes from the previous monitoring event were implemented:

- Monitoring points MW-40-25 and MW-40-34 were not monitored as recommended in the 2012 Site 40 Monitoring Report (CKY 2013)
- Cations, anions, TDS, and TOC were removed from the analyses as recommended in the 2012 Site 40 Monitoring Report (CKY 2013)
- Soil vapor field parameters were not monitored at MW-40-30, MW-40-31, and IW-18 since they have consistently drawn water and there is no probe installed at IW-18.

3.2 COCs in Regularly Monitored Wells

This subsection provides a summary of data collected in December 2013 to assess existing COC concentrations across the Site in relation to their respective target cleanup goal (TCG), followed by key observations regarding COC concentrations in the selected groundwater monitoring wells sampled during the December 2013 event.

The following are the TCGs for the COCs at Site 40:

Chemicals of Concern	**TCG (μg/L)**
Tetrachloroethene	5
Trichloroethene	5
cis-1,2-Dichloroethene	6
Vinyl chloride	0.5

Evaluation of COC concentrations and plume dynamics included assessment of shallow interval groundwater monitoring wells MW-40-07, -08, -22, -27, -30, -32, -36, and -37; shallow interval injection wells IW-2, -4, -10, and -18; and mid-shallow interval wells MW-40-14, -31, and -35 (refer to Figure 1 for well locations). None of the wells monitored had concentration of PCE or TCE above the TCG. MW-40-08 and MW-40-37 were the only monitoring points that had concentrations of cis-1,2-DCE above the TCG. Eleven of the seventeen monitoring points had concentrations of VC above the TCG.

3.2.1 COC Concentrations

Figure 1 presents COC concentrations of the December 2013 monitoring points. All wells monitored in the

December 2013 monitoring event had concentrations of the primary COC concentrations, PCE and TCE, below the TCGs. The key wells sampled have had at least two consecutive sampling events with COC concentrations below the TCGs. The only COCs with concentrations remaining above the TCGs at the site are cis-1,2-DCE and VC.

Figure 2 presents the interpreted plume delineations for cis-1,2-DCE and Figure 3 presents the interpreted plume delineations for VC, based on the December 2013 data. Observations on the fate of COCs in monitoring points above the TCGs are presented below compared to the previous year's results. A concentration followed by the letter "J" indicates that the concentration is an estimated level and a "U" indicates the concentration was not detected above the associated reporting limit.

- Decreases in concentrations of cis-1,2-DCE above the TCG include:

  42 to 25 in MW-40-08

  37 to 33 in MW-40-37

- There were no increases in concentrations of cis-1,2-DCE in monitoring points with results above the TCG

- Decreases in concentrations of VC above the TCG include:

  0.95J to 0.50J in IW-18

  3.6 to 3.5 in MW-40-14

  0.61J to 0.53J in MW-40-27

- Increases in concentrations of VC above the TCG include:

  0.75J to 0.96J in IW-4

  0.90J to 1.6 in IW-10

  0.98J to 7.5 in MW-40-07

  1.4 to 1.7 in MW-40-08

  0.72J to 1.3 in MW-40-22

  0.96J to 3.6 in MW-40-30

  0.55J to 0.88J in MW-40-32

  1.6 to 3.5 in MW-40-36

  3.9 to 4.9 in MW-40-37

The Site has continued a decreasing trend of cis-1,2-DCE in the two monitoring points that have consistently been above the TCG. This represents evidence that reductive dechlorination is still occurring at the Site. Of the monitoring points that had increased concentrations of VC for the 2013 monitoring event, two monitoring points exhibited larger than usual increases than were observed in previous results. MW-40-07 went from 0.98J to 7.5 µg/L and MW-40-30 went from 0.96J to 3.6 µg/L. Results from the other monitoring points are consistent with minor fluctuations observed from previous results. Increases in VC are likely due to continued biodegradation of cis-1,2-DCE. The differences in COC increases and decreases are considered relatively minor and in small pockets of the Site. These flucutations are expected based on the relatively low concentrations as the contaminants are affected more dramatically at low concentrations by their surrounding environment. The increase of VC is a common effect of rebound at chlorinated sites but there is not enough data to determine if a stall is occurring. VC concentrations will be evaluated during subsequent sampling events to determine if further action is required at the Site.

3.3 Plume Interpretations

- Concentrations of PCE and TCE have not exceeded the TCGs (5 µg/L for both COCs) in any wells since the 2010 monitoring event.
- Concentrations of cis-1,2-DCE exceed the TCG (6 µg/L) in only two of the seventeen monitoring points (MW-40-08 and MW-40-37). The concentrations in these wells are approximately five times the TCG. Both wells have shown a continual decrease in concentration from previous monitoring events.
- Low concentrations of VC, generally in the 0.5 to 2.0 µg/L range, form a residual plume across the Site. Higher concentrations exists slightly downgradient from the source but has not migrated significantly. Five wells (MW-40-07, -14, -30, -36, and -37) had concentrations over 2 µg/L.

An increase in VC concentration across the Site were noted during this event. Most COC concentrations are consistent with previous monitoring results and are attributed to the reductive dechlorination occurring at the Site. The plume is not migrating and there is evidence to suggest that dechlorination will continue, however, at a slower rate than previously observed.

3.4 Field Parameters

Field parameters were measured during this monitoring event including DO, ORP, and pH, which are included in Table 3. Monitoring of these parameters provide additional indication of the potential for further reductive dechlorination.

Key observations regarding field parameter data are as follows:

- Based on the December 2013 readings, DO concentrations in the monitoring wells remained at or less than 0.9 mg/L (given limitations associated with this measurement, this essentially represents not detected).
- ORP values measured during the December 2013 event were negative for all monitoring points, ranging from -113.6 millivolts (mV) to -176.8 mV. These values reflect conditions favorable for reductive dechlorination, however, above the optimum value of -240 mV.
- The pH readings ranged from 6.3 to 7.0 pH units. These values are only slightly out of the optimum range of 6.5 to 8.5.

The December 2013 field parameter data indicate the presence of sufficient parameters supportive of continued reductive dechlorination. While reductive dechlorination will continue to occur at the Site, the rates will decrease as concentrations of COCs decrease. Field parameter data is useful as an indicator of site conditions, however, it should not be the only consideration to determine expected future results.

3.5 Soil Gas Data

Soil gas field parameters were measured at IW-1, -3, -7, -10, MW-40-32, -34, -35, -36, -37, and VW-40-01,-02, -03, -04, and -06 from December 18–19, 2013. Methane gas was present at concentrations from 0.0 to 71.5 percent (%) in air. The highest methane concentration was in the soil gas probe in injection well IW-7. The average methane concentration was 26% in air, which is lower than the average of 36% recorded in 2012. Hydrogen sulfide was reported in 10 of 14 probes with concentrations ranging from 0 to 40 parts per million (ppm). The highest hydrogen sulfide concentration was in monitoring well MW-40-37, which is one of the monitoring points with the highest levels of COCs in groundwater. Table 4 summarizes the soil gas field parameter data.

In addition, soil gas samples were collected in 6-liter SUMMA™ canisters from four vapor monitoring wells (VW-40-02, -03, -04, and -06) and soil gas monitoring probes that are installed in groundwater monitoring wells MW-40-32 and -37 and injection wells IW-1 and -3. Table 5 lists the analytical results for

the soil gas analyses.

Although certain COCs such as PCE and TCE are well below the target cleanup goals in groundwater, they are still present in the vadose zone in soil gas (Figure 5). PCE was reported in the soil gas samples ranging from 1.9J to 278 $\mu g/m^3$ and TCE was reported ranging from 3.2 to 1,074 $\mu g/m^3$. The maximum reported concentration in 2012 was 454 and 3,866 $\mu g/m^3$ for PCE and TCE, respectively. These results are roughly half year over year and are expected to decrease as COCs in groundwater decrease.

Concentrations of cis-1,2-DCE were reported in all sampled wells at concentrations ranging from non-detect in the soil gas probe installed in injection well VW-40-04 to 3,686 $\mu g/m^3$ in soil gas monitoring well VW-40-02. The average cis-1,2-DCE concentration was 900 $\mu g/m^3$ compared to 1,320 $\mu g/m^3$ in 2012. The average concentration is lower year over year reflecting the continuing reductive dechlorination.

VC was reported at concentrations from non-detect in the vapor monitoring well VW-40-04 to 4,344 $\mu g/m^3$ in vapor monitoring well VW-40-02. The average VC concentration was 1,265 $\mu g/m^3$ compared to 1,525 $\mu g/m^3$ in 2012. The average concentration is similar likely due to continued reduction of cis-1,2-DCE concentrations.

Methane gas concentrations in samples collected in SUMMA™ canisters from the soil gas monitoring probes and vapor monitoring wells ranged from below the detection limit in soil gas monitoring well VW-40-04 and MW-40-32 to 51.3% by volume in the soil gas monitoring well VW-40-03. In comparison 2012 results, methane gas concentrations are similar but trending lower. Soil gas is expected to be present as a result of volatilization and bio-fermentation.

Methane gas and volatile organic compound (VOC) surface emissions monitoring was performed on December 20, 2013. During this monitoring event, neither methane gas nor VOC emissions were detected within Buildings 239 or 240, or in the surrounding areas.

In addition to routine monitoring of soil gas data, a preliminary risk analysis has been performed of the December 2013 data to evaluate the potential for site closure. Section 4.0 includes the results of the preliminary risk analysis.

3.6 Groundwater Level Measurements

Groundwater level measurements were collected on December 18, 2013. Groundwater elevations within the Site ranged from 1.56 feet above mean sea level (msl) in MW-40-08 to 2.24 feet above msl in IW-2. In general, water level measurements collected in December 2013 were similar in comparison with the elevations measured during the previous monitoring event in 2012. Minor fluctuations are likely due to seasonal/annual variation in precipitation. Groundwater elevation trends since the start of the project (March 2005) are similar but show an overall slight decline in groundwater level at the site. Groundwater levels ranged from approximately 1.5 to 2.5 feet above msl in 2005. Differences in groundwater elevation are not significant enough to have an impact on achieving the remedial goals of this project.

4.0 Risk Analysis

A screening-level human health risk assessment and an ecological risk assessment were conducted in 1998 at IRP Site 40 during the Extended Removal Site Evaluation (ERSE; BNI 1999). The ERSE report recommended further action to address VOCs in groundwater (based on the use of groundwater as tap water) and no further action for soil. DTSC and RWQCB Santa Ana Region concurred with these recommendations in the ROD/Remedial Action Plan (DON 2004). Based on this information, the preliminary risk evaluation focused on potential groundwater exposure pathways.

At sites where VOCs are present in groundwater, risk assessments generally consider the following potential exposure pathways:

- Inhalation of VOCs that may intrude to indoor air from the subsurface,
- Inhalation of VOCs from groundwater being used as tap water for showering and general household use, and
- Ingestion of groundwater used as tap water.

Groundwater at IRP Site 40 is not currently being used as tap water and will not be used as tap water in the future due to salt water intrusion and because the shallow aquifer is not capable of producing sufficient groundwater for use as tap water.

In addition to these three potential human health exposure pathways, another potential groundwater exposure pathway is the migration of VOCs in groundwater to the Seal Beach National Wildlife Refuge; approximately 500 feet southeast of Building 239. However, based on groundwater monitoring results conducted since 2005, it does not appear that the VOC groundwater contamination extends southeast of Building 239 and has shown almost no plume migration. Therefore, this potential exposure pathway is not complete.

This preliminary risk evaluation focuses on the inhalation of VOCs that may intrude to indoor air from the subsurface. Because soil vapor data are available and better represent to potential for vapor intrusion than groundwater data, the preliminary risk evaluation was conducted using available soil vapor data.

4.1 Preliminary Screening Evaluation

The preliminary risk evaluation generally followed procedures outlined in DTSC–Cal/EPA's 2011 Vapor Intrusion Guidance Document (VI Guidance, DTSC – Cal/EPA 2011). The first step was to conduct a preliminary screening evaluation, which consists of using available soil vapor data and default attenuation factors to estimate indoor air VOC concentrations. These estimated indoor air concentrations were then compared to residential and industrial air screening levels from DTSC's Human Health Risk Assessment Note Number 3 (DTSC, 2013).

Attenuation factors represent the ratio of indoor air concentrations and soil vapor concentration, as noted below:

$$\propto = \frac{Cindoor}{Csoil\ vapor}$$

Default attenuation factors are available for existing and future residential and commercial buildings. The attenuation factors were used, along with soil vapor data, to estimate potential indoor air concentrations under three exposure scenarios: existing industrial, future residential and future industrial/commercial.

4.2 Preliminary Screening Evaluation Results

Air and Vapor Concentrations in µg/m³	DTSC Air Screening Levels		Maximum Soil Vapor Concentration (2013)	Estimated Indoor Air Concentrations		
	Residential	Industrial		Existing Industrial (AF = 0.001)	Future Residential (AF = 0.001)	Future Industrial (AF = 0.0005)
PCE	0.41	2.1	278 (VW-40-04)	0.28	0.28	0.14
TCE	0.43	3.0	1,074 (VW-40-03)	1.1	1.1	0.54
cis-1,2-DCE	7.3	31	3,686 (VW-40-02)	3.7	3.7	1.8
Vinyl chloride	0.031	0.16	4,344 (VW-40-02)	4.3	4.3	2.2

Note: Estimated indoor air concentrations values in red are greater than applicable DTSC air screening levels (residential or industrial).

The table above shows the DTSC air screening levels, maximum soil vapor concentrations, estimated indoor

air concentrations for PCE, TCE, cis-1,2-DCE, and vinyl chloride, and whether the estimated indoor air concentrations are greater than the residential or industrial air screening levels.

The table shows the estimated TCE indoor air concentration in future residential homes is greater than the DTSC residential air screening level and that the estimated vinyl chloride indoor air concentrations are greater than DTSC air screening levels under each of the three scenarios evaluated. Because the estimated indoor air concentrations for TCE and vinyl chloride are greater than DTSC air screening levels, a more focused site-specific screening evaluation was required. Note that, because the DTSC air screening levels for TCE and vinyl chloride are based on a carcinogenic risk of 1×10^{-6}, estimated indoor air concentrations greater than the DTSC levels correspond to excess carcinogenic risks of greater than 1×10^{-6}. The excess carcinogenic risk estimates for vinyl chloride at future residential buildings are greater than 1×10^{-4} because the estimated indoor air concentrations are greater than 100 times the DTSC air screening level.

4.3 Site Specific Screening Evaluation

The site-specific screening evaluation consisted of using available site-specific data and information and U.S. Environmental Protection Agency's Johnson and Ettinger (J&E) model spreadsheet for soil vapor to calculate a site-specific and building-specific attenuation factor, which is then used to estimate indoor air concentrations for Buildings 239 and 240. EPA's advanced soil vapor Excel spreadsheet (SG-ADV-Feb04.xls) was used to model vapor intrusion into Buildings 239 and 240. DTSC-Cal/EPA's VI guidance recommends the use of DTSC-modified J&E model spreadsheets for the site-specific screening evaluation. However, these screening-level spreadsheets were not used because they do not allow for the use of site-specific building dimensions and for multiple soil types. The following DTSC-recommended parameter values were used in the EPA advanced spreadsheet: Average Soil Temperature (24 degrees Celsius) and Crack-to-Total Area Ratio (0.005).

Building-specific attenuation factors were calculated using the following site- and building-specific information:

- **Soil vapor sampling depth below grade** – the soil vapor wells are generally screened from 3.5 to 10-feet below ground surface (bgs). The building-specific attenuation factors were modeled using sample depths of 3.5 and 10 feet.
- **Soil type** – soil types for buildings 239 (sand, silty clay, and sand) and 240 (sand, silt, and sandy clay) are from Tetra Tech EC, Inc. boring logs for MW-37 (Building 239) and VW-03 (Building 240).
- **Building dimensions** – building dimensions for Building 239 were estimated at 75- by 200-feet with a ceiling height of 10-feet. Building dimensions for Building 240 were estimated at 70- by 85-feet with a ceiling height of 10-feet.

4.4 Site-Specific Screening Evaluation Results – Vinyl Chloride

Air and Vapor Concentrations in µg/m³	Maximum Soil Vapor Concentration	Soil Vapor Sample Depth (feet)	Building-Specific Attenuation Factor	Estimated Indoor Air Concentration	DTSC Air Screening Level – Vinyl Chloride	Estimated Excess Carcinogenic Risk
Building 239 (2013 results)	639 (MW-40-37)	3.5	0.0005	0.30	0.16	1.9×10^{-6}
		10	0.0002	0.15	0.16	9.7×10^{-7}
Building 239 (2012 results)	1,203 (MW-40-37)	3.5	0.0005	0.57	0.16	3.5×10^{-6}
		10	0.0002	0.29	0.16	1.8×10^{-6}
Building 240 (2013 results)	4,344 (VW-40-02)	3.5	0.0004	1.8	0.16	1.1×10^{-5}
		10	0.0001	0.52	0.16	3.3×10^{-6}
Building 240	4,608	3.5	0.0004	1.9	0.16	1.2×10^{-5}

Air and Vapor Concentrations in µg/m³	Maximum Soil Vapor Concentration	Soil Vapor Sample Depth (feet)	Building-Specific Attenuation Factor	Estimated Indoor Air Concentration	DTSC Air Screening Level – Vinyl Chloride	Estimated Excess Carcinogenic Risk
(2012 results)	(VW-40-02)	10	0.0001	0.55	0.16	3.5×10^{-6}

Note: Estimated excess carcinogenic risk calculated by dividing estimated indoor air concentration by the DTSC air screening level, then multiplying by 1×10^{-6}.

The site-specific screening evaluation results show that the building-specific attenuation factors are equal to or lower than the lowest default attenuation factor used in the preliminary screening evaluation. These results also show that the estimated indoor air concentrations result in estimated excess carcinogenic risks from 1.9×10^{-6} to 1.2×10^{-5}. These risk estimates are within the excess carcinogenic risk range of 1×10^{-6} to 1×10^{-4} (NCP, 40 CFR 300.430). Risks less than 1×10^{-6} are allowable, while risks greater than 1×10^{-4} may require additional evaluation or remedial action. Risks within the risk range are typically evaluated on a site-specific basis.

4.5 Risk Analysis Conclusions

Risk Summary. The preliminary risk evaluation presented above shows estimated excess carcinogenic risks associated with the vapor intrusion pathway at IRP Site 40 are within the excess carcinogenic risk range of 1×10^{-6} to 1×10^{-4}, with the exception of vinyl chloride at future residential buildings. The estimated excess cancer risk for future residential buildings due to vinyl chloride is 1.4×10^{-4} and is based on the maximum detected vinyl chloride concentration of 4,344 µg/m^3 (December 2013, VW-02).

Indoor Air Quality Uncertainty. The soil vapor concentrations used to estimate indoor air concentrations at Building 239 likely overestimate soil vapor concentrations beneath this building because the monitoring locations used (MW-40-37) are located near the west end of the building at the downgradient end of the vinyl chloride groundwater plume. Soil vapor concentrations beneath Building 239 are expected to be lower than those detected at MW-40-37.

Future Buildings. The preliminary screening evaluation showed potentially unacceptable risks from vapor intrusion for future residential and industrial buildings. Based on this, vapor mitigation (e.g., constructive vapor barriers) may be required for future buildings at IRP Site 40.

Existing Buildings. The excess carcinogenic risks for the existing buildings are within the carcinogenic risk range of 1×10^{-6} to 1×10^{-4}. However, indoor air samples within Buildings 239 and 240 should be collected so that risk estimates can be calculated using actual, instead of estimated, indoor air concentrations.

5.0 CONCLUSIONS

While the contaminant plume boundaries have shifted slightly (as expected due to dechlorination activity), significant reductions in total chloroethene concentrations have been observed in all monitoring wells over the life of the project. Vinyl chloride has had a minor spike in concentrations during the December 2013 monitoring event, however, additional data acquired during routine monitoring is required to determine if this is a temporary spike indicative of rebound or a more significant stalling event.

Field parameter data suggest an environment favorable for reductive dechlorination to continue. However, COC concentrations have decreased to very low levels across the site, which would limit the rate of dechlorination.

Additional soil vapor intrusion investigation is required to support site closure.

6.0 RECOMMENDATIONS

Collection of additional soil vapor data is recommended to support a risk assessment for the potential of site closure. In order to obtain more representative data reflecting actual conditions at Buildings 239 and 240, indoor air samples will be collected. As identified on Figure 4, CKY will collect the following samples:

- Building 240 – One (1) sample will be collected in the storage area in the back (west end) of the building. One (1) sample will be collected from the main shop area of the building.
- Building 239 – One (1) sample will be collected from the storage area where the cubicles are located. One (1) sample will be collected in the cubicle area. One (1) sample will be collected in the warehouse where the workers have work stations set up. One (1) sample will be collected in the warehouse storage area.

The samples identified in Figure 4 were selected to represent areas of the buildings where workers would theoretically spend the most amount of time. The storage and office areas are separated by walls and doors and may collect contaminated vapors. These rooms will be sampled for workers that may enter these areas temporarily and potentially be exposed to contaminated vapor.

In addition, four (4) outdoor air samples; 1 upwind (north of Building 240), 1 on either side of the plume between the two buildings, and 1 downwind, will be collected. These sample results will provide the necessary information to facilitate preparation of a risk assessment that is more representative of expected exposure threats than the data set that currently exists. The samples will be collected and analyzed in accordance with the existing Sampling and Analysis Plan for the site for PCE, TCE, cis-1,2-DCE and vinyl chloride. DTSC-Cal/EPA (2011) recommends a minimum of two sampling events (late summer/early autumn and late winter/early spring). The proposed samples will be collected in December 2014 and May of 2015. Results will be presented in a site closure request document, if warranted, with the risk assessment report. The sampling procedures are detailed in Appendix B.

7.0 REFERENCES

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TABLES

TABLE 1

SUMMARY OF MONITORING ACTIVITIES CONDUCTED

Date	Event	Wells Sampled[a]	Analytes/Parameters	Notes
12/18	Groundwater level measurement	MW-40-07, 08, -14, -22, -27, -30, -31, -32, -35, 36, and -37, and IW-2, -4, -10, and -18.	Not applicable	Groundwater level measurements
12/20	Surface emissions monitoring	Not applicable	Methane gas and VOC concentrations	Inside Building 240 and western portion of Building 239, and areas between the buildings in the Site 40 vicinity
12/18 and 12/19	Groundwater sampling	MW-40-07, 08, -14, -22, -27, -30, -31, -32, -35, 36, and -37, and IW-2, -4, -10, and -18.	VOCs and field parameters	Laboratory and field parameters
12/18 and 12/19	Soil vapor/gas probe monitoring	Probes in wells VW-40-01, -02, -03, -04, and -06, and nested probes in MW-40-32, -34, -35, -36, and -37 and IW-1, -3, -7, and 10	Methane, oxygen, carbon dioxide, hydrogen sulfide, VOCs, and carbon monoxide	Field testing
12/18 and 12/19	Soil vapor sampling	Probes in wells VW-40-02, 03, 04, and VW-40-06, and nested probes in MW-40-32 and -37, and IW-1 and IW-3	VOCs and fixed gases	Laboratory analysis

Notes:

[a] Refer to figures for well/sampling locations.

Abbreviations and Acronyms:

COD – chemical oxygen demand
DNA – deoxyribonucleic acid
TDS – total dissolved solid
TOC – total organic carbon
VOC – volatile organic compound

TABLE 2

CONCENTRATIONS OF COCs IN GROUNDWATER

Location	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	VC (µg/L)
IW-2	<0.50U	<0.50U	<0.50U	<0.50U
IW-4	<0.50U	<0.50U	0.59J	0.96J
IW-10	<0.50U	0.64J	1.3	1.6
IW-18	<0.50U	1.3	0.75J	0.50J
MW-40-07	<0.50U	1.9	2.8	7.5
MW-40-08	<0.50U	<0.50U	25	1.7
MW-40-14	<0.50U	1.2	3.0	3.5
MW-40-22	<0.50U	<0.50U	1.1	1.3
MW-40-27	<0.50U	0.96J	<0.50U	0.53J
MW-40-30	<0.50U	<0.50U	3.4	3.6
MW-40-31	<0.50U	<0.50U	<0.50U	<0.50U
MW-40-32	<0.50U	<0.50U	0.94J	0.88J
MW-40-35	<0.50U	<0.50U	0.99J	0.34J
MW-40-36	<0.50U	1.2	6.0	3.5
MW-40-37	<0.50U	0.48J	33	4.9

Notes:

J – estimated value
U – not detected above the associated reporting limit

Abbreviations and Acronyms:

µg/L – micrograms per liter
PCE – tetrachloroethene
TCE – trichloroethene
DCE – dichloroethene
VC – vinyl chloride

TABLE 3

Groundwater Field Parameter Data
Dissolved Oxygen, Oxygen Reduction Potential, AND pH

Location	DO (mg/L)	ORP (mV)	pH (pH units)
IW-2	0.54	-136.2	6.84
IW-4	0.36	-113.6	6.37
IW-10	0.89	-158.5	6.34
IW-18	0.34	-151.7	6.35
MW-40-07	0.23	-118.4	6.41
MW-40-08	0.75	-169.7	6.67
MW-40-14	0.30	-162.4	6.40
MW-40-22	0.21	-138.2	7.03
MW-40-27	0.61	-162.8	6.90
MW-40-30	0.62	-139.9	6.29
MW-40-31	0.61	-158.2	6.66
MW-40-32	0.81	-158.6	6.40
MW-40-35	0.20	-176.8	6.65
MW-40-36	0.24	-136.4	6.36
MW-40-37	0.51	-123.4	6.65

Abbreviations and Acronyms:

DO – dissolved oxygen
mg/L – milligrams per liter
mV – millivolt

ND – not detected
ORP – oxidation/reduction potential
TDS – total dissolved solids
TOC – total organic carbon
U – not detected above the associated reporting limit

TABLE 4

SOIL GAS FIELD PARAMETER DATA

Probe/Well ID	Oxygen (%)	Carbon Dioxide (%)	Methane (%)	Barometric Pressure (in.Hg)	Hydrogen Sulfide (ppm)	Carbon Monoxide (ppm)	VOCs (ppm)
IW-1	0.0	14.5	4.1	29.83	7	0	0.0
IW-3	0.0	15.9	24.2	29.83	6	1	0.0
IW-7	0.0	22.4	71.5	29.75	7	1	0.0
IW-10	12.7	6.3	0.0	29.85	0	0	0.0
MW-40-32	3.7	10.7	0.0	23.79	0	0	0.0
MW-40-34	0.0	16.3	7.4	27.82	0	0	0.0
MW-40-35	0.0	28.1	63.1	27.83	4	0	0.0
MW-40-36	0.0	16.9	15.5	29.70	3	0	0.0
MW-40-37	0.0	26.4	20.8	29.78	40	0	0.0
VW-40-01	0.0	16.4	40.6	27.83	4	1	0.0
VW-40-02	0.0	16.8	36.2	29.72	15	2	0.0
VW-40-03	0.0	24.6	57.6	29.78	1	0	0.0
VW-40-04	18.5	3.9	0.0	29.96	0	0	0.0
VW-40-06	0.0	26.1	21.8	28.16	11	1	0.0

Abbreviations and Acronyms:

in.Hg – inches of mercury
J – estimated value
ppm – parts per million
U – not detected above the associated reporting limit

TABLE 5

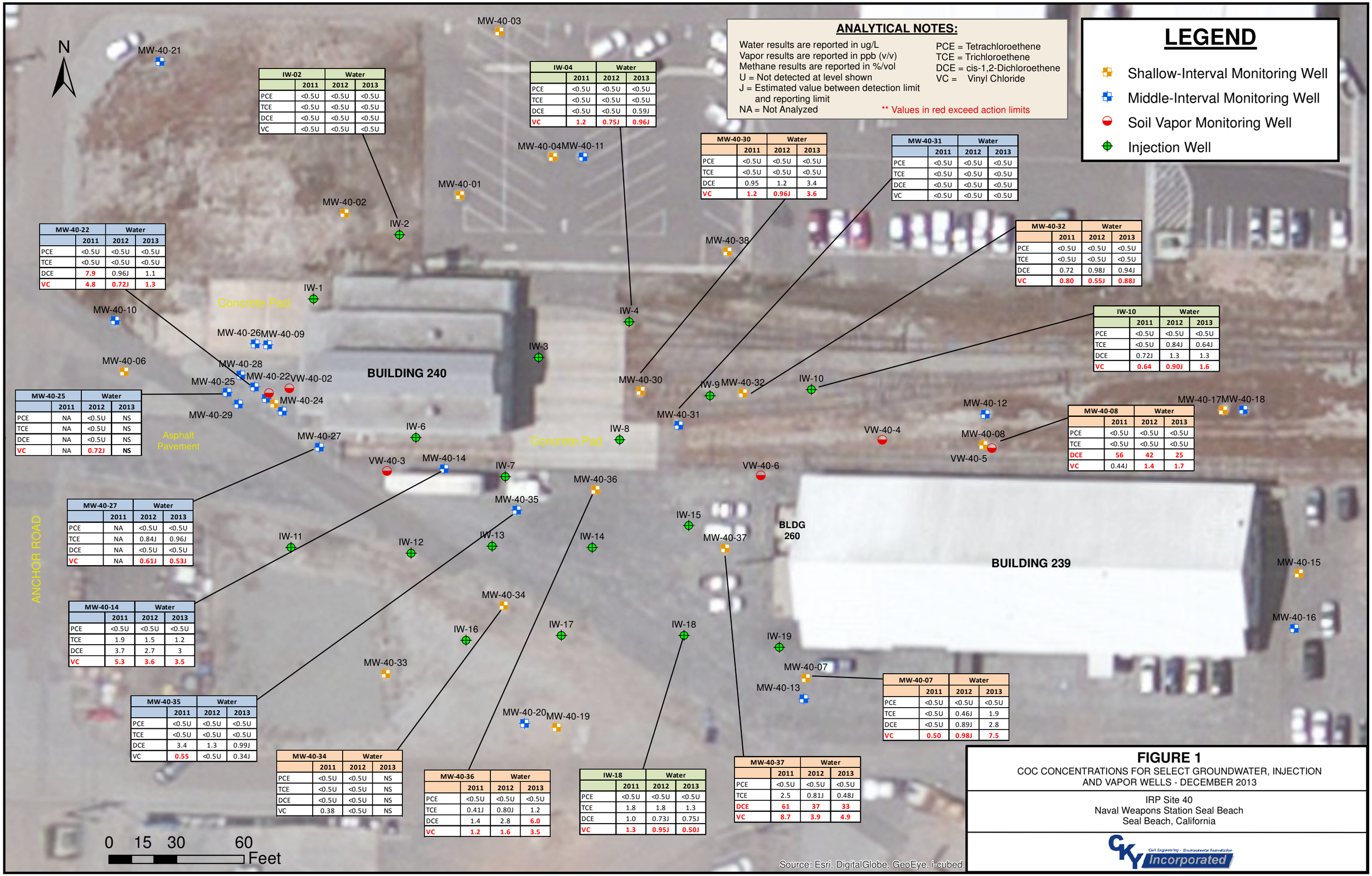
CONCENTRATIONS OF COCs IN SOIL GAS

Probe/Well ID	PCE		TCE		cis-1,2-DCE		Vinyl Chloride		methane
	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	%v
IW-1	3.6	24.4	92	494.2	250	990.8	500	1277.6	3.71
IW-3	0.28J	1.9J	1.0	5.4	2.2	8.7	170	434.4	20.7
MW-40-32	4.3	29.2	4.4	23.6	1.5	5.9	0.34J	0.9J	0.255U
MW-40-37	4.7	31.9	20	107.4	120	475.6	250	638.8	18.4
VW-40-02	2.0	13.6	12	64.5	930	3685.8	1,700	4343.7	31.9
VW-40-03	3.0	20.3	200	1074.4	490	1942.0	1,200	3066.1	51.3
VW-40-04	41	278.0	0.6	3.2	0.2U	0.8U	0.5U	1.3U	0.255U
VW-40-06	2.3	15.6	22	118.2	22	87.2	140	357.7	19.3

Abbreviations and Acronyms:

%v – percent by volume
µg/m^3 – micrograms per cubic meter
DCE – dichloroethene
ID – identification
J – estimated value
PCE – tetrachloroethene
ppbv – parts per billion by volume
TCE – trichloroethene
U – not detected above the associated reporting limit

FIGURES



ANALYTICAL NOTES:

Water results are reported in ug/L
Vapor results are reported in ppb (v/v)
Methane results are reported in %/vol
U = Not detected at level shown
J = Estimated value between detection limit and reporting limit
NA = Not Analyzed

PCE = Tetrachloroethene
TCE = Trichloroethene
DCE = cis-1,2-Dichloroethene
VC = Vinyl Chloride

** Values in red exceed action limits

LEGEND

- Shallow-Interval Monitoring Well
- Middle-Interval Monitoring Well
- Soil Vapor Monitoring Well
- Injection Well

IW-02	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	<0.5U	<0.5U
DCE	<0.5U	<0.5U	<0.5U
VC	<0.5U	<0.5U	<0.5U

IW-04	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	<0.5U	<0.5U
DCE	<0.5U	<0.5U	0.59J
VC	1.2	0.75J	0.96J

MW-40-30	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	<0.5U	<0.5U
DCE	0.95	1.2	3.4
VC	1.2	0.96J	3.6

MW-40-31	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	<0.5U	<0.5U
DCE	<0.5U	<0.5U	<0.5U
VC	<0.5U	<0.5U	<0.5U

MW-40-22	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	<0.5U	<0.5U
DCE	7.9	0.96J	1.1
VC	4.8	0.72J	1.3

MW-40-32	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	<0.5U	<0.5U
DCE	0.72	0.98J	0.94J
VC	0.80	0.55J	0.88J

IW-10	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	0.84J	0.64J
DCE	0.72J	1.3	1.3
VC	0.64	0.90J	1.6

MW-40-25	Water		
	2011	2012	2013
PCE	NA	<0.5U	NS
TCE	NA	<0.5U	NS
DCE	NA	<0.5U	NS
VC	NA	0.72J	NS

MW-40-08	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	<0.5U	<0.5U
DCE	56	42	25
VC	0.44J	1.4	1.7

MW-40-27	Water		
	2011	2012	2013
PCE	NA	<0.5U	<0.5U
TCE	NA	0.84J	0.96J
DCE	NA	<0.5U	<0.5U
VC	NA	0.61J	0.53J

MW-40-14	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	1.9	1.5	1.2
DCE	3.7	2.7	3
VC	5.3	3.6	3.5

MW-40-35	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	<0.5U	<0.5U
DCE	3.4	1.3	0.99J
VC	0.55	<0.5U	0.34J

MW-40-07	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	<0.5U	0.46J	1.9
DCE	<0.5U	0.89J	2.8
VC	0.50	0.98J	7.5

MW-40-34	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	NS
TCE	<0.5U	<0.5U	NS
DCE	<0.5U	<0.5U	NS
VC	0.38	<0.5U	NS

MW-40-36	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	0.41J	0.80J	1.2
DCE	1.4	2.8	6.0
VC	1.2	1.6	3.5

IW-18	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	1.8	1.8	1.3
DCE	1.0	0.73J	0.75J
VC	1.3	0.95J	0.50J

MW-40-37	Water		
	2011	2012	2013
PCE	<0.5U	<0.5U	<0.5U
TCE	2.5	0.81J	0.48J
DCE	61	37	33
VC	8.7	3.9	4.9

FIGURE 1

COC CONCENTRATIONS FOR SELECT GROUNDWATER, INJECTION AND VAPOR WELLS - DECEMBER 2013

IRP Site 40
Naval Weapons Station Seal Beach
Seal Beach, California

CKY Incorporated
Civil Engineering - Environmental Remediation

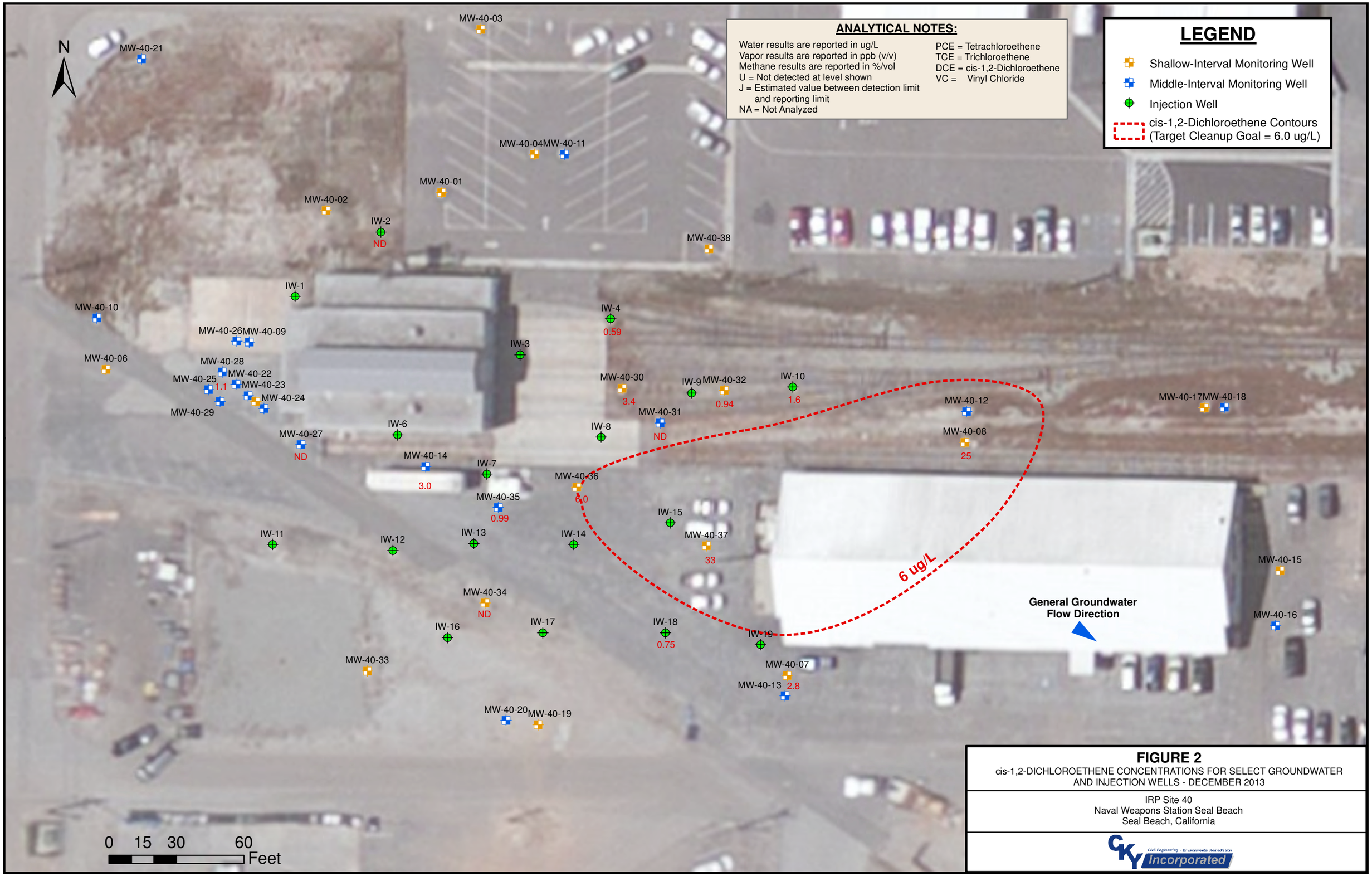


FIGURE 2

cis-1,2-DICHLOROETHENE CONCENTRATIONS FOR SELECT GROUNDWATER AND INJECTION WELLS - DECEMBER 2013

IRP Site 40
Naval Weapons Station Seal Beach
Seal Beach, California

CKY Incorporated
Civil Engineering · Environmental Remediation

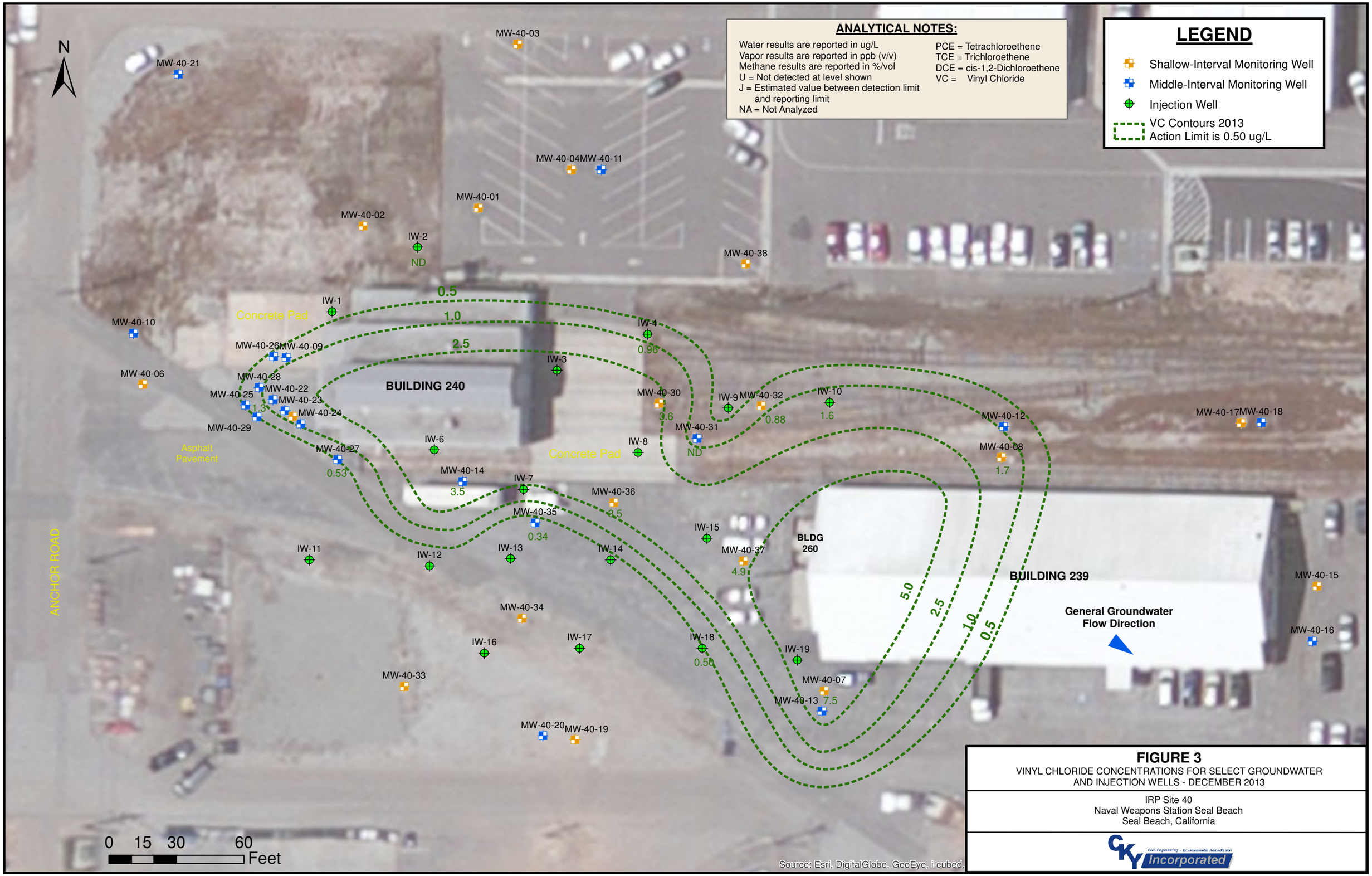


FIGURE 3

VINYL CHLORIDE CONCENTRATIONS FOR SELECT GROUNDWATER AND INJECTION WELLS - DECEMBER 2013

IRP Site 40
Naval Weapons Station Seal Beach
Seal Beach, California

CKY Incorporated

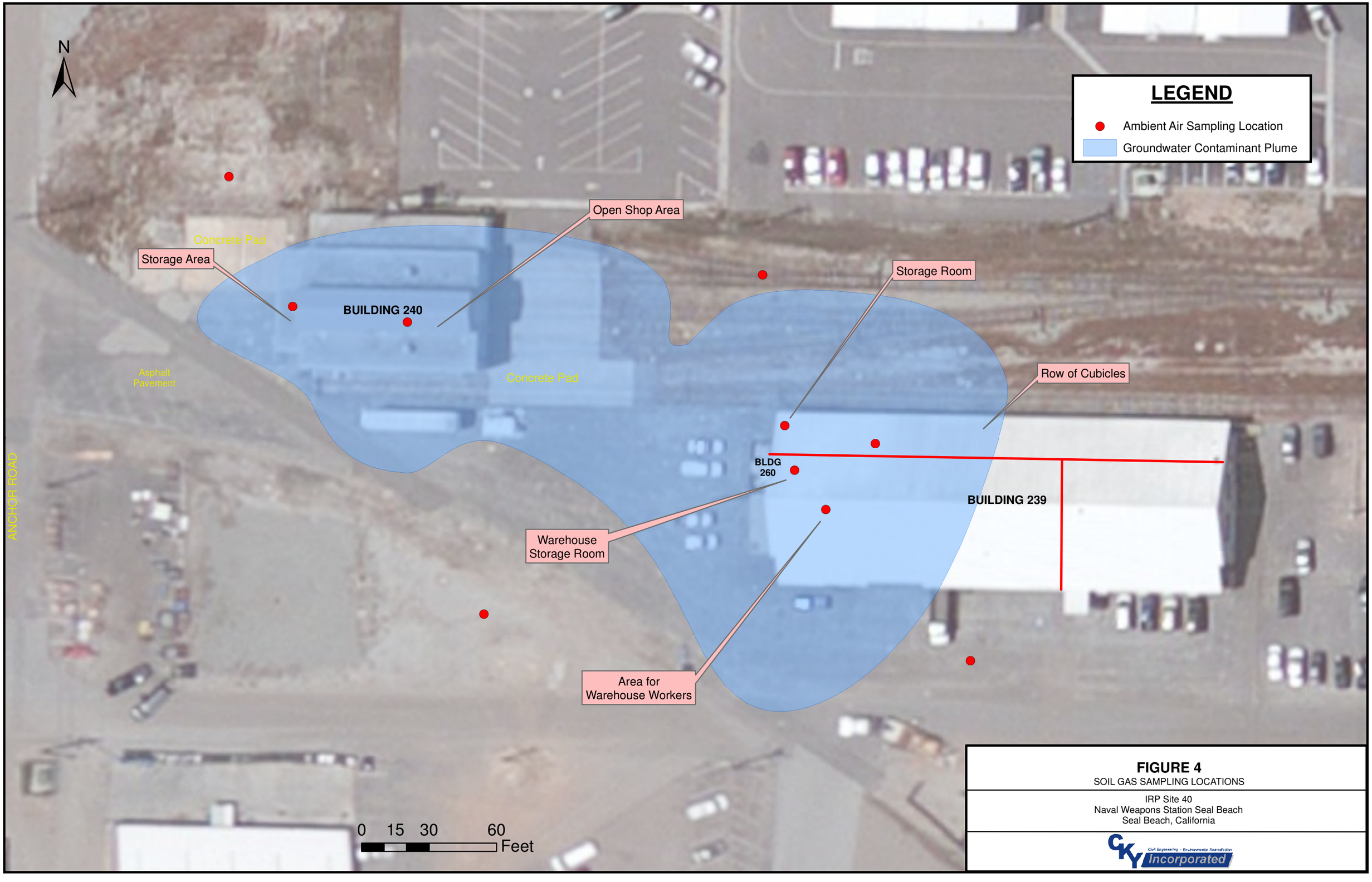
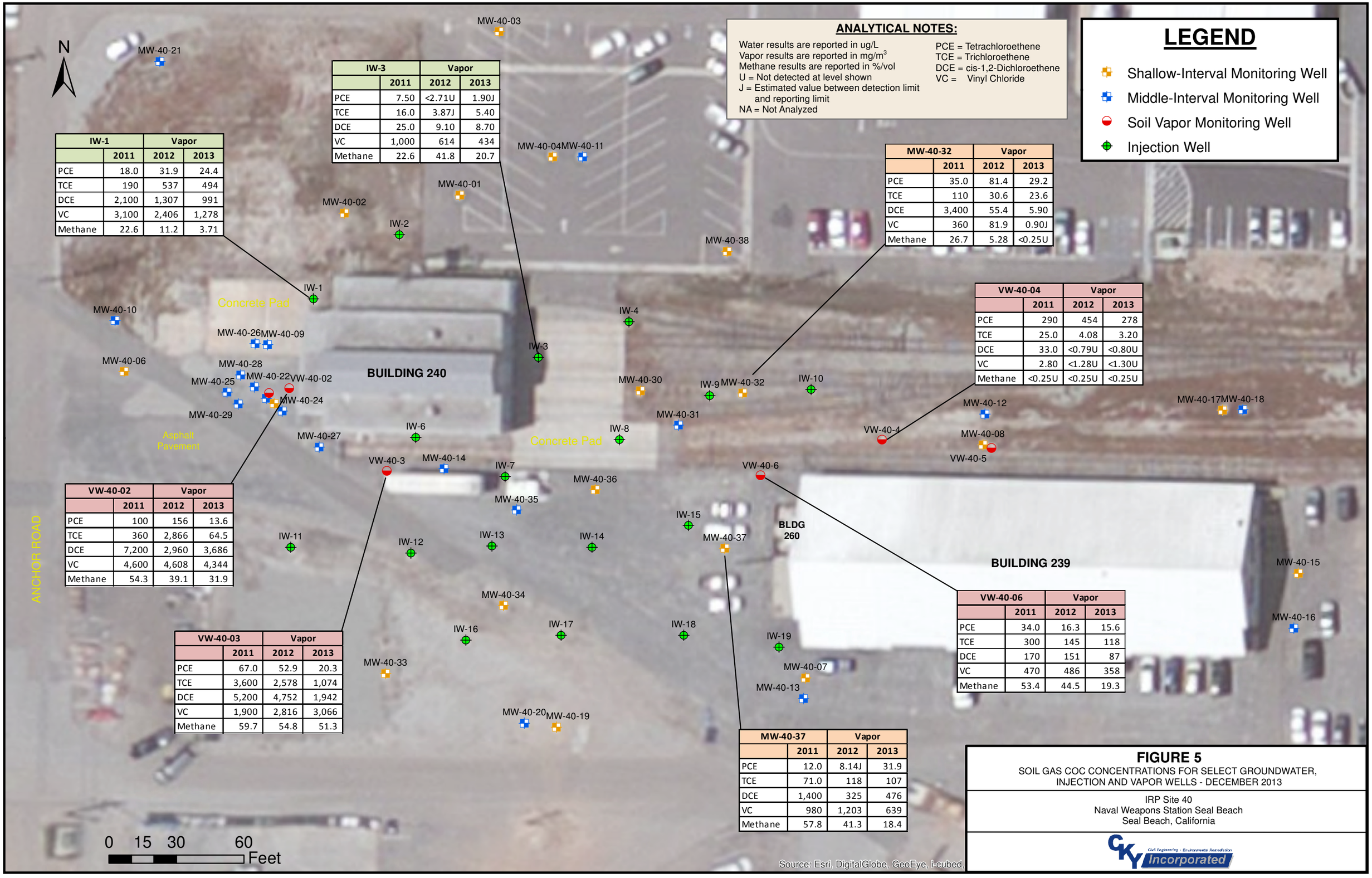


FIGURE 4
SOIL GAS SAMPLING LOCATIONS

IRP Site 40
Naval Weapons Station Seal Beach
Seal Beach, California

CKY Incorporated
Civil Engineering - Environmental Remediation



ANALYTICAL NOTES:

Water results are reported in ug/L
Vapor results are reported in mg/m^3
Methane results are reported in %/vol
U = Not detected at level shown
J = Estimated value between detection limit and reporting limit
NA = Not Analyzed

PCE = Tetrachloroethene
TCE = Trichloroethene
DCE = cis-1,2-Dichloroethene
VC = Vinyl Chloride

LEGEND

- Shallow-Interval Monitoring Well
- Middle-Interval Monitoring Well
- Soil Vapor Monitoring Well
- Injection Well

IW-1	Vapor	
2011	2012	2013
PCE 18.0	31.9	24.4
TCE 190	537	494
DCE 2,100	1,307	991
VC 3,100	2,406	1,278
Methane 22.6	11.2	3.71

IW-3	Vapor	
2011	2012	2013
PCE 7.50	<2.71U	1.90J
TCE 16.0	3.87J	5.40
DCE 25.0	9.10	8.70
VC 1,000	614	434
Methane 22.6	41.8	20.7

MW-40-32	Vapor	
2011	2012	2013
PCE 35.0	81.4	29.2
TCE 110	30.6	23.6
DCE 3,400	55.4	5.90
VC 360	81.9	0.90J
Methane 26.7	5.28	<0.25U

VW-40-04	Vapor	
2011	2012	2013
PCE 290	454	278
TCE 25.0	4.08	3.20
DCE 33.0	<0.79U	<0.80U
VC 2.80	<1.28U	<1.30U
Methane <0.25U	<0.25U	<0.25U

VW-40-02	Vapor	
2011	2012	2013
PCE 100	156	13.6
TCE 360	2,866	64.5
DCE 7,200	2,960	3,686
VC 4,600	4,608	4,344
Methane 54.3	39.1	31.9

VW-40-03	Vapor	
2011	2012	2013
PCE 67.0	52.9	20.3
TCE 3,600	2,578	1,074
DCE 5,200	4,752	1,942
VC 1,900	2,816	3,066
Methane 59.7	54.8	51.3

VW-40-06	Vapor	
2011	2012	2013
PCE 34.0	16.3	15.6
TCE 300	145	118
DCE 170	151	87
VC 470	486	358
Methane 53.4	44.5	19.3

MW-40-37	Vapor	
2011	2012	2013
PCE 12.0	8.14J	31.9
TCE 71.0	118	107
DCE 1,400	325	476
VC 980	1,203	639
Methane 57.8	41.3	18.4

FIGURE 5

SOIL GAS COC CONCENTRATIONS FOR SELECT GROUNDWATER, INJECTION AND VAPOR WELLS - DECEMBER 2013

IRP Site 40
Naval Weapons Station Seal Beach
Seal Beach, California

CKY Incorporated
Civil Engineering · Environmental Remediation

APPENDIX A
RESPONSE TO COMMETNS ON THE DRAFT REPORT

Response to Comments on the Draft 2013 Site 40 Groundwater Monitoring Report, Naval Weapons Station Seal Beach, Seal Beach, California				
No.	**Section**	**Pages**	**Comments**	**Responses**
Department of Toxic Substances Control, Mr. Stephen Niou, P.E.				
1	General		On reported soil gas sampling result, DTSC recommends that figures be provided to show soil gas sampling locations and detected concentrations of VOCs (especially vinyl chloride (VC) and cis-1,2-DCE). The figure(s) will help us to realize the relationship between the groundwater and soil vapor concentrations; and with respect to the two buildings located at the site.	Figure 5 with this information will be included in the report.
2	General		Because cis-1,2-DCE and VC are still having elevated soil gas concentrations, DTSC is not able to concur that "the site is suitable for closure from a risk standpoint."	Reference to the site being suitable for closure has been deleted. The third paragraph of Section 5.0 has been revised as follows: “Additional soil vapor intrusion investigation is required to support site closure.”
3	Section 6 Recommen-dations	8 & 9	a. DTSC guidance recommends collecting indoor air samples during the Summer and Winter months to account for seasonal variation. In the Report, the indoor air and sub-slabs samples are proposed to be collected during June and September 2014. These two sampling events do not represent opposite seasons and we do not concur with collecting the samples in June and September. We recommend that the Navy collect samples during either June or September but not both and recommends that the	Agreed. The report will be revised to indicate that proposed indoor/ambient air sampling events will be conducted in December (winter) and June (summer). These sampling times are consistent with DTSC-Cal/EPA's Final "Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)" dated October 2011.

Response to Comments on the Draft 2013 Site 40 Groundwater Monitoring Report, Naval Weapons Station Seal Beach, Seal Beach, California				
No.	**Section**	**Pages**	**Comments**	**Responses**
			second round of samples be collected in December/January/February to provide data that will indicate whether or not there is any seasonal differences that could contribute to vapor intrusion to indoor air.	
	Comment Continued		b. The Report states that "after the probes are installed, subsurface conditions will be allowed to equilibrate for at least 30 minutes before soil gas samples are collected." DTSC's Advisory-Active Soil Gas Investigations document recommends allowing at least 2 hours for equilibration prior to the collection of samples. Please refer to DTSC's Advisory document which can be found at (http://www.dtsc.ca.gov/SiteCleanup/upload/VI_ActiveSoilGasAdvisory_FINAL_043012.pdf).	Pursuant to a site visit with the DTSC and RWQCB project managers on July 23rd, 2014, it was agreed by all parties that sub-slab samples will not be required in the buildings. Section 6.1 has been revised to discuss indoor and outdoor sampling procedures.
	Comment Continued		c. Please include the height that the indoor air and outdoor air samples will be collected. Please see DTSe's Soil Gas Advisory and Vapor Intrusion Guidance documents for further information. (http://www.dtsc.ca.gov/SiteCleanup/upload/VI_ActiveSoilGasAdvisory_FINAL_043012.pdf, http://www.dtsc.ca.gov/AssessingRisk/upload/Final VIG Oct 2011 .pdf).	The following text will be added to the report: "Indoor and outdoor air samples will be collected concurrently using 6-liter stainless steel Summa canisters over an 8-hour period, which represents a typical work day. Air sampling will be conducted using vacuum gauges and 8-hour flow controllers. The indoor air canisters will be placed so that the samples will be collected in the breathing zone, approximately 3- to 5-feet aboveground. The outdoor air canisters will be located approximately 6-feet aboveground. The canisters will be filled until the vacuum equivalent of approximately 5-inches of mercury remains in the Summa canister. The initial and final canister vacuums and sampling times will

Response to Comments on the Draft 2013 Site 40 Groundwater Monitoring Report, Naval Weapons Station Seal Beach, Seal Beach, California				
No.	**Section**	**Pages**	**Comments**	**Responses**
				be recorded." These sampling heights are recommended in DTSC-Cal/EPA's 2011 Vapor Intrusion Guidance.
	Comment Continued		d. Location of Outdoor Air Samples. It appears that the location of the outdoor air sample south of Building 239 and between Buildings 239 and 240 are located over the groundwater plume. These samples need to be relocated outside the groundwater plume.	Agreed. Figure 4 has been revised to show a total of four (4) outdoor ambient air samples. The samples are located to the north, northeast, south, and southwest of the plume. As recommended, these revised ambient air sampling locations will be beyond the known extent of the groundwater plume.
			e. Sub-Slab and Indoor Air Sampling Locations: Additional information is needed regarding the location of the sub-slab and indoor air samples proposed at Building 239 and 240. i. Buildings 239 and 240. The email dated June 25, 2014 states that "the proposed locations were selected to sample indoor air in portions of the building most likely to be affected by subsurface VOCs." Please provide additional information as to why these locations are most likely to be affected by subsurface VOCs, e.g., preferential pathway such as· sumps, utility lines, or drains.	Pursuant to a site visit with the DTSC and RWQCB project managers on July 23rd, 2014, sub-slab samples will not be required in the buildings. The proposed indoor air sampling locations in each building were discussed during the site visit and are intended to gauge exposure to employees working in the buildings. No preferential pathways were identified in either building. See response to 3eii for the description of sampling locations discussed during the site visit. Figure 4 illustrates where the samples will be collected.
			ii. Building 240. The June 25, 2014 email states that there are some office spaces in Building 240. Will indoor air samples be collected in any of the office spaces? Additional where are the potential preferential pathways in Building 239. See Comment 7.e.i.	Pursuant to the site visit on July 23, 2014, the following samples will be collected: Building 240 – One (1) sample will be collected in the storage area in the back (west end) of the building. One (1) sample will be collected from the main shop area of the

Response to Comments on the Draft 2013 Site 40 Groundwater Monitoring Report, Naval Weapons Station Seal Beach, Seal Beach, California				
No.	**Section**	**Pages**	**Comments**	**Responses**
				building. Building 239 – One (1) sample will be collected from the storage area where the cubicles are located. One (1) sample will be collected in the cubicle area. Building 239 – One (1) sample will be collected in the warehouse where the workers have work stations set up. One (1) sample will be collected in the warehouse storage area. Figure 4 identifies the sampling locations.
			iii. Building 239. The June 25, 2014 email states that only the "western half of Building 239 is potentially affected by chlorinated VOCs ... ". While the vinyl chloride groundwater plume is only under the Western half of the building, the vadose zone has not been characterized and it is unknown whether there are any preferential pathways in the vadose zone that could allow subsurface vapors to migrate under the eastern portion of Building 239. DTSC recommends collecting at least one if not two sub-slab and indoor air samples in the eastern section of Building 239.	Based on the overall configuration of the facility and employee work areas, four (4) indoor air samples will be collected in Building 239 at the locations shown in the attached Figure 4. Gas, water, electric and sewer utilities enter at the east end of Building 239. Except for the toilet plumbing, no utilities or conduits run under the concrete slabs of the building. Other than some minor cracks in the warehouse floor, no other potential preferential pathways were noted.
Santa Ana Regional Water Quality Control Board, Ms. Patricia A. Hannon, PG				
1	General		We agree with Department of Toxic Substances Control	Comment noted.

Response to Comments on the Draft 2013 Site 40 Groundwater Monitoring Report, Naval Weapons Station Seal Beach, Seal Beach, California				
No.	**Section**	**Pages**	**Comments**	**Responses**
			(DTSC) comments dated June 30, 2014.	
2	3.1	2	Please explain why monitoring points MW-40-25 and MW-40-34 were not monitored as recommended in the 2012 Site 40 Monitoring Report.	Per Section 5.0 Recommendations, Note 3, in the 2012 Site 40 Monitoring Report, MW-40-25 and MW-40-34 were removed from the groundwater monitoring program.
3	6	8	We request the addition of a section describing in detail how the indoor and outdoor air samples will be collected. Please see DTSC's guidance document "Guidance for the Evaluation & Mitigation of Subsurface Vapor Intrusion to Indoor Air, October 2011 at http://www.dtsc.ca.gov/AssessingRisk/upload/Final_VIG_Oct_2011.pdf	Section 6.1 has been revised as follows: "Indoor and outdoor air samples will be collected concurrently using 6-liter stainless steel Summa canisters over an 8-hour period, which represents a typical work day. Air sampling will be conducted using vacuum gauges and 8-hour flow controllers. The indoor air canisters will be placed so that the samples will be collected in the breathing zone, approximately 3- to 5-feet aboveground. The outdoor air canisters will be located approximately 6-feet aboveground. The canisters will be filled until the vacuum equivalent of approximately 5-inches of mercury remains in the Summa canister. The initial and final canister vacuums and sampling times will be recorded." All air samples will be analyzed using TO-15 SIM method for site COCs; PCE, TCE, cis-1,2-DCE, and VC.
4	Figures		Please add a map scale to Figures 1 through 4.	A scale will be added to all figures.

APPENDIX B
SUPPLEMENTAL WORK PLAN FOR AIR SAMPLING

SUPPLEMENTAL WORK PLAN FOR AIR SAMPLING

This Supplemental Work Plan has been prepared to perform additional indoor and outdoor air sampling in support of a site closure request for Site 40 at Naval Weapons Station Seal Beach.

Elevated levels of volatile organic compounds (VOCs) exist in the vadose zone across Site 40 (See Table 5 and Figure 5). While routine monitoring of soil vapor intrusion in and around the buildings (Buildings 239 and 240) that occupy the boundary of Site 40 have never had a significant measurement of VOCs, Site 40 has not yet had a robust sampling program to detect and evaluate exposure to workers in the buildings. A preliminary risk analysis was performed in April 2014 and recommendations were made to perform additional air sampling in and around Buildings 239 and 240. This work plan outlines the steps that will be taken to collect the indoor and outdoor air samples for laboratory analysis in accordance with DTSC-Cal/EPA's 2011 Vapor Intrusion Guidance.

Indoor and outdoor air samples will be collected concurrently using 6-liter stainless steel Summa canisters over an 8-hour period, which represents a typical work day. Air sampling will be conducted using vacuum gauges and 8-hour flow controllers. The indoor air canisters will be placed so that the samples will be collected in the breathing zone, approximately 3- to 5-feet aboveground. The outdoor air canisters will be located approximately 6-feet aboveground. The canisters will be filled until the vacuum equivalent of approximately 5-inches of mercury remains in the Summa canister. The initial and final canister vacuums and sampling times will be recorded.

Typical Sample Container Setup

Sample containers will be transported under chain of custody to the laboratory for analysis. All air samples will be analyzed using TO-15 SIM method for site COCs; including PCE, TCE, cis-1,2-DCE, and VC.

Sample locations are shown on Figure 4. Based on the overall configuration of each building and employee work areas, the sampling methodology was developed to account for areas with the greatest exposure risks.

At Building 239, four (4) indoor air samples will be collected in the western half of the building. The western half of the building is comprised of a warehouse, warehouse storage, cubicle office area and an office storage area. One (1) sample will be collected from the storage area where the cubicles are located; one (1) sample will be collected in the cubicle area; one (1) sample will be collected in the warehouse where the workers have work stations set up; and one (1) sample will be collected in the warehouse storage area.

At Building 240, two (2) samples will be collected. Building 240 includes a main shop area where locomotive maintenance was performed as well as a small storage area in the back of the building. One

(1) sample will be collected in the storage area in the back (west end) of the building and one (1) sample will be collected from the main shop area of the building.

In addition to the indoor air samples, four (4) outdoor air samples will be collected per the recommendations made in the risk analysis and discussions with regulatory agency representatives. One (1) upwind (north of Building 240); one (1) on either side of the plume between the two buildings; and one (1) downwind (south of Building 239) sample will be collected.

All indoor and outdoor samples will be collected and analyzed in accordance with the existing Sampling and Analysis Plan for the Site for PCE, TCE, cis-1,2-DCE and vinyl chloride. These sample results will provide the necessary information to facilitate preparation of a risk assessment that is more representative of expected exposure threats than the data set that currently exists. DTSC-Cal/EPA recommends a minimum of two sampling events (late summer/early autumn and late winter/early spring). The proposed samples will be collected in December 2014 and May of 2015. Results will be presented in a site closure request document, if warranted, with the risk assessment report.

APPENDIX C

LABORATORY DATA

(Included on CD)

Calscience Environmental Laboratories, Inc.

Supplemental Report 1

The original report has been revised to include the Level III deliverables package.

CALSCIENCE

WORK ORDER NUMBER: 13-12-1614

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: CKY, Incorporated

Client Project Name: Seal Beach NWS

Attention: Howard Wittenberg
302 West Fifth Street, Ste. 310
San Pedro, CA 90731-2738

Approved for release on 01/15/2014 by:
Richard Villafania
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 13-12-1614

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Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946
		Units:	%v
Project: Seal Beach NWS			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-40-04	**13-12-1614-1-A**	**12/18/13 10:00**	**Air**	**GC 65**	**N/A**	**12/20/13 13:19**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	<0.255	0.155	0.255	0.510	1	U

MW-40-32	**13-12-1614-2-A**	**12/18/13 11:08**	**Air**	**GC 65**	**N/A**	**12/20/13 13:57**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	<0.255	0.155	0.255	0.510	1	U

VW-40-06	**13-12-1614-3-A**	**12/18/13 12:16**	**Air**	**GC 65**	**N/A**	**12/20/13 14:34**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	19.3	0.155	0.255	0.510	1	

IW-03	**13-12-1614-4-A**	**12/18/13 13:41**	**Air**	**GC 65**	**N/A**	**12/20/13 14:55**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	20.7	0.155	0.255	0.510	1	

IW-01	**13-12-1614-5-A**	**12/18/13 14:30**	**Air**	**GC 65**	**N/A**	**12/20/13 15:22**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	3.71	0.155	0.255	0.510	1	

VW-40-03	**13-12-1614-6-A**	**12/19/13 09:27**	**Air**	**GC 65**	**N/A**	**12/20/13 15:42**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	51.3	0.155	0.255	0.510	1	

VW-40-02	**13-12-1614-7-A**	**12/19/13 12:17**	**Air**	**GC 65**	**N/A**	**12/20/13 16:01**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	31.9	0.155	0.255	0.510	1	

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302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946
		Units:	%v
Project: Seal Beach NWS			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP-1	**13-12-1614-8-A**	**12/19/13 00:00**	**Air**	**GC 65**	**N/A**	**12/20/13 16:26**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	33.2	0.155	0.255	0.510	1	

FB-1	**13-12-1614-9-A**	**12/19/13 14:22**	**Air**	**GC 65**	**N/A**	**12/20/13 16:59**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	<0.255	0.155	0.255	0.510	1	U

Method Blank	**099-14-535-8**	**N/A**	**Air**	**GC 65**	**N/A**	**12/20/13 11:54**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	<0.255	0.155	0.255	0.510	1	U

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Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946 (M)
		Units:	%v
Project: Seal Beach NWS			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-40-04	**13-12-1614-1-A**	**12/18/13 10:00**	**Air**	**GC 55**	**N/A**	**12/20/13 12:20**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

MW-40-32	**13-12-1614-2-A**	**12/18/13 11:08**	**Air**	**GC 55**	**N/A**	**12/20/13 12:42**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

VW-40-06	**13-12-1614-3-A**	**12/18/13 12:16**	**Air**	**GC 55**	**N/A**	**12/20/13 13:16**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

IW-03	**13-12-1614-4-A**	**12/18/13 13:41**	**Air**	**GC 55**	**N/A**	**12/20/13 13:40**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

IW-01	**13-12-1614-5-A**	**12/18/13 14:30**	**Air**	**GC 55**	**N/A**	**12/20/13 14:09**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

VW-40-03	**13-12-1614-6-A**	**12/19/13 09:27**	**Air**	**GC 55**	**N/A**	**12/20/13 14:34**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

VW-40-02	**13-12-1614-7-A**	**12/19/13 12:17**	**Air**	**GC 55**	**N/A**	**12/20/13 15:00**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

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Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946 (M)
		Units:	%v
Project: Seal Beach NWS			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP-1	**13-12-1614-8-A**	**12/19/13 00:00**	**Air**	**GC 55**	**N/A**	**12/20/13 15:24**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

FB-1	**13-12-1614-9-A**	**12/19/13 14:22**	**Air**	**GC 55**	**N/A**	**12/20/13 15:45**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

Method Blank	**099-15-156-2**	**N/A**	**Air**	**GC 55**	**N/A**	**12/20/13 11:34**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

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CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 1 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-40-04	**13-12-1614-1-A**	**12/18/13 10:00**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 18:10**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	0.41	0.052	0.20	0.50	1	J
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	0.32	0.25	0.50	1.2	1	J
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	<0.50	0.18	0.50	1.2	1	U
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	10	0.25	0.50	1.2	1	
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	0.39	0.25	0.50	1.2	1	J
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	<0.50	0.20	0.50	1.2	1	U
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
c-1,2-Dichloroethene	<0.20	0.087	0.20	0.50	1	U
t-1,2-Dichloroethene	<0.20	0.13	0.20	0.50	1	U
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	<2.0	0.87	2.0	5.0	1	U
Ethylbenzene	<0.10	0.067	0.10	0.50	1	U
4-Ethyltoluene	<0.20	0.057	0.20	0.50	1	U
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	4.4	0.25	0.50	1.2	1	
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	0.064	0.055	0.10	0.50	1	J
p/m-Xylene	0.23	0.15	0.20	1.0	1	J

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Analytical Report

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302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 2 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Styrene	<0.20	0.064	0.20	0.50	1	U
Tetrachloroethene	41	0.067	0.10	0.50	1	
Toluene	0.47	0.080	0.20	0.50	1	J
Trichloroethene	0.60	0.046	0.10	0.50	1	
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	<0.20	0.051	0.20	0.50	1	U
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	<0.20	0.070	0.20	0.50	1	U
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U
Vinyl Chloride	<0.50	0.22	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	57-129	
1,2-Dichloroethane-d4	100	47-137	
Toluene-d8	96	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 3 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-32	**13-12-1614-2-A**	**12/18/13 11:08**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 19:00**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	0.32	0.052	0.20	0.50	1	J
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	0.52	0.18	0.50	1.2	1	J
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	<0.50	0.20	0.50	1.2	1	U
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
c-1,2-Dichloroethene	1.5	0.087	0.20	0.50	1	
t-1,2-Dichloroethene	<0.20	0.13	0.20	0.50	1	U
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	6.8	0.87	2.0	5.0	1	
Ethylbenzene	1.8	0.067	0.10	0.50	1	
4-Ethyltoluene	1.0	0.057	0.20	0.50	1	
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	3.4	0.055	0.10	0.50	1	
p/m-Xylene	7.6	0.15	0.20	1.0	1	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 4 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Styrene	0.26	0.064	0.20	0.50	1	J
Tetrachloroethene	4.3	0.067	0.10	0.50	1	
Toluene	3.0	0.080	0.20	0.50	1	
Trichloroethene	4.4	0.046	0.10	0.50	1	
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	0.95	0.051	0.20	0.50	1	
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	3.7	0.070	0.20	0.50	1	
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U
Vinyl Chloride	0.34	0.22	0.50	1.2	1	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	57-129	
1,2-Dichloroethane-d4	100	47-137	
Toluene-d8	97	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 5 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-40-06	**13-12-1614-3-A**	**12/18/13 12:16**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 19:50**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	4.1	0.052	0.20	0.50	1	
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	0.65	0.18	0.50	1.2	1	J
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	0.80	0.25	0.50	1.2	1	J
1,1-Dichloroethene	<0.50	0.20	0.50	1.2	1	U
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
c-1,2-Dichloroethene	22	0.087	0.20	0.50	1	
t-1,2-Dichloroethene	18	0.13	0.20	0.50	1	
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	6.9	0.87	2.0	5.0	1	
Ethylbenzene	0.85	0.067	0.10	0.50	1	
4-Ethyltoluene	0.56	0.057	0.20	0.50	1	
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	1.7	0.055	0.10	0.50	1	
p/m-Xylene	3.5	0.15	0.20	1.0	1	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 6 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Styrene	0.16	0.064	0.20	0.50	1	J
Tetrachloroethene	2.3	0.067	0.10	0.50	1	
Toluene	1.9	0.080	0.20	0.50	1	
Trichloroethene	22	0.046	0.10	0.50	1	
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	0.61	0.051	0.20	0.50	1	
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	2.2	0.070	0.20	0.50	1	
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	57-129	
1,2-Dichloroethane-d4	102	47-137	
Toluene-d8	97	78-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-40-06	**13-12-1614-3-A**	**12/18/13 12:16**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 19:06**	**D140102L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Vinyl Chloride	140	0.56	1.2	3.1	2.5	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	57-129	
1,2-Dichloroethane-d4	101	47-137	
Toluene-d8	97	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 7 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IW-03	**13-12-1614-4-A**	**12/18/13 13:41**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 20:40**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	2.7	0.052	0.20	0.50	1	
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	<0.50	0.18	0.50	1.2	1	U
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	<0.50	0.20	0.50	1.2	1	U
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
c-1,2-Dichloroethene	2.2	0.087	0.20	0.50	1	
t-1,2-Dichloroethene	71	0.13	0.20	0.50	1	
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	4.2	0.87	2.0	5.0	1	J
Ethylbenzene	0.42	0.067	0.10	0.50	1	J
4-Ethyltoluene	0.32	0.057	0.20	0.50	1	J
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	1.0	0.055	0.10	0.50	1	
p/m-Xylene	1.8	0.15	0.20	1.0	1	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 8 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Styrene	<0.20	0.064	0.20	0.50	1	U
Tetrachloroethene	0.28	0.067	0.10	0.50	1	J
Toluene	0.95	0.080	0.20	0.50	1	
Trichloroethene	1.0	0.046	0.10	0.50	1	
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	0.43	0.051	0.20	0.50	1	J
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	1.3	0.070	0.20	0.50	1	
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	115	57-129	
1,2-Dichloroethane-d4	102	47-137	
Toluene-d8	96	78-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IW-03	**13-12-1614-4-A**	**12/18/13 13:41**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 19:54**	**D140102L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Vinyl Chloride	170	0.56	1.2	3.1	2.5	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	106	57-129	
1,2-Dichloroethane-d4	101	47-137	
Toluene-d8	96	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 9 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IW-01	**13-12-1614-5-A**	**12/18/13 14:30**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 21:30**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	1.6	0.052	0.20	0.50	1	
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	<0.50	0.18	0.50	1.2	1	U
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	2.3	0.20	0.50	1.2	1	
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	5.8	0.87	2.0	5.0	1	
Ethylbenzene	0.31	0.067	0.10	0.50	1	J
4-Ethyltoluene	0.25	0.057	0.20	0.50	1	J
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	0.74	0.055	0.10	0.50	1	
p/m-Xylene	1.2	0.15	0.20	1.0	1	
Styrene	<0.20	0.064	0.20	0.50	1	U
Tetrachloroethene	3.6	0.067	0.10	0.50	1	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 10 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Toluene	0.41	0.080	0.20	0.50	1	J
Trichloroethene	92	0.046	0.10	0.50	1	
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	0.32	0.051	0.20	0.50	1	J
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	1.1	0.070	0.20	0.50	1	
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	107	57-129	
1,2-Dichloroethane-d4	103	47-137	
Toluene-d8	95	78-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IW-01	**13-12-1614-5-A**	**12/18/13 14:30**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 20:40**	**D140102L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
c-1,2-Dichloroethene	250	0.35	0.80	2.0	4	
t-1,2-Dichloroethene	190	0.51	0.80	2.0	4	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	57-129	
1,2-Dichloroethane-d4	101	47-137	
Toluene-d8	97	78-156	

IW-01	**13-12-1614-5-A**	**12/18/13 14:30**	**Air**	**GC/MS YY**	**N/A**	**01/03/14 20:52**	**D140103L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Vinyl Chloride	500	1.8	4.0	10	8	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	57-129	
1,2-Dichloroethane-d4	107	47-137	
Toluene-d8	97	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 11 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-40-03	**13-12-1614-6-A**	**12/19/13 09:27**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 22:20**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	3.6	0.052	0.20	0.50	1	
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	0.23	0.18	0.50	1.2	1	J
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	8.5	0.20	0.50	1.2	1	
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	4.0	0.87	2.0	5.0	1	J
Ethylbenzene	0.43	0.067	0.10	0.50	1	J
4-Ethyltoluene	0.16	0.057	0.20	0.50	1	J
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	0.73	0.055	0.10	0.50	1	
p/m-Xylene	1.7	0.15	0.20	1.0	1	
Styrene	0.087	0.064	0.20	0.50	1	J
Tetrachloroethene	3.0	0.067	0.10	0.50	1	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 12 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Toluene	0.94	0.080	0.20	0.50	1	
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	0.16	0.051	0.20	0.50	1	J
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	0.61	0.070	0.20	0.50	1	
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	57-129	
1,2-Dichloroethane-d4	102	47-137	
Toluene-d8	96	78-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-40-03	**13-12-1614-6-A**	**12/19/13 09:27**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 21:25**	**D140102L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
c-1,2-Dichloroethene	490	0.87	2.0	5.0	10	
t-1,2-Dichloroethene	440	1.3	2.0	5.0	10	
Trichloroethene	200	0.46	1.0	5.0	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	57-129	
1,2-Dichloroethane-d4	102	47-137	
Toluene-d8	97	78-156	

VW-40-03	**13-12-1614-6-A**	**12/19/13 09:27**	**Air**	**GC/MS YY**	**N/A**	**01/03/14 21:36**	**D140103L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Vinyl Chloride	1200	4.4	10	25	20	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	105	57-129	
1,2-Dichloroethane-d4	106	47-137	
Toluene-d8	98	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 13 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-40-02	**13-12-1614-7-A**	**12/19/13 12:17**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 23:10**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	2.9	0.052	0.20	0.50	1	
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	<0.50	0.18	0.50	1.2	1	U
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	20	0.20	0.50	1.2	1	
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	<2.0	0.87	2.0	5.0	1	U
Ethylbenzene	0.096	0.067	0.10	0.50	1	J
4-Ethyltoluene	<0.20	0.057	0.20	0.50	1	U
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	0.15	0.055	0.10	0.50	1	J
p/m-Xylene	0.31	0.15	0.20	1.0	1	J
Styrene	<0.20	0.064	0.20	0.50	1	U
Tetrachloroethene	2.0	0.067	0.10	0.50	1	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 14 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Toluene	0.58	0.080	0.20	0.50	1	
Trichloroethene	12	0.046	0.10	0.50	1	
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	0.072	0.051	0.20	0.50	1	J
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	<0.20	0.070	0.20	0.50	1	U
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	57-129	
1,2-Dichloroethane-d4	102	47-137	
Toluene-d8	97	78-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-40-02	**13-12-1614-7-A**	**12/19/13 12:17**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 22:10**	**D140102L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
c-1,2-Dichloroethene	930	1.4	3.2	8.0	16	
t-1,2-Dichloroethene	830	2.0	3.2	8.0	16	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	57-129	
1,2-Dichloroethane-d4	104	47-137	
Toluene-d8	98	78-156	

VW-40-02	**13-12-1614-7-A**	**12/19/13 12:17**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 22:54**	**D140102L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Vinyl Chloride	1700	8.9	20	50	40	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	57-129	
1,2-Dichloroethane-d4	105	47-137	
Toluene-d8	98	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 15 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP-1	**13-12-1614-8-A**	**12/19/13 00:00**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 23:59**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	3.1	0.052	0.20	0.50	1	
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	<0.50	0.18	0.50	1.2	1	U
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	21	0.20	0.50	1.2	1	
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	<2.0	0.87	2.0	5.0	1	U
Ethylbenzene	0.31	0.067	0.10	0.50	1	J
4-Ethyltoluene	0.19	0.057	0.20	0.50	1	J
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	0.49	0.055	0.10	0.50	1	J
p/m-Xylene	1.2	0.15	0.20	1.0	1	
Styrene	<0.20	0.064	0.20	0.50	1	U
Tetrachloroethene	3.2	0.067	0.10	0.50	1	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 16 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Toluene	0.89	0.080	0.20	0.50	1	
Trichloroethene	13	0.046	0.10	0.50	1	
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	0.47	0.051	0.20	0.50	1	J
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	0.74	0.070	0.20	0.50	1	
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	106	57-129	
1,2-Dichloroethane-d4	105	47-137	
Toluene-d8	97	78-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP-1	**13-12-1614-8-A**	**12/19/13 00:00**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 23:39**	**D140102L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
c-1,2-Dichloroethene	1000	1.4	3.2	8.0	16	
t-1,2-Dichloroethene	910	2.0	3.2	8.0	16	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	57-129	
1,2-Dichloroethane-d4	105	47-137	
Toluene-d8	98	78-156	

DUP-1	**13-12-1614-8-A**	**12/19/13 00:00**	**Air**	**GC/MS YY**	**N/A**	**01/03/14 02:18**	**D140102L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Vinyl Chloride	1900	8.9	20	50	40	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	57-129	
1,2-Dichloroethane-d4	108	47-137	
Toluene-d8	99	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 17 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FB-1	**13-12-1614-9-A**	**12/19/13 14:22**	**Air**	**GC/MS YY**	**N/A**	**12/29/13 01:34**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.20	0.052	0.20	0.50	1	U
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	2.5	0.18	0.50	1.2	1	
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	0.54	0.24	0.50	1.2	1	J
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	0.54	0.25	0.50	1.2	1	J
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	<0.50	0.20	0.50	1.2	1	U
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	0.078	0.067	0.10	0.50	1	J
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
c-1,2-Dichloroethene	<0.20	0.087	0.20	0.50	1	U
t-1,2-Dichloroethene	<0.20	0.13	0.20	0.50	1	U
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	6.8	0.87	2.0	5.0	1	
Ethylbenzene	0.094	0.067	0.10	0.50	1	J
4-Ethyltoluene	0.22	0.057	0.20	0.50	1	J
Hexachloro-1,3-Butadiene	0.51	0.078	0.10	0.50	1	
2-Hexanone	0.77	0.44	0.50	1.2	1	J
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	0.32	0.25	0.50	1.2	1	J
4-Methyl-2-Pentanone	2.0	0.37	0.50	1.2	1	
o-Xylene	0.094	0.055	0.10	0.50	1	J
p/m-Xylene	0.34	0.15	0.20	1.0	1	J

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 18 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Styrene	<0.20	0.064	0.20	0.50	1	U
Tetrachloroethene	<0.10	0.067	0.10	0.50	1	U
Toluene	0.34	0.080	0.20	0.50	1	J
Trichloroethene	<0.10	0.046	0.10	0.50	1	U
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	0.20	0.051	0.20	0.50	1	J
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	0.52	0.070	0.20	0.50	1	
1,2,4-Trichlorobenzene	1.0	0.12	0.20	0.50	1	
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U
Vinyl Chloride	<0.50	0.22	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	57-129	
1,2-Dichloroethane-d4	104	47-137	
Toluene-d8	97	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 19 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-523-262**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 10:47**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.20	0.052	0.20	0.50	1	U
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	<0.50	0.18	0.50	1.2	1	U
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	<0.50	0.20	0.50	1.2	1	U
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
c-1,2-Dichloroethene	<0.20	0.087	0.20	0.50	1	U
t-1,2-Dichloroethene	<0.20	0.13	0.20	0.50	1	U
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	<2.0	0.87	2.0	5.0	1	U
Ethylbenzene	<0.10	0.067	0.10	0.50	1	U
4-Ethyltoluene	<0.20	0.057	0.20	0.50	1	U
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	<0.10	0.055	0.10	0.50	1	U
p/m-Xylene	<0.20	0.15	0.20	1.0	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 20 of 21

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Styrene	<0.20	0.064	0.20	0.50	1	U
Tetrachloroethene	<0.10	0.067	0.10	0.50	1	U
Toluene	<0.20	0.080	0.20	0.50	1	U
Trichloroethene	<0.10	0.046	0.10	0.50	1	U
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	<0.20	0.051	0.20	0.50	1	U
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	<0.20	0.070	0.20	0.50	1	U
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U
Vinyl Chloride	<0.50	0.22	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	57-129	
1,2-Dichloroethane-d4	102	47-137	
Toluene-d8	98	78-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-523-264**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 17:34**	**D140102L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
c-1,2-Dichloroethene	<0.20	0.087	0.20	0.50	1	U
t-1,2-Dichloroethene	<0.20	0.13	0.20	0.50	1	U
Trichloroethene	<0.10	0.046	0.10	0.50	1	U
Vinyl Chloride	<0.50	0.22	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	57-129	
1,2-Dichloroethane-d4	102	47-137	
Toluene-d8	99	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 21 of 21

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-523-265**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**01/03/14 19:22**	**D140103L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Vinyl Chloride	<0.50	0.22	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	57-129	
1,2-Dichloroethane-d4	105	47-137	
Toluene-d8	98	78-156	

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946
Project: Seal Beach NWS			Page 1 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-535-8	**LCS**	**Air**	**GC 65**	**N/A**	**12/20/13 10:48**	**131220L02**
099-14-535-8	**LCSD**	**Air**	**GC 65**	**N/A**	**12/20/13 11:26**	**131220L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	4.500	4.423	98	4.353	97	80-120	2	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946 (M)
Project: Seal Beach NWS			Page 2 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-156-2	**LCS**	**Air**	**GC 55**	**N/A**	**12/20/13 10:29**	**131220L01**
099-15-156-2	**LCSD**	**Air**	**GC 55**	**N/A**	**12/20/13 10:51**	**131220L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Helium	1.000	0.9559	96	1.041	104	80-120	9	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
Project: Seal Beach NWS			Page 3 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-523-262	**LCS**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 07:08**	**D131228L01**
099-14-523-262	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 07:58**	**D131228L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	25.00	24.46	98	24.51	98	60-156	0	0-40	
Benzyl Chloride	25.00	25.48	102	25.04	100	50-150	2	0-35	
Bromodichloromethane	25.00	24.71	99	24.77	99	50-150	0	0-35	
Bromoform	25.00	24.73	99	24.83	99	62-134	0	0-38	
Bromomethane	25.00	24.72	99	24.84	99	50-150	0	0-35	
2-Butanone	25.00	24.47	98	24.44	98	50-150	0	0-35	
Carbon Disulfide	25.00	25.75	103	25.82	103	50-150	0	0-35	
Carbon Tetrachloride	25.00	24.09	96	24.15	97	64-154	0	0-32	
Chlorobenzene	25.00	24.10	96	24.33	97	50-150	1	0-35	
Chloroethane	25.00	24.61	98	24.69	99	50-150	0	0-35	
Chloroform	25.00	23.66	95	23.69	95	50-150	0	0-35	
Chloromethane	25.00	24.86	99	25.17	101	50-150	1	0-35	
Dibromochloromethane	25.00	24.70	99	24.98	100	50-150	1	0-35	
Dichlorodifluoromethane	25.00	23.59	94	23.73	95	50-150	1	0-35	
1,1-Dichloroethane	25.00	23.90	96	23.94	96	50-150	0	0-35	
1,1-Dichloroethene	25.00	24.40	98	24.54	98	50-150	1	0-35	
1,2-Dibromoethane	25.00	24.37	97	24.67	99	54-144	1	0-36	
1,2-Dichlorobenzene	25.00	21.67	87	21.42	86	34-160	1	0-47	
1,2-Dichloroethane	25.00	23.70	95	23.68	95	69-153	0	0-35	
1,2-Dichloropropane	25.00	24.35	97	24.42	98	67-157	0	0-35	
1,3-Dichlorobenzene	25.00	22.58	90	22.40	90	50-150	1	0-35	
1,4-Dichlorobenzene	25.00	22.15	89	21.77	87	36-156	2	0-47	
c-1,3-Dichloropropene	25.00	25.71	103	25.82	103	61-157	0	0-35	
c-1,2-Dichloroethene	25.00	24.24	97	24.28	97	50-150	0	0-35	
t-1,2-Dichloroethene	25.00	23.13	93	23.24	93	50-150	0	0-35	
t-1,3-Dichloropropene	25.00	28.40	114	28.41	114	50-150	0	0-35	
Ethanol	100.0	89.88	90	89.66	90	50-150	0	0-35	
Ethylbenzene	25.00	24.83	99	25.15	101	52-154	1	0-38	
4-Ethyltoluene	25.00	24.87	99	24.95	100	50-150	0	0-35	
Hexachloro-1,3-Butadiene	25.00	20.42	82	20.87	83	50-150	2	0-35	
2-Hexanone	25.00	24.66	99	25.02	100	50-150	1	0-35	
Methyl-t-Butyl Ether (MTBE)	25.00	24.52	98	24.68	99	50-150	1	0-35	
Methylene Chloride	25.00	23.99	96	24.01	96	50-150	0	0-35	
4-Methyl-2-Pentanone	25.00	25.11	100	25.17	101	50-150	0	0-35	
o-Xylene	25.00	24.28	97	24.50	98	52-148	1	0-38	
p/m-Xylene	50.00	48.83	98	49.46	99	42-156	1	0-41	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
Project: Seal Beach NWS			Page 4 of 8

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Styrene	25.00	24.82	99	25.02	100	50-150	1	0-35	
Tetrachloroethene	25.00	23.84	95	24.11	96	56-152	1	0-40	
Toluene	25.00	24.82	99	25.21	101	56-146	2	0-43	
Trichloroethene	25.00	24.25	97	24.28	97	63-159	0	0-34	
Trichlorofluoromethane	25.00	18.20	73	18.51	74	50-150	2	0-35	
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.27	97	24.30	97	50-150	0	0-35	
1,1,1-Trichloroethane	25.00	23.18	93	23.21	93	50-150	0	0-35	
1,1,2-Trichloroethane	25.00	24.30	97	24.24	97	65-149	0	0-37	
1,3,5-Trimethylbenzene	25.00	23.82	95	23.87	95	50-150	0	0-35	
1,1,2,2-Tetrachloroethane	25.00	23.35	93	23.48	94	50-150	1	0-35	
1,2,4-Trimethylbenzene	25.00	23.11	92	23.15	93	50-150	0	0-35	
1,2,4-Trichlorobenzene	25.00	21.68	87	22.00	88	50-150	1	0-35	
Vinyl Acetate	25.00	22.38	90	22.36	89	50-150	0	0-35	
Vinyl Chloride	25.00	24.44	98	24.55	98	45-177	0	0-36	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
Project: Seal Beach NWS			Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-523-264	**LCS**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 13:47**	**D140102L01**
099-14-523-264	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**01/02/14 14:39**	**D140102L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	25.00	24.63	99	24.79	99	60-156	1	0-40	
Benzyl Chloride	25.00	25.01	100	25.56	102	50-150	2	0-35	
Bromodichloromethane	25.00	25.05	100	25.22	101	50-150	1	0-35	
Bromoform	25.00	22.93	92	23.21	93	62-134	1	0-38	
Bromomethane	25.00	25.06	100	25.18	101	50-150	0	0-35	
2-Butanone	25.00	23.72	95	23.71	95	50-150	0	0-35	
Carbon Disulfide	25.00	25.66	103	25.93	104	50-150	1	0-35	
Carbon Tetrachloride	25.00	25.14	101	25.08	100	64-154	0	0-32	
Chlorobenzene	25.00	23.83	95	23.93	96	50-150	0	0-35	
Chloroethane	25.00	23.50	94	23.77	95	50-150	1	0-35	
Chloroform	25.00	24.47	98	24.65	99	50-150	1	0-35	
Chloromethane	25.00	24.18	97	24.09	96	50-150	0	0-35	
Dibromochloromethane	25.00	24.48	98	24.52	98	50-150	0	0-35	
Dichlorodifluoromethane	25.00	25.20	101	24.89	100	50-150	1	0-35	
1,1-Dichloroethane	25.00	24.50	98	24.60	98	50-150	0	0-35	
1,1-Dichloroethene	25.00	25.23	101	24.98	100	50-150	1	0-35	
1,2-Dibromoethane	25.00	24.05	96	24.12	96	54-144	0	0-36	
1,2-Dichlorobenzene	25.00	22.44	90	22.80	91	34-160	2	0-47	
1,2-Dichloroethane	25.00	24.28	97	24.46	98	69-153	1	0-35	
1,2-Dichloropropane	25.00	24.13	97	24.38	98	67-157	1	0-35	
1,3-Dichlorobenzene	25.00	22.09	88	22.51	90	50-150	2	0-35	
1,4-Dichlorobenzene	25.00	21.51	86	21.99	88	36-156	2	0-47	
c-1,3-Dichloropropene	25.00	25.35	101	25.66	103	61-157	1	0-35	
c-1,2-Dichloroethene	25.00	24.61	98	24.81	99	50-150	1	0-35	
t-1,2-Dichloroethene	25.00	22.49	90	23.00	92	50-150	2	0-35	
t-1,3-Dichloropropene	25.00	27.62	110	28.03	112	50-150	1	0-35	
Ethanol	100.0	82.14	82	85.26	85	50-150	4	0-35	
Ethylbenzene	25.00	24.19	97	24.26	97	52-154	0	0-38	
4-Ethyltoluene	25.00	23.99	96	24.33	97	50-150	1	0-35	
Hexachloro-1,3-Butadiene	25.00	20.26	81	20.62	82	50-150	2	0-35	
2-Hexanone	25.00	23.69	95	23.79	95	50-150	0	0-35	
Methyl-t-Butyl Ether (MTBE)	25.00	24.83	99	25.10	100	50-150	1	0-35	
Methylene Chloride	25.00	24.85	99	25.03	100	50-150	1	0-35	
4-Methyl-2-Pentanone	25.00	24.21	97	24.52	98	50-150	1	0-35	
o-Xylene	25.00	23.53	94	23.72	95	52-148	1	0-38	
p/m-Xylene	50.00	46.77	94	46.94	94	42-156	0	0-41	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
Project: Seal Beach NWS			Page 6 of 8

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Styrene	25.00	23.51	94	23.75	95	50-150	1	0-35	
Tetrachloroethene	25.00	23.89	96	23.81	95	56-152	0	0-40	
Toluene	25.00	24.76	99	24.72	99	56-146	0	0-43	
Trichloroethene	25.00	24.21	97	24.45	98	63-159	1	0-34	
Trichlorofluoromethane	25.00	38.20	153	38.37	153	50-150	0	0-35	X
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.64	99	24.84	99	50-150	1	0-35	
1,1,1-Trichloroethane	25.00	24.07	96	24.27	97	50-150	1	0-35	
1,1,2-Trichloroethane	25.00	24.06	96	24.34	97	65-149	1	0-37	
1,3,5-Trimethylbenzene	25.00	23.26	93	23.52	94	50-150	1	0-35	
1,1,2,2-Tetrachloroethane	25.00	22.06	88	22.37	89	50-150	1	0-35	
1,2,4-Trimethylbenzene	25.00	22.52	90	22.83	91	50-150	1	0-35	
1,2,4-Trichlorobenzene	25.00	20.40	82	21.29	85	50-150	4	0-35	
Vinyl Acetate	25.00	21.80	87	21.89	88	50-150	0	0-35	
Vinyl Chloride	25.00	23.97	96	24.06	96	45-177	0	0-36	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
Project: Seal Beach NWS			Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-523-265	**LCS**	**Air**	**GC/MS YY**	**N/A**	**01/03/14 14:16**	**D140103L01**
099-14-523-265	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**01/03/14 15:06**	**D140103L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	25.00	23.67	95	23.68	95	60-156	0	0-40	
Benzyl Chloride	25.00	25.55	102	25.34	101	50-150	1	0-35	
Bromodichloromethane	25.00	25.24	101	25.05	100	50-150	1	0-35	
Bromoform	25.00	23.48	94	23.58	94	62-134	0	0-38	
Bromomethane	25.00	24.86	99	24.87	99	50-150	0	0-35	
2-Butanone	25.00	23.40	94	23.17	93	50-150	1	0-35	
Carbon Disulfide	25.00	24.53	98	24.52	98	50-150	0	0-35	
Carbon Tetrachloride	25.00	25.76	103	25.43	102	64-154	1	0-32	
Chlorobenzene	25.00	23.01	92	23.26	93	50-150	1	0-35	
Chloroethane	25.00	22.93	92	22.92	92	50-150	0	0-35	
Chloroform	25.00	24.20	97	24.07	96	50-150	1	0-35	
Chloromethane	25.00	23.57	94	23.58	94	50-150	0	0-35	
Dibromochloromethane	25.00	24.31	97	24.27	97	50-150	0	0-35	
Dichlorodifluoromethane	25.00	24.57	98	24.31	97	50-150	1	0-35	
1,1-Dichloroethane	25.00	23.58	94	23.48	94	50-150	0	0-35	
1,1-Dichloroethene	25.00	24.12	96	23.90	96	50-150	1	0-35	
1,2-Dibromoethane	25.00	23.34	93	23.47	94	54-144	1	0-36	
1,2-Dichlorobenzene	25.00	22.73	91	22.62	90	34-160	0	0-47	
1,2-Dichloroethane	25.00	24.59	98	24.28	97	69-153	1	0-35	
1,2-Dichloropropane	25.00	23.22	93	23.21	93	67-157	0	0-35	
1,3-Dichlorobenzene	25.00	22.40	90	22.35	89	50-150	0	0-35	
1,4-Dichlorobenzene	25.00	22.02	88	21.86	87	36-156	1	0-47	
c-1,3-Dichloropropene	25.00	24.77	99	24.79	99	61-157	0	0-35	
c-1,2-Dichloroethene	25.00	23.61	94	23.67	95	50-150	0	0-35	
t-1,2-Dichloroethene	25.00	22.30	89	22.35	89	50-150	0	0-35	
t-1,3-Dichloropropene	25.00	27.50	110	27.39	110	50-150	0	0-35	
Ethanol	100.0	81.14	81	81.23	81	50-150	0	0-35	
Ethylbenzene	25.00	23.36	93	23.48	94	52-154	0	0-38	
4-Ethyltoluene	25.00	23.95	96	24.01	96	50-150	0	0-35	
Hexachloro-1,3-Butadiene	25.00	20.48	82	20.52	82	50-150	0	0-35	
2-Hexanone	25.00	22.74	91	22.78	91	50-150	0	0-35	
Methyl-t-Butyl Ether (MTBE)	25.00	23.49	94	23.57	94	50-150	0	0-35	
Methylene Chloride	25.00	23.54	94	23.60	94	50-150	0	0-35	
4-Methyl-2-Pentanone	25.00	23.73	95	23.62	94	50-150	0	0-35	
o-Xylene	25.00	23.19	93	23.30	93	52-148	0	0-38	
p/m-Xylene	50.00	45.99	92	46.16	92	42-156	0	0-41	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1614
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
Project: Seal Beach NWS			Page 8 of 8

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Styrene	25.00	22.91	92	23.14	93	50-150	1	0-35	
Tetrachloroethene	25.00	23.19	93	23.21	93	56-152	0	0-40	
Toluene	25.00	23.45	94	23.63	95	56-146	1	0-43	
Trichloroethene	25.00	23.85	95	23.83	95	63-159	0	0-34	
Trichlorofluoromethane	25.00	23.71	95	23.36	93	50-150	2	0-35	
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.07	96	23.92	96	50-150	1	0-35	
1,1,1-Trichloroethane	25.00	24.12	96	23.92	96	50-150	1	0-35	
1,1,2-Trichloroethane	25.00	23.57	94	23.54	94	65-149	0	0-37	
1,3,5-Trimethylbenzene	25.00	23.21	93	23.23	93	50-150	0	0-35	
1,1,2,2-Tetrachloroethane	25.00	21.74	87	21.80	87	50-150	0	0-35	
1,2,4-Trimethylbenzene	25.00	22.73	91	22.68	91	50-150	0	0-35	
1,2,4-Trichlorobenzene	25.00	20.89	84	21.13	85	50-150	1	0-35	
Vinyl Acetate	25.00	21.44	86	21.24	85	50-150	1	0-35	
Vinyl Chloride	25.00	23.53	94	23.66	95	45-177	1	0-36	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Summa Canister Vacuum Summary

Work Order: 13-12-1614

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
VW-40-04	-29.60 in Hg	-5.00 in Hg	D638	Summa Canister 6L
MW-40-32	-29.60 in Hg	-6.00 in Hg	D561	Summa Canister 6L
VW-40-06	-29.60 in Hg	-5.00 in Hg	D426	Summa Canister 6L
IW-03	-29.60 in Hg	-6.00 in Hg	D240	Summa Canister 6L
IW-01	-29.60 in Hg	-5.00 in Hg	D528	Summa Canister 6L
VW-40-03	-29.60 in Hg	-6.00 in Hg	D454	Summa Canister 6L
VW-40-02	-29.70 in Hg	-4.00 in Hg	D448	Summa Canister 6L
DUP-1	-29.60 in Hg	-4.00 in Hg	D417	Summa Canister 6L
FB-1	-29.60 in Hg	-5.00 in Hg	D333	Summa Canister 6L

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Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 13-12-1614

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-1946	N/A	878	GC 65	2
ASTM D-1946	N/A	884	GC 65	2
ASTM D-1946	N/A	896	GC 65	2
ASTM D-1946 (M)	N/A	878	GC 55	2
ASTM D-1946 (M)	N/A	888	GC 55	2
EPA TO-15	N/A	326	GC/MS YY	2

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 13-12-1614

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
DL	The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
ICH	Initial calibration verification recovery is above the control limit for this analyte.
ICJ	Initial calibration verification recovery is below the control limit for this analyte.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J	Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LOD	The Limit of Detection (LOD) is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at 99% confidence level.
LOQ	The Limit of Quantitation (LOQ) is the lowest concentration of a substance that produces a quantitative result within specified limits of precision and bias.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
U	Undetected at Detection Limit (DL) and is reported as less than the Limit of Detection (LOD).
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

DATE: 12/18/13
PAGE: 1 OF 1

LABORATORY CLIENT: CKY
ADDRESS: 302 W 5th St, San Pedro, CA 90731
TEL: (310) 519-4000 | FAX: (310) 519-4029 | E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (SIGNATURE)
COELT LOG CODE
P.O. NO.:
LAB USE ONLY: 13-12-1614
COOLER RECEIPT Temp = °C

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ Standard
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☐ RWQCB REPORTING ☐ COELT EDF ☐
SPECIAL INSTRUCTIONS

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	CEL SAMPLE #	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	VOCs EPA (TO-15)	Methane (ASTM 1946M)	Helium	Level III
1	VW-40-04	D683	12/18/13	1000	Air	1	X	X	X	X
2	MW-40-32	D561		1108	Air	1	X	X	X	X
3	VW-40-06	D426		1216	Air	1	X	X	X	X
4	IW-03	D240		1341	Air	1	X	X	X	X
5	IW-01	D528		1430	Air	1	X	X	X	X
6	VW-40-03	~~D454~~ D454	12/19/13	0927	Air	1	X	X	X	X
7	VW-40-02	D448		1217	Air	1	X	X	X	X
8	DUP-1	D417		—	Air	1	X	X	X	X
9	FB-1	D333		1422	Air	1	X	X	X	X

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	NICOLE	12/19/13	1630
NICOLE	CEL	12/19/13	1732
	CSR	12/19/13	1845

Revision: 072611

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-12-1614

SAMPLE RECEIPT FORM

Cooler 0 of 0

CLIENT: CKY

DATE: 12/19/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature ____.____ °C - 0.2 °C (CF) = ____.____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☑ Air ☐ Filter Checked by: 676

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☑ N/A Checked by: 676

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 300

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna_2 ☐1AGBs

☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB

☐250PB ☐250PBn ☑125PB ☐125PBznna ☐100PJ ☐100PJna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 300

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 836

Preservative: **h:** HCL **n:** HNO_3 **na_2:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 836

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Calscience Environmental Laboratories, Inc.

Case Narrative

Client Project Name: Seal Beach NWS
Work Order Number: 13-12-1614

CONDITION UPON RECEIPT:

Calscience Laboratories received (9) air samples in Summa canisters on December 19th, 2013. The samples were received in good condition at ambient temperature.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
VW-40-04	13-12-1614-1	12/18/2013 10:00	12/19/2013 18:45
MW-40-32	13-12-1614-2	12/18/2013 11:08	12/19/2013 18:45
VW-40-06	13-12-1614-3	12/18/2013 12:16	12/19/2013 18:45
IW-03	13-12-1614-4	12/18/2013 13:41	12/19/2013 18:45
IW-01	13-12-1614-5	12/18/2013 14:30	12/19/2013 18:45
VW-40-03	13-12-1614-6	12/19/2013 09:27	12/19/2013 18:45
VW-40-02	13-12-1614-7	12/19/2013 12:17	12/19/2013 18:45
DUP-1	13-12-1614-8	12/19/2013 00:00	12/19/2013 18:45
FB-1	13-12-1614-9	12/19/2013 14:22	12/19/2013 18:45

DATA SUMMARY:

Per the chain-of-custody (COC), the samples were analyzed using the following methodologies: ASTM D-1946 (M) for Helium, ASTM D-1946 for Methane and EPA Method TO-15 for Volatile Organic Compounds

The summa canisters were batch certified on 12/13/13.

All samples were analyzed within the suggested EPA holding time for the requested methods.

Sample results were reported in the DL/LOD/LOQ format. In the instance where a result fell between the DL and the LOQ, a “J” flag was applied to the data indicating an estimated value.

Any dilutions made to the sample(s) and/or QC will be noted in the following narrative. Reporting limits have been adjusted accordingly.

Any manual integrations made to the data will be noted in the following narrative. The initial and amended chromatograms have been included in the data package.

Unless otherwise noted below, all sample/instrument QC were within stated acceptance criteria.

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7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Case Narrative

Client Project Name: Seal Beach NWS
Work Order Number: 13-12-1614

ASTM D-1946 – FIXED GASES (METHANE):

Samples 13-12-1614: -1 through -9 were analyzed for Methane by ASTM D-1946 on 12/20/13 in batch # 131220L02 on GC 65.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 10/10/13 on GC 65. The %RSD for Methane in the initial calibration was ≤ 20% and the initial calibration verification was within the 20% D acceptance criteria.

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

The method blank was non-detect and the LCS/LCSD were within acceptance criteria.

ASTM D-1946 (M) – FIXED GASES (HELIUM):

Samples 13-12-1614: -1 through -9 were analyzed for Helium by ASTM D-1946 (M) on 12/20/13 in batch # 131220L01 on GC 55.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 07/26/13 on GC 55. The %RSD for Helium in the initial calibration was ≤ 15% and the initial calibration verification was within the 15% D acceptance criteria.

Manual integrations were performed on one or more target analytes in one or more of the ICAL standards to correct the peak and/or baseline integration.

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

The method blank was non-detect and the LCS/LCSD were within acceptance criteria.

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EPA TO-15 – VOLATILE ORGANIC COMPOUNDS:

Samples 13-12-1614: -1 through -9 were analyzed for Volatile Organic Compounds by EPA Method TO-15 on 12/28/13 – 01/03/14 in batch #s D131228L01, D140102L01, and D140103L01 on GC/MS YY.

Initial Calibration and Initial Calibration Verification:

ICAL 12/27/13 GC/MS YY: The %RSD for each target analyte was ≤ 30%. The ICV was within the 30% D acceptance criteria for all project-specific analytes.

Manual integrations were performed on one or more target analytes in one or more of the ICAL standards to correct the peak and/or baseline integration.

ICAL 12/30/13 GC/MS YY: The %RSD for each target analyte was ≤ 30%. The ICV was within the 30% D acceptance criteria for all project-specific analytes.

Continuing Calibration Verification:

All project-specific analytes were within the 30% D acceptance criteria.

Tuning Reports:

All instrument tuning standards (BFB) were within acceptance criteria.

Sample and QC Data:

- *QC batch # D131228L01 on GC/MS YY:* (Associated with samples -1 through -9)

The method blank was non-detect and the LCS/LCSD were within acceptance criteria for all target analytes.

All surrogates and internal standards were within acceptance criteria.

Manual integrations were performed on one or more target analytes in one or more of the samples to correct the peak and/or baseline integration.

- *QC batch # D140102L01 on GC/MS YY:* (Associated with the reanalysis of samples -3 through -8)

The method blank was non-detect and the LCS/LCSD were within acceptance criteria for all target analytes.

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7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL: (714) 895-5494 • FAX: (714) 894-7501

All surrogates and internal standards were within acceptance criteria.

Manual integrations were performed on one or more target analytes in one or more of the samples to correct the peak and/or baseline integration.

Additional dilutions were performed to bring the target analytes within calibration range:

Sample -3: 2.5x (for Vinyl Chloride)
Sample -4: 2.5x (for Vinyl Chloride)
Sample -5: 4x (for c-1,2-Dichloroethene and t-1,2-Dichloroethene)
Sample -6: 10x (for c-1,2-Dichloroethene, t-1,2-Dichloroethene, and Trichloroethene)
Sample -7: 16x (for c-1,2-Dichloroethene and t-1,2-Dichloroethene)
Sample -7: 40x (for Vinyl Chloride)
Sample -8: 16x (for c-1,2-Dichloroethene and t-1,2-Dichloroethene)
Sample -8: 40x (for Vinyl Chloride)

- *QC batch # D140103L01 on GC/MS YY:* (Associated with the reanalysis of samples -5 and -6)

The method blank was non-detect and the LCS/LCSD were within acceptance criteria for all target analytes.

All surrogates and internal standards were within acceptance criteria.

Manual integrations were performed on one or more target analytes in one or more of the samples to correct the peak and/or baseline integration.

Additional dilutions were performed to bring the target analytes within calibration range:

Sample -5: 8x (for Vinyl Chloride)
Sample -6: 20x (for Vinyl Chloride)

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Calscience Environmental Laboratories, Inc.

Level III Data Package

CLIENT NAME:	**CKY, Incorporated**
PROJECT NAME:	**Seal Beach NWS**
WORK ORDER:	**13-12-1614**

ASTM D-1946 Fixed Gases (Air)

Initial Calibration Data

Sample Data

Quality Control Data

Continuing Calibration Data

Run Logs

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Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Initial Calibration Data

Return to Contents

GC 65 ASTM D-1946 FG/25.1 TCD
Multipoint Calibration – 131010IC
10/10/2013

	LVL	AREA	CONC (%)	RF	AVE RF	STD	RSD(%)
O2	1	1766.997	0.492	3591.46	3291.499	252.14	8
	2	6088.666	1.755	3469.33			
	3	11669.300	3.510	3324.59			
	6	60280.200	20.010	3012.50			
	7	122446.000	40.020	3059.62			
N2	1	2173.651	0.514	4228.89	3432.395	502.16	15
	2	18800.600	5.005	3756.36			
	3	35455.300	10.010	3541.99			
	4	61760.300	20.100	3072.65			
	6	226581.000	74.960	3022.69			
	8	298664.000	100.500	2971.78			
CH4	1	1341.383	0.495	2709.87	2678.966	96.13	4
	2	13082.900	5.070	2580.45			
	3	26090.000	10.140	2572.98			
	4	53355.500	19.300	2764.53			
	5	141117.000	51.000	2767.00			
CO	1	1499.753	0.511	2934.94	3078.806	198.63	6
	2	16116.900	4.990	3229.84			
	3	32621.100	9.980	3268.65			
	4	61094.200	21.200	2881.80			
CO2	1	2252.362	0.498	4522.82	4309.374	222.95	5
	2	22027.400	5.025	4383.56			
	3	44425.500	10.050	4420.45			
	4	84262.200	19.700	4277.27			
	5	193196.000	49.000	3942.78			

ICV		ADDED	REC	%D
	O2	4.01	3.997	0
	N2	69.5	69.288	0
	CH4	4.5	4.351	3
	CO	6.99	7.508	7
	CO2	15	16.000	7

ASTM	D-1946	METHOD	CRITERIA
ICV	20%		%D
DAILY CCV	20%		%D
ICAL	20%		RSD

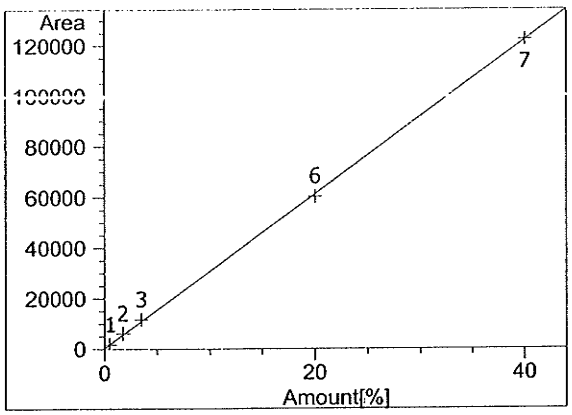
CONTROLLED COPY
Copy Number: 1
Copy Holder: GC 65
Issued By: 326
Date Issued: 10/15/13
This stamp appears in red ink on original copy.

Return to Contents

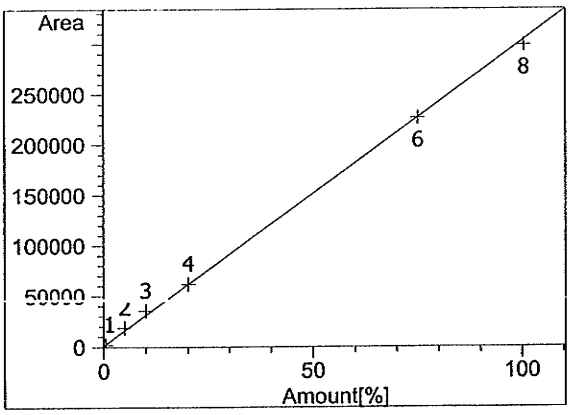
Peak Sum Table

No Entries in table

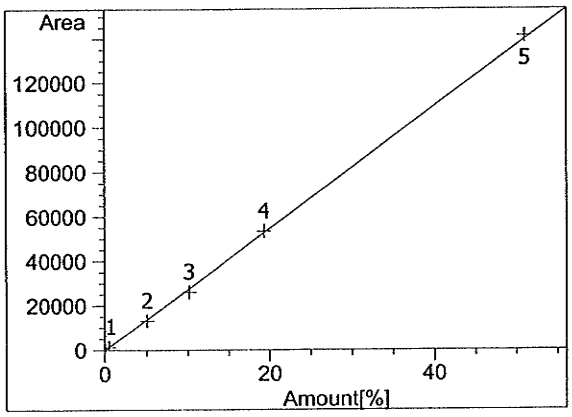
Calibration Curves



Oxygen + Argon at exp. RT: 2.636
TCD1 A, Front Signal
Correlation: 0.99972
Residual Std. Dev.: 663.96877
Formula: y = mx + b
m: 3046.39472
b: 347.38347
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.290211
Level 3 : 0.151423
Level 6 : 0.029313
Level 7 : 0.014431



Nitrogen at exp. RT: 3.219
TCD1 A, Front Signal
Correlation: 0.99901
Residual Std. Dev.: 3335.44758
Formula: y = mx + b
m: 3015.09614
b: 969.90658
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.115616
Level 3 : 0.061307
Level 4 : 0.035195
Level 6 : 0.009593
Level 8 : 0.007278



Methane at exp. RT: 5.826
TCD1 A, Front Signal
Correlation: 0.99961
Residual Std. Dev.: 1232.64377
Formula: y = mx + b
m: 2736.49959
b: -105.98094
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.10253
Level 3 : 0.051414
Level 4 : 0.02514
Level 5 : 0.009505

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Calibration Table

Calib. Data Modified : 10/11/2013 10:33:47 AM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.500 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.500 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Included
Weight : Linear (Resp)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: TCD1 A, Front Signal

RetTime [min]	Sig	Lvl	Amount [%]	Area	Amt/Area	Ref	Grp	Name
2.636	1	1	4.92000e-1	1766.99731	2.78438e-4			Oxygen + Argon
		2	1.75500	6088.66602	2.88240e-4			
		3	3.51000	1.16693e4	3.00789e-4			
		6	20.01000	6.02802e4	3.31950e-4			
		7	40.02000	1.22446e5	3.26838e-4			
3.219	1	1	5.14000e-1	2173.65088	2.36469e-4			Nitrogen
		2	5.00500	1.88006e4	2.66215e-4			
		3	10.01000	3.54553e4	2.82327e-4			
		4	20.10000	6.17603e4	3.25452e-4			
		6	74.96000	2.26581e5	3.30831e-4			
		8	100.50000	2.98664e5	3.36499e-4			
5.826	1	1	4.95000e-1	1341.38342	3.69022e-4			Methane
		2	5.07000	1.30829e4	3.87529e-4			
		3	10.14000	2.60900e4	3.88655e-4			
		4	19.30000	5.33555e4	3.61725e-4			
		5	51.00000	1.41117e5	3.61402e-4			
6.713	1	1	5.11000e-1	1499.75281	3.40723e-4			Carbon Monoxide
		2	4.99000	1.61169e4	3.09613e-4			
		3	9.98000	3.26211e4	3.05937e-4			
		4	21.20000	6.10942e4	3.47005e-4			
12.502	1	1	4.98000e-1	2252.36206	2.21101e-4			Carbon Dioxide
		2	5.02500	2.20274e4	2.28125e-4			
		3	10.05000	4.44255e4	2.26221e-4			
		4	19.70000	8.42622e4	2.33794e-4			
		5	49.00000	1.93196e5	2.53628e-4			

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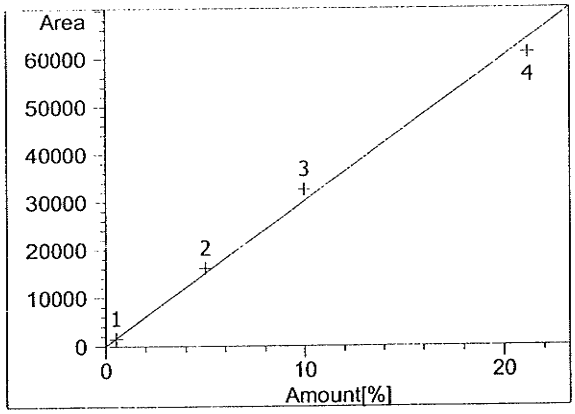
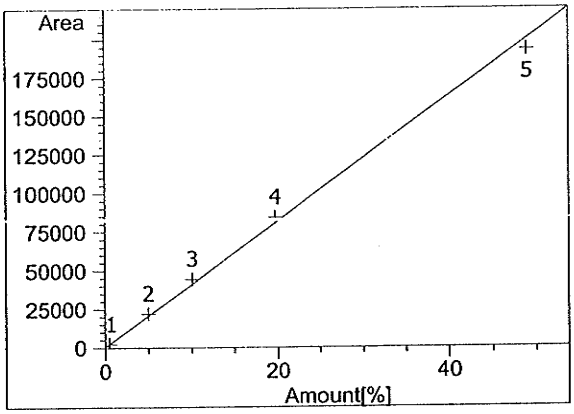


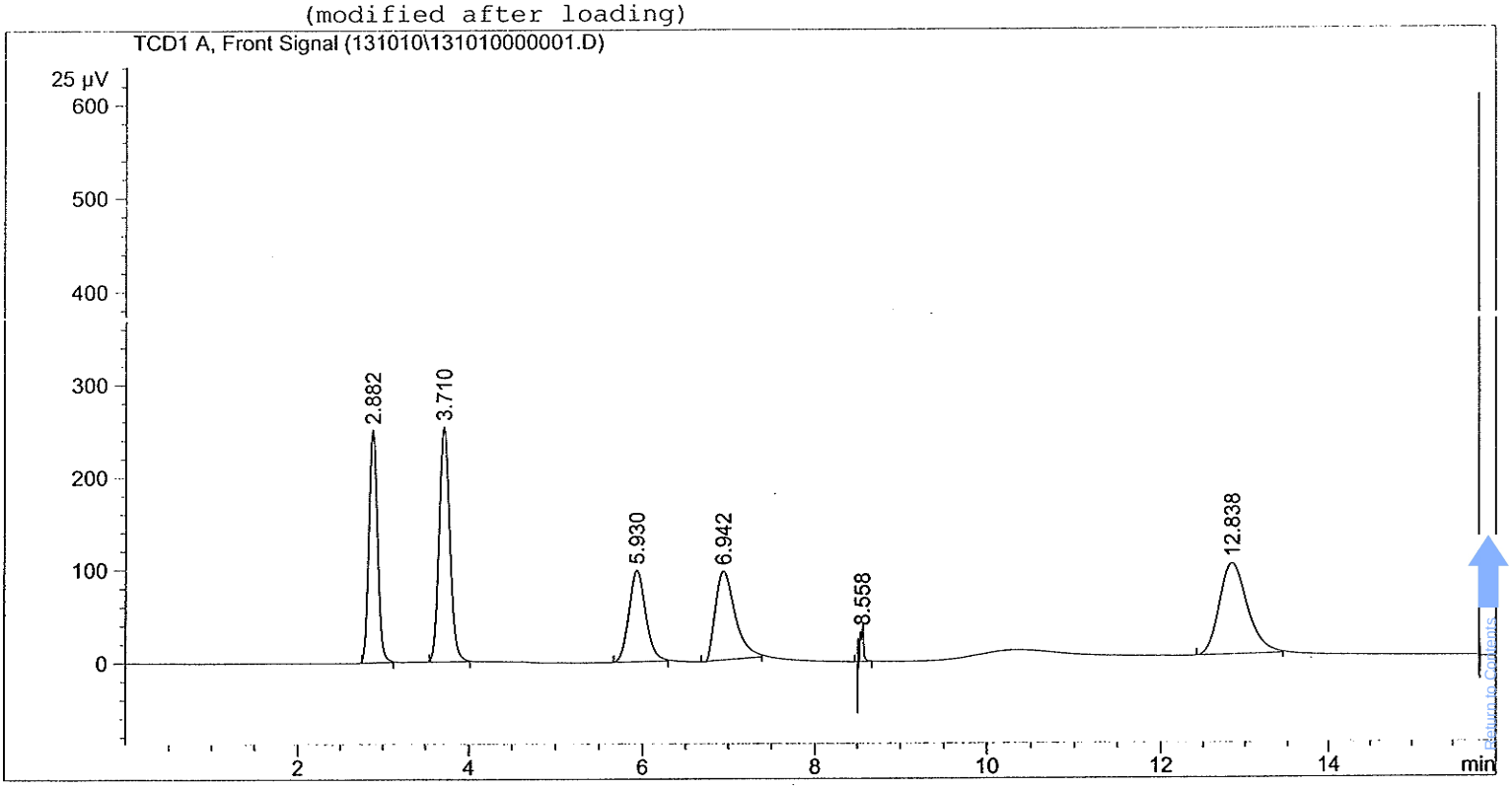
Carbon Monoxide at exp. RT: 6.713
TCD1 A, Front Signal
Correlation: 0.99792
Residual Std. Dev.: 2277.68481
Formula: y = mx + b
m: 3016.70149
b: 70.52941
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.093055
Level 3 : 0.045975
Level 4 : 0.024548



Carbon Dioxide at exp. RT: 12.502
TCD1 A, Front Signal
Correlation: 0.99886
Residual Std. Dev.: 4214.97394
Formula: y = mx + b
m: 4074.89191
b: 411.88526
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.102253
Level 3 : 0.0507
Level 4 : 0.02673
Level 5 : 0.011658

==========

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 10:50:36 AM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 10:44:41 AM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:34:23 AM by 884
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.882	BB	1766.99731	2.63723e-4	4.65998e-1		Oxygen + Argon
3.710	BB	2173.65088	1.83672e-4	3.99239e-1		Nitrogen
5.930	BB	1341.38342	3.94303e-4	5.28911e-1		Methane
6.942	BB	1499.75281	3.15899e-4	4.73770e-1		Carbon Monoxide
12.838	BB	2252.36206	2.00528e-4	4.51663e-1		Carbon Dioxide

Totals : 2.31958

*** End of Report ***

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 11:40:30 AM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 11:35:09 AM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:05:14 AM by 878
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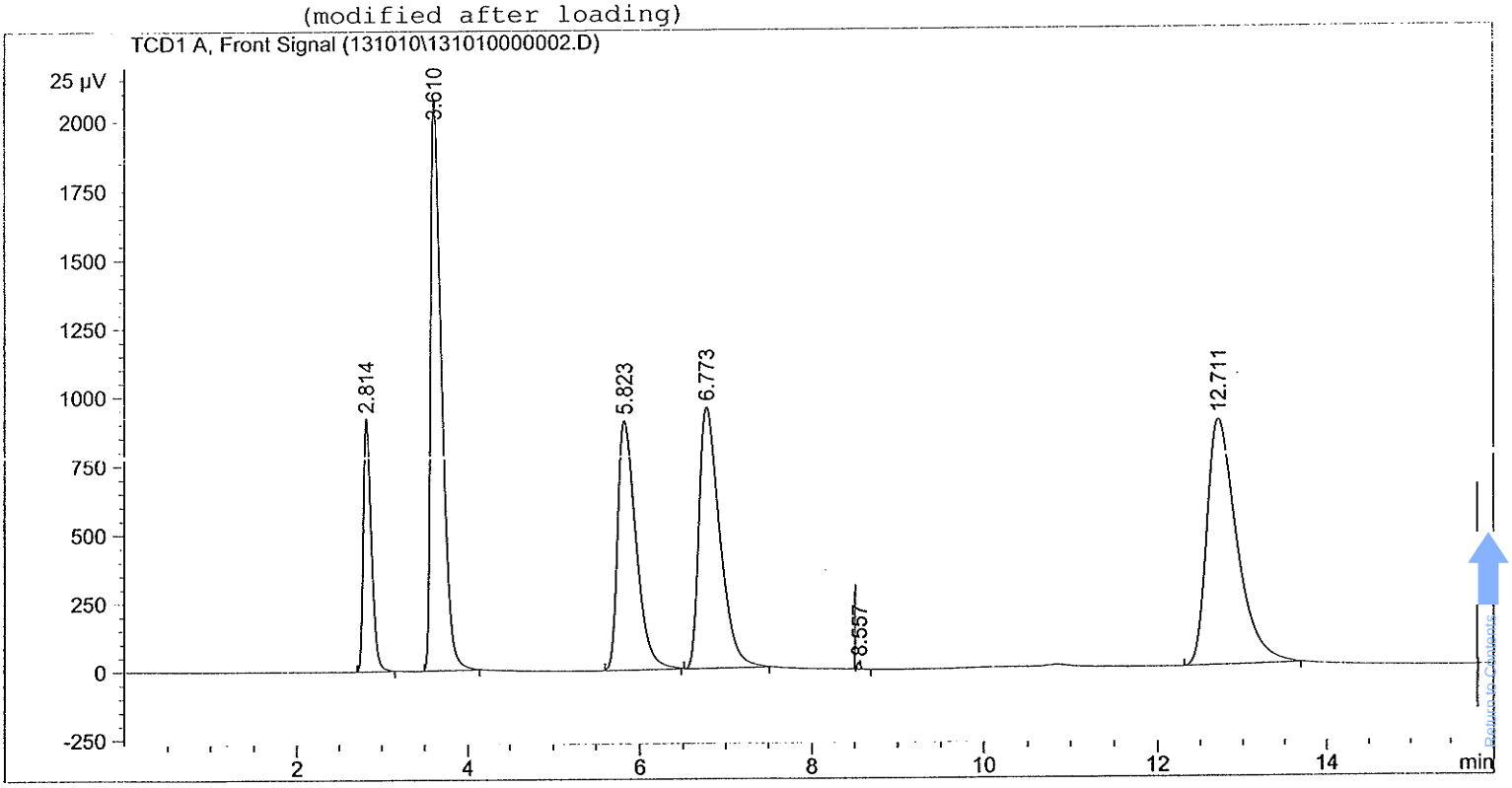

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, October 10, 2013 10:08:57 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.814	BB	6088.66602	3.11059e-4	1.89393		Oxygen + Argon
3.610	BB	1.88006e4	3.14554e-4	5.91381		Nitrogen
5.823	BB	1.30829e4	3.68391e-4	4.81961		Methane
6.773	BB	1.61169e4	3.30037e-4	5.31919		Carbon Monoxide
12.711	BB	2.20274e4	2.40817e-4	5.30456		Carbon Dioxide

Totals : 23.25111

*** End of Report ***

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 12:03:21 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 11:56:30 AM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:52:23 AM by 884
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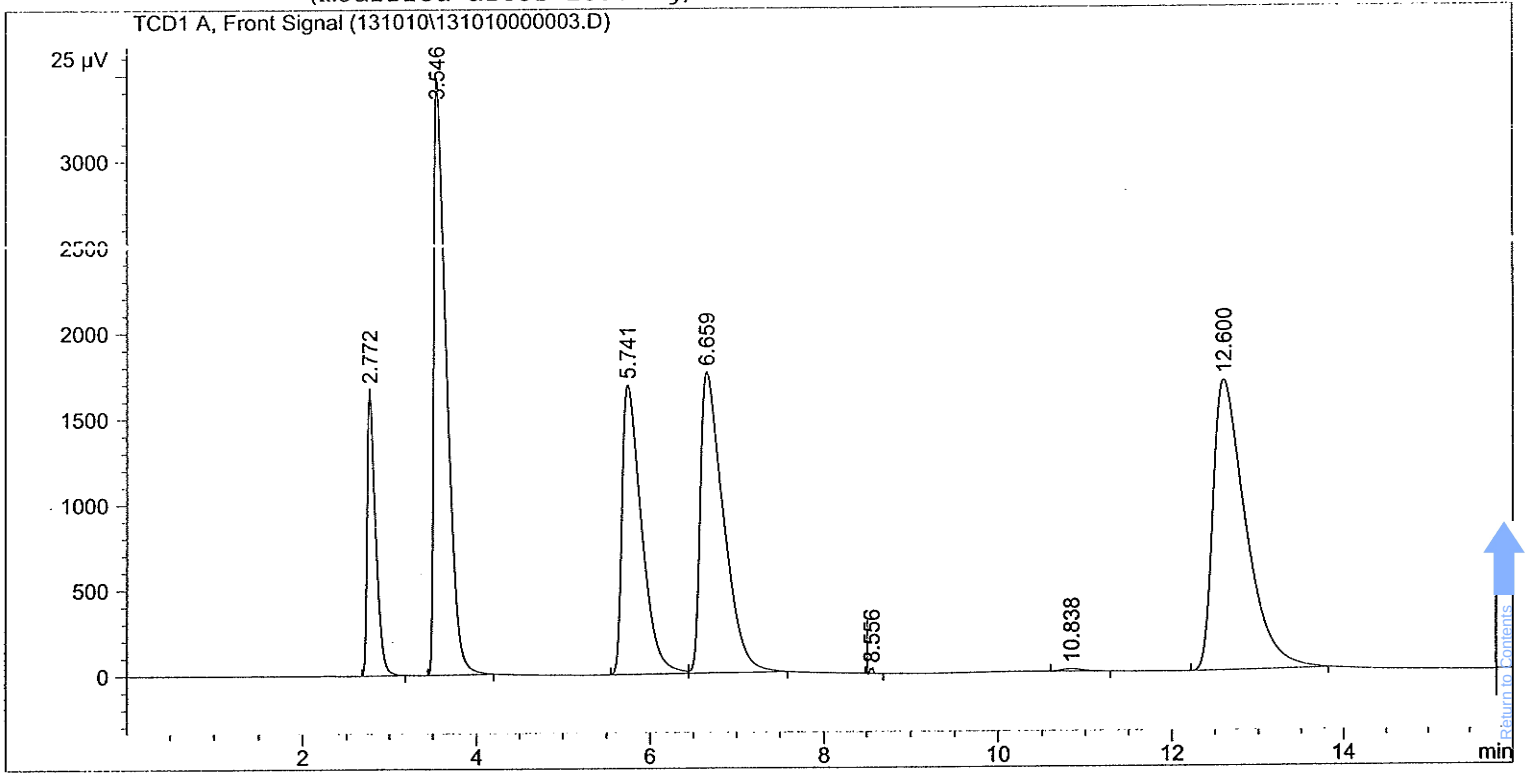

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.772	BB	1.16693e4	3.18485e-4	3.71650		Oxygen + Argon
3.546	BB	3.54553e4	3.22591e-4	11.43757		Nitrogen
5.741	BV	2.60900e4	3.66915e-4	9.57281		Methane
6.659	VB	3.26211e4	3.30771e-4	10.79010		Carbon Monoxide
12.600	BB	4.44255e4	2.43130e-4	10.80119		Carbon Dioxide

Totals : 46.31817

*** End of Report ***

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 12:45:30 PM
Inj Volume : Manually

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Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:54:13 AM by 884
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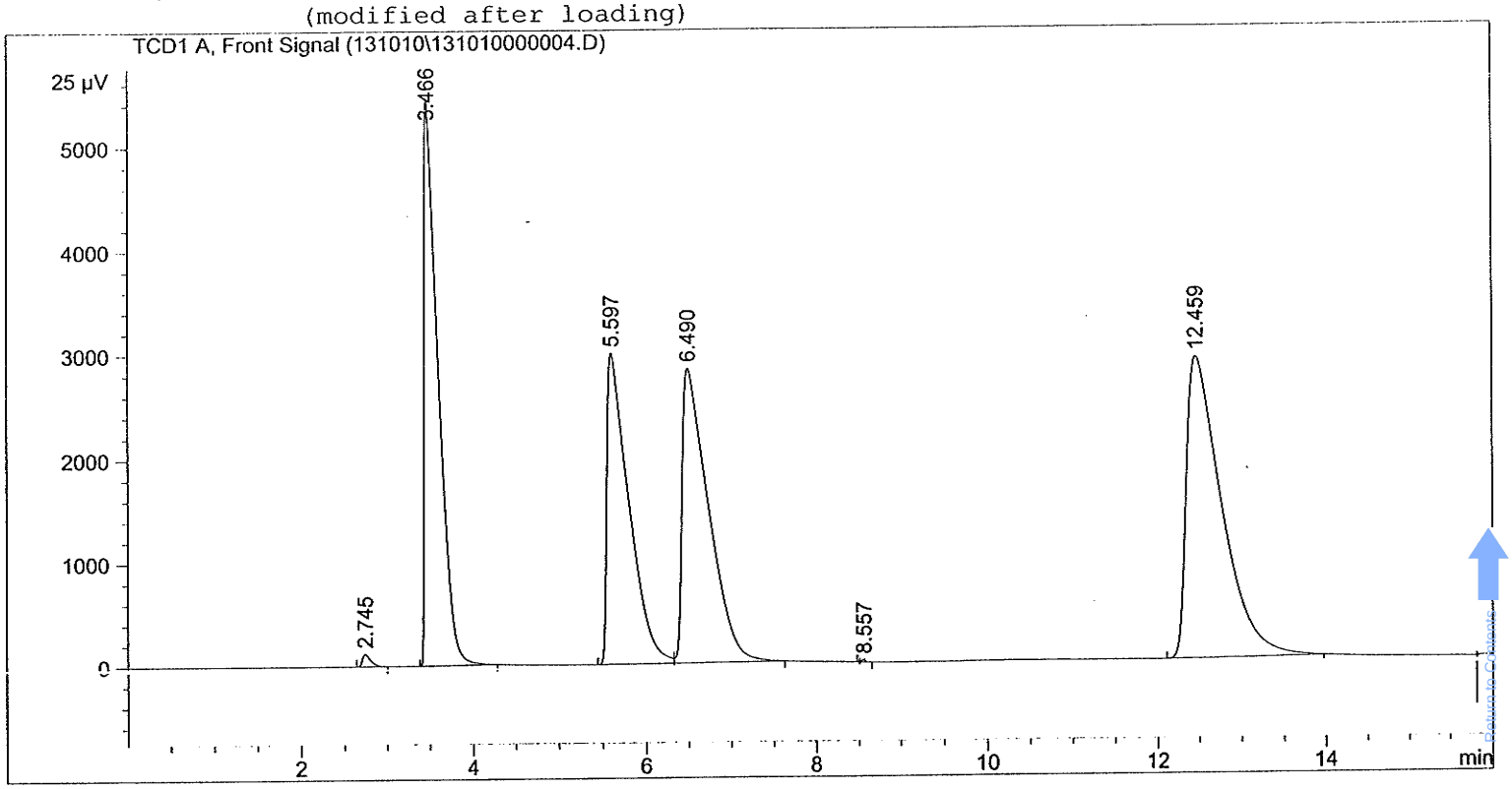

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.745	BB	825.92249	1.90192e-4	1.57084e-1		Oxygen + Argon
3.466	BB S	6.17603e4	3.26456e-4	20.16201		Nitrogen
5.597	BV	5.33555e4	3.66156e-4	19.53645		Methane
6.490	VB	6.10942e4	3.31105e-4	20.22860		Carbon Monoxide
12.459	BB	8.42622e4	2.44206e-4	20.57731		Carbon Dioxide

Totals : 80.66145

*** End of Report ***

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Inj Volume : Manually
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Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:55:54 AM by 884
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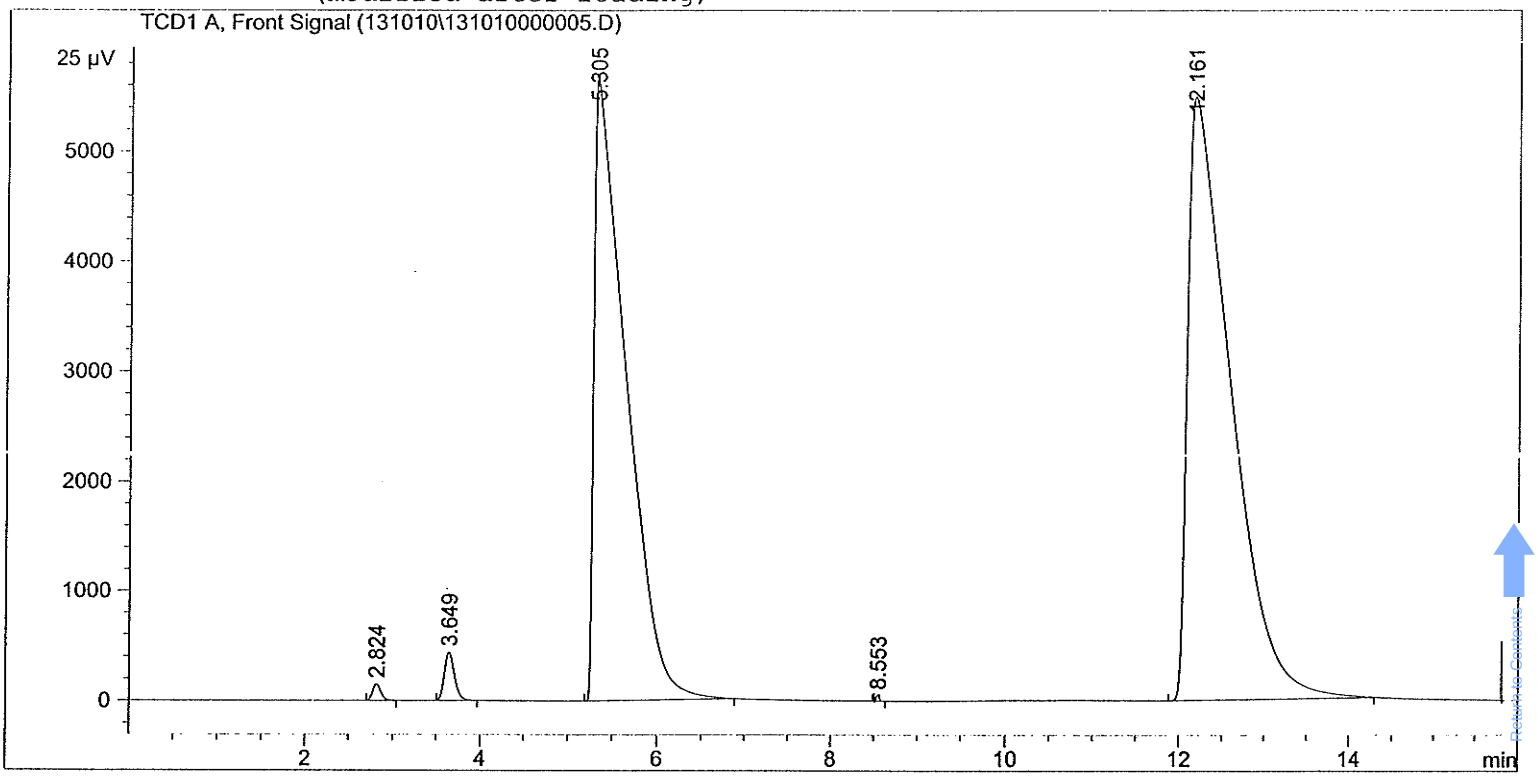

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.824	BB	960.64563	2.09554e-4	2.01308e-1		Oxygen + Argon
3.649	BB	3506.82520	2.39934e-4	8.41406e-1		Nitrogen
5.305	BB S	1.41117e5	3.65705e-4	51.60706		Methane
6.659		-	-	-		Carbon Monoxide
12.161	BB	1.93196e5	2.44882e-4	47.31013		Carbon Dioxide

Totals : 99.95991

1 Warnings or Errors :

==========

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Injection Date : 10/10/2013 2:04:21 PM
Inj Volume : Manually

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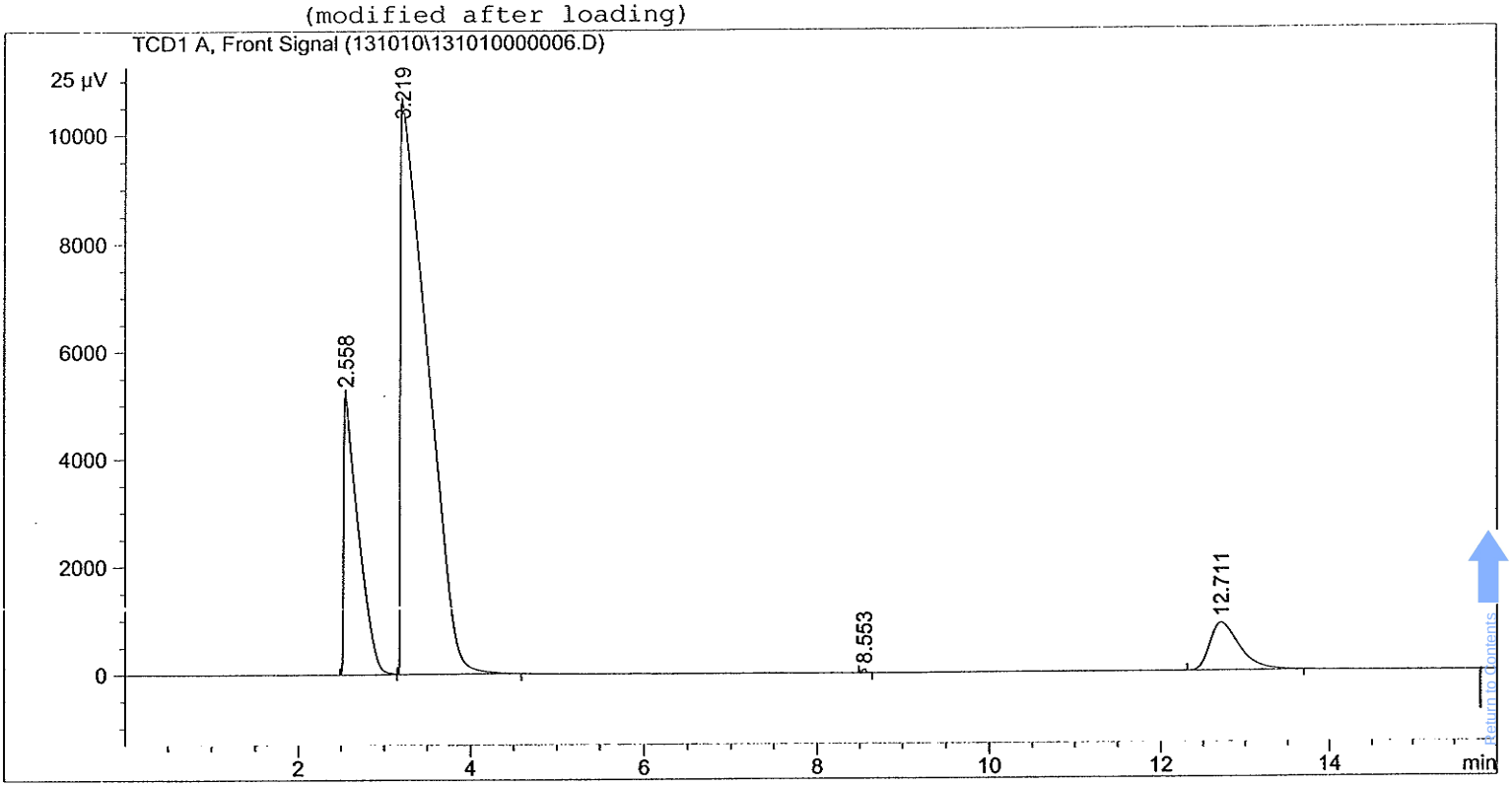

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.558	BV S	6.02802e4	3.26365e-4	19.67336		Oxygen + Argon
3.219	VB S	2.26581e5	3.30245e-4	74.82733		Nitrogen
5.305		-	-	-		Methane
6.659		-	-	-		Carbon Monoxide
12.711	BB	2.18102e4	2.40771e-4	5.25125		Carbon Dioxide

Totals : 99.75194

1 Warnings or Errors :

==========

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Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 2:51:41 PM
Inj Volume : Manually
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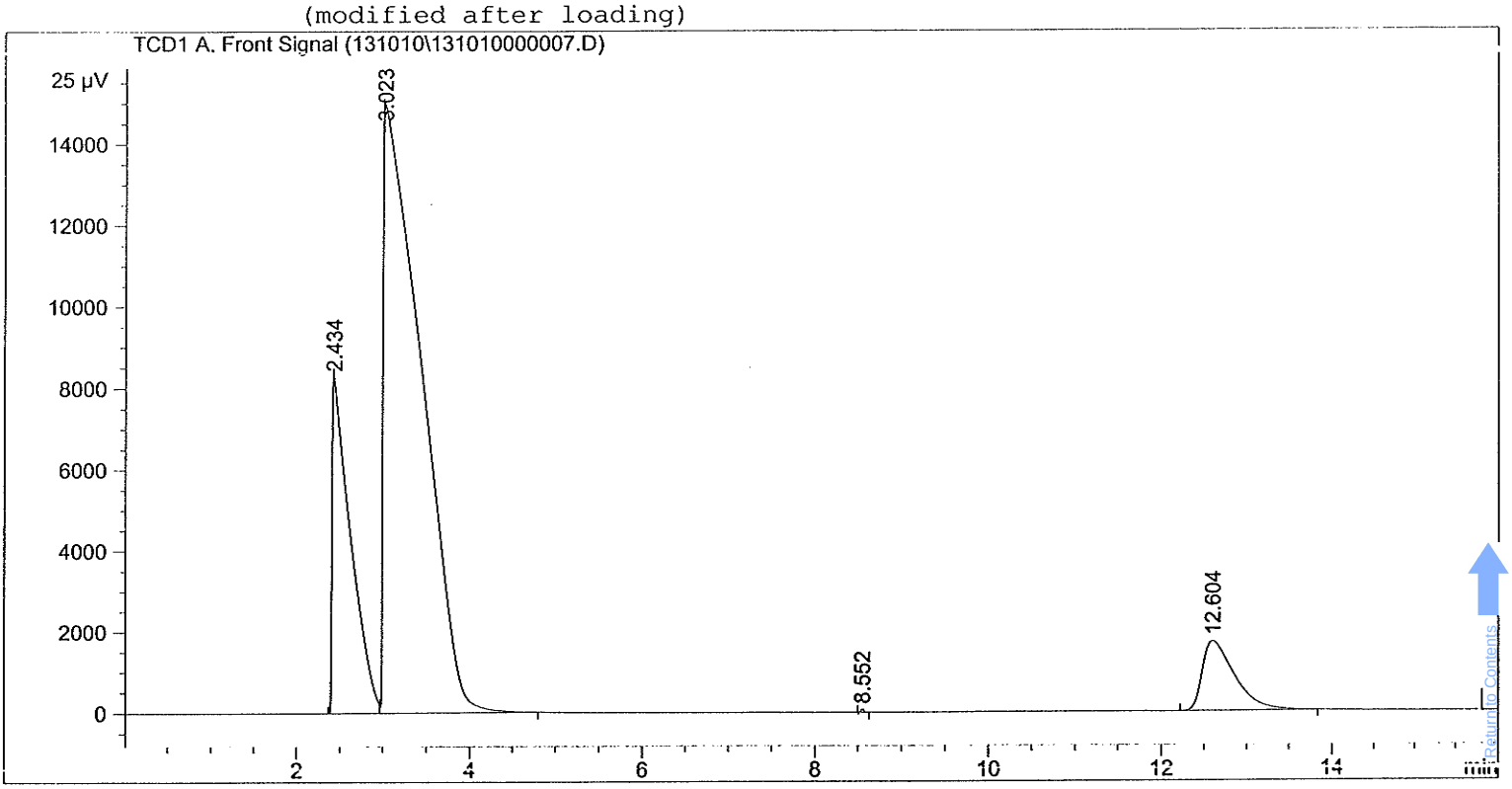
Last changed : 10/10/2013 2:20:23 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:56:51 AM by 884
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.434	BV S	1.22446e5	3.27326e-4	40.07966		Oxygen + Argon
3.023	VB S	4.49436e5	3.30949e-4	148.74014		Nitrogen
5.305		-	-	-		Methane
6.659		-	-	-		Carbon Monoxide
12.604	BB	4.52449e4	2.43171e-4	11.00225		Carbon Dioxide

Totals : 199.82204

1 Warnings or Errors :

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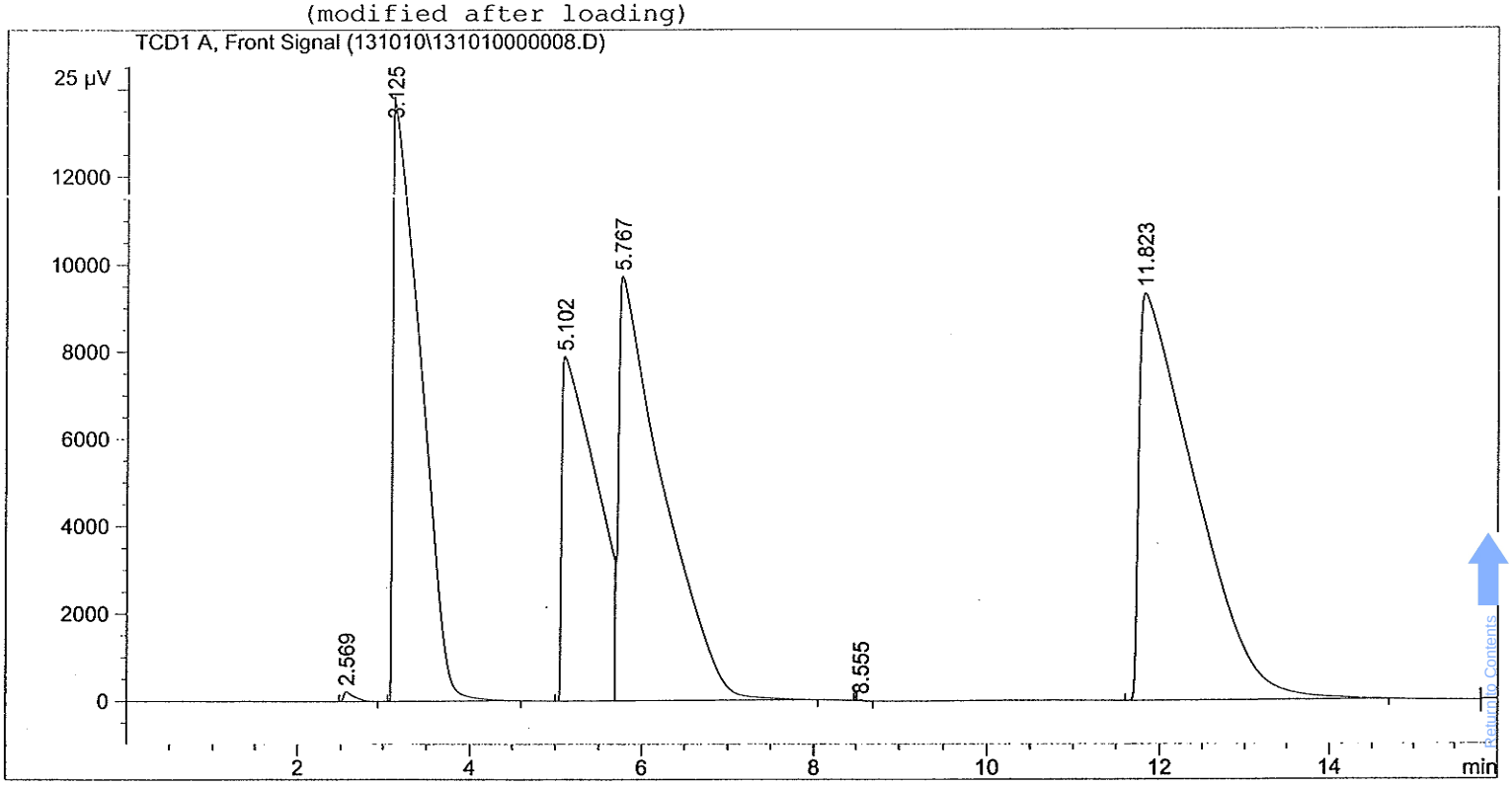
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 3:52:59 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 3:50:05 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:58:34 AM by 884
(modified after loading)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

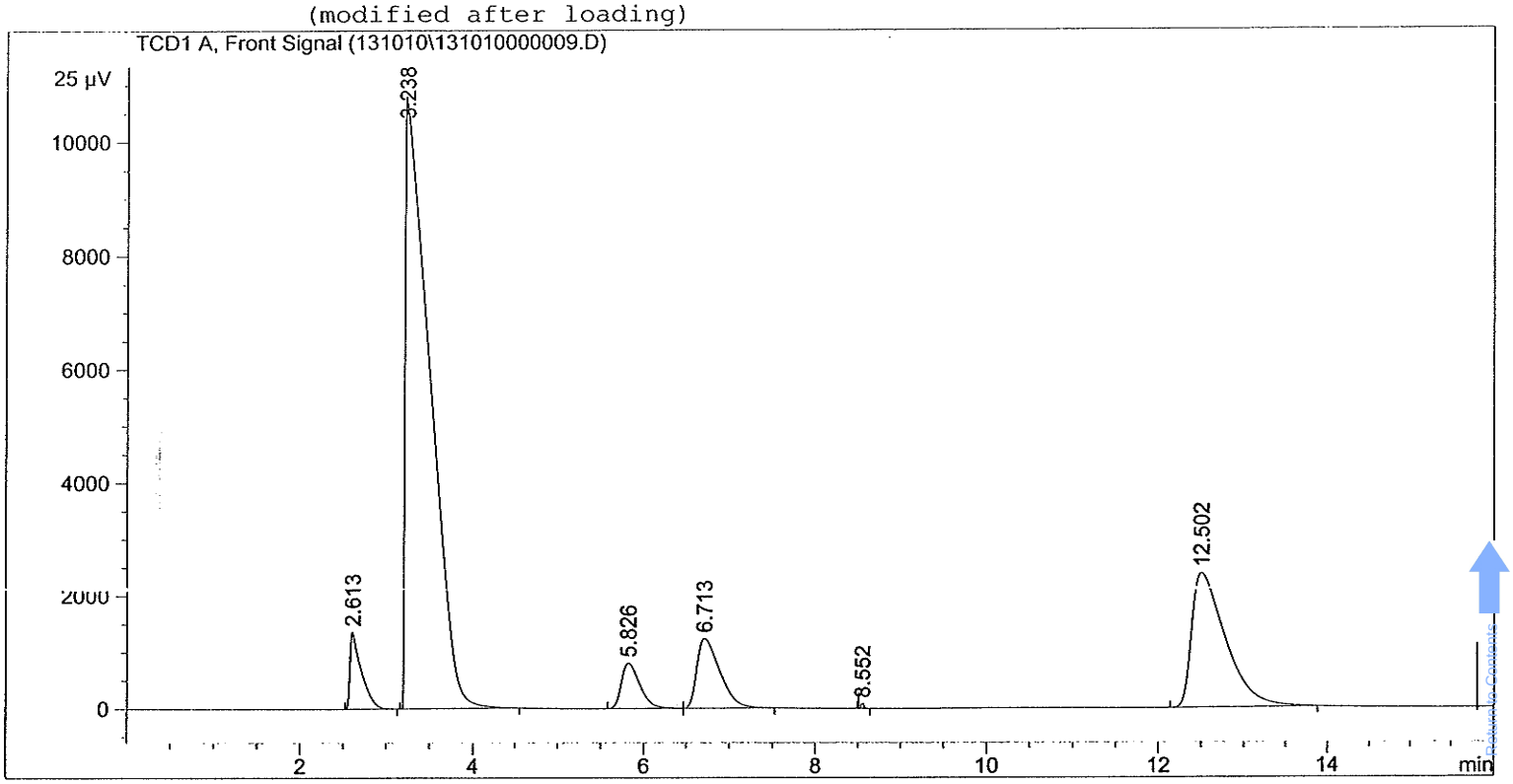
Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.569	BB	1891.33752	2.67966e-4	5.06814e-1		Oxygen + Argon
3.125	BB S	2.98664e5	3.30587e-4	98.73444		Nitrogen
5.102	BV S	2.16374e5	3.65609e-4	79.10835		Methane
5.767	VB S	3.41974e5	3.31420e-4	113.33676		Carbon Monoxide
11.823	BB S	4.22959e5	2.45166e-4	103.69540		Carbon Dioxide

Totals : 395.38176

1 Warnings or Errors :

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 5:59:45 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 5:19:30 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 11:00:02 AM by 884
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.613	BB	1.25252e4	3.19153e-4	3.99745		Oxygen + Argon
3.238	BB S	2.09879e5	3.30132e-4	69.28767		Nitrogen
5.826	BB	1.18017e4	3.68712e-4	4.35143		Methane
6.713	BB	2.27212e4	3.30459e-4	7.50844		Carbon Monoxide
12.502	BB	6.56096e4	2.43865e-4	15.99985		Carbon Dioxide

Totals : 101.14485

*** End of Report ***

Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Sample Data

Return to Contents

RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 13:19
ANALYST: 884
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000009.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:24
EXTRACTION: N/A
D/T EXTRACTED:

1 **CLIENT SAMPLE NUMBER: VW-40-04**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	0.000	1	ND	0.155	0.255	0.510	1	%v	
Carbon Dioxide	3.30	1	3.30	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	19.5	1	19.5	0.205	0.250	0.500	1	%v	
Nitrogen	77.2	1	77.2	0.477	0.497	0.994	1	%v	

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RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 13:57
ANALYST: 878
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000010.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:24
EXTRACTION: N/A
D/T EXTRACTED:

2 **CLIENT SAMPLE NUMBER:** **MW-40-32**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	0.000	1	ND	0.155	0.255	0.510	1	%v	
Carbon Dioxide	10.6	1	10.6	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	6.93	1	6.93	0.205	0.250	0.500	1	%v	
Nitrogen	82.4	1	82.4	0.477	0.497	0.994	1	%v	

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RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 14:34
ANALYST: 878
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000011.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:24
EXTRACTION: N/A
D/T EXTRACTED:

3 **CLIENT SAMPLE NUMBER: VW-40-06**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	19.3	1	19.3	0.155	0.255	0.510	1	%v	
Carbon Dioxide	25.6	1	25.6	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	1.65	1	1.65	0.205	0.250	0.500	1	%v	
Nitrogen	53.4	1	53.4	0.477	0.497	0.994	1	%v	

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RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 14:55
ANALYST: 884
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000012.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:24
EXTRACTION: N/A
D/T EXTRACTED:

 # 4 **CLIENT SAMPLE NUMBER: IW-03**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	20.7	1	20.7	0.155	0.255	0.510	1	%v	
Carbon Dioxide	15.4	1	15.4	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	2.91	1	2.91	0.205	0.250	0.500	1	%v	
Nitrogen	60.9	1	60.9	0.477	0.497	0.994	1	%v	

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RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 15:22
ANALYST: 878
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000013.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:24
EXTRACTION: N/A
D/T EXTRACTED:

 # 5 **CLIENT SAMPLE NUMBER: IW-01**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	3.71	1	3.71	0.155	0.255	0.510	1	%v	
Carbon Dioxide	14.9	1	14.9	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	2.22	1	2.22	0.205	0.250	0.500	1	%v	
Nitrogen	79.2	1	79.2	0.477	0.497	0.994	1	%v	

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RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 15:42
ANALYST: 896
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000014.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:24
EXTRACTION: N/A
D/T EXTRACTED:

 # 6 **CLIENT SAMPLE NUMBER: VW-40-03**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	51.3	1	51.3	0.155	0.255	0.510	1	%v	
Carbon Dioxide	24.1	1	24.1	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	1.70	1	1.70	0.205	0.250	0.500	1	%v	
Nitrogen	23.0	1	23.0	0.477	0.497	0.994	1	%v	

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RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 16:01
ANALYST: 884
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000015.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:24
EXTRACTION: N/A
D/T EXTRACTED:

 # 7 **CLIENT SAMPLE NUMBER: VW-40-02**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	31.9	1	31.9	0.155	0.255	0.510	1	%v	
Carbon Dioxide	15.9	1	15.9	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	2.89	1	2.89	0.205	0.250	0.500	1	%v	
Nitrogen	49.3	1	49.3	0.477	0.497	0.994	1	%v	

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RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 16:26
ANALYST: 896
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000016.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:24
EXTRACTION: N/A
D/T EXTRACTED:

 # 8 **CLIENT SAMPLE NUMBER: DUP-1**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	33.2	1	33.2	0.155	0.255	0.510	1	%v	
Carbon Dioxide	16.6	1	16.6	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	2.09	1	2.09	0.205	0.250	0.500	1	%v	
Nitrogen	48.2	1	48.2	0.477	0.497	0.994	1	%v	

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RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 16:59
ANALYST: 896
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000017.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:24
EXTRACTION: N/A
D/T EXTRACTED:

 # 9 **CLIENT SAMPLE NUMBER: FB-1**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	0.000	1	ND	0.155	0.255	0.510	1	%v	
Carbon Dioxide	0.000	1	ND	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	21.7	1	21.7	0.205	0.250	0.500	1	%v	
Nitrogen	78.3	1	78.3	0.477	0.497	0.994	1	%v	

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Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Quality Control Data

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: ASTM D-1946

MB Sample ID: 099-14-535-8
MB Batch ID: 131220L02
Instrument: GC 65
Matrix: Air
Analyst: 888
D/T Analyzed: 12/20/2013 11:54
Data File: Y:\GC_54_65\2\DATA\2013\131220\131220000005.D\Report.TXT

Reviewed By: 794
D/T Reviewed: 12/31/2013 15:56
Extraction: N/A
D/T Extracted:

Work Order #: 13-12-1614

Sample#	Client Sample ID	D/T Analyzed	Data File
1	VW-40-04	12/20/2013 13:19	Y:\GC_54_65\2\DATA\2013\131220\131220000009.D\Report.TXT
2	MW-40-32	12/20/2013 13:57	Y:\GC_54_65\2\DATA\2013\131220\131220000010.D\Report.TXT
3	VW-40-06	12/20/2013 14:34	Y:\GC_54_65\2\DATA\2013\131220\131220000011.D\Report.TXT
4	IW-03	12/20/2013 14:55	Y:\GC_54_65\2\DATA\2013\131220\131220000012.D\Report.TXT
5	IW-01	12/20/2013 15:22	Y:\GC_54_65\2\DATA\2013\131220\131220000013.D\Report.TXT
6	VW-40-03	12/20/2013 15:42	Y:\GC_54_65\2\DATA\2013\131220\131220000014.D\Report.TXT
7	VW-40-02	12/20/2013 16:01	Y:\GC_54_65\2\DATA\2013\131220\131220000015.D\Report.TXT
8	DUP-1	12/20/2013 16:26	Y:\GC_54_65\2\DATA\2013\131220\131220000016.D\Report.TXT
9	FB-1	12/20/2013 16:59	Y:\GC_54_65\2\DATA\2013\131220\131220000017.D\Report.TXT

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RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 099-14-535
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 11:54
ANALYST: 888
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000005.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 15:56
EXTRACTION : N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT:

COMPOUND	ON COL CON	DF	CONC	RL	PF	UNITS	QUAL
Methane	0.000	1	ND	0.510	1	%v	
Carbon Dioxide	0.000	1	ND	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.500	1	%v	
Oxygen + Argon	0.000	1	ND	0.500	1	%v	
Nitrogen	0.000	1	ND	0.994	1	%v	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: ASTM D-1946

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	12/31/2013 15:56	LCS D/T ANALYZED:	12/20/2013 10:48
LCS/LCSD BATCH:	131220L02	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/20/2013 11:26
LCS/LCSD SAMPLE I	**099-14-535-8**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC 65
ANALYST:	896	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC 65
REVIEWED BY:	794				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Methane	4.500	4.423	98	4.353	97	80-120	73-127	2	0-30	PASS	
Carbon Dioxide	15.00	16.05	107	15.94	106	80-120	73-127	1	0-30	PASS	
Carbon Monoxide	6.990	7.688	110	7.547	108	80-120	73-127	2	0-30	PASS	
Oxygen + Argon	4.010	4.094	102	4.013	100	80-120	73-127	2	0-30	PASS	
Nitrogen	69.50	70.57	102	69.37	100	80-120	73-127	2	0-30	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	Report.TXT	Y:\GC_54_65\2\DATA\2013\131220\131220000003.D\
LCSD	Report.TXT	Y:\GC_54_65\2\DATA\2013\131220\131220000004.D\

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Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Continuing Calibration Data

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ASTM D-1946 CALIBRATION CHECK

Work Order Number: 13-12-1614

Instrument ID: GC 65

Batch Number (LCS/MS/SA): 131220L01/L02

Analyst: 888 Date 12/21/13

QC Review: 794 Date 12/31/13

Date Analyzed: 12/~~21~~ 20/13 1/14/14 TJG

Daily Calibration Check

Analyte	Daily RF ($\times 10^{-3}$)	Ave RF ($\times 10^{-3}$)	% D	Control Limit
Oxygen (O_2) + Argon (Ar) $\frac{11055.7}{3.51}$	= 3.150	3.29	4	0 – 20
Nitrogen (N_2) $\frac{33135.4}{10.01}$	= 3.310	3.43	3	0 – 20
Methane (CH_4) $\frac{26294.5}{10.14}$	= 2.593	2.68	3	0 – 20
Carbon Monoxide (CO) $\frac{33030.3}{9.98}$	= 3.310	3.08	7	0 – 20
Carbon Dioxide (CO_2) $\frac{44774}{10.05}$	= 4.455	4.31	3	0 – 20

Analyst's Comments:

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```
==================================================================
Acq. Operator    : 896
Acq. Instrument  : GC 65                          Location : Vial 1
Injection Date   : 12/20/2013 10:26:53 AM
                                                Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed     : 12/20/2013 10:15:12 AM by 896
Analysis Method  : C:\CHEM32\1\METHODS\131010.M
Last changed     : 12/20/2013 10:47:10 AM by 896
                   (modified after loading)
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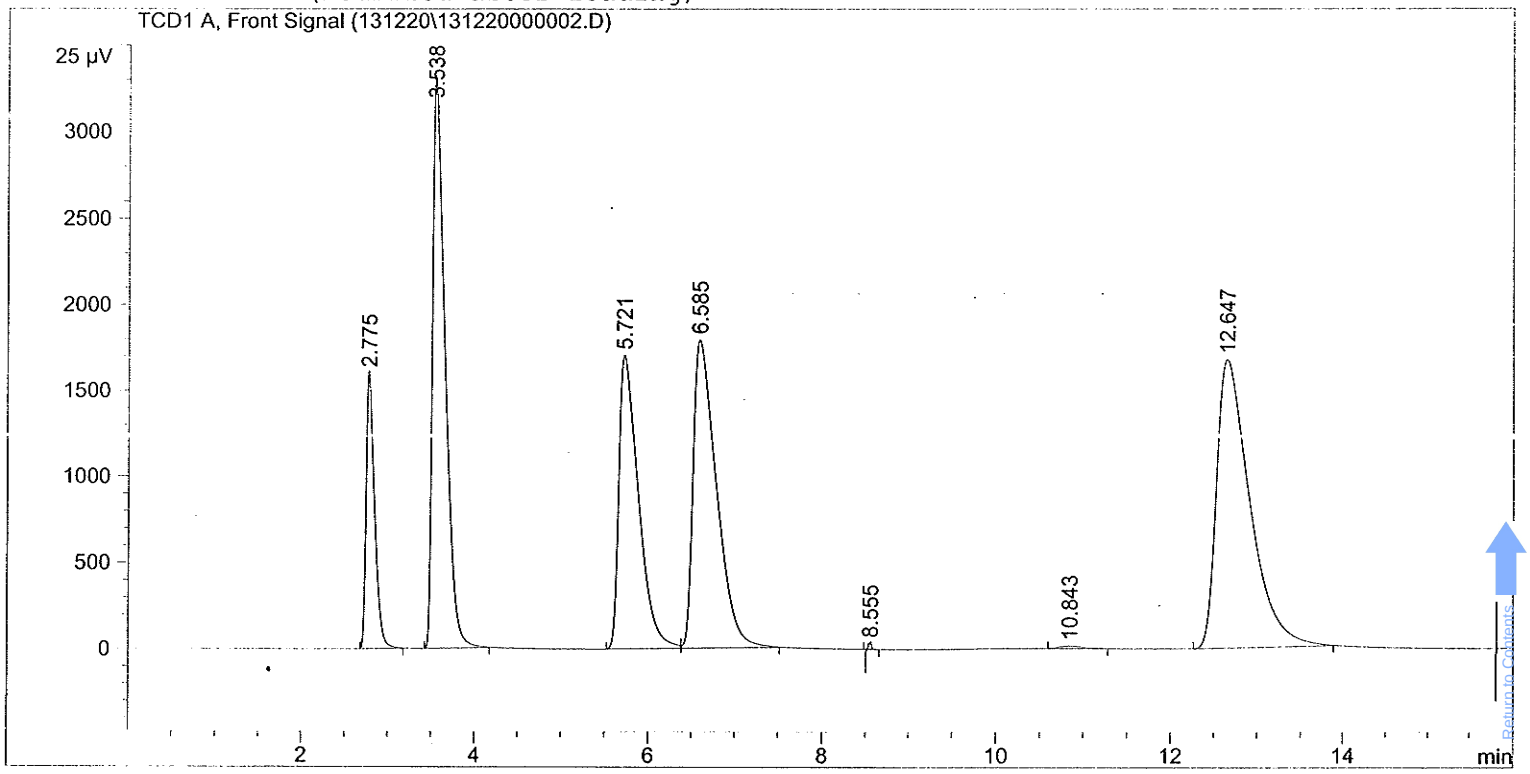


```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      Friday, December 20, 2013 10:24:18 AM
Multiplier             :      1.0000
Dilution               :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal
```

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.775	BB	1.10557e4	3.17943e-4	3.51507		Oxygen + Argon
3.538	BB	3.31354e4	3.21956e-4	10.66814		Nitrogen
5.721	BV	2.62945e4	3.66903e-4	9.64754		Methane
6.585	VB	3.30303e4	3.30780e-4	10.92576		Carbon Monoxide
12.647	BB	4.47740e4	2.43148e-4	10.88671		Carbon Dioxide

Totals : 45.64321

```
==================================================================
                      *** End of Report ***
```

DOD Ending CCV

ASTM D-1946 CALIBRATION CHECK

Work Order Number: 13-12-1614

Instrument ID: GC 65

Batch Number (LCS/MS/SA): 131220L01/L02

Analyst: 884 Date 12/23/13

QC Review: 794 Date 12/31/13

Date Analyzed: 12/20/13

Daily Calibration Check

Analyte	Daily RF ($\times 10^{-3}$)	Ave RF ($\times 10^{-3}$)	% D	Control Limit
Oxygen (O_2) + Argon (Ar)	11086.1 / 3.51 = 3.158	3.29	4	0 – 20
Nitrogen (N_2)	33310.9 / 10.01 = 3.328	3.43	3	0 – 20
Methane (CH_4)	26120.9 / 10.14 = 2.576	2.68	4	0 – 20
Carbon Monoxide (CO)	32792.9 / 9.98 = 3.286	3.08	7	0 – 20
Carbon Dioxide (CO_2)	44557.2 / 10.05 = 4.434	4.31	3	0 – 20

Analyst's Comments:

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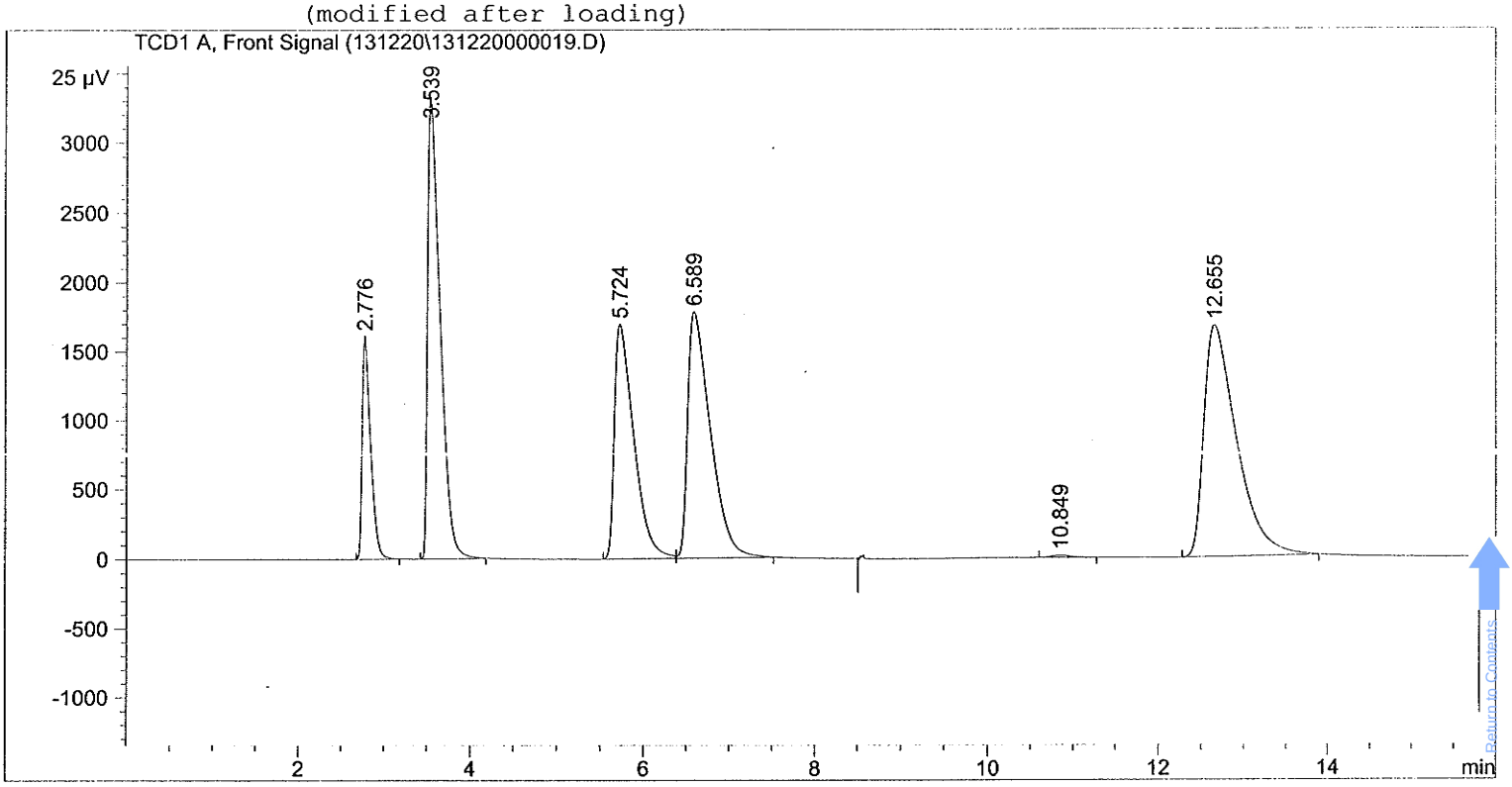
Acq. Operator : 888
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 12/20/2013 5:42:54 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 12/20/2013 5:39:26 PM by 896
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 12/20/2013 6:04:07 PM by 878
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, December 20, 2013 5:41:39 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.776	BB	1.10861e4	3.17971e-4	3.52506		Oxygen + Argon
3.539	BB	3.33109e4	3.22007e-4	10.72636		Nitrogen
5.724	BV	2.61209e4	3.66913e-4	9.58408		Methane
6.589	VB	3.27929e4	3.30775e-4	10.84707		Carbon Monoxide
12.655	BB	4.45572e4	2.43137e-4	10.83350		Carbon Dioxide

Totals : 45.51606

*** End of Report ***

Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Run Logs

Return to Contents

INSTRUMENT LOGBOOK

Calscience Environmental Laboratories, Inc.

Date Loaded	Pos	Directory	Data File	CEL ID #	Mtx	Amount Loaded	pH <2	Lot # IS/SS	Lot # Cal. Std.	By	Comments
10/9/13	NA	131009	131009000017	13-10-0633-2A	AIR	1	NA	NA	NA	888	confirmation
↓	↓	↓	↓ 18	CCV 3.5%/10%	↓	↓	↓	↓	A01-21-22	↓	
10/10/13	NA	131010	131010000001	ICAL#1 0.5%	AIR	1mL	NA	NA	A01-22-22	878	
			2	ICAL#2 1.75%/5%		500uL			A01-27-10		
			3	ICAL#3 3.5%/10%		1mL			A01-27-10		
			4	ICAL#4 20%					A01-22-25		
			5	ICAL#5 50%					A01-22-24		
			6	ICAL#6 20/75%					A01-23-11		
			7	ICAL#7 40% O_2		2mL			A01-23-11		
			8	ICAL#8 100% N2		5mL			A01-22-25		
↓	↓	↓	↓ 9	ICV 4/7/15%	↓	1mL	✓	✓	A01-30-11	✓	

INSTRUMENT LOGBOOK

Calscience Environmental Laboratories, Inc.

Date Loaded	Pos	Directory	Data File	CEL ID #	Mtx	Amount Loaded	pH <2	Lot # IS/SS	Lot # Cal. Std.	By	Comments
12/18/13	NA	131218	131218000005	MB	AIR	1	NA	NA	NA	896	
			6	13-12-1350-2A							
			7	-1A						888	
			8	-1393-1A							
			9	-2A							
			10	CCV 3.5%/10%					A01-27-10		
12/19/13	NA	131219	131219000001	LAB AIR	AIR	1	NA	NA	NA	896	
			2	CCV 3.5%/10%					A01-27-10		
			3	LCS 4/7/15%					A01-30-11		
			4	LCSD 4/7/15%						888	
			5	MB					NA		
			6	13-12-1453-1A							
			7	-2A							
			8	-3A							
			9	-4A							
			10	-5A							
			11	CCV 3.5%/10%					A01-27-10		
			12	13-12-1566-3A					NA		
			13	1559-1A							
			14	CCV 3.5%/10%					A01-27-10		
12/20/13	NA	131220	131220000001	LAB AIR	AIR	1	NA	NA	NA	896	

INSTRUMENT LOGBOOK

Calscience Environmental Laboratories, Inc.

Date Loaded	Pos	Directory	Data File	CEL ID #	Mtx	Amount Loaded	pH <2	Lot # IS/SS	Lot # Cal. Std.	By	Comments
12/20/13	NA	131220	131220000002	✓CCV 3.5%/10%	AIR	1	NA	NA	A01-27-10	896	
			3	✓LCS 4/7/15%					A01-30-11		
			4	✓LCSD 4/7/15%						888	
			5	✓MB					NA		
			6	13-12-1615-1A							
			7	-1635-1A							
			8	-2A							
			9	✓-1614-1A						884	
			10	✓-2A						878	
			11	✓-3A							
			12	✓-4A						884	
			13	✓-5A						878	
			14	✓6A						896	
			15	✓-7A						884	
			16	✓8A						896	
			17	✓9A							
			18	1691-1A							
			19	✓CCV 3.5%/10%					A01-27-10	888	
12/21/13	NA	131221	131221000001	Lab Air	AIR	1	NA	NA	NA	888	
			2	CCV 3.5%/10%					A01-27-10		
			3	LCS 4/7/15%					A01-30-11		

Calscience Environmental Laboratories, Inc.

Level III Data Package

CLIENT NAME:	**CKY, Incorporated**
PROJECT NAME:	**Seal Beach NWS**
WORK ORDER:	**13-12-1614**

ASTM D-1946 (M) Fixed Gases (H2 and/or He) (Air)

Initial Calibration Data

Sample Data

Quality Control Data

Continuing Calibration Data

Run Logs

Return to Contents

Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Initial Calibration Data

Return to Contents

130726IC

GC 55 (ASTM D-1946 He&H2) 07/26/13

Helium — Multipoint Calibration — FID detector

Conc (%)	PK Area	RF	Rf avg.	Std Dev,I	sum Ai	STD DEV	RSD %
0.01	12.55	1255.15		5892.85			
0.025	33.48	1339.25		25877.26			
0.25	276.07	1104.28	1178.39	5491.17	49698.39	99.70	8.46
0.5	557.39	1114.78		4046.37			
1	1087.2	1087.20		8314.49			
2	2339.31	1169.66		76.24			

Hydrogen — Multipoint Calibration — FID detector

Conc (%)	PK Area	RF	Rf avg.	Std Dev,I	sum Ai	STD DEV	RSD %
0.01	19.77	1977.10		227.42			
0.025	56.35	2253.91		85203.32			
0.25	465.64	1862.58	1962.02	9887.94	119014.07	154.28	7.86
0.5	940.64	1881.28		6517.63			
1	1831.02	1831.02		17160.21			
2	3932.41	1966.21		17.56			

ICAL Criteria

ICAL RSD	15%
ICV	15%
DAILY CCV	30%

CONTROLLED COPY

Copy Number: 1

Copy Holder: GC 55

Issued By: 326

Date Issued: 7/27/13

This stamp appears in red ink on original copy.

Return to Contents

Calibration Table

Calib. Data Modified : Friday, July 26, 2013 7:10:04 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.500 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.500 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Average Response/Amount
Origin : Included
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Sig	Lvl	Amount [%]	Area	Amt/Area	Ref	Grp	Name
2.844	1	6	1.00000e-2	12.55152	7.96716e-4			Helium
		5	2.50000e-2	33.48128	7.46686e-4			
		4	2.50000e-1	276.07117	9.05564e-4			
		3	5.00000e-1	550.38800	8.97041e-4			
		2	1.00000	1087.20325	9.19791e-4			
		1	2.00000	2339.31079	8.54953e-4			
3.295	1	6	1.00000e-2	19.77096	5.05792e-4			Hydrogen
		5	2.50000e-2	56.94779	4.43673e-4			
		4	2.50000e-1	465.64435	5.36890e-4			
		3	5.00000e-1	940.64185	5.31552e-4			
		2	1.00000	1831.01855	5.46144e-4			
		1	2.00000	3932.41187	5.08594e-4			

1 Warnings or Errors :

Warning : Overlapping peak time windows at 2.844 min, signal 1

Peak Sum Table

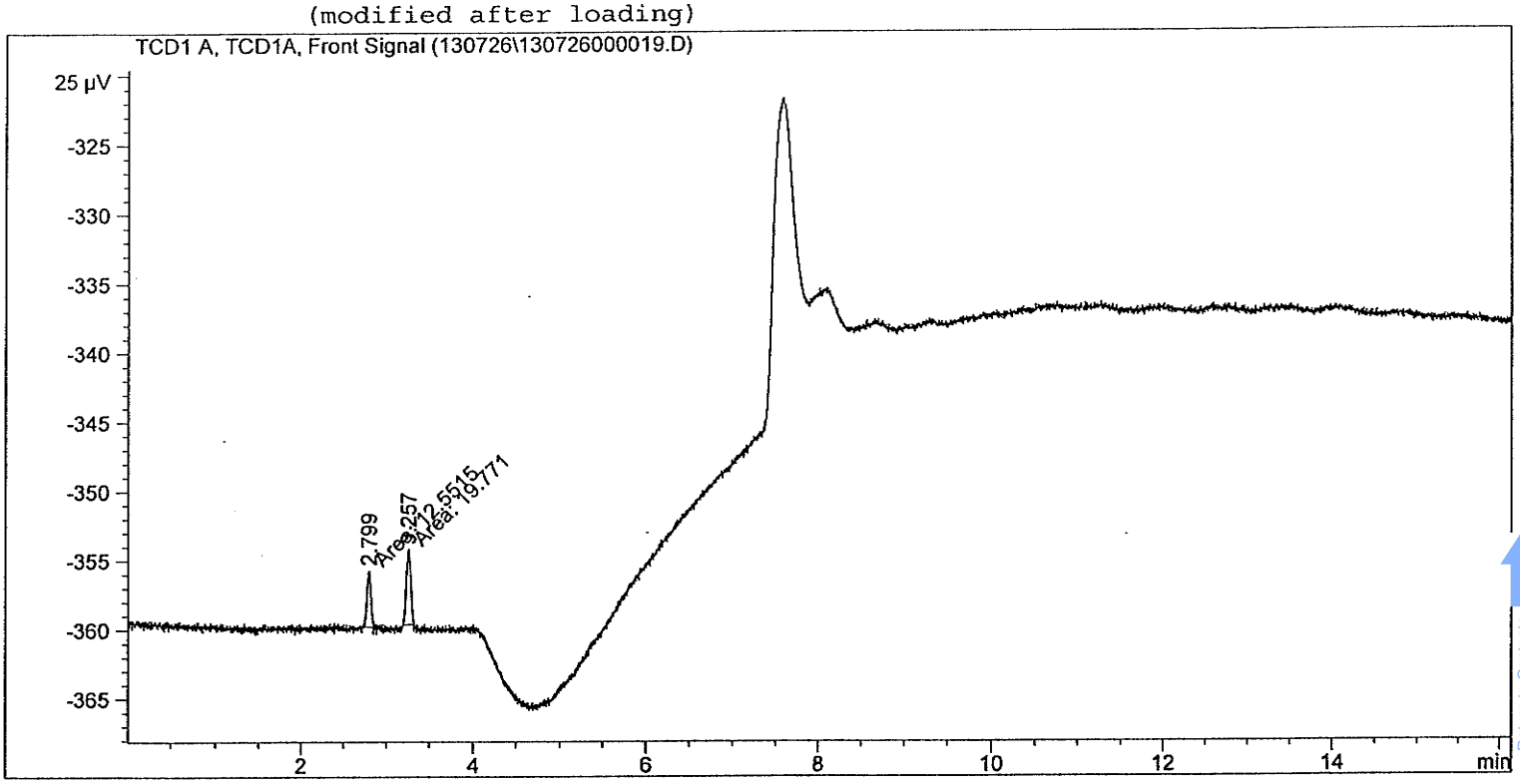
No Entries in table

Return to Contents

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 6:34:58 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 6:28:29 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

MANUAL INTEGRATION
BEFORE / AFTER
Date: 07/26/13
Chemist: 658 GL: 846
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.799	MM	12.55152	7.77427e-4	9.75788e-3		Helium
3.257	MM	19.77096	4.66102e-4	9.21529e-3		Hydrogen

Totals : 1.89732e-2

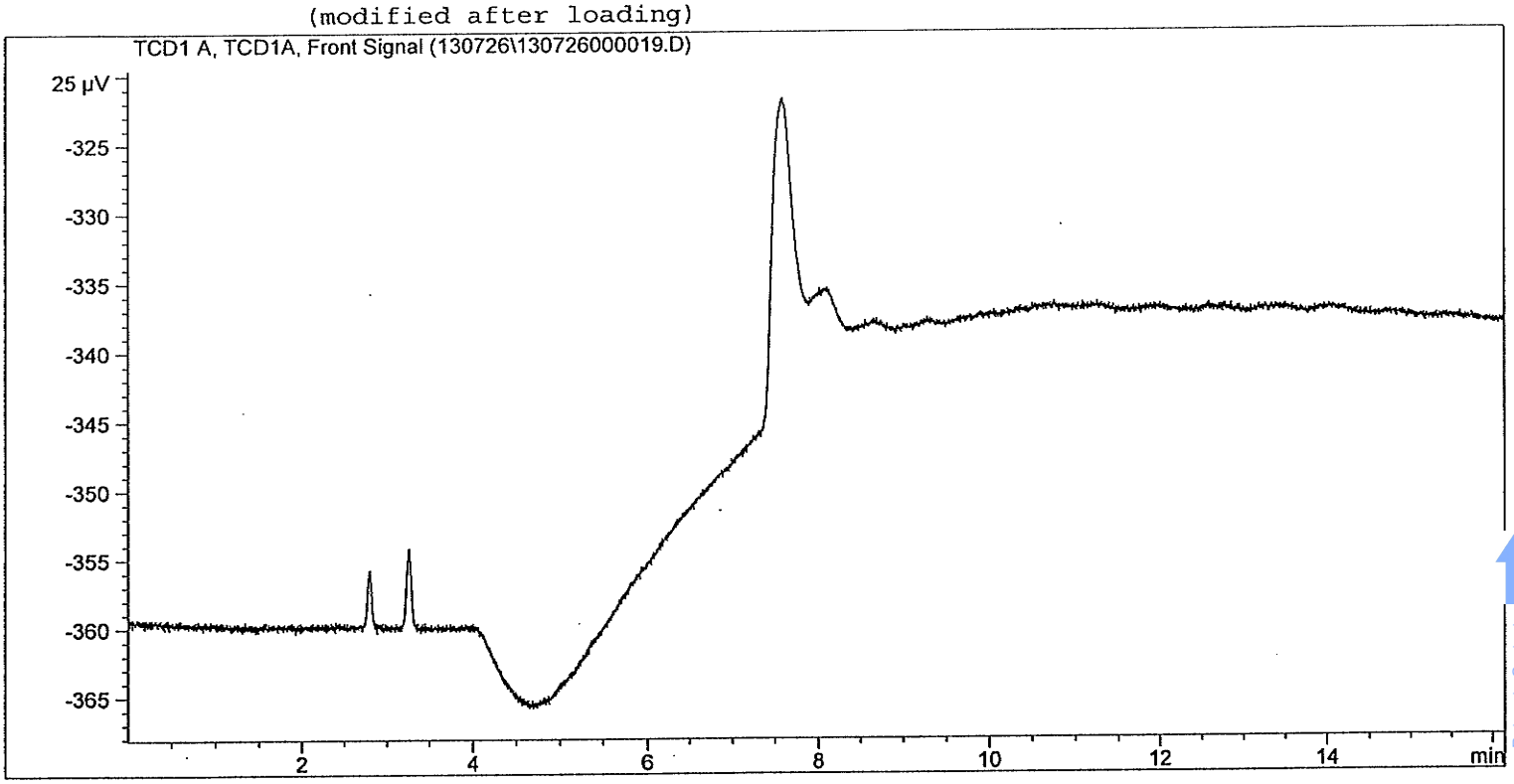
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 6:34:58 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 6:28:29 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

MANUAL INTEGRATION
BEFORE / AFTER
Date:
Chemist: GL:
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.771		-	-	-		Helium
3.227		-	-	-		Hydrogen

Totals : 0.00000

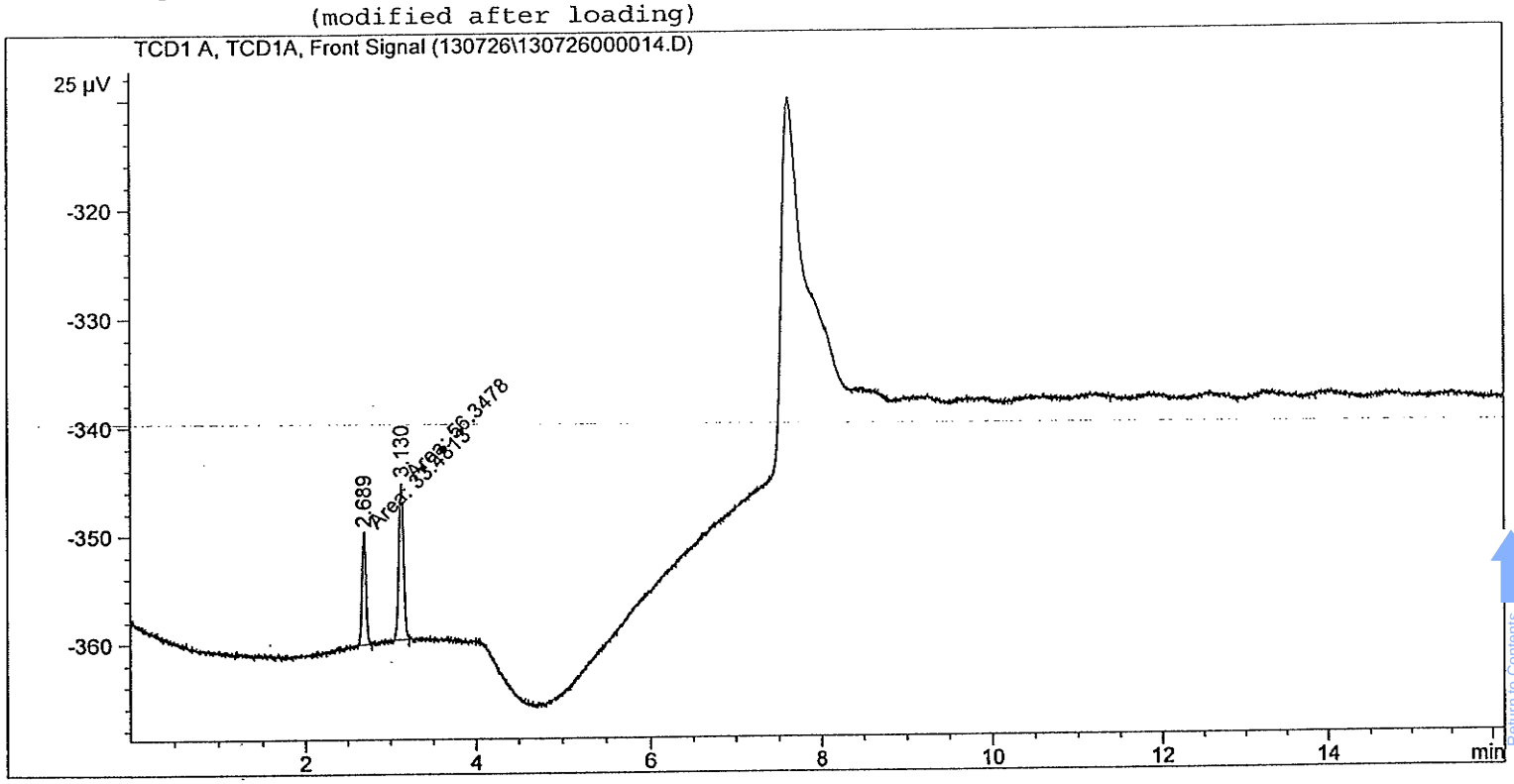
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 4:01:51 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 3:58:38 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

MANUAL INTEGRATION
BEFORE / AFTER
Date: 7/26/13
Chemist: 858 GL: 846
Reason: BASELINE CORR., PEAK ID CORR.
Other:
This stamp appears in red ink on original copy

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.689	MM	33.48128	7.77427e-4	2.60292e-2		Helium
3.130	MM	56.34779	4.66102e-4	2.62638e-2		Hydrogen

Totals : 5.22931e-2

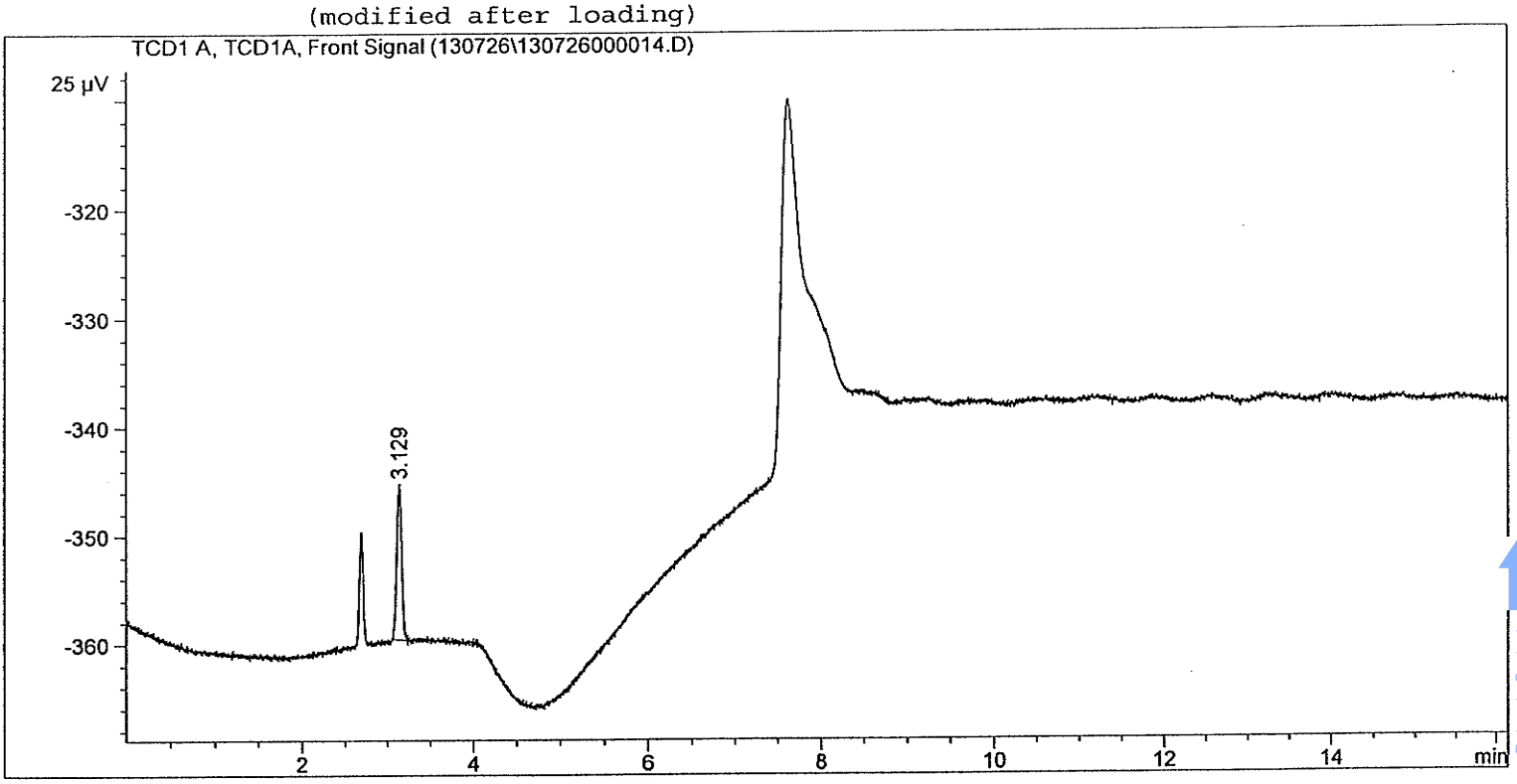
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 4:01:51 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 3:58:38 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

-ORATION
RE AFTER
GL:
BASELINE CORR., PEAK ID CORR.
This stamp appears in red ink on original copy

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.771		-	-	-		Helium
3.129	BB	55.72969	4.66102e-4	2.59757e-2		Hydrogen

Totals : 2.59757e-2

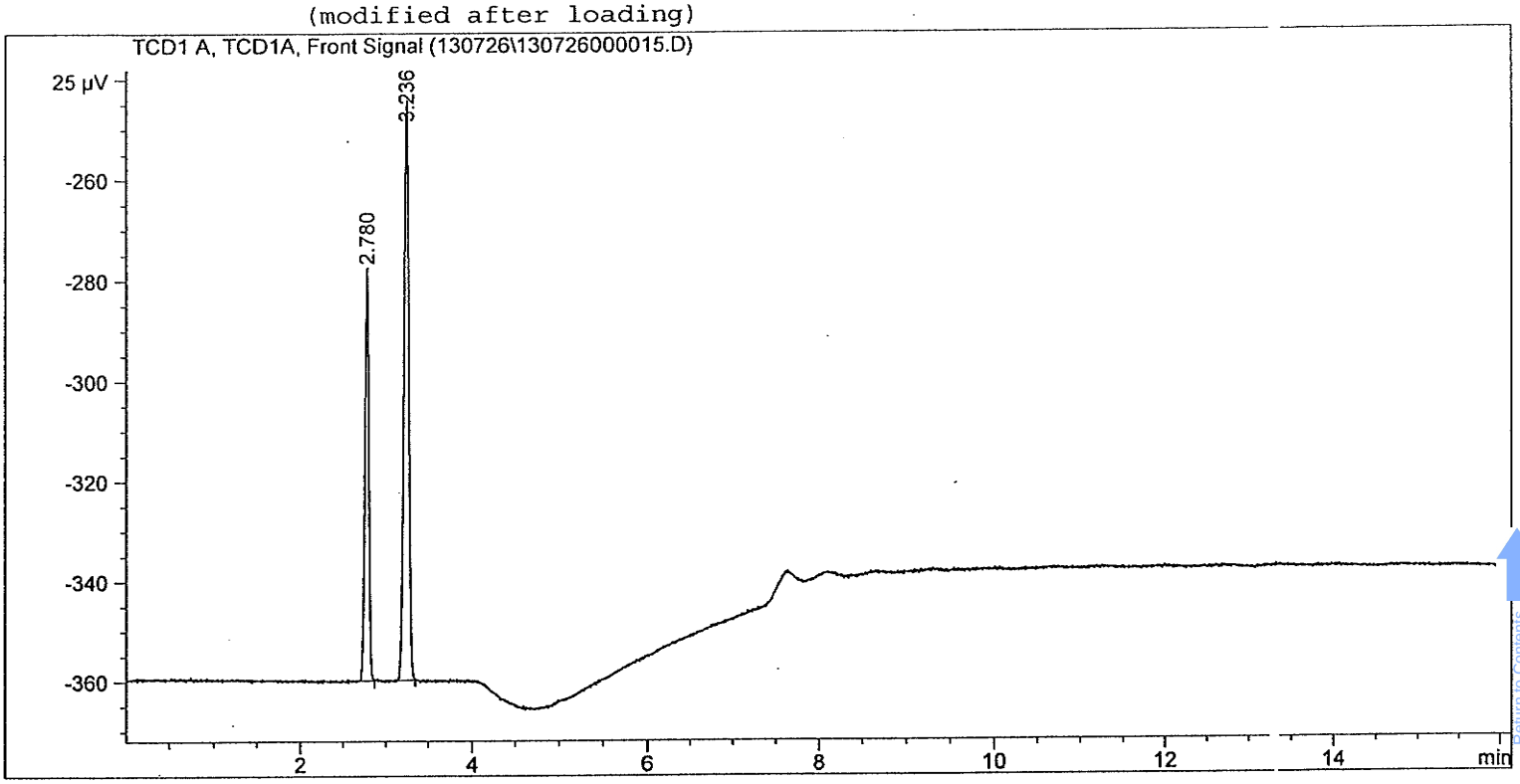
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 5:04:43 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 4:58:05 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.780	BB	276.07117	7.77427e-4	2.14625e-1		Helium
3.236	BB	465.64435	4.66102e-4	2.17038e-1		Hydrogen

Totals : 4.31663e-1

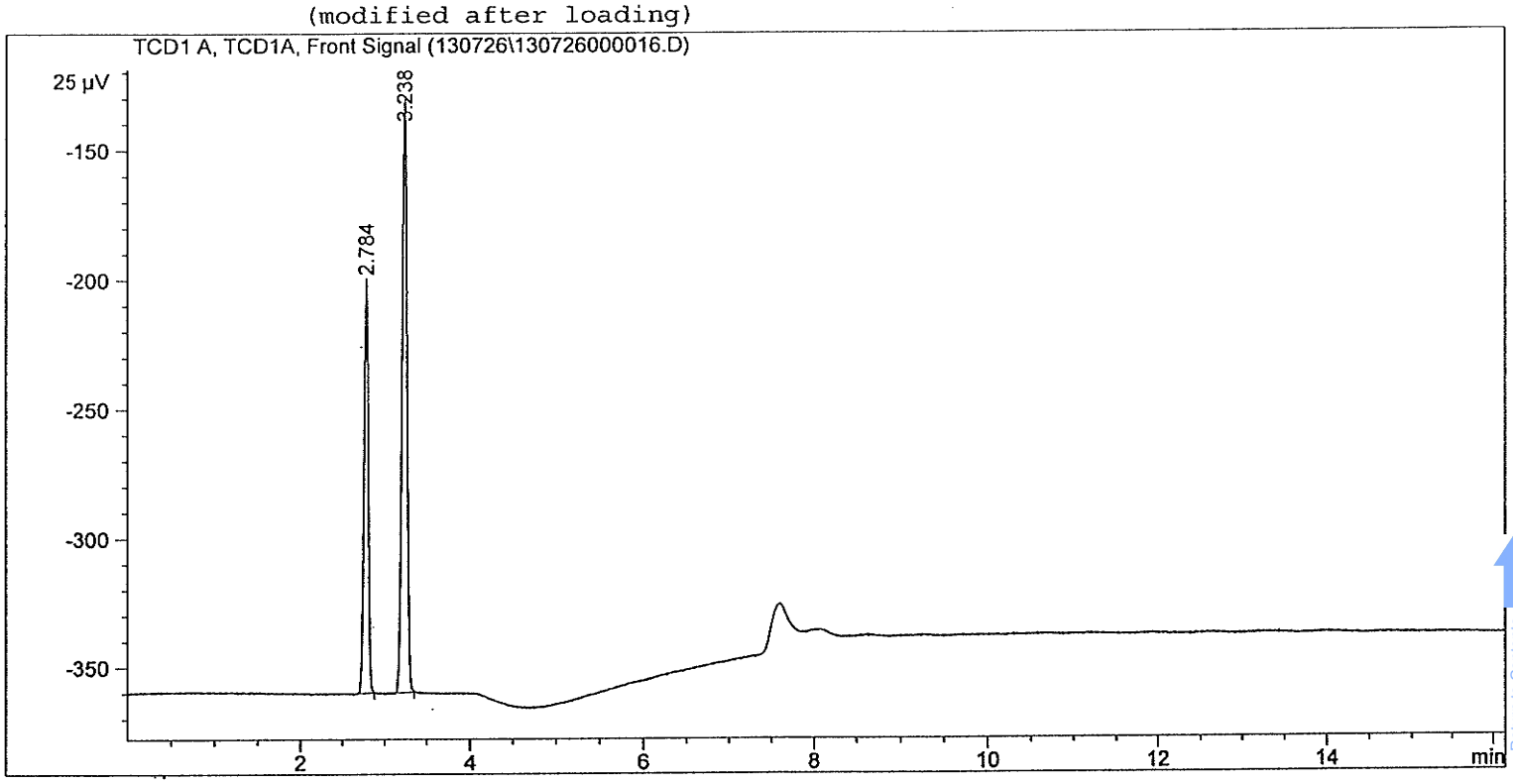
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

Data File W:\DATA\2013\130726\130726000016.D
Sample Name: ICAL ~~#3~~ 0.5% 500UL
#4 QT 07/26/13

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 5:26:53 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 5:20:53 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.784	BB	557[illegible]38800	7.77427e-4	4.33328e-1		Helium
3.238	BB	9[illegible]0.64185	4.66102e-4	4.38435e-1		Hydrogen

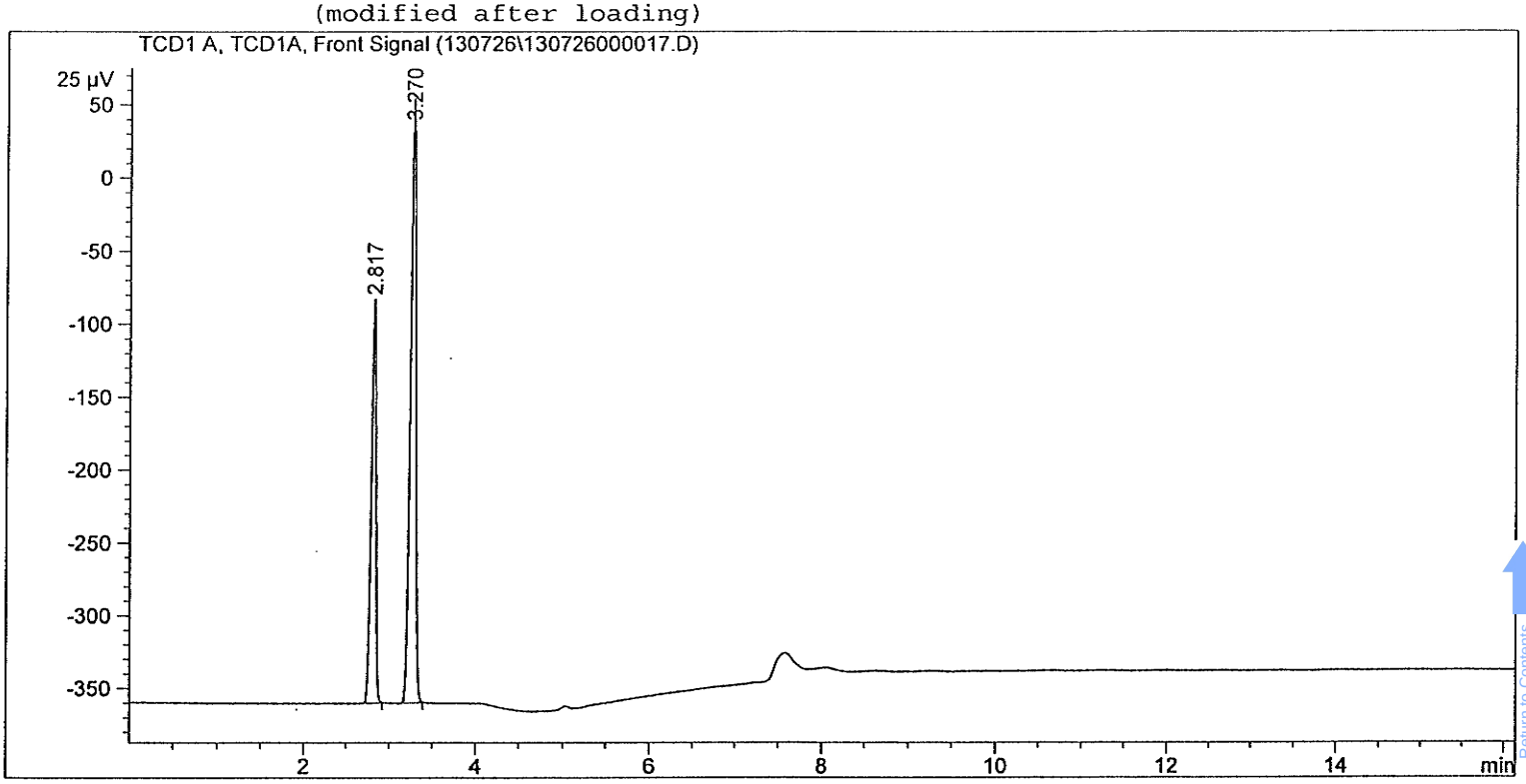
Totals : 8.71764e-1

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 5:49:50 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 5:43:02 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.817	BB	1087.20325	7.77427e-4	8.45221e-1		Helium
3.270	BB	1831.01855	4.66102e-4	8.53442e-1		Hydrogen

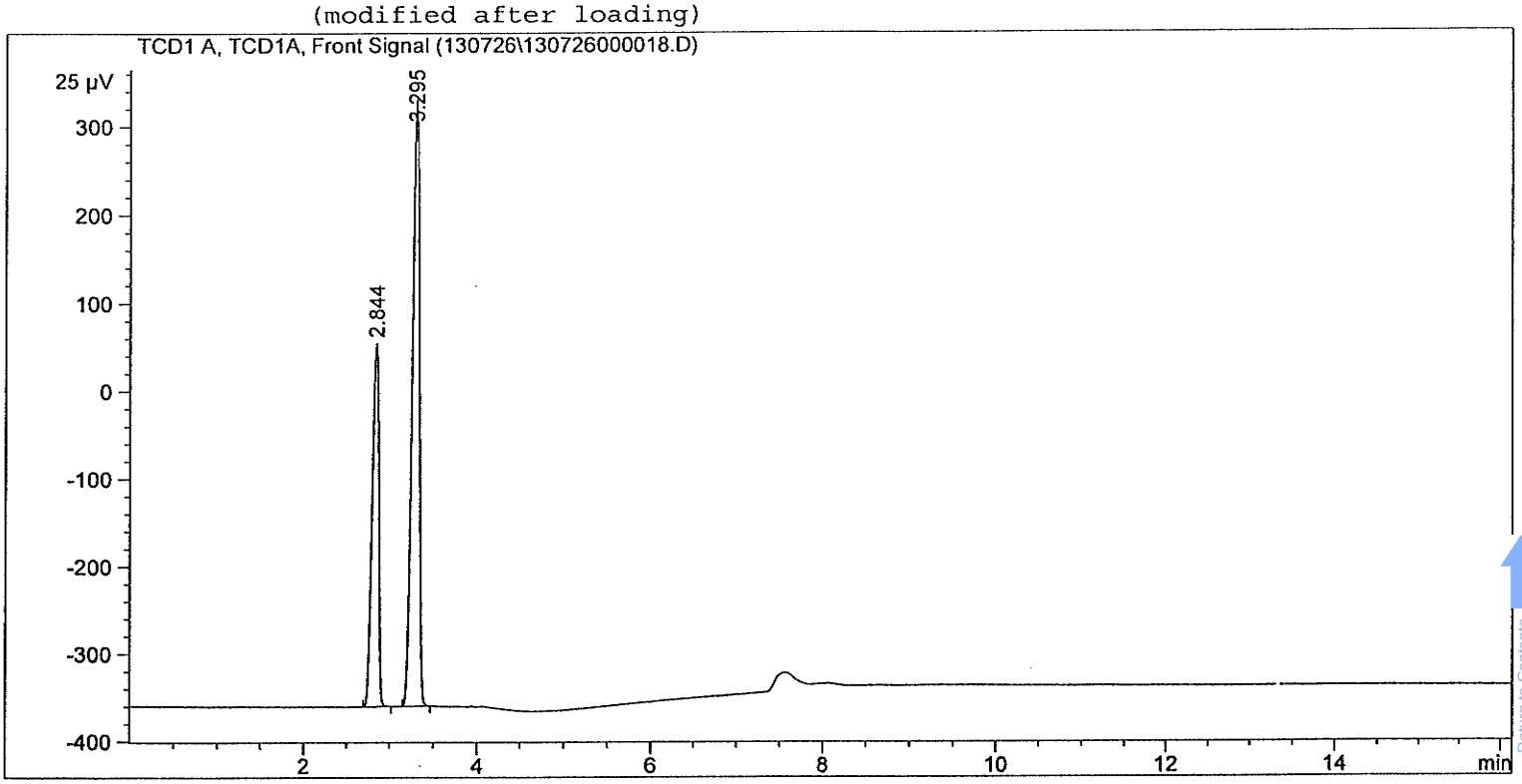
Totals : 1.69866

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 6:12:19 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 6:06:01 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130726.M
Last changed : 7/26/2013 7:10:05 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, July 26, 2013 7:10:04 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.844	BB	2339.31079	8.48618e-4	1.98518		Helium
3.295	BB	393.41187	5.09680e-4	2.00427		Hydrogen

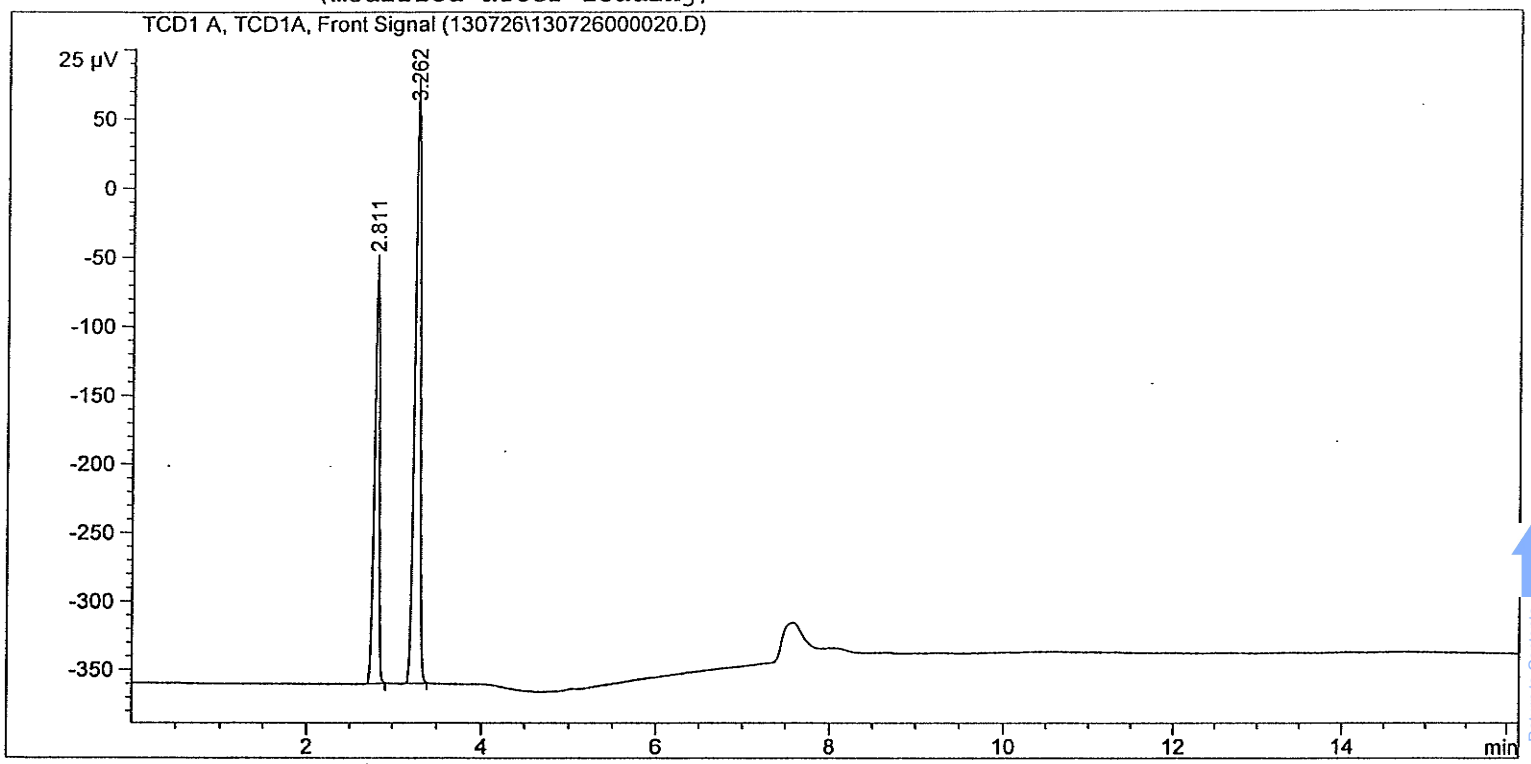
Totals : 3.98945

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 7:19:22 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 7:13:11 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130726.M
Last changed : 7/26/2013 7:10:05 PM by 658
(modified after loading)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, July 26, 2013 7:10:04 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.811	BB	1224.07410	8.48618e-4	1.03877		Helium
3.262	BB	1939.64709	5.09680e-4	9.88599e-1		Hydrogen

Totals : 2.02737

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Sample Data

Return to Contents

RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 12:20
ANALYST: 888
DATA FILE: 131220000006

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:19
EXTRACTION: N/A
D/T EXTRACTED:

1 **CLIENT SAMPLE NUMBER: VW-40-04**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

Return to Contents

RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 12:42
ANALYST: 888
DATA FILE: 131220000007

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:19
EXTRACTION: N/A
D/T EXTRACTED:

2 **CLIENT SAMPLE NUMBER: MW-40-32**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

Return to Contents

RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 13:16
ANALYST: 888
DATA FILE: 131220000008

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:19
EXTRACTION: N/A
D/T EXTRACTED:

3 **CLIENT SAMPLE NUMBER: VW-40-06**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

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RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 13:40
ANALYST: 888
DATA FILE: 131220000009

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:19
EXTRACTION: N/A
D/T EXTRACTED:

4 **CLIENT SAMPLE NUMBER: IW-03**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

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RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 14:09
ANALYST: 878
DATA FILE: 131220000010

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:19
EXTRACTION: N/A
D/T EXTRACTED:

 # 5 **CLIENT SAMPLE NUMBER: IW-01**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

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RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 14:34
ANALYST: 888
DATA FILE: 131220000011

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:19
EXTRACTION: N/A
D/T EXTRACTED:

6 **CLIENT SAMPLE NUMBER: VW-40-03**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

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RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 15:00
ANALYST: 888
DATA FILE: 131220000012

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:19
EXTRACTION: N/A
D/T EXTRACTED:

7 **CLIENT SAMPLE NUMBER: VW-40-02**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

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RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 15:24
ANALYST: 878
DATA FILE: 131220000013

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:19
EXTRACTION: N/A
D/T EXTRACTED:

8 **CLIENT SAMPLE NUMBER: DUP-1**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

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RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 15:45
ANALYST: 878
DATA FILE: 131220000014

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:19
EXTRACTION: N/A
D/T EXTRACTED:

 # 9 **CLIENT SAMPLE NUMBER: FB-1**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

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Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Quality Control Data

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: ASTM D-1946 (M)

MB Sample ID: 099-15-156-2
MB Batch ID: 131220L01
Instrument: GC 55
Matrix: Air
Analyst: 888
D/T Analyzed: 12/20/2013 11:34
Data File: 131220000004

Reviewed By: 794
D/T Reviewed: 12/31/2013 16:09
Extraction: N/A
D/T Extracted:

Work Order #: 13-12-1614

Sample#	Client Sample ID	D/T Analyzed	Data File
1	VW-40-04	12/20/2013 12:20	131220000006
2	MW-40-32	12/20/2013 12:42	131220000007
3	VW-40-06	12/20/2013 13:16	131220000008
4	IW-03	12/20/2013 13:40	131220000009
5	IW-01	12/20/2013 14:09	131220000010
6	VW-40-03	12/20/2013 14:34	131220000011
7	VW-40-02	12/20/2013 15:00	131220000012
8	DUP-1	12/20/2013 15:24	131220000013
9	FB-1	12/20/2013 15:45	131220000014

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RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 099-15-156
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 11:34
ANALYST: 888
DATA FILE: 131220000004

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:09
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: ASTM D-1946 (M)

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	12/31/2013 16:09	LCS D/T ANALYZED:	12/20/2013 10:29
LCS/LCSD BATCH:	131220L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/20/2013 10:51
LCS/LCSD SAMPLE ID:	**099-15-156-2**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC 55
ANALYST:	896	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC 55
REVIEWED BY:	794				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
Helium	1.000	0.9559	96	1.041	104	80-120	73-127	9	0-30	PASS	
Hydrogen	1.000	0.9084	91	0.9912	99	80-120	73-127	9	0-30	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	131220000002	
LCSD	131220000003	

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Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Continuing Calibration Data

Return to Contents

ASTM D-1946 CALIBRATION CHECK

Work Order Number: 13-12-1614
Instrument ID: GC 55
Batch Number (LCS/MS/SA): 131220L01

Analyst: 888 Date 12/20/13
QC Review: 794 Date 12/31/13
Date Analyzed: 12/20/13

Daily Calibration Check

Analyte	Daily RF ($\times 10^{-3}$)	Ave RF ($\times 10^{-3}$)	% D	Control Limit
Helium (He)	1.095	1.178	7	0 – 20
Hydrogen (H_2)	1.846	1.962	6	0 – 20

Analyst's Comments:

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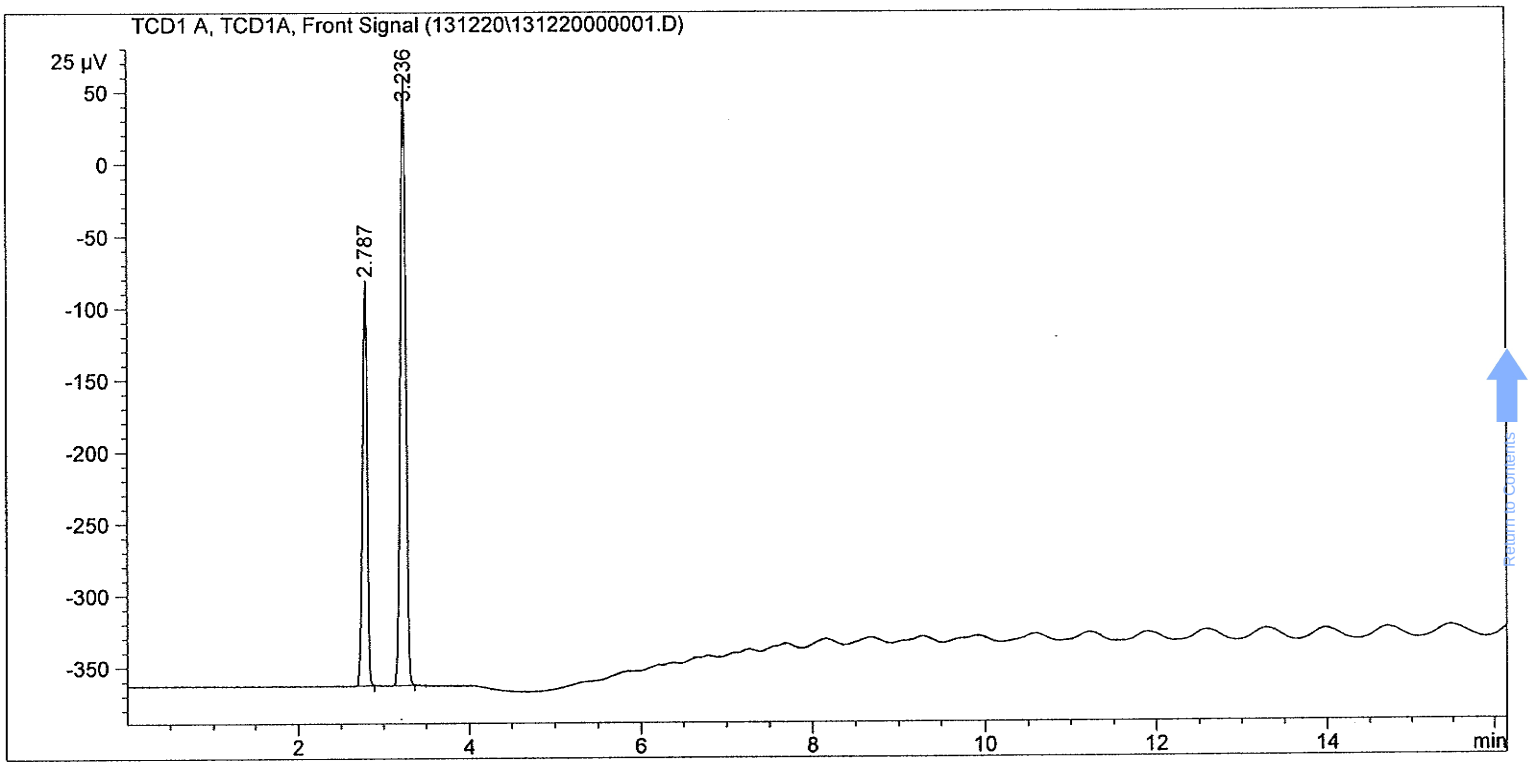
```
==================================================================
Acq. Operator    : 896
Acq. Instrument  : GC 55                          Location : Vial 1
Injection Date   : 12/20/2013 10:01:51 AM
                                                 Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed     : 12/19/2013 12:36:34 PM by 858
Analysis Method  : C:\CHEM32\1\METHODS\130726.M
Last changed     : 12/10/2013 4:19:00 PM by 884
                   (modified after loading)
Sample Info      :
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      12/10/2013 4:19:23 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [25 µV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.787 BB     1095.46838 8.48618e-4 9.29634e-1     Helium
  3.236 BB     1845.97351 5.09680e-4 9.40856e-1     Hydrogen

Totals :                                 1.87049
```

ENDING CCV

ASTM D-1946 CALIBRATION CHECK

Work Order Number: 13-12-1614

Instrument ID: GC55

Batch Number (LCS/MS/SA): 131220L01

Analyst: 878 Date 12/20/13

QC Review: 794 Date 12/31/13

Date Analyzed: 12/20/13

Daily Calibration Check

Analyte	Daily RF ($\times 10^{-3}$)	Ave RF ($\times 10^{-3}$)	% D	Control Limit
Helium (He)	1.122	1.178	5	0 – 20
Hydrogen (H_2)	1.888	1.962	4	0 – 20

Analyst's Comments:

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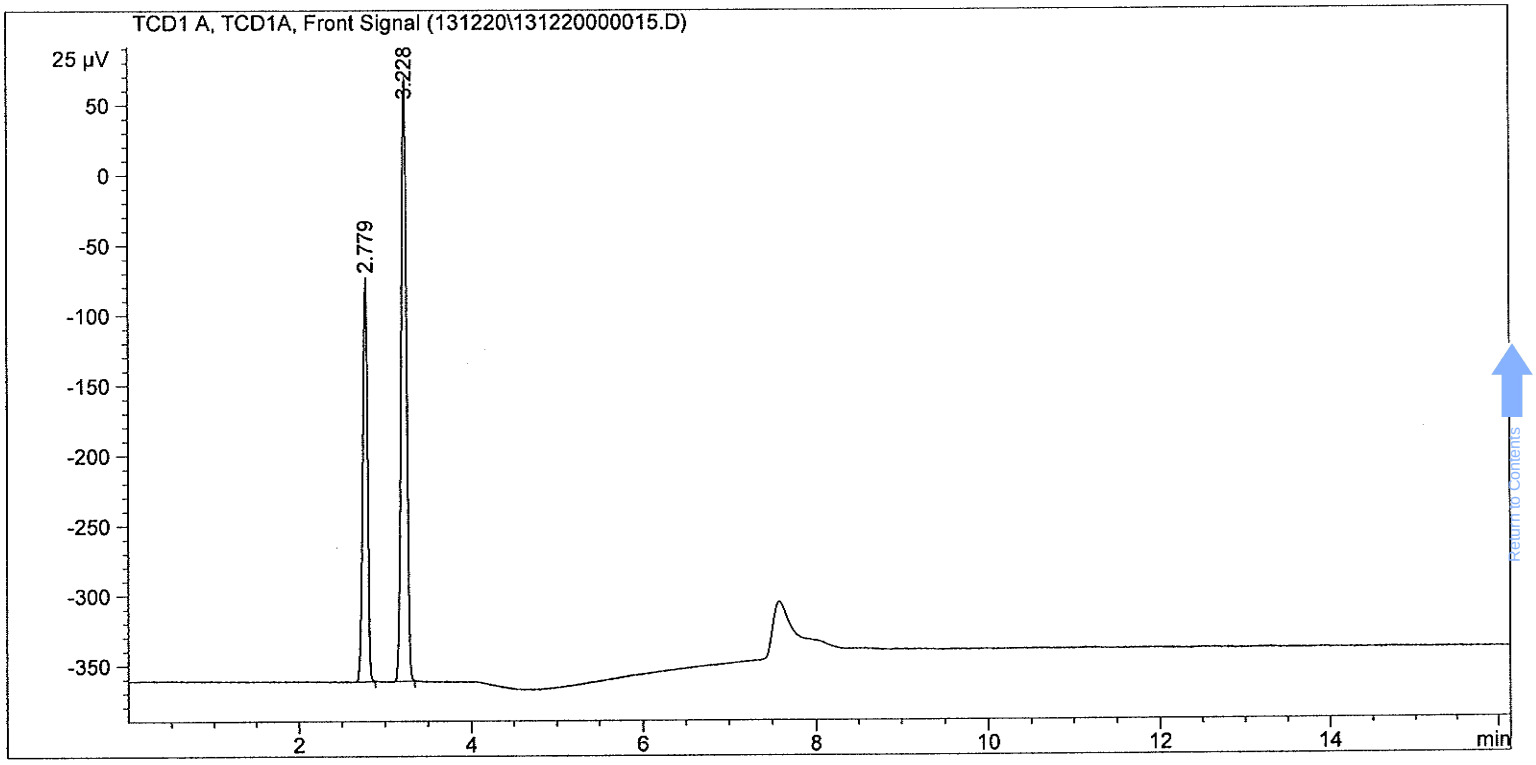
```
==================================================================
Acq. Operator    : 878
Acq. Instrument  : GC 55                          Location : Vial 1
Injection Date   : 12/20/2013 4:07:03 PM
                                                Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed     : 12/20/2013 4:01:51 PM by 878
Analysis Method  : C:\CHEM32\1\METHODS\130726.M
Last changed     : 12/10/2013 4:19:00 PM by 884
                   (modified after loading)
Sample Info      :
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      12/10/2013 4:19:23 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [25 µV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.779 BB     1121.51392 8.48618e-4 9.51736e-1     Helium
  3.228 BB     1887.60095 5.09680e-4 9.62072e-1     Hydrogen

Totals :                                 1.91381
```

Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Run Logs

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Air Analysis Logbook

Instrument ID: GC 55

DATE	DIRECTORY	DATA FILE	CEL ID #	TEST METHOD	STANDARD ID #	LOOP VOL (mL)	ANALYST ID #	COMMENTS
07/25/13	130725	130725000012	13-07-1610- 8A	He+H_2+Hc	NA	1	858	Samples rerun
		13	9A					
		14	10A					
		15	CCV 1%		A01-28-18		846	See sequence 130726
07/26/13	130726	130726000001	CCV 1%	He+H_2+Hc	A01-28-18	1	858	
		2	LCS 1%		A01-25-24			
		3	LCSD 1%					
		4	MB		NA			
		5	13-07-1714-1A					Samples rerun.
		6	2A					
		7	2A					Confirmation
		8	3A					
		9	4A					
		10	4A					Confirmation
		11	5A				658	See 130726
		12	IB					
		13	ICAL #1 0.010%		A01-28-18	0.01		X High Response
		14	ICAL #2 0.025%			0.025	858	
		15	ICAL #3 0.25%			0.250		
		16	ICAL #4 0.5%			0.500		
		17	ICAL #5 1%			1		
		18	ICAL #6 2%			2		
		19	ICAL #1 0.010%			0.10		
		20	ICV 1%		A01-25-24	1		
		21	LCSD 1%				658	
		22	MB		NA			

Book Number: _____

Air Analysis Logbook

Instrument ID: GC 55

DATE	DIRECTORY	DATA FILE	CEL ID #	TEST METHOD	STANDARD ID #	LOOP VOL (mL)	ANALYST ID #	COMMENTS
12/17/13	131217	131217000002	LCS 17	He + H2 + HC	A01-25-24	1	896	
		3	LCSD 17					
		4	MB					
12/18/13	131218	131218000001	CCV 17	He + H2 + HC	A01-28-18	1	896	
		2	LCS 17		A01-25-24			
		3	LCSD 17					
		4	MB		NA		858	
		5	13-12-1366-4A				888	
		6	-4A					confirmation
		7	-1393-1A					
		8	-1A					confirmation
		9	-2A					
		10	-2A					confirmation
		11	-3A					
		12	~~-4A~~ 12/18/13			0.100		-3A
		13	-4A			1	884	
		14	-4A			0.100		
		15	CCV 1%		A01-28-18	1	888	
12/19/13	131219	131219000001	CCV 17	He + H2 + HC	A01-28-18	1	896	
		2	LCS 17		A01-25-24			
		3	LCSD 17					
		4	MB		NA			
		5	13-12-1469-1A				888	
		6	CCV 1%		A01-28-18		858	
12/20/13	131220	131220000001	CCV 17	He + H2 + HC	A01-28-18	1	896	
		2	LCS 17		A01-25-24			

Book Number: 4

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09/19/12 Revision

Air Analysis Logbook

Instrument ID: GC 55

DATE	DIRECTORY	DATA FILE	CEL ID #	TEST METHOD	STANDARD ID #	LOOP VOL (mL)	ANALYST ID #	COMMENTS
12/20/13	131220	131220000003	✓ LCSD 1%	He+H2+Hc	A01-25-24	1	896	
		4	✓ MB		NA		888	
		5	13-12-1615-1A					
		6	✓ 1614-1A					
		7	✓ -2A					
		8	✓ -3A					
		9	✓ -4A					
		10	✓ -5A				878	
		11	✓ -6A				888	
		12	✓ -7A					
		13	✓ -8A				878	
		14	✓ -9A					
		15	✓ CCV 1%		BV 12/20/13 ~~A01-18-28~~			A01-28-18
12/21/13	131221	131221000001	CCV 1%	He+H2+Hc	A01-28-18	1	888	
		2	LCS 1%		A01-25-24			
		3	LCSD 1%					
		4	MB		NA			
12/23/13	131223	131223000001	CCV 1%	He+H2+Hc	A01-28-18	1	888	
		2	LCS 1%		A01-25-24			
		3	LCSD 1%					
		4	MB		NA			
		5	13-12-1810-1A					
		6	-2A					
		7	-2A					Confirmation
		8	-3A					
		9	-3A					confirmation

Book Number: 4

Calscience Environmental Laboratories, Inc.

Level III Data Package

CLIENT NAME:	**CKY, Incorporated**
PROJECT NAME:	**Seal Beach NWS**
WORK ORDER:	**13-12-1614**

EPA TO-15 Full List (Air)

Initial Calibration Data

Sample Data

Quality Control Data

Continuing Calibration Data

Tuning Data

Run Logs

Air/Vapor Sampling Equipment Certification

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Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Initial Calibration Data

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA TO-15

Work Order #: 13-12-1614
Instrument: GC/MS YY
ICAL Batch ID: D131227IC
ICAL D/T Analyzed: 12/27/2013 06:38

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20
Analyst: 460

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
Acetone	Avg Resp		0.200	0.232	0.215	0.206	0.205	0.264			0.220	0.00	11	0-30			PASS
Benzene	Avg Resp	0.810	0.789	0.875	0.812	0.768	0.731	0.653			0.777	0.00	9	0-30			PASS
Benzyl Chloride	Avg Resp		1.070	1.253	1.190	1.087	1.028	0.749			1.063	0.00	16	0-30			PASS
Bromodichloromethane	Avg Resp	0.615	0.596	0.672	0.622	0.585	0.546	0.481			0.588	0.00	10	0-30			PASS
Bromoform	Avg Resp	0.754	0.741	0.831	0.757	0.684	0.615	0.487			0.696	0.00	16	0-30			PASS
Bromomethane	Avg Resp	0.556	0.554	0.618	0.570	0.541	0.525	0.484			0.550	0.00	7	0-30			PASS
1,3-Butadiene	Avg Resp		0.318	0.379	0.350	0.329	0.322	0.290			0.331	0.00	9	0-30			PASS
2-Butanone	Avg Resp		2.234	2.481	2.224	2.091	1.941	1.710			2.113	0.00	13	0-30			PASS
Carbon Disulfide	Avg Resp	2.766	2.713	2.996	2.738	2.527	2.248	1.766			2.536	0.00	16	0-30			PASS
Carbon Tetrachloride	Avg Resp	0.644	0.619	0.673	0.620	0.584	0.539	0.474			0.593	0.00	11	0-30			PASS
Chlorobenzene	Avg Resp	1.034	0.994	1.062	0.976	0.918	0.862	0.749			0.942	0.00	12	0-30			PASS
Chloroethane	Avg Resp	0.202	0.227	0.267	0.251	0.237	0.230	0.214			0.233	0.00	9	0-30			PASS
Chloroform	Avg Resp	2.126	2.031	2.180	1.992	1.858	1.739	1.541			1.924	0.00	12	0-30			PASS
Chloromethane	Avg Resp	0.372	0.375	0.439	0.409	0.384	0.379	0.355			0.387	0.00	7	0-30			PASS
Cyclohexane	Avg Resp	0.457	0.467	0.519	0.476	0.442	0.401	0.335			0.443	0.00	13	0-30			PASS
Dibromochloromethane	Avg Resp	0.790	0.791	0.889	0.824	0.774	0.715	0.618			0.772	0.00	11	0-30			PASS
Dichlorodifluoromethane	Avg Resp	2.424	2.257	2.478	2.251	2.134	1.936	1.793			2.182	0.00	11	0-30			PASS
Diisopropyl Ether (DIPE)	Avg Resp	4.551	4.333	4.429	3.815	3.126	2.319				3.762	0.00	23	0-30			PASS
1,1-Dichloroethane	Avg Resp	1.914	1.839	2.022	1.864	1.750	1.643	1.457			1.784	0.00	11	0-30			PASS
1,1-Dichloroethene	Avg Resp	1.545	1.519	1.650	1.506	1.403	1.285	1.175			1.440	0.00	11	0-30			PASS
1,2-Dibromoethane	Avg Resp	0.675	0.677	0.745	0.691	0.647	0.608	0.530			0.653	0.00	10	0-30			PASS
Dichlorotetrafluoroethane	Avg Resp	1.627	1.533	1.685	1.515	1.374	1.213	0.952			1.414	0.00	18	0-30			PASS
1,2-Dichlorobenzene	Avg Resp	1.035	0.978	1.011	0.929	0.846	0.822	0.700			0.903	0.00	13	0-30			PASS
1,2-Dichloroethane	Avg Resp	1.377	1.364	1.482	1.360	1.278	1.207	1.108			1.311	0.00	9	0-30			PASS
1,2-Dichloropropane	Avg Resp	0.348	0.340	0.373	0.345	0.322	0.298	0.255			0.326	0.00	12	0-30			PASS
1,3-Dichlorobenzene	Avg Resp	1.081	0.996	1.034	0.935	0.847	0.788	0.636			0.902	0.00	17	0-30			PASS
1,4-Dichlorobenzene	Avg Resp	1.084	0.993	1.024	0.920	0.807	0.733	0.559			0.874	0.00	21	0-30			PASS
1,4-Dioxane	Avg Resp		0.170	0.202	0.195	0.182	0.161	0.133			0.174	0.00	15	0-30			PASS
c-1,3-Dichloropropene	Avg Resp	0.418	0.440	0.528	0.495	0.472	0.454	0.405			0.459	0.00	9	0-30			PASS
c-1,2-Dichloroethene	Avg Resp	0.963	0.966	1.111	1.030	0.983	0.946	0.867			0.981	0.00	8	0-30			PASS
t-1,2-Dichloroethene	Avg Resp	1.091	1.033	1.168	1.077	0.989	0.943	0.846			1.021	0.00	10	0-30			PASS
t-1,3-Dichloropropene	Avg Resp	0.320	0.364	0.449	0.428	0.410	0.403	0.368			0.392	0.00	11	0-30			PASS
Ethanol	Avg Resp		0.174	0.194	0.171	0.157	0.152	0.136			0.164	0.00	12	0-30			PASS
Ethyl Acetate	Avg Resp		0.289	0.348	0.318	0.277	0.224	0.157			0.269	0.00	26	0-30			PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	3.185	3.184	3.534	3.265	2.986	2.778	2.196			3.019	0.00	14	0-30			PASS
Ethylbenzene	Avg Resp	1.469	1.504	1.674	1.546	1.441	1.337	1.129			1.443	0.00	12	0-30			PASS
4-Ethyltoluene	Avg Resp	1.549	1.555	1.695	1.545	1.437	1.347	1.105			1.462	0.00	13	0-30			PASS
Heptane	Avg Resp		0.070	0.082	0.076	0.071	0.067	0.058			0.071	0.00	11	0-30			PASS
Hexachloro-1,3-Butadiene	Avg Resp		1.088	0.882	0.789	0.679	0.592				0.806	0.00	24	0-30			PASS
Hexane	Avg Resp	1.635	1.589	1.662	1.456	1.241	0.955	0.665			1.315	0.00	29	0-30			PASS
2-Hexanone	Avg Resp	0.452	0.502	0.545	0.515	0.480	0.429	0.344			0.467	0.00	14	0-30			PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp		2.272	2.613	2.441	2.293	2.247	1.898			2.294	0.00	10	0-30			PASS
Methylene Chloride	Avg Resp		0.967	0.918	0.835	0.786	0.751	0.686			0.824	0.00	13	0-30			PASS
4-Methyl-2-Pentanone	Avg Resp		0.277	0.300	0.284	0.264	0.246	0.208			0.263	0.00	12	0-30			PASS
Naphthalene	Avg Resp		1.804	1.674	1.620	1.469	1.379				1.589	0.00	11	0-30			PASS

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA TO-15

Work Order #: 13-12-1614
Instrument: GC/MS YY
ICAL Batch ID: D131227IC
ICAL D/T Analyzed: 12/27/2013 06:38

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20
Analyst: 460

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
o-Xylene	Avg Resp	1.237	1.222	1.323	1.204	1.109	0.999	0.797			1.127	0.00	16	0-30			PASS
p/m-Xylene	Avg Resp	1.284	1.279	1.377	1.244	1.112	0.931	0.672			1.128	0.00	22	0-30			PASS
Propene	Avg Resp		1.015	1.141	1.010	0.932	0.792	0.677			0.928	0.00	18	0-30			PASS
Styrene	Avg Resp	0.747	0.820	0.948	0.880	0.832	0.801	0.697			0.818	0.00	10	0-30			PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.690	0.711	0.823	0.781	0.732	0.711	0.587			0.719	0.00	10	0-30			PASS
Tert-Butyl Alcohol (TBA)	Avg Resp		1.944	2.096	1.974	1.800	1.658	1.316			1.798	0.00	16	0-30			PASS
Tetrachloroethene	Avg Resp	0.676	0.655	0.704	0.643	0.595	0.543	0.471			0.613	0.00	13	0-30			PASS
Tetrahydrofuran	Avg Resp		1.010	1.299	1.212	1.142	1.062	0.936			1.110	0.00	12	0-30			PASS
Toluene	Avg Resp	1.235	1.220	1.323	1.220	1.145	1.063	0.913			1.160	0.00	12	0-30			PASS
Trichloroethene	Avg Resp	0.382	0.379	0.416	0.381	0.352	0.322	0.269			0.357	0.00	14	0-30			PASS
Trichlorofluoromethane	Avg Resp	1.525	2.372	1.579	1.439	1.672	2.031	1.842			1.780	0.00	18	0-30			PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	2.068	1.950	2.107	1.904	1.743	1.536	1.230			1.791	0.00	18	0-30			PASS
1,1,1-Trichloroethane	Avg Resp	2.047	1.966	2.155	1.986	1.864	1.758	1.562			1.905	0.00	10	0-30			PASS
1,1,2-Trichloroethane	Avg Resp	0.311	0.304	0.335	0.310	0.291	0.274	0.239			0.295	0.00	10	0-30			PASS
2-Chlorotoluene	Avg Resp	1.245	1.221	1.346	1.231	1.152	1.084	0.913			1.170	0.00	12	0-30			PASS
1,2,3-Trichloropropane	Avg Resp	0.772	0.728	0.770	0.702	0.655	0.613	0.517			0.680	0.00	14	0-30			PASS
Acrolein	Avg Resp		0.154	0.194	0.182	0.176	0.172	0.167			0.174	0.00	8	0-30			PASS
Acrylonitrile	Avg Resp		0.805	0.795	0.846	0.833	0.789	0.745			0.802	0.00	4	0-30			PASS
Methyl Methacrylate	Avg Resp		0.272	0.318	0.298	0.283	0.275	0.243			0.281	0.00	9	0-30			PASS
Propane	Avg Resp			0.659	0.569	0.503	0.399	0.310			0.488	0.00	28	0-30			PASS
Butane	Avg Resp		0.661	0.709	0.641	0.586	0.538	0.449			0.598	0.00	16	0-30			PASS
Methanol	Avg Resp		0.111	0.115	0.109	0.102	0.102	0.093			0.105	0.00	8	0-30			PASS
2,2,4-Trimethyl Pentane	Avg Resp	1.664	1.594	1.697	1.519	1.351	1.119	0.847			1.398	0.00	23	0-30			PASS
Isobutane	Avg Resp		0.764	0.798	0.703	0.625	0.545	0.423			0.643	0.00	22	0-30			PASS
1,1,1,2-Tetrafluoroethane	Avg Resp	0.611	0.632	0.874	0.787	0.747	0.736	0.719			0.730	0.00	12	0-30			PASS
1,3,5-Trimethylbenzene	Avg Resp	1.398	1.364	1.460	1.341	1.236	1.160	0.950			1.273	0.00	14	0-30			PASS
1,1,2,2-Tetrachloroethane	Avg Resp	1.034	0.977	1.006	0.915	0.842	0.766	0.583			0.875	0.00	18	0-30			PASS
1,2,4-Trimethylbenzene	Avg Resp	1.459	1.402	1.475	1.332	1.174	1.022	0.763			1.233	0.00	21	0-30			PASS
1,2,4-Trichlorobenzene	Avg Resp	0.773	0.804	0.770	0.742	0.680	0.667				0.739	0.00	7	0-30			PASS
Vinyl Acetate	Avg Resp	2.835	2.943	3.311	3.039	2.842	2.588	2.201			2.823	0.00	12	0-30			PASS
Vinyl Chloride	Avg Resp	0.484	0.479	0.553	0.510	0.480	0.468	0.425			0.486	0.00	8	0-30			PASS
1,1-Difluoroethane	Avg Resp	1.165	1.096	1.249	1.125	1.098	0.983	0.977			1.099	0.00	9	0-30			PASS
Isopropanol	**Avg Resp**		1.855	0.891	0.847	1.663	1.663	1.523			1.407	**0.00**	**31**	**0-30**			**FAIL**

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA TO-15

Work Order #: 13-12-1614
Instrument: GC/MS YY
ICAL Batch ID: D131227IC
ICAL D/T Analyzed: 12/27/2013 06:38

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20
Analyst: 460

Data Files:

Level #	D/T Analyzed	Data File
1	12/27/2013 06:38	W:\GCMS_YY_DATA\2013\131227\DOD27DEC06.D\DOD27DEC06.rr
2	12/27/2013 05:52	W:\GCMS_YY_DATA\2013\131227\DOD27DEC05.D\DOD27DEC05.rr
3	12/27/2013 05:02	W:\GCMS_YY_DATA\2013\131227\DOD27DEC04.D\DOD27DEC04.rr
4	12/27/2013 04:17	W:\GCMS_YY_DATA\2013\131227\DOD27DEC03.D\DOD27DEC03.rr
5	12/27/2013 03:30	W:\GCMS_YY_DATA\2013\131227\DOD27DEC02.D\DOD27DEC02.rr
6	12/27/2013 08:23	W:\GCMS_YY_DATA\2013\131227\DOD27DEC08.D\DOD27DEC08.rr
7	12/27/2013 07:34	W:\GCMS_YY_DATA\2013\131227\DOD27DEC07.D\DOD27DEC07.rr

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

ICV WORK ORDER: 099-14-522-198-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131227IC
INITIAL DATE ANALYZED 12/27/13 6:38

ANALYST: 460
REVIEWED BY: 794
DATE REVIEWED: 1/6/14 15:20
ICV DATE ANALYZED 12/27/13 9:13

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Acetone	Avg Resp	0.00	0.220	0.218			1	0-30	PASS
Benzene	Avg Resp	0.00	0.777	0.825			-6	0-30	PASS
Benzyl Chloride	Avg Resp	0.00	1.063	1.285			-21	0-30	PASS
Bromodichloromethane	Avg Resp	0.00	0.588	0.629			-7	0-30	PASS
Bromoform	Avg Resp	0.00	0.696	0.733			-5	0-30	PASS
Bromomethane	Avg Resp	0.00	0.550	0.588			-7	0-30	PASS
1,3-Butadiene	Avg Resp	0.00	0.331	0.358			-8	0-30	PASS
2-Butanone	Avg Resp	0.00	2.113	2.253			-7	0-30	PASS
Carbon Disulfide	Avg Resp	0.00	2.536	2.846			-12	0-30	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.593	0.614			-4	0-30	PASS
Chlorobenzene	Avg Resp	0.00	0.942	0.975			-4	0-30	PASS
Chloroethane	Avg Resp	0.00	0.233	0.247			-6	0-30	PASS
Chloroform	Avg Resp	0.00	1.924	1.991			-3	0-30	PASS
Chloromethane	Avg Resp	0.00	0.387	0.415			-7	0-30	PASS
Cyclohexane	Avg Resp	0.00	0.443	0.463			-5	0-30	PASS
Dibromochloromethane	Avg Resp	0.00	0.772	0.812			-5	0-30	PASS
Dichlorodifluoromethane	Avg Resp	0.00	2.182	2.205			-1	0-30	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	3.762	3.133			17	0-30	PASS
1,1-Dichloroethane	Avg Resp	0.00	1.784	1.862			-4	0-30	PASS
1,1-Dichloroethene	Avg Resp	0.00	1.440	1.515			-5	0-30	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.653	0.684			-5	0-30	PASS
Dichlorotetrafluoroethane	Avg Resp	0.00	1.414	1.188			16	0-30	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	0.903	0.919			-2	0-30	PASS
1,2-Dichloroethane	Avg Resp	0.00	1.311	1.358			-4	0-30	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.326	0.345			-6	0-30	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	0.902	0.933			-3	0-30	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	0.874	0.900			-3	0-30	PASS
1,4-Dioxane	Avg Resp	0.00	0.174	0.169			3	0-30	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.459	0.516			-12	0-30	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.981	1.043			-6	0-30	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	1.021	1.026			0	0-30	PASS
t-1,3-Dichloropropene	Avg Resp	0.00	0.392	0.488			-24	0-30	PASS
Ethanol	Avg Resp	0.00	0.164	0.161			2	0-30	PASS
Ethyl Acetate	Avg Resp	0.00	0.269	0.296			-10	0-30	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	3.019	3.091			-2	0-30	PASS
Ethylbenzene	Avg Resp	0.00	1.443	1.534			-6	0-30	PASS
4-Ethyltoluene	Avg Resp	0.00	1.462	1.596			-9	0-30	PASS
Heptane	Avg Resp	0.00	0.071	0.075			-6	0-30	PASS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.806	0.699			13	0-30	PASS
Hexane	Avg Resp	0.00	1.315	1.324			-1	0-30	PASS
2-Hexanone	Avg Resp	0.00	0.467	0.496			-6	0-30	PASS

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

ICV WORK ORDER:	099-14-522-198-5985	ANALYST:	460
INSTRUMENT NAME:	GC/MS YY	REVIEWED BY:	794
INITIAL BATCH:	D131227IC	DATE REVIEWED:	1/6/14 15:20
INITIAL DATE ANALYZED	12/27/13 6:38	ICV DATE ANALYZED	12/27/13 9:13

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	2.294	2.516			-10	0-30	PASS
Methylene Chloride	Avg Resp	0.00	0.824	0.862			-5	0-30	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.263	0.287			-9	0-30	PASS
Naphthalene	Avg Resp	0.00	1.589	1.498			6	0-30	PASS
o-Xylene	Avg Resp	0.00	1.127	1.171			-4	0-30	PASS
p/m-Xylene	Avg Resp	0.00	1.128	1.174			-4	0-30	PASS
Propene	Avg Resp	0.00	0.928	0.953			-3	0-30	PASS
Styrene	Avg Resp	0.00	0.818	0.876			-7	0-30	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.719	0.758			-5	0-30	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.798	1.885			-5	0-30	PASS
Tetrachloroethene	Avg Resp	0.00	0.613	0.623			-2	0-30	PASS
Tetrahydrofuran	Avg Resp	0.00	1.110	1.188			-7	0-30	PASS
Toluene	Avg Resp	0.00	1.160	1.234			-6	0-30	PASS
Trichloroethene	Avg Resp	0.00	0.357	0.374			-5	0-30	PASS
Trichlorofluoromethane	Avg Resp	0.00	1.780	1.401			21	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	1.791	1.876			-5	0-30	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	1.905	1.933			-1	0-30	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.295	0.311			-5	0-30	PASS
2-Chlorotoluene	Avg Resp	0.00	1.170	1.172			0	0-30	PASS
1,2,3-Trichloropropane	Avg Resp	0.00	0.680	0.676			1	0-30	PASS
Acrolein	Avg Resp	0.00	0.174	0.184			-6	0-30	PASS
Acrylonitrile	Avg Resp	0.00	0.802	0.828			-3	0-30	PASS
Methyl Methacrylate	Avg Resp	0.00	0.281	0.303			-8	0-30	PASS
Propane	Avg Resp	0.00	0.488	0.460			6	0-30	PASS
Butane	Avg Resp	0.00	0.598	0.574			4	0-30	PASS
Methanol	Avg Resp	0.00	0.105	0.106			0	0-30	PASS
2,2,4-Trimethyl Pentane	Avg Resp	0.00	1.398	1.382			1	0-30	PASS
Isobutane	Avg Resp	0.00	0.643	0.619			4	0-30	PASS
1,1,1,2-Tetrafluoroethane	Avg Resp	0.00	0.730	0.634			13	0-30	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.273	1.340			-5	0-30	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.00	0.875	0.884			-1	0-30	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	1.233	1.273			-3	0-30	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	0.739	0.692			6	0-30	PASS
Vinyl Acetate	Avg Resp	0.00	2.823	2.764			2	0-30	PASS
Vinyl Chloride	Avg Resp	0.00	0.486	0.510			-5	0-30	PASS
1,1-Difluoroethane	Avg Resp	0.00	1.099	1.108			-1	0-30	PASS
Isopropanol	**Avg Resp**	**0.00**	**1.407**	**0.809**			**42**	0-30	**FAIL**

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

ICV WORK ORDER:	099-14-522-198-5985	ANALYST:	460
INSTRUMENT NAME:	GC/MS YY	REVIEWED BY:	794
INITIAL BATCH:	D131227IC	DATE REVIEWED:	1/6/14 15:20
INITIAL DATE ANALYZED	12/27/13 6:38	ICV DATE ANALYZED	12/27/13 9:13

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_YY_DATA\2013\131227\DOD27DEC09.D\DOD27DEC09.rr

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA TO-15

Work Order #: 13-12-1614
Instrument: GC/MS YY
ICAL Batch ID: D131230IC
ICAL D/T Analyzed: 12/31/2013 01:31

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:21
Analyst: 326

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
Acetone	Avg Resp		0.249	0.240	0.225	0.218	0.208	0.202			0.224	0.00	8	0-30			PASS
Benzene	Avg Resp	0.857	0.835	0.899	0.832	0.787	0.739	0.660			0.801	0.00	10	0-30			PASS
Benzyl Chloride	Avg Resp		1.175	1.410	1.277	1.198	1.078	0.850			1.164	0.00	16	0-30			PASS
Bromodichloromethane	Avg Resp	0.680	0.658	0.722	0.668	0.626	0.582	0.521			0.637	0.00	11	0-30			PASS
Bromoform	Avg Resp	0.813	0.785	0.827	0.737	0.655	0.565	0.482			0.695	0.00	19	0-30			PASS
Bromomethane	Avg Resp	0.521	0.520	0.584	0.542	0.519	0.515	0.492			0.527	0.00	5	0-30			PASS
1,3-Butadiene	Avg Resp		0.325	0.377	0.351	0.332	0.331	0.310			0.338	0.00	7	0-30			PASS
2-Butanone	Avg Resp		2.392	2.535	2.322	2.188	2.048	1.824			2.218	0.00	12	0-30			PASS
Carbon Disulfide	Avg Resp	2.828	2.780	2.984	2.736	2.497	2.206	1.789			2.546	0.00	16	0-30			PASS
Carbon Tetrachloride	Avg Resp	0.673	0.649	0.707	0.652	0.612	0.570	0.519			0.626	0.00	10	0-30			PASS
Chlorobenzene	Avg Resp	1.055	1.013	1.071	0.985	0.917	0.839	0.735			0.945	0.00	13	0-30			PASS
Chloroethane	Avg Resp	0.228	0.238	0.267	0.248	0.238	0.232	0.225			0.240	0.00	6	0-30			PASS
Chloroform	Avg Resp	2.219	2.117	2.260	2.075	1.954	1.822	1.628			2.011	0.00	11	0-30			PASS
Chloromethane	Avg Resp	0.370	0.363	0.420	0.391	0.368	0.375	0.366			0.379	0.00	5	0-30			PASS
Cyclohexane	Avg Resp	0.498	0.494	0.539	0.495	0.461	0.420	0.355			0.466	0.00	13	0-30			PASS
Dibromochloromethane	Avg Resp	0.876	0.861	0.929	0.851	0.791	0.723	0.634			0.809	0.00	13	0-30			PASS
Dichlorodifluoromethane	Avg Resp	2.530	2.380	2.580	2.346	2.182	2.059	1.972			2.293	0.00	10	0-30			PASS
Diisopropyl Ether (DIPE)	Avg Resp	4.611	4.439	4.564	3.958	3.271	2.423				3.878	0.00	23	0-30			PASS
1,1-Dichloroethane	Avg Resp	1.919	1.858	2.018	1.874	1.767	1.662	1.483			1.797	0.00	10	0-30			PASS
1,1-Dichloroethene	Avg Resp	1.628	1.582	1.703	1.574	1.461	1.384	1.275			1.515	0.00	10	0-30			PASS
1,2-Dibromoethane	Avg Resp	0.737	0.731	0.776	0.715	0.665	0.610	0.537			0.682	0.00	12	0-30			PASS
Dichlorotetrafluoroethane	Avg Resp	1.586	1.523	1.639	1.500	1.377	1.267	1.075			1.424	0.00	14	0-30			PASS
1,2-Dichlorobenzene	Avg Resp	1.066	1.003	1.060	0.946	0.877	0.802	0.703			0.922	0.00	15	0-30			PASS
1,2-Dichloroethane	Avg Resp	1.477	1.423	1.555	1.439	1.370	1.306	1.226			1.400	0.00	8	0-30			PASS
1,2-Dichloropropane	Avg Resp	0.363	0.352	0.379	0.349	0.326	0.300	0.256			0.332	0.00	13	0-30			PASS
1,3-Dichlorobenzene	Avg Resp	1.098	1.028	1.081	0.933	0.849	0.750	0.644			0.912	0.00	19	0-30			PASS
1,4-Dichlorobenzene	Avg Resp	1.095	1.018	1.056	0.900	0.797	0.704	0.588			0.880	0.00	22	0-30			PASS
1,4-Dioxane	Avg Resp		0.176	0.200	0.188	0.174	0.160	0.133			0.172	0.00	14	0-30			PASS
c-1,3-Dichloropropene	Avg Resp	0.481	0.494	0.556	0.519	0.494	0.464	0.416			0.489	0.00	9	0-30			PASS
c-1,2-Dichloroethene	Avg Resp	1.019	1.012	1.109	1.031	0.979	0.927	0.837			0.988	0.00	9	0-30			PASS
t-1,2-Dichloroethene	Avg Resp	1.129	1.089	1.158	1.058	0.982	0.914	0.808			1.020	0.00	12	0-30			PASS
t-1,3-Dichloropropene	Avg Resp	0.398	0.420	0.486	0.460	0.440	0.421	0.391			0.431	0.00	8	0-30			PASS
Ethanol	Avg Resp		0.172	0.185	0.174	0.164	0.152	0.143			0.165	0.00	9	0-30			PASS
Ethyl Acetate	Avg Resp		0.321	0.366	0.329	0.284	0.225	0.166			0.282	0.00	26	0-30			PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	3.573	3.539	3.854	3.560	3.315	2.923	2.426			3.313	0.00	15	0-30			PASS
Ethylbenzene	Avg Resp	1.615	1.606	1.723	1.590	1.481	1.351	1.176			1.506	0.00	12	0-30			PASS
4-Ethyltoluene	Avg Resp	1.708	1.696	1.840	1.647	1.540	1.395	1.189			1.573	0.00	14	0-30			PASS
Heptane	Avg Resp		0.075	0.083	0.076	0.071	0.065	0.056			0.071	0.00	13	0-30			PASS
Hexachloro-1,3-Butadiene	Avg Resp		1.052	0.816	0.712	0.609	0.525				0.743	0.00	28	0-30			PASS
Hexane	Avg Resp	1.631	1.590	1.642	1.454	1.246	0.978	0.701			1.320	0.00	28	0-30			PASS
2-Hexanone	Avg Resp	0.504	0.545	0.564	0.522	0.484	0.439	0.356			0.488	0.00	15	0-30			PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp		2.503	2.756	2.568	2.440	2.301	2.035			2.434	0.00	10	0-30			PASS
Methylene Chloride	Avg Resp		0.983	0.920	0.847	0.793	0.749	0.668			0.827	0.00	14	0-30			PASS
4-Methyl-2-Pentanone	Avg Resp		0.298	0.323	0.300	0.280	0.255	0.215			0.279	0.00	14	0-30			PASS
Naphthalene	Avg Resp		2.084	1.760	1.680	1.540	1.319				1.677	0.00	17	0-30			PASS

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA TO-15

Work Order #: 13-12-1614
Instrument: GC/MS YY
ICAL Batch ID: D131230IC
ICAL D/T Analyzed: 12/31/2013 01:31

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:21
Analyst: 326

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
o-Xylene	Avg Resp	1.312	1.292	1.373	1.253	1.153	1.022	0.852			1.180	0.00	16	0-30			PASS
p/m-Xylene	Avg Resp	1.379	1.358	1.415	1.278	1.135	0.963	0.739			1.181	0.00	21	0-30			PASS
Propene	Avg Resp		1.058	1.136	1.031	0.918	0.816	0.726			0.947	0.00	16	0-30			PASS
Styrene	Avg Resp	0.864	0.911	1.003	0.928	0.871	0.801	0.705			0.869	0.00	11	0-30			PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.826	0.831	0.923	0.859	0.810	0.730	0.632			0.802	0.00	12	0-30			PASS
Tert-Butyl Alcohol (TBA)	Avg Resp		2.100	2.365	2.179	2.013	1.780	1.493			1.988	0.00	16	0-30			PASS
Tetrachloroethene	Avg Resp	0.674	0.649	0.675	0.609	0.552	0.490	0.425			0.582	0.00	17	0-30			PASS
Tetrahydrofuran	Avg Resp		1.115	1.330	1.249	1.186	1.111	0.988			1.163	0.00	10	0-30			PASS
Toluene	Avg Resp	1.278	1.245	1.324	1.221	1.135	1.047	0.913			1.166	0.00	12	0-30			PASS
Trichloroethene	Avg Resp	0.405	0.398	0.424	0.388	0.358	0.322	0.274			0.367	0.00	14	0-30			PASS
Trichlorofluoromethane	Avg Resp	1.582	1.515	1.629	1.506	1.427	1.382	1.943			1.569	0.00	12	0-30			PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	2.068	1.978	2.080	1.898	1.721	1.518	1.252			1.788	0.00	17	0-30			PASS
1,1,1-Trichloroethane	Avg Resp	2.153	2.084	2.248	2.082	1.970	1.856	1.688			2.011	0.00	9	0-30			PASS
1,1,2-Trichloroethane	Avg Resp	0.338	0.329	0.352	0.325	0.303	0.277	0.242			0.309	0.00	12	0-30			PASS
2-Chlorotoluene	Avg Resp	1.347	1.331	1.471	1.325	1.251	1.109	0.971			1.258	0.00	13	0-30			PASS
1,2,3-Trichloropropane	Avg Resp	0.830	0.794	0.845	0.762	0.718	0.636	0.550			0.734	0.00	15	0-30			PASS
Acrolein	Avg Resp		0.170	0.197	0.189	0.183	0.179	0.177			0.182	0.00	5	0-30			PASS
Acrylonitrile	Avg Resp		0.832	0.432	0.870	0.863	0.804	0.771			0.762	0.00	22	0-30			PASS
Methyl Methacrylate	Avg Resp		0.298	0.337	0.313	0.295	0.275	0.241			0.293	0.00	11	0-30			PASS
Propane	Avg Resp			0.670	0.591	0.498	0.412	0.333			0.501	0.00	27	0-30			PASS
Butane	Avg Resp		0.650	0.701	0.642	0.591	0.551	0.479			0.602	0.00	13	0-30			PASS
Methanol	Avg Resp		0.118	0.114	0.107	0.103	0.100	0.095			0.106	0.00	8	0-30			PASS
2,2,4-Trimethyl Pentane	Avg Resp	1.716	1.635	1.740	1.564	1.404	1.163	0.901			1.446	0.00	22	0-30			PASS
Isobutane	Avg Resp		0.757	0.778	0.705	0.631	0.562	0.473			0.651	0.00	18	0-30			PASS
1,1,1,2-Tetrafluoroethane	Avg Resp	0.675	0.656	0.808	0.793	0.711	0.710	0.745			0.728	0.00	8	0-30			PASS
1,3,5-Trimethylbenzene	Avg Resp	1.515	1.494	1.597	1.433	1.334	1.209	1.035			1.374	0.00	14	0-30			PASS
1,1,2,2-Tetrachloroethane	Avg Resp	1.115	1.068	1.084	0.967	0.883	0.773	0.618			0.930	0.00	20	0-30			PASS
1,2,4-Trimethylbenzene	Avg Resp	1.586	1.509	1.600	1.394	1.249	1.080	0.868			1.327	0.00	21	0-30			PASS
1,2,4-Trichlorobenzene	Avg Resp	0.769	0.833	0.753	0.710	0.643	0.570				0.713	0.00	13	0-30			PASS
Vinyl Acetate	Avg Resp	3.078	2.992	3.375	3.151	2.945	2.729	2.361			2.947	0.00	11	0-30			PASS
Vinyl Chloride	Avg Resp	0.468	0.473	0.535	0.498	0.474	0.466	0.453			0.481	0.00	6	0-30			PASS
1,1-Difluoroethane	Avg Resp	1.194	1.147	1.288	1.182	1.107	1.029	1.067			1.145	0.00	8	0-30			PASS
Isopropanol	Avg Resp		0.819	0.953	0.878	1.261	1.488	1.605			1.167	0.00	29	0-30			PASS

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA TO-15

Work Order #: 13-12-1614
Instrument: GC/MS YY
ICAL Batch ID: D131230IC
ICAL D/T Analyzed: 12/31/2013 01:31

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:21
Analyst: 326

Data Files:

Level #	D/T Analyzed	Data File
1	12/31/2013 01:31	W:\GCMS_YY_DATA\2013\131230\DOD30DEC20.D\DOD30DEC20.rr
2	12/31/2013 00:45	W:\GCMS_YY_DATA\2013\131230\DOD30DEC19.D\DOD30DEC19.rr
3	12/30/2013 23:55	W:\GCMS_YY_DATA\2013\131230\DOD30DEC18.D\DOD30DEC18.rr
4	12/30/2013 23:09	W:\GCMS_YY_DATA\2013\131230\DOD30DEC17.D\DOD30DEC17.rr
5	12/30/2013 22:22	W:\GCMS_YY_DATA\2013\131230\DOD30DEC16.D\DOD30DEC16.rr
6	12/30/2013 21:32	W:\GCMS_YY_DATA\2013\131230\DOD30DEC15.D\DOD30DEC15.rr
7	12/30/2013 20:42	W:\GCMS_YY_DATA\2013\131230\DOD30DEC14.D\DOD30DEC14.rr

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

ICV WORK ORDER:	099-14-522-205-5985	ANALYST:	326
INSTRUMENT NAME:	GC/MS YY	REVIEWED BY:	794
INITIAL BATCH:	D131230IC	DATE REVIEWED:	1/6/14 15:21
INITIAL DATE ANALYZED	12/31/13 1:31	ICV DATE ANALYZED	12/31/13 2:21

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Acetone	Avg Resp	0.00	0.224	0.218			3	0-30	PASS
Benzene	Avg Resp	0.00	0.801	0.842			-5	0-30	PASS
Benzyl Chloride	Avg Resp	0.00	1.164	1.267			-9	0-30	PASS
Bromodichloromethane	Avg Resp	0.00	0.637	0.690			-8	0-30	PASS
Bromoform	Avg Resp	0.00	0.695	0.689			1	0-30	PASS
Bromomethane	Avg Resp	0.00	0.527	0.569			-8	0-30	PASS
1,3-Butadiene	Avg Resp	0.00	0.338	0.363			-7	0-30	PASS
2-Butanone	Avg Resp	0.00	2.218	2.379			-7	0-30	PASS
Carbon Disulfide	Avg Resp	0.00	2.546	2.801			-10	0-30	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.626	0.677			-8	0-30	PASS
Chlorobenzene	Avg Resp	0.00	0.945	0.957			-1	0-30	PASS
Chloroethane	Avg Resp	0.00	0.240	0.248			-4	0-30	PASS
Chloroform	Avg Resp	0.00	2.011	2.100			-4	0-30	PASS
Chloromethane	Avg Resp	0.00	0.379	0.408			-8	0-30	PASS
Cyclohexane	Avg Resp	0.00	0.466	0.487			-5	0-30	PASS
Dibromochloromethane	Avg Resp	0.00	0.809	0.846			-4	0-30	PASS
Dichlorodifluoromethane	Avg Resp	0.00	2.293	2.438			-6	0-30	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	3.878	3.269			16	0-30	PASS
1,1-Dichloroethane	Avg Resp	0.00	1.797	1.883			-5	0-30	PASS
1,1-Dichloroethene	Avg Resp	0.00	1.515	1.616			-7	0-30	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.682	0.696			-2	0-30	PASS
Dichlorotetrafluoroethane	Avg Resp	0.00	1.424	1.228			14	0-30	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	0.922	0.894			3	0-30	PASS
1,2-Dichloroethane	Avg Resp	0.00	1.400	1.479			-6	0-30	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.332	0.349			-5	0-30	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	0.912	0.875			4	0-30	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	0.880	0.821			7	0-30	PASS
1,4-Dioxane	Avg Resp	0.00	0.172	0.166			3	0-30	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.489	0.535			-9	0-30	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.988	1.027			-4	0-30	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	1.020	1.015			0	0-30	PASS
t-1,3-Dichloropropene	Avg Resp	0.00	0.431	0.515			-19	0-30	PASS
Ethanol	Avg Resp	0.00	0.165	0.158			4	0-30	PASS
Ethyl Acetate	Avg Resp	0.00	0.282	0.293			-4	0-30	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	3.313	3.207			3	0-30	PASS
Ethylbenzene	Avg Resp	0.00	1.506	1.548			-3	0-30	PASS
4-Ethyltoluene	Avg Resp	0.00	1.573	1.631			-4	0-30	PASS
Heptane	Avg Resp	0.00	0.071	0.074			-5	0-30	PASS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.743	0.614			17	0-30	PASS
Hexane	Avg Resp	0.00	1.320	1.322			0	0-30	PASS
2-Hexanone	Avg Resp	0.00	0.488	0.503			-3	0-30	PASS

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

ICV WORK ORDER:	099-14-522-205-5985	ANALYST:	326
INSTRUMENT NAME:	GC/MS YY	REVIEWED BY:	794
INITIAL BATCH:	D131230IC	DATE REVIEWED:	1/6/14 15:21
INITIAL DATE ANALYZED	12/31/13 1:31	ICV DATE ANALYZED	12/31/13 2:21

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	2.434	2.543			-5	0-30	PASS
Methylene Chloride	Avg Resp	0.00	0.827	0.864			-5	0-30	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.279	0.298			-7	0-30	PASS
Naphthalene	Avg Resp	0.00	1.677	1.459			13	0-30	PASS
o-Xylene	Avg Resp	0.00	1.180	1.191			-1	0-30	PASS
p/m-Xylene	Avg Resp	0.00	1.181	1.184			0	0-30	PASS
Propene	Avg Resp	0.00	0.947	1.062			-12	0-30	PASS
Styrene	Avg Resp	0.00	0.869	0.875			-1	0-30	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.802	0.784			2	0-30	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.988	2.005			-1	0-30	PASS
Tetrachloroethene	Avg Resp	0.00	0.582	0.585			-1	0-30	PASS
Tetrahydrofuran	Avg Resp	0.00	1.163	1.238			-6	0-30	PASS
Toluene	Avg Resp	0.00	1.166	1.220			-5	0-30	PASS
Trichloroethene	Avg Resp	0.00	0.367	0.381			-4	0-30	PASS
Trichlorofluoromethane	Avg Resp	0.00	1.569	1.559			1	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	1.788	1.867			-4	0-30	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	2.011	2.063			-3	0-30	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.309	0.322			-4	0-30	PASS
2-Chlorotoluene	Avg Resp	0.00	1.258	1.210			4	0-30	PASS
1,2,3-Trichloropropane	Avg Resp	0.00	0.734	0.707			4	0-30	PASS
Acrolein	Avg Resp	0.00	0.182	0.186			-2	0-30	PASS
Acrylonitrile	Avg Resp	0.00	0.762	0.868			-14	0-30	PASS
Methyl Methacrylate	Avg Resp	0.00	0.293	0.306			-4	0-30	PASS
Propane	Avg Resp	0.00	0.501	0.520			-4	0-30	PASS
Butane	Avg Resp	0.00	0.602	0.569			6	0-30	PASS
Methanol	Avg Resp	0.00	0.106	0.097			8	0-30	PASS
2,2,4-Trimethyl Pentane	Avg Resp	0.00	1.446	1.432			1	0-30	PASS
Isobutane	Avg Resp	0.00	0.651	0.624			4	0-30	PASS
1,1,1,2-Tetrafluoroethane	Avg Resp	0.00	0.728	0.721			1	0-30	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.374	1.372			0	0-30	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.00	0.930	0.898			3	0-30	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	1.327	1.294			2	0-30	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	0.713	0.606			15	0-30	PASS
Vinyl Acetate	Avg Resp	0.00	2.947	2.910			1	0-30	PASS
Vinyl Chloride	Avg Resp	0.00	0.481	0.508			-6	0-30	PASS
1,1-Difluoroethane	Avg Resp	0.00	1.145	1.244			-9	0-30	PASS
Isopropanol	Avg Resp	0.00	1.167	1.220			-5	0-30	PASS

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

ICV WORK ORDER:	099-14-522-205-5985	ANALYST:	326
INSTRUMENT NAME:	GC/MS YY	REVIEWED BY:	794
INITIAL BATCH:	D131230IC	DATE REVIEWED:	1/6/14 15:21
INITIAL DATE ANALYZED	12/31/13 1:31	ICV DATE ANALYZED	12/31/13 2:21

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_YY_DATA\2013\131230\DOD30DEC21.D\DOD30DEC21.rr

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Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Sample Data

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 18:10
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC16.D\28DEC16.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 1 **CLIENT SAMPLE NUMBER: VW-40-04**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	2.7	1	2.7	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	0.41	1	0.41	0.052	0.20	0.50	1	ppb (v/v)	J
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.32	1	0.32	0.25	0.50	1.2	1	ppb (v/v)	J
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.00	1	ND	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	10	1	10	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.52	1	0.52	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.39	1	0.39	0.25	0.50	1.2	1	ppb (v/v)	J
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	0.00	1	ND	0.087	0.20	0.50	1	ppb (v/v)	
t-1,2-Dichloroethene	0.00	1	ND	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	0.00	1	ND	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.064	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
4-Ethyltoluene	0.00	1	ND	0.057	0.20	0.50	1	ppb (v/v)	
Heptane	0.41	1	0.41	0.21	0.50	1.2	1	ppb (v/v)	J
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 18:10
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC16.D\28DEC16.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 1 **CLIENT SAMPLE NUMBER: VW-40-04**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	1.5	1	1.5	0.072	0.10	0.50	1	ppb (v/v)	
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	4.4	1	4.4	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	0.064	1	0.064	0.055	0.10	0.50	1	ppb (v/v)	J
p/m-Xylene	0.23	1	0.23	0.15	0.20	1.0	1	ppb (v/v)	J
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	41	1	41	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.47	1	0.47	0.080	0.20	0.50	1	ppb (v/v)	J
Trichloroethene	0.60	1	0.60	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	1.3	1	1.3	0.48	1.0	2.5	1	ppb (v/v)	J
Methanol	1.5	1	1.5	1.3	1.5	15	1	ppb (v/v)	BJ
1,3,5-Trimethylbenzene	0.00	1	ND	0.051	0.20	0.50	1	ppb (v/v)	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.00	1	ND	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	0.12	1	ND	0.22	0.50	1.2	1	ppb (v/v)	
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	]km

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 19:00
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC17.D\28DEC17.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 2 **CLIENT SAMPLE NUMBER: MW-40-32**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	11	1	11	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	0.32	1	0.32	0.052	0.20	0.50	1	ppb (v/v)	J
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.52	1	0.52	0.18	0.50	1.2	1	ppb (v/v)	J
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.14	1	ND	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.18	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	1.5	1	1.5	0.087	0.20	0.50	1	ppb (v/v)	
t-1,2-Dichloroethene	0.00	1	ND	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	6.8	1	6.8	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	1.8	1	1.8	0.067	0.10	0.50	1	ppb (v/v)	
4-Ethyltoluene	1.0	1	1.0	0.057	0.20	0.50	1	ppb (v/v)	
Heptane	0.25	1	0.25	0.21	0.50	1.2	1	ppb (v/v)	J
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 19:00
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC17.D\28DEC17.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 2 **CLIENT SAMPLE NUMBER: MW-40-32**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	0.14	1	0.14	0.072	0.10	0.50	1	ppb (v/v)	J
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.19	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.26	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.13	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	3.4	1	3.4	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	7.6	1	7.6	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.26	1	0.26	0.064	0.20	0.50	1	ppb (v/v)	J
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.24	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	4.3	1	4.3	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	3.0	1	3.0	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	4.4	1	4.4	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	0.98	1	0.98	0.48	1.0	2.5	1	ppb (v/v)	J
Methanol	2.4	1	2.4	1.3	1.5	15	1	ppb (v/v)	BJ
1,3,5-Trimethylbenzene	0.95	1	0.95	0.051	0.20	0.50	1	ppb (v/v)	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	3.7	1	3.7	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	0.34	1	0.34	0.22	0.50	1.2	1	ppb (v/v)	J
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	]km

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 19:50
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC18.D\28DEC18.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 3 **CLIENT SAMPLE NUMBER: VW-40-06**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	6.2	1	6.2	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	4.1	1	4.1	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.65	1	0.65	0.18	0.50	1.2	1	ppb (v/v)	J
Carbon Disulfide	0.40	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	1.6	1	1.6	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.80	1	0.80	0.25	0.50	1.2	1	ppb (v/v)	J
1,1-Dichloroethene	0.15	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	22	1	22	0.087	0.20	0.50	1	ppb (v/v)	
t-1,2-Dichloroethene	18	1	18	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	6.9	1	6.9	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.85	1	0.85	0.067	0.10	0.50	1	ppb (v/v)	
4-Ethyltoluene	0.56	1	0.56	0.057	0.20	0.50	1	ppb (v/v)	
Heptane	0.63	1	0.63	0.21	0.50	1.2	1	ppb (v/v)	J
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 19:50
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC18.D\28DEC18.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 3 **CLIENT SAMPLE NUMBER: VW-40-06**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	6.3	1	6.3	0.072	0.10	0.50	1	ppb (v/v)	
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.098	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.13	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	1.7	1	1.7	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	3.5	1	3.5	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.16	1	0.16	0.064	0.20	0.50	1	ppb (v/v)	J
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.35	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	2.3	1	2.3	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	1.9	1	1.9	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	22	1	22	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	27	1	27	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	0.00	1	ND	1.3	1.5	15	1	ppb (v/v)	
1,3,5-Trimethylbenzene	0.61	1	0.61	0.051	0.20	0.50	1	ppb (v/v)	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	2.2	1	2.2	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	120	1	120	0.22	0.50	1.2	1	ppb (v/v)	E
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	]km

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/02/2014 19:06
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN12.D\02JAN12.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

3 **CLIENT SAMPLE NUMBER: VW-40-06**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Vinyl Chloride	57	2.5	140	0.56	1.2	3.1	1	ppb (v/v)	D

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 20:40
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC19.D\28DEC19.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 4 **CLIENT SAMPLE NUMBER: IW-03**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	1.7	1	1.7	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	2.7	1	2.7	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.00	1	ND	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	2.7	1	2.7	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	2.2	1	2.2	0.087	0.20	0.50	1	ppb (v/v)	
t-1,2-Dichloroethene	71	1	71	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	4.2	1	4.2	0.87	2.0	5.0	1	ppb (v/v)	J
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.42	1	0.42	0.067	0.10	0.50	1	ppb (v/v)	J
4-Ethyltoluene	0.32	1	0.32	0.057	0.20	0.50	1	ppb (v/v)	J
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 20:40
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC19.D\28DEC19.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 4 **CLIENT SAMPLE NUMBER: IW-03**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	8.0	1	8.0	0.072	0.10	0.50	1	ppb (v/v)	
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	1.0	1	1.0	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	1.8	1	1.8	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	0.28	1	0.28	0.067	0.10	0.50	1	ppb (v/v)	J
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.95	1	0.95	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	1.0	1	1.0	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	100	1	100	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	0.00	1	ND	1.3	1.5	15	1	ppb (v/v)	
1,3,5-Trimethylbenzene	0.43	1	0.43	0.051	0.20	0.50	1	ppb (v/v)	J
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	1.3	1	1.3	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	150	1	150	0.22	0.50	1.2	1	ppb (v/v)	E
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	]km

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/02/2014 19:54
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN13.D\02JAN13.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

4 **CLIENT SAMPLE NUMBER: IW-03**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Vinyl Chloride	69	2.5	170	0.56	1.2	3.1	1	ppb (v/v)	D

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 21:30
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC20.D\28DEC20.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 5 **CLIENT SAMPLE NUMBER: IW-01**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	2.6	1	2.6	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	1.6	1	1.6	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.00	1	ND	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.31	1	0.31	0.16	0.20	0.50	1	ppb (v/v)	J
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	2.3	1	2.3	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	200	1	200	0.087	0.20	0.50	1	ppb (v/v)	E
t-1,2-Dichloroethene	160	1	160	0.13	0.20	0.50	1	ppb (v/v)	E
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	5.8	1	5.8	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.31	1	0.31	0.067	0.10	0.50	1	ppb (v/v)	J
4-Ethyltoluene	0.25	1	0.25	0.057	0.20	0.50	1	ppb (v/v)	J
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 21:30
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC20.D\28DEC20.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 5 **CLIENT SAMPLE NUMBER: IW-01**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	10	1	10	0.072	0.10	0.50	1	ppb (v/v)	
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	0.74	1	0.74	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	1.2	1	1.2	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.10	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	3.6	1	3.6	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.41	1	0.41	0.080	0.20	0.50	1	ppb (v/v)	J
Trichloroethene	92	1	92	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	48	1	48	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	0.00	1	ND	1.3	1.5	15	1	ppb (v/v)	
1,3,5-Trimethylbenzene	0.32	1	0.32	0.051	0.20	0.50	1	ppb (v/v)	J
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	1.1	1	1.1	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	300	1	300	0.22	0.50	1.2	1	ppb (v/v)	E
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	]km

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/02/2014 20:40
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN14.D\02JAN14.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

 # 5 **CLIENT SAMPLE NUMBER: IW-01**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
c-1,2-Dichloroethene	62	4	250	0.35	0.80	2.0	1	ppb (v/v)	D
t-1,2-Dichloroethene	48	4	190	0.51	0.80	2.0	1	ppb (v/v)	D
Vinyl Chloride	120	4	490	0.89	2.0	5.0	1	ppb (v/v)	DE

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/03/2014 20:52
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140103\03JAN20.D\03JAN20.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

 # 5 **CLIENT SAMPLE NUMBER: IW-01**

LCS/MB BATCH: D140103L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Vinyl Chloride	63	8	500	1.8	4.0	10	1	ppb (v/v)	D

Return to Contents

RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 22:20
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC21.D\28DEC21.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 6 **CLIENT SAMPLE NUMBER: VW-40-03**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	16	1	16	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	3.6	1	3.6	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.23	1	0.23	0.18	0.50	1.2	1	ppb (v/v)	J
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.34	1	0.34	0.16	0.20	0.50	1	ppb (v/v)	J
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.23	1	0.23	0.10	0.20	0.50	1	ppb (v/v)	J
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	8.5	1	8.5	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	290	1	290	0.087	0.20	0.50	1	ppb (v/v)	E
t-1,2-Dichloroethene	270	1	270	0.13	0.20	0.50	1	ppb (v/v)	E
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	4.0	1	4.0	0.87	2.0	5.0	1	ppb (v/v)	J
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.43	1	0.43	0.067	0.10	0.50	1	ppb (v/v)	J
4-Ethyltoluene	0.16	1	0.16	0.057	0.20	0.50	1	ppb (v/v)	J
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 22:20
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC21.D\28DEC21.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 6 **CLIENT SAMPLE NUMBER: VW-40-03**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	2.2	1	2.2	0.072	0.10	0.50	1	ppb (v/v)	
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	0.73	1	0.73	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	1.7	1	1.7	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.087	1	0.087	0.064	0.20	0.50	1	ppb (v/v)	J
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	3.0	1	3.0	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.94	1	0.94	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	130	1	130	0.046	0.10	0.50	1	ppb (v/v)	E
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	0.00	1	ND	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	0.00	1	ND	1.3	1.5	15	1	ppb (v/v)	
1,3,5-Trimethylbenzene	0.16	1	0.16	0.051	0.20	0.50	1	ppb (v/v)	J
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.61	1	0.61	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	470	1	470	0.22	0.50	1.2	1	ppb (v/v)	E
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	]km

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/02/2014 21:25
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN15.D\02JAN15.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

6 **CLIENT SAMPLE NUMBER: VW-40-03**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
c-1,2-Dichloroethene	49	10	490	0.87	2.0	5.0	1	ppb (v/v)	D
t-1,2-Dichloroethene	44	10	440	1.3	2.0	5.0	1	ppb (v/v)	D
Trichloroethene	20	10	200	0.46	1.0	5.0	1	ppb (v/v)	D
Vinyl Chloride	110	10	1100	2.2	5.0	12	1	ppb (v/v)	DE

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/03/2014 21:36
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140103\03JAN21.D\03JAN21.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

6 **CLIENT SAMPLE NUMBER: VW-40-03**

LCS/MB BATCH: D140103L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Vinyl Chloride	59	20	1200	4.4	10	25	1	ppb (v/v)	D

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 23:10
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC22.D\28DEC22.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 7 **CLIENT SAMPLE NUMBER: VW-40-02**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	0.00	1	ND	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	2.9	1	2.9	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.00	1	ND	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.54	1	0.54	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	20	1	20	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	500	1	500	0.087	0.20	0.50	1	ppb (v/v)	E
t-1,2-Dichloroethene	490	1	490	0.13	0.20	0.50	1	ppb (v/v)	E
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	0.00	1	ND	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.096	1	0.096	0.067	0.10	0.50	1	ppb (v/v)	J
4-Ethyltoluene	0.00	1	ND	0.057	0.20	0.50	1	ppb (v/v)	
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 23:10
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC22.D\28DEC22.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 7 **CLIENT SAMPLE NUMBER: VW-40-02**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	31	1	31	0.072	0.10	0.50	1	ppb (v/v)	
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.13	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	0.15	1	0.15	0.055	0.10	0.50	1	ppb (v/v)	J
p/m-Xylene	0.31	1	0.31	0.15	0.20	1.0	1	ppb (v/v)	J
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.71	1	0.71	0.50	1.0	2.5	1	ppb (v/v)	J
Tetrachloroethene	2.0	1	2.0	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.58	1	0.58	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	12	1	12	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	130	1	130	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	0.00	1	ND	1.3	1.5	15	1	ppb (v/v)	
1,3,5-Trimethylbenzene	0.072	1	0.072	0.051	0.20	0.50	1	ppb (v/v)	J
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.00	1	ND	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	1100	1	1100	0.22	0.50	1.2	1	ppb (v/v)	E
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	]km

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/02/2014 22:10
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN16.D\02JAN16.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

7 **CLIENT SAMPLE NUMBER: VW-40-02**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
c-1,2-Dichloroethene	58	16	930	1.4	3.2	8.0	1	ppb (v/v)	D
t-1,2-Dichloroethene	52	16	830	2.0	3.2	8.0	1	ppb (v/v)	D
Vinyl Chloride	140	16	2200	3.6	8.0	20	1	ppb (v/v)	DE

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/02/2014 22:54
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN17.D\02JAN17.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

7 **CLIENT SAMPLE NUMBER: VW-40-02**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Vinyl Chloride	41	40	1700	8.9	20	50	1	ppb (v/v)	D

Return to Contents

RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 23:59
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC23.D\28DEC23.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 8 **CLIENT SAMPLE NUMBER: DUP-1**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	0.00	1	ND	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	3.1	1	3.1	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.00	1	ND	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.31	1	0.31	0.16	0.20	0.50	1	ppb (v/v)	J
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	21	1	21	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	570	1	570	0.087	0.20	0.50	1	ppb (v/v)	E
t-1,2-Dichloroethene	550	1	550	0.13	0.20	0.50	1	ppb (v/v)	E
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	0.00	1	ND	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.31	1	0.31	0.067	0.10	0.50	1	ppb (v/v)	J
4-Ethyltoluene	0.19	1	0.19	0.057	0.20	0.50	1	ppb (v/v)	J
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 23:59
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC23.D\28DEC23.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 8 **CLIENT SAMPLE NUMBER: DUP-1**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	33	1	33	0.072	0.10	0.50	1	ppb (v/v)	
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.20	1	0.20	0.16	0.50	1.2	1	ppb (v/v)	J
o-Xylene	0.49	1	0.49	0.055	0.10	0.50	1	ppb (v/v)	J
p/m-Xylene	1.2	1	1.2	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	3.2	1	3.2	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.89	1	0.89	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	13	1	13	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	120	1	120	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	0.00	1	ND	1.3	1.5	15	1	ppb (v/v)	
1,3,5-Trimethylbenzene	0.47	1	0.47	0.051	0.20	0.50	1	ppb (v/v)	J
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.74	1	0.74	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	1100	1	1100	0.22	0.50	1.2	1	ppb (v/v)	E
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	]km

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/02/2014 23:39
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN18.D\02JAN18.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

8 **CLIENT SAMPLE NUMBER: DUP-1**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
c-1,2-Dichloroethene	64	16	1000	1.4	3.2	8.0	1	ppb (v/v)	D
t-1,2-Dichloroethene	57	16	910	2.0	3.2	8.0	1	ppb (v/v)	D
Vinyl Chloride	140	16	2200	3.6	8.0	20	1	ppb (v/v)	DE

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/03/2014 02:18
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN19.D\02JAN19.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

8 **CLIENT SAMPLE NUMBER: DUP-1**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Vinyl Chloride	49	40	1900	8.9	20	50	1	ppb (v/v)	D

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/29/2013 01:34
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC25.D\28DEC25.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 9 **CLIENT SAMPLE NUMBER: FB-1**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	4.4	1	4.4	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	0.00	1	ND	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	2.5	1	2.5	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.54	1	0.54	0.24	0.50	1.2	1	ppb (v/v)	J
Cyclohexane	0.00	1	ND	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.54	1	0.54	0.25	0.50	1.2	1	ppb (v/v)	J
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.078	1	0.078	0.067	0.10	0.50	1	ppb (v/v)	J
1,4-Dioxane	1.4	1	1.4	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	0.00	1	ND	0.087	0.20	0.50	1	ppb (v/v)	
t-1,2-Dichloroethene	0.00	1	ND	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	6.8	1	6.8	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	2.4	1	2.4	1.0	2.5	5.0	1	ppb (v/v)	J
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.094	1	0.094	0.067	0.10	0.50	1	ppb (v/v)	J
4-Ethyltoluene	0.22	1	0.22	0.057	0.20	0.50	1	ppb (v/v)	J
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.51	1	0.51	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1614
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/29/2013 01:34
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC25.D\28DEC25.rr

REVIEWED BY: 326
DATE REVIEWED: 01/04/2014 11:07
EXTRACTION: N/A
D/T EXTRACTED:

 # 9 **CLIENT SAMPLE NUMBER: FB-1**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	0.00	1	ND	0.072	0.10	0.50	1	ppb (v/v)	
2-Hexanone	0.77	1	0.77	0.44	0.50	1.2	1	ppb (v/v)	J
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.32	1	0.32	0.25	0.50	1.2	1	ppb (v/v)	J
4-Methyl-2-Pentanone	2.0	1	2.0	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	1.2	1	1.2	0.16	0.50	1.2	1	ppb (v/v)	J
o-Xylene	0.094	1	0.094	0.055	0.10	0.50	1	ppb (v/v)	J
p/m-Xylene	0.34	1	0.34	0.15	0.20	1.0	1	ppb (v/v)	J
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.47	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.34	1	0.34	0.080	0.20	0.50	1	ppb (v/v)	J
Trichloroethene	0.00	1	ND	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.064	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	0.92	1	0.92	0.48	1.0	2.5	1	ppb (v/v)	J
Methanol	22	1	22	1.3	1.5	15	1	ppb (v/v)	B
1,3,5-Trimethylbenzene	0.20	1	0.20	0.051	0.20	0.50	1	ppb (v/v)	J
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.52	1	0.52	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	1.0	1	1.0	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	0.00	1	ND	0.22	0.50	1.2	1	ppb (v/v)	
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	]km

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Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Quality Control Data

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA TO-15

MB Sample ID: 099-14-523-262
MB Batch ID: D131228L01
Instrument: GC/MS YY
Matrix: Air
Analyst: 460
D/T Analyzed: 12/28/2013 10:47
Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

Reviewed By: 326
D/T Reviewed: 01/02/2014 13:01
Extraction: N/A
D/T Extracted:

Work Order #: 13-12-1614

Sample#	Client Sample ID	D/T Analyzed	Data File
1	VW-40-04	12/28/2013 18:10	W:\GCMS_YY_DATA\2013\131228\28DEC16.D\28DEC16.rr
2	MW-40-32	12/28/2013 19:00	W:\GCMS_YY_DATA\2013\131228\28DEC17.D\28DEC17.rr
3	VW-40-06	12/28/2013 19:50	W:\GCMS_YY_DATA\2013\131228\28DEC18.D\28DEC18.rr
4	IW-03	12/28/2013 20:40	W:\GCMS_YY_DATA\2013\131228\28DEC19.D\28DEC19.rr
5	IW-01	12/28/2013 21:30	W:\GCMS_YY_DATA\2013\131228\28DEC20.D\28DEC20.rr
6	VW-40-03	12/28/2013 22:20	W:\GCMS_YY_DATA\2013\131228\28DEC21.D\28DEC21.rr
7	VW-40-02	12/28/2013 23:10	W:\GCMS_YY_DATA\2013\131228\28DEC22.D\28DEC22.rr
8	DUP-1	12/28/2013 23:59	W:\GCMS_YY_DATA\2013\131228\28DEC23.D\28DEC23.rr
9	FB-1	12/29/2013 01:34	W:\GCMS_YY_DATA\2013\131228\28DEC25.D\28DEC25.rr

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 099-14-523
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 10:47
ANALYST: 460
DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

REVIEWED BY: 326
DATE REVIEWED: 01/02/2014 13:01
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	0.00	1	ND	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	0.00	1	ND	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.00	1	ND	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.00	1	ND	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	0.00	1	ND	0.087	0.20	0.50	1	ppb (v/v)	
t-1,2-Dichloroethene	0.00	1	ND	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	0.00	1	ND	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
4-Ethyltoluene	0.00	1	ND	0.057	0.20	0.50	1	ppb (v/v)	
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	
Hexane	0.00	1	ND	0.072	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 099-14-523
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 10:47
ANALYST: 460
DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

REVIEWED BY: 326
DATE REVIEWED: 01/02/2014 13:01
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER:** **Method Blank**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.22	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	0.00	1	ND	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	0.00	1	ND	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.00	1	ND	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	0.00	1	ND	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	0.00	1	ND	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	3.0	1	3.0	1.3	1.5	15	1	ppb (v/v)	J
1,3,5-Trimethylbenzene	0.00	1	ND	0.051	0.20	0.50	1	ppb (v/v)	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.00	1	ND	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	0.00	1	ND	0.22	0.50	1.2	1	ppb (v/v)	
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	01/02/2014 13:01	LCS D/T ANALYZED:	12/28/2013 07:08
LCS/LCSD BATCH:	D131228L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/28/2013 07:58
LCS/LCSD SAMPLE I	**099-14-523-262**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	460	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	326				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Acetone	25.00	22.77	91	22.62	90	50-150	33-167	1	0-35	PASS	
Benzene	25.00	24.46	98	24.51	98	60-156	44-172	0	0-40	PASS	
Benzyl Chloride	25.00	25.48	102	25.04	100	50-150	33-167	2	0-35	PASS	
Bromodichloromethane	25.00	24.71	99	24.77	99	50-150	33-167	0	0-35	PASS	
Bromoform	25.00	24.73	99	24.83	99	62-134	50-146	0	0-38	PASS	
Bromomethane	25.00	24.72	99	24.84	99	50-150	33-167	1	0-35	PASS	
1,3-Butadiene	25.00	24.97	100	25.07	100	50-150	33-167	0	0-35	PASS	
2-Butanone	25.00	24.47	98	24.44	98	50-150	33-167	0	0-35	PASS	
Carbon Disulfide	25.00	25.75	103	25.82	103	50-150	33-167	0	0-35	PASS	
Carbon Tetrachloride	25.00	24.09	96	24.15	97	64-154	49-169	0	0-32	PASS	
Chlorobenzene	25.00	24.10	96	24.33	97	50-150	33-167	1	0-35	PASS	
Chloroethane	25.00	24.61	98	24.69	99	50-150	33-167	0	0-35	PASS	
Chloroform	25.00	23.66	95	23.69	95	50-150	33-167	0	0-35	PASS	
Chloromethane	25.00	24.86	99	25.17	101	50-150	33-167	1	0-35	PASS	
Cyclohexane	25.00	24.16	97	24.29	97	50-150	33-167	1	0-35	PASS	
Dibromochloromethane	25.00	24.70	99	24.98	100	50-150	33-167	1	0-35	PASS	
Dichlorodifluoromethane	25.00	23.59	94	23.73	95	50-150	33-167	1	0-35	PASS	
Diisopropyl Ether (DIPE)	25.00	19.33	77	19.34	77	50-150	33-167	0	0-35	PASS	
1,1-Dichloroethane	25.00	23.90	96	23.94	96	50-150	33-167	0	0-35	PASS	
1,1-Dichloroethene	25.00	24.40	98	24.54	98	50-150	33-167	1	0-35	PASS	
1,2-Dibromoethane	25.00	24.37	97	24.67	99	54-144	39-159	1	0-36	PASS	
Dichlorotetrafluoroethane	25.00	19.48	78	19.60	78	50-150	33-167	1	0-35	PASS	
1,2-Dichlorobenzene	25.00	21.67	87	21.42	86	34-160	13-181	1	0-47	PASS	
1,2-Dichloroethane	25.00	23.70	95	23.68	95	69-153	55-167	0	0-35	PASS	
1,2-Dichloropropane	25.00	24.35	97	24.42	98	67-157	52-172	0	0-35	PASS	
1,3-Dichlorobenzene	25.00	22.58	90	22.40	90	50-150	33-167	1	0-35	PASS	
1,4-Dichlorobenzene	25.00	22.15	89	21.77	87	36-156	16-176	2	0-47	PASS	
1,4-Dioxane	25.00	21.66	87	21.59	86	50-150	33-167	0	0-35	PASS	
c-1,3-Dichloropropene	25.00	25.71	103	25.82	103	61-157	45-173	0	0-35	PASS	
c-1,2-Dichloroethene	25.00	24.24	97	24.28	97	50-150	33-167	0	0-35	PASS	
t-1,2-Dichloroethene	25.00	23.13	93	23.24	93	50-150	33-167	0	0-35	PASS	
t-1,3-Dichloropropene	25.00	28.40	114	28.41	114	50-150	33-167	0	0-35	PASS	
Ethanol	100.0	89.88	90	89.66	90	50-150	33-167	0	0-35	PASS	
Ethyl Acetate	25.00	25.48	102	25.47	102	50-150	33-167	0	0-35	PASS	
Ethyl-t-Butyl Ether (ETBE)	25.00	22.82	91	22.95	92	50-150	33-167	1	0-35	PASS	
Ethylbenzene	25.00	24.83	99	25.15	101	52-154	35-171	1	0-38	PASS	
4-Ethyltoluene	25.00	24.87	99	24.95	100	50-150	33-167	0	0-35	PASS	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	01/02/2014 13:01	LCS D/T ANALYZED:	12/28/2013 07:08
LCS/LCSD BATCH:	D131228L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/28/2013 07:58
LCS/LCSD SAMPLE I	**099-14-523-262**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	460	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	326				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Heptane	25.00	24.50	98	24.52	98	50-150	33-167	0	0-35	PASS	
Hexachloro-1,3-Butadiene	25.00	20.42	82	20.87	83	50-150	33-167	2	0-35	PASS	
Hexane	25.00	23.30	93	23.30	93	50-150	33-167	0	0-35	PASS	
2-Hexanone	25.00	24.66	99	25.02	100	50-150	33-167	1	0-35	PASS	
Methyl-t-Butyl Ether (MTBE)	25.00	24.52	98	24.68	99	50-150	33-167	1	0-35	PASS	
Methylene Chloride	25.00	23.99	96	24.01	96	50-150	33-167	0	0-35	PASS	
4-Methyl-2-Pentanone	25.00	25.11	100	25.17	101	50-150	33-167	0	0-35	PASS	
Naphthalene	25.00	21.82	87	22.08	88	40-190	15-215	1	0-35	PASS	
o-Xylene	25.00	24.28	97	24.50	98	52-148	36-164	1	0-38	PASS	
p/m-Xylene	50.00	48.83	98	49.46	99	42-156	23-175	1	0-41	PASS	
Propene	25.00	24.69	99	25.16	101	50-150	33-167	2	0-35	PASS	
Styrene	25.00	24.82	99	25.02	100	50-150	33-167	1	0-35	PASS	
Tert-Amyl-Methyl Ether (TAME)	25.00	23.55	94	23.76	95	50-150	33-167	1	0-35	PASS	
Tert-Butyl Alcohol (TBA)	50.00	47.11	94	47.71	95	50-150	33-167	1	0-35	PASS	
Tetrachloroethene	25.00	23.84	95	24.11	96	56-152	40-168	1	0-40	PASS	
Tetrahydrofuran	25.00	24.59	98	24.43	98	50-150	33-167	1	0-35	PASS	
Toluene	25.00	24.82	99	25.21	101	56-146	41-161	2	0-43	PASS	
Trichloroethene	25.00	24.25	97	24.28	97	63-159	47-175	0	0-34	PASS	
Trichlorofluoromethane	25.00	18.20	73	18.51	74	50-150	33-167	2	0-35	PASS	
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.27	97	24.30	97	50-150	33-167	0	0-35	PASS	
1,1,1-Trichloroethane	25.00	23.18	93	23.21	93	50-150	33-167	0	0-35	PASS	
1,1,2-Trichloroethane	25.00	24.30	97	24.24	97	65-149	51-163	0	0-37	PASS	
2-Chlorotoluene	25.00	23.30	93	23.38	94	50-150	33-167	0	0-35	PASS	
1,2,3-Trichloropropane	25.00	23.17	93	23.26	93	50-150	33-167	0	0-35	PASS	
Acrolein	25.00	24.06	96	24.02	96	50-150	33-167	0	0-35	PASS	
Acrylonitrile	25.00	24.02	96	24.16	97	50-150	33-167	1	0-35	PASS	
Methyl Methacrylate	25.00	24.69	99	24.78	99	50-150	33-167	0	0-35	PASS	
Propane	50.00	46.13	92	47.04	94	50-150	33-167	2	0-35	PASS	
Butane	50.00	44.16	88	44.45	89	50-150	33-167	1	0-35	PASS	
Methanol	75.00	64.40	86	64.54	86	50-150	33-167	0	0-35	PASS	
2,2,4-Trimethyl Pentane	25.00	22.94	92	23.00	92	50-150	33-167	0	0-35	PASS	
Isobutane	50.00	44.96	90	45.41	91	50-150	33-167	1	0-35	PASS	
1,1,1,2-Tetrafluoroethane	25.00	23.95	96	24.79	99	50-150	33-167	3	0-35	PASS	
1,3,5-Trimethylbenzene	25.00	23.82	95	23.87	95	50-150	33-167	0	0-35	PASS	
1,1,2,2-Tetrachloroethane	25.00	23.35	93	23.48	94	50-150	33-167	1	0-35	PASS	
1,2,4-Trimethylbenzene	25.00	23.11	92	23.15	93	50-150	33-167	0	0-35	PASS	
1,2,4-Trichlorobenzene	25.00	21.68	87	22.00	88	50-150	33-167	1	0-35	PASS	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	01/02/2014 13:01	LCS D/T ANALYZED:	12/28/2013 07:08
LCS/LCSD BATCH:	D131228L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/28/2013 07:58
LCS/LCSD SAMPLE I	**099-14-523-262**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	460	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	326				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Vinyl Acetate	25.00	22.38	90	22.36	89	50-150	33-167	0	0-35	PASS	
Vinyl Chloride	25.00	24.44	98	24.55	98	45-177	23-199	0	0-36	PASS	
1,1-Difluoroethane	25.00	23.85	95	24.21	97	50-150	33-167	2	0-35	PASS	
Isopropanol	**25.00**	**15.60**	**62**	**22.83**	**91**	**50-150**	**33-167**	**38**	**0-35**	**FAIL**	**TX}**

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	DOD28DEC03.rr	W:\GCMS_YY_DATA\2013\131228\DOD28DEC03.D\
LCSD	DOD28DEC04.rr	W:\GCMS_YY_DATA\2013\131228\DOD28DEC04.D\

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SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1614 REVIEWED BY: 326

LCS/MB BATCH : D131228L01 DATE REVIEWED: 01/04/2014 11:07

MS BATCH : EXTRACTION : N/A

1 CLIENT SAMPLE NUMBER : VW-40-04

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC16.D\28DEC16.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 1810 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**101**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**100**	**47-137**	**PASS**	
Toluene-d8	**96**	**78-156**	**PASS**	

2 CLIENT SAMPLE NUMBER : MW-40-32

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC17.D\28DEC17.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 1900 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**103**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**100**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

3 CLIENT SAMPLE NUMBER : VW-40-06

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC18.D\28DEC18.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 1950 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**99**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**102**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

4 CLIENT SAMPLE NUMBER : IW-03

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC19.D\28DEC19.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 2040 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**115**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**102**	**47-137**	**PASS**	
Toluene-d8	**96**	**78-156**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1614 REVIEWED BY: 326

LCS/MB BATCH : D131228L01 DATE REVIEWED: 01/04/2014 11:07

MS BATCH : EXTRACTION : N/A

5 CLIENT SAMPLE NUMBER : IW-01

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC20.D\28DEC20.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 2130 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**107**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**103**	**47-137**	**PASS**	
Toluene-d8	**95**	**78-156**	**PASS**	

6 CLIENT SAMPLE NUMBER : VW-40-03

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC21.D\28DEC21.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 2220 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**102**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**102**	**47-137**	**PASS**	
Toluene-d8	**96**	**78-156**	**PASS**	

7 CLIENT SAMPLE NUMBER : VW-40-02

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC22.D\28DEC22.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 2310 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**103**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**102**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

8 CLIENT SAMPLE NUMBER : DUP-1

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC23.D\28DEC23.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 2359 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**106**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**105**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1614 REVIEWED BY: 326

LCS/MB BATCH : D131228L01 DATE REVIEWED: 01/04/2014 11:07

MS BATCH : EXTRACTION : N/A

9 CLIENT SAMPLE NUMBER : FB-1

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC25.D\28DEC25.rr

D/T EXTRACTED:
D/T ANALYZED: 12/29/2013 0134 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**99**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**104**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

MB CLIENT SAMPLE NUMBER : Method Blank

DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 1047 ANALYST: 460 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**101**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**102**	**47-137**	**PASS**	
Toluene-d8	**98**	**78-156**	**PASS**	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC03.D\DOD28DEC03.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 0708 ANALYST: 460 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**102**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**99**	**47-137**	**PASS**	
Toluene-d8	**99**	**78-156**	**PASS**	

LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC04.D\DOD28DEC04.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 0758 ANALYST: 460 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**101**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**99**	**47-137**	**PASS**	
Toluene-d8	**99**	**78-156**	**PASS**	

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA TO-15

MB Sample ID: 099-14-523-264
MB Batch ID: D140102L01
Instrument: GC/MS YY
Matrix: Air
Analyst: 326
D/T Analyzed: 01/02/2014 17:34
Data File: W:\GCMS_YY_DATA\2014\140102\02JAN10.D\02JAN10.rr

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20
Extraction: N/A
D/T Extracted:

Work Order #: 13-12-1614

Sample#	Client Sample ID	D/T Analyzed	Data File
3	VW-40-06	01/02/2014 19:06	W:\GCMS_YY_DATA\2014\140102\02JAN12.D\02JAN12.rr
4	IW-03	01/02/2014 19:54	W:\GCMS_YY_DATA\2014\140102\02JAN13.D\02JAN13.rr
5	IW-01	01/02/2014 20:40	W:\GCMS_YY_DATA\2014\140102\02JAN14.D\02JAN14.rr
6	VW-40-03	01/02/2014 21:25	W:\GCMS_YY_DATA\2014\140102\02JAN15.D\02JAN15.rr
7	VW-40-02	01/02/2014 22:10	W:\GCMS_YY_DATA\2014\140102\02JAN16.D\02JAN16.rr
7	VW-40-02	01/02/2014 22:54	W:\GCMS_YY_DATA\2014\140102\02JAN17.D\02JAN17.rr
8	DUP-1	01/02/2014 23:39	W:\GCMS_YY_DATA\2014\140102\02JAN18.D\02JAN18.rr
8	DUP-1	01/03/2014 02:18	W:\GCMS_YY_DATA\2014\140102\02JAN19.D\02JAN19.rr

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 099-14-523
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/02/2014 17:34
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN10.D\02JAN10.rr

REVIEWED BY: 794
DATE REVIEWED: 01/06/2014 15:20
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	0.00	1	ND	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	0.00	1	ND	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.00	1	ND	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.00	1	ND	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	0.00	1	ND	0.087	0.20	0.50	1	ppb (v/v)	
t-1,2-Dichloroethene	0.00	1	ND	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	0.00	1	ND	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
4-Ethyltoluene	0.00	1	ND	0.057	0.20	0.50	1	ppb (v/v)	
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	
Hexane	0.00	1	ND	0.072	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 099-14-523
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/02/2014 17:34
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN10.D\02JAN10.rr

REVIEWED BY: 794
DATE REVIEWED: 01/06/2014 15:20
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER:** **Method Blank**

LCS/MB BATCH: D140102L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.24	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	0.00	1	ND	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	0.00	1	ND	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.00	1	ND	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	0.00	1	ND	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	0.00	1	ND	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	0.59	1	ND	1.3	1.5	15	1	ppb (v/v)	
1,3,5-Trimethylbenzene	0.00	1	ND	0.051	0.20	0.50	1	ppb (v/v)	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.00	1	ND	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	0.00	1	ND	0.22	0.50	1.2	1	ppb (v/v)	
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	01/06/2014 15:20	LCS D/T ANALYZED:	01/02/2014 13:47
LCS/LCSD BATCH:	D140102L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	01/02/2014 14:39
LCS/LCSD SAMPLE I	**099-14-523-264**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	326	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	794				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Acetone	**25.00**	**45.68**	**183**	**47.59**	**190**	**50-150**	**33-167**	**4**	**0-35**	**FAIL**	**LX**
Benzene	25.00	24.63	99	24.79	99	60-156	44-172	1	0-40	PASS	
Benzyl Chloride	25.00	25.01	100	25.56	102	50-150	33-167	2	0-35	PASS	
Bromodichloromethane	25.00	25.05	100	25.22	101	50-150	33-167	1	0-35	PASS	
Bromoform	25.00	22.93	92	23.21	93	62-134	50-146	1	0-38	PASS	
Bromomethane	25.00	25.06	100	25.18	101	50-150	33-167	0	0-35	PASS	
1,3-Butadiene	25.00	24.02	96	24.23	97	50-150	33-167	1	0-35	PASS	
2-Butanone	25.00	23.72	95	23.71	95	50-150	33-167	0	0-35	PASS	
Carbon Disulfide	25.00	25.66	103	25.93	104	50-150	33-167	1	0-35	PASS	
Carbon Tetrachloride	25.00	25.14	101	25.08	100	64-154	49-169	0	0-32	PASS	
Chlorobenzene	25.00	23.83	95	23.93	96	50-150	33-167	0	0-35	PASS	
Chloroethane	25.00	23.50	94	23.77	95	50-150	33-167	1	0-35	PASS	
Chloroform	25.00	24.47	98	24.65	99	50-150	33-167	1	0-35	PASS	
Chloromethane	25.00	24.18	97	24.09	96	50-150	33-167	0	0-35	PASS	
Cyclohexane	25.00	23.73	95	23.84	95	50-150	33-167	0	0-35	PASS	
Dibromochloromethane	25.00	24.48	98	24.52	98	50-150	33-167	0	0-35	PASS	
Dichlorodifluoromethane	25.00	25.20	101	24.89	100	50-150	33-167	1	0-35	PASS	
Diisopropyl Ether (DIPE)	25.00	18.53	74	18.68	75	50-150	33-167	1	0-35	PASS	
1,1-Dichloroethane	25.00	24.50	98	24.60	98	50-150	33-167	0	0-35	PASS	
1,1-Dichloroethene	25.00	25.23	101	24.98	100	50-150	33-167	1	0-35	PASS	
1,2-Dibromoethane	25.00	24.05	96	24.12	96	54-144	39-159	0	0-36	PASS	
Dichlorotetrafluoroethane	25.00	19.94	80	19.95	80	50-150	33-167	0	0-35	PASS	
1,2-Dichlorobenzene	25.00	22.44	90	22.80	91	34-160	13-181	2	0-47	PASS	
1,2-Dichloroethane	25.00	24.28	97	24.46	98	69-153	55-167	1	0-35	PASS	
1,2-Dichloropropane	25.00	24.13	97	24.38	98	67-157	52-172	1	0-35	PASS	
1,3-Dichlorobenzene	25.00	22.09	88	22.51	90	50-150	33-167	2	0-35	PASS	
1,4-Dichlorobenzene	25.00	21.51	86	21.99	88	36-156	16-176	2	0-47	PASS	
1,4-Dioxane	25.00	21.26	85	22.29	89	50-150	33-167	5	0-35	PASS	
c-1,3-Dichloropropene	25.00	25.35	101	25.66	103	61-157	45-173	1	0-35	PASS	
c-1,2-Dichloroethene	25.00	24.61	98	24.81	99	50-150	33-167	1	0-35	PASS	
t-1,2-Dichloroethene	25.00	22.49	90	23.00	92	50-150	33-167	2	0-35	PASS	
t-1,3-Dichloropropene	25.00	27.62	110	28.03	112	50-150	33-167	1	0-35	PASS	
Ethanol	100.0	82.14	82	85.26	85	50-150	33-167	4	0-35	PASS	
Ethyl Acetate	25.00	23.69	95	24.00	96	50-150	33-167	1	0-35	PASS	
Ethyl-t-Butyl Ether (ETBE)	25.00	22.34	89	22.67	91	50-150	33-167	1	0-35	PASS	
Ethylbenzene	25.00	24.19	97	24.26	97	52-154	35-171	0	0-38	PASS	
4-Ethyltoluene	25.00	23.99	96	24.33	97	50-150	33-167	1	0-35	PASS	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	01/06/2014 15:20	LCS D/T ANALYZED:	01/02/2014 13:47
LCS/LCSD BATCH:	D140102L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	01/02/2014 14:39
LCS/LCSD SAMPLE I	**099-14-523-264**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	326	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	794				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Heptane	25.00	24.91	100	25.01	100	50-150	33-167	0	0-35	PASS	
Hexachloro-1,3-Butadiene	25.00	20.26	81	20.62	82	50-150	33-167	2	0-35	PASS	
Hexane	25.00	22.66	91	22.83	91	50-150	33-167	1	0-35	PASS	
2-Hexanone	25.00	23.69	95	23.79	95	50-150	33-167	0	0-35	PASS	
Methyl-t-Butyl Ether (MTBE)	25.00	24.83	99	25.10	100	50-150	33-167	1	0-35	PASS	
Methylene Chloride	25.00	24.85	99	25.03	100	50-150	33-167	1	0-35	PASS	
4-Methyl-2-Pentanone	25.00	24.21	97	24.52	98	50-150	33-167	1	0-35	PASS	
Naphthalene	25.00	21.22	85	22.02	88	40-190	15-215	4	0-35	PASS	
o-Xylene	25.00	23.53	94	23.72	95	52-148	36-164	1	0-38	PASS	
p/m-Xylene	50.00	46.77	94	46.94	94	42-156	23-175	0	0-41	PASS	
Propene	25.00	24.81	99	24.37	97	50-150	33-167	2	0-35	PASS	
Styrene	25.00	23.51	94	23.75	95	50-150	33-167	1	0-35	PASS	
Tert-Amyl-Methyl Ether (TAME)	25.00	23.01	92	23.22	93	50-150	33-167	1	0-35	PASS	
Tert-Butyl Alcohol (TBA)	50.00	47.24	94	47.54	95	50-150	33-167	1	0-35	PASS	
Tetrachloroethene	25.00	23.89	96	23.81	95	56-152	40-168	0	0-40	PASS	
Tetrahydrofuran	25.00	23.22	93	23.46	94	50-150	33-167	1	0-35	PASS	
Toluene	25.00	24.76	99	24.72	99	56-146	41-161	0	0-43	PASS	
Trichloroethene	25.00	24.21	97	24.45	98	63-159	47-175	1	0-34	PASS	
Trichlorofluoromethane	**25.00**	**38.20**	**153**	**38.37**	**153**	**50-150**	**33-167**	**0**	**0-35**	**ME**	**L$**
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.64	99	24.84	99	50-150	33-167	1	0-35	PASS	
1,1,1-Trichloroethane	25.00	24.07	96	24.27	97	50-150	33-167	1	0-35	PASS	
1,1,2-Trichloroethane	25.00	24.06	96	24.34	97	65-149	51-163	1	0-37	PASS	
2-Chlorotoluene	25.00	22.09	88	22.41	90	50-150	33-167	1	0-35	PASS	
1,2,3-Trichloropropane	25.00	22.03	88	22.33	89	50-150	33-167	1	0-35	PASS	
Acrolein	25.00	23.11	92	24.76	99	50-150	33-167	7	0-35	PASS	
Acrylonitrile	25.00	26.43	106	26.47	106	50-150	33-167	0	0-35	PASS	
Methyl Methacrylate	25.00	24.11	96	24.45	98	50-150	33-167	1	0-35	PASS	
Propane	50.00	45.59	91	44.64	89	50-150	33-167	2	0-35	PASS	
Butane	50.00	42.11	84	42.39	85	50-150	33-167	1	0-35	PASS	
Methanol	75.00	56.88	76	58.63	78	50-150	33-167	3	0-35	PASS	
2,2,4-Trimethyl Pentane	25.00	22.34	89	22.58	90	50-150	33-167	1	0-35	PASS	
Isobutane	50.00	43.41	87	43.36	87	50-150	33-167	0	0-35	PASS	
1,1,1,2-Tetrafluoroethane	25.00	25.31	101	24.44	98	50-150	33-167	4	0-35	PASS	
1,3,5-Trimethylbenzene	25.00	23.26	93	23.52	94	50-150	33-167	1	0-35	PASS	
1,1,2,2-Tetrachloroethane	25.00	22.06	88	22.37	89	50-150	33-167	1	0-35	PASS	
1,2,4-Trimethylbenzene	25.00	22.52	90	22.83	91	50-150	33-167	1	0-35	PASS	
1,2,4-Trichlorobenzene	25.00	20.40	82	21.29	85	50-150	33-167	4	0-35	PASS	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	01/06/2014 15:20	LCS D/T ANALYZED:	01/02/2014 13:47
LCS/LCSD BATCH:	D140102L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	01/02/2014 14:39
LCS/LCSD SAMPLE I	**099-14-523-264**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	326	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	794				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Vinyl Acetate	25.00	21.80	87	21.89	88	50-150	33-167	0	0-35	PASS	
Vinyl Chloride	25.00	23.97	96	24.06	96	45-177	23-199	0	0-36	PASS	
1,1-Difluoroethane	25.00	24.54	98	23.89	96	50-150	33-167	3	0-35	PASS	
Isopropanol	25.00	35.63	143	36.36	145	50-150	33-167	2	0-35	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	02JAN06.rr	W:\GCMS_YY_DATA\2014\140102\02JAN06.D\
LCSD	02JAN07.rr	W:\GCMS_YY_DATA\2014\140102\02JAN07.D\

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SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1614 REVIEWED BY: 326

LCS/MB BATCH : D140102L01 DATE REVIEWED: 01/04/2014 11:07

MS BATCH : EXTRACTION : N/A

3R CLIENT SAMPLE NUMBER : VW-40-06

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN12.D\02JAN12.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 1906 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**100**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**101**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

4R CLIENT SAMPLE NUMBER : IW-03

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN13.D\02JAN13.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 1954 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**106**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**101**	**47-137**	**PASS**	
Toluene-d8	**96**	**78-156**	**PASS**	

5R CLIENT SAMPLE NUMBER : IW-01

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN14.D\02JAN14.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 2040 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**102**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**101**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

6R CLIENT SAMPLE NUMBER : VW-40-03

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN15.D\02JAN15.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 2125 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**102**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**102**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1614 REVIEWED BY: 326

LCS/MB BATCH : D140102L01 DATE REVIEWED: 01/04/2014 11:07

MS BATCH : EXTRACTION : N/A

7R CLIENT SAMPLE NUMBER : VW-40-02

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN16.D\02JAN16.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 2210 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**100**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**104**	**47-137**	**PASS**	
Toluene-d8	**98**	**78-156**	**PASS**	

7R CLIENT SAMPLE NUMBER : VW-40-02

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN17.D\02JAN17.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 2254 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**100**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**105**	**47-137**	**PASS**	
Toluene-d8	**98**	**78-156**	**PASS**	

8R CLIENT SAMPLE NUMBER : DUP-1

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN18.D\02JAN18.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 2339 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**102**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**105**	**47-137**	**PASS**	
Toluene-d8	**98**	**78-156**	**PASS**	

8R CLIENT SAMPLE NUMBER : DUP-1

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN19.D\02JAN19.rr

D/T EXTRACTED:
D/T ANALYZED: 01/03/2014 0218 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**103**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**108**	**47-137**	**PASS**	
Toluene-d8	**99**	**78-156**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1614 REVIEWED BY: 794

LCS/MB BATCH : D140102L01 DATE REVIEWED: 01/06/2014 15:20

MS BATCH : EXTRACTION : N/A

MB CLIENT SAMPLE NUMBER : Method Blank

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN10.D\02JAN10.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 1734 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**99**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**102**	**47-137**	**PASS**	
Toluene-d8	**99**	**78-156**	**PASS**	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN06.D\02JAN06.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 1347 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**99**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**99**	**47-137**	**PASS**	
Toluene-d8	**99**	**78-156**	**PASS**	

LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

DATA FILE: W:\GCMS_YY_DATA\2014\140102\02JAN07.D\02JAN07.rr

D/T EXTRACTED:
D/T ANALYZED: 01/02/2014 1439 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**99**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**99**	**47-137**	**PASS**	
Toluene-d8	**100**	**78-156**	**PASS**	

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA TO-15

MB Sample ID: 099-14-523-265
MB Batch ID: D140103L01
Instrument: GC/MS YY
Matrix: Air
Analyst: 326
D/T Analyzed: 01/03/2014 19:22
Data File: W:\GCMS_YY_DATA\2014\140103\03JAN18.D\03JAN18.rr

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20
Extraction: N/A
D/T Extracted:

Work Order #: 13-12-1614

Sample#	Client Sample ID	D/T Analyzed	Data File
5	IW-01	01/03/2014 20:52	W:\GCMS_YY_DATA\2014\140103\03JAN20.D\03JAN20.rr
6	VW-40-03	01/03/2014 21:36	W:\GCMS_YY_DATA\2014\140103\03JAN21.D\03JAN21.rr

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 099-14-523
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/03/2014 19:22
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140103\03JAN18.D\03JAN18.rr

REVIEWED BY: 794
DATE REVIEWED: 01/06/2014 15:20
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: D140103L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	0.00	1	ND	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	0.00	1	ND	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.00	1	ND	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.00	1	ND	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	0.00	1	ND	0.087	0.20	0.50	1	ppb (v/v)	
t-1,2-Dichloroethene	0.00	1	ND	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	0.00	1	ND	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
4-Ethyltoluene	0.00	1	ND	0.057	0.20	0.50	1	ppb (v/v)	
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	
Hexane	0.00	1	ND	0.072	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 099-14-523
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 01/03/2014 19:22
ANALYST: 326
DATA FILE: W:\GCMS_YY_DATA\2014\140103\03JAN18.D\03JAN18.rr

REVIEWED BY: 794
DATE REVIEWED: 01/06/2014 15:20
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER:** **Method Blank**

LCS/MB BATCH: D140103L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.23	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	0.00	1	ND	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	0.00	1	ND	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.00	1	ND	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	0.00	1	ND	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	0.00	1	ND	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	0.54	1	ND	1.3	1.5	15	1	ppb (v/v)	
1,3,5-Trimethylbenzene	0.00	1	ND	0.051	0.20	0.50	1	ppb (v/v)	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.00	1	ND	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	0.00	1	ND	0.22	0.50	1.2	1	ppb (v/v)	
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	01/06/2014 15:20	LCS D/T ANALYZED:	01/03/2014 14:16
LCS/LCSD BATCH:	D140103L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	01/03/2014 15:06
LCS/LCSD SAMPLE I	**099-14-523-265**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	326	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	794				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Acetone	25.00	21.31	85	21.44	86	50-150	33-167	1	0-35	PASS	
Benzene	25.00	23.67	95	23.68	95	60-156	44-172	0	0-40	PASS	
Benzyl Chloride	25.00	25.55	102	25.34	101	50-150	33-167	1	0-35	PASS	
Bromodichloromethane	25.00	25.24	101	25.05	100	50-150	33-167	1	0-35	PASS	
Bromoform	25.00	23.48	94	23.58	94	62-134	50-146	0	0-38	PASS	
Bromomethane	25.00	24.86	99	24.87	99	50-150	33-167	0	0-35	PASS	
1,3-Butadiene	25.00	23.80	95	23.69	95	50-150	33-167	0	0-35	PASS	
2-Butanone	25.00	23.40	94	23.17	93	50-150	33-167	1	0-35	PASS	
Carbon Disulfide	25.00	24.53	98	24.52	98	50-150	33-167	0	0-35	PASS	
Carbon Tetrachloride	25.00	25.76	103	25.43	102	64-154	49-169	1	0-32	PASS	
Chlorobenzene	25.00	23.01	92	23.26	93	50-150	33-167	1	0-35	PASS	
Chloroethane	25.00	22.93	92	22.92	92	50-150	33-167	0	0-35	PASS	
Chloroform	25.00	24.20	97	24.07	96	50-150	33-167	1	0-35	PASS	
Chloromethane	25.00	23.57	94	23.58	94	50-150	33-167	0	0-35	PASS	
Cyclohexane	25.00	22.88	92	22.85	91	50-150	33-167	0	0-35	PASS	
Dibromochloromethane	25.00	24.31	97	24.27	97	50-150	33-167	0	0-35	PASS	
Dichlorodifluoromethane	25.00	24.57	98	24.31	97	50-150	33-167	1	0-35	PASS	
Diisopropyl Ether (DIPE)	25.00	18.14	73	18.04	72	50-150	33-167	1	0-35	PASS	
1,1-Dichloroethane	25.00	23.58	94	23.48	94	50-150	33-167	0	0-35	PASS	
1,1-Dichloroethene	25.00	24.12	96	23.90	96	50-150	33-167	1	0-35	PASS	
1,2-Dibromoethane	25.00	23.34	93	23.47	94	54-144	39-159	1	0-36	PASS	
Dichlorotetrafluoroethane	25.00	20.15	81	20.01	80	50-150	33-167	1	0-35	PASS	
1,2-Dichlorobenzene	25.00	22.73	91	22.62	90	34-160	13-181	0	0-47	PASS	
1,2-Dichloroethane	25.00	24.59	98	24.28	97	69-153	55-167	1	0-35	PASS	
1,2-Dichloropropane	25.00	23.22	93	23.21	93	67-157	52-172	0	0-35	PASS	
1,3-Dichlorobenzene	25.00	22.40	90	22.35	89	50-150	33-167	0	0-35	PASS	
1,4-Dichlorobenzene	25.00	22.02	88	21.86	87	36-156	16-176	1	0-47	PASS	
1,4-Dioxane	25.00	21.46	86	21.58	86	50-150	33-167	1	0-35	PASS	
c-1,3-Dichloropropene	25.00	24.77	99	24.79	99	61-157	45-173	0	0-35	PASS	
c-1,2-Dichloroethene	25.00	23.61	94	23.67	95	50-150	33-167	0	0-35	PASS	
t-1,2-Dichloroethene	25.00	22.30	89	22.35	89	50-150	33-167	0	0-35	PASS	
t-1,3-Dichloropropene	25.00	27.50	110	27.39	110	50-150	33-167	0	0-35	PASS	
Ethanol	100.0	81.14	81	81.23	81	50-150	33-167	0	0-35	PASS	
Ethyl Acetate	25.00	22.46	90	22.63	91	50-150	33-167	1	0-35	PASS	
Ethyl-t-Butyl Ether (ETBE)	25.00	21.34	85	21.36	85	50-150	33-167	0	0-35	PASS	
Ethylbenzene	25.00	23.36	93	23.48	94	52-154	35-171	1	0-38	PASS	
4-Ethyltoluene	25.00	23.95	96	24.01	96	50-150	33-167	0	0-35	PASS	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	01/06/2014 15:20	LCS D/T ANALYZED:	01/03/2014 14:16
LCS/LCSD BATCH:	D140103L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	01/03/2014 15:06
LCS/LCSD SAMPLE I	**099-14-523-265**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	326	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	794				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Heptane	25.00	23.98	96	23.97	96	50-150	33-167	0	0-35	PASS	
Hexachloro-1,3-Butadiene	25.00	20.48	82	20.52	82	50-150	33-167	0	0-35	PASS	
Hexane	25.00	21.68	87	21.62	86	50-150	33-167	0	0-35	PASS	
2-Hexanone	25.00	22.74	91	22.78	91	50-150	33-167	0	0-35	PASS	
Methyl-t-Butyl Ether (MTBE)	25.00	23.49	94	23.57	94	50-150	33-167	0	0-35	PASS	
Methylene Chloride	25.00	23.54	94	23.60	94	50-150	33-167	0	0-35	PASS	
4-Methyl-2-Pentanone	25.00	23.73	95	23.62	94	50-150	33-167	0	0-35	PASS	
Naphthalene	25.00	21.12	84	21.83	87	40-190	15-215	3	0-35	PASS	
o-Xylene	25.00	23.19	93	23.30	93	52-148	36-164	0	0-38	PASS	
p/m-Xylene	50.00	45.99	92	46.16	92	42-156	23-175	0	0-41	PASS	
Propene	25.00	24.13	97	23.90	96	50-150	33-167	1	0-35	PASS	
Styrene	25.00	22.91	92	23.14	93	50-150	33-167	1	0-35	PASS	
Tert-Amyl-Methyl Ether (TAME)	25.00	21.61	86	21.73	87	50-150	33-167	1	0-35	PASS	
Tert-Butyl Alcohol (TBA)	50.00	44.23	88	43.95	88	50-150	33-167	1	0-35	PASS	
Tetrachloroethene	25.00	23.19	93	23.21	93	56-152	40-168	0	0-40	PASS	
Tetrahydrofuran	25.00	22.92	92	22.81	91	50-150	33-167	1	0-35	PASS	
Toluene	25.00	23.45	94	23.63	95	56-146	41-161	1	0-43	PASS	
Trichloroethene	25.00	23.85	95	23.83	95	63-159	47-175	0	0-34	PASS	
Trichlorofluoromethane	25.00	23.71	95	23.36	93	50-150	33-167	1	0-35	PASS	
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.07	96	23.92	96	50-150	33-167	1	0-35	PASS	
1,1,1-Trichloroethane	25.00	24.12	96	23.92	96	50-150	33-167	1	0-35	PASS	
1,1,2-Trichloroethane	25.00	23.57	94	23.54	94	65-149	51-163	0	0-37	PASS	
2-Chlorotoluene	25.00	22.13	89	22.25	89	50-150	33-167	1	0-35	PASS	
1,2,3-Trichloropropane	25.00	22.06	88	22.09	88	50-150	33-167	0	0-35	PASS	
Acrolein	25.00	21.97	88	22.25	89	50-150	33-167	1	0-35	PASS	
Acrylonitrile	25.00	24.72	99	22.05	88	50-150	33-167	11	0-35	PASS	
Methyl Methacrylate	25.00	23.41	94	23.42	94	50-150	33-167	0	0-35	PASS	
Propane	50.00	44.19	88	43.74	87	50-150	33-167	1	0-35	PASS	
Butane	50.00	41.31	83	41.58	83	50-150	33-167	1	0-35	PASS	
Methanol	75.00	58.38	78	58.91	79	50-150	33-167	1	0-35	PASS	
2,2,4-Trimethyl Pentane	25.00	21.85	87	21.82	87	50-150	33-167	0	0-35	PASS	
Isobutane	50.00	42.49	85	42.81	86	50-150	33-167	1	0-35	PASS	
1,1,1,2-Tetrafluoroethane	25.00	22.61	90	22.91	92	50-150	33-167	1	0-35	PASS	
1,3,5-Trimethylbenzene	25.00	23.21	93	23.23	93	50-150	33-167	0	0-35	PASS	
1,1,2,2-Tetrachloroethane	25.00	21.74	87	21.80	87	50-150	33-167	0	0-35	PASS	
1,2,4-Trimethylbenzene	25.00	22.73	91	22.68	91	50-150	33-167	0	0-35	PASS	
1,2,4-Trichlorobenzene	25.00	20.89	84	21.13	85	50-150	33-167	1	0-35	PASS	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1614**	D/T REVIEWED:	01/06/2014 15:20	LCS D/T ANALYZED:	01/03/2014 14:16
LCS/LCSD BATCH:	D140103L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	01/03/2014 15:06
LCS/LCSD SAMPLE I	**099-14-523-265**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	326	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	794				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Vinyl Acetate	25.00	21.44	86	21.24	85	50-150	33-167	1	0-35	PASS	
Vinyl Chloride	25.00	23.53	94	23.66	95	45-177	23-199	1	0-36	PASS	
1,1-Difluoroethane	25.00	23.73	95	23.55	94	50-150	33-167	1	0-35	PASS	
Isopropanol	25.00	15.01	60	14.89	60	50-150	33-167	1	0-35	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	03JAN12.rr	W:\GCMS_YY_DATA\2014\140103\03JAN12.D\
LCSD	03JAN13.rr	W:\GCMS_YY_DATA\2014\140103\03JAN13.D\

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SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1614 REVIEWED BY: 326

LCS/MB BATCH : D140103L01 DATE REVIEWED: 01/04/2014 11:07

MS BATCH : EXTRACTION : N/A

5R CLIENT SAMPLE NUMBER : IW-01

DATA FILE: W:\GCMS_YY_DATA\2014\140103\03JAN20.D\03JAN20.rr

D/T EXTRACTED:
D/T ANALYZED: 01/03/2014 2052 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**102**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**107**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

6R CLIENT SAMPLE NUMBER : VW-40-03

DATA FILE: W:\GCMS_YY_DATA\2014\140103\03JAN21.D\03JAN21.rr

D/T EXTRACTED:
D/T ANALYZED: 01/03/2014 2136 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**105**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**106**	**47-137**	**PASS**	
Toluene-d8	**98**	**78-156**	**PASS**	

MB CLIENT SAMPLE NUMBER : Method Blank

DATA FILE: W:\GCMS_YY_DATA\2014\140103\03JAN18.D\03JAN18.rr

D/T EXTRACTED:
D/T ANALYZED: 01/03/2014 1922 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**99**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**105**	**47-137**	**PASS**	
Toluene-d8	**98**	**78-156**	**PASS**	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

DATA FILE: W:\GCMS_YY_DATA\2014\140103\03JAN12.D\03JAN12.rr

D/T EXTRACTED:
D/T ANALYZED: 01/03/2014 1416 ANALYST: 326 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**103**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**104**	**47-137**	**PASS**	
Toluene-d8	**100**	**78-156**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1614

REVIEWED BY: 794

LCS/MB BATCH : D140103L01

DATE REVIEWED: 01/06/2014 15:20

MS BATCH :

EXTRACTION : N/A

 # LCD **CLIENT SAMPLE NUMBER :** **Lab Control Sample Duplicate**

DATA FILE: W:\GCMS_YY_DATA\2014\140103\03JAN13.D\03JAN13.rr

D/T EXTRACTED:

D/T ANALYZED: 01/03/2014 1506 ANALYST: 326 INSTRUMENT NAME: GC/MS YY

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**102**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**102**	**47-137**	**PASS**	
Toluene-d8	**100**	**78-156**	**PASS**	

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Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Continuing Calibration Data

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-14-522-203-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131227IC
INITIAL DATE ANALYZED: 12/27/13 6:38
ANALYST: 460

REVIEWED BY: 326
DATE REVIEWED: 1/2/14 13:01
CCV BATCH: D131228A
CCV DATE ANALYZED: 12/28/13 6:19

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	Avg Resp	0.00	0.220	0.193			12	0-30	PASS
Benzene	Avg Resp	0.00	0.777	0.710			9	0-30	PASS
Benzyl Chloride	Avg Resp	0.00	1.063	0.973			8	0-30	PASS
Bromodichloromethane	Avg Resp	0.00	0.588	0.538			9	0-30	PASS
Bromoform	Avg Resp	0.00	0.696	0.634			9	0-30	PASS
Bromomethane	Avg Resp	0.00	0.550	0.505			8	0-30	PASS
1,3-Butadiene	Avg Resp	0.00	0.331	0.310			6	0-30	PASS
2-Butanone	Avg Resp	0.00	2.113	1.929			9	0-30	PASS
Carbon Disulfide	Avg Resp	0.00	2.536	2.338			8	0-30	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.593	0.536			10	0-30	PASS
Chlorobenzene	Avg Resp	0.00	0.942	0.845			10	0-30	PASS
Chloroethane	Avg Resp	0.00	0.233	0.222			4	0-30	PASS
Chloroform	Avg Resp	0.00	1.924	1.719			11	0-30	PASS
Chloromethane	Avg Resp	0.00	0.387	0.362			7	0-30	PASS
Cyclohexane	Avg Resp	0.00	0.443	0.407			8	0-30	PASS
Dibromochloromethane	Avg Resp	0.00	0.772	0.708			8	0-30	PASS
Dichlorodifluoromethane	Avg Resp	0.00	2.182	1.994			9	0-30	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	3.762	2.887			23	0-30	PASS
1,1-Dichloroethane	Avg Resp	0.00	1.784	1.627			9	0-30	PASS
1,1-Dichloroethene	Avg Resp	0.00	1.440	1.312			9	0-30	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.653	0.594			9	0-30	PASS
Dichlorotetrafluoroethane	Avg Resp	0.00	1.414	1.287			9	0-30	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	0.903	0.770			15	0-30	PASS
1,2-Dichloroethane	Avg Resp	0.00	1.311	1.183			10	0-30	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.326	0.296			9	0-30	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	0.902	0.775			14	0-30	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	0.874	0.739			16	0-30	PASS
1,4-Dioxane	Avg Resp	0.00	0.174	0.160			8	0-30	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.459	0.434			5	0-30	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.981	0.910			7	0-30	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	1.021	0.937			8	0-30	PASS
t-1,3-Dichloropropene	Avg Resp	0.00	0.392	0.378			4	0-30	PASS
Ethanol	Avg Resp	0.00	0.164	0.142			13	0-30	PASS
Ethyl Acetate	Avg Resp	0.00	0.269	0.255			5	0-30	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	3.019	2.776			8	0-30	PASS
Ethylbenzene	Avg Resp	0.00	1.443	1.330			8	0-30	PASS
4-Ethyltoluene	Avg Resp	0.00	1.462	1.322			10	0-30	PASS
Heptane	Avg Resp	0.00	0.071	0.066			7	0-30	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-14-522-203-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131227IC
INITIAL DATE ANALYZED: 12/27/13 6:38
ANALYST: 460

REVIEWED BY: 326
DATE REVIEWED: 1/2/14 13:01
CCV BATCH: D131228A
CCV DATE ANALYZED: 12/28/13 6:19

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.806	0.620			23	0-30	PASS
Hexane	Avg Resp	0.00	1.315	1.148			13	0-30	PASS
2-Hexanone	Avg Resp	0.00	0.467	0.423			9	0-30	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	2.294	2.127			7	0-30	PASS
Methylene Chloride	Avg Resp	0.00	0.824	0.729			12	0-30	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.263	0.238			9	0-30	PASS
Naphthalene	Avg Resp	0.00	1.589	1.363			14	0-30	PASS
o-Xylene	Avg Resp	0.00	1.127	1.023			9	0-30	PASS
p/m-Xylene	Avg Resp	0.00	1.128	1.022			9	0-30	PASS
Propene	Avg Resp	0.00	0.928	0.874			6	0-30	PASS
Styrene	Avg Resp	0.00	0.818	0.770			6	0-30	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.719	0.677			6	0-30	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.798	1.634			9	0-30	PASS
Tetrachloroethene	Avg Resp	0.00	0.613	0.545			11	0-30	PASS
Tetrahydrofuran	Avg Resp	0.00	1.110	1.057			5	0-30	PASS
Toluene	Avg Resp	0.00	1.160	1.045			10	0-30	PASS
Trichloroethene	Avg Resp	0.00	0.357	0.326			9	0-30	PASS
Trichlorofluoromethane	Avg Resp	0.00	1.780	1.252			30	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	1.791	1.624			9	0-30	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	1.905	1.726			9	0-30	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.295	0.269			9	0-30	PASS
Butane	Avg Resp	0.00	0.598	0.551			8	0-30	PASS
Methanol	Avg Resp	0.00	0.105	0.095			10	0-30	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.273	1.129			11	0-30	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.00	0.875	0.770			12	0-30	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	1.233	1.073			13	0-30	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	0.739	0.624			16	0-30	PASS
Vinyl Acetate	Avg Resp	0.00	2.823	2.617			7	0-30	PASS
Vinyl Chloride	Avg Resp	0.00	0.486	0.451			7	0-30	PASS
Isopropanol	**Avg Resp**	**0.00**	**1.407**	**0.740**			**47**	0-30	**FAIL**

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_YY_DATA\2013\131228\DOD28DEC02.D\DOD28DEC02.rr

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CCV Association Summary For Method: EPA TO-15

Batch ID: D131228A
Instrument: GC/MS YY

Analyst: 460

Work Order Number: 099-14-522
Matrix: Air

Reviewed By: 326
D/T Reviewed: 01/02/2014 13:01

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
203	Daily Calibration	12/28/2013 06:19	W:\GCMS_YY_DATA\2013\131228\DOD28DEC02.D\DOD28DEC02.rr

Work Order Number: 13-12-1614
Matrix: Air

Reviewed By: 326
D/T Reviewed: 01/04/2014 11:07

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
1	VW-40-04	12/28/2013 18:10	W:\GCMS_YY_DATA\2013\131228\28DEC16.D\28DEC16.rr
2	MW-40-32	12/28/2013 19:00	W:\GCMS_YY_DATA\2013\131228\28DEC17.D\28DEC17.rr
3	VW-40-06	12/28/2013 19:50	W:\GCMS_YY_DATA\2013\131228\28DEC18.D\28DEC18.rr
4	IW-03	12/28/2013 20:40	W:\GCMS_YY_DATA\2013\131228\28DEC19.D\28DEC19.rr
5	IW-01	12/28/2013 21:30	W:\GCMS_YY_DATA\2013\131228\28DEC20.D\28DEC20.rr
6	VW-40-03	12/28/2013 22:20	W:\GCMS_YY_DATA\2013\131228\28DEC21.D\28DEC21.rr
7	VW-40-02	12/28/2013 23:10	W:\GCMS_YY_DATA\2013\131228\28DEC22.D\28DEC22.rr
8	DUP-1	12/28/2013 23:59	W:\GCMS_YY_DATA\2013\131228\28DEC23.D\28DEC23.rr
9	FB-1	12/29/2013 01:34	W:\GCMS_YY_DATA\2013\131228\28DEC25.D\28DEC25.rr

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ICAL Internal Standards Average Compound Area Report for Method: EPA TO-15

Sample ID: 099-14-522-198 **D/T Analyzed:** 12/27/2013 03:30
Batch ID: D131227IC

Analyte	1	2	3	4	5	6	7	8	9	Avg. Area	Lower Area Limit	Upper Area Limit
Bromochloromethane	542995	540995	538385	534937	541433	515419	515303			532781	319669	745893
1,4-Difluorobenzene	1919722	1915058	1900978	1883151	1891271	1802706	1791587			1872068	1123241	2620895
Chlorobenzene-d5	1555588	1536551	1532860	1517661	1519043	1459666	1459560			1511561	906937	2116186

ICV, CCV And Samples Internal Standard Compounds Area Report for Method: EPA TO-15

ICV
Sample ID: 099-14-522-198 **Run #:** 10
CCV Batch ID: D131228A **D/T Analyzed:** 12/27/2013 09:13
Data File: W:\GCMS_YY_DATA\2013\131227\DOD27DEC09.D\DOD27DEC09.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	516110	319669	745893	9.43	PASS	
1,4-Difluorobenzene	1820485	1123241	2620895	12.12	PASS	
Chlorobenzene-d5	1487380	906937	2116186	19.23	PASS	

CCV
Sample ID: 099-14-522-203 **Run #:** 0
CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 06:19
Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC02.D\DOD28DEC02.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	556183	319669	745893	9.43	PASS	
1,4-Difluorobenzene	1953493	1123241	2620895	12.11	PASS	
Chlorobenzene-d5	1586853	906937	2116186	19.22	PASS	

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LCS

Sample ID: 099-14-523-262 **Run #:** 1

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 07:08

Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC03.D\DOD28DEC03.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	525248	319669	745893	9.43	PASS	
1,4-Difluorobenzene	1831568	1123241	2620895	12.11	PASS	
Chlorobenzene-d5	1475951	906937	2116186	19.22	PASS	

LCSD

Sample ID: 099-14-523-262 **Run #:** 2

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 07:58

Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC04.D\DOD28DEC04.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	522153	319669	745893	9.43	PASS	
1,4-Difluorobenzene	1815956	1123241	2620895	12.11	PASS	
Chlorobenzene-d5	1443749	906937	2116186	19.22	PASS	

MB

Sample ID: 099-14-523-262 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 10:47

Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	546472	319669	745893	9.42	PASS	
1,4-Difluorobenzene	1920822	1123241	2620895	12.11	PASS	
Chlorobenzene-d5	1505652	906937	2116186	19.22	PASS	

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CS

Sample ID: 13-12-1614-1 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 18:10

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC16.D\28DEC16.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	510434	319669	745893	9.47	PASS	
1,4-Difluorobenzene	1758259	1123241	2620895	12.14	PASS	
Chlorobenzene-d5	1292850	906937	2116186	19.23	PASS	

CS

Sample ID: 13-12-1614-2 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 19:00

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC17.D\28DEC17.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	501712	319669	745893	9.48	PASS	
1,4-Difluorobenzene	1729488	1123241	2620895	12.14	PASS	
Chlorobenzene-d5	1296903	906937	2116186	19.23	PASS	

CS

Sample ID: 13-12-1614-3 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 19:50

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC18.D\28DEC18.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	492129	319669	745893	9.49	PASS	
1,4-Difluorobenzene	1699073	1123241	2620895	12.15	PASS	
Chlorobenzene-d5	1256001	906937	2116186	19.23	PASS	

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CS

Sample ID: 13-12-1614-4 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 20:40

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC19.D\28DEC19.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	492466	319669	745893	9.45	PASS	
1,4-Difluorobenzene	1685988	1123241	2620895	12.12	PASS	
Chlorobenzene-d5	1300356	906937	2116186	19.22	PASS	

CS

Sample ID: 13-12-1614-5 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 21:30

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC20.D\28DEC20.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	472125	319669	745893	9.49	PASS	
1,4-Difluorobenzene	1648470	1123241	2620895	12.15	PASS	
Chlorobenzene-d5	1200560	906937	2116186	19.23	PASS	

CS

Sample ID: 13-12-1614-6 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 22:20

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC21.D\28DEC21.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	465539	319669	745893	9.51	PASS	
1,4-Difluorobenzene	1627778	1123241	2620895	12.16	PASS	
Chlorobenzene-d5	1208249	906937	2116186	19.23	PASS	

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CS

Sample ID: 13-12-1614-7 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 23:10

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC22.D\28DEC22.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	455697	319669	745893	9.49	PASS	
1,4-Difluorobenzene	1606246	1123241	2620895	12.14	PASS	
Chlorobenzene-d5	1230281	906937	2116186	19.23	PASS	

CS

Sample ID: 13-12-1614-8 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 23:59

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC23.D\28DEC23.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	445711	319669	745893	9.52	PASS	
1,4-Difluorobenzene	1609415	1123241	2620895	12.17	PASS	
Chlorobenzene-d5	1246392	906937	2116186	19.23	PASS	

CS

Sample ID: 13-12-1614-9 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/29/2013 01:34

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC25.D\28DEC25.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	484559	319669	745893	9.43	PASS	
1,4-Difluorobenzene	1680063	1123241	2620895	12.11	PASS	
Chlorobenzene-d5	1285792	906937	2116186	19.22	PASS	

Notes:

For all samples including QC, all internal standard area responses must be within 60% to 140% of the mean area response in the initial calibration.

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-14-522-206-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131230IC
INITIAL DATE ANALYZED: 12/31/13 1:31
ANALYST: 326

REVIEWED BY: 794
DATE REVIEWED: 1/6/14 15:20
CCV BATCH: D140102A
CCV DATE ANALYZED: 1/2/14 9:39

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	Avg Resp	0.00	0.224	0.180			20	0-30	PASS
Benzene	Avg Resp	0.00	0.801	0.733			9	0-30	PASS
Benzyl Chloride	Avg Resp	0.00	1.164	1.127			3	0-30	PASS
Bromodichloromethane	Avg Resp	0.00	0.637	0.596			6	0-30	PASS
Bromoform	Avg Resp	0.00	0.695	0.627			10	0-30	PASS
Bromomethane	Avg Resp	0.00	0.527	0.466			12	0-30	PASS
1,3-Butadiene	Avg Resp	0.00	0.338	0.280			17	0-30	PASS
2-Butanone	Avg Resp	0.00	2.218	1.889			15	0-30	PASS
Carbon Disulfide	Avg Resp	0.00	2.546	2.273			11	0-30	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.626	0.597			5	0-30	PASS
Chlorobenzene	Avg Resp	0.00	0.945	0.862			9	0-30	PASS
Chloroethane	Avg Resp	0.00	0.240	0.204			15	0-30	PASS
Chloroform	Avg Resp	0.00	2.011	1.832			9	0-30	PASS
Chloromethane	Avg Resp	0.00	0.379	0.309			19	0-30	PASS
Cyclohexane	Avg Resp	0.00	0.466	0.411			12	0-30	PASS
Dibromochloromethane	Avg Resp	0.00	0.809	0.757			6	0-30	PASS
Dichlorodifluoromethane	Avg Resp	0.00	2.293	2.120			8	0-30	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	3.878	2.748			29	0-30	PASS
1,1-Dichloroethane	Avg Resp	0.00	1.797	1.622			10	0-30	PASS
1,1-Dichloroethene	Avg Resp	0.00	1.515	1.348			11	0-30	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.682	0.627			8	0-30	PASS
Dichlorotetrafluoroethane	Avg Resp	0.00	1.424	1.264			11	0-30	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	0.922	0.845			8	0-30	PASS
1,2-Dichloroethane	Avg Resp	0.00	1.400	1.280			9	0-30	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.332	0.296			11	0-30	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	0.912	0.807			12	0-30	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	0.880	0.753			14	0-30	PASS
1,4-Dioxane	Avg Resp	0.00	0.172	0.160			7	0-30	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.489	0.462			6	0-30	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.988	0.913			8	0-30	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	1.020	0.905			11	0-30	PASS
t-1,3-Dichloropropene	Avg Resp	0.00	0.431	0.414			4	0-30	PASS
Ethanol	Avg Resp	0.00	0.165	0.135			18	0-30	PASS
Ethyl Acetate	Avg Resp	0.00	0.282	0.245			13	0-30	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	3.313	2.994			10	0-30	PASS
Ethylbenzene	Avg Resp	0.00	1.506	1.390			8	0-30	PASS
4-Ethyltoluene	Avg Resp	0.00	1.573	1.458			7	0-30	PASS
Heptane	Avg Resp	0.00	0.071	0.067			6	0-30	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-14-522-206-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131230IC
INITIAL DATE ANALYZED: 12/31/13 1:31
ANALYST: 326

REVIEWED BY: 794
DATE REVIEWED: 1/6/14 15:20
CCV BATCH: D140102A
CCV DATE ANALYZED: 1/2/14 9:39

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.743	0.615			17	0-30	PASS
Hexane	Avg Resp	0.00	1.320	1.065			19	0-30	PASS
2-Hexanone	Avg Resp	0.00	0.488	0.436			11	0-30	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	2.434	2.291			6	0-30	PASS
Methylene Chloride	Avg Resp	0.00	0.827	0.730			12	0-30	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.279	0.252			10	0-30	PASS
Naphthalene	Avg Resp	0.00	1.677	1.497			11	0-30	PASS
o-Xylene	Avg Resp	0.00	1.180	1.080			8	0-30	PASS
p/m-Xylene	Avg Resp	0.00	1.181	1.059			10	0-30	PASS
Propene	Avg Resp	0.00	0.947	0.807			15	0-30	PASS
Styrene	Avg Resp	0.00	0.869	0.817			6	0-30	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.802	0.762			5	0-30	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.988	1.847			7	0-30	PASS
Tetrachloroethene	Avg Resp	0.00	0.582	0.528			9	0-30	PASS
Tetrahydrofuran	Avg Resp	0.00	1.163	1.004			14	0-30	PASS
Toluene	Avg Resp	0.00	1.166	1.064			9	0-30	PASS
Trichloroethene	Avg Resp	0.00	0.367	0.335			9	0-30	PASS
Trichlorofluoromethane	Avg Resp	0.00	1.569	1.356			14	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	1.788	1.612			10	0-30	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	2.011	1.894			6	0-30	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.309	0.283			8	0-30	PASS
Butane	Avg Resp	0.00	0.602	0.493			18	0-30	PASS
Methanol	Avg Resp	0.00	0.106	0.085			20	0-30	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.374	1.267			8	0-30	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.00	0.930	0.817			12	0-30	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	1.327	1.181			11	0-30	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	0.713	0.638			10	0-30	PASS
Vinyl Acetate	Avg Resp	0.00	2.947	2.562			13	0-30	PASS
Vinyl Chloride	Avg Resp	0.00	0.481	0.407			15	0-30	PASS
Isopropanol	**Avg Resp**	**0.00**	**1.167**	**0.701**			**40**	0-30	**FAIL**

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_YY_DATA\2014\140102\02JAN02.D\02JAN02.rr

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CCV Association Summary For Method: EPA TO-15

Batch ID: D140102A
Instrument: GC/MS YY

Analyst: 326

Work Order Number: 099-14-522
Matrix: Air

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
206	Daily Calibration	01/02/2014 09:39	W:\GCMS_YY_DATA\2014\140102\02JAN02.D\02JAN02.rr

Work Order Number: 13-12-1614
Matrix: Air

Reviewed By: 326
D/T Reviewed: 01/04/2014 11:07

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
3	VW-40-06	01/02/2014 19:06	W:\GCMS_YY_DATA\2014\140102\02JAN12.D\02JAN12.rr
4	IW-03	01/02/2014 19:54	W:\GCMS_YY_DATA\2014\140102\02JAN13.D\02JAN13.rr
5	IW-01	01/02/2014 20:40	W:\GCMS_YY_DATA\2014\140102\02JAN14.D\02JAN14.rr
6	VW-40-03	01/02/2014 21:25	W:\GCMS_YY_DATA\2014\140102\02JAN15.D\02JAN15.rr
7	VW-40-02	01/02/2014 22:10	W:\GCMS_YY_DATA\2014\140102\02JAN16.D\02JAN16.rr
7	VW-40-02	01/02/2014 22:54	W:\GCMS_YY_DATA\2014\140102\02JAN17.D\02JAN17.rr
8	DUP-1	01/02/2014 23:39	W:\GCMS_YY_DATA\2014\140102\02JAN18.D\02JAN18.rr
8	DUP-1	01/03/2014 02:18	W:\GCMS_YY_DATA\2014\140102\02JAN19.D\02JAN19.rr

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ICAL Internal Standards Average Compound Area Report for Method: EPA TO-15

Sample ID: 099-14-522-205 **D/T Analyzed:** 12/30/2013 22:22
Batch ID: D131230IC

Analyte	1	2	3	4	5	6	7	8	9	Avg. Area	Lower Area Limit	Upper Area Limit
Bromochloromethane	727182	734803	728047	728404	721312	716490	691475			721102	432661	1009543
1,4-Difluorobenzene	2520622	2559707	2539368	2540497	2515052	2484425	2365609			2503611	1502167	3505056
Chlorobenzene-d5	2046693	2086612	2075232	2078845	2065297	2028350	1933871			2044986	1226991	2862980

ICV, CCV And Samples Internal Standard Compounds Area Report for Method: EPA TO-15

ICV
Sample ID: 099-14-522-205 **Run #:** 10
CCV Batch ID: D140102A **D/T Analyzed:** 12/31/2013 02:21
Data File: W:\GCMS_YY_DATA\2013\131230\DOD30DEC21.D\DOD30DEC21.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	702238	432661	1009543	9.43	PASS	
1,4-Difluorobenzene	2414433	1502167	3505056	12.11	PASS	
Chlorobenzene-d5	1997625	1226991	2862980	19.22	PASS	

CCV
Sample ID: 099-14-522-206 **Run #:** 0
CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 09:39
Data File: W:\GCMS_YY_DATA\2014\140102\02JAN02.D\02JAN02.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	767912	432661	1009543	9.43	PASS	
1,4-Difluorobenzene	2636478	1502167	3505056	12.12	PASS	
Chlorobenzene-d5	2167077	1226991	2862980	19.22	PASS	

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LCS

Sample ID: 099-14-523-264 **Run #:** 1

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 13:47

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN06.D\02JAN06.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	763160	432661	1009543	9.44	PASS	
1,4-Difluorobenzene	2628576	1502167	3505056	12.12	PASS	
Chlorobenzene-d5	2145428	1226991	2862980	19.23	PASS	

LCSD

Sample ID: 099-14-523-264 **Run #:** 2

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 14:39

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN07.D\02JAN07.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	751472	432661	1009543	9.43	PASS	
1,4-Difluorobenzene	2606097	1502167	3505056	12.12	PASS	
Chlorobenzene-d5	2149530	1226991	2862980	19.23	PASS	

MB

Sample ID: 099-14-523-264 **Run #:** 0

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 17:34

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN10.D\02JAN10.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	741284	432661	1009543	9.42	PASS	
1,4-Difluorobenzene	2558672	1502167	3505056	12.11	PASS	
Chlorobenzene-d5	2066129	1226991	2862980	19.22	PASS	

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CS

Sample ID: 13-12-1614-3 **Run #:** 1

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 19:06

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN12.D\02JAN12.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	668430	432661	1009543	9.49	PASS	
1,4-Difluorobenzene	2254651	1502167	3505056	12.15	PASS	
Chlorobenzene-d5	1744369	1226991	2862980	19.23	PASS	

CS

Sample ID: 13-12-1614-4 **Run #:** 1

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 19:54

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN13.D\02JAN13.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	663683	432661	1009543	9.48	PASS	
1,4-Difluorobenzene	2249967	1502167	3505056	12.14	PASS	
Chlorobenzene-d5	1753924	1226991	2862980	19.23	PASS	

CS

Sample ID: 13-12-1614-5 **Run #:** 1

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 20:40

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN14.D\02JAN14.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	647797	432661	1009543	9.48	PASS	
1,4-Difluorobenzene	2186799	1502167	3505056	12.15	PASS	
Chlorobenzene-d5	1722250	1226991	2862980	19.23	PASS	

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CS

Sample ID: 13-12-1614-6 **Run #:** 1

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 21:25

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN15.D\02JAN15.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	639068	432661	1009543	9.47	PASS	
1,4-Difluorobenzene	2154398	1502167	3505056	12.14	PASS	
Chlorobenzene-d5	1702427	1226991	2862980	19.23	PASS	

CS

Sample ID: 13-12-1614-7 **Run #:** 1

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 22:10

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN16.D\02JAN16.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	623431	432661	1009543	9.45	PASS	
1,4-Difluorobenzene	2108477	1502167	3505056	12.13	PASS	
Chlorobenzene-d5	1667552	1226991	2862980	19.22	PASS	

CS

Sample ID: 13-12-1614-7 **Run #:** 2

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 22:54

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN17.D\02JAN17.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	619266	432661	1009543	9.44	PASS	
1,4-Difluorobenzene	2088159	1502167	3505056	12.12	PASS	
Chlorobenzene-d5	1647450	1226991	2862980	19.22	PASS	

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CS

Sample ID: 13-12-1614-8 **Run #:** 1

CCV Batch ID: D140102A **D/T Analyzed:** 01/02/2014 23:39

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN18.D\02JAN18.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	608002	432661	1009543	9.46	PASS	
1,4-Difluorobenzene	2052911	1502167	3505056	12.13	PASS	
Chlorobenzene-d5	1645721	1226991	2862980	19.23	PASS	

CS

Sample ID: 13-12-1614-8 **Run #:** 2

CCV Batch ID: D140102A **D/T Analyzed:** 01/03/2014 02:18

Data File: W:\GCMS_YY_DATA\2014\140102\02JAN19.D\02JAN19.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	598394	432661	1009543	9.43	PASS	
1,4-Difluorobenzene	2023119	1502167	3505056	12.11	PASS	
Chlorobenzene-d5	1662097	1226991	2862980	19.22	PASS	

Notes:

For all samples including QC, all internal standard area responses must be within 60% to 140% of the mean area response in the initial calibration.

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-14-522-207-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131230IC
INITIAL DATE ANALYZED: 12/31/13 1:31
ANALYST: 326

REVIEWED BY: 794
DATE REVIEWED: 1/6/14 15:20
CCV BATCH: D140103A
CCV DATE ANALYZED: 1/3/14 13:26

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	Avg Resp	0.00	0.224	0.184			18	0-30	PASS
Benzene	Avg Resp	0.00	0.801	0.719			10	0-30	PASS
Benzyl Chloride	Avg Resp	0.00	1.164	1.168			0	0-30	PASS
Bromodichloromethane	Avg Resp	0.00	0.637	0.632			1	0-30	PASS
Bromoform	Avg Resp	0.00	0.695	0.648			7	0-30	PASS
Bromomethane	Avg Resp	0.00	0.527	0.489			7	0-30	PASS
1,3-Butadiene	Avg Resp	0.00	0.338	0.295			13	0-30	PASS
2-Butanone	Avg Resp	0.00	2.218	2.032			8	0-30	PASS
Carbon Disulfide	Avg Resp	0.00	2.546	2.234			12	0-30	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.626	0.654			-4	0-30	PASS
Chlorobenzene	Avg Resp	0.00	0.945	0.843			11	0-30	PASS
Chloroethane	Avg Resp	0.00	0.240	0.209			13	0-30	PASS
Chloroform	Avg Resp	0.00	2.011	1.915			5	0-30	PASS
Chloromethane	Avg Resp	0.00	0.379	0.331			13	0-30	PASS
Cyclohexane	Avg Resp	0.00	0.466	0.415			11	0-30	PASS
Dibromochloromethane	Avg Resp	0.00	0.809	0.774			4	0-30	PASS
Dichlorodifluoromethane	Avg Resp	0.00	2.293	2.316			-1	0-30	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	3.878	2.941			24	0-30	PASS
1,1-Dichloroethane	Avg Resp	0.00	1.797	1.627			9	0-30	PASS
1,1-Dichloroethene	Avg Resp	0.00	1.515	1.392			8	0-30	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.682	0.619			9	0-30	PASS
Dichlorotetrafluoroethane	Avg Resp	0.00	1.424	1.374			4	0-30	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	0.922	0.879			5	0-30	PASS
1,2-Dichloroethane	Avg Resp	0.00	1.400	1.396			0	0-30	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.332	0.296			11	0-30	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	0.912	0.832			9	0-30	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	0.880	0.781			11	0-30	PASS
1,4-Dioxane	Avg Resp	0.00	0.172	0.155			10	0-30	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.489	0.466			5	0-30	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.988	0.894			9	0-30	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	1.020	0.904			11	0-30	PASS
t-1,3-Dichloropropene	Avg Resp	0.00	0.431	0.428			1	0-30	PASS
Ethanol	Avg Resp	0.00	0.165	0.135			18	0-30	PASS
Ethyl Acetate	Avg Resp	0.00	0.282	0.243			14	0-30	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	3.313	2.957			11	0-30	PASS
Ethylbenzene	Avg Resp	0.00	1.506	1.362			10	0-30	PASS
4-Ethyltoluene	Avg Resp	0.00	1.573	1.468			7	0-30	PASS
Heptane	Avg Resp	0.00	0.071	0.066			7	0-30	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-14-522-207-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131230IC
INITIAL DATE ANALYZED: 12/31/13 1:31
ANALYST: 326

REVIEWED BY: 794
DATE REVIEWED: 1/6/14 15:20
CCV BATCH: D140103A
CCV DATE ANALYZED: 1/3/14 13:26

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.743	0.654			12	0-30	PASS
Hexane	Avg Resp	0.00	1.320	1.077			18	0-30	PASS
2-Hexanone	Avg Resp	0.00	0.488	0.430			12	0-30	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	2.434	2.180			10	0-30	PASS
Methylene Chloride	Avg Resp	0.00	0.827	0.713			14	0-30	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.279	0.260			7	0-30	PASS
Naphthalene	Avg Resp	0.00	1.677	1.605			4	0-30	PASS
o-Xylene	Avg Resp	0.00	1.180	1.083			8	0-30	PASS
p/m-Xylene	Avg Resp	0.00	1.181	1.066			10	0-30	PASS
Propene	Avg Resp	0.00	0.947	0.925			2	0-30	PASS
Styrene	Avg Resp	0.00	0.869	0.795			9	0-30	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.802	0.717			11	0-30	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.988	1.787			10	0-30	PASS
Tetrachloroethene	Avg Resp	0.00	0.582	0.524			10	0-30	PASS
Tetrahydrofuran	Avg Resp	0.00	1.163	1.068			8	0-30	PASS
Toluene	Avg Resp	0.00	1.166	1.011			13	0-30	PASS
Trichloroethene	Avg Resp	0.00	0.367	0.344			6	0-30	PASS
Trichlorofluoromethane	Avg Resp	0.00	1.569	1.550			1	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	1.788	1.639			8	0-30	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	2.011	2.008			0	0-30	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.309	0.289			7	0-30	PASS
Butane	Avg Resp	0.00	0.602	0.518			14	0-30	PASS
Methanol	Avg Resp	0.00	0.106	0.091			15	0-30	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.374	1.287			6	0-30	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.00	0.930	0.818			12	0-30	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	1.327	1.225			8	0-30	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	0.713	0.680			5	0-30	PASS
Vinyl Acetate	Avg Resp	0.00	2.947	2.711			8	0-30	PASS
Vinyl Chloride	Avg Resp	0.00	0.481	0.424			12	0-30	PASS
Isopropanol	**Avg Resp**	**0.00**	**1.167**	**0.707**			**40**	0-30	**FAIL**

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_YY_DATA\2014\140103\03JAN11.D\03JAN11.rr

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CCV Association Summary For Method: EPA TO-15

Batch ID: D140103A
Instrument: GC/MS YY

Analyst: 326

Work Order Number: 099-14-522
Matrix: Air

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
207	Daily Calibration	01/03/2014 13:26	W:\GCMS_YY_DATA\2014\140103\03JAN11.D\03JAN11.rr

Work Order Number: 13-12-1614
Matrix: Air

Reviewed By: 326
D/T Reviewed: 01/04/2014 11:07

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
5	IW-01	01/03/2014 20:52	W:\GCMS_YY_DATA\2014\140103\03JAN20.D\03JAN20.rr
6	VW-40-03	01/03/2014 21:36	W:\GCMS_YY_DATA\2014\140103\03JAN21.D\03JAN21.rr

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ICAL Internal Standards Average Compound Area Report for Method: EPA TO-15

Sample ID: 099-14-522-205 **D/T Analyzed:** 12/30/2013 22:22
Batch ID: D131230IC

Analyte	1	2	3	4	5	6	7	8	9	Avg. Area	Lower Area Limit	Upper Area Limit
Bromochloromethane	727182	734803	728047	728404	721312	716490	691475			721102	432661	1009543
1,4-Difluorobenzene	2520622	2559707	2539368	2540497	2515052	2484425	2365609			2503611	1502167	3505056
Chlorobenzene-d5	2046693	2086612	2075232	2078845	2065297	2028350	1933871			2044986	1226991	2862980

ICV, CCV And Samples Internal Standard Compounds Area Report for Method: EPA TO-15

ICV
Sample ID: 099-14-522-205 **Run #:** 10
CCV Batch ID: D140103A **D/T Analyzed:** 12/31/2013 02:21
Data File: W:\GCMS_YY_DATA\2013\131230\DOD30DEC21.D\DOD30DEC21.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	702238	432661	1009543	9.43	PASS	
1,4-Difluorobenzene	2414433	1502167	3505056	12.11	PASS	
Chlorobenzene-d5	1997625	1226991	2862980	19.22	PASS	

CCV
Sample ID: 099-14-522-207 **Run #:** 0
CCV Batch ID: D140103A **D/T Analyzed:** 01/03/2014 13:26
Data File: W:\GCMS_YY_DATA\2014\140103\03JAN11.D\03JAN11.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	645243	432661	1009543	9.43	PASS	
1,4-Difluorobenzene	2219866	1502167	3505056	12.11	PASS	
Chlorobenzene-d5	1930826	1226991	2862980	19.22	PASS	

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LCS

Sample ID: 099-14-523-265 **Run #:** 1

CCV Batch ID: D140103A **D/T Analyzed:** 01/03/2014 14:16

Data File: W:\GCMS_YY_DATA\2014\140103\03JAN12.D\03JAN12.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	700263	432661	1009543	9.43	PASS	
1,4-Difluorobenzene	2395866	1502167	3505056	12.11	PASS	
Chlorobenzene-d5	2010268	1226991	2862980	19.22	PASS	

LCSD

Sample ID: 099-14-523-265 **Run #:** 2

CCV Batch ID: D140103A **D/T Analyzed:** 01/03/2014 15:06

Data File: W:\GCMS_YY_DATA\2014\140103\03JAN13.D\03JAN13.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	711301	432661	1009543	9.43	PASS	
1,4-Difluorobenzene	2438106	1502167	3505056	12.11	PASS	
Chlorobenzene-d5	2032200	1226991	2862980	19.22	PASS	

MB

Sample ID: 099-14-523-265 **Run #:** 0

CCV Batch ID: D140103A **D/T Analyzed:** 01/03/2014 19:22

Data File: W:\GCMS_YY_DATA\2014\140103\03JAN18.D\03JAN18.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	673774	432661	1009543	9.42	PASS	
1,4-Difluorobenzene	2294858	1502167	3505056	12.11	PASS	
Chlorobenzene-d5	1841467	1226991	2862980	19.22	PASS	

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CS

Sample ID: 13-12-1614-5 **Run #:** 2

CCV Batch ID: D140103A **D/T Analyzed:** 01/03/2014 20:52

Data File: W:\GCMS_YY_DATA\2014\140103\03JAN20.D\03JAN20.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	591222	432661	1009543	9.46	PASS	
1,4-Difluorobenzene	1961706	1502167	3505056	12.13	PASS	
Chlorobenzene-d5	1524772	1226991	2862980	19.22	PASS	

CS

Sample ID: 13-12-1614-6 **Run #:** 2

CCV Batch ID: D140103A **D/T Analyzed:** 01/03/2014 21:36

Data File: W:\GCMS_YY_DATA\2014\140103\03JAN21.D\03JAN21.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	589568	432661	1009543	9.50	PASS	
1,4-Difluorobenzene	1945208	1502167	3505056	12.15	PASS	
Chlorobenzene-d5	1574455	1226991	2862980	19.23	PASS	

Notes:

For all samples including QC, all internal standard area responses must be within 60% to 140% of the mean area response in the initial calibration.

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EPA TO-15 Full List

Tuning Data

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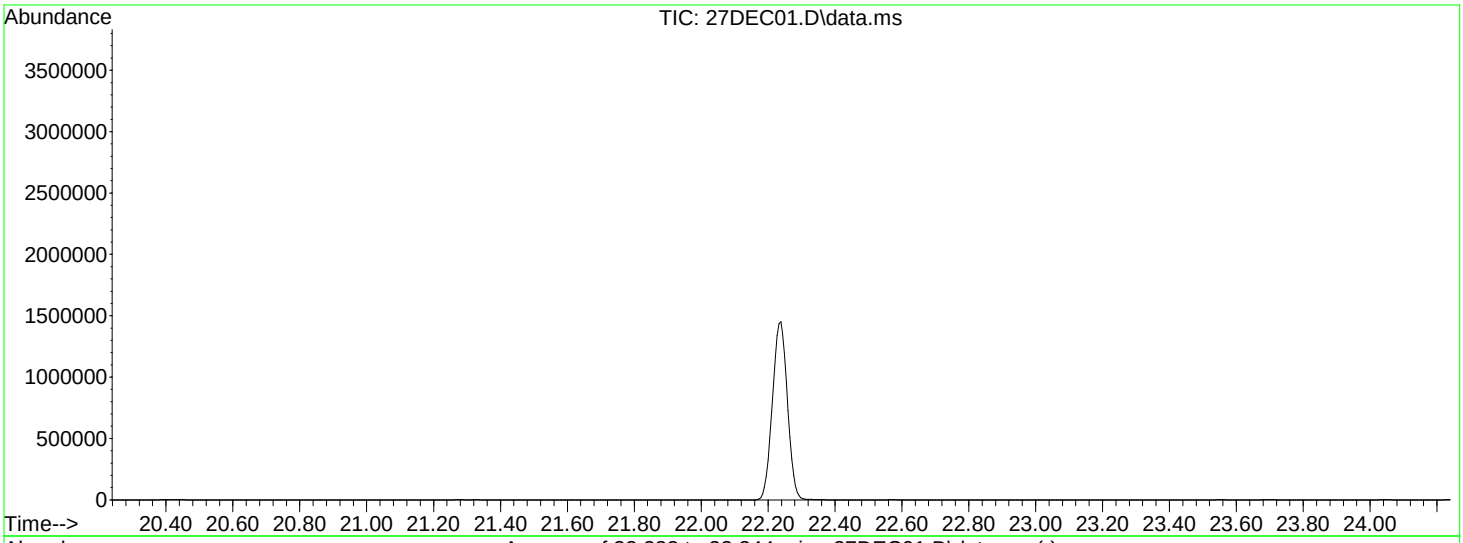
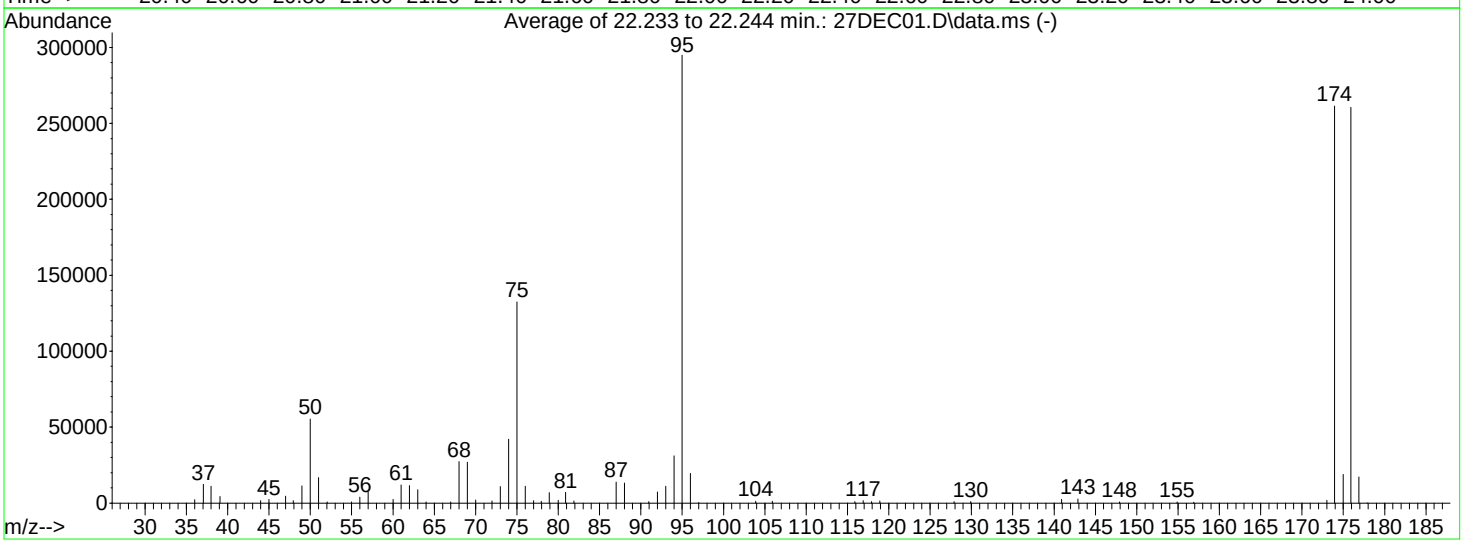
Data Path : W:\GCMS_YY_DATA\2013\131227\
Data File : 27DEC01.D
Acq On : 27 Dec 2013 2:40 am
Operator : 846
Sample : TUNE CHECK
Misc : AIR-01-31-15 326
ALS Vial : 10 Sample Multiplier: 1

Integration File: THR0.3p.P

Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Title :
Last Update : Fri Dec 27 18:10:47 2013





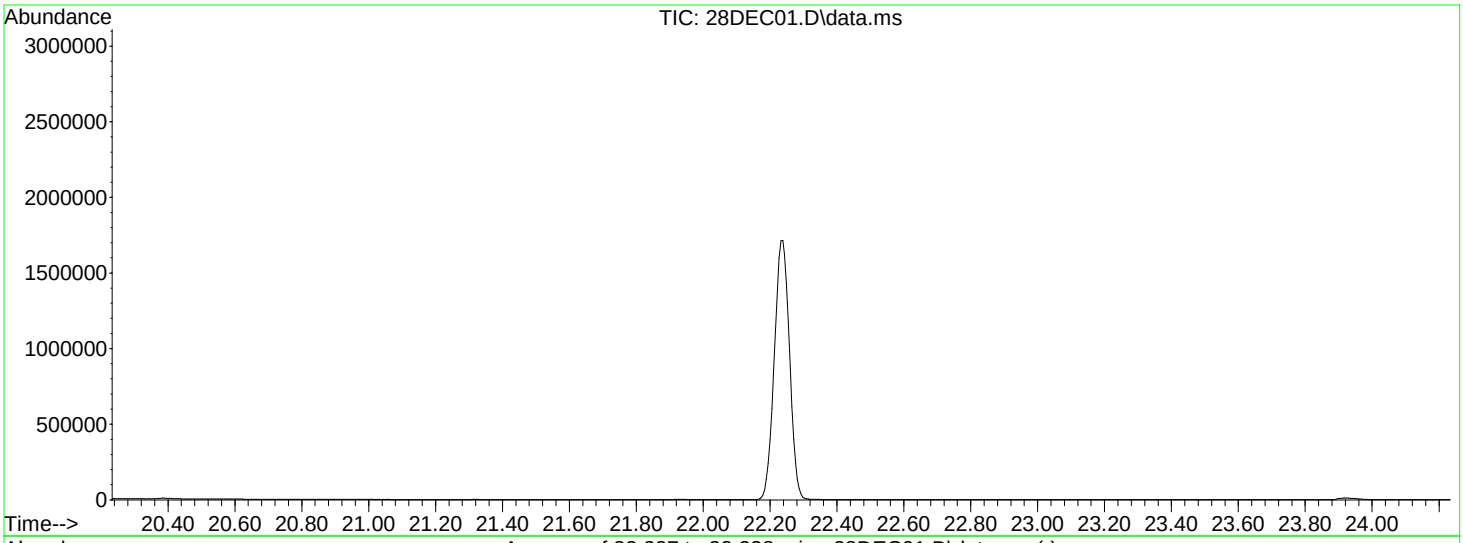
AutoFind: Scans 3473, 3474, 3475; Background Corrected with Scan 3458

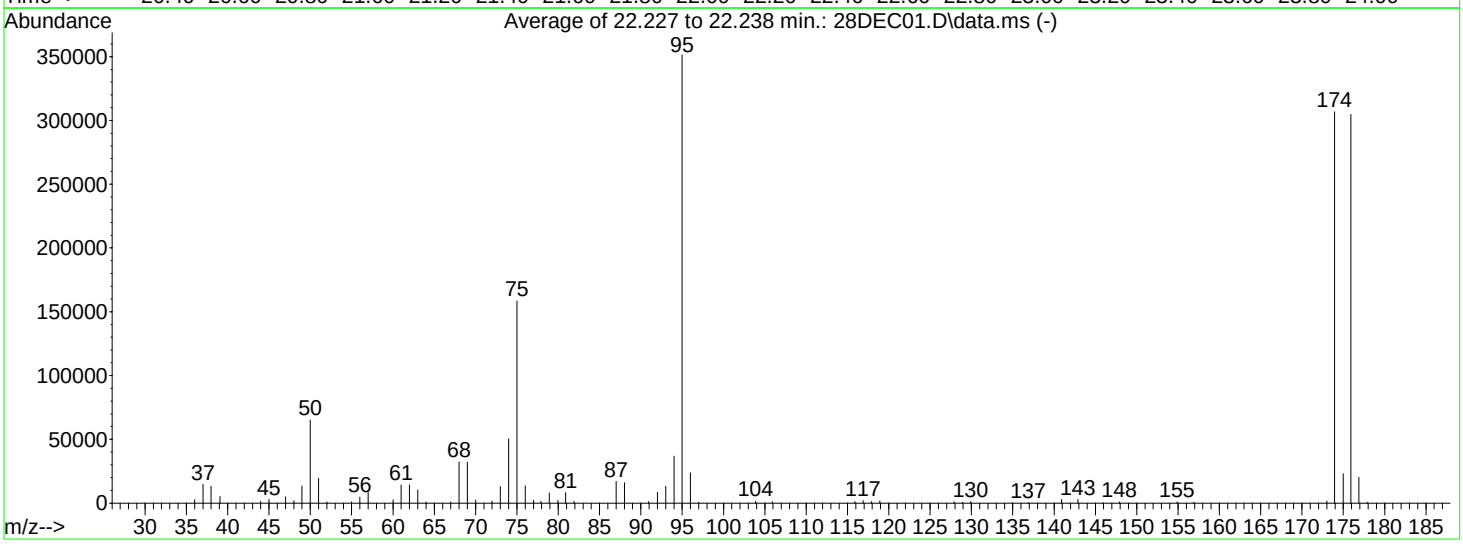
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	55261	PASS
75	95	30	60	44.9	132421	PASS
95	95	100	100	100.0	295019	PASS
96	95	5	9	6.6	19488	PASS
173	174	0.00	2	0.7	1791	PASS
174	95	50	120	88.6	261483	PASS
175	174	5	9	7.2	18883	PASS
176	174	95	101	99.6	260565	PASS
177	176	5	9	6.6	17126	PASS

Data Path : W:\GCMS_YY_DATA\2013\131228\
Data File : 28DEC01.D
Acq On : 28 Dec 2013 5:29 am
Operator : 846
Sample : TUNE CHECK
Misc : AIR-01-31-15 326
ALS Vial : 10 Sample Multiplier: 1

Integration File: THR0.3p.P

Method : C:\MSDCHEM\1\METHODS\131230.M
Title :
Last Update : Sat Jan 04 11:46:36 2014





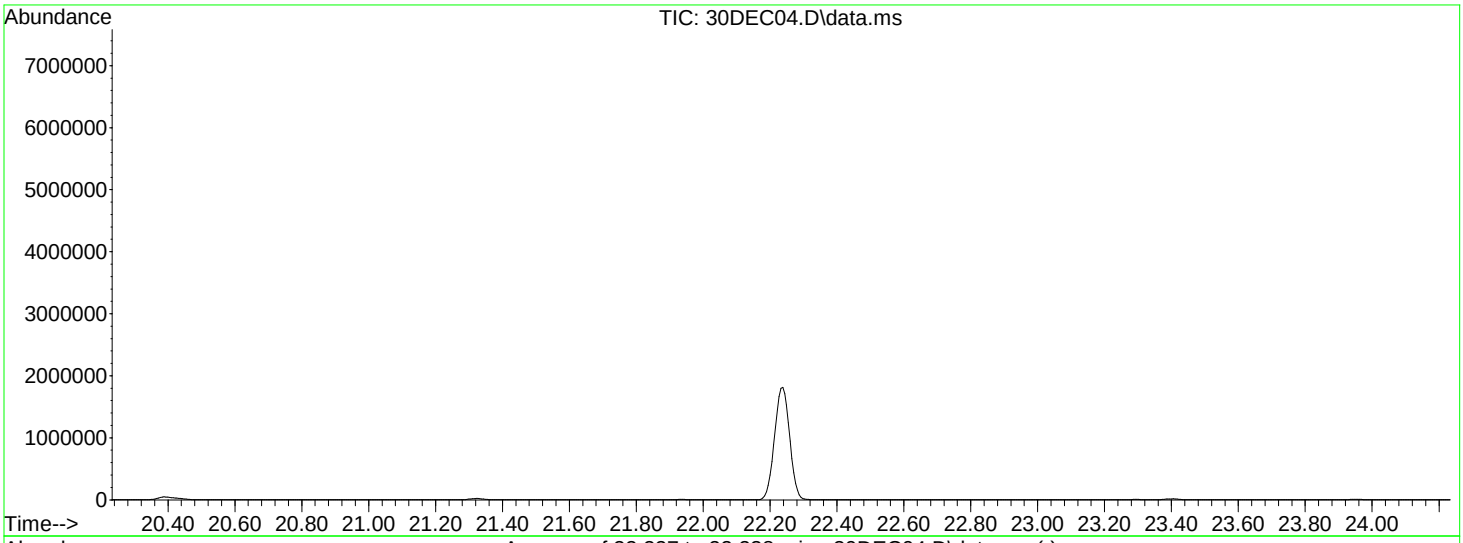
AutoFind: Scans 3472, 3473, 3474; Background Corrected with Scan 3457

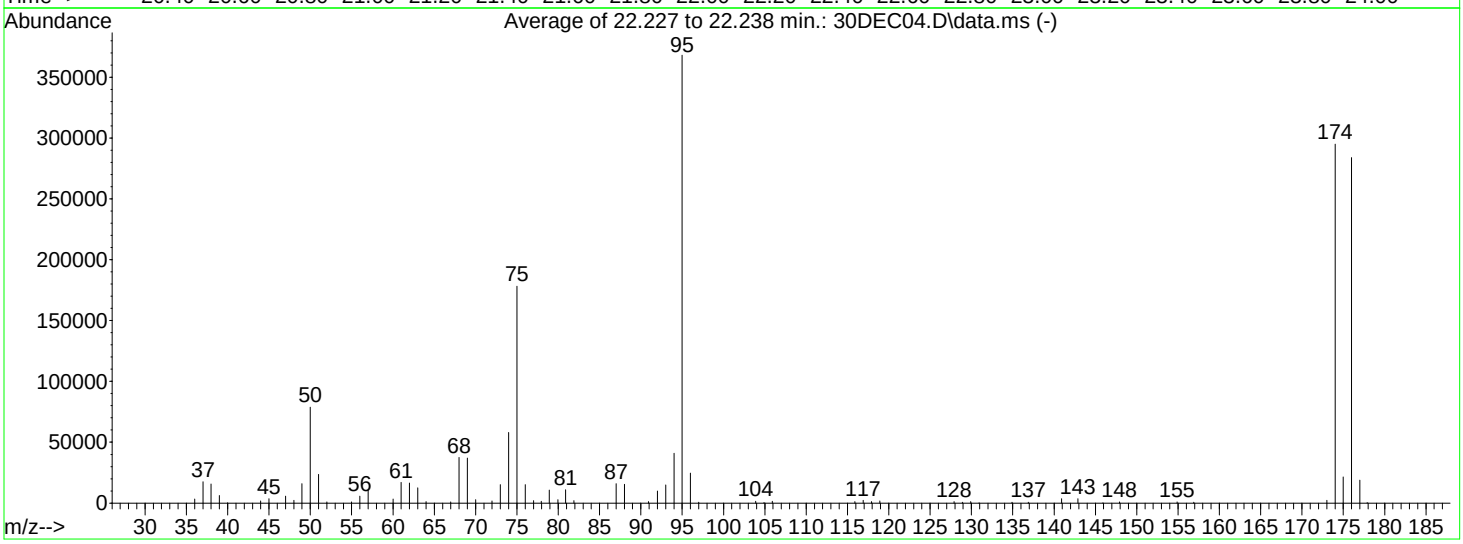
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.6	65192	PASS
75	95	30	60	45.1	158507	PASS
95	95	100	100	100.0	351296	PASS
96	95	5	9	6.7	23669	PASS
173	174	0.00	2	0.5	1535	PASS
174	95	50	120	87.3	306773	PASS
175	174	5	9	7.5	22963	PASS
176	174	95	101	99.3	304683	PASS
177	176	5	9	6.7	20309	PASS

Data Path : W:\GCMS_YY_DATA\2013\131230\
Data File : 30DEC04.D
Acq On : 30 Dec 2013 10:55 am
Operator : 846
Sample : TUNE CHECK EM:-71=>-94EV
Misc : AIR-01-31-15 326
ALS Vial : 10 Sample Multiplier: 1

Integration File: THR0.3p.P

Method : C:\MSDCHEM\1\METHODS\131230DOD.M
Title :
Last Update : Fri Jan 03 10:24:09 2014





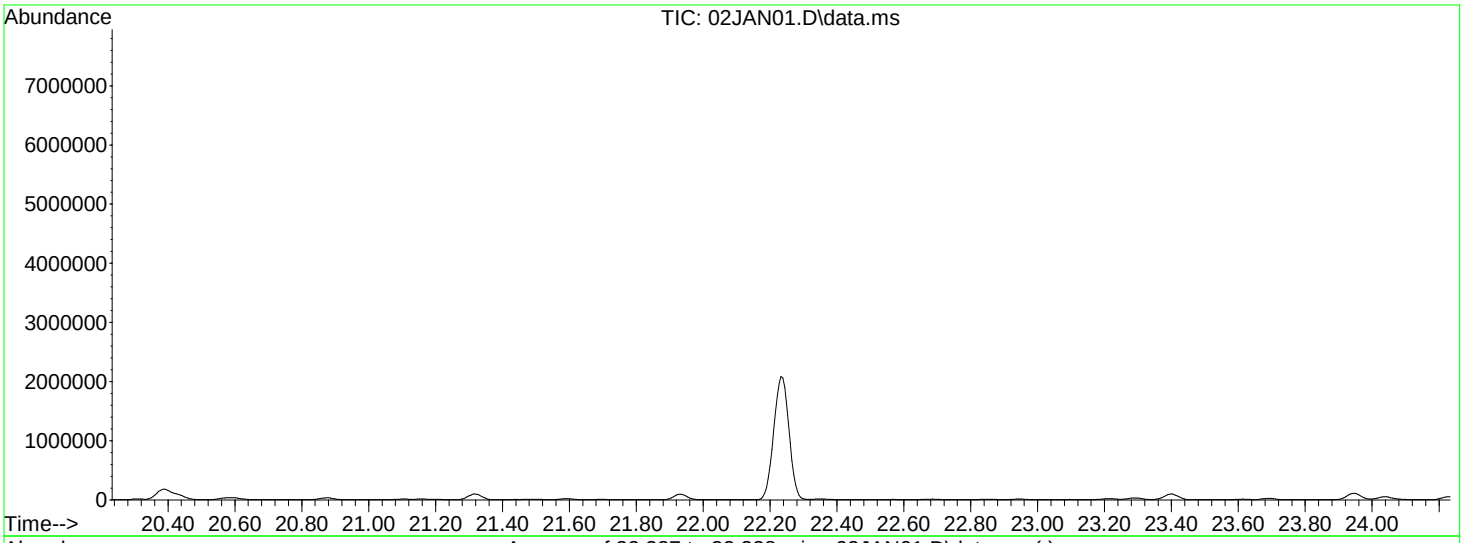
AutoFind: Scans 3472, 3473, 3474; Background Corrected with Scan 3458

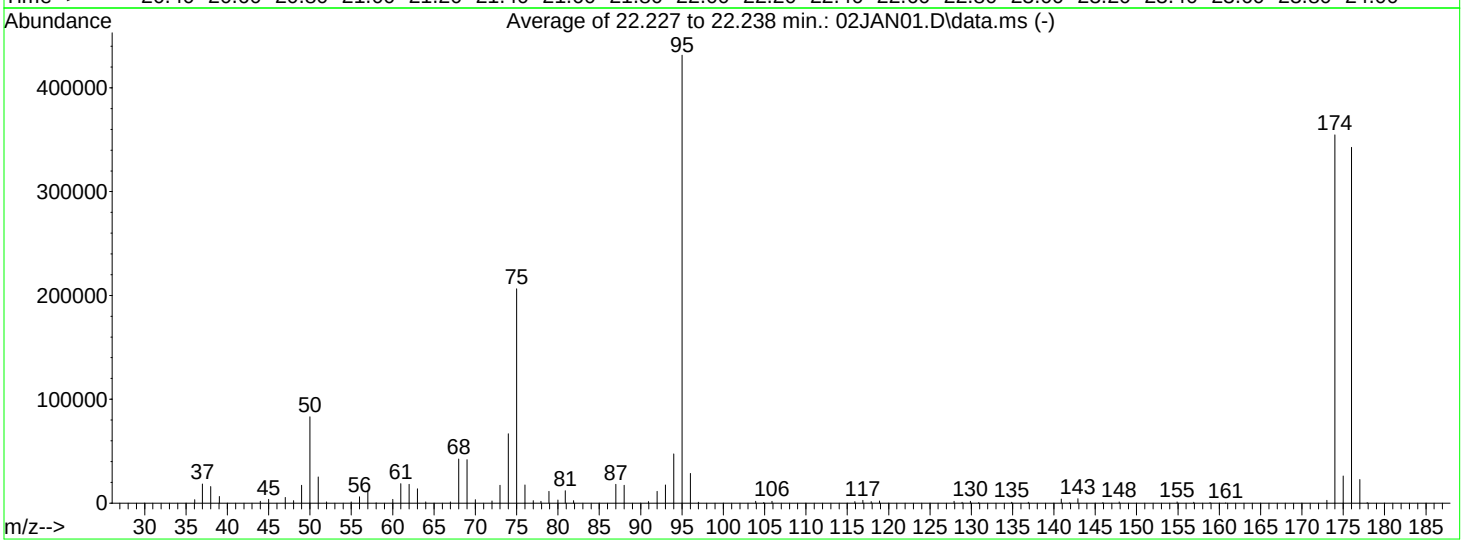
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.4	78749	PASS
75	95	30	60	48.4	178325	PASS
95	95	100	100	100.0	368363	PASS
96	95	5	9	6.6	24491	PASS
173	174	0.00	2	0.7	2143	PASS
174	95	50	120	80.1	294997	PASS
175	174	5	9	7.3	21579	PASS
176	174	95	101	96.3	283989	PASS
177	176	5	9	6.6	18848	PASS

Data Path : W:\GCMS_YY_DATA\2014\140102\
Data File : 02JAN01.D
Acq On : 2 Jan 2014 8:49 am
Operator : 846
Sample : TUNE CHECK
Misc : AIR-01-31-15 326
ALS Vial : 10 Sample Multiplier: 1

Integration File: THR0.3p.P

Method : C:\MSDCHEM\1\METHODS\131230DOD.M
Title :
Last Update : Fri Jan 03 10:24:09 2014





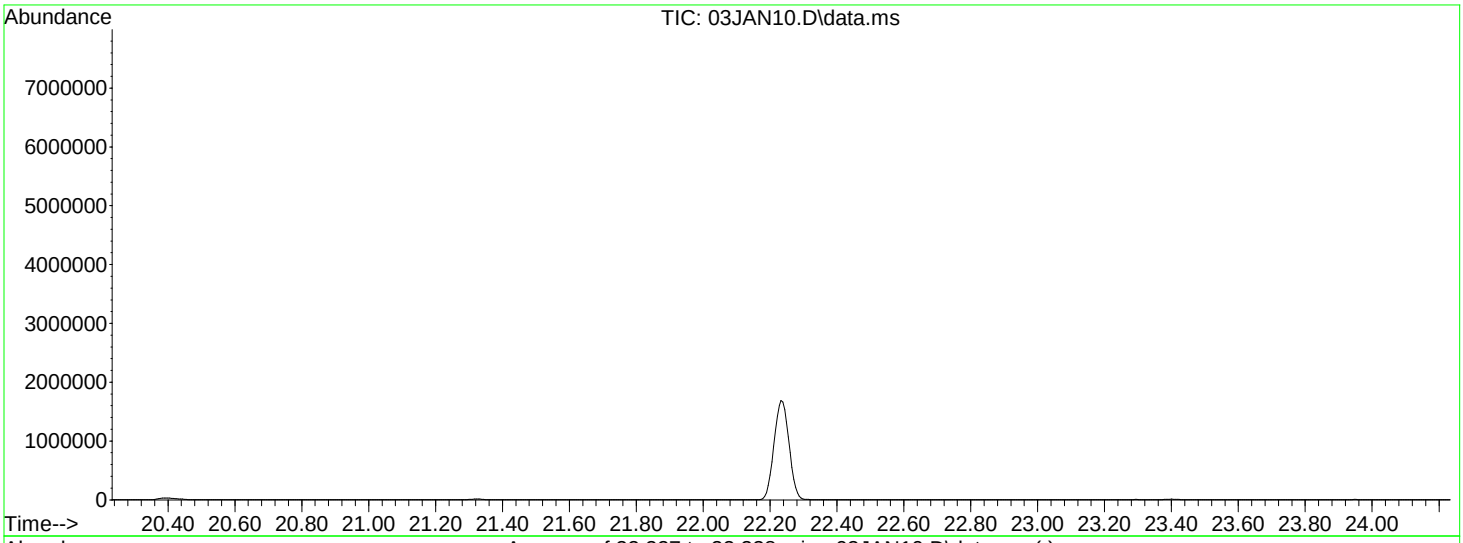
AutoFind: Scans 3472, 3473, 3474; Background Corrected with Scan 3457

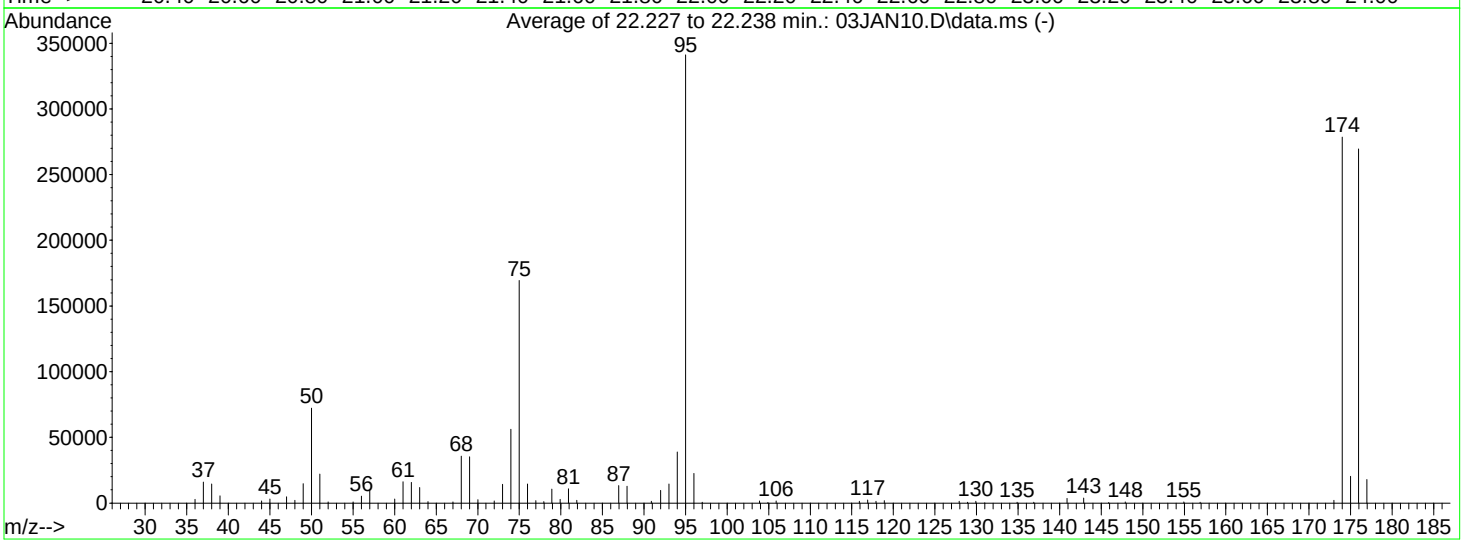
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.3	83208	PASS
75	95	30	60	47.8	206379	PASS
95	95	100	100	100.0	431637	PASS
96	95	5	9	6.6	28557	PASS
173	174	0.00	2	0.8	2708	PASS
174	95	50	120	82.2	354752	PASS
175	174	5	9	7.3	25957	PASS
176	174	95	101	96.6	342656	PASS
177	176	5	9	6.6	22621	PASS

Data Path : W:\GCMS_YY_DATA\2014\140103\
Data File : 03JAN10.D
Acq On : 3 Jan 2014 12:19 pm
Operator : 846
Sample : TUNE CHECK
Misc : AIR-01-31-15 326
ALS Vial : 10 Sample Multiplier: 1

Integration File: THR0.3p.P

Method : C:\MSDCHEM\1\METHODS\131230DOD.M
Title :
Last Update : Fri Jan 03 10:24:09 2014





AutoFind: Scans 3472, 3473, 3474; Background Corrected with Scan 3458

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.2	72275	PASS
75	95	30	60	49.7	169408	PASS
95	95	100	100	100.0	340992	PASS
96	95	5	9	6.6	22461	PASS
173	174	0.00	2	0.7	2008	PASS
174	95	50	120	81.6	278400	PASS
175	174	5	9	7.3	20365	PASS
176	174	95	101	96.8	269419	PASS
177	176	5	9	6.6	17835	PASS

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EPA TO-15 Full List

Run Logs

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Directory: W:\GCMS_YY_DATA\2013\131227

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	27dec01.d	1.	TUNE CHECK	AIR-01-31-15 326	27 Dec 2013 02:40
2	2	27dec02.d	1.	ICAL 25PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 03:30
3	2	27dec03.d	1.	ICAL 12.5PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 04:17
4	2	27dec04.d	1.	ICAL 6.25PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 05:02
5	4	27dec05.d	1.	ICAL 1.25PPBV A122613B	AIR-01-31-15 326	27 Dec 2013 05:52
6	4	27dec06.d	1.	ICAL 0.5PPBV A122613B	AIR-01-31-15 326	27 Dec 2013 06:38
7	1	27dec07.d	1.	ICAL 100PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 07:34
8	1	27dec08.d	1.	ICAL 50PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 08:23
9	2	27dec09.d	1.	ICV/LCS 25PPBV A122313E	AIR-01-31-15 326	27 Dec 2013 09:13
10	2	27dec10.d	1.	ICV/LCSD 25PPBV A122313E	AIR-01-31-15 326	27 Dec 2013 10:03
11	1	27dec11.d	1.	IB	AIR-01-31-15 326	27 Dec 2013 10:47
12	1	27dec12.d	1.	ICAL 50PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 11:37
13	1	27dec13.d	1.	IB	AIR-01-31-15 326	27 Dec 2013 12:21
14	2	27dec14.d	1.	BQC D813 400ML	AIR-01-31-15 326	27 Dec 2013 13:10
15	10	27dec15.d	1.	MB BQC LC536 400ML	AIR-01-31-15 326	27 Dec 2013 14:05
16	10	27dec16.d	1.	MB BQC D805 400ML	AIR-01-31-15 326	27 Dec 2013 15:15
17	1	27dec17.d	1.	13-12-1277-1A 400ML	AIR-01-31-15 326	27 Dec 2013 16:06
18	2	27dec18.d	1.	13-12-1277-2A 400ML	AIR-01-31-15 326	27 Dec 2013 16:56
19	4	27dec19.d	1.	13-12-1277-3A 400ML	AIR-01-31-15 326	27 Dec 2013 17:47
20	5	27dec20.d	1.	13-12-1277-4A 400ML	AIR-01-31-15 326	27 Dec 2013 18:37
21	6	27dec21.d	1.	13-12-1277-5A 400ML	AIR-01-31-15 326	27 Dec 2013 19:28
22	7	27dec22.d	1.	13-12-1277-6A 400ML	AIR-01-31-15 326	27 Dec 2013 20:18
23	8	27dec23.d	1.	13-12-1277-7A 400ML	AIR-01-31-15 326	27 Dec 2013 21:09
24	9	27dec24.d	1.	13-12-1371-1A 40ML	AIR-01-31-15 326	27 Dec 2013 21:54
25	11	27dec25.d	1.	13-12-1371-3A 40ML	AIR-01-31-15 326	27 Dec 2013 22:38
26	12	27dec26.d	1.	13-12-1371-4A 100ML	AIR-01-31-15 326	27 Dec 2013 23:24
27	13	27dec27.d	1.	13-12-1371-5A 160ML	AIR-01-31-15 326	28 Dec 2013 00:59
28	14	27dec28.d	1.	13-12-1371-6A 160ML	AIR-01-31-15 326	28 Dec 2013 01:46
29	1	27dec29.d	1.	13-12-1371-8A 125ML	AIR-01-31-15 326	28 Dec 2013 02:32
30	2	27dec30.d	1.	13-12-1371-9A 400ML	AIR-01-31-15 326	28 Dec 2013 03:26
31	2	Dod27dec02.d	1.	ICAL 25PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 03:30
32	2	Dod27dec03.d	1.	ICAL 12.5PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 04:17
33	2	Dod27dec04.d	1.	ICAL 6.25PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 05:02
34	4	Dod27dec05.d	1.	ICAL 1.25PPBV A122613B	AIR-01-31-15 326	27 Dec 2013 05:52
35	4	Dod27dec06.d	1.	ICAL 0.5PPBV A122613B	AIR-01-31-15 326	27 Dec 2013 06:38
36	1	Dod27dec07.d	1.	ICAL 100PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 07:34
37	1	Dod27dec08.d	1.	ICAL 50PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 08:23
38	2	Dod27dec09.d	1.	ICV/LCS 25PPBV A122313E	AIR-01-31-15 326	27 Dec 2013 09:13
39	2	Dod27dec10.d	1.	ICV/LCSD 25PPBV A122313E	AIR-01-31-15 326	27 Dec 2013 10:03
40	1	Dod27dec12.d	1.	DTSC 50PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 11:37
41	10	Dod27dec16.d	1.	MB BQC D805 400ML	AIR-01-31-15 326	27 Dec 2013 15:15

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Injection Log

Directory: W:\GCMS_YY_DATA\2013\131228

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	28dec01.d	1.	TUNE CHECK	AIR-01-31-15 326	28 Dec 2013 05:29
2	2	28dec02.d	1.	CCV 25PPBV A122613A	AIR-01-31-15 326	28 Dec 2013 06:19
3	2	28dec03.d	1.	LCS 25PPBV A122013D	AIR-01-31-15 326	28 Dec 2013 07:08
4	2	28dec04.d	1.	LCSD 25PPBV A122013D	AIR-01-31-15 326	28 Dec 2013 07:58
5	1	28dec05.d	1.	IB	AIR-01-31-15 326	28 Dec 2013 08:53
6	10	28dec06.d	1.	CEL BLANK 400ML	AIR-01-31-15 326	28 Dec 2013 09:51
7	10	28dec07.d	1.	MB 400ML	AIR-01-31-15 326	28 Dec 2013 10:47
8	6	28dec08.d	1.	13-12-1277-5A 200ML	AIR-01-31-15 326	28 Dec 2013 11:41
9	7	28dec09.d	1.	13-12-1371-9A 2.95X 200ML	AIR-01-31-15 326	28 Dec 2013 12:28
10	12	28dec10.d	1.	13-12-1371-4A 50ML	AIR-01-31-15 326	28 Dec 2013 13:13
11	4	28dec11.d	1.	13-12-1371-2A 500X 100ML	AIR-01-31-15 326	28 Dec 2013 14:00
12	5	28dec12.d	1.	13-12-1371-7A 250X 400ML	AIR-01-31-15 326	28 Dec 2013 14:57
13	15	28dec13.d	1.	13-12-1371-10A 500X 20ML	AIR-01-31-15 326	28 Dec 2013 15:42
14	16	28dec14.d	1.	13-12-1615-1A 400ML	AIR-01-31-15 326	28 Dec 2013 16:33
15	16	28dec15.d	1.	13-12-1615-1A 100ML	AIR-01-31-15 326	28 Dec 2013 17:19
16	15	28dec16.d	1.	13-12-1614-1A 400ML	AIR-01-31-15 326	28 Dec 2013 18:10
17	2	28dec17.d	1.	13-12-1614-2A 400ML	AIR-01-31-15 326	28 Dec 2013 19:00
18	4	28dec18.d	1.	13-12-1614-3A 400ML	AIR-01-31-15 326	28 Dec 2013 19:50
19	5	28dec19.d	1.	13-12-1614-4A 400ML	AIR-01-31-15 326	28 Dec 2013 20:40
20	6	28dec20.d	1.	13-12-1614-5A 400ML	AIR-01-31-15 326	28 Dec 2013 21:30
21	7	28dec21.d	1.	13-12-1614-6A 400ML	AIR-01-31-15 326	28 Dec 2013 22:20
22	8	28dec22.d	1.	13-12-1614-7A 400ML	AIR-01-31-15 326	28 Dec 2013 23:10
23	9	28dec23.d	1.	13-12-1614-8A 400ML	AIR-01-31-15 326	28 Dec 2013 23:59
24	9	28dec24.d	1.	IB	AIR-01-31-15 326	29 Dec 2013 00:43
25	10	28dec25.d	1.	13-12-1614-9A 400ML	AIR-01-31-15 326	29 Dec 2013 01:34
26	1	28dec26.d	1.	13-12-1887-1A 400ML	AIR-01-31-15 326	29 Dec 2013 02:24
27	11	28dec27.d	1.	13-12-1887-2A 400ML	AIR-01-31-15 326	29 Dec 2013 03:18
28	12	28dec28.d	1.	13-12-1887-3A 289ML	AIR-01-31-15 326	29 Dec 2013 04:13
29	2	Dod28dec02.d	1.	CCV 25PPBV A122613A	AIR-01-31-15 326	28 Dec 2013 06:19
30	2	Dod28dec03.d	1.	LCS 25PPBV A122013D	AIR-01-31-15 326	28 Dec 2013 07:08
31	2	Dod28dec04.d	1.	LCSD 25PPBV A122013D	AIR-01-31-15 326	28 Dec 2013 07:58
32	10	Dod28dec07.d	1.	MB 400ML	AIR-01-31-15 326	28 Dec 2013 10:47

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Injection Log

Directory: W:\GCMS_YY_DATA\2013\131230

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	30dec01.d	1.	TUNE CHECK	AIR-01-31-15 326	30 Dec 2013 08:39
2		30dec02.d	1.	No MS or GC data present		
3	10	30dec03.d	1.	TUNE CHECK RETUNE	AIR-01-31-15 326	30 Dec 2013 10:02
4	10	30dec04.d	1.	TUNE CHECK EM:-71=>-94EV	AIR-01-31-15 326	30 Dec 2013 10:55
5	2	30dec05.d	1.	ICAL 100PPBV A123013A	AIR-01-31-15 326	30 Dec 2013 12:38
6	2	30dec06.d	1.	ICAL 50PPBV A123013C	AIR-01-31-15 326	30 Dec 2013 13:28
7	2	30dec07.d	1.	ICAL 25PPBV A123013D	AIR-01-31-15 326	30 Dec 2013 14:31
8	2	30dec08.d	1.	ICAL 12.5PPBV A123013D	AIR-01-31-15 326	30 Dec 2013 15:18
9	2	30dec09.d	1.	ICAL 6.25PPBV A123013D	AIR-01-31-15 326	30 Dec 2013 16:03
10	1	30dec10.d	1.	ICAL 1.25PPBV A123013F	AIR-01-31-15 326	30 Dec 2013 17:08
11	1	30dec11.d	1.	ICAL 0.5PPBV A123013F	AIR-01-31-15 326	30 Dec 2013 17:54
12	2	30dec12.d	1.	ICV/LCS 25PPBV A123013E	AIR-01-31-15 326	30 Dec 2013 18:49
13	2	30dec13.d	1.	ICV/LCSD 25PPBV A123013E	AIR-01-31-15 326	30 Dec 2013 19:47
14	16	30dec14.d	1.	ICAL 100PPBV A122013I	AIR-01-31-15 326	30 Dec 2013 20:42
15	16	30dec15.d	1.	ICAL 50PPBV A122013I	AIR-01-31-15 326	30 Dec 2013 21:32
16	2	30dec16.d	1.	ICAL 25PPBV A122713C	AIR-01-31-15 326	30 Dec 2013 22:22
17	2	30dec17.d	1.	ICAL 12.5PPBV A122713C	AIR-01-31-15 326	30 Dec 2013 23:09
18	2	30dec18.d	1.	ICAL 6.25PPBV A122713C	AIR-01-31-15 326	30 Dec 2013 23:55
19	1	30dec19.d	1.	ICAL 1.25PPBV A122313D	AIR-01-31-15 326	31 Dec 2013 00:45
20	1	30dec20.d	1.	ICAL 0.5PPBV A122313D	AIR-01-31-15 326	31 Dec 2013 01:31
21	14	30dec21.d	1.	ICV/LCS 25PPBV A122813C	AIR-01-31-15 326	31 Dec 2013 02:21
22	14	30dec22.d	1.	ICV/LCSD 25PPBV A122813C	AIR-01-31-15 326	31 Dec 2013 03:11
23	16	30dec23.d	1.	DTSC 50PPBV A122013I	AIR-01-31-15 326	31 Dec 2013 04:00
24	10	30dec24.d	1.	IB	AIR-01-31-15 326	31 Dec 2013 04:45
25	10	30dec25.d	1.	MB BQC LC299 400ML	AIR-01-31-15 326	31 Dec 2013 05:35
26	15	30dec26.d	1.	LOQ APH 2.5PPBV A123013E	AIR-01-31-15 326	31 Dec 2013 06:19
27	11	30dec27.d	1.	13-12-1896-1A 400ML	AIR-01-31-15 326	31 Dec 2013 08:46
28	12	30dec28.d	1.	13-12-1896-2A 400ML	AIR-01-31-15 326	31 Dec 2013 09:39
29	13	30dec29.d	1.	13-12-1896-3A 400ML	AIR-01-31-15 326	31 Dec 2013 10:30
30	2	Btexar30dec05.d	1.	ICAL 100PPBV A123013A	AIR-01-31-15 326	30 Dec 2013 12:38
31	2	Btexar30dec06.d	1.	ICAL 50PPBV A123013C	AIR-01-31-15 326	30 Dec 2013 13:28
32	2	Btexar30dec07.d	1.	ICAL 25PPBV A123013D	AIR-01-31-15 326	30 Dec 2013 14:31
33	2	Btexar30dec08.d	1.	ICAL 12.5PPBV A123013D	AIR-01-31-15 326	30 Dec 2013 15:18
34	2	Btexar30dec09.d	1.	ICAL 6.25PPBV A123013D	AIR-01-31-15 326	30 Dec 2013 16:03
35	1	Btexar30dec10.d	1.	ICAL 1.25PPBV A123013F	AIR-01-31-15 326	30 Dec 2013 17:08
36	1	Btexar30dec11.d	1.	ICAL 0.5PPBV A123013F	AIR-01-31-15 326	30 Dec 2013 17:54
37	2	Btexar30dec12.d	1.	ICV/LCS 25PPBV A123013E	AIR-01-31-15 326	30 Dec 2013 18:49
38	2	Btexar30dec13.d	1.	ICV/LCSD 25PPBV A123013E	AIR-01-31-15 326	30 Dec 2013 19:47
39	15	Btexar30dec26.d	1.	LOQ APH 2.5PPBV A123013E	AIR-01-31-15 326	31 Dec 2013 06:19
40	16	Dod30dec14.d	1.	ICAL 100PPBV A122013I	AIR-01-31-15 326	30 Dec 2013 20:42
41	16	Dod30dec15.d	1.	ICAL 50PPBV A122013I	AIR-01-31-15 326	30 Dec 2013 21:32
42	2	Dod30dec16.d	1.	ICAL 25PPBV A122713C	AIR-01-31-15 326	30 Dec 2013 22:22
43	2	Dod30dec17.d	1.	ICAL 12.5PPBV A122713C	AIR-01-31-15 326	30 Dec 2013 23:09
44	2	Dod30dec18.d	1.	ICAL 6.25PPBV A122713C	AIR-01-31-15 326	30 Dec 2013 23:55
45	1	Dod30dec19.d	1.	ICAL 1.25PPBV A122313D	AIR-01-31-15 326	31 Dec 2013 00:45
46	1	Dod30dec20.d	1.	ICAL 0.5PPBV A122313D	AIR-01-31-15 326	31 Dec 2013 01:31

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Directory: W:\GCMS_YY_DATA\2013\131230

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
47	14	Dod30dec21.d	1.	ICV/LCS 25PPBV A122813C	AIR-01-31-15 326	31 Dec 2013 02:21
48	14	Dod30dec22.d	1.	ICV/LCSD 25PPBV A122813C	AIR-01-31-15 326	31 Dec 2013 03:11
49	16	Dod30dec23.d	1.	DTSC 50PPBV A122013I	AIR-01-31-15 326	31 Dec 2013 04:00
50	10	Dod30dec24.d	1.	IB	AIR-01-31-15 326	31 Dec 2013 04:45
51	10	Dod30dec25.d	1.	MB BQC LC299 400ML	AIR-01-31-15 326	31 Dec 2013 05:35

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Injection Log

Directory: W:\GCMS_YY_DATA\2014\140102

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	02jan01.d	1.	TUNE CHECK	AIR-01-31-15 326	2 Jan 2014 08:49
2	10	02jan02.d	1.	CCV 25PPBV A122313A	AIR-01-31-15 326	2 Jan 2014 09:39
3	10	02jan03.d	1.	APH CCV 25PPBV A123013D	AIR-01-31-15 326	2 Jan 2014 10:37
4	10	02jan04.d	1.	APH LCS 25PPBV A123013E	AIR-01-31-15 326	2 Jan 2014 12:03
5	10	02jan05.d	1.	APH LCSD 25PPBV A123013E	AIR-01-31-15 326	2 Jan 2014 12:52
6	10	02jan06.d	1.	LCS 25PPBV A122813C	AIR-01-31-15 326	2 Jan 2014 13:47
7	10	02jan07.d	1.	LCSD 25PPBV A122813C	AIR-01-31-15 326	2 Jan 2014 14:39
8	1	02jan08.d	1.	IB	AIR-01-31-15 326	2 Jan 2014 15:50
9	1	02jan09.d	1.	BQC D142 400ML	AIR-01-31-15 326	2 Jan 2014 16:40
10	1	02jan10.d	1.	MB BQC D793 400ML	AIR-01-31-15 326	2 Jan 2014 17:34
11	2	02jan11.d	1.	13-12-1896-3A 40ML	AIR-01-31-15 326	2 Jan 2014 18:19
12	4	02jan12.d	1.	13-12-1614-3A 160ML	AIR-01-31-15 326	2 Jan 2014 19:06
13	5	02jan13.d	1.	13-12-1614-4A 160ML	AIR-01-31-15 326	2 Jan 2014 19:54
14	6	02jan14.d	1.	13-12-1614-5A 100ML	AIR-01-31-15 326	2 Jan 2014 20:40
15	7	02jan15.d	1.	13-12-1614-6A 40ML	AIR-01-31-15 326	2 Jan 2014 21:25
16	7	02jan16.d	1.	13-12-1614-7A 25ML	AIR-01-31-15 326	2 Jan 2014 22:10
17	8	02jan17.d	1.	13-12-1614-7A 10ML	AIR-01-31-15 326	2 Jan 2014 22:54
18	8	02jan18.d	1.	13-12-1614-8A 25ML	AIR-01-31-15 326	2 Jan 2014 23:39
19	8	02jan19.d	1.	13-12-1614-8A 10ML	AIR-01-31-15 326	3 Jan 2014 02:18
20	1	02jan20.d	1.	IB	AIR-01-31-15 460	3 Jan 2014 03:02

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Injection Log

Directory: W:\GCMS_YY_DATA\2014\140103

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	03jan01.d	1.	TUNE CHECK	AIR-01-31-15 326	3 Jan 2014 04:41
2	16	03jan02.d	1.	MDL 0.10PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 05:26
3	16	03jan03.d	1.	MDL 0.10PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 06:11
4	16	03jan04.d	1.	MDL 0.10PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 06:55
5	16	03jan05.d	1.	MDL 0.10PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 07:40
6	16	03jan06.d	1.	MDL 0.10PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 08:25
7	16	03jan07.d	1.	MDL 0.10PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 09:09
8	16	03jan08.d	1.	MDL 0.10PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 09:54
9	16	03jan09.d	1.	MDLV 0.10PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 10:39
10	10	03jan10.d	1.	TUNE CHECK	AIR-01-31-15 326	3 Jan 2014 12:19
11	10	03jan11.d	1.	CCV 25PPBV A122313A	AIR-01-31-15 326	3 Jan 2014 13:26
12	10	03jan12.d	1.	LCS 25PPBV A122313A	AIR-01-31-15 326	3 Jan 2014 14:16
13	10	03jan13.d	1.	LCSD 25PPBV A122313A	AIR-01-31-15 326	3 Jan 2014 15:06
14	10	03jan14.d	1.	APH CCV 25PPBV A1223013D	AIR-01-31-15 326	3 Jan 2014 16:02
15	10	03jan15.d	1.	APH LCS 25PPBV A1223013D	AIR-01-31-15 326	3 Jan 2014 16:59
16	10	03jan16.d	1.	APH LCSD 25PPBV A1223013D	AIR-01-31-15 326	3 Jan 2014 17:48
17	1	03jan17.d	1.	IB	AIR-01-31-15 326	3 Jan 2014 18:32
18	1	03jan18.d	1.	MB	AIR-01-31-15 326	3 Jan 2014 19:22
19	13	03jan19.d	1.	13-12-1896-3A 1.68X 10ML	AIR-01-31-15 326	3 Jan 2014 20:07
20	5	03jan20.d	1.	13-12-1614-5A 50ML	AIR-01-31-15 326	3 Jan 2014 20:52
21	6	03jan21.d	1.	13-12-1614-6A 20ML	AIR-01-31-15 326	3 Jan 2014 21:36
22	1	03jan22.d	1.	IB	AIR-01-31-15 326	3 Jan 2014 22:22
23	16	03jan23.d	1.	MDL 0.2PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 23:07
24	16	03jan24.d	1.	MDL 0.2PPBV A123013F	AIR-01-31-15 326	3 Jan 2014 23:52
25	16	03jan25.d	1.	MDL 0.2PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 00:37
26	16	03jan26.d	1.	MDL 0.2PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 01:22
27	16	03jan27.d	1.	MDL 0.2PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 02:07
28	16	03jan28.d	1.	MDL 0.2PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 02:53
29	16	03jan29.d	1.	MDL 0.2PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 03:42
30	16	03jan30.d	1.	MDLV 0.2PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 04:32
31	16	03jan31.d	1.	MDL 1.25PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 05:22
32	16	03jan32.d	1.	MDL 1.25PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 06:12
33	16	03jan33.d	1.	MDL 1.25PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 07:01
34	16	03jan34.d	1.	MDL 1.25PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 07:51
35	16	03jan35.d	1.	MDL 1.25PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 08:41
36	16	03jan36.d	1.	MDL 1.25PPBV A123013F	AIR-01-31-15 326	4 Jan 2014 09:30
37		03jan37.d	1.	No MS or GC data present		

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Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Air/Vapor Sampling Equipment Certification

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Summa Canister Activity Report

Client: Blaine Tech - Carson (Shell)

Work Order: 13-12-1614

Summa Can	Sample #	Vac. Out	Vac. In	Press. To	DF	Analysis Type	Date Changed
D638	1-A	-29.6	-5.0	-5.0	1.00	Pressurize	12/20/2013 11:33:40 AM
D561	2-A	-29.6	-6.0	-6.0	1.00	Pressurize	12/20/2013 11:34:06 AM
D426	3-A	-29.6	-5.0	-5.0	1.00	Pressurize	12/20/2013 11:34:33 AM
D240	4-A	-29.6	-6.0	-6.0	1.00	Pressurize	12/20/2013 11:35:00 AM
D528	5-A	-29.6	-5.0	-5.0	1.00	Pressurize	12/20/2013 11:35:31 AM
D454	6-A	-29.6	-6.0	-6.0	1.00	Pressurize	12/20/2013 11:35:55 AM
D448	7-A	-29.7	-4.0	-4.0	1.00	Pressurize	12/20/2013 11:36:18 AM
D417	8-A	-29.6	-4.0	-4.0	1.00	Pressurize	12/20/2013 11:36:49 AM
D333	9-A	-29.6	-5.0	-5.0	1.00	Pressurize	12/20/2013 11:37:12 AM

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Calscience Environmental Laboratories, Inc.

BATCH CANISTER QC CERTIFICATION

Certified Canister IDs:

Canister Size:			Canister Size:		
☑ 6L	☐ 1L	D449 (Certified Canister)	☑ 6L	☐ 1L	D498
☑ 6L	☐ 1L	D454	☑ 6L	☐ 1L	D561
☑ 6L	☐ 1L	D528	☑ 6L	☐ 1L	D333
☑ 6L	☐ 1L	D448	☑ 6L	☐ 1L	D417
☑ 6L	☐ 1L	D240	☑ 6L	☐ 1L	D638
☑ 6L	☐ 1L	D426	☑ 6L	☐ 1L	D336

Certification Level: ☐ TO-14 ☑ TO-15 ☐ TO-15 SIM

Date Certified: 12/13/13

Date Cleaned: 12/10/13

Date Leak Checked: 12/16/13

Data File: 13DEC10.D

Instrument ID: gcms 5

Oven/Rack ID: Rack 1

Canisters were cleaned as a batch per Calscience SOP T-013. This certifies that the canisters referenced above contain no target analytes above the reporting limits stated in the applicable SOP.

814
CEL Employee ID

12/16/13
Date

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Calscience Environmental Laboratories, Inc.

Supplemental Report 1

The original report has been revised to include the Level IV deliverables package.

CALSCIENCE

WORK ORDER NUMBER: 13-12-1615

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: CKY, Incorporated

Client Project Name: Seal Beach NWS

Attention: Howard Wittenberg
302 West Fifth Street, Ste. 310
San Pedro, CA 90731-2738

Approved for release on 01/15/2014 by:
Richard Villafania
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

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Work Order Number: 13-12-1615

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946
		Units:	%v
Project: Seal Beach NWS			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-37	**13-12-1615-1-A**	**12/19/13 08:09**	**Air**	**GC 65**	**N/A**	**12/20/13 12:14**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	18.4	0.155	0.255	0.510	1	

Method Blank	**099-14-535-8**	**N/A**	**Air**	**GC 65**	**N/A**	**12/20/13 11:54**	**131220L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Methane	<0.255	0.155	0.255	0.510	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946 (M)
		Units:	%v
Project: Seal Beach NWS			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-37	**13-12-1615-1-A**	**12/19/13 08:09**	**Air**	**GC 55**	**N/A**	**12/20/13 11:57**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

Method Blank	**099-15-156-2**	**N/A**	**Air**	**GC 55**	**N/A**	**12/20/13 11:34**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Helium	<0.0100	0.00373	0.0100	0.0250	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-37	**13-12-1615-1-A**	**12/19/13 08:09**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 16:33**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	3.0	0.052	0.20	0.50	1	
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	3.0	0.18	0.50	1.2	1	
Carbon Disulfide	1.3	0.62	1.2	2.5	1	J
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	<0.50	0.20	0.50	1.2	1	U
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
t-1,2-Dichloroethene	26	0.13	0.20	0.50	1	
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	<2.0	0.87	2.0	5.0	1	U
Ethylbenzene	0.57	0.067	0.10	0.50	1	
4-Ethyltoluene	0.18	0.057	0.20	0.50	1	J
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	0.81	0.055	0.10	0.50	1	
p/m-Xylene	2.5	0.15	0.20	1.0	1	
Styrene	0.15	0.064	0.20	0.50	1	J

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 2 of 4

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Tetrachloroethene	4.7	0.067	0.10	0.50	1	
Toluene	1.5	0.080	0.20	0.50	1	
Trichloroethene	20	0.046	0.10	0.50	1	
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	0.19	0.051	0.20	0.50	1	J
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	0.66	0.070	0.20	0.50	1	
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	57-129	
1,2-Dichloroethane-d4	97	47-137	
Toluene-d8	97	78-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-37	**13-12-1615-1-A**	**12/19/13 08:09**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 17:19**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
c-1,2-Dichloroethene	120	0.35	0.80	2.0	4	
Vinyl Chloride	250	0.89	2.0	5.0	4	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	57-129	
1,2-Dichloroethane-d4	97	47-137	
Toluene-d8	98	78-156	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-523-262**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 10:47**	**D131228L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.20	0.052	0.20	0.50	1	U
Benzyl Chloride	<0.50	0.25	0.50	1.2	1	U
Bromodichloromethane	<0.50	0.25	0.50	1.2	1	U
Bromoform	<0.50	0.25	0.50	1.2	1	U
Bromomethane	<0.20	0.14	0.20	0.50	1	U
2-Butanone	<0.50	0.18	0.50	1.2	1	U
Carbon Disulfide	<1.2	0.62	1.2	2.5	1	U
Carbon Tetrachloride	<0.50	0.25	0.50	1.2	1	U
Chlorobenzene	<0.10	0.061	0.10	0.50	1	U
Chloroethane	<1.2	0.62	1.2	2.5	1	U
Chloroform	<0.50	0.25	0.50	1.2	1	U
Chloromethane	<0.50	0.24	0.50	1.2	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.2	1	U
Dichlorodifluoromethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethane	<0.50	0.25	0.50	1.2	1	U
1,1-Dichloroethene	<0.50	0.20	0.50	1.2	1	U
1,2-Dibromoethane	<0.10	0.041	0.10	0.50	1	U
1,2-Dichlorobenzene	<0.10	0.053	0.10	0.50	1	U
1,2-Dichloroethane	<0.20	0.056	0.20	0.50	1	U
1,2-Dichloropropane	<0.20	0.19	0.20	0.50	1	U
1,3-Dichlorobenzene	<0.10	0.052	0.10	0.50	1	U
1,4-Dichlorobenzene	<0.10	0.067	0.10	0.50	1	U
c-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
c-1,2-Dichloroethene	<0.20	0.087	0.20	0.50	1	U
t-1,2-Dichloroethene	<0.20	0.13	0.20	0.50	1	U
t-1,3-Dichloropropene	<0.50	0.25	0.50	1.2	1	U
Ethanol	<2.0	0.87	2.0	5.0	1	U
Ethylbenzene	<0.10	0.067	0.10	0.50	1	U
4-Ethyltoluene	<0.20	0.057	0.20	0.50	1	U
Hexachloro-1,3-Butadiene	<0.10	0.078	0.10	0.50	1	U
2-Hexanone	<0.50	0.44	0.50	1.2	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.25	0.50	1.2	1	U
Methylene Chloride	<0.50	0.25	0.50	1.2	1	U
4-Methyl-2-Pentanone	<0.50	0.37	0.50	1.2	1	U
o-Xylene	<0.10	0.055	0.10	0.50	1	U
p/m-Xylene	<0.20	0.15	0.20	1.0	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppb (v/v)
Project: Seal Beach NWS			Page 4 of 4

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Styrene	<0.20	0.064	0.20	0.50	1	U
Tetrachloroethene	<0.10	0.067	0.10	0.50	1	U
Toluene	<0.20	0.080	0.20	0.50	1	U
Trichloroethene	<0.10	0.046	0.10	0.50	1	U
Trichlorofluoromethane	<0.50	0.17	0.50	1.2	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.20	0.10	0.20	0.50	1	U
1,1,1-Trichloroethane	<0.10	0.079	0.10	0.50	1	U
1,1,2-Trichloroethane	<0.20	0.18	0.20	0.50	1	U
1,3,5-Trimethylbenzene	<0.20	0.051	0.20	0.50	1	U
1,1,2,2-Tetrachloroethane	<0.50	0.25	0.50	1.2	1	U
1,2,4-Trimethylbenzene	<0.20	0.070	0.20	0.50	1	U
1,2,4-Trichlorobenzene	<0.20	0.12	0.20	0.50	1	U
Vinyl Acetate	<0.50	0.25	0.50	1.2	1	U
Vinyl Chloride	<0.50	0.22	0.50	1.2	1	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	57-129	
1,2-Dichloroethane-d4	102	47-137	
Toluene-d8	98	78-156	

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946
Project: Seal Beach NWS			Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-535-8	**LCS**	**Air**	**GC 65**	**N/A**	**12/20/13 10:48**	**131220L02**
099-14-535-8	**LCSD**	**Air**	**GC 65**	**N/A**	**12/20/13 11:26**	**131220L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	4.500	4.423	98	4.353	97	80-120	2	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	ASTM D-1946 (M)
Project: Seal Beach NWS			Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-156-2	**LCS**	**Air**	**GC 55**	**N/A**	**12/20/13 10:29**	**131220L01**
099-15-156-2	**LCSD**	**Air**	**GC 55**	**N/A**	**12/20/13 10:51**	**131220L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Helium	1.000	0.9559	96	1.041	104	80-120	9	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
Project: Seal Beach NWS			Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-523-262	**LCS**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 07:08**	**D131228L01**
099-14-523-262	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**12/28/13 07:58**	**D131228L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	25.00	24.46	98	24.51	98	60-156	0	0-40	
Benzyl Chloride	25.00	25.48	102	25.04	100	50-150	2	0-35	
Bromodichloromethane	25.00	24.71	99	24.77	99	50-150	0	0-35	
Bromoform	25.00	24.73	99	24.83	99	62-134	0	0-38	
Bromomethane	25.00	24.72	99	24.84	99	50-150	0	0-35	
2-Butanone	25.00	24.47	98	24.44	98	50-150	0	0-35	
Carbon Disulfide	25.00	25.75	103	25.82	103	50-150	0	0-35	
Carbon Tetrachloride	25.00	24.09	96	24.15	97	64-154	0	0-32	
Chlorobenzene	25.00	24.10	96	24.33	97	50-150	1	0-35	
Chloroethane	25.00	24.61	98	24.69	99	50-150	0	0-35	
Chloroform	25.00	23.66	95	23.69	95	50-150	0	0-35	
Chloromethane	25.00	24.86	99	25.17	101	50-150	1	0-35	
Dibromochloromethane	25.00	24.70	99	24.98	100	50-150	1	0-35	
Dichlorodifluoromethane	25.00	23.59	94	23.73	95	50-150	1	0-35	
1,1-Dichloroethane	25.00	23.90	96	23.94	96	50-150	0	0-35	
1,1-Dichloroethene	25.00	24.40	98	24.54	98	50-150	1	0-35	
1,2-Dibromoethane	25.00	24.37	97	24.67	99	54-144	1	0-36	
1,2-Dichlorobenzene	25.00	21.67	87	21.42	86	34-160	1	0-47	
1,2-Dichloroethane	25.00	23.70	95	23.68	95	69-153	0	0-35	
1,2-Dichloropropane	25.00	24.35	97	24.42	98	67-157	0	0-35	
1,3-Dichlorobenzene	25.00	22.58	90	22.40	90	50-150	1	0-35	
1,4-Dichlorobenzene	25.00	22.15	89	21.77	87	36-156	2	0-47	
c-1,3-Dichloropropene	25.00	25.71	103	25.82	103	61-157	0	0-35	
c-1,2-Dichloroethene	25.00	24.24	97	24.28	97	50-150	0	0-35	
t-1,2-Dichloroethene	25.00	23.13	93	23.24	93	50-150	0	0-35	
t-1,3-Dichloropropene	25.00	28.40	114	28.41	114	50-150	0	0-35	
Ethanol	100.0	89.88	90	89.66	90	50-150	0	0-35	
Ethylbenzene	25.00	24.83	99	25.15	101	52-154	1	0-38	
4-Ethyltoluene	25.00	24.87	99	24.95	100	50-150	0	0-35	
Hexachloro-1,3-Butadiene	25.00	20.42	82	20.87	83	50-150	2	0-35	
2-Hexanone	25.00	24.66	99	25.02	100	50-150	1	0-35	
Methyl-t-Butyl Ether (MTBE)	25.00	24.52	98	24.68	99	50-150	1	0-35	
Methylene Chloride	25.00	23.99	96	24.01	96	50-150	0	0-35	
4-Methyl-2-Pentanone	25.00	25.11	100	25.17	101	50-150	0	0-35	
o-Xylene	25.00	24.28	97	24.50	98	52-148	1	0-38	
p/m-Xylene	50.00	48.83	98	49.46	99	42-156	1	0-41	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1615
San Pedro, CA 90731-2738		Preparation:	N/A
		Method:	EPA TO-15
Project: Seal Beach NWS			Page 4 of 4

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Styrene	25.00	24.82	99	25.02	100	50-150	1	0-35	
Tetrachloroethene	25.00	23.84	95	24.11	96	56-152	1	0-40	
Toluene	25.00	24.82	99	25.21	101	56-146	2	0-43	
Trichloroethene	25.00	24.25	97	24.28	97	63-159	0	0-34	
Trichlorofluoromethane	25.00	18.20	73	18.51	74	50-150	2	0-35	
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.27	97	24.30	97	50-150	0	0-35	
1,1,1-Trichloroethane	25.00	23.18	93	23.21	93	50-150	0	0-35	
1,1,2-Trichloroethane	25.00	24.30	97	24.24	97	65-149	0	0-37	
1,3,5-Trimethylbenzene	25.00	23.82	95	23.87	95	50-150	0	0-35	
1,1,2,2-Tetrachloroethane	25.00	23.35	93	23.48	94	50-150	1	0-35	
1,2,4-Trimethylbenzene	25.00	23.11	92	23.15	93	50-150	0	0-35	
1,2,4-Trichlorobenzene	25.00	21.68	87	22.00	88	50-150	1	0-35	
Vinyl Acetate	25.00	22.38	90	22.36	89	50-150	0	0-35	
Vinyl Chloride	25.00	24.44	98	24.55	98	45-177	0	0-36	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Summa Canister Vacuum Summary

Work Order: 13-12-1615

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
MW-40-37	-29.70 in Hg	-6.00 in Hg	D449	Summa Canister 6L

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Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 13-12-1615

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-1946	N/A	888	GC 65	2
ASTM D-1946 (M)	N/A	888	GC 55	2
EPA TO-15	N/A	460	GC/MS YY	2

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 13-12-1615

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
DL	The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
ICH	Initial calibration verification recovery is above the control limit for this analyte.
ICJ	Initial calibration verification recovery is below the control limit for this analyte.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J	Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LOD	The Limit of Detection (LOD) is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at 99% confidence level.
LOQ	The Limit of Quantitation (LOQ) is the lowest concentration of a substance that produces a quantitative result within specified limits of precision and bias.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
U	Undetected at Detection Limit (DL) and is reported as less than the Limit of Detection (LOD).
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

DATE: 12/19/13
PAGE: 1 OF 1

LABORATORY CLIENT: CKY
ADDRESS: 302 W 5th St, San Pedro, CA 90731
TEL: (310) 519-4000 FAX: (310) 519-4029 E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (SIGNATURE)
COELT LOG CODE
P.O. NO.:
LAB USE ONLY: 13-12-1615
COOLER RECEIPT Temp = °C

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ Standard

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☐ RWQCB REPORTING ☐ COELT EDF ☐

SPECIAL INSTRUCTIONS

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	CEL SAMPLE #	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	VOCs EPA (TO-15)	Methane (ASTM 1946M)	Helium	Level III	Level IV
1	MW-40-37	0449	12/19/13	0809	Air	1	X	X	X		X

Relinquished by: (Signature)	Nicole	Date: 12/19/13	Time: 1630
Relinquished by: (Signature) Nicole	Received by: (Signature) CEL	Date: 12/19/13	Time: 1732
Relinquished by: (Signature)	Received by: (Signature)	Date: 12/19/13	Time: 1845

Revision: 072611

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-12-1615

SAMPLE RECEIPT FORM

Cooler 0 of 0

CLIENT: CKY

DATE: 12/19/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature ____.____ °C - 0.2 °C (CF) = ____.____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☑ Air ☐ Filter Checked by: 676

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☑ N/A Checked by: 676

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 300

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 300

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 636

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 636

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Calscience Environmental Laboratories, Inc.

Case Narrative

Client Project Name: Seal Beach NWS
Work Order Number: 13-12-1615

CONDITION UPON RECEIPT:

Calscience Laboratories received (1) air sample in Summa canister on December 19th, 2013. The sample was received in good condition at ambient temperature.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
MW-40-37	13-12-1615-1	12/19/2013 08:09	12/19/2013 18:45

DATA SUMMARY:

Per the chain-of-custody (COC), the sample was analyzed using the following methodologies: ASTM D-1946 (M) for Helium, ASTM D-1946 for Methane, and EPA Method TO-15 for Volatile Organic Compounds

The summa canister was batch certified on 12/13/13.

The sample was analyzed within the suggested EPA holding time for the requested methods.

Sample results were reported in the DL/LOD/LOQ format. In the instance where a result fell between the DL and the LOQ, a "J" flag was applied to the data indicating an estimated value.

Any dilutions made to the sample(s) and/or QC will be noted in the following narrative. Reporting limits have been adjusted accordingly.

Any manual integrations made to the data will be noted in the following narrative. The initial and amended chromatograms have been included in the data package.

Unless otherwise noted below, all sample/instrument QC were within stated acceptance criteria.

ASTM D-1946 – FIXED GASES (METHANE):

Sample 13-12-1615: -1 was analyzed for Methane by ASTM D-1946 on 12/20/13 in batch # 131220L02 on GC 65.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 10/10/13 on GC 65. The %RSD for Methane in the initial calibration was ≤ 20% and the initial calibration verification was within the 20% D acceptance criteria.

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Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

The method blank was non-detect and the LCS/LCSD were within acceptance criteria.

ASTM D-1946 (M) – FIXED GASES (HELIUM):

Sample 13-12-1615: -1 was analyzed for Helium by ASTM D-1946 (M) on 12/20/13 in batch # 131220L01 on GC 55.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 07/26/13 on GC 55. The %RSD for Helium in the initial calibration was ≤ 15% and the initial calibration verification was within the 15% D acceptance criteria.

Manual integrations were performed on one or more target analytes in one or more of the ICAL standards to correct the peak and/or baseline integration.

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

The method blank was non-detect and the LCS/LCSD were within acceptance criteria.

EPA TO-15 – VOLATILE ORGANIC COMPOUNDS:

Sample 13-12-1615: -1 was analyzed for Volatile Organic Compounds by EPA Method TO-15 on 12/28/13 in batch # D131228L01 on GC/MS YY.

Initial Calibration and Initial Calibration Verification:

ICAL 12/27/13 GC/MS YY: The %RSD for each target analyte was ≤ 30%. The ICV was within the 30% D acceptance criteria for all project-specific analytes.

Manual integrations were performed on one or more target analytes in one or more of the ICAL standards to correct the peak and/or baseline integration.

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Calscience Environmental Laboratories, Inc.

Case Narrative

Client Project Name: Seal Beach NWS
Work Order Number: 13-12-1615

Continuing Calibration Verification:

All project-specific analytes were within the 30% D acceptance criteria.

Tuning Reports:

All instrument tuning standards (BFB) were within acceptance criteria.

Sample and QC Data:

The method blank was non-detect and the LCS/LCSD were within acceptance criteria for all target analytes.

All surrogates and internal standards were within acceptance criteria.

Sample -1 was reanalyzed at a 4x dilution to bring the concentration of c-1,2-Dichloroethene and Vinyl Chloride within calibration range.

Manual integrations were performed on one or more target analytes in the sample to correct the peak and/or baseline integration.

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Calscience Environmental Laboratories, Inc.

Level IV Data Package

CLIENT NAME:	**CKY, Incorporated**
PROJECT NAME:	**Seal Beach NWS**
WORK ORDER:	**13-12-1615**

ASTM D-1946 Fixed Gases (Air)

Initial Calibration Data

Sample Data

Quality Control Data

Continuing Calibration Data

Run Logs

Chemical Receiving Logs and Standards Preparation Logs

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Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Initial Calibration Data

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GC 65 ASTM D-1946 FG/25.1 TCD
Multipoint Calibration – 131010IC
10/10/2013

	LVL	AREA	CONC (%)	RF	AVE RF	STD	RSD(%)
O2	1	1766.997	0.492	3591.46	3291.499	252.14	8
	2	6088.666	1.755	3469.33			
	3	11669.300	3.510	3324.59			
	6	60280.200	20.010	3012.50			
	7	122446.000	40.020	3059.62			
N2	1	2173.651	0.514	4228.89	3432.395	502.16	15
	2	18800.600	5.005	3756.36			
	3	35455.300	10.010	3541.99			
	4	61760.300	20.100	3072.65			
	6	226581.000	74.960	3022.69			
	8	298664.000	100.500	2971.78			
CH4	1	1341.383	0.495	2709.87	2678.966	96.13	4
	2	13082.900	5.070	2580.45			
	3	26090.000	10.140	2572.98			
	4	53355.500	19.300	2764.53			
	5	141117.000	51.000	2767.00			
CO	1	1499.753	0.511	2934.94	3078.806	198.63	6
	2	16116.900	4.990	3229.84			
	3	32621.100	9.980	3268.65			
	4	61094.200	21.200	2881.80			
CO2	1	2252.362	0.498	4522.82	4309.374	222.95	5
	2	22027.400	5.025	4383.56			
	3	44425.500	10.050	4420.45			
	4	84262.200	19.700	4277.27			
	5	193196.000	49.000	3942.78			

ICV		ADDED	REC	%D
	O2	4.01	3.997	0
	N2	69.5	69.288	0
	CH4	4.5	4.351	3
	CO	6.99	7.508	7
	CO2	15	16.000	7

ASTM	D-1946	METHOD	CRITERIA
ICV	20%		%D
DAILY CCV	20%		%D
ICAL	20%		RSD

CONTROLLED COPY
Copy Number: 1
Copy Holder: GC 65
Issued By: 326
Date Issued: 10/15/13
This stamp appears in red ink on original copy.

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Calibration Table

Calib. Data Modified : 10/11/2013 10:33:47 AM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.500 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.500 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Included
Weight : Linear (Resp)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: TCD1 A, Front Signal

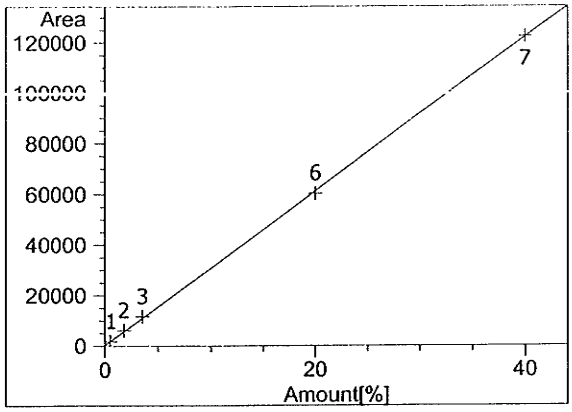
RetTime [min]	Lvl Sig		Amount [%]	Area	Amt/Area	Ref	Grp	Name
2.636	1	1	4.92000e-1	1766.99731	2.78438e-4			Oxygen + Argon
		2	1.75500	6088.66602	2.88240e-4			
		3	3.51000	1.16693e4	3.00789e-4			
		6	20.01000	6.02802e4	3.31950e-4			
		7	40.02000	1.22446e5	3.26838e-4			
3.219	1	1	5.14000e-1	2173.65088	2.36469e-4			Nitrogen
		2	5.00500	1.88006e4	2.66215e-4			
		3	10.01000	3.54553e4	2.82327e-4			
		4	20.10000	6.17603e4	3.25452e-4			
		6	74.96000	2.26581e5	3.30831e-4			
		8	100.50000	2.98664e5	3.36499e-4			
5.826	1	1	4.95000e-1	1341.38342	3.69022e-4			Methane
		2	5.07000	1.30829e4	3.87529e-4			
		3	10.14000	2.60900e4	3.88655e-4			
		4	19.30000	5.33555e4	3.61725e-4			
		5	51.00000	1.41117e5	3.61402e-4			
6.713	1	1	5.11000e-1	1499.75281	3.40723e-4			Carbon Monoxide
		2	4.99000	1.61169e4	3.09613e-4			
		3	9.98000	3.26211e4	3.05937e-4			
		4	21.20000	6.10942e4	3.47005e-4			
12.502	1	1	4.98000e-1	2252.36206	2.21101e-4			Carbon Dioxide
		2	5.02500	2.20274e4	2.28125e-4			
		3	10.05000	4.44255e4	2.26221e-4			
		4	19.70000	8.42622e4	2.33794e-4			
		5	49.00000	1.93196e5	2.53628e-4			

Return to Contents

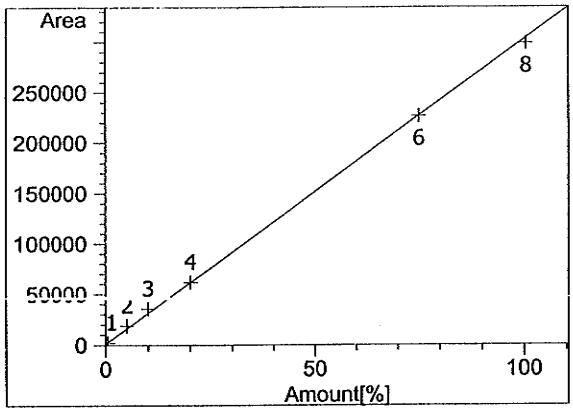
Peak Sum Table

No Entries in table

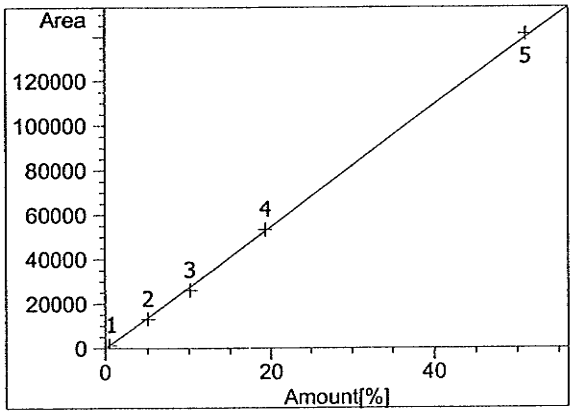
Calibration Curves



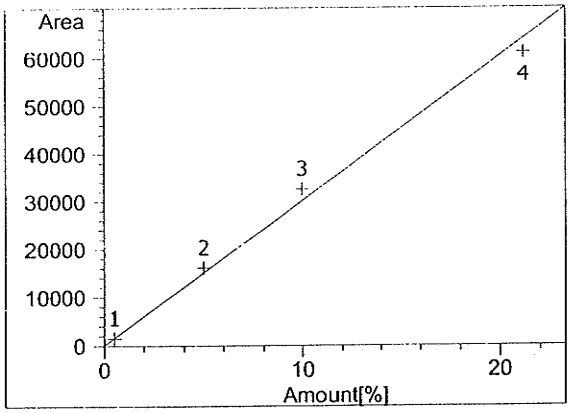
Oxygen + Argon at exp. RT: 2.636
TCD1 A, Front Signal
Correlation: 0.99972
Residual Std. Dev.: 663.96877
Formula: y = mx + b
m: 3046.39472
b: 347.38347
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.290211
Level 3 : 0.151423
Level 6 : 0.029313
Level 7 : 0.014431



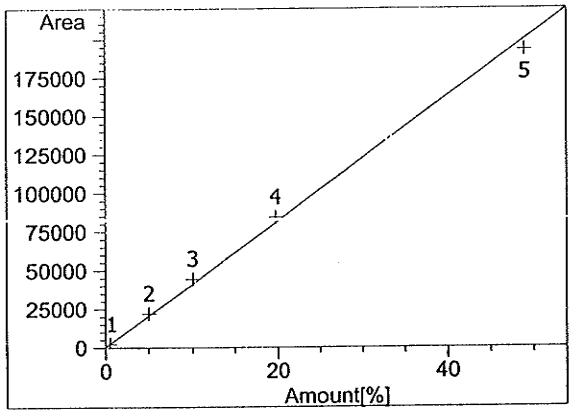
Nitrogen at exp. RT: 3.219
TCD1 A, Front Signal
Correlation: 0.99901
Residual Std. Dev.: 3335.44758
Formula: y = mx + b
m: 3015.09614
b: 969.90658
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.115616
Level 3 : 0.061307
Level 4 : 0.035195
Level 6 : 0.009593
Level 8 : 0.007278



Methane at exp. RT: 5.826
TCD1 A, Front Signal
Correlation: 0.99961
Residual Std. Dev.: 1232.64377
Formula: y = mx + b
m: 2736.49959
b: -105.98094
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.10253
Level 3 : 0.051414
Level 4 : 0.02514
Level 5 : 0.009505



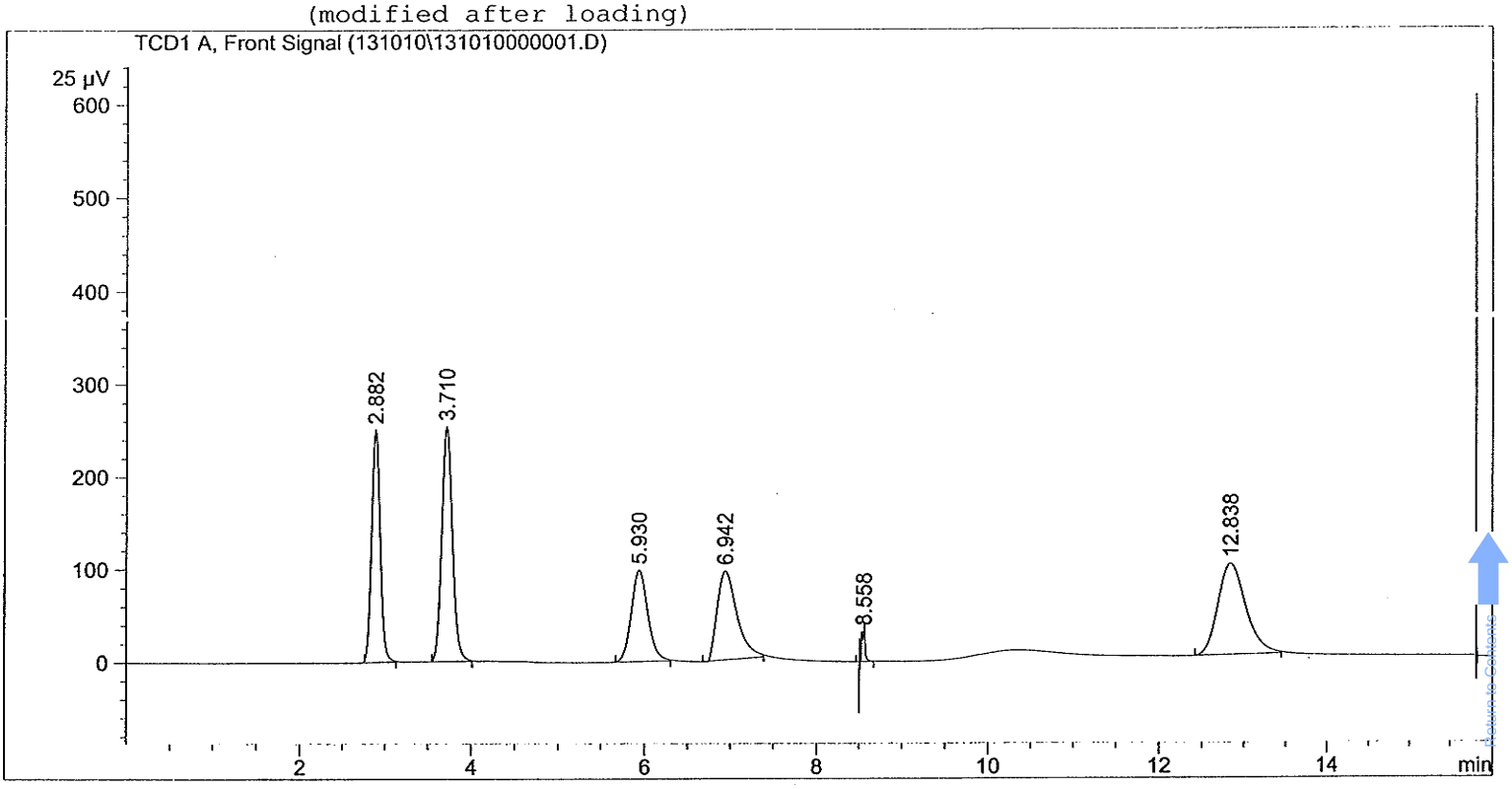
Carbon Monoxide at exp. RT: 6.713
TCD1 A, Front Signal
Correlation: 0.99792
Residual Std. Dev.: 2277.68481
Formula: y = mx + b
m: 3016.70149
b: 70.52941
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.093055
Level 3 : 0.045975
Level 4 : 0.024548



Carbon Dioxide at exp. RT: 12.502
TCD1 A, Front Signal
Correlation: 0.99886
Residual Std. Dev.: 4214.97394
Formula: y = mx + b
m: 4074.89191
b: 411.88526
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.102253
Level 3 : 0.0507
Level 4 : 0.02673
Level 5 : 0.011658

==========

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 10:50:36 AM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 10:44:41 AM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:34:23 AM by 884
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

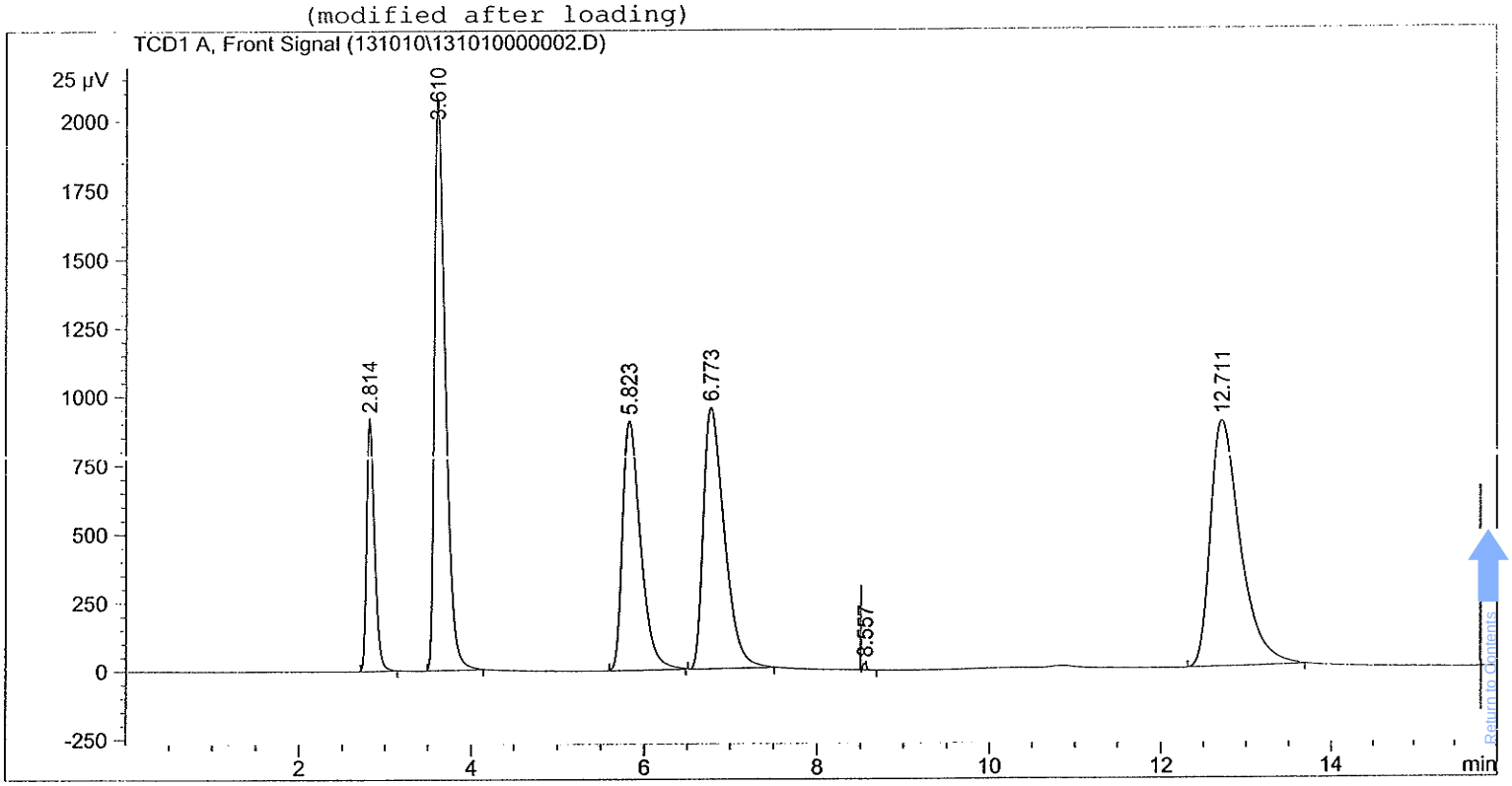
RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.882	BB	1766.99731	2.63723e-4	4.65998e-1		Oxygen + Argon
3.710	BB	2173.65088	1.83672e-4	3.99239e-1		Nitrogen
5.930	BB	1341.38342	3.94303e-4	5.28911e-1		Methane
6.942	BB	1499.75281	3.15899e-4	4.73770e-1		Carbon Monoxide
12.838	BB	2252.36206	2.00528e-4	4.51663e-1		Carbon Dioxide

Totals : 2.31958

*** End of Report ***

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 11:40:30 AM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 11:35:09 AM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:05:14 AM by 878
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, October 10, 2013 10:08:57 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

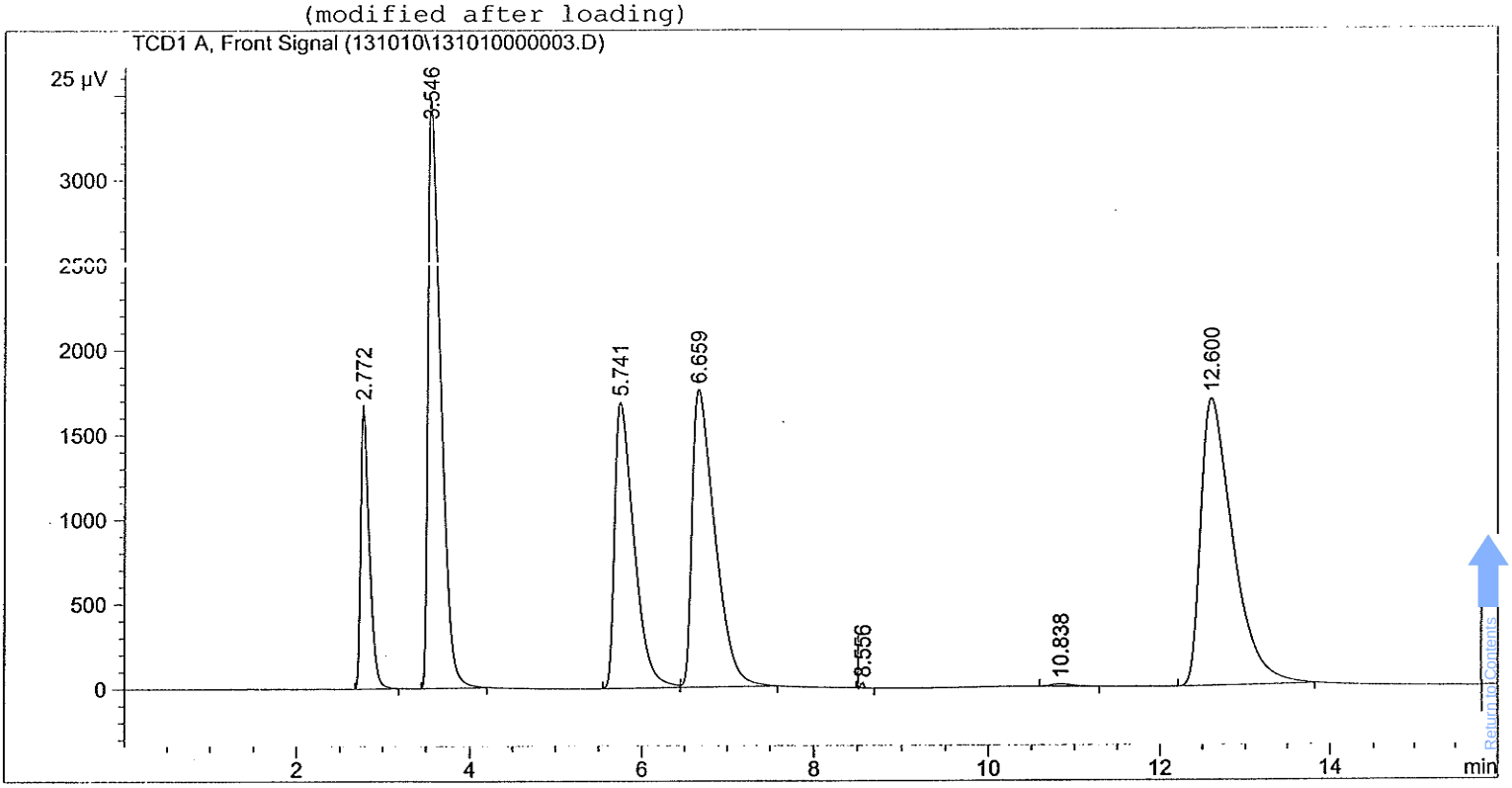
Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.814	BB	6088.66602	3.11059e-4	1.89393		Oxygen + Argon
3.610	BB	1.88006e4	3.14554e-4	5.91381		Nitrogen
5.823	BB	1.30829e4	3.68391e-4	4.81961		Methane
6.773	BB	1.61169e4	3.30037e-4	5.31919		Carbon Monoxide
12.711	BB	2.20274e4	2.40817e-4	5.30456		Carbon Dioxide

Totals : 23.25111

*** End of Report ***

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 12:03:21 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 11:56:30 AM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:52:23 AM by 884
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.772	BB	1.16693e4	3.18485e-4	3.71650		Oxygen + Argon
3.546	BB	3.54553e4	3.22591e-4	11.43757		Nitrogen
5.741	BV	2.60900e4	3.66915e-4	9.57281		Methane
6.659	VB	3.26211e4	3.30771e-4	10.79010		Carbon Monoxide
12.600	BB	4.44255e4	2.43130e-4	10.80119		Carbon Dioxide

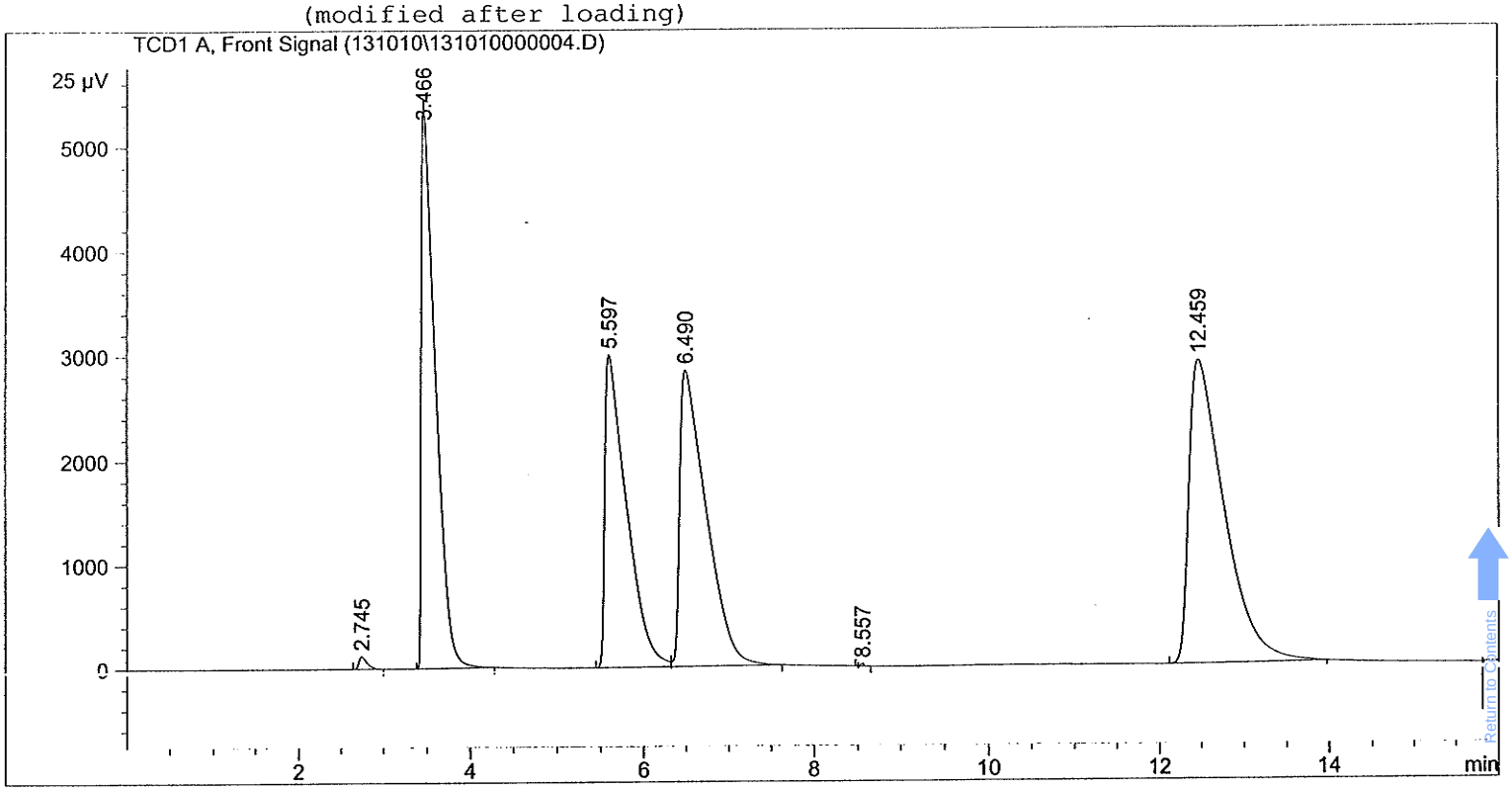
Totals : 46.31817

*** End of Report ***

==========

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 12:45:30 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 12:40:33 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:54:13 AM by 884
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.745	BB	825.92249	1.90192e-4	1.57084e-1		Oxygen + Argon
3.466	BB S	6.17603e4	3.26456e-4	20.16201		Nitrogen
5.597	BV	5.33555e4	3.66156e-4	19.53645		Methane
6.490	VB	6.10942e4	3.31105e-4	20.22860		Carbon Monoxide
12.459	BB	8.42622e4	2.44206e-4	20.57731		Carbon Dioxide

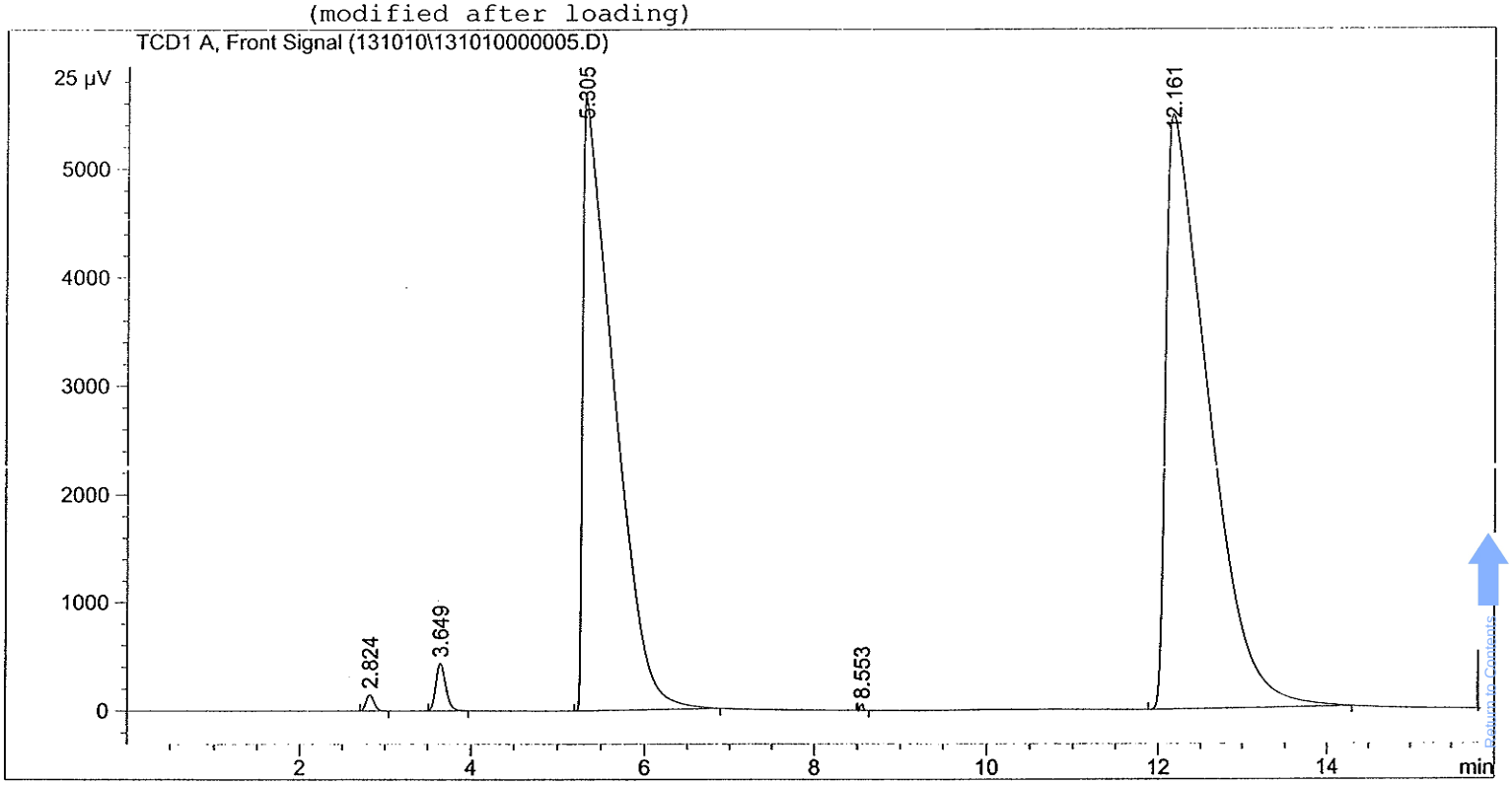
Totals : 80.66145

==========

*** End of Report ***

==========

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 1:23:33 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 1:01:30 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:55:54 AM by 884
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

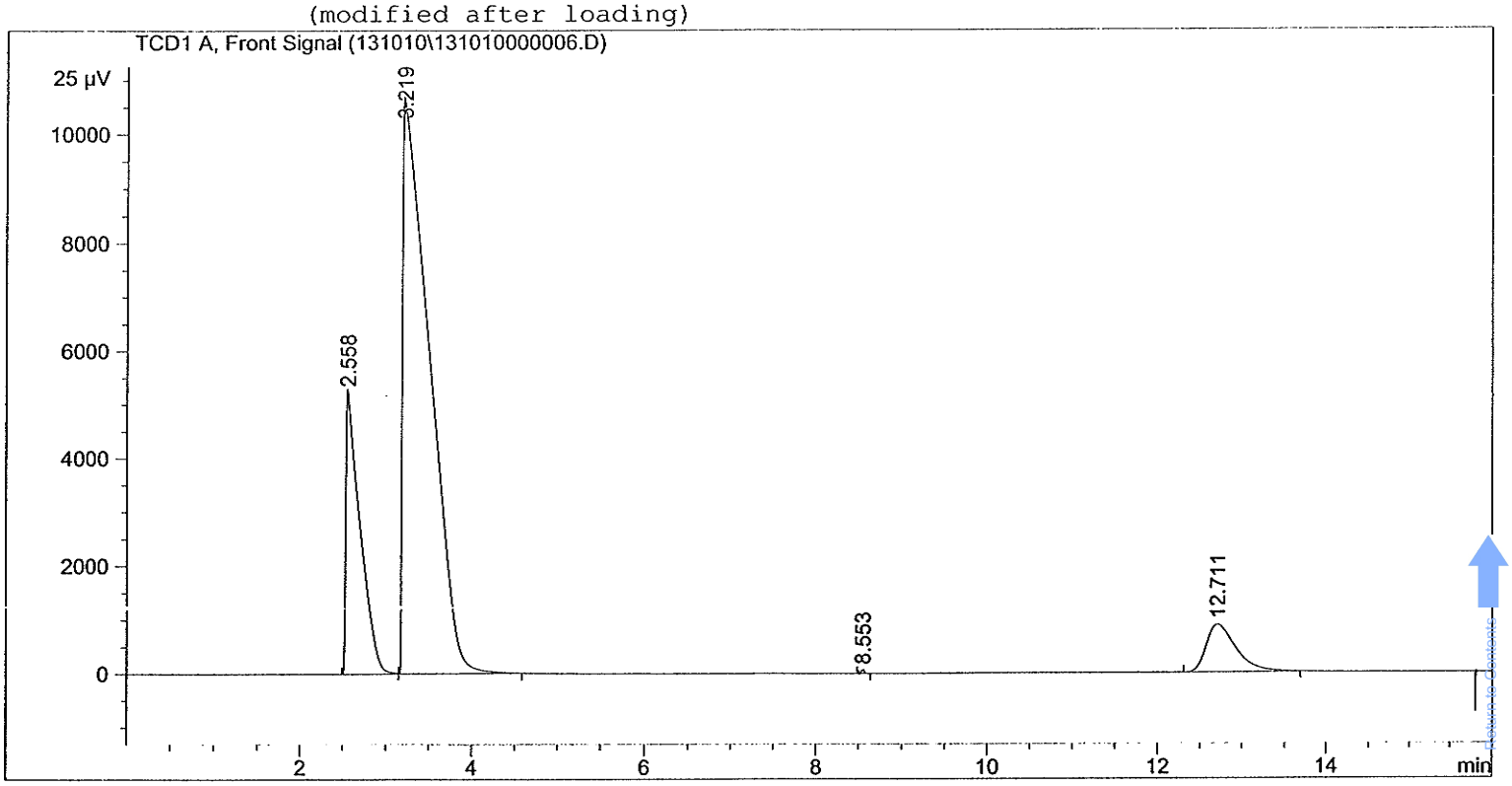
RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.824	BB	960.64563	2.09554e-4	2.01308e-1		Oxygen + Argon
3.649	BB	3506.82520	2.39934e-4	8.41406e-1		Nitrogen
5.305	BB S	1.41117e5	3.65705e-4	51.60706		Methane
6.659		-	-	-		Carbon Monoxide
12.161	BB	1.93196e5	2.44882e-4	47.31013		Carbon Dioxide

Totals : 99.95991

1 Warnings or Errors :

==========

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 2:04:21 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 1:39:33 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:56:51 AM by 884
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

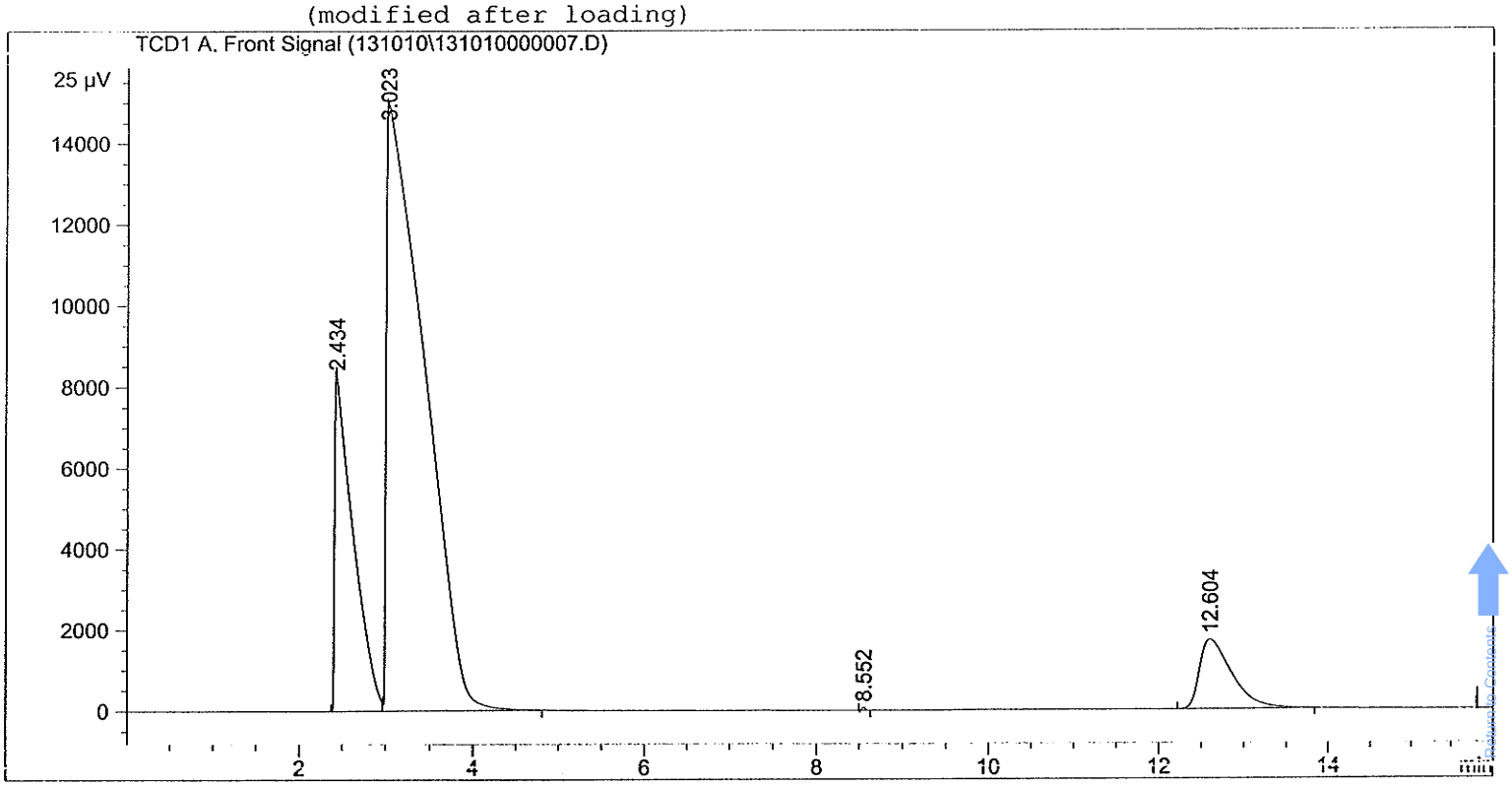
RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.558	BV S	6.02802e4	3.26365e-4	19.67336		Oxygen + Argon
3.219	VB S	2.26581e5	3.30245e-4	74.82733		Nitrogen
5.305		-	-	-		Methane
6.659		-	-	-		Carbon Monoxide
12.711	BB	2.18102e4	2.40771e-4	5.25125		Carbon Dioxide

Totals : 99.75194

1 Warnings or Errors :

==========

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 2:51:41 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 2:20:23 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:56:51 AM by 884
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

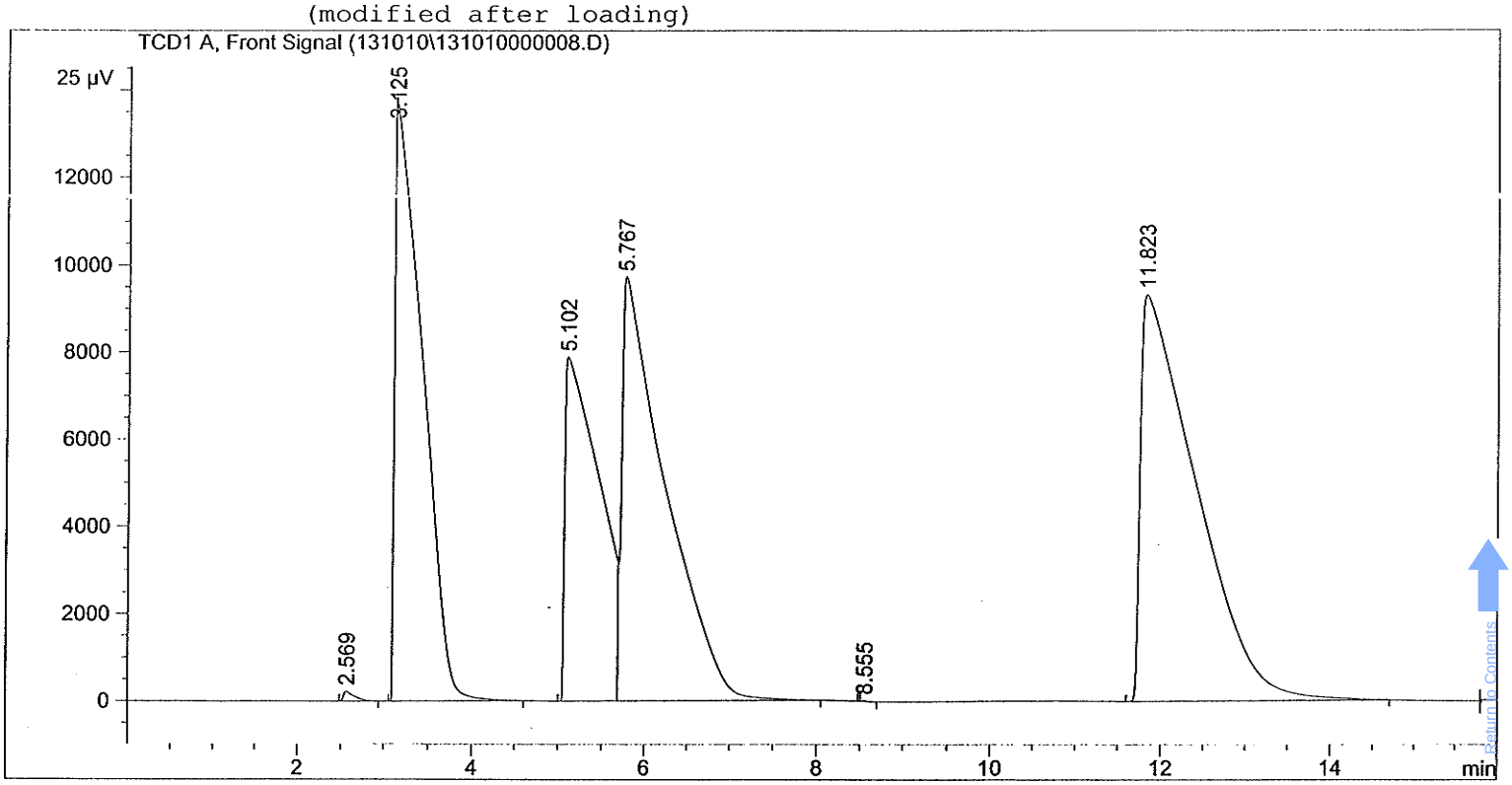
RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.434	BV S	1.22446e5	3.27326e-4	40.07966		Oxygen + Argon
3.023	VB S	4.49436e5	3.30949e-4	148.74014		Nitrogen
5.305		-	-	-		Methane
6.659		-	-	-		Carbon Monoxide
12.604	BB	4.52449e4	2.43171e-4	11.00225		Carbon Dioxide

Totals : 199.82204

1 Warnings or Errors :

==========

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 3:52:59 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 3:50:05 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 10:58:34 AM by 884
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

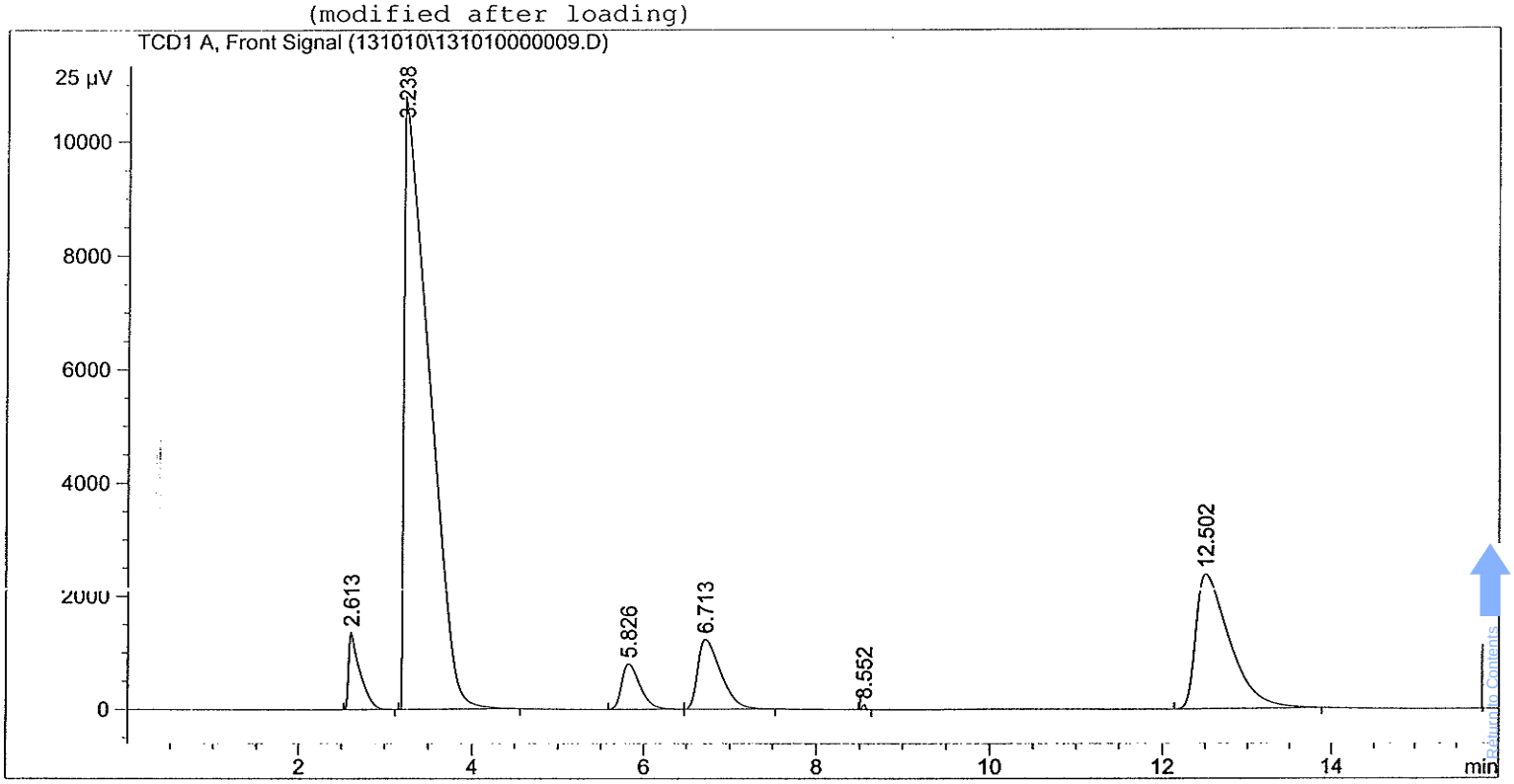
RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.569	BB	1891.33752	2.67966e-4	5.06814e-1		Oxygen + Argon
3.125	BB S	2.98664e5	3.30587e-4	98.73444		Nitrogen
5.102	BV S	2.16374e5	3.65609e-4	79.10835		Methane
5.767	VB S	3.41974e5	3.31420e-4	113.33676		Carbon Monoxide
11.823	BB S	4.22959e5	2.45166e-4	103.69540		Carbon Dioxide

Totals : 395.38176

1 Warnings or Errors :

==========

Acq. Operator : 878
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 10/10/2013 5:59:45 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 10/10/2013 5:19:30 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 10/11/2013 11:00:02 AM by 884
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/11/2013 10:33:47 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.613	BB	1.25252e4	3.19153e-4	3.99745		Oxygen + Argon
3.238	BB S	2.09879e5	3.30132e-4	69.28767		Nitrogen
5.826	BB	1.18017e4	3.68712e-4	4.35143		Methane
6.713	BB	2.27212e4	3.30459e-4	7.50844		Carbon Monoxide
12.502	BB	6.56096e4	2.43865e-4	15.99985		Carbon Dioxide

Totals : 101.14485

==========

*** End of Report ***

Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Sample Data

Return to Contents

RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 13-12-1615
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 12:14
ANALYST: 888
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000006.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 15:56
EXTRACTION: N/A
D/T EXTRACTED:

 # 1 **CLIENT SAMPLE NUMBER: MW-40-37**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	18.4	1	18.4	0.155	0.255	0.510	1	%v	
Carbon Dioxide	25.6	1	25.6	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	1.60	1	1.60	0.205	0.250	0.500	1	%v	
Nitrogen	54.4	1	54.4	0.477	0.497	0.994	1	%v	

Return to Contents

```
==================================================================
Acq. Operator    : 888
Acq. Instrument  : GC 65                          Location : Vial 1
Injection Date   : 12/20/2013 12:14:50 PM
                                                 Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed     : 12/20/2013 12:10:38 PM by 888
Analysis Method  : C:\CHEM32\1\METHODS\131010.M
Last changed     : 12/20/2013 12:31:40 PM by 896
                   (modified after loading)
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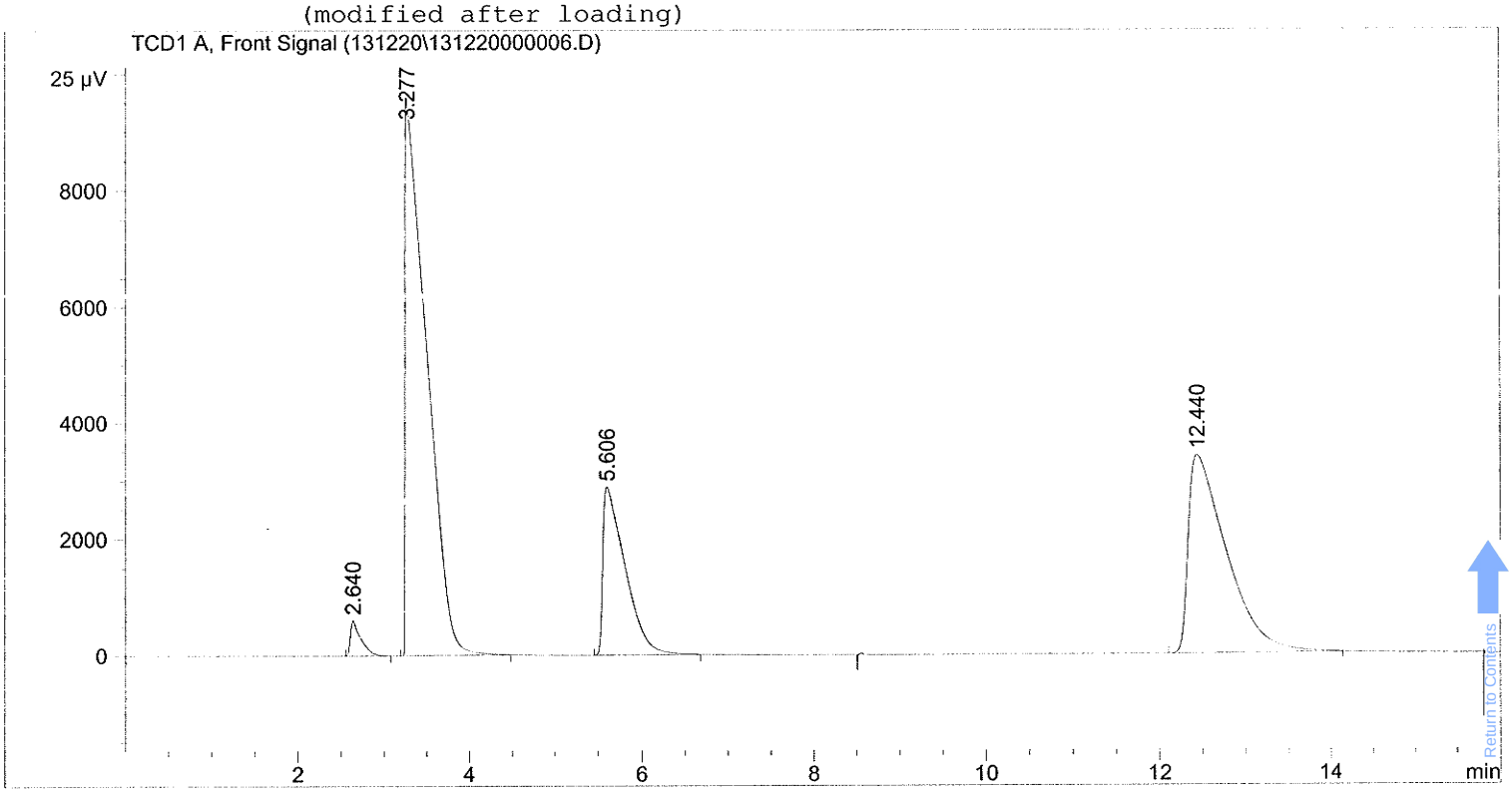


```
==================================================================
                      Normalized Percent Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      Friday, December 20, 2013 12:31:40 PM
Multiplier             :      1.0000
Dilution               :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal
```

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Norm %	Grp	Name
2.640	BB	5246.85254	3.06524e-4	1.597297		Oxygen + Argon
3.277	BB S	1.66204e5	3.29729e-4	54.427966		Nitrogen
5.606	BB	5.05935e4	3.66196e-4	18.400574		Methane
6.713		-	-	-		Carbon Monoxide
12.440	BB	1.05341e5	2.44446e-4	25.574162		Carbon Dioxide

Totals : 100.000000

1 Warnings or Errors :

Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Quality Control Data

Return to Contents

METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: ASTM D-1946

MB Sample ID: 099-14-535-8
MB Batch ID: 131220L02
Instrument: GC 65
Matrix: Air
Analyst: 888
D/T Analyzed: 12/20/2013 11:54
Data File: Y:\GC_54_65\2\DATA\2013\131220\131220000005.D\Report.TXT

Reviewed By: 794
D/T Reviewed: 12/31/2013 15:56
Extraction: N/A
D/T Extracted:

Work Order #: 13-12-1615

Sample#	Client Sample ID	D/T Analyzed	Data File
1	MW-40-37	12/20/2013 12:14	Y:\GC_54_65\2\DATA\2013\131220\131220000006.D\Report.TXT

Return to Contents

RAW DATA SHEET FOR METHOD: ASTM D-1946

WORK ORDER NUMBER: 099-14-535
INSTRUMENT NAME: GC 65
D/T ANALYZED: 12/20/2013 11:54
ANALYST: 888
DATA FILE: Y:\GC_54_65\2\DATA\2013\131220\131220000005.D\Report.TXT

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 15:56
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131220L02
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Methane	0.000	1	ND	0.155	0.255	0.510	1	%v	
Carbon Dioxide	0.000	1	ND	0.139	0.250	0.500	1	%v	
Carbon Monoxide	0.000	1	ND	0.183	0.250	0.500	1	%v	
Oxygen + Argon	0.000	1	ND	0.205	0.250	0.500	1	%v	
Nitrogen	0.000	1	ND	0.477	0.497	0.994	1	%v	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: ASTM D-1946

WORK ORDER:	**13-12-1615**	D/T REVIEWED:	12/31/2013 15:56	LCS D/T ANALYZED:	12/20/2013 10:48
LCS/LCSD BATCH:	131220L02	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/20/2013 11:26
LCS/LCSD SAMPLE I	**099-14-535-8**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC 65
ANALYST:	896	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC 65
REVIEWED BY:	794				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Methane	4.500	4.423	98	4.353	97	80-120	73-127	2	0-30	PASS	
Carbon Dioxide	15.00	16.05	107	15.94	106	80-120	73-127	1	0-30	PASS	
Carbon Monoxide	6.990	7.688	110	7.547	108	80-120	73-127	2	0-30	PASS	
Oxygen + Argon	4.010	4.094	102	4.013	100	80-120	73-127	2	0-30	PASS	
Nitrogen	69.50	70.57	102	69.37	100	80-120	73-127	2	0-30	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	Report.TXT	Y:\GC_54_65\2\DATA\2013\131220\131220000003.D\
LCSD	Report.TXT	Y:\GC_54_65\2\DATA\2013\131220\131220000004.D\

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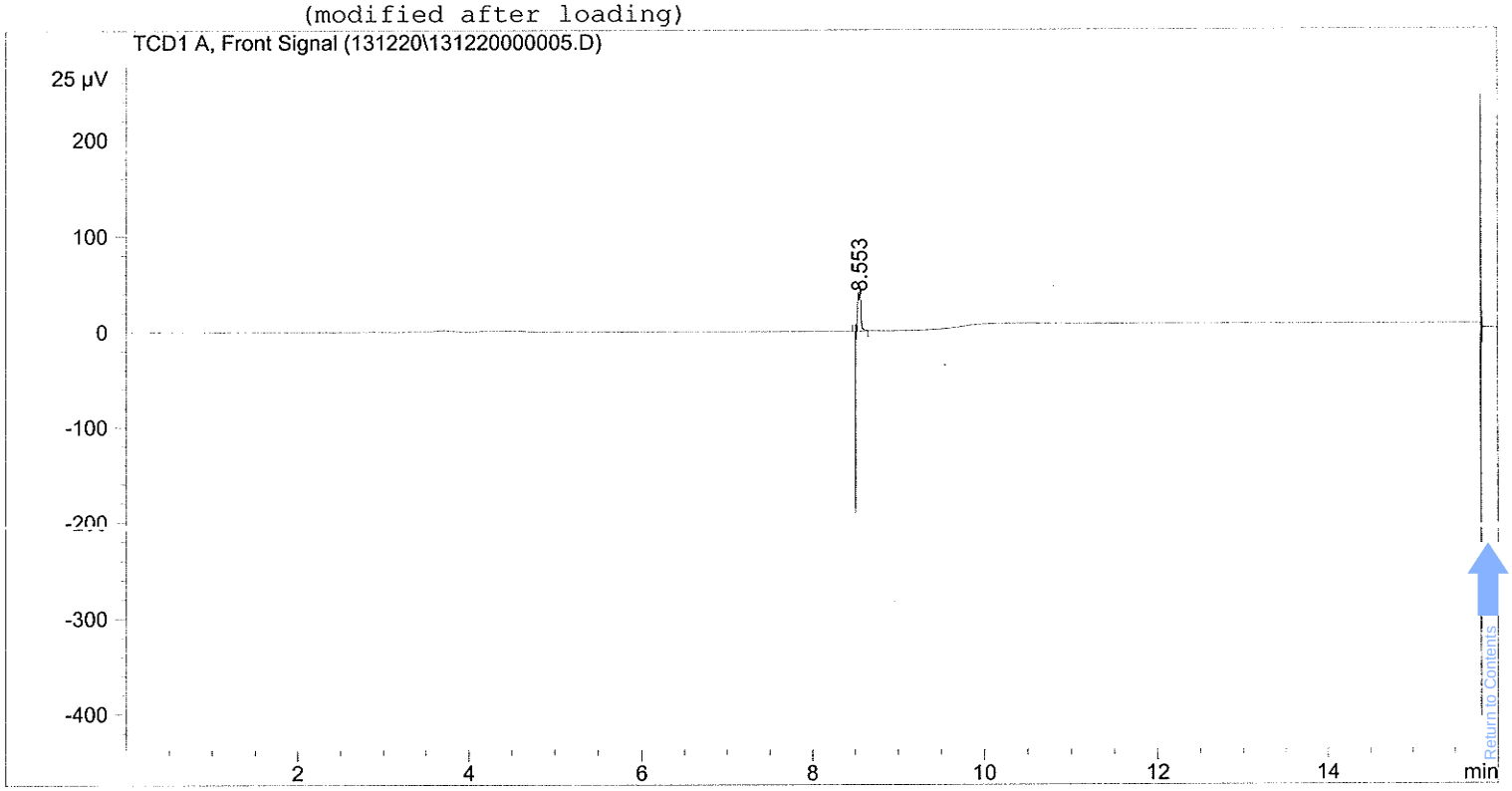
==========

Acq. Operator : 888
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 12/20/2013 11:54:37 AM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 12/20/2013 11:42:06 AM by 888
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 12/20/2013 12:07:54 PM by 896
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Friday, December 20, 2013 12:07:54 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

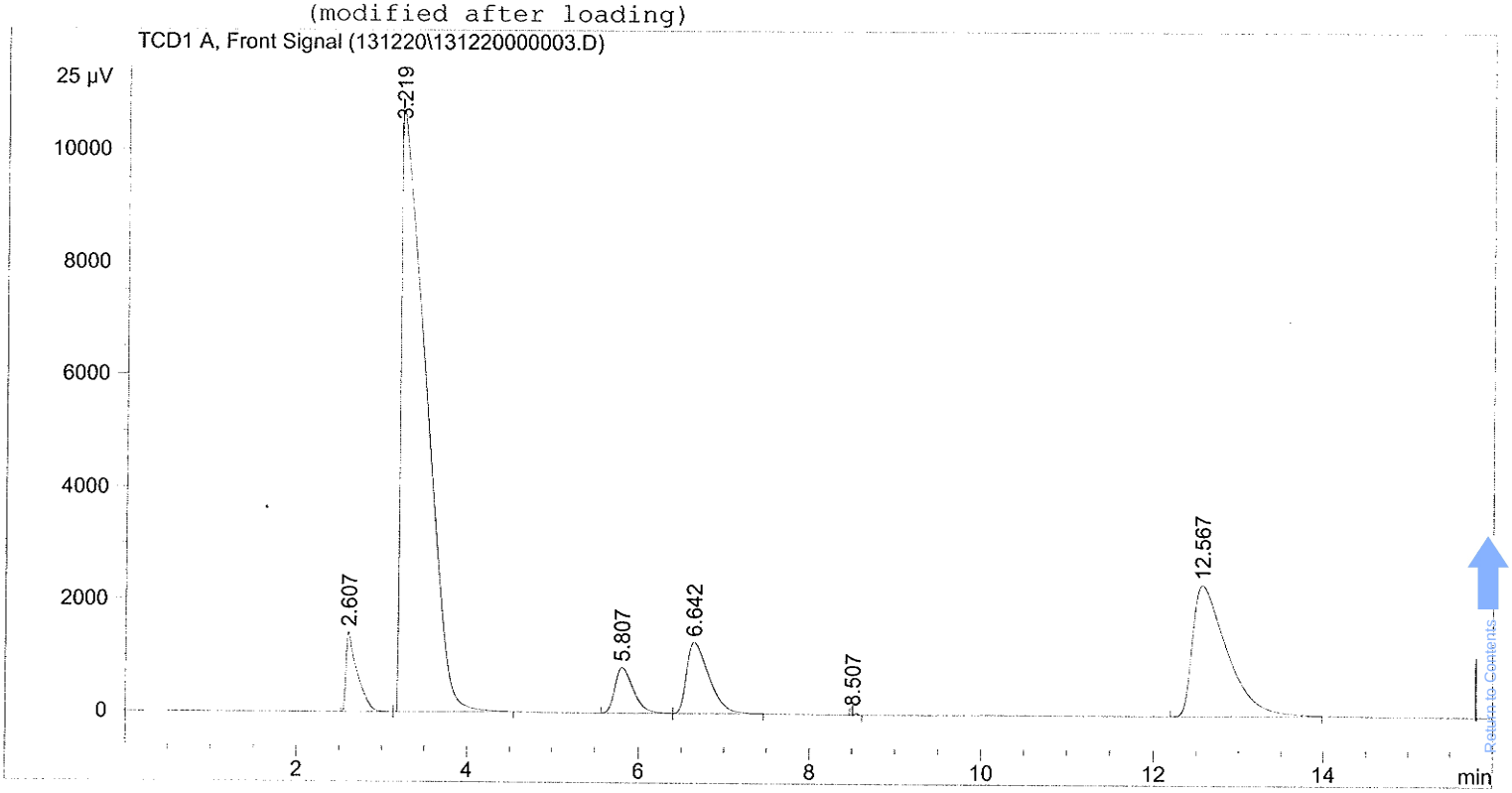
Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.636		-	-	-		Oxygen + Argon
3.200		-	-	-		Nitrogen
5.720		-	-	-		Methane
6.713		-	-	-		Carbon Monoxide
12.654		-	-	-		Carbon Dioxide

Totals : 0.00000

1 Warnings or Errors :

Acq. Operator : 896
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 12/20/2013 10:48:58 AM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 12/20/2013 10:42:56 AM by 896
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 12/20/2013 11:25:13 AM by 896
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, December 20, 2013 10:24:18 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

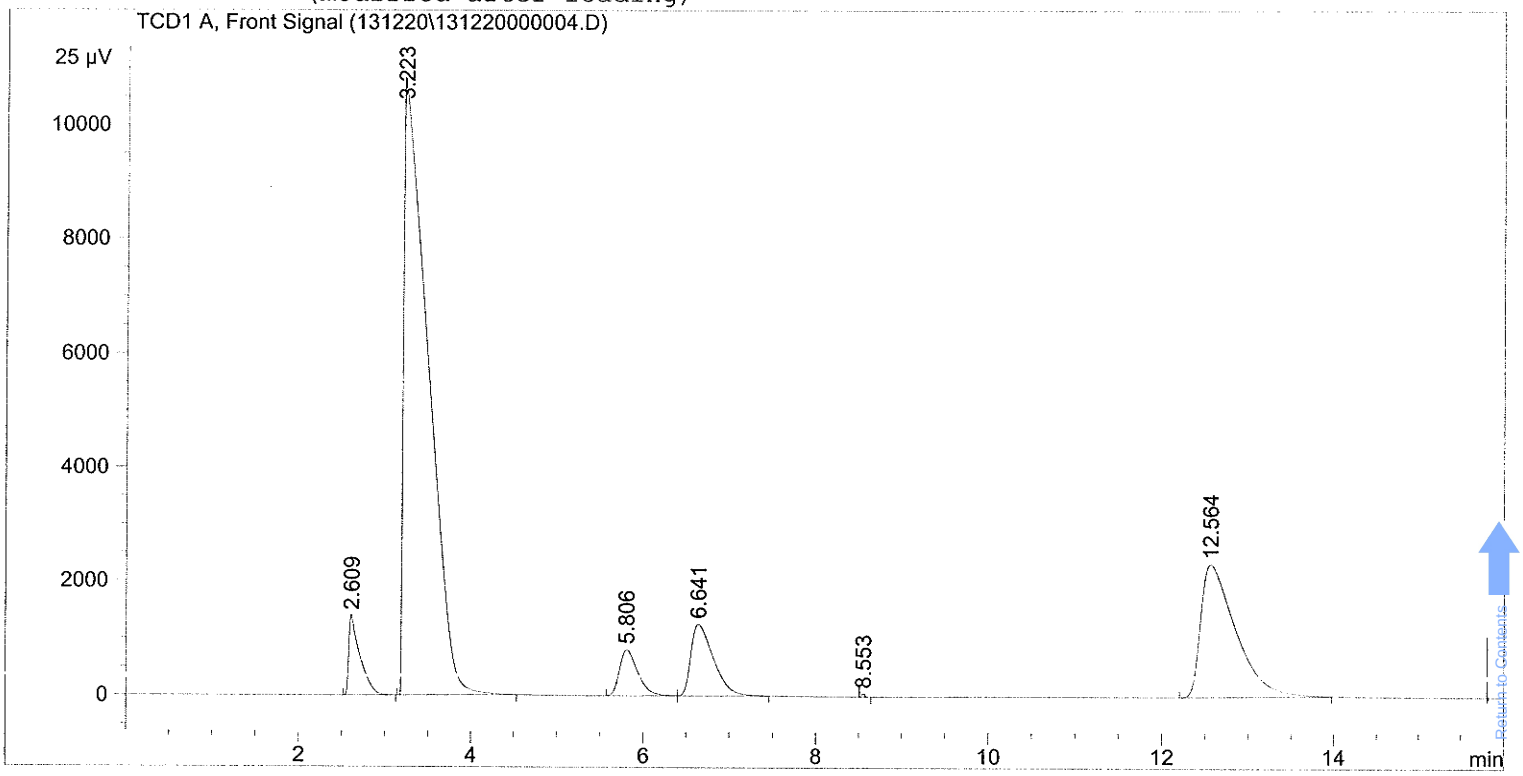
Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.607	BB	1.28187e4	3.19361e-4	4.09378		Oxygen + Argon
3.219	BB S	2.13747e5	3.30159e-4	70.57072		Nitrogen
5.807	BV	1.19987e4	3.68658e-4	4.42342		Methane
6.642	VB	2.32641e4	3.30483e-4	7.68838		Carbon Monoxide
12.567	BB	6.57978e4	2.43869e-4	16.04606		Carbon Dioxide

Totals : 102.82236

*** End of Report ***

Acq. Operator : 888
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 12/20/2013 11:26:02 AM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 12/20/2013 11:05:00 AM by 896
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 12/20/2013 11:25:13 AM by 896
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, December 20, 2013 10:24:18 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.609	BB	1.25731e4	3.19187e-4	4.01316		Oxygen + Argon
3.223	BB S	2.10130e5	3.30134e-4	69.37101		Nitrogen
5.806	BV	1.18056e4	3.68711e-4	4.35284		Methane
6.641	VB	2.28364e4	3.30464e-4	7.54662		Carbon Monoxide
12.564	BB	6.53664e4	2.43859e-4	15.94018		Carbon Dioxide

Totals : 101.22382

*** End of Report ***

Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Continuing Calibration Data

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ASTM D-1946 CALIBRATION CHECK

Work Order Number: 13-12-1615
Instrument ID: GC 65
Batch Number (LCS/MS/SA): 131220L01/L02

Analyst: 888 Date 12/21/13
QC Review: 794 Date 12/31/13
Date Analyzed: 12/21/13

Daily Calibration Check

Analyte	Daily RF ($\times 10^{-3}$)	Ave RF ($\times 10^{-3}$)	% D	Control Limit
Oxygen (O_2) + Argon (Ar) $\frac{11055.7}{3.51}$	= 3.150	3.29	4	0 – 20
Nitrogen (N_2) $\frac{33135.4}{10.01}$	= 3.310	3.43	3	0 – 20
Methane (CH_4) $\frac{26294.5}{10.14}$	= 2.593	2.68	3	0 – 20
Carbon Monoxide (CO) $\frac{33030.3}{9.98}$	= 3.310	3.08	7	0 – 20
Carbon Dioxide (CO_2) $\frac{44774}{10.05}$	= 4.455	4.31	3	0 – 20

Analyst's Comments:

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```
==========================================================================
Acq. Operator    : 896
Acq. Instrument  : GC 65                          Location : Vial 1
Injection Date   : 12/20/2013 10:26:53 AM
                                                Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed     : 12/20/2013 10:15:12 AM by 896
Analysis Method  : C:\CHEM32\1\METHODS\131010.M
Last changed     : 12/20/2013 10:47:10 AM by 896
                   (modified after loading)
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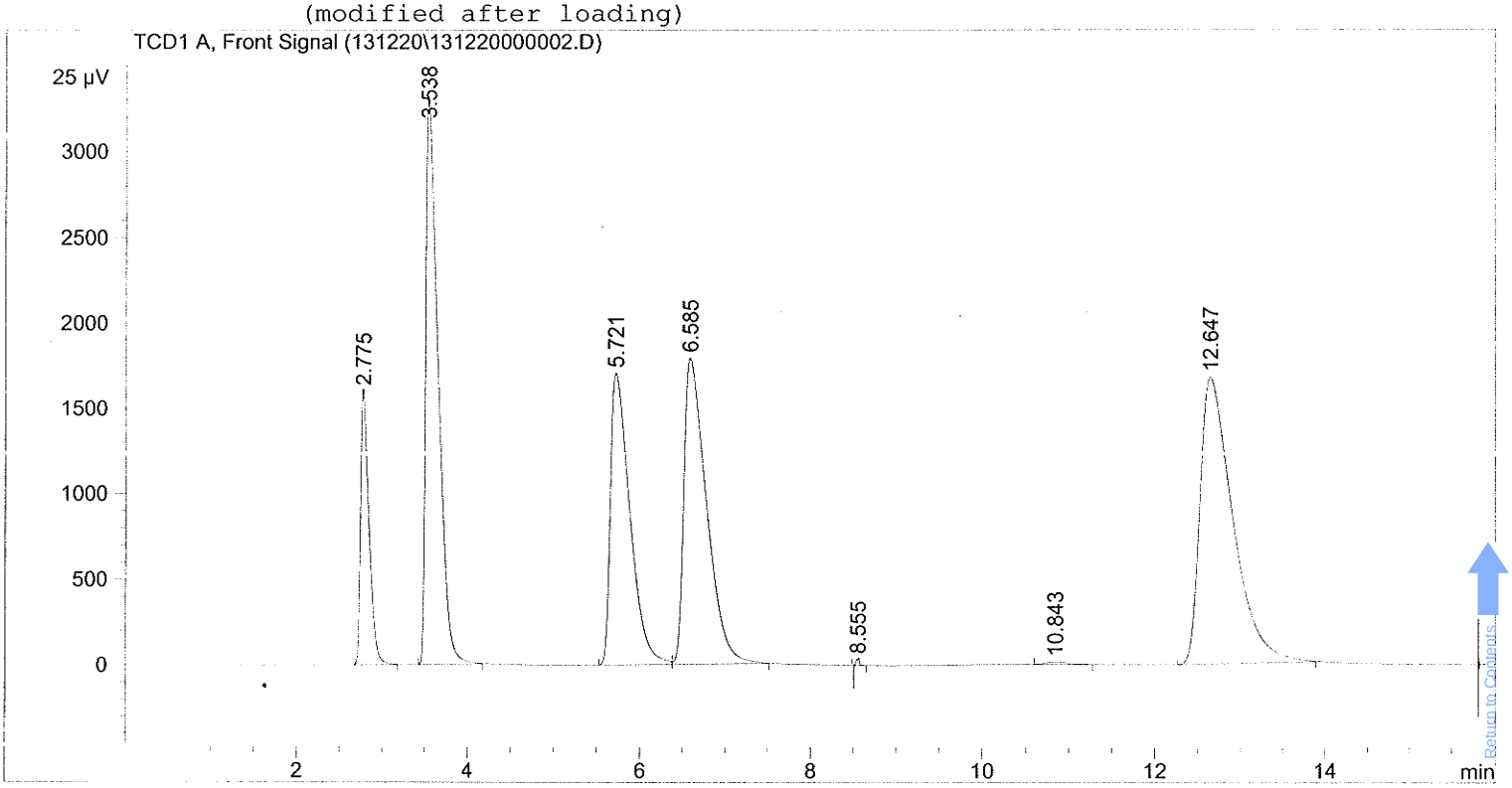


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==========================================================================
                        External Standard Report
==========================================================================

Sorted By              :      Signal
Calib. Data Modified   :      Friday, December 20, 2013 10:24:18 AM
Multiplier             :      1.0000
Dilution               :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal
```

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.775	BB	1.10557e4	3.17943e-4	3.51507		Oxygen + Argon
3.538	BB	3.31354e4	3.21956e-4	10.66814		Nitrogen
5.721	BV	2.62945e4	3.66903e-4	9.64754		Methane
6.585	VB	3.30303e4	3.30780e-4	10.92576		Carbon Monoxide
12.647	BB	4.47740e4	2.43148e-4	10.88671		Carbon Dioxide

Totals : 45.64321

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==========================================================================
                          *** End of Report ***
```

DOD Ending CCV

ASTM D-1946 CALIBRATION CHECK

Work Order Number: 13-12-1615 Analyst: SSH Date 12/23/13

Instrument ID: GC 65 QC Review: 794 Date 12/31/13

Batch Number (LCS/MS/SA): 131220L01/L02 Date Analyzed: 12/20/13

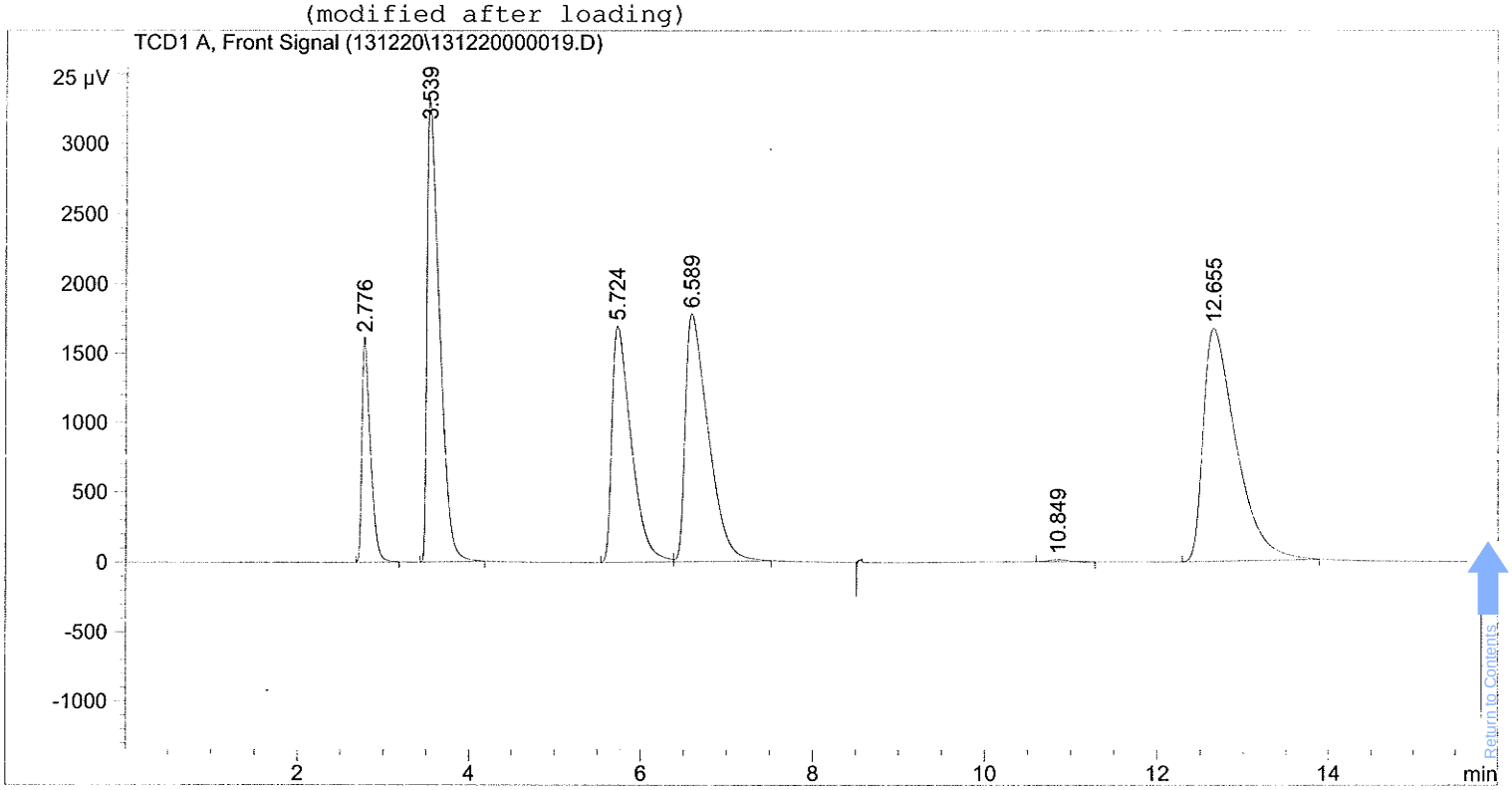
Daily Calibration Check

Analyte	Daily RF ($\times 10^{-3}$)	Ave RF ($\times 10^{-3}$)	% D	Control Limit
Oxygen (O_2) + Argon (Ar) $\frac{11086.1}{3.51}$	= 3.158	3.29	4	0 – 20
Nitrogen (N_2) $\frac{33310.9}{10.01}$	= 3.328	3.43	3	0 – 20
Methane (CH_4) $\frac{26120.9}{10.14}$	= 2.576	2.68	4	0 – 20
Carbon Monoxide (CO) $\frac{32792.9}{9.98}$	= 3.286	3.08	7	0 – 20
Carbon Dioxide (CO_2) $\frac{44557.2}{10.05}$	= 4.434	4.31	3	0 – 20

Analyst's Comments:

Return to Contents

Acq. Operator : 888
Acq. Instrument : GC 65 Location : Vial 1
Injection Date : 12/20/2013 5:42:54 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\FIXEDGAS.M
Last changed : 12/20/2013 5:39:26 PM by 896
Analysis Method : C:\CHEM32\1\METHODS\131010.M
Last changed : 12/20/2013 6:04:07 PM by 878
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, December 20, 2013 5:41:39 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.776	BB	1.10861e4	3.17971e-4	3.52506		Oxygen + Argon
3.539	BB	3.33109e4	3.22007e-4	10.72636		Nitrogen
5.724	BV	2.61209e4	3.66913e-4	9.58408		Methane
6.589	VB	3.27929e4	3.30775e-4	10.84707		Carbon Monoxide
12.655	BB	4.45572e4	2.43137e-4	10.83350		Carbon Dioxide

Totals : 45.51606

*** End of Report ***

Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Run Logs

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INSTRUMENT LOGBOOK

Calscience Environmental Laboratories, Inc.

Date Loaded	Pos	Directory	Data File	CEL ID #	Mtx	Amount Loaded	pH <2	Lot # IS/SS	Lot # Cal. Std.	By	Comments
10/9/13	NA	131009	131009000017	13-10-0633-2A	AIR	1	NA	NA	NA	888	confirmation
↓	↓	↓	↓ 18	CCV 3.5%/10%	↓	↓	↓	↓	A01-21-22	↓	
10/10/13	NA	131010	131010000001	ICAL#1 0.5%	AIR	1mL	NA	NA	A01-22-22	B78	
			2	ICAL#2 1.75%/5%		500uL			A01-27-10		
			3	ICAL#3 3.5%/10%		1mL			A01-27-10		
			4	ICAL#4 20%					A01-22-25		
			5	ICAL#5 50%					A01-22-24		
			6	ICAL#6 20/75%					A01-23-11		
			7	ICAL#7 40% O_2		2mL			A01-23-11		
			8	ICAL#8 100% N2		5mL			A01-22-25		
↓	↓	↓	↓ 9	ICV 4/7/15%	↓	1mL	✓	↓	A01-30-11	✓	

INSTRUMENT LOGBOOK

Calscience Environmental Laboratories, Inc.

Date Loaded	Pos	Directory	Data File	CEL ID #	Mtx	Amount Loaded	pH <2	Lot # IS/SS	Lot # Cal. Std.	By	Comments
12/18/13	NA	131218	131218000005	MB	AIR	1	NA	NA	NA	896	
			6	13-12-1350-2A							
			7	-1A						888	
			8	-1393-1A							
			9	-2A							
			10	CCV 3.5%/10%					A01-27-10		
12/19/13	NA	131219	131219000001	LAB AIR	AIR	1	NA	NA	NA	896	
			2	CCV 3.5%/10%					A01-27-10		
			3	LCS 4/7/15%					A01-30-11		
			4	LCSD 4/7/15%						888	
			5	MB					NA		
			6	13-12-1453-1A							
			7	-2A							
			8	-3A							
			9	-4A							
			10	-5A							
			11	CCV 3.5%/10%					A01-27-10		
			12	13-12-1566-3A					NA		
			13	1559-1A							
			14	CCV 3.5%/10%					A01-27-10		
12/20/13	NA	131220	131220000001	LAB AIR	AIR	1	NA	NA	NA	896	

INSTRUMENT LOGBOOK

Calscience Environmental Laboratories, Inc.

Date Loaded	Pos	Directory	Data File	CEL ID #	Mtx	Amount Loaded	pH <2	Lot # IS/SS	Lot # Cal. Std.	By	Comments
12/20/13	NA	131220	131220000002	CCV 3.5%/10%	AIR	1	NA	NA	A01-27-10	896	
			3	LCS 4/7/15%					A01-30-11		
			4	LCSD 4/7/15%						888	
			5	MB					NA		
			6	13-12-1615-1A							
			7	-1635-1A							
			8	-2A							
			9	-1614-1A						884	
			10	-2A						878	
			11	-3A							
			12	-4A						884	
			13	-5A						878	
			14	6A						896	
			15	-7A						884	
			16	8A						896	
			17	9A							
			18	1691-1A							
			19	CCV 3.5%/10%					A01-27-10	888	
12/21/13	NA	131221	131221000001	Lab Air	AIR	1	NA	NA	NA	888	
			2	CCV 3.5%/10%					A01-27-10		
			3	LCS 4/7/15%					A01-30-11		

Calscience Environmental Laboratories, Inc.

ASTM D-1946 Fixed Gases

Chemical Receiving Logs and Standards Preparation Logs

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CHEMICAL RECEIVING LOGBOOK

LINE NO.	CHEMICAL	SOURCE	CATALOG NO.	LOT NO.	EXP. DATE	AMOUNT RECEIVED	TYPE CONT.	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO
1	Hexane STD	PRAXAIR	AI HX40C-AS ~~HG055-71~~	109112004	05/09/14	2000 psig	cylinder	05/17/11	SS	05/17/11	SS
2	TCD CCV	PRAXAIR	HE CD DCMIX CAQ	109112009	05/02/14	842 psig	cylinder	05/17/11	SS	04/25/12	JC
3	Hexane STD	Scott	01-01-282-17	137PLU15PC01D	05/16/13	240 psig	cylinder	05/18/11	SS	05/18/11	SS
4	↓	↓	↓	↓	↓	↓	↓	↓	↓	05/24/12	JC
5	To-15 LCS Std (Std #1)	RESTEK	34436-PS	084PLU15PC05J	04/27/12	1300 PSIG	Cylinder	05/18/11	RS	07/05/11	RS
6	Methanol (for cleaning)	BDH	2018-1GLP	0504100 1	05/18/14	1 gallon	plastic	05/18/11	RS	02/20/13	JC
7	↓	↓	↓	↓	↓	↓	↓	↓	↓	10/26/11	RS
8	↓	↓	↓	↓	↓	↓	↓	↓	↓	4/10/12	RS
9	↓	↓	↓	↓	↓	↓	↓	↓	↓	8/23/12	SLO
10	Ethene STD	Supelco	332300-U	934101L	02/15/12	240 psig	cylinder	05/20/11	SS	05/28/11	SS
11	↓	↓	↓	↓	↓	↓	↓	↓	SS	08/30/11	VL
12	Ethene STD in He	↓	332200	017PLU15PC07L	03/20/13	240 psig	cylinder	05/20/11	↓	07/08/11	SS
13	↓	↓	↓	↓	↓	↓	↓	↓	↓	10/21/11	JC
14	C_1 – C_6 STD 100ppm in He	Supelco	330200	020302L	10/24/12	240 psig	cylinder	05/24/11	SS	08/16/11	SS
15	↓	↓	↓	288PLU05PC07L	02/10/13	240 psig	cylinder	↓	↓	09/15/11	JC
16	↓	↓	↓	↓	↓	↓	↓	↓	↓	10/20/11	JC
17	C_1 – C_6 STD 100ppm in N_2	↓	330300	355PLU05PC02L	02/10/13	↓	↓	↓	↓	08/31/11	SS
18	↓	↓	↓	↓	↓	↓	↓	↓	↓	10/13/11	JC
19	↓	↓	↓	↓	↓	↓	↓	↓	↓	11/25/11	658
20	Ethylene and Propylene std in N_2	Scott (Supelco)	332300-U	012604L	11/14/12	240 psig	cylinder	06/23/11	RS	11/22/11	1157
21	↓	↓	↓	↓	↓	↓	↓	↓	RS	09/23/11	JC
22	✓ 25.1 0-5%	Praxair	HE CD5MIX IC-AQ	109431603	06/21/14	1000 psig	cylinder	06/29/11	SS	06/29/11	↓
23	25.1 5 ppm	Praxair	AI CD5MCMPIC AQ	109433508	06/09/14	1500 psig	cylinder	06/29/11	SS	↓	↓
24	✓ 25.1 50% CO_2	Praxair	HE CD5DC-AQ	109430601	06/21/14	1100 psig	cylinder	06/29/11	SS	↓	↓
25	✓ 25.1 20%	Praxair	NI CD20CHMIC-AQ	109430602	06/10/14	1500 psig	cylinder	06/29/11	JR	↓	↓

Reviewed by: RS on 09 / 18 / 12

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CHEMICAL RECEIVING LOGBOOK

LINE NO.	CHEMICAL	SOURCE	CATALOG NO.	LOT NO.	EXP. DATE	AMOUNT RECEIVED	TYPE CONT.	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO
1	Ethene STD in He	SUPELCO	332200	0609PLU1SPC09L	6/23/13	240 psig	cylinder	7/6/11	JP	09/06/11	VL
2	To-15 Lcs (2nd source) std #2 (15 compds)	Linde Spectra	20110753	1184231	07-14-12	2000 psig	cylinder	07-20-11	RS	07/26/11	LT
3	C1-C6 STD 100ppm in He	SUPELCO	330200	055PLU1SPC02L	05-26-13	240 psig	cylinder	09-22-11	IR	11/22/11	IR
4	C1-C6 STD 100 ppm in He	SUPELCO	330200	055PLU1SPC02L	~~05-27-14~~ 05-26-13 IR	240 psig	cylinder	09-22-11	IR	01/10/12	VL
5	To-15 2nd source std Lcs (65 compds)	RESTEK	34436-PI	216PLU1SPC01L	08-12-12	1270 psig	Cylinder	09-23-11	RS	12/04/11	RB
6	Ethene STD in ~~He~~ N2 SC 10/06/11	SUPELCO	332300-U	143PLU1SPC02L	06-23-13	240 psig	Cylinder	10-06-11	SC	01/17/12	SS
7	Ethene STD in He	SUPELCO	332200	214PLU1SPC05L	09-25-13	240 psig	Cylinder	10-06-11	VL	12/16/11	QT
8	↓	SUPELCO	332200	214PLU1SPC05L	09-25-13	240 psig	Cylinder	10-06-11	VL	01/15/13	AW
9	To-15 CV standard #1 (65 compds)	Linde Spectra	20111091	CC-344535	10-18-12	1900 psig	Cylinder	10-26-11	RS	10-26-11	RS
10	To-15 CV standard #2 (15 compds)	Linde Spectra	20111091	CC-256155	10-18-12	1600 psig	Cylinder	10-26-11	RS	10-26-11	RS
11	TCD & FID ICAL STD	Praxair	NI CO5C1M01C-AQ	109125504	09/12/14	2000 psig	Cylinder	11-09-11	SS	01-04-12	TST
12	H2S STD	Praxair	NIHS5MC-A3	109128307	10/17/12	2000 psig	Cylinder	11-09-11	VL	12-06-11	TST
13	Isopropylbenzene & n-Propylbenzene CW 1ppm	Linde	10853911	1198076	11/11/12	2200 psig	Cylinder	11/18/11	SS	11-28-11	SD
14	Ethylene and propylene STD in N2	SUPELCO	332300	143PLU1SPC02L	06/23/13	240 psig	cylinder	12/01/11	IR	02-27-12	IR
15	↓	↓	↓	320PLU0SPC01L	07/17/13	↓	↓	↓	IR	04/21/12	QT
16	C1-C6 STD 100ppm in He	SUPELCO	330200	012PLU1SPC02L	06/08/13	240 psig	cylinder	12/01/11	QT	12-08-11	TST
17	C1-C6 STD 100ppm in He	SUPELCO	330200	012PLU1SPC02L	06/08/13	240 psig	cylinder	12/01/11	QT	02/07/12	TST
18	APH std (Lcs 2nd source) (Butadiene 1.03ppm)	LINDE	20111250	PPB-7699 1198631	11-22-12	1800 psig	cylinder	12/07/11	RS	12-27-11	326
19	To-15 - Internal / surrogate standard	LINDE	20110868	1188006	8-15-12	2000 psig	cylinder	12/07/11	RS	12-22-11	326
20	To-15 sim I.S + Surr std	LINDE	20111246	2789990	12-7-12	1700 psig	cylinder	12/09/11	RS	12-09-11	RS
21	To-17 I.S. + Surr std	LINDE	73302	1191418	9-8-12	1800 psig	cylinder	12/13/11	RS	12-13-11	RS
22	ASTM D1946 He+H2 1% STD	Praxair	NI HE2H1C-A3	109134101	12/08/14	2200 psig	cylinder	12/20/11	SS	12-21-11	QT
23	Ethene STD in He	SUPELCO	332200	214PLU1SPC05L	12-15-13	240 psig	cylinder	12/28/11	QT	04-18-12	QT
24	Ethene STD in He	SUPELCO	332200	214PLU1SPC05L	12-15-13	240 psig	cylinder	12/28/11	QT	8-27-12	IR
25	Ethene STD in He	SUPELCO	332200	214PLU1SPC05L	12-15-13	240 psig	cylinder	12/28/11	QT	01-26-12	VL

Reviewed by: RS on 02/18/12

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09/01/95 Revision

CHEMICAL RECEIVING LOGBOOK

LINE NO.	CHEMICAL	SOURCE	CATALOG NO.	LOT NO.	EXP. DATE	AMOUNT RECEIVED	TYPE CONT.	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO
1	TO-17 California Air Mix #1	Restek	30465	A087085	03/2017	1mL	AMP	08/03/12	SS	02/06/13	702
2										05/09/13	702
3										08/27/13	702
4	TO-17 8260B Calibration Mix #1	Restek	30633	A088137	04/2015	1mL	AMP	08/03/12	SS	08/16/12	SS
5										11/06/12	SS
6										02/06/13	702
7										05/09/13	702
8											
9	Hexane 400 PPM STD	PRAXAIR	AI HX400C-A3	109222205	08/2014	2200 psig	Cylinder	08/21/12	X	03/11/13	658
10	TCD CCV	PRAXAIR	HE CO10CNNOTCM	109222204	08/2015	842 psig	Cylinder	08/21/12	X		
11	C_1-C_6 alkane STD in N_2	SUPELCO	300300	35SPLU15PC09L	01/12/14	240 psig	Cylinder	08/23/12	X	10/31/12	TST
12										11/28/12	658
13	TO-15 Les std (2nd source - 65 compds)	Scott	20122231	236PLU25PC02J	08/30/13	1300 psig	Cylinder	09/04/12	510	09/04/12	510
14	FID Std	Praxair	AI CDX5CI-9	109222606	08/23/15	2000 psig	cylinder	09/7/12	835	9/10/12	835
15	1,1,1,2-Tetrachloroethane	SIGMA-ALDRICH	1001001147 T7209-2ML	MKBF2316V	09/20/15	~~28 mL~~ 25 mL	Glass Jar	09/20/12	702	09/20/12	702
16	~~TO-15~~ TO-15 CCV Std (~~64 compds~~ 65 compds) SS 09/25/12	Linde (Spectra)	Production # 2838020	Sales # 109452480	09/19/13	2394/2017 ~~29.5~~ 1700 psig SS 09/25/12	Cylinder	09/25/12	702	09/27/12	702
17	TO-15 CCV Std (17 compds)	Linde Spectra	Production # 1231016	Sales # 109464657	9/24/13	2000 psig	cylinder	10/02/12	702	10/03/12	702
18	Hexane Std LCS (TO-3M)	Scott	Item # T282-17	265PLU25PC03D	9/21/15	240 psig	cylinder	10/02/12	702	12/21/12	844
19										02/18/13	TST
20											
21										02/22/13	TST
22	TO-15 5m IS + SURR Std.	Scott	P.O# 20122345	PLU013269	3/24/13	2000 psig	cylinder	10/02/12	702	wrap std returned	to Paige to make stock
23	Hemercosame	ALDRICH	~~P-CODE~~ P.CODE 1001289665	MKBC5373V	10/12/15	1 g	Glass Jar	10/12/12	702	10/12/12	706
24	APH STD (LCS 2nd source) (Intradiene 0.99 ppm)	Linde	20122447	A#8213 12-34401	10/15/13	1800 psig (0.8 L)	Cylinder	10/30/12	702	12/3/12	702
25	TO-15 IS/SUR	Scott	20122417	cc. 203145 PLU0139433	10/22/13	2000 psig 30 AL	cylinder	10/30/12	702	12/19/12	702

Reviewed by: _____ on ____/____/____

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CHEMICAL RECEIVING LOGBOOK

LINE NO.	CHEMICAL	SOURCE	CATALOG NO.	LOT NO.	EXP. DATE	AMOUNT RECEIVED	TYPE CONT.	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO
1	TCD CCV 5%	AIR LIQUIDE	MC600827-P-30AL	EGM0083825	04/04/2016	2000 psig 30AL	Cylinder	05/22/13	789	05/23/13	789
2	Gasoline - Regular unleaded	accustandard	GA-001-40X	212061373	06/28/22	1mL	Ampule	06/13/13	702	06/26/13	702
3										09/18/13	658
4											
5											
6											
7	TO-15 IS/Surr	Scott	~~20133169~~	CC 429777	05/17/16	2000 psig 30AL	Cylinder	06/13/13	789	06/15/13	789
8	TCD STD (Zero air)	Praxair	AI 0.0 Z-T	109304601	Not listed.	2400 psig 348 ft³	Cylinder	06/13/13	789	06/18/13	789
9	H_2S STD (LCS)	Praxair	NIHS5MP-A3	109315704	06/14/2014	2000 psig 25 ft³	cylinder	06/25/13	754		
10	H_2S STD (CCV)	Praxair	NIHS5MP-A3	109315705	06/14/2014	2000 psig 25 ft³	cylinder	06/25/13	754		
11	TCD lcs	Air Liquide	MC500034P-30AL	SB00072813	06/20/2016	2000 psig 30AL	cylinder	07/23/13	658	7/24/13	658
12	C1-C6 Alkene STD in He	Air Liquide	T221-221	213PU35PE02L	8/2/16	221L	cylinder	8/8/13	858	10/03/13	658
13	1,1,1,2-Tetrachloroethane (2nd source)	Chem Service	N-10132-1G ~~ss 08/15/13~~	1644800	12/31/16	1g	vial	8/15/13	702	08/15/13	702
14											
15	8260B Calibration Mix #1	Restek	30633	A095254	05/2016 ~~05/20/16~~ ss 08/27/13	1mL	Amp.	08/27/13	702	08/27/13	702
16										09/17/13	658
17											
18											
19											
20											
21	California Oxy Mixture #1	Restek	30465	A093856	03/2018					09/17/13	658
22											
23											
24											
25											

Reviewed by: _____ on ____/____/____

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09/01/95 Revision

Calscience Environmental Laboratories, Inc.

Level IV Data Package

CLIENT NAME:	**CKY, Incorporated**
PROJECT NAME:	**Seal Beach NWS**
WORK ORDER:	**13-12-1615**

ASTM D-1946 (M) Fixed Gases (H2 and/or He) (Air)

Initial Calibration Data

Sample Data

Quality Control Data

Continuing Calibration Data

Run Logs

Chemical Receiving Logs and Standards Preparation Logs

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Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Initial Calibration Data

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130726IC

GC 55 (ASTM D-1946 He&H2) 07/26/13

Helium — Multipoint Calibration — FID detector

Conc (%)	PK Area	RF	Rf avg.	Std Dev,I	sum Ai	STD DEV	RSD %
0.01	12.55	1255.15		5892.85			
0.025	33.48	1339.25		25877.26			
0.25	276.07	1104.28	1178.39	5491.17	49698.39	99.70	8.46
0.5	557.39	1114.78		4046.37			
1	1087.2	1087.20		8314.49			
2	2339.31	1169.66		76.24			

Hydrogen — Multipoint Calibration — FID detector

Conc (%)	PK Area	RF	Rf avg.	Std Dev,I	sum Ai	STD DEV	RSD %
0.01	19.77	1977.10		227.42			
0.025	56.35	2253.91		85203.32			
0.25	465.64	1862.58	1962.02	9887.94	119014.07	154.28	7.86
0.5	940.64	1881.28		6517.63			
1	1831.02	1831.02		17160.21			
2	3932.41	1966.21		17.56			

ICAL Criteria

ICAL RSD	15%
ICV	15%
DAILY CCV	30%

CONTROLLED COPY

Copy Number: 1

Copy Holder: GC 55

Issued By: 326

Date Issued: 7/27/13

This stamp appears in red ink on original copy.

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Calibration Table

Calib. Data Modified : Friday, July 26, 2013 7:10:04 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.500 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.500 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Average Response/Amount
Origin : Included
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Lvl Sig		Amount [%]	Area	Amt/Area	Ref	Grp	Name
2.844	1	6	1.00000e-2	12.55152	7.96716e-4			Helium
		5	2.50000e-2	33.48128	7.46686e-4			
		4	2.50000e-1	276.07117	9.05564e-4			
		3	5.00000e-1	557.38800	8.97041e-4			
		2	1.00000	1087.20325	9.19791e-4			
		1	2.00000	2339.31079	8.54953e-4			
3.295	1	6	1.00000e-2	19.77096	5.05792e-4			Hydrogen
		5	2.50000e-2	56.34779	4.43673e-4			
		4	2.50000e-1	465.64435	5.36890e-4			
		3	5.00000e-1	940.64185	5.31552e-4			
		2	1.00000	1831.01855	5.46144e-4			
		1	2.00000	3932.41187	5.08594e-4			

1 Warnings or Errors :

Warning : Overlapping peak time windows at 2.844 min, signal 1

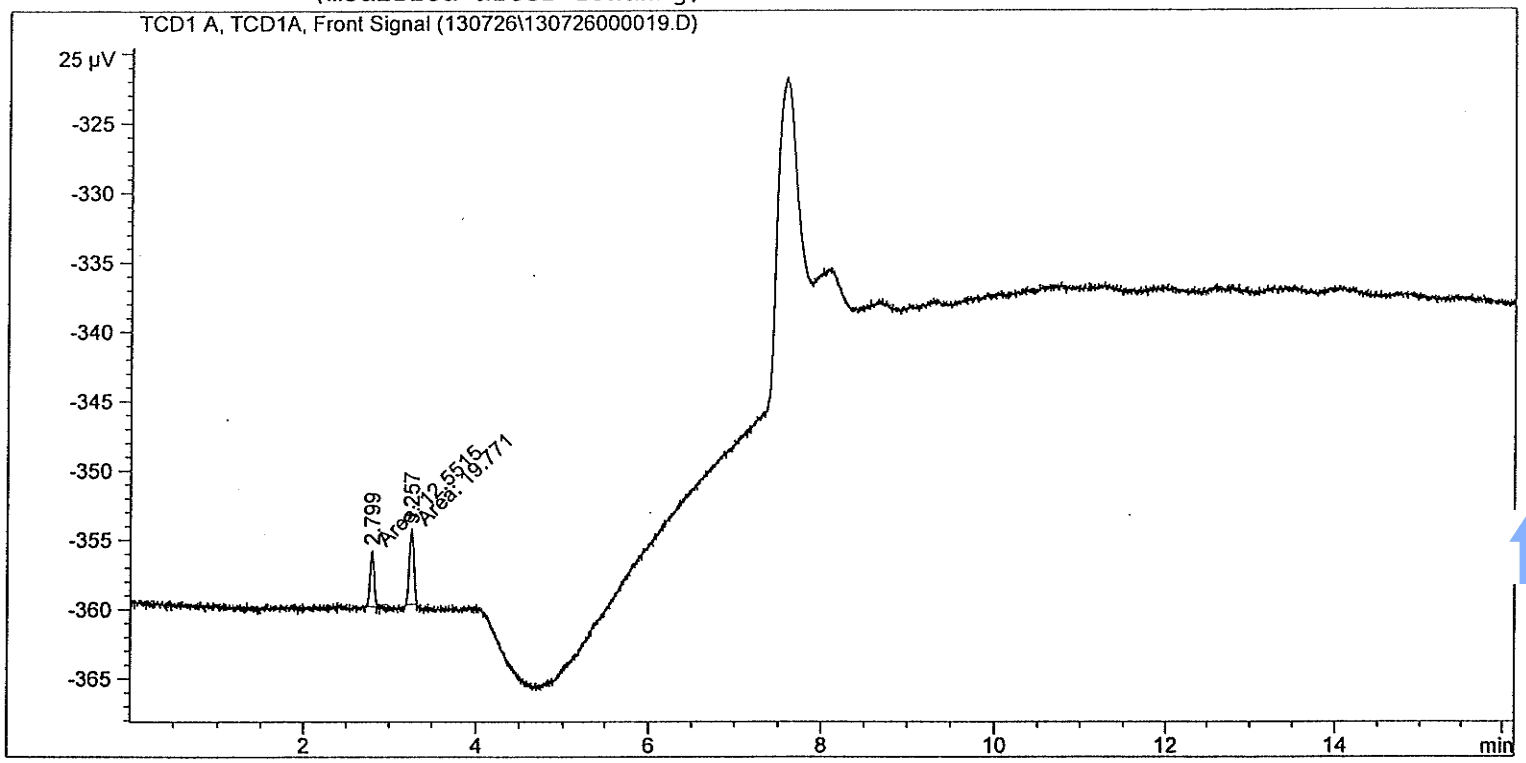
Peak Sum Table

No Entries in table

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 6:34:58 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 6:28:29 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

MANUAL INTEGRATION
BEFORE / AFTER
Date: 07/26/13
Chemist: 658 GL: 846
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.799	MM	12.55152	7.77427e-4	9.75788e-3		Helium
3.257	MM	19.77096	4.66102e-4	9.21529e-3		Hydrogen

Totals : 1.89732e-2

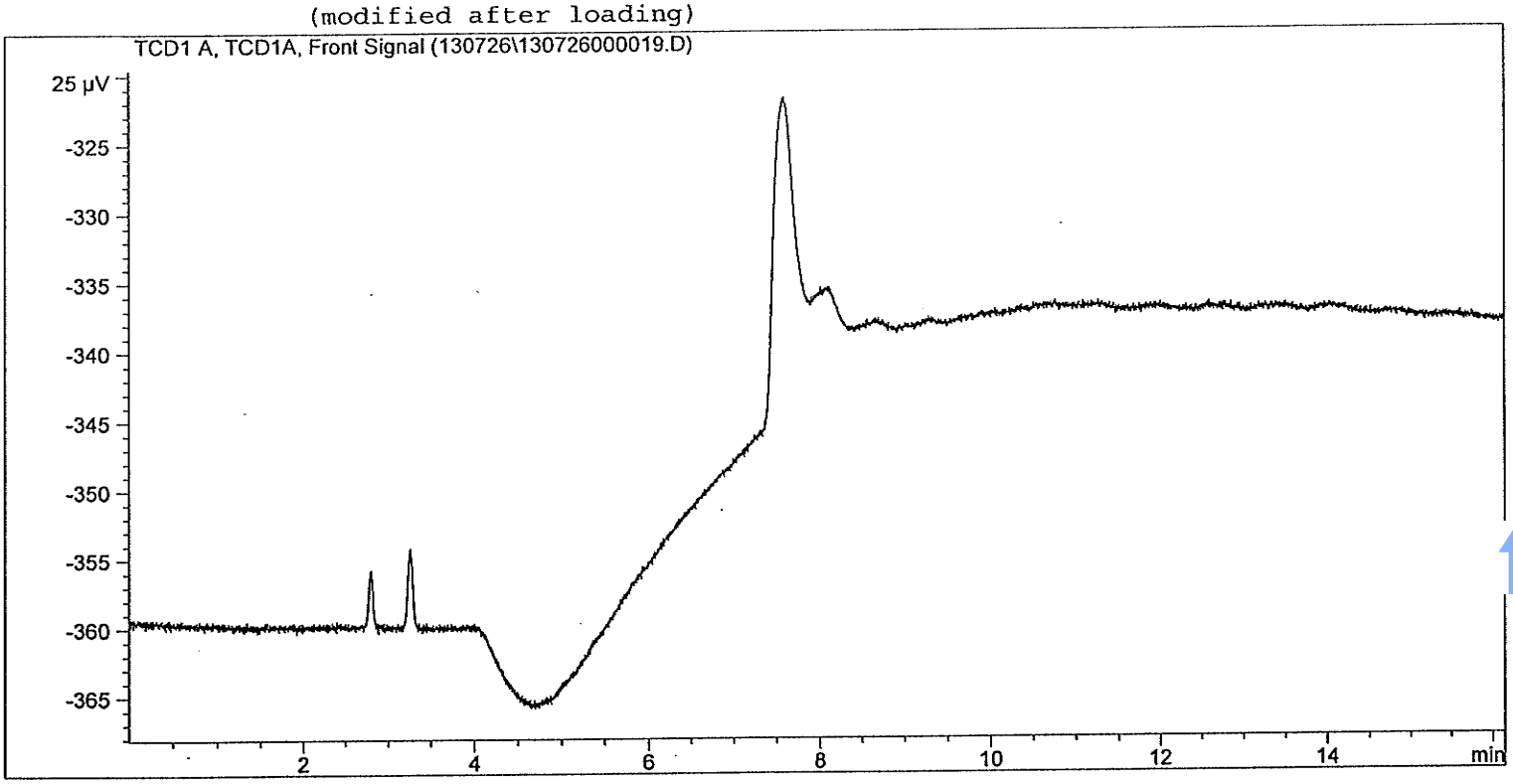
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 6:34:58 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 6:28:29 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

MANUAL INTEGRATION
BEFORE / AFTER
Date:
Chemist: GL:
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.771		-	-	-		Helium
3.227		-	-	-		Hydrogen

Totals : 0.00000

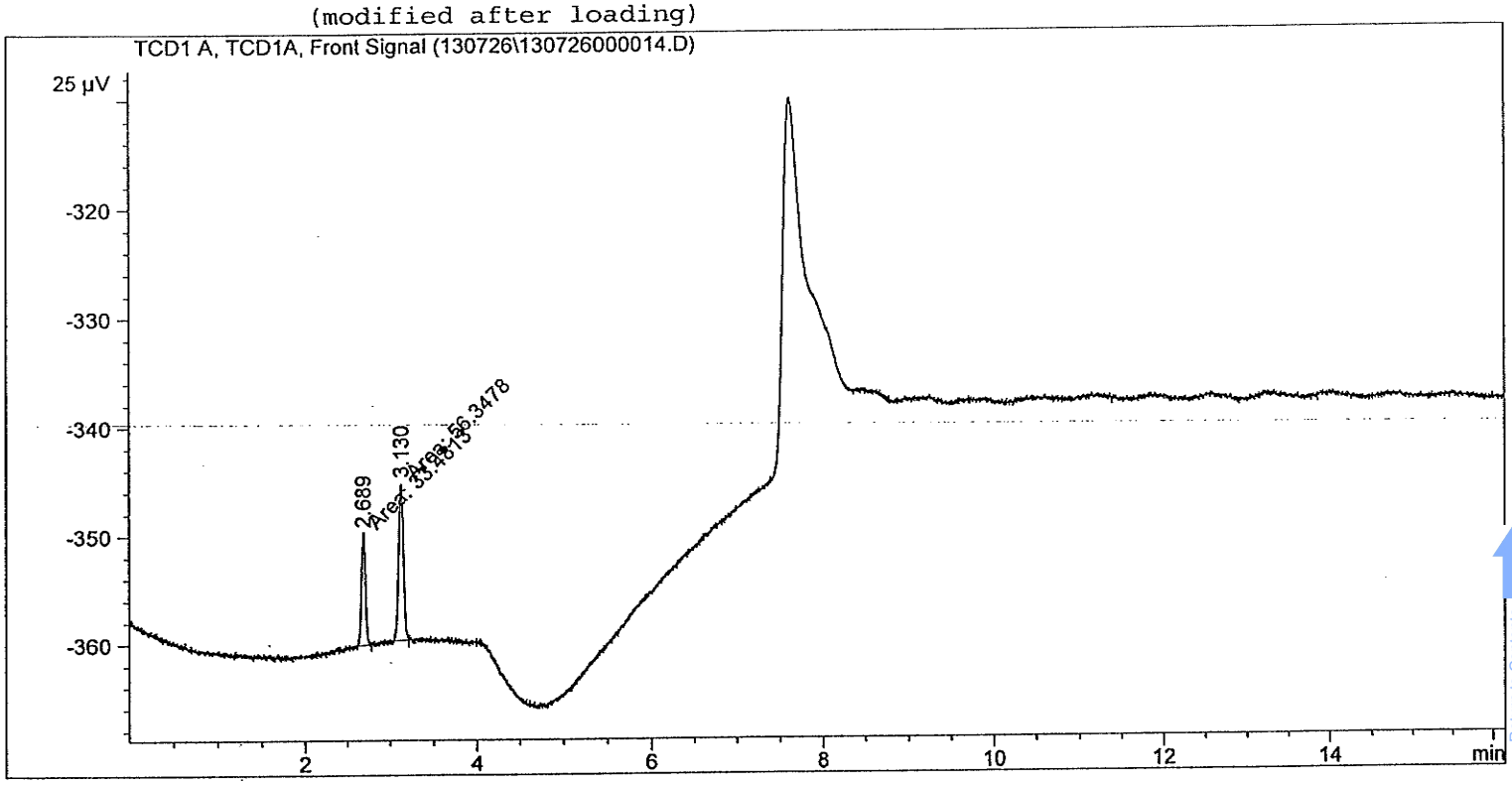
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 4:01:51 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 3:58:38 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

MANUAL INTEGRATION
BEFORE / AFTER
Date: 7/26/13
Chemist: 858 GL: 846
Reason: BASELINE CORR., PEAK ID CORR.
Other:
This stamp appears in red ink on original copy

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.689	MM	33.48128	7.77427e-4	2.60292e-2		Helium
3.130	MM	56.34779	4.66102e-4	2.62638e-2		Hydrogen

Totals : 5.22931e-2

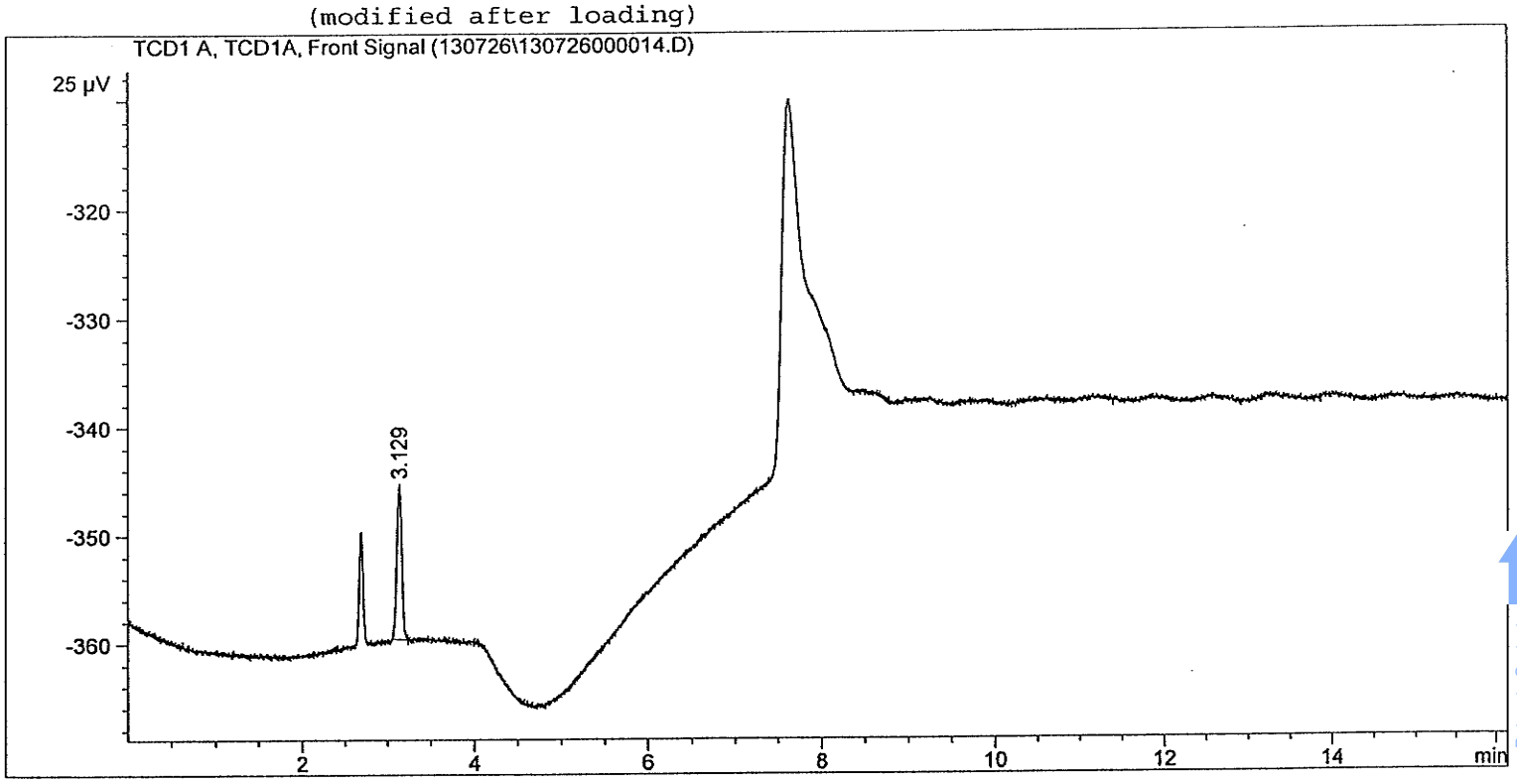
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 4:01:51 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 3:58:38 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

CORRECTION
BEFORE AFTER
GL:
BASELINE CORR., PEAK ID CORR.
This stamp appears in red ink on original copy

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.771		-	-	-		Helium
3.129	BB	55.72969	4.66102e-4	2.59757e-2		Hydrogen

Totals : 2.59757e-2

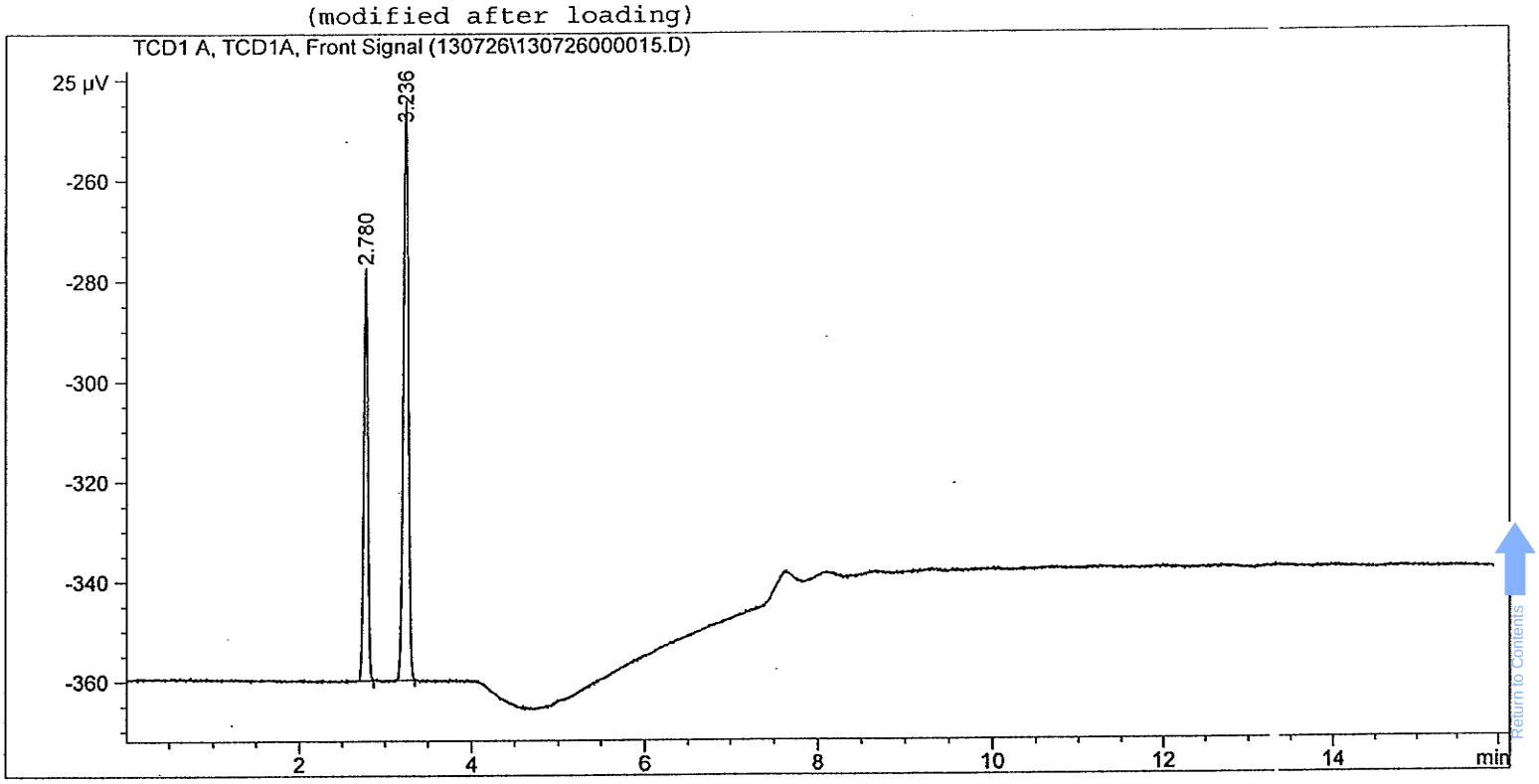
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 5:04:43 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 4:58:05 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.780	BB	276.07117	7.77427e-4	2.14625e-1		Helium
3.236	BB	465.64435	4.66102e-4	2.17038e-1		Hydrogen

Totals : 4.31663e-1

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

Data File W:\DATA\2013\130726\130726000016.D
Sample Name: ICAL ~~#3~~ 0.5% 500UL
#4 QT 07/26/13

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 5:26:53 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 5:20:53 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130206.M
Last changed : 7/17/2013 9:31:39 PM by 658
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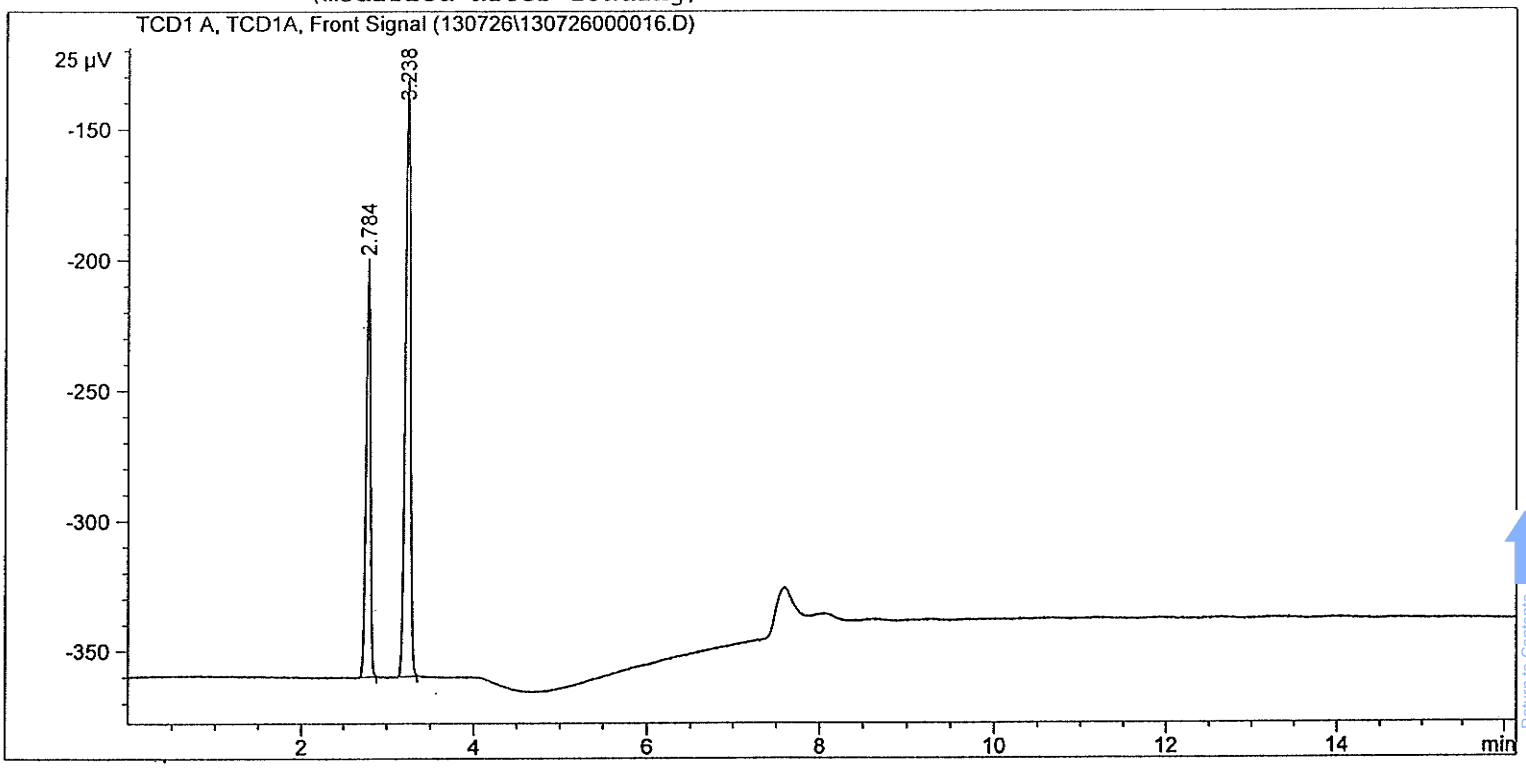

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/18/2013 2:52:13 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.784	BB	557.38800	7.77427e-4	4.33328e-1		Helium
3.238	BB	940.64185	4.66102e-4	4.38435e-1		Hydrogen

Totals : 8.71764e-1

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

```
==========================================================================
Acq. Operator    : 858
Acq. Instrument  : GC 55                          Location : Vial 1
Injection Date   : 7/26/2013 5:49:50 PM
                                                 Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed     : 7/26/2013 5:43:02 PM by 858
Analysis Method  : C:\CHEM32\1\METHODS\130206.M
Last changed     : 7/17/2013 9:31:39 PM by 658
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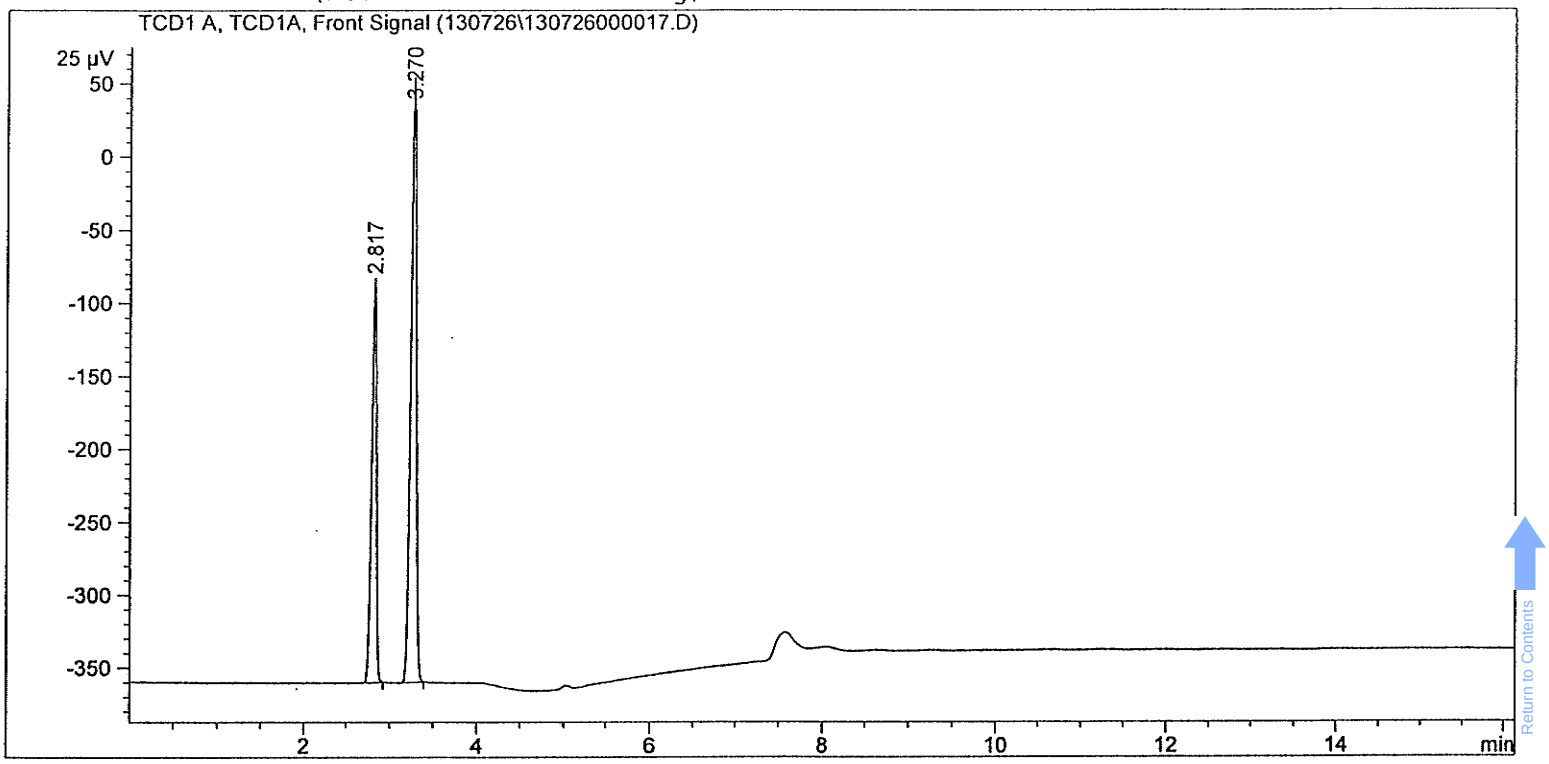


```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By              :      Signal
Calib. Data Modified   :      7/18/2013 2:52:13 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [25 µV*s]                [%]
-------|------|----------|----------|----------|--|-----------------
  2.817 BB     1087.20325 7.77427e-4 8.45221e-1     Helium
  3.270 BB     1831.01855 4.66102e-4 8.53442e-1     Hydrogen

Totals :                                 1.69866


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
```

==========

Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 6:12:19 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 6:06:01 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130726.M
Last changed : 7/26/2013 7:10:05 PM by 658
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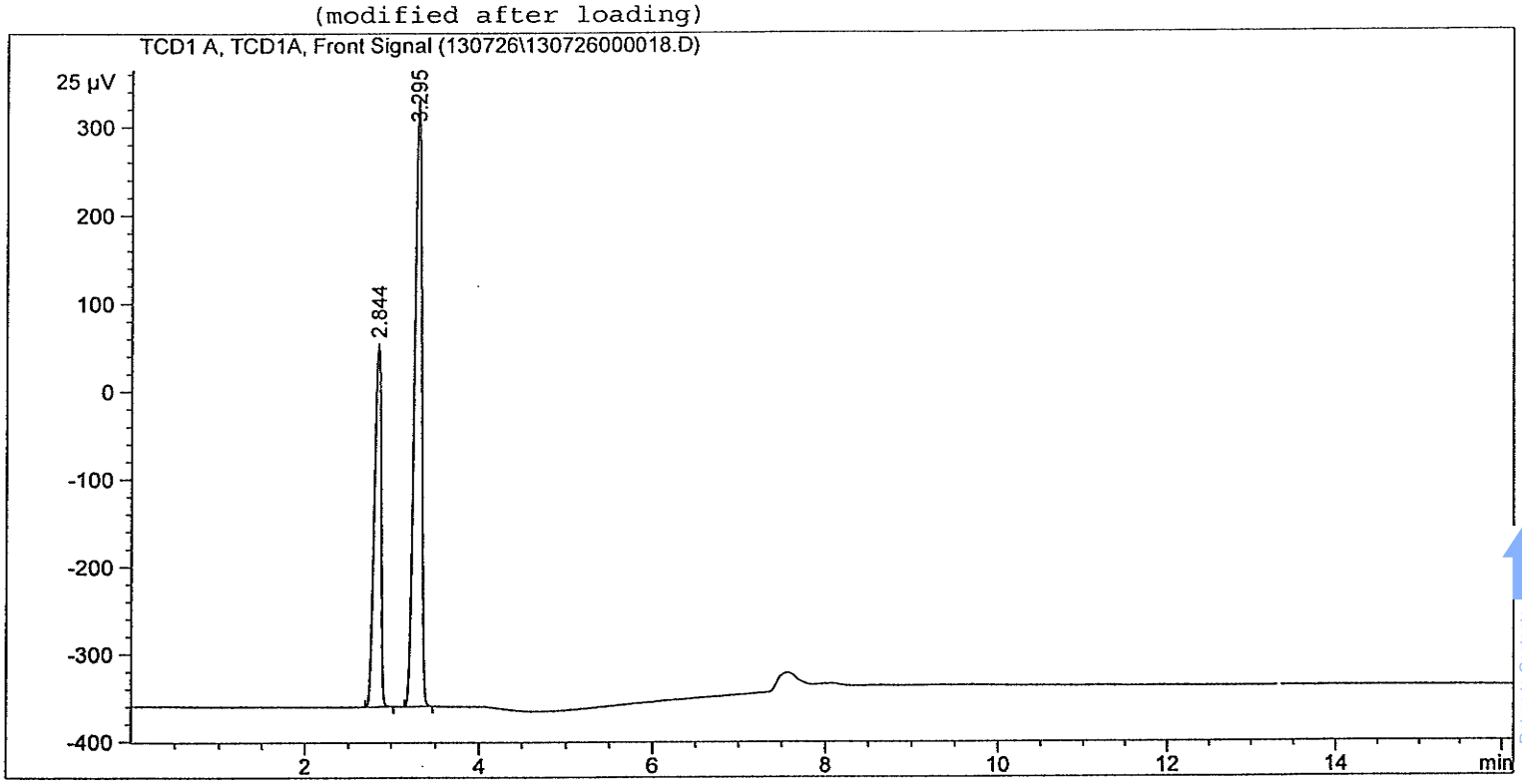

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Friday, July 26, 2013 7:10:04 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

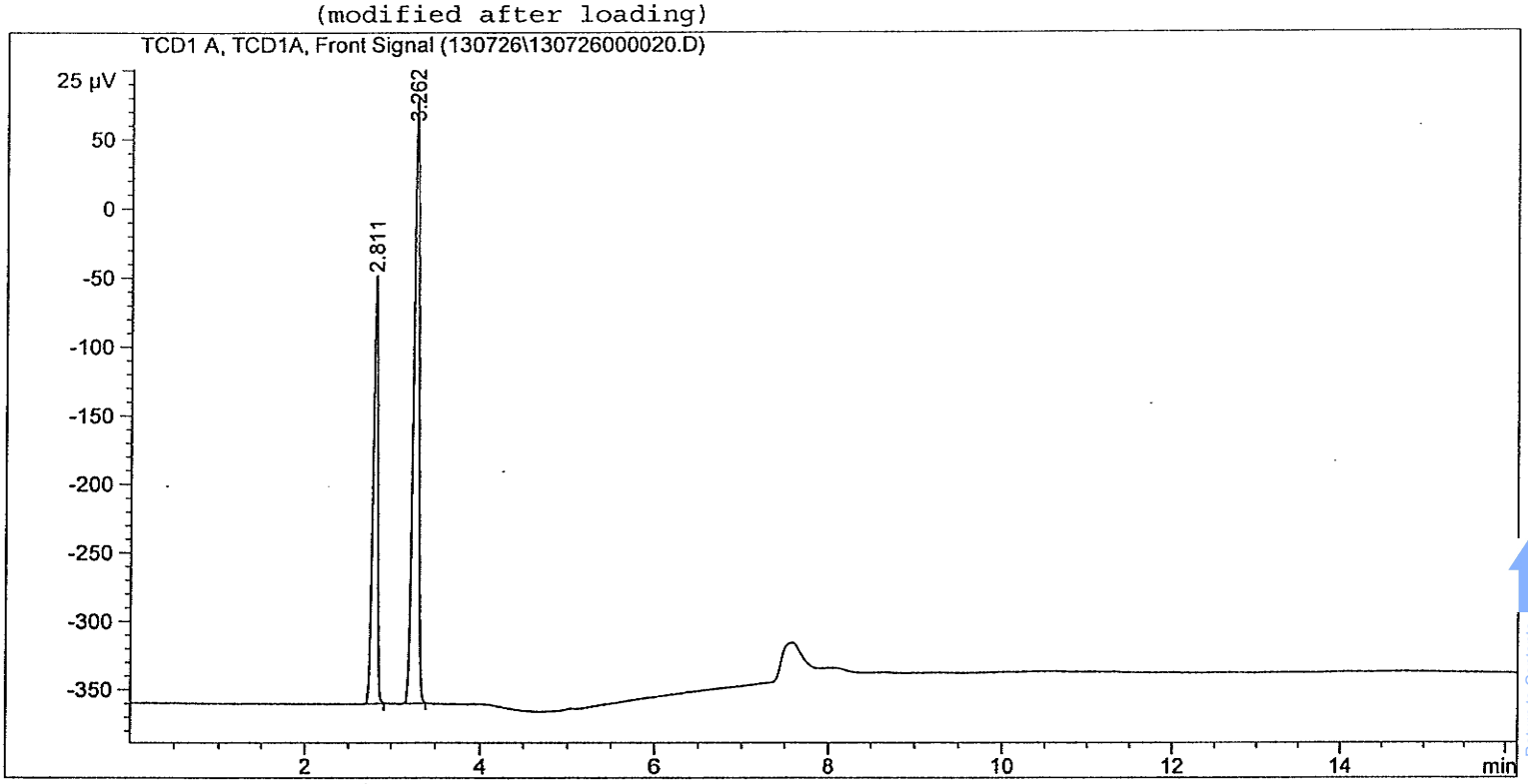
RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.844	BB	2339.31079	8.48618e-4	1.98518		Helium
3.295	BB	3938.41187	5.09680e-4	2.00427		Hydrogen

Totals : 3.98945

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========
Acq. Operator : 858
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 7/26/2013 7:19:22 PM
Inj Volume : Manually
Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 7/26/2013 7:13:11 PM by 858
Analysis Method : C:\CHEM32\1\METHODS\130726.M
Last changed : 7/26/2013 7:10:05 PM by 658
(modified after loading)



==========
External Standard Report
==========

Sorted By : Signal
Calib. Data Modified : Friday, July 26, 2013 7:10:04 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.811	BB	1224.07410	8.48618e-4	1.03877		Helium
3.262	BB	1939.64709	5.09680e-4	9.88599e-1		Hydrogen

Totals : 2.02737

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Sample Data

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RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 13-12-1615
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 11:57
ANALYST: 888
DATA FILE: 131220000005

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:08
EXTRACTION: N/A
D/T EXTRACTED:

1 **CLIENT SAMPLE NUMBER: MW-40-37**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	-

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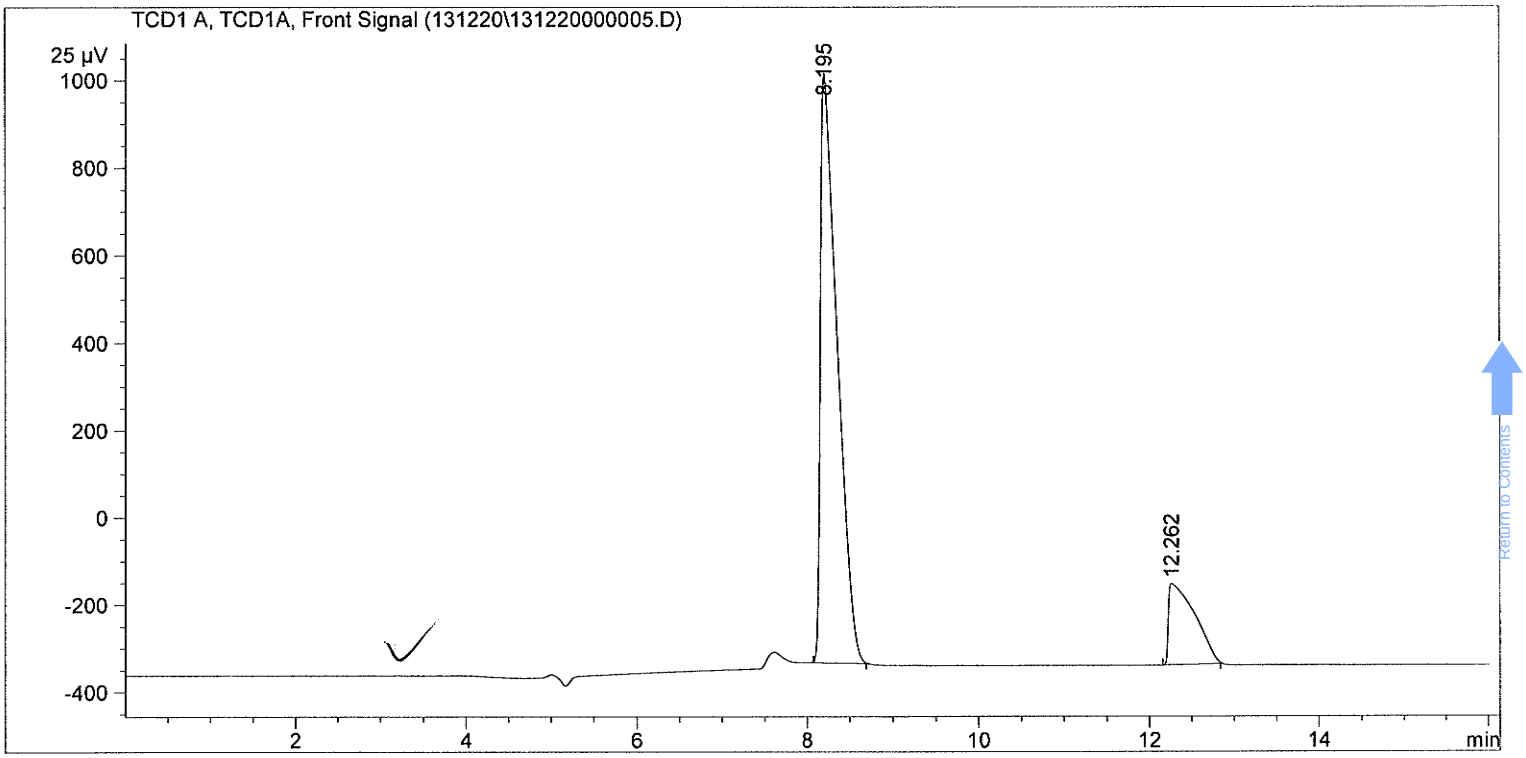
```
==================================================================
Acq. Operator    : 888
Acq. Instrument  : GC 55                          Location : Vial 1
Injection Date   : 12/20/2013 11:57:30 AM
                                                 Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed     : 12/20/2013 11:50:10 AM by 888
Analysis Method  : C:\CHEM32\1\METHODS\130726.M
Last changed     : 12/10/2013 4:19:00 PM by 884
                   (modified after loading)
Sample Info      :
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      12/10/2013 4:19:23 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [25 µV*s]                [%]
-------|------|----------|----------|----------|--|-----------------
  2.699            -          -          -          Helium
  3.262            -          -          -          Hydrogen

Totals :                                 0.00000
```

Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Quality Control Data

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: ASTM D-1946 (M)

MB Sample ID: 099-15-156-2
MB Batch ID: 131220L01
Instrument: GC 55
Matrix: Air
Analyst: 888
D/T Analyzed: 12/20/2013 11:34
Data File: 131220000004

Reviewed By: 794
D/T Reviewed: 12/31/2013 16:09
Extraction: N/A
D/T Extracted:

Work Order #: 13-12-1615

Sample#	Client Sample ID	D/T Analyzed	Data File
1	MW-40-37	12/20/2013 11:57	131220000005

Return to Contents

RAW DATA SHEET FOR METHOD: ASTM D-1946 (M)

WORK ORDER NUMBER: 099-15-156
INSTRUMENT NAME: GC 55
D/T ANALYZED: 12/20/2013 11:34
ANALYST: 888
DATA FILE: 131220000004

REVIEWED BY: 794
DATE REVIEWED: 12/31/2013 16:09
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Helium	0.000	1	ND	0.00373	0.0100	0.0250	1	%v	
Hydrogen	0.000	1	ND	0.00380	0.0100	0.0250	1	%v	

Return to Contents

LCS / LCSD QUALITY CONTROL SHEET
METHOD: ASTM D-1946 (M)

WORK ORDER:	**13-12-1615**	D/T REVIEWED:	12/31/2013 16:09	LCS D/T ANALYZED:	12/20/2013 10:29
LCS/LCSD BATCH:	131220L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/20/2013 10:51
LCS/LCSD SAMPLE I	**099-15-156-2**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC 55
ANALYST:	896	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC 55
REVIEWED BY:	794				

COMMENT:

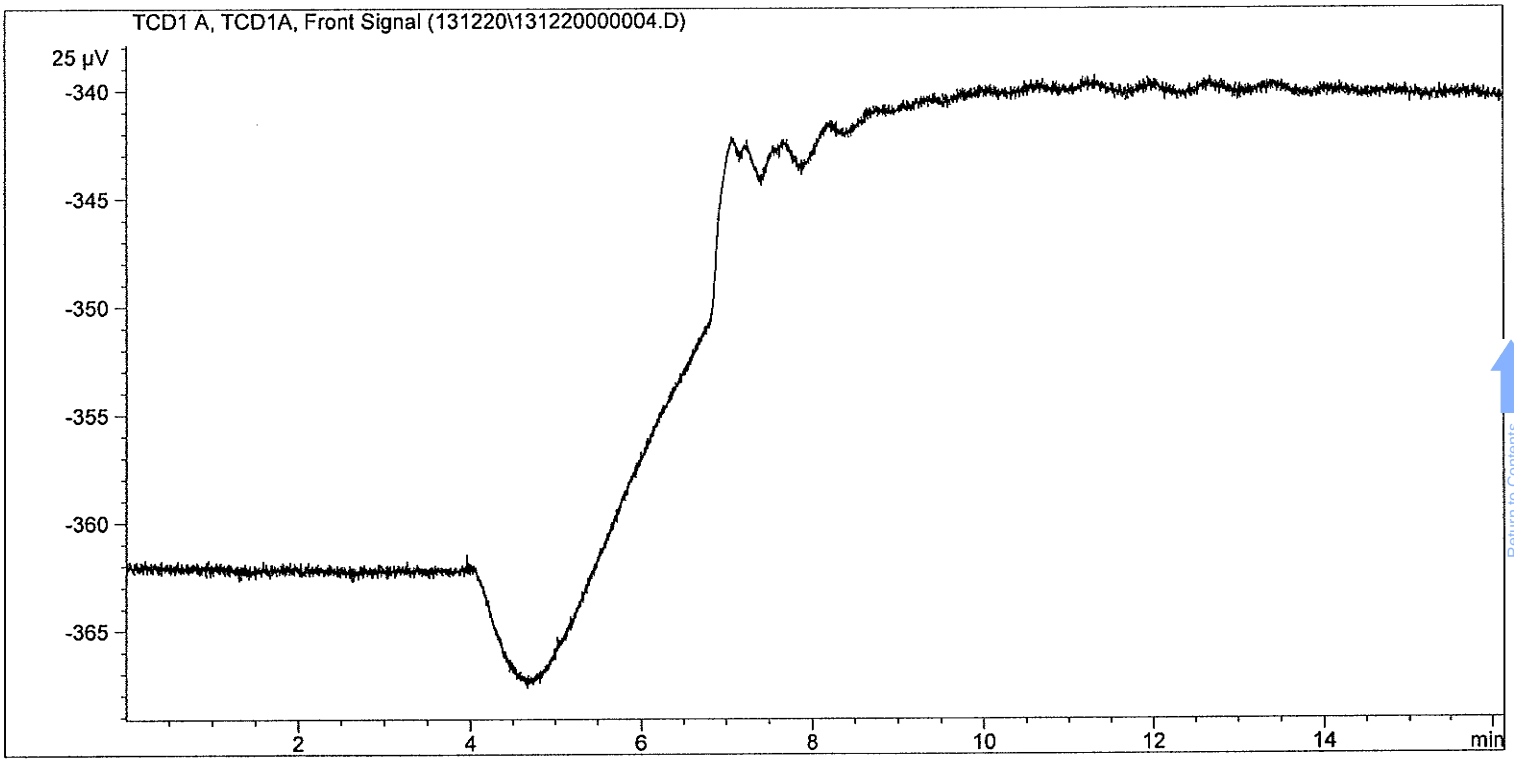
COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Helium	1.000	0.9559	96	1.041	104	80-120	73-127	9	0-30	PASS	
Hydrogen	1.000	0.9084	91	0.9912	99	80-120	73-127	9	0-30	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	131220000002	
LCSD	131220000003	

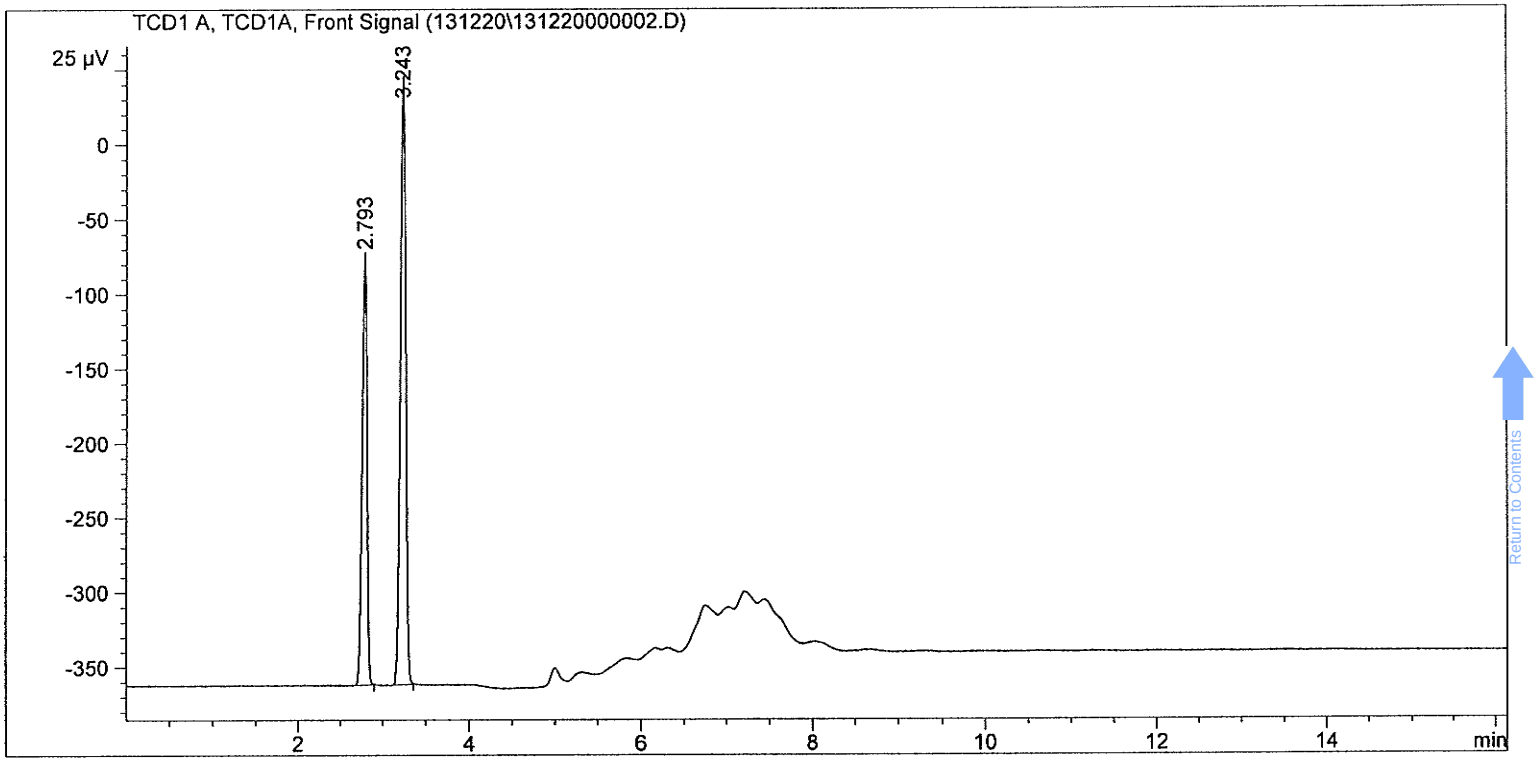
Return to Contents

```
==================================================================
Acq. Operator    : 888
Acq. Instrument  : GC 55                          Location : Vial 1
Injection Date   : 12/20/2013 11:34:00 AM
                                                Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed     : 12/20/2013 11:08:01 AM by 896
Analysis Method  : C:\CHEM32\1\METHODS\130726.M
Last changed     : 12/10/2013 4:19:00 PM by 884
                   (modified after loading)
Sample Info      :
```



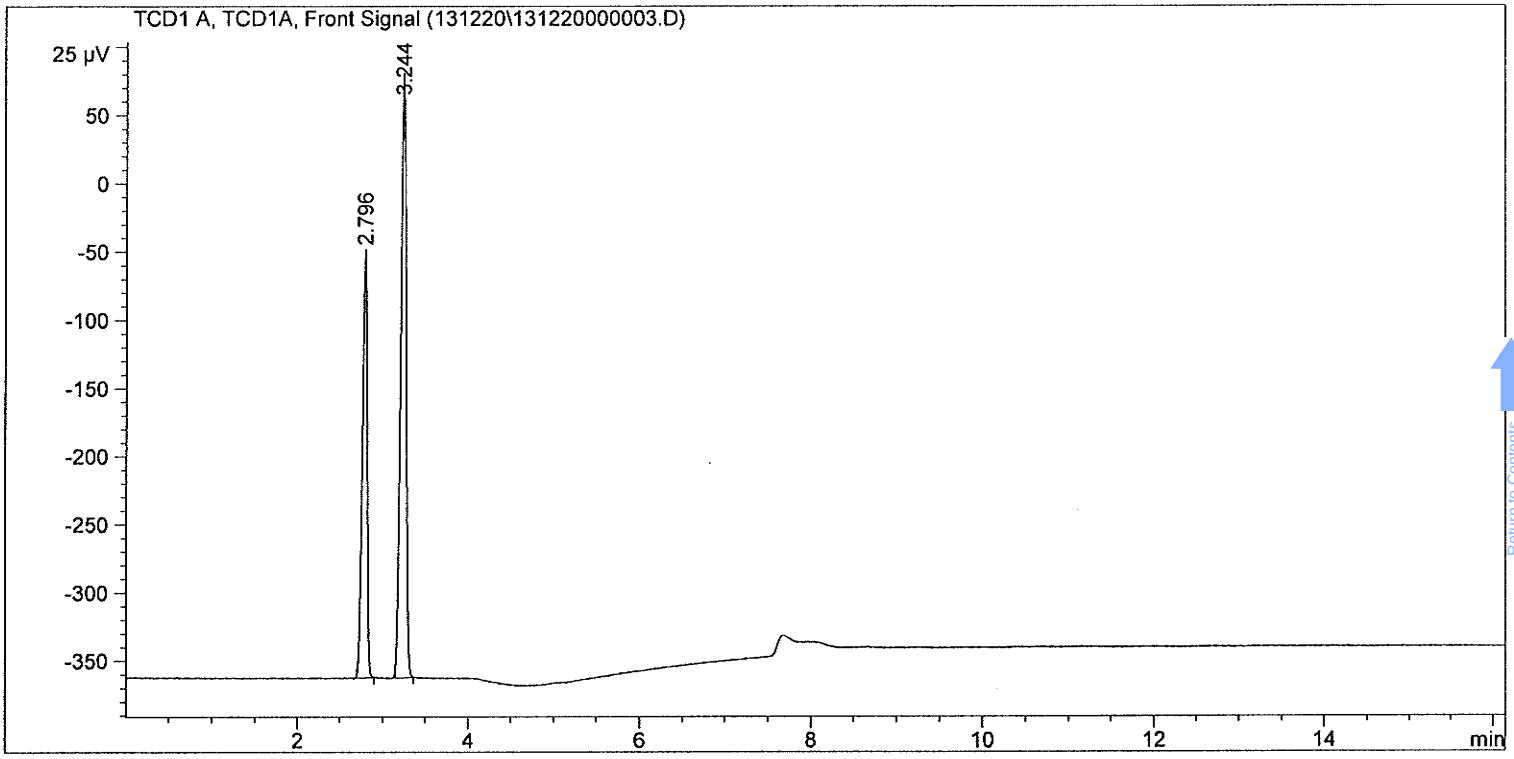

```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      12/10/2013 4:19:23 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [25 µV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.699            -          -          -          Helium
  3.262            -          -          -          Hydrogen

Totals :                                 0.00000
```

```
==================================================================
Acq. Operator    : 896
Acq. Instrument  : GC 55                          Location : Vial 1
Injection Date   : 12/20/2013 10:29:12 AM
                                                Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed     : 12/20/2013 10:17:58 AM by 896
Analysis Method  : C:\CHEM32\1\METHODS\130726.M
Last changed     : 12/10/2013 4:19:00 PM by 884
                   (modified after loading)
Sample Info      :
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      12/10/2013 4:19:23 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [25 µV*s]                [%]
-------|------|----------|----------|----------|--|-----------------
  2.793 BB     1126.37488 8.48618e-4 9.55862e-1     Helium
  3.243 BB     1782.39246 5.09680e-4 9.08450e-1     Hydrogen

Totals :                                 1.86431
```

```
==================================================================
Acq. Operator    : 896
Acq. Instrument  : GC 55                          Location : Vial 1
Injection Date   : 12/20/2013 10:51:52 AM
                                                Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed     : 12/20/2013 10:45:21 AM by 896
Analysis Method  : C:\CHEM32\1\METHODS\130726.M
Last changed     : 12/10/2013 4:19:00 PM by 884
                   (modified after loading)
Sample Info      :
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      12/10/2013 4:19:23 PM
Multiplier:                    :      1.0000
Dilution:                      :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [25 µV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.796 BB     1227.19238 8.48618e-4    1.04142     Helium
  3.244 BB     1944.71826 5.09680e-4 9.91184e-1     Hydrogen

Totals :                                 2.03260
```

Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Continuing Calibration Data

Return to Contents

ASTM D-1946 CALIBRATION CHECK

Work Order Number: 13-12-1615
Instrument ID: GC 55
Batch Number (LCS/MS/SA): 131220L01

Analyst: 888 Date 12/20/13
QC Review: 794 Date 12/31/13
Date Analyzed: 12/20/13

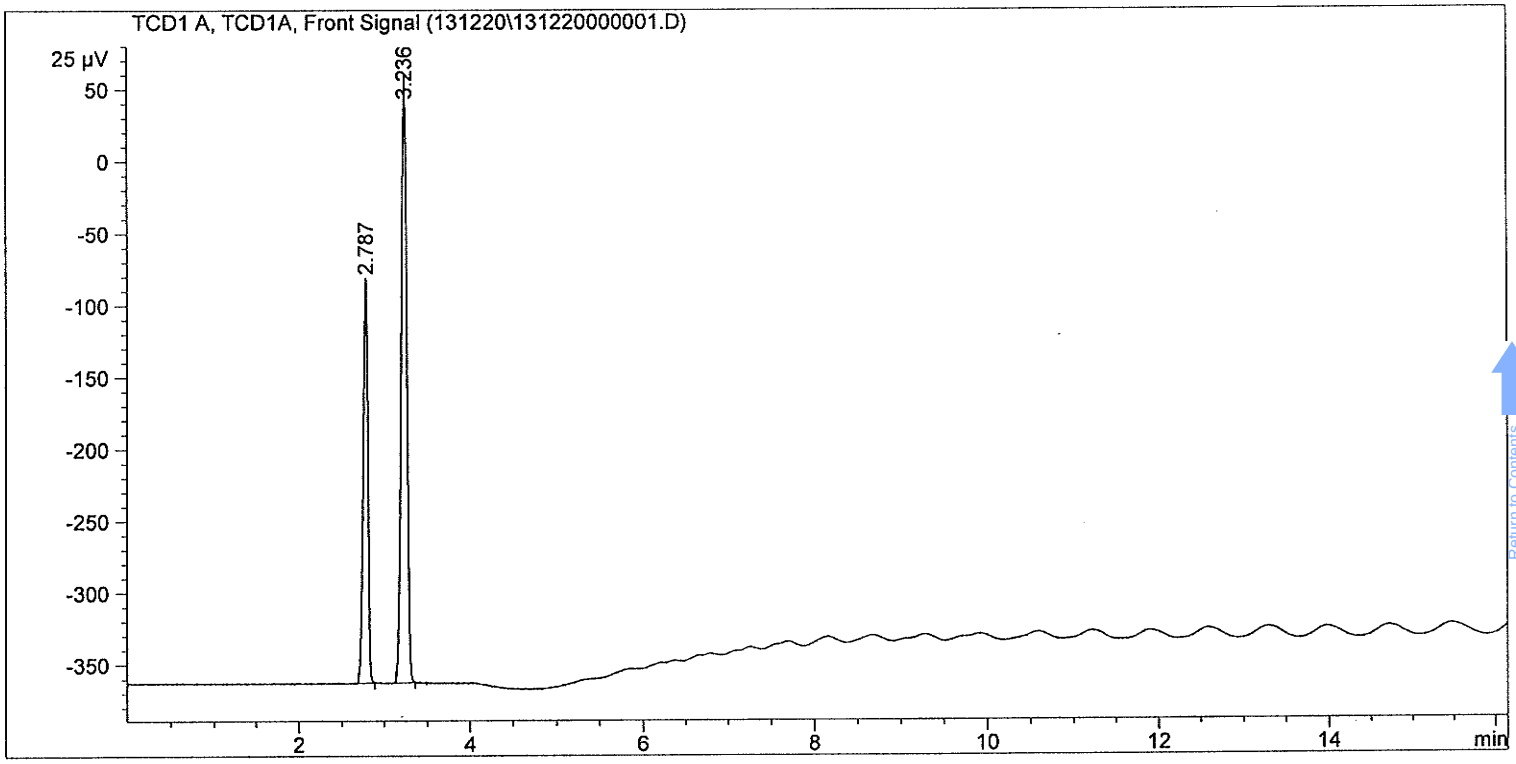
Daily Calibration Check

Analyte	Daily RF ($\times 10^{-3}$)	Ave RF ($\times 10^{-3}$)	% D	Control Limit
Helium (He)	1.095	1.178	7	0 – 20
Hydrogen (H_2)	1.846	1.962	6	0 – 20

Analyst's Comments:

Return to Contents

```
==================================================================
Acq. Operator    : 896
Acq. Instrument  : GC 55                          Location : Vial 1
Injection Date   : 12/20/2013 10:01:51 AM
                                                Inj Volume : Manually
Acq. Method      : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed     : 12/19/2013 12:36:34 PM by 858
Analysis Method  : C:\CHEM32\1\METHODS\130726.M
Last changed     : 12/10/2013 4:19:00 PM by 884
                   (modified after loading)
Sample Info      :
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      12/10/2013 4:19:23 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [25 µV*s]                [%]
-------|------|----------|----------|----------|--|-----------------
  2.787 BB     1095.46838 8.48618e-4 9.29634e-1     Helium
  3.236 BB     1845.97351 5.09680e-4 9.40856e-1     Hydrogen

Totals :                                 1.87049
```

ENDING CCV

ASTM D-1946 CALIBRATION CHECK

Work Order Number: 13-12-1615

Instrument ID: GC55

Batch Number (LCS/MS/SA): 131220L01

Analyst: 878 Date 12/20/13

QC Review: 794 Date 12/31/13

Date Analyzed: 12/20/13

Daily Calibration Check

Analyte	Daily RF ($\times 10^{-3}$)	Ave RF ($\times 10^{-3}$)	% D	Control Limit
Helium (He)	1.122	1.178	5	0 – 20
Hydrogen (H_2)	1.888	1.962	4	0 – 20

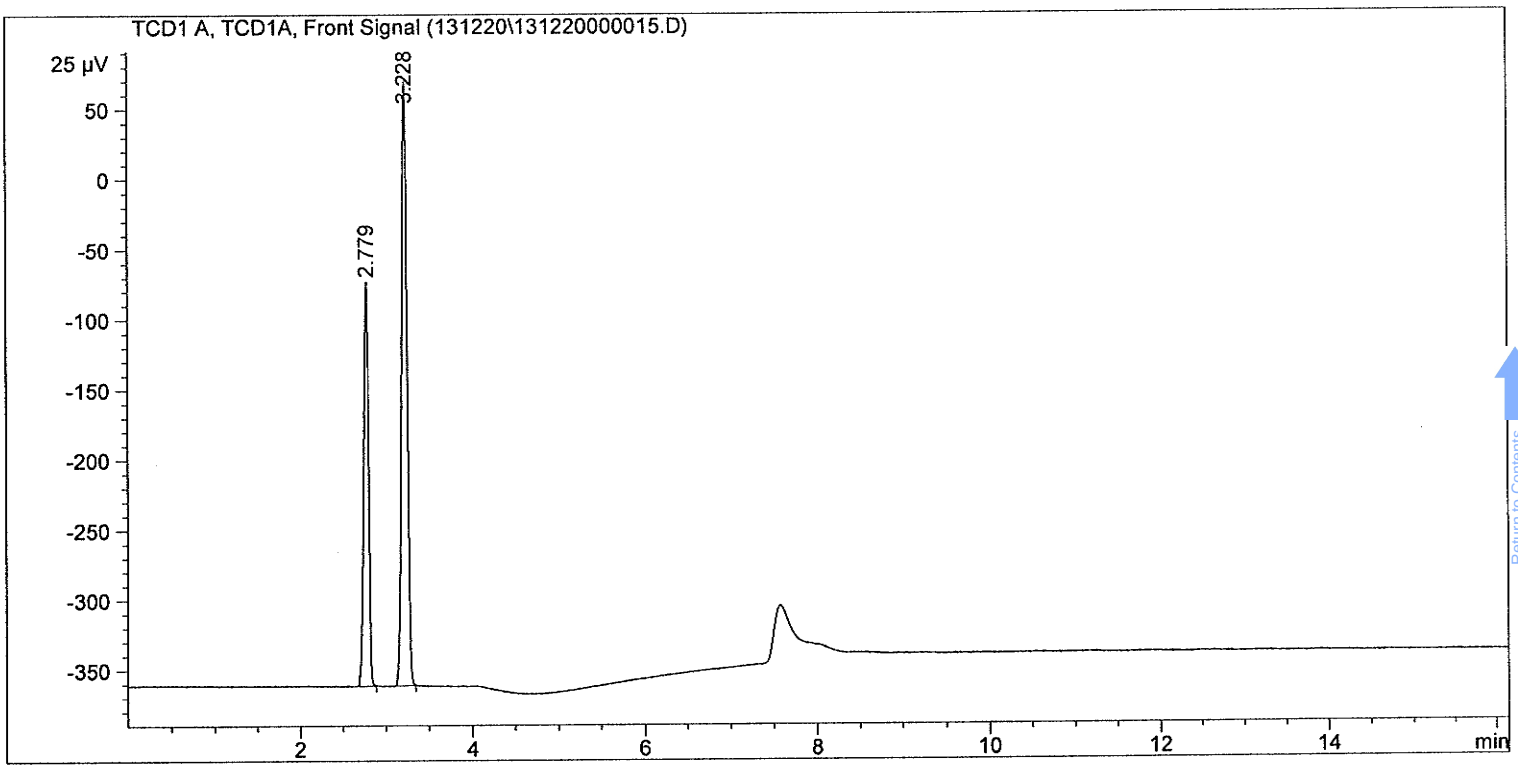
Analyst's Comments:

Return to Contents

==========

Acq. Operator : 878
Acq. Instrument : GC 55 Location : Vial 1
Injection Date : 12/20/2013 4:07:03 PM
Inj Volume : Manually

Acq. Method : C:\CHEM32\1\METHODS\HE+H2+HC.M
Last changed : 12/20/2013 4:01:51 PM by 878
Analysis Method : C:\CHEM32\1\METHODS\130726.M
Last changed : 12/10/2013 4:19:00 PM by 884
(modified after loading)
Sample Info :



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 12/10/2013 4:19:23 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A, TCD1A, Front Signal

RetTime [min]	Type	Area [25 µV*s]	Amt/Area	Amount [%]	Grp	Name
2.779	BB	1121.51392	8.48618e-4	9.51736e-1		Helium
3.228	BB	1887.60095	5.09680e-4	9.62072e-1		Hydrogen

Totals : 1.91381

Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Run Logs

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Air Analysis Logbook

Instrument ID: GC 55

DATE	DIRECTORY	DATA FILE	CEL ID #	TEST METHOD	STANDARD ID #	LOOP VOL (mL)	ANALYST ID #	COMMENTS
07/25/13	130725	130725000012	13-07-1610- 8A	He+H_2+Hc	NA	1	858	Samples rerun
		13	9A					
		14	10A					
		15	CCV 1%		A01-28-18		846	see sequence 130726
07/26/13	130726	130726000001	CCV 1%	He+H_2+Hc	A01-28-18	1	858	
		2	LCS 1%		A01-25-24			
		3	LCSD 1%					
		4	MB		NA			
		5	13-07-1714-1A					Samples rerun.
		6	2A					
		7	2A					Confirmation
		8	3A					
		9	4A					
		10	4A					Confirmation
		11	5A				658	See 130726
		12	IB					
		13	ICAL #1 0.010%		A01-28-18	0.01		X High Response
		14	ICAL #2 0.025%			0.025	858	
		15	ICAL #3 0.25%			0.250		
		16	ICAL #4 0.5%			0.500		
		17	ICAL #5 1%			1		
		18	ICAL #6 2%			2		
		19	ICAL #1 0.010%			0.10		
		20	ICV 1%		A01-25-24	1		
		21	LCSD 1%				658	
		22	MB		NA			

Book Number: _____

Air Analysis Logbook

Instrument ID: GC 55

DATE	DIRECTORY	DATA FILE	CEL ID #	TEST METHOD	STANDARD ID #	LOOP VOL (mL)	ANALYST ID #	COMMENTS
12/17/13	131217	131217000002	LCS 17	He + H2 + HC	A01-25-24	1	896	
		3	LCSD 17					
		4	MB					
12/18/13	131218	131218000001	CCV 17	He + H2 + HC	A01-28-18	1	896	
		2	LCS 17		A01-25-24			
		3	LCSD 17					
		4	MB		NA		858	
		5	13-12-1366-4A				888	
		6	-4A					confirmation
		7	-1393-1A					
		8	-1A					confirmation
		9	-2A					
		10	-2A					confirmation
		11	-3A					
		12	~~-4A~~ 12/18/13			0.100		-3A
		13	-4A			1	884	
		14	-4A			0.100		
		15	CCV 1%		A01-28-18	1	888	
12/19/13	131219	131219000001	CCV 17	He + H2 + HC	A01-28-18	1	896	
		2	LCS 17		A01-25-24			
		3	LCSD 17					
		4	MB		NA			
		5	13-12-1469-1A				888	
		6	CCV 1%		A01-28-18		858	
12/20/13	131220	131220000001	CCV 17	He + H2 + HC	A01-28-18	1	896	
		2	LCS 17		A01-25-24			

Book Number: 4

09/19/12 Revision

Air Analysis Logbook

Instrument ID: GC 55

DATE	DIRECTORY	DATA FILE	CEL ID #	TEST METHOD	STANDARD ID #	LOOP VOL (mL)	ANALYST ID #	COMMENTS
12/20/13	131220	131220000003	LCSD 17	He + H2 + Hc	A01-25-24	1	896	
		4	MB		NA		888	
		5	13-12-1615-1A					
		6	1614-1A					
		7	-2A					
		8	-3A					
		9	-4A					
		10	-5A				878	
		11	-6A				888	
		12	-7A					
		13	-8A				878	
		14	-9A					
		15	CCV 1%		BV 12/20/13 ~~A01-18-28~~			A01-28-18
12/21/13	131221	131221000001	CCV 1%	He + H2 + Hc	A01-28-18	1	888	
		2	LCS 1%		A01-25-24			
		3	LCSD 1%					
		4	MB		NA			
12/23/13	131223	131223000001	CCV 1%	He + H2 + Hc	A01-28-18	1	888	
		2	LCS 1%		A01-25-24			
		3	LCSD 1%					
		4	MB		NA			
		5	13-12-1810-1A					
		6	-2A					
		7	-2A					Confirmation
		8	-3A					
		9	-3A					confirmation

Book Number: 4

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09/19/12 Revision

Calscience Environmental Laboratories, Inc.

ASTM D-1946 (M) Fixed Gases (H2 and/or He)

Chemical Receiving Logs and Standards Preparation Logs

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CHEMICAL RECEIVING LOGBOOK

LINE NO.	CHEMICAL	SOURCE	CATALOG NO.	LOT NO.	EXP. DATE	AMOUNT RECEIVED	TYPE CONT.	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO
1	Custom PAH Mix 2nd Source	Restek	566590	A084910	10/2017	1 mL ~~5 mg/mL~~ SSO 5/29/12	Amp.	2/08/12	702		
2	↓	↓	↓	↓	↓	↓	↓	↓	↓		
3	↓	↓	↓	↓	↓	↓	↓	↓	↓		
4	Hexane, reagent plus	Sigma-Aldrich	139386	53796JMV	02/28/15	100 mL	Glass Jar	02/29/12	789	02/29/12	789
5	Dodecane, reagent plus	↓	022104	MKBH9775V	↓	100 mL	↓	↓	↓	↓	↓
6	TO-15 Les std (2nd source 65 compds)	Scott	34436-PI	034PLU2SPC04	2/14/13	1300 Psig	cylinder	3/6/12	510	4/3/12	510
7	NONANE, reagent plus	Sigma-Aldrich	N29406	STBC4734V	03/19/15	100 mL	Glass Jar	03/19/12	702	03/19/12	702
8	PAH STD	Absolute	96876	031512	03/15/17	1 mL	Amp.	03/20/12	702	03/20/12	702
9	↓	↓	↓	↓	↓	↓	↓	↓	↓		
10	↓	↓	↓	↓	↓	↓	↓	↓	↓		
11	↓	↓	↓	↓	↓	↓	↓	↓	↓		
12	↓	↓ SSO 5/29/12	↓	↓	↓	↓	↓	↓	↓		
13	TO-17 IS & SUR.	Linde	~~Mat #~~ Mat # 24081372	Prod # 1211023	03/21/13	5.9 L	Cylinder	03/29/12	702	03/29/12	702
14	C_1-C_6 STD 100 PPM N_2	Praxair	NI BT100DNC AQ	E585 208344	03/23/14	2000 psi	Cylinder	04/06/12	789	04/06/12	789
15	FID STD 50ppm	Praxair	NI CD50MCHP1C AQ	109210107	04/11/15	2200	Cylinder	04/17/12	702		
16	APH STD CCV	Linde	AB 7875 (cylinder) 2012175 7 (PO#)	Product Lot # 1213599	04/12/13	1800 psi	cylinder	04/24/12	702	05/07/12	510
17	C_1-C_6 alkane STD in He	Supelco	332200	353 PLU13PC08L	4/16/14	240 psi	cylinder	04/25/12	702	03/18/13	658
18	C_1-C_6 alkane STD in N_2	Supelco	330300	312PLU13PC03L	12/15/13	240 psi	cylinder	05/01/12	757	06/12/12	789
19	C_1-C_6 alkane Std in N_2	Supelco	330300	312PLU13PC03L	12/15/13	240 psi	cylinder	05/01/12	757	09/19/12	835
20	C_1-C_6 alkene Std in N_2	Supelco	332300-U	19 9PLU13PC04L	12/15/13	240 psi	cylinder	05/01/12	757	~~09~~ 04/29/12	658
21	C_1-C_6 alkene Std in N_2	Supelco	332300-U	353PLU13PC07L	01/12/14	240 psi	cylinder	05/01/12	757	06/05/12	789
22	Gasoline Regular, unleaded	AccuStandard	GA-001-40X	211101238	10/20/21	1 mL	Amp.	05/08/12	702	05/08/12	702
23	unleaded Gasoline 87 Octane-MTBE	Absolute	51010	033012	03/30/17	1 mL	↓	↓	↓	05/08/12	702
24	Helium STD ~~CV~~ 06/16/13	Praxair	NI HE1MCAB	109212801	05/07/2015	2000 psig	cylinder	05/15/12	702	05/16/12	658
25	TO-15 IS/SUR STD	Linde	20121829	1215799	04/25/13	2000 psig	cylinder	05/15/12	702	06/23/12	702

Reviewed by: _____ on 7 / 5 / 12

09/01/95 Revision

CHEMICAL RECEIVING LOGBOOK

LINE NO.	CHEMICAL	SOURCE	CATALOG NO.	LOT NO.	EXP. DATE	AMOUNT RECEIVED	TYPE CONT.	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO
1	TO-15 Sim ZS/SUR	Scott	20122345	PLU0138810	10/22/13	2000 psig 30AL	Cylinder	10/30/12	702	11-30-12	510
2	C1-C6 Alkane STD in N_2	Scott ~~Se~~ FR 11/6/12	330300	128PLU23PC06L	06/05/14	240psig 14L	cylinder	11/06/12	754	12-18-12	844
3	C1-C6 ~~Alkane~~ Alkane STD in N_2	Scott	330300	128PLU23PC06L	06/05/14	240psig 14L	cylinder	11/06/12	754	01/30/13	658
4	C1-C6 Alkane ~~HA~~ AN 11/6/12 STD in N_2	Scott	330300	128PLU23PC06L	06/05/14	240 psig 14 L	cylinder	11/06/12	844	01/11/13	829 ~~844~~
5	4-Ethyltoluene	ALDRICH	PCODE 1001228507	001030MV	11/07/15	SS 11/07/12 ~~5~~ 59	Jar	11/07/12	702	11/07/12	702
6	TCD LCS	PRAXAIR	21903795	109231406	11/08/15	342psig 32A3	cylinder	12/05/12	754		
7	EPA 524.2 Revision 4 Mix.	Supelco	47427-U	LB94783	12/01/13	1 mL	Amp	12/11/12	702	01/02/13	702
8	↓	↓	↓	↓	↓	↓	↓	↓	↓	04/16/13	702
9	EPA 524.2 SS Revision Ketone Mix	Supelco	457428-U	LB 93167	07/01/14	1mL	Amp	12/11/12	702	01/02/13	702
10	↓	↓	↓	↓	↓	↓	↓	↓	↓	04/16/13	702
11	IS/SURR for TO-17	ULTRA	CUS-9349	CJ-4018	12-31-2014	1mL	Amp.	12/28/12	702	02/05/13	702
12	↓	↓	↓	↓	↓	↓	↓	↓	↓	05/09/13	702
13										08/14/13	702
14										09/17/13	658
15	Chloroprene TO-17	Supelco	861145	LB97751	2/2014	1mL	AMP.	01/22/13	702		
16	↓	↓	↓	↓	↓	↓	↓	↓	↓		
17	TCD LCS	2c 01/30/13 ~~Supelco~~ Scott	501743	352PLU23PC03L	12/17/2015	240 psig 14L	Cylinder	01/30/13	789	01/30/13	789
18	✓ He STD ~~(LCS)~~ SS 02/08/13	Air Liquid	MH 30020-P-302	20132803	02/01/16	2000 psig 30AL	cylinder	02/05/13	702	02/05/13	702
19	C1-C6 alkane std in N_2	Supelco	330300	128PLU23PC06L	05/25/14	240 Psig	Cylinder	02/20/13	658	03/08/13	754
20	APH STD CW	Linde	AB-8461 (Cyl #) 20132907 (PO#)	Production # 1248298	02/26/14	1800 psig	Cylinder	03/06/13	789	04/12/13	702
21	C1-C6 Alkene STD in He	Supelco	332200	272PLU23PC02L	02/21/16	240 psig 14L	Cylinder	03/06/13	789	06/21/13	868
22	Hexane STD LCS (TO-3M)	Scott	Item # T282-17	063PLU35PC20	03/05/16	240 PSIG	Cylinder	03/12/13	658		
23	↓ ↓	↓	↓	↓	↓	↓	↓	↓	658		
24	C1-C6 alkene STD in He	Supelco	332200	272PLU23PC02L	03/01/16	240 PSIG	Cylinder	03/13/13	658	05/14/13	754
25	C1-C6 Alkane STD in N_2	Supelco	330300	157PLU23PC03L	11/28/15	240 psig	cylinder	03/14/13	846	04/01/13	658

Reviewed by: _____ on ____/____/____

Calscience Environmental Laboratories, Inc.

Level IV Data Package

CLIENT NAME:	**CKY, Incorporated**
PROJECT NAME:	**Seal Beach NWS**
WORK ORDER:	**13-12-1615**

EPA TO-15 Full List (Air)

Initial Calibration Data

Sample Data

Quality Control Data

Continuing Calibration Data

Tuning Data

Run Logs

Air/Vapor Sampling Equipment Certification

Chemical Receiving Logs and Standards Preparation Logs

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Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Initial Calibration Data

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA TO-15

Work Order #: 13-12-1615
Instrument: GC/MS YY
ICAL Batch ID: D131227IC
ICAL D/T Analyzed: 12/27/2013 06:38

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20
Analyst: 460

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
Acetone	Avg Resp		0.200	0.232	0.215	0.206	0.205	0.264			0.220	0.00	11	0-30			PASS
Benzene	Avg Resp	0.810	0.789	0.875	0.812	0.768	0.731	0.653			0.777	0.00	9	0-30			PASS
Benzyl Chloride	Avg Resp		1.070	1.253	1.190	1.087	1.028	0.749			1.063	0.00	16	0-30			PASS
Bromodichloromethane	Avg Resp	0.615	0.596	0.672	0.622	0.585	0.546	0.481			0.588	0.00	10	0-30			PASS
Bromoform	Avg Resp	0.754	0.741	0.831	0.757	0.684	0.615	0.487			0.696	0.00	16	0-30			PASS
Bromomethane	Avg Resp	0.556	0.554	0.618	0.570	0.541	0.525	0.484			0.550	0.00	7	0-30			PASS
1,3-Butadiene	Avg Resp		0.318	0.379	0.350	0.329	0.322	0.290			0.331	0.00	9	0-30			PASS
2-Butanone	Avg Resp		2.234	2.481	2.224	2.091	1.941	1.710			2.113	0.00	13	0-30			PASS
Carbon Disulfide	Avg Resp	2.766	2.713	2.996	2.738	2.527	2.248	1.766			2.536	0.00	16	0-30			PASS
Carbon Tetrachloride	Avg Resp	0.644	0.619	0.673	0.620	0.584	0.539	0.474			0.593	0.00	11	0-30			PASS
Chlorobenzene	Avg Resp	1.034	0.994	1.062	0.976	0.918	0.862	0.749			0.942	0.00	12	0-30			PASS
Chloroethane	Avg Resp	0.202	0.227	0.267	0.251	0.237	0.230	0.214			0.233	0.00	9	0-30			PASS
Chloroform	Avg Resp	2.126	2.031	2.180	1.992	1.858	1.739	1.541			1.924	0.00	12	0-30			PASS
Chloromethane	Avg Resp	0.372	0.375	0.439	0.409	0.384	0.379	0.355			0.387	0.00	7	0-30			PASS
Cyclohexane	Avg Resp	0.457	0.467	0.519	0.476	0.442	0.401	0.335			0.443	0.00	13	0-30			PASS
Dibromochloromethane	Avg Resp	0.790	0.791	0.889	0.824	0.774	0.715	0.618			0.772	0.00	11	0-30			PASS
Dichlorodifluoromethane	Avg Resp	2.424	2.257	2.478	2.251	2.134	1.936	1.793			2.182	0.00	11	0-30			PASS
Diisopropyl Ether (DIPE)	Avg Resp	4.551	4.333	4.429	3.815	3.126	2.319				3.762	0.00	23	0-30			PASS
1,1-Dichloroethane	Avg Resp	1.914	1.839	2.022	1.864	1.750	1.643	1.457			1.784	0.00	11	0-30			PASS
1,1-Dichloroethene	Avg Resp	1.545	1.519	1.650	1.506	1.403	1.285	1.175			1.440	0.00	11	0-30			PASS
1,2-Dibromoethane	Avg Resp	0.675	0.677	0.745	0.691	0.647	0.608	0.530			0.653	0.00	10	0-30			PASS
Dichlorotetrafluoroethane	Avg Resp	1.627	1.533	1.685	1.515	1.374	1.213	0.952			1.414	0.00	18	0-30			PASS
1,2-Dichlorobenzene	Avg Resp	1.035	0.978	1.011	0.929	0.846	0.822	0.700			0.903	0.00	13	0-30			PASS
1,2-Dichloroethane	Avg Resp	1.377	1.364	1.482	1.360	1.278	1.207	1.108			1.311	0.00	9	0-30			PASS
1,2-Dichloropropane	Avg Resp	0.348	0.340	0.373	0.345	0.322	0.298	0.255			0.326	0.00	12	0-30			PASS
1,3-Dichlorobenzene	Avg Resp	1.081	0.996	1.034	0.935	0.847	0.788	0.636			0.902	0.00	17	0-30			PASS
1,4-Dichlorobenzene	Avg Resp	1.084	0.993	1.024	0.920	0.807	0.733	0.559			0.874	0.00	21	0-30			PASS
1,4-Dioxane	Avg Resp		0.170	0.202	0.195	0.182	0.161	0.133			0.174	0.00	15	0-30			PASS
c-1,3-Dichloropropene	Avg Resp	0.418	0.440	0.528	0.495	0.472	0.454	0.405			0.459	0.00	9	0-30			PASS
c-1,2-Dichloroethene	Avg Resp	0.963	0.966	1.111	1.030	0.983	0.946	0.867			0.981	0.00	8	0-30			PASS
t-1,2-Dichloroethene	Avg Resp	1.091	1.033	1.168	1.077	0.989	0.943	0.846			1.021	0.00	10	0-30			PASS
t-1,3-Dichloropropene	Avg Resp	0.320	0.364	0.449	0.428	0.410	0.403	0.368			0.392	0.00	11	0-30			PASS
Ethanol	Avg Resp		0.174	0.194	0.171	0.157	0.152	0.136			0.164	0.00	12	0-30			PASS
Ethyl Acetate	Avg Resp		0.289	0.348	0.318	0.277	0.224	0.157			0.269	0.00	26	0-30			PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	3.185	3.184	3.534	3.265	2.986	2.778	2.196			3.019	0.00	14	0-30			PASS
Ethylbenzene	Avg Resp	1.469	1.504	1.674	1.546	1.441	1.337	1.129			1.443	0.00	12	0-30			PASS
4-Ethyltoluene	Avg Resp	1.549	1.555	1.695	1.545	1.437	1.347	1.105			1.462	0.00	13	0-30			PASS
Heptane	Avg Resp		0.070	0.082	0.076	0.071	0.067	0.058			0.071	0.00	11	0-30			PASS
Hexachloro-1,3-Butadiene	Avg Resp		1.088	0.882	0.789	0.679	0.592				0.806	0.00	24	0-30			PASS
Hexane	Avg Resp	1.635	1.589	1.662	1.456	1.241	0.955	0.665			1.315	0.00	29	0-30			PASS
2-Hexanone	Avg Resp	0.452	0.502	0.545	0.515	0.480	0.429	0.344			0.467	0.00	14	0-30			PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp		2.272	2.613	2.441	2.293	2.247	1.898			2.294	0.00	10	0-30			PASS
Methylene Chloride	Avg Resp		0.967	0.918	0.835	0.786	0.751	0.686			0.824	0.00	13	0-30			PASS
4-Methyl-2-Pentanone	Avg Resp		0.277	0.300	0.284	0.264	0.246	0.208			0.263	0.00	12	0-30			PASS
Naphthalene	Avg Resp		1.804	1.674	1.620	1.469	1.379				1.589	0.00	11	0-30			PASS

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA TO-15

Work Order #: 13-12-1615
Instrument: GC/MS YY
ICAL Batch ID: D131227IC
ICAL D/T Analyzed: 12/27/2013 06:38

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20
Analyst: 460

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
o-Xylene	Avg Resp	1.237	1.222	1.323	1.204	1.109	0.999	0.797			1.127	0.00	16	0-30			PASS
p/m-Xylene	Avg Resp	1.284	1.279	1.377	1.244	1.112	0.931	0.672			1.128	0.00	22	0-30			PASS
Propene	Avg Resp		1.015	1.141	1.010	0.932	0.792	0.677			0.928	0.00	18	0-30			PASS
Styrene	Avg Resp	0.747	0.820	0.948	0.880	0.832	0.801	0.697			0.818	0.00	10	0-30			PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.690	0.711	0.823	0.781	0.732	0.711	0.587			0.719	0.00	10	0-30			PASS
Tert-Butyl Alcohol (TBA)	Avg Resp		1.944	2.096	1.974	1.800	1.658	1.316			1.798	0.00	16	0-30			PASS
Tetrachloroethene	Avg Resp	0.676	0.655	0.704	0.643	0.595	0.543	0.471			0.613	0.00	13	0-30			PASS
Tetrahydrofuran	Avg Resp		1.010	1.299	1.212	1.142	1.062	0.936			1.110	0.00	12	0-30			PASS
Toluene	Avg Resp	1.235	1.220	1.323	1.220	1.145	1.063	0.913			1.160	0.00	12	0-30			PASS
Trichloroethene	Avg Resp	0.382	0.379	0.416	0.381	0.352	0.322	0.269			0.357	0.00	14	0-30			PASS
Trichlorofluoromethane	Avg Resp	1.525	2.372	1.579	1.439	1.672	2.031	1.842			1.780	0.00	18	0-30			PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	2.068	1.950	2.107	1.904	1.743	1.536	1.230			1.791	0.00	18	0-30			PASS
1,1,1-Trichloroethane	Avg Resp	2.047	1.966	2.155	1.986	1.864	1.758	1.562			1.905	0.00	10	0-30			PASS
1,1,2-Trichloroethane	Avg Resp	0.311	0.304	0.335	0.310	0.291	0.274	0.239			0.295	0.00	10	0-30			PASS
2-Chlorotoluene	Avg Resp	1.245	1.221	1.346	1.231	1.152	1.084	0.913			1.170	0.00	12	0-30			PASS
1,2,3-Trichloropropane	Avg Resp	0.772	0.728	0.770	0.702	0.655	0.613	0.517			0.680	0.00	14	0-30			PASS
Acrolein	Avg Resp		0.154	0.194	0.182	0.176	0.172	0.167			0.174	0.00	8	0-30			PASS
Acrylonitrile	Avg Resp		0.805	0.795	0.846	0.833	0.789	0.745			0.802	0.00	4	0-30			PASS
Methyl Methacrylate	Avg Resp		0.272	0.318	0.298	0.283	0.275	0.243			0.281	0.00	9	0-30			PASS
Propane	Avg Resp			0.659	0.569	0.503	0.399	0.310			0.488	0.00	28	0-30			PASS
Butane	Avg Resp		0.661	0.709	0.641	0.586	0.538	0.449			0.598	0.00	16	0-30			PASS
Methanol	Avg Resp		0.111	0.115	0.109	0.102	0.102	0.093			0.105	0.00	8	0-30			PASS
2,2,4-Trimethyl Pentane	Avg Resp	1.664	1.594	1.697	1.519	1.351	1.119	0.847			1.398	0.00	23	0-30			PASS
Isobutane	Avg Resp		0.764	0.798	0.703	0.625	0.545	0.423			0.643	0.00	22	0-30			PASS
1,1,1,2-Tetrafluoroethane	Avg Resp	0.611	0.632	0.874	0.787	0.747	0.736	0.719			0.730	0.00	12	0-30			PASS
1,3,5-Trimethylbenzene	Avg Resp	1.398	1.364	1.460	1.341	1.236	1.160	0.950			1.273	0.00	14	0-30			PASS
1,1,2,2-Tetrachloroethane	Avg Resp	1.034	0.977	1.006	0.915	0.842	0.766	0.583			0.875	0.00	18	0-30			PASS
1,2,4-Trimethylbenzene	Avg Resp	1.459	1.402	1.475	1.332	1.174	1.022	0.763			1.233	0.00	21	0-30			PASS
1,2,4-Trichlorobenzene	Avg Resp	0.773	0.804	0.770	0.742	0.680	0.667				0.739	0.00	7	0-30			PASS
Vinyl Acetate	Avg Resp	2.835	2.943	3.311	3.039	2.842	2.588	2.201			2.823	0.00	12	0-30			PASS
Vinyl Chloride	Avg Resp	0.484	0.479	0.553	0.510	0.480	0.468	0.425			0.486	0.00	8	0-30			PASS
1,1-Difluoroethane	Avg Resp	1.165	1.096	1.249	1.125	1.098	0.983	0.977			1.099	0.00	9	0-30			PASS
Isopropanol	**Avg Resp**		1.855	0.891	0.847	1.663	1.663	1.523			1.407	**0.00**	**31**	**0-30**			**FAIL**

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA TO-15

Work Order #: 13-12-1615
Instrument: GC/MS YY
ICAL Batch ID: D131227IC
ICAL D/T Analyzed: 12/27/2013 06:38

Reviewed By: 794
D/T Reviewed: 01/06/2014 15:20
Analyst: 460

Data Files:

Level #	D/T Analyzed	Data File
1	12/27/2013 06:38	W:\GCMS_YY_DATA\2013\131227\DOD27DEC06.D\DOD27DEC06.rr
2	12/27/2013 05:52	W:\GCMS_YY_DATA\2013\131227\DOD27DEC05.D\DOD27DEC05.rr
3	12/27/2013 05:02	W:\GCMS_YY_DATA\2013\131227\DOD27DEC04.D\DOD27DEC04.rr
4	12/27/2013 04:17	W:\GCMS_YY_DATA\2013\131227\DOD27DEC03.D\DOD27DEC03.rr
5	12/27/2013 03:30	W:\GCMS_YY_DATA\2013\131227\DOD27DEC02.D\DOD27DEC02.rr
6	12/27/2013 08:23	W:\GCMS_YY_DATA\2013\131227\DOD27DEC08.D\DOD27DEC08.rr
7	12/27/2013 07:34	W:\GCMS_YY_DATA\2013\131227\DOD27DEC07.D\DOD27DEC07.rr

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

ICV WORK ORDER: 099-14-522-198-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131227IC
INITIAL DATE ANALYZED 12/27/13 6:38

ANALYST: 460
REVIEWED BY: 794
DATE REVIEWED: 1/6/14 15:20
ICV DATE ANALYZED 12/27/13 9:13

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Acetone	Avg Resp	0.00	0.220	0.218			1	0-30	PASS
Benzene	Avg Resp	0.00	0.777	0.825			-6	0-30	PASS
Benzyl Chloride	Avg Resp	0.00	1.063	1.285			-21	0-30	PASS
Bromodichloromethane	Avg Resp	0.00	0.588	0.629			-7	0-30	PASS
Bromoform	Avg Resp	0.00	0.696	0.733			-5	0-30	PASS
Bromomethane	Avg Resp	0.00	0.550	0.588			-7	0-30	PASS
1,3-Butadiene	Avg Resp	0.00	0.331	0.358			-8	0-30	PASS
2-Butanone	Avg Resp	0.00	2.113	2.253			-7	0-30	PASS
Carbon Disulfide	Avg Resp	0.00	2.536	2.846			-12	0-30	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.593	0.614			-4	0-30	PASS
Chlorobenzene	Avg Resp	0.00	0.942	0.975			-4	0-30	PASS
Chloroethane	Avg Resp	0.00	0.233	0.247			-6	0-30	PASS
Chloroform	Avg Resp	0.00	1.924	1.991			-3	0-30	PASS
Chloromethane	Avg Resp	0.00	0.387	0.415			-7	0-30	PASS
Cyclohexane	Avg Resp	0.00	0.443	0.463			-5	0-30	PASS
Dibromochloromethane	Avg Resp	0.00	0.772	0.812			-5	0-30	PASS
Dichlorodifluoromethane	Avg Resp	0.00	2.182	2.205			-1	0-30	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	3.762	3.133			17	0-30	PASS
1,1-Dichloroethane	Avg Resp	0.00	1.784	1.862			-4	0-30	PASS
1,1-Dichloroethene	Avg Resp	0.00	1.440	1.515			-5	0-30	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.653	0.684			-5	0-30	PASS
Dichlorotetrafluoroethane	Avg Resp	0.00	1.414	1.188			16	0-30	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	0.903	0.919			-2	0-30	PASS
1,2-Dichloroethane	Avg Resp	0.00	1.311	1.358			-4	0-30	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.326	0.345			-6	0-30	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	0.902	0.933			-3	0-30	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	0.874	0.900			-3	0-30	PASS
1,4-Dioxane	Avg Resp	0.00	0.174	0.169			3	0-30	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.459	0.516			-12	0-30	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.981	1.043			-6	0-30	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	1.021	1.026			0	0-30	PASS
t-1,3-Dichloropropene	Avg Resp	0.00	0.392	0.488			-24	0-30	PASS
Ethanol	Avg Resp	0.00	0.164	0.161			2	0-30	PASS
Ethyl Acetate	Avg Resp	0.00	0.269	0.296			-10	0-30	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	3.019	3.091			-2	0-30	PASS
Ethylbenzene	Avg Resp	0.00	1.443	1.534			-6	0-30	PASS
4-Ethyltoluene	Avg Resp	0.00	1.462	1.596			-9	0-30	PASS
Heptane	Avg Resp	0.00	0.071	0.075			-6	0-30	PASS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.806	0.699			13	0-30	PASS
Hexane	Avg Resp	0.00	1.315	1.324			-1	0-30	PASS
2-Hexanone	Avg Resp	0.00	0.467	0.496			-6	0-30	PASS

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

ICV WORK ORDER:	099-14-522-198-5985	ANALYST:	460
INSTRUMENT NAME:	GC/MS YY	REVIEWED BY:	794
INITIAL BATCH:	D131227IC	DATE REVIEWED:	1/6/14 15:20
INITIAL DATE ANALYZED	12/27/13 6:38	ICV DATE ANALYZED	12/27/13 9:13

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	2.294	2.516			-10	0-30	PASS
Methylene Chloride	Avg Resp	0.00	0.824	0.862			-5	0-30	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.263	0.287			-9	0-30	PASS
Naphthalene	Avg Resp	0.00	1.589	1.498			6	0-30	PASS
o-Xylene	Avg Resp	0.00	1.127	1.171			-4	0-30	PASS
p/m-Xylene	Avg Resp	0.00	1.128	1.174			-4	0-30	PASS
Propene	Avg Resp	0.00	0.928	0.953			-3	0-30	PASS
Styrene	Avg Resp	0.00	0.818	0.876			-7	0-30	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.719	0.758			-5	0-30	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.798	1.885			-5	0-30	PASS
Tetrachloroethene	Avg Resp	0.00	0.613	0.623			-2	0-30	PASS
Tetrahydrofuran	Avg Resp	0.00	1.110	1.188			-7	0-30	PASS
Toluene	Avg Resp	0.00	1.160	1.234			-6	0-30	PASS
Trichloroethene	Avg Resp	0.00	0.357	0.374			-5	0-30	PASS
Trichlorofluoromethane	Avg Resp	0.00	1.780	1.401			21	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	1.791	1.876			-5	0-30	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	1.905	1.933			-1	0-30	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.295	0.311			-5	0-30	PASS
2-Chlorotoluene	Avg Resp	0.00	1.170	1.172			0	0-30	PASS
1,2,3-Trichloropropane	Avg Resp	0.00	0.680	0.676			1	0-30	PASS
Acrolein	Avg Resp	0.00	0.174	0.184			-6	0-30	PASS
Acrylonitrile	Avg Resp	0.00	0.802	0.828			-3	0-30	PASS
Methyl Methacrylate	Avg Resp	0.00	0.281	0.303			-8	0-30	PASS
Propane	Avg Resp	0.00	0.488	0.460			6	0-30	PASS
Butane	Avg Resp	0.00	0.598	0.574			4	0-30	PASS
Methanol	Avg Resp	0.00	0.105	0.106			0	0-30	PASS
2,2,4-Trimethyl Pentane	Avg Resp	0.00	1.398	1.382			1	0-30	PASS
Isobutane	Avg Resp	0.00	0.643	0.619			4	0-30	PASS
1,1,1,2-Tetrafluoroethane	Avg Resp	0.00	0.730	0.634			13	0-30	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.273	1.340			-5	0-30	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.00	0.875	0.884			-1	0-30	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	1.233	1.273			-3	0-30	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	0.739	0.692			6	0-30	PASS
Vinyl Acetate	Avg Resp	0.00	2.823	2.764			2	0-30	PASS
Vinyl Chloride	Avg Resp	0.00	0.486	0.510			-5	0-30	PASS
1,1-Difluoroethane	Avg Resp	0.00	1.099	1.108			-1	0-30	PASS
Isopropanol	**Avg Resp**	**0.00**	**1.407**	**0.809**			**42**	0-30	**FAIL**

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

ICV WORK ORDER:	099-14-522-198-5985	ANALYST:	460
INSTRUMENT NAME:	GC/MS YY	REVIEWED BY:	794
INITIAL BATCH:	D131227IC	DATE REVIEWED:	1/6/14 15:20
INITIAL DATE ANALYZED	12/27/13 6:38	ICV DATE ANALYZED	12/27/13 9:13

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_YY_DATA\2013\131227\DOD27DEC09.D\DOD27DEC09.rr

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Response Factor Report GCMS YY

Method Path : C:\MSDCHEM\1\METHODS\
Method File : 131227DOD.M
Title :
Last Update : Fri Dec 27 18:10:47 2013
Response Via : Initial Calibration

Calibration Files
1 =DOD27DEC06.D 2 =DOD27DEC05.D 3 =DOD27DEC04.D 4 =DOD27DEC03.D 5 =DOD27DEC02.D 6 =DOD27DEC08.D
7 =DOD27DEC07.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD
1)	I	Bromochloromethane			----------ISTD----------						
2)		1,1,1,2-Tetrafluoroethane	0.611	0.632	0.874	0.787	0.747	0.736	0.719	0.730	12
3)		1,1-Difluoroethane	1.165	1.096	1.249	1.125	1.098	0.983	0.977	1.099	9
4)		Propene		1.015	1.141	1.010	0.932	0.792	0.677	0.928	18
5)		Propane			0.659	0.569	0.503	0.399	0.310	0.488	28
6)		Dichlorodifluoromethane	2.424	2.257	2.478	2.251	2.134	1.936	1.793	2.182	11
7)		Chloromethane	0.372	0.375	0.439	0.409	0.384	0.379	0.355	0.387	7
8)		Dichlorotetrafluoroethane	1.627	1.533	1.685	1.515	1.374	1.213	0.952	1.414	18
9)		Isobutane		0.764	0.798	0.703	0.625	0.545	0.423	0.643	22
10)		Methanol		0.111	0.115	0.109	0.102	0.102	0.093	0.105	8
11)		Vinyl Chloride	0.484	0.479	0.553	0.510	0.480	0.468	0.425	0.486	8
12)		1,3-Butadiene		0.318	0.379	0.350	0.329	0.322	0.290	0.331	9
13)		Butane		0.661	0.709	0.641	0.586	0.538	0.449	0.598	16
14)		Bromomethane	0.556	0.554	0.618	0.570	0.541	0.525	0.484	0.550	7
15)		Chloroethane	0.202	0.227	0.267	0.251	0.237	0.230	0.214	0.233	9
16)		Ethanol		0.174	0.194	0.171	0.157	0.152	0.136	0.164	12
17)		Acrolein		0.154	0.194	0.182	0.176	0.172	0.167	0.174	8
18)		Acetone		0.200	0.232	0.215	0.206	0.205	0.264	0.220	11
19)		Trichlorofluoromethane	1.525	2.372	1.579	1.439	1.672	2.031	1.842	1.780	18
20)		Isopropanol		1.855	0.891	0.847	1.663	1.663	1.523	1.407	31
21)		Acrylonitrile		0.805	0.795	0.846	0.833	0.789	0.745	0.802	4
22)		1,1-Dichloroethene	1.545	1.519	1.650	1.506	1.403	1.285	1.175	1.440	11
23)		Methylene Chloride		0.967	0.918	0.835	0.786	0.751	0.686	0.824	13
24)		Tert-Butyl Alcohol (TBA)		1.944	2.096	1.974	1.800	1.658	1.316	1.798	16
25)		1,1,2-Trichloro-1,2,2-Trif...	2.068	1.950	2.107	1.904	1.743	1.536	1.230	1.791	18
26)		Carbon Disulfide	2.766	2.713	2.996	2.738	2.527	2.248	1.766	2.536	16
27)		t-1,2-Dichloroethene	1.091	1.033	1.168	1.077	0.989	0.943	0.846	1.021	10
28)		1,1-Dichloroethane	1.914	1.839	2.022	1.864	1.750	1.643	1.457	1.784	11
29)		Methyl-t-Butyl Ether (MTBE)		2.272	2.613	2.441	2.293	2.247	1.898	2.294	10
30)		Vinyl Acetate	2.835	2.943	3.311	3.039	2.842	2.588	2.201	2.823	12
31)		2-Butanone		2.234	2.481	2.224	2.091	1.941	1.710	2.113	13
32)		c-1,2-Dichloroethene	0.963	0.966	1.111	1.030	0.983	0.946	0.867	0.981	8
33)		Hexane	1.635	1.589	1.662	1.456	1.241	0.955	0.665	1.315	29
34)		Diisopropyl Ether (DIPE)	4.551	4.333	4.429	3.815	3.126	2.319		3.762	23
35)		Ethyl Acetate		0.289	0.348	0.318	0.277	0.224	0.157	0.269	26
36)		Chloroform	2.126	2.031	2.180	1.992	1.858	1.739	1.541	1.924	12
37)		Tetrahydrofuran		1.010	1.299	1.212	1.142	1.062	0.936	1.110	12
38)		Ethyl-t-Butyl Ether (ETBE)	3.185	3.184	3.534	3.265	2.986	2.778	2.196	3.019	14
39)	S	1,2-Dichloroethane-d4	1.254	1.244	1.238	1.229	1.222	1.213	1.222	1.232	1
40)		1,2-Dichloroethane	1.377	1.364	1.482	1.360	1.278	1.207	1.108	1.311	9
41)		1,1,1-Trichloroethane	2.047	1.966	2.155	1.986	1.864	1.758	1.562	1.905	10
42)	I	1,4-Difluorobenzene			----------ISTD----------						

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Response Factor Report GCMS YY

Method Path : C:\MSDCHEM\1\METHODS\
Method File : 131227DOD.M
Title :

43)		Benzene	0.810	0.789	0.875	0.812	0.768	0.731	0.653	0.777	9
44)		Carbon Tetrachloride	0.644	0.619	0.673	0.620	0.584	0.539	0.474	0.593	11
45)		Cyclohexane	0.457	0.467	0.519	0.476	0.442	0.401	0.335	0.443	13
46)		Tert-Amyl-Methyl Ether (TAME)	0.690	0.711	0.823	0.781	0.732	0.711	0.587	0.719	10
47)		1,2-Dichloropropane	0.348	0.340	0.373	0.345	0.322	0.298	0.255	0.326	12
48)		Bromodichloromethane	0.615	0.596	0.672	0.622	0.585	0.546	0.481	0.588	10
49)		Trichloroethene	0.382	0.379	0.416	0.381	0.352	0.322	0.269	0.357	14
50)		2,2,4-Trimethyl Pentane	1.664	1.594	1.697	1.519	1.351	1.119	0.847	1.398	23
51)		1,4-Dioxane		0.170	0.202	0.195	0.182	0.161	0.133	0.174	15
52)		Methyl Methacrylate		0.272	0.318	0.298	0.283	0.275	0.243	0.281	9
53)		Heptane		0.070	0.082	0.076	0.071	0.067	0.058	0.071	11
54)		c-1,3-Dichloropropene	0.418	0.440	0.528	0.495	0.472	0.454	0.405	0.459	9
55)		4-Methyl-2-Pentanone		0.277	0.300	0.284	0.264	0.246	0.208	0.263	12
56)		t-1,3-Dichloropropene	0.320	0.364	0.449	0.428	0.410	0.403	0.368	0.392	11
57)		1,1,2-Trichloroethane	0.311	0.304	0.335	0.310	0.291	0.274	0.239	0.295	10
58)	S	Toluene-d8	0.948	0.949	0.948	0.948	0.944	0.948	0.949	0.948	0
59)	I	Chlorobenzene-d5				----------ISTD----------					
60)		Toluene	1.235	1.220	1.323	1.220	1.145	1.063	0.913	1.160	12
61)		2-Hexanone	0.452	0.502	0.545	0.515	0.480	0.429	0.344	0.467	14
62)		Dibromochloromethane	0.790	0.791	0.889	0.824	0.774	0.715	0.618	0.772	11
63)		1,2-Dibromoethane	0.675	0.677	0.745	0.691	0.647	0.608	0.530	0.653	10
64)		Tetrachloroethene	0.676	0.655	0.704	0.643	0.595	0.543	0.471	0.613	13
65)		Chlorobenzene	1.034	0.994	1.062	0.976	0.918	0.862	0.749	0.942	12
66)		Ethylbenzene	1.469	1.504	1.674	1.546	1.441	1.337	1.129	1.443	12
67)		p/m-Xylene	1.284	1.279	1.377	1.244	1.112	0.931	0.672	1.128	22
68)		Bromoform	0.754	0.741	0.831	0.757	0.684	0.615	0.487	0.696	16
69)		Styrene	0.747	0.820	0.948	0.880	0.832	0.801	0.697	0.818	10
70)		1,1,2,2-Tetrachloroethane	1.034	0.977	1.006	0.915	0.842	0.766	0.583	0.875	18
71)		o-Xylene	1.237	1.222	1.323	1.204	1.109	0.999	0.797	1.127	16
72)		1,2,3-Trichloropropane	0.772	0.728	0.770	0.702	0.655	0.613	0.517	0.680	14
73)	S	1,4-Bromofluorobenzene	0.672	0.654	0.667	0.659	0.656	0.662	0.666	0.662	1
74)		Isopropylbenzene	1.721	1.688	1.851	1.689	1.558	1.408	1.158	1.582	15
75)		2-Chlorotoluene	1.245	1.221	1.346	1.231	1.152	1.084	0.913	1.170	12
76)		n-Propylbenzene	2.138	2.082	2.268	2.051	1.893	1.722	1.382	1.934	16
77)		4-Ethyltoluene	1.549	1.555	1.695	1.545	1.437	1.347	1.105	1.462	13
78)		1,3,5-Trimethylbenzene	1.398	1.364	1.460	1.341	1.236	1.160	0.950	1.273	14
79)		1,2,4-Trimethylbenzene	1.459	1.402	1.475	1.332	1.174	1.022	0.763	1.233	21
80)		Benzyl Chloride		1.070	1.253	1.190	1.087	1.028	0.749	1.063	16
81)		1,3-Dichlorobenzene	1.081	0.996	1.034	0.935	0.847	0.788	0.636	0.902	17
82)		1,4-Dichlorobenzene	1.084	0.993	1.024	0.920	0.807	0.733	0.559	0.874	21
83)		1,2-Dichlorobenzene	1.035	0.978	1.011	0.929	0.846	0.822	0.700	0.903	13
84)		1,2,4-Trichlorobenzene	0.773	0.804	0.770	0.742	0.680	0.667		0.739	7
85)		Naphthalene		1.804	1.674	1.620	1.469	1.379		1.589	11
86)		Hexachloro-1,3-Butadiene		1.088	0.882	0.789	0.679	0.592		0.806	24

(#) = Out of Range

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Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC09.D Vial: 2
Acq On : 27 Dec 2013 9:13 am Operator: 846
Sample : ICV/LCS 25PPBV A122313E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:11:28 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0	95	0.00
2		1,1,1,2-Tetrafluoroethane	0.730	0.634	13	81	0.00
3		1,1-Difluoroethane	1.099	1.108	-1	96	0.00
4		Propene	0.928	0.953	-3	97	0.00
5		Propane	0.488	0.460	6	87	0.00
6		Dichlorodifluoromethane	2.182	2.205	-1	98	0.00
7		Chloromethane	0.387	0.415	-7	103	0.00
8		Dichlorotetrafluoroethane	1.414	1.188	16	82	0.00
9		Isobutane	0.643	0.619	4	94	0.00
10		Methanol	0.105	0.106	-1	99	0.00
11		Vinyl Chloride	0.486	0.510	-5	101	0.00
12		1,3-Butadiene	0.331	0.358	-8	104	0.00
13		Butane	0.598	0.574	4	93	0.00
14		Bromomethane	0.550	0.588	-7	104	0.00
15		Chloroethane	0.233	0.247	-6	99	0.00
16		Ethanol	0.164	0.161	2	98	0.00
17		Acrolein	0.174	0.184	-6	100	0.00
18		Acetone	0.220	0.218	1	101	0.00
19		Trichlorofluoromethane	1.780	1.401	21	80	0.00
20		Isopropanol	1.407	0.809	43#	46#	0.00
21		Acrylonitrile	0.802	0.828	-3	95	0.00
22		1,1-Dichloroethene	1.440	1.515	-5	103	0.00
23		Methylene Chloride	0.824	0.862	-5	105	0.00
24		Tert-Butyl Alcohol (TBA)	1.798	1.885	-5	100	0.00
25		1,1,2-Trichloro-1,2,2-Trifl	1.791	1.876	-5	103	0.00
26		Carbon Disulfide	2.536	2.846	-12	107	0.00
27		t-1,2-Dichloroethene	1.021	1.026	0	99	0.00
28		1,1-Dichloroethane	1.784	1.862	-4	101	0.00
29		Methyl-t-Butyl Ether (MTBE)	2.294	2.516	-10	105	0.00
30		Vinyl Acetate	2.823	2.764	2	93	0.00
31		2-Butanone	2.113	2.253	-7	103	0.00
32		c-1,2-Dichloroethene	0.981	1.043	-6	101	0.00
33		Hexane	1.315	1.324	-1	102	0.00
34		Diisopropyl Ether (DIPE)	3.762	3.133	17	96	0.00
35		Ethyl Acetate	0.269	0.296	-10	102	0.00
36		Chloroform	1.924	1.991	-3	102	0.00
37		Tetrahydrofuran	1.110	1.188	-7	99	0.00
38		Ethyl-t-Butyl Ether (ETBE)	3.019	3.091	-2	99	0.00
39	S	1,2-Dichloroethane-d4	1.232	1.221	1	95	0.00
40		1,2-Dichloroethane	1.311	1.358	-4	101	0.00
41		1,1,1-Trichloroethane	1.905	1.933	-1	99	0.00
42	I	1,4-Difluorobenzene	1.000	1.000	0	96	0.00
43		Benzene	0.777	0.825	-6	103	0.00
44		Carbon Tetrachloride	0.593	0.614	-4	101	0.00
45		Cyclohexane	0.443	0.463	-5	101	0.00
46		Tert-Amyl-Methyl Ether (TAM	0.719	0.758	-5	100	0.00
47		1,2-Dichloropropane	0.326	0.345	-6	103	0.00
48		Bromodichloromethane	0.588	0.629	-7	104	0.00
49		Trichloroethene	0.357	0.374	-5	102	0.00
50		2,2,4-Trimethyl Pentane	1.398	1.382	1	98	0.00
51		1,4-Dioxane	0.174	0.169	3	90	0.00

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Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC09.D Vial: 2
Acq On : 27 Dec 2013 9:13 am Operator: 846
Sample : ICV/LCS 25PPBV A122313E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:11:28 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52		Methyl Methacrylate	0.281	0.303	-8	103	0.00
53		Heptane	0.071	0.075	-6	102	0.00
54		c-1,3-Dichloropropene	0.459	0.516	-12	105	0.00
55		4-Methyl-2-Pentanone	0.263	0.287	-9	105	0.00
56		t-1,3-Dichloropropene	0.392	0.488	-24	114	0.00
57		1,1,2-Trichloroethane	0.295	0.311	-5	103	0.00
58	S	Toluene-d8	0.948	0.949	0	97	0.00
59	I	Chlorobenzene-d5	1.000	1.000	0	98	0.00
60		Toluene	1.160	1.234	-6	105	0.00
61		2-Hexanone	0.467	0.496	-6	101	0.00
62		Dibromochloromethane	0.772	0.812	-5	103	0.00
63		1,2-Dibromoethane	0.653	0.684	-5	103	0.00
64		Tetrachloroethene	0.613	0.623	-2	102	0.00
65		Chlorobenzene	0.942	0.975	-4	104	0.00
66		Ethylbenzene	1.443	1.534	-6	104	0.00
67		p/m-Xylene	1.128	1.174	-4	103	0.00
68		Bromoform	0.696	0.733	-5	105	0.00
69		Styrene	0.818	0.876	-7	103	0.00
70		1,1,2,2-Tetrachloroethane	0.875	0.884	-1	103	0.00
71		o-Xylene	1.127	1.171	-4	103	0.00
72		1,2,3-Trichloropropane	0.680	0.676	1	101	0.00
73	S	1,4-Bromofluorobenzene	0.662	0.668	-1	100	0.00
74		Isopropylbenzene	1.582	1.554	2	98	0.00
75		2-Chlorotoluene	1.170	1.172	0	100	0.00
76		n-Propylbenzene	1.934	1.954	-1	101	0.00
77		4-Ethyltoluene	1.462	1.596	-9	109	0.00
78		1,3,5-Trimethylbenzene	1.273	1.340	-5	106	0.00
79		1,2,4-Trimethylbenzene	1.233	1.273	-3	106	0.00
80		Benzyl Chloride	1.063	1.285	-21	116	0.00
81		1,3-Dichlorobenzene	0.902	0.933	-3	108	0.00
82		1,4-Dichlorobenzene	0.874	0.900	-3	109	0.00
83		1,2-Dichlorobenzene	0.903	0.919	-2	106	0.00
84		1,2,4-Trichlorobenzene	0.739	0.692	6	100	0.00
85		Naphthalene	1.589	1.498	6	100	0.00
86		Hexachloro-1,3-Butadiene	0.806	0.699	13	101	0.00

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

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC06.D Vial: 4
Acq On : 27 Dec 2013 6:38 am Operator: 846
Sample : ICAL 0.5PPBV A122613B Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:06:31 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.427	130	542995	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.106	114	1919722	25.00	ppbv	-0.01
59) Chlorobenzene-d5	19.215	117	1555588	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.431	65	680748	25.44	ppbv	0.00
Spiked Amount 25.000			Recovery	=	101.76%	
58) Toluene-d8	15.931	98	1820273	25.01	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.04%	
73) 1,4-Bromofluorobenzene	22.238	95	1045965	25.38	ppbv	0.00
Spiked Amount 25.000			Recovery	=	101.52%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.045	69	6640	0.42	ppbv	95
3) 1,1-Difluoroethane	4.119	51	12649	0.53	ppbv	96
4) Propene	4.204	41	11879	0.59	ppbv	96
5) Propane	4.227	29	16696	1.58	ppbv	98
6) Dichlorodifluoromethane	4.278	85	26326	0.56	ppbv	99
7) Chloromethane	4.436	50	4039	0.48	ppbv	96
8) Dichlorotetrafluoroethane	4.538	85	17673	0.58	ppbv	99
9) Isobutane	4.561	43	18457	1.32	ppbv	97
10) Methanol	4.652	31	3794	1.66	ppbv	86
11) Vinyl Chloride	4.657	62	5260	0.50	ppbv	100
12) 1,3-Butadiene	4.799	54	3230	0.45	ppbv	96
13) Butane	4.856	43	15688	1.21	ppbv	98
14) Bromomethane	5.077	94	6038	0.51	ppbv #	90
15) Chloroethane	5.264	64	2199	0.44	ppbv #	43
16) Ethanol	5.411	45	9125	2.56	ppbv	88
17) Acrolein	5.763	56	1205	0.32	ppbv	99
18) Acetone	5.899	58	1851	0.39	ppbv #	52
19) Trichlorofluoromethane	6.069	101	16556	0.43	ppbv	99
20) Isopropanol	6.143	45	13461	0.44	ppbv	88
21) Acrylonitrile	6.387	53	4923	0.28	ppbv	96
22) 1,1-Dichloroethene	6.750	61	16774	0.54	ppbv	97
23) Methylene Chloride	6.874	84	13354	0.75	ppbv	95
24) Tert-Butyl Alcohol (TBA)	6.784	59	43311	1.11	ppbv	92
25) 1,1,2-Trichloro-1,2,2-...	7.192	101	22463	0.58	ppbv	98
26) Carbon Disulfide	7.220	76	30038	0.55	ppbv	79
27) t-1,2-Dichloroethene	7.957	96	11848	0.53	ppbv	94
28) 1,1-Dichloroethane	8.194	63	20791	0.54	ppbv	99
29) Methyl-t-Butyl Ether (...	8.286	73	24514	0.49	ppbv	90
30) Vinyl Acetate	8.395	43	30792	0.50	ppbv	98
31) 2-Butanone	8.706	43	23498	0.51	ppbv	97
32) c-1,2-Dichloroethene	9.225	96	10455	0.49	ppbv	97
33) Hexane	9.541	57	17751	0.62	ppbv	93
34) Diisopropyl Ether (DIPE)	9.530	45	49419	0.60	ppbv #	77
35) Ethyl Acetate	9.552	61	2272	0.39	ppbv	61
36) Chloroform	9.601	83	23093	0.55	ppbv	99
37) Tetrahydrofuran	10.169	42	9284	0.39	ppbv	93
38) Ethyl-t-Butyl Ether (E...	10.240	59	34593	0.53	ppbv	98
40) 1,2-Dichloroethane	10.578	62	14955	0.53	ppbv	97
41) 1,1,1-Trichloroethane	10.944	97	22225	0.54	ppbv	98
43) Benzene	11.582	78	31083	0.52	ppbv	97
44) Carbon Tetrachloride	11.800	117	24718	0.54	ppbv	99
45) Cyclohexane	11.991	56	17563	0.52	ppbv	92

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC06.D Vial: 4
Acq On : 27 Dec 2013 6:38 am Operator: 846
Sample : ICAL 0.5PPBV A122613B Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:06:31 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

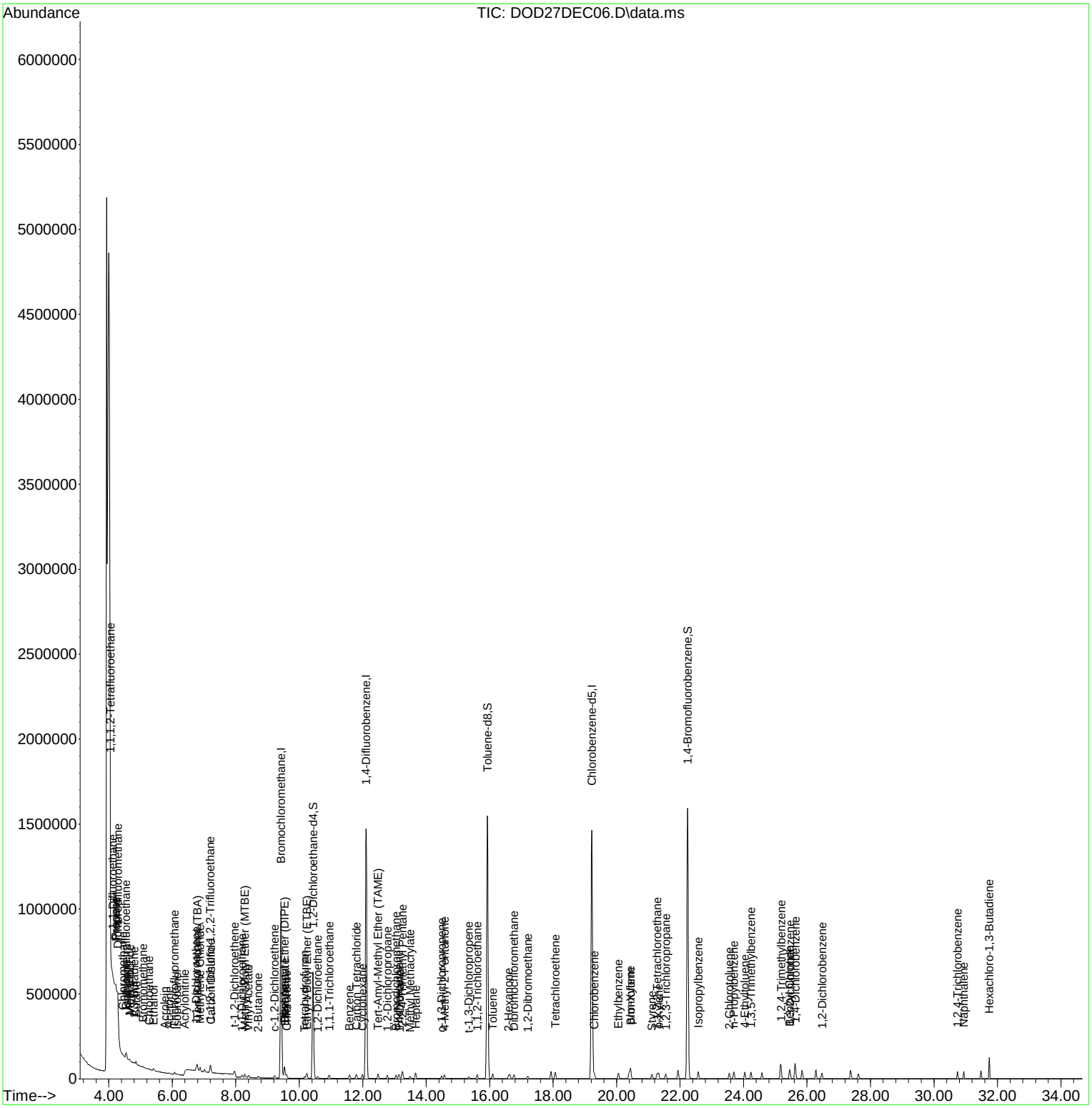
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.482	73	26489	0.48	ppbv		89
47) 1,2-Dichloropropane	12.771	63	13346	0.53	ppbv		96
48) Bromodichloromethane	13.050	83	23604	0.52	ppbv		99
49) Trichloroethene	13.137	95	14660	0.53	ppbv		98
50) 2,2,4-Trimethyl Pentane	13.252	57	63871	0.59	ppbv		98
51) 1,4-Dioxane	13.170	88	5426	0.41	ppbv	#	78
52) Methyl Methacrylate	13.486	69	9563	0.44	ppbv		88
53) Heptane	13.666	100	2285	0.42	ppbv	#	75
54) c-1,3-Dichloropropene	14.485	75	16044	0.46	ppbv		96
55) 4-Methyl-2-Pentanone	14.577	58	9751	0.48	ppbv		93
56) t-1,3-Dichloropropene	15.341	75	12271	0.41	ppbv		93
57) 1,1,2-Trichloroethane	15.603	83	11944	0.53	ppbv		96
60) Toluene	16.094	91	38412	0.53	ppbv		99
61) 2-Hexanone	16.591	58	14051	0.48	ppbv	#	83
62) Dibromochloromethane	16.765	129	24576	0.51	ppbv		99
63) 1,2-Dibromoethane	17.197	107	20999	0.52	ppbv		98
64) Tetrachloroethene	18.070	166	21033	0.55	ppbv		98
65) Chlorobenzene	19.297	112	32174	0.55	ppbv		98
66) Ethylbenzene	20.056	91	45688	0.51	ppbv		99
67) p/m-Xylene	20.432	91	79877	1.14	ppbv		97
68) Bromoform	20.443	173	23471	0.54	ppbv		99
69) Styrene	21.109	104	23225	0.46	ppbv		98
70) 1,1,2,2-Tetrachloroethane	21.278	83	32173	0.59	ppbv		97
71) o-Xylene	21.322	91	38478	0.55	ppbv		98
72) 1,2,3-Trichloropropane	21.551	75	24026	0.57	ppbv		98
74) Isopropylbenzene	22.571	105	53549	0.54	ppbv		99
75) 2-Chlorotoluene	23.548	91	38720	0.53	ppbv		100
76) n-Propylbenzene	23.695	91	66523	0.55	ppbv		99
77) 4-Ethyltoluene	24.039	105	48199	0.53	ppbv		99
78) 1,3,5-Trimethylbenzene	24.230	105	43504	0.55	ppbv		99
79) 1,2,4-Trimethylbenzene	25.179	105	45395	0.59	ppbv		97
80) Benzyl Chloride	25.447	91	31954	0.48	ppbv		97
81) 1,3-Dichlorobenzene	25.463	146	33618	0.60	ppbv		98
82) 1,4-Dichlorobenzene	25.638	146	33729	0.62	ppbv		97
83) 1,2-Dichlorobenzene	26.472	146	32196	0.57	ppbv		97
84) 1,2,4-Trichlorobenzene	30.739	180	24034	0.52	ppbv		99
85) Naphthalene	30.936	128	51430	0.52	ppbv		100
86) Hexachloro-1,3-Butadiene	31.743	225	34789	0.69	ppbv		99

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

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC06.D Vial: 4
Acq On : 27 Dec 2013 6:38 am Operator: 846
Sample : ICAL 0.5PPBV A122613B Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:06:31 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC05.D Vial: 4
Acq On : 27 Dec 2013 5:52 am Operator: 846
Sample : ICAL 1.25PPBV A122613B Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:05:07 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.427	130	540995	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.111	114	1915058	25.00	ppbv	0.00
59) Chlorobenzene-d5	19.215	117	1536551	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.431	65	673073	25.25	ppbv	0.00
Spiked Amount 25.000			Recovery	=	101.00%	
58) Toluene-d8	15.931	98	1816597	25.02	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.08%	
73) 1,4-Bromofluorobenzene	22.238	95	1005196	24.69	ppbv	0.00
Spiked Amount 25.000			Recovery	=	98.76%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.045	69	17098	1.08	ppbv	98
3) 1,1-Difluoroethane	4.119	51	29634	1.25	ppbv	100
4) Propene	4.209	41	27459	1.37	ppbv	96
5) Propane	4.226	29	34768	3.29	ppbv	98
6) Dichlorodifluoromethane	4.277	85	61043	1.29	ppbv	100
7) Chloromethane	4.436	50	10151	1.21	ppbv	94
8) Dichlorotetrafluoroethane	4.544	85	41476	1.36	ppbv	97
9) Isobutane	4.567	43	41352	2.97	ppbv	99
10) Methanol	4.652	31	9022	3.97	ppbv	93
11) Vinyl Chloride	4.663	62	12959	1.23	ppbv	99
12) 1,3-Butadiene	4.810	54	8592	1.20	ppbv	98
13) Butane	4.861	43	35779	2.77	ppbv	98
14) Bromomethane	5.088	94	14985	1.26	ppbv	99
15) Chloroethane	5.275	64	6142	1.22	ppbv	99
16) Ethanol	5.400	45	18779	5.29	ppbv	97
17) Acrolein	5.757	56	4173	1.11	ppbv	94
18) Acetone	5.893	58	5416	1.14	ppbv	96
19) Trichlorofluoromethane	6.075	101	64156	1.67	ppbv	100
20) Isopropanol	6.137	45	50184	1.65	ppbv	97
21) Acrylonitrile	6.381	53	21786	1.26	ppbv	98
22) 1,1-Dichloroethene	6.755	61	41087	1.32	ppbv	98
23) Methylene Chloride	6.874	84	26153	1.47	ppbv	94
24) Tert-Butyl Alcohol (TBA)	6.778	59	105187	2.70	ppbv	94
25) 1,1,2-Trichloro-1,2,2-...	7.197	101	52741	1.36	ppbv	99
26) Carbon Disulfide	7.220	76	73378	1.34	ppbv	94
27) t-1,2-Dichloroethene	7.957	96	27944	1.26	ppbv	97
28) 1,1-Dichloroethane	8.193	63	49754	1.29	ppbv	99
29) Methyl-t-Butyl Ether (...	8.281	73	61458	1.24	ppbv	93
30) Vinyl Acetate	8.390	43	79619	1.30	ppbv	98
31) 2-Butanone	8.690	43	60418	1.33	ppbv	100
32) c-1,2-Dichloroethene	9.225	96	26122	1.23	ppbv	98
33) Hexane	9.541	57	42987	1.51	ppbv #	91
34) Diisopropyl Ether (DIPE)	9.525	45	117201	1.44	ppbv #	81
35) Ethyl Acetate	9.536	61	7805	1.34	ppbv	60
36) Chloroform	9.601	83	54938	1.32	ppbv	99
37) Tetrahydrofuran	10.152	42	27315	1.14	ppbv	95
38) Ethyl-t-Butyl Ether (E...	10.234	59	86134	1.32	ppbv	97
40) 1,2-Dichloroethane	10.578	62	36894	1.30	ppbv	98
41) 1,1,1-Trichloroethane	10.943	97	53192	1.29	ppbv	98
43) Benzene	11.582	78	75519	1.27	ppbv	97
44) Carbon Tetrachloride	11.800	117	59240	1.30	ppbv	99
45) Cyclohexane	11.991	56	44760	1.32	ppbv	94

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC05.D Vial: 4
Acq On : 27 Dec 2013 5:52 am Operator: 846
Sample : ICAL 1.25PPBV A122613B Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:05:07 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

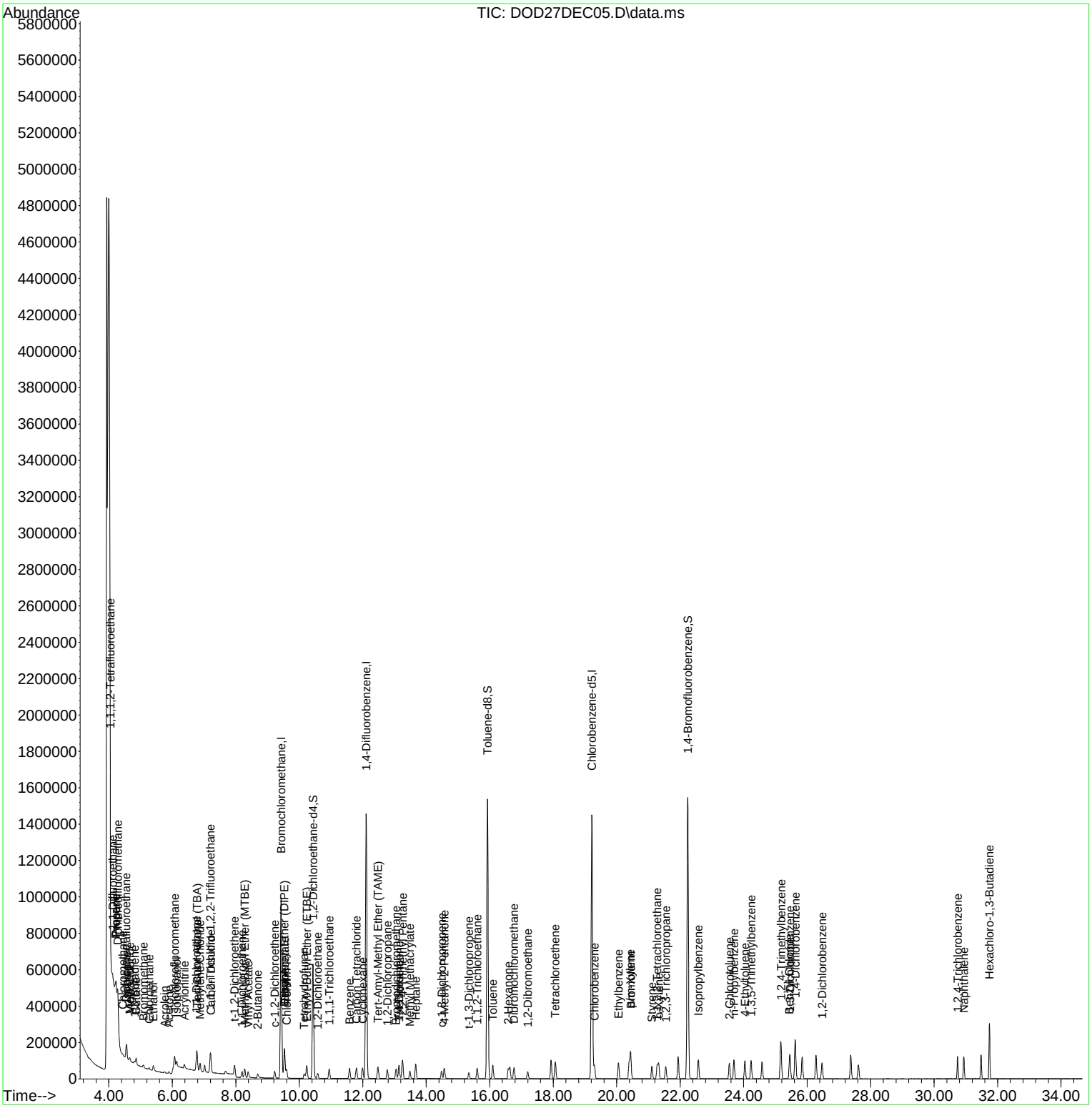
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.477	73	68107	1.24	ppbv		92
47) 1,2-Dichloropropane	12.771	63	32547	1.30	ppbv		96
48) Bromodichloromethane	13.050	83	57050	1.27	ppbv		98
49) Trichloroethene	13.137	95	36334	1.33	ppbv		99
50) 2,2,4-Trimethyl Pentane	13.252	57	152594	1.42	ppbv		99
51) 1,4-Dioxane	13.148	88	16273	1.22	ppbv		91
52) Methyl Methacrylate	13.481	69	25999	1.21	ppbv		92
53) Heptane	13.666	100	6714	1.24	ppbv	#	85
54) c-1,3-Dichloropropene	14.485	75	42175	1.20	ppbv		96
55) 4-Methyl-2-Pentanone	14.567	58	26477	1.31	ppbv	#	87
56) t-1,3-Dichloropropene	15.341	75	34888	1.16	ppbv		96
57) 1,1,2-Trichloroethane	15.603	83	29096	1.29	ppbv		98
60) Toluene	16.094	91	93729	1.31	ppbv		100
61) 2-Hexanone	16.585	58	38559	1.34	ppbv		88
62) Dibromochloromethane	16.765	129	60774	1.28	ppbv		98
63) 1,2-Dibromoethane	17.196	107	52001	1.29	ppbv		100
64) Tetrachloroethene	18.064	166	50337	1.34	ppbv		99
65) Chlorobenzene	19.297	112	76388	1.32	ppbv		98
66) Ethylbenzene	20.056	91	115548	1.30	ppbv		100
67) p/m-Xylene	20.432	91	196578	2.83	ppbv		97
68) Bromoform	20.443	173	56898	1.33	ppbv		99
69) Styrene	21.109	104	62981	1.25	ppbv		99
70) 1,1,2,2-Tetrachloroethane	21.272	83	75060	1.40	ppbv		99
71) o-Xylene	21.321	91	93899	1.36	ppbv		98
72) 1,2,3-Trichloropropane	21.545	75	55894	1.34	ppbv		100
74) Isopropylbenzene	22.571	105	129669	1.33	ppbv		99
75) 2-Chlorotoluene	23.548	91	93773	1.30	ppbv		100
76) n-Propylbenzene	23.695	91	159980	1.35	ppbv		98
77) 4-Ethyltoluene	24.039	105	119484	1.33	ppbv		99
78) 1,3,5-Trimethylbenzene	24.235	105	104809	1.34	ppbv		100
79) 1,2,4-Trimethylbenzene	25.179	105	107745	1.42	ppbv		96
80) Benzyl Chloride	25.441	91	82236	1.26	ppbv		99
81) 1,3-Dichlorobenzene	25.463	146	76558	1.38	ppbv		99
82) 1,4-Dichlorobenzene	25.632	146	76272	1.42	ppbv		99
83) 1,2-Dichlorobenzene	26.467	146	75168	1.35	ppbv		99
84) 1,2,4-Trichlorobenzene	30.739	180	61786	1.36	ppbv		98
85) Naphthalene	30.936	128	138605	1.42	ppbv		99
86) Hexachloro-1,3-Butadiene	31.743	225	83572	1.69	ppbv		99

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

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC05.D Vial: 4
Acq On : 27 Dec 2013 5:52 am Operator: 846
Sample : ICAL 1.25PPBV A122613B Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:05:07 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC04.D Vial: 2
Acq On : 27 Dec 2013 5:02 am Operator: 846
Sample : ICAL 6.25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:05:28 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.427	130	538385	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.106	114	1900978	25.00	ppbv	-0.01
59) Chlorobenzene-d5	19.221	117	1532860	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.430	65	666297	25.12	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.48%	
58) Toluene-d8	15.931	98	1802184	25.01	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.04%	
73) 1,4-Bromofluorobenzene	22.238	95	1022862	25.19	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.76%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.045	69	117606	7.49	ppbv	99
3) 1,1-Difluoroethane	4.124	51	168151	7.11	ppbv	98
4) Propene	4.209	41	153558	7.68	ppbv	98
5) Propane	4.232	29	177284	16.87	ppbv	98
6) Dichlorodifluoromethane	4.277	85	333521	7.10	ppbv	100
7) Chloromethane	4.436	50	59071	7.08	ppbv	99
8) Dichlorotetrafluoroethane	4.550	85	226759	7.45	ppbv	98
9) Isobutane	4.567	43	214686	15.50	ppbv	99
10) Methanol	4.640	31	46361	20.48	ppbv	97
11) Vinyl Chloride	4.663	62	74435	7.12	ppbv	99
12) 1,3-Butadiene	4.810	54	50996	7.15	ppbv	100
13) Butane	4.861	43	190916	14.84	ppbv	100
14) Bromomethane	5.082	94	83186	7.03	ppbv	100
15) Chloroethane	5.264	64	35954	7.18	ppbv	98
16) Ethanol	5.383	45	104479	29.60	ppbv	100
17) Acrolein	5.740	56	26121	6.96	ppbv	99
18) Acetone	5.876	58	31169	6.57	ppbv	98
19) Trichlorofluoromethane	6.063	101	212551	5.54	ppbv	99
20) Isopropanol	6.120	45	119899	3.96	ppbv	95
21) Acrylonitrile	6.364	53	107017	6.20	ppbv	100
22) 1,1-Dichloroethene	6.744	61	222106	7.16	ppbv	98
23) Methylene Chloride	6.868	84	123539	6.97	ppbv	97
24) Tert-Butyl Alcohol (TBA)	6.772	59	564217	14.57	ppbv	97
25) 1,1,2-Trichloro-1,2,2-...	7.192	101	283567	7.35	ppbv	98
26) Carbon Disulfide	7.209	76	403228	7.38	ppbv	98
27) t-1,2-Dichloroethene	7.951	96	157243	7.15	ppbv	97
28) 1,1-Dichloroethane	8.188	63	272088	7.08	ppbv	99
29) Methyl-t-Butyl Ether (...	8.275	73	351760	7.12	ppbv	98
30) Vinyl Acetate	8.379	43	445647	7.33	ppbv	99
31) 2-Butanone	8.668	43	333968	7.38	ppbv	98
32) c-1,2-Dichloroethene	9.219	96	149508	7.08	ppbv	98
33) Hexane	9.536	57	223747	7.90	ppbv	92
34) Diisopropyl Ether (DIPE)	9.519	45	596073	7.36	ppbv	94
35) Ethyl Acetate	9.525	61	46905	8.10	ppbv	64
36) Chloroform	9.596	83	293424	7.08	ppbv	99
37) Tetrahydrofuran	10.125	42	174792	7.31	ppbv	98
38) Ethyl-t-Butyl Ether (E...	10.234	59	475711	7.32	ppbv	99
40) 1,2-Dichloroethane	10.578	62	199517	7.07	ppbv	99
41) 1,1,1-Trichloroethane	10.938	97	290022	7.07	ppbv	99
43) Benzene	11.582	78	415797	7.04	ppbv	99
44) Carbon Tetrachloride	11.795	117	319962	7.09	ppbv	99
45) Cyclohexane	11.991	56	246851	7.33	ppbv	98

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Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC04.D Vial: 2
Acq On : 27 Dec 2013 5:02 am Operator: 846
Sample : ICAL 6.25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:05:28 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.477	73	391051	7.15	ppbv		96
47) 1,2-Dichloropropane	12.771	63	177481	7.16	ppbv		98
48) Bromodichloromethane	13.050	83	319171	7.14	ppbv		99
49) Trichloroethene	13.137	95	197842	7.28	ppbv		100
50) 2,2,4-Trimethyl Pentane	13.251	57	806465	7.58	ppbv		100
51) 1,4-Dioxane	13.126	88	96188	7.27	ppbv		95
52) Methyl Methacrylate	13.475	69	151356	7.08	ppbv		95
53) Heptane	13.666	100	38928	7.24	ppbv	#	85
54) c-1,3-Dichloropropene	14.479	75	251022	7.19	ppbv		97
55) 4-Methyl-2-Pentanone	14.561	58	142648	7.13	ppbv		93
56) t-1,3-Dichloropropene	15.336	75	213473	7.17	ppbv		97
57) 1,1,2-Trichloroethane	15.603	83	159331	7.10	ppbv		99
60) Toluene	16.094	91	507120	7.13	ppbv		100
61) 2-Hexanone	16.574	58	208846	7.30	ppbv		93
62) Dibromochloromethane	16.765	129	340777	7.20	ppbv		99
63) 1,2-Dibromoethane	17.196	107	285444	7.13	ppbv		98
64) Tetrachloroethene	18.064	166	269900	7.19	ppbv		99
65) Chlorobenzene	19.297	112	406961	7.04	ppbv		99
66) Ethylbenzene	20.056	91	641422	7.25	ppbv		99
67) p/m-Xylene	20.432	91	1055471	15.26	ppbv		98
68) Bromoform	20.443	173	318576	7.47	ppbv		99
69) Styrene	21.109	104	363187	7.24	ppbv		100
70) 1,1,2,2-Tetrachloroethane	21.278	83	385476	7.19	ppbv		99
71) o-Xylene	21.321	91	506810	7.33	ppbv		100
72) 1,2,3-Trichloropropane	21.545	75	295206	7.09	ppbv		99
74) Isopropylbenzene	22.571	105	709453	7.31	ppbv		100
75) 2-Chlorotoluene	23.548	91	515676	7.19	ppbv		99
76) n-Propylbenzene	23.695	91	869124	7.33	ppbv		99
77) 4-Ethyltoluene	24.039	105	649475	7.25	ppbv		100
78) 1,3,5-Trimethylbenzene	24.235	105	559572	7.17	ppbv		100
79) 1,2,4-Trimethylbenzene	25.179	105	565125	7.48	ppbv		96
80) Benzyl Chloride	25.441	91	480016	7.37	ppbv		99
81) 1,3-Dichlorobenzene	25.463	146	396123	7.16	ppbv		100
82) 1,4-Dichlorobenzene	25.637	146	392535	7.32	ppbv		99
83) 1,2-Dichlorobenzene	26.467	146	387274	7.00	ppbv		99
84) 1,2,4-Trichlorobenzene	30.739	180	295129	6.51	ppbv		98
85) Naphthalene	30.936	128	641597	6.58	ppbv		99
86) Hexachloro-1,3-Butadiene	31.743	225	337882	6.84	ppbv		99

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

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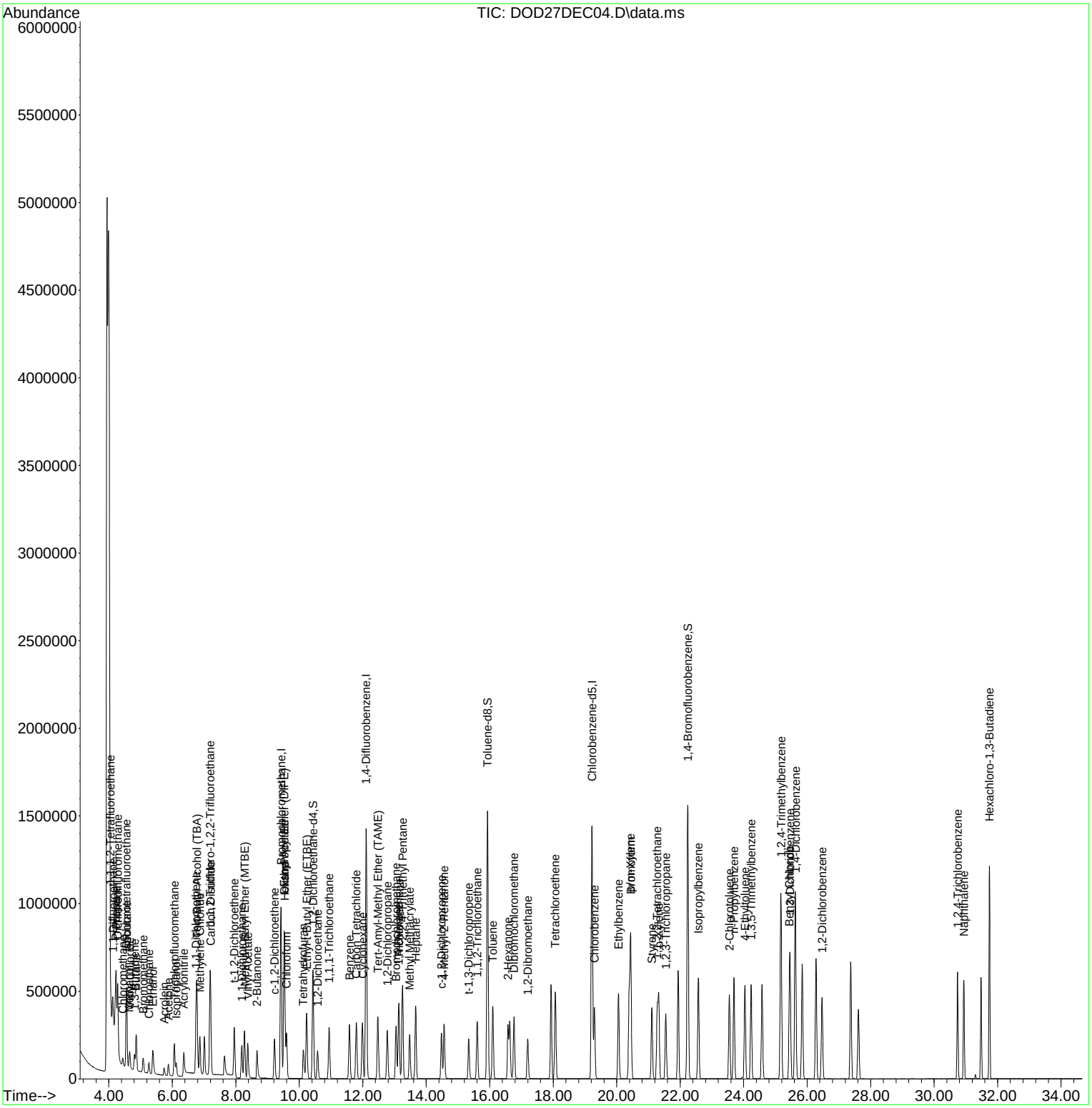
Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC04.D Vial: 2
Acq On : 27 Dec 2013 5:02 am Operator: 846
Sample : ICAL 6.25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:05:28 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC03.D Vial: 2
Acq On : 27 Dec 2013 4:17 am Operator: 846
Sample : ICAL 12.5PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:05:49 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.427	130	534937	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.111	114	1883151	25.00	ppbv	0.00
59) Chlorobenzene-d5	19.221	117	1517661	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.436	65	657653	24.95	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.80%	
58) Toluene-d8	15.931	98	1784653	25.00	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.00%	
73) 1,4-Bromofluorobenzene	22.238	95	999901	24.87	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.48%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.051	69	210560	13.49	ppbv	99
3) 1,1-Difluoroethane	4.124	51	300808	12.79	ppbv	100
4) Propene	4.209	41	270275	13.61	ppbv	99
5) Propane	4.232	29	304210	29.14	ppbv	97
6) Dichlorodifluoromethane	4.283	85	602160	12.90	ppbv	100
7) Chloromethane	4.442	50	109391	13.19	ppbv	100
8) Dichlorotetrafluoroethane	4.555	85	405226	13.39	ppbv	99
9) Isobutane	4.572	43	376274	27.34	ppbv	99
10) Methanol	4.640	31	87383	38.86	ppbv	98
11) Vinyl Chloride	4.669	62	136394	13.13	ppbv	99
12) 1,3-Butadiene	4.816	54	93717	13.22	ppbv	100
13) Butane	4.867	43	343045	26.83	ppbv	100
14) Bromomethane	5.088	94	152415	12.96	ppbv	98
15) Chloroethane	5.264	64	67045	13.47	ppbv	99
16) Ethanol	5.389	45	182510	52.03	ppbv	99
17) Acrolein	5.746	56	48744	13.08	ppbv	100
18) Acetone	5.876	58	57551	12.21	ppbv	100
19) Trichlorofluoromethane	6.069	101	384974	10.11	ppbv	99
20) Isopropanol	6.126	45	226606	7.53	ppbv	95
21) Acrylonitrile	6.364	53	226239	13.18	ppbv	99
22) 1,1-Dichloroethene	6.749	61	402903	13.07	ppbv	99
23) Methylene Chloride	6.874	84	223317	12.67	ppbv	98
24) Tert-Butyl Alcohol (TBA)	6.778	59	1056172	27.45	ppbv	99
25) 1,1,2-Trichloro-1,2,2-...	7.192	101	509382	13.29	ppbv	99
26) Carbon Disulfide	7.214	76	732438	13.50	ppbv	99
27) t-1,2-Dichloroethene	7.957	96	287985	13.18	ppbv	98
28) 1,1-Dichloroethane	8.194	63	498527	13.06	ppbv	100
29) Methyl-t-Butyl Ether (...	8.275	73	652941	13.30	ppbv	99
30) Vinyl Acetate	8.379	43	812760	13.46	ppbv	99
31) 2-Butanone	8.668	43	594775	13.23	ppbv	97
32) c-1,2-Dichloroethene	9.225	96	275616	13.13	ppbv	99
33) Hexane	9.541	57	389459	13.84	ppbv	95
34) Diisopropyl Ether (DIPE)	9.519	45	1020273	12.67	ppbv	94
35) Ethyl Acetate	9.525	61	84972	14.77	ppbv	82
36) Chloroform	9.601	83	532830	12.94	ppbv	100
37) Tetrahydrofuran	10.125	42	324120	13.64	ppbv	99
38) Ethyl-t-Butyl Ether (E...	10.234	59	873410	13.52	ppbv	99
40) 1,2-Dichloroethane	10.578	62	363753	12.97	ppbv	99
41) 1,1,1-Trichloroethane	10.944	97	531071	13.03	ppbv	99
43) Benzene	11.582	78	764460	13.06	ppbv	99
44) Carbon Tetrachloride	11.800	117	584103	13.07	ppbv	99
45) Cyclohexane	11.991	56	447943	13.43	ppbv	98

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Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC03.D Vial: 2
Acq On : 27 Dec 2013 4:17 am Operator: 846
Sample : ICAL 12.5PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:05:49 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

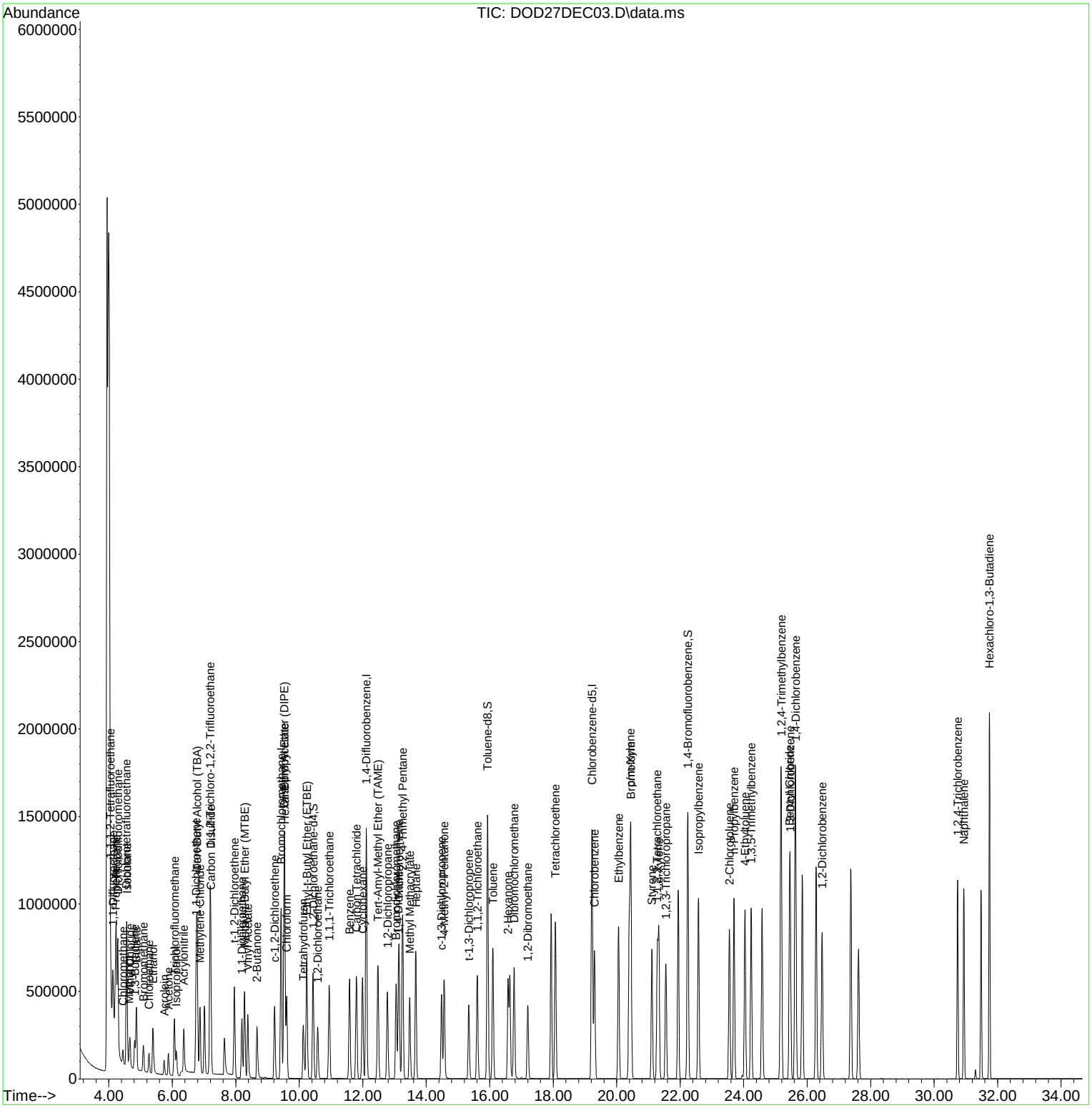
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.477	73	735337	13.57	ppbv	98
47) 1,2-Dichloropropane	12.777	63	324593	13.23	ppbv	100
48) Bromodichloromethane	13.050	83	586130	13.23	ppbv	99
49) Trichloroethene	13.137	95	359121	13.34	ppbv	99
50) 2,2,4-Trimethyl Pentane	13.252	57	1430165	13.57	ppbv	100
51) 1,4-Dioxane	13.121	88	183898	14.04	ppbv	98
52) Methyl Methacrylate	13.481	69	280263	13.23	ppbv	98
53) Heptane	13.672	100	71450	13.42	ppbv #	91
54) c-1,3-Dichloropropene	14.479	75	465805	13.47	ppbv	99
55) 4-Methyl-2-Pentanone	14.561	58	267030	13.48	ppbv	97
56) t-1,3-Dichloropropene	15.341	75	402712	13.64	ppbv	99
57) 1,1,2-Trichloroethane	15.609	83	291738	13.12	ppbv	100
60) Toluene	16.100	91	925416	13.14	ppbv	99
61) 2-Hexanone	16.580	58	390915	13.80	ppbv	97
62) Dibromochloromethane	16.771	129	625395	13.35	ppbv	100
63) 1,2-Dibromoethane	17.197	107	524678	13.23	ppbv	98
64) Tetrachloroethene	18.070	166	487791	13.12	ppbv	99
65) Chlorobenzene	19.303	112	740638	12.95	ppbv	99
66) Ethylbenzene	20.061	91	1173260	13.39	ppbv	99
67) p/m-Xylene	20.432	91	1888187	27.57	ppbv	98
68) Bromoform	20.449	173	574670	13.61	ppbv	100
69) Styrene	21.109	104	667778	13.45	ppbv	99
70) 1,1,2,2-Tetrachloroethane	21.278	83	694313	13.08	ppbv	100
71) o-Xylene	21.327	91	913580	13.35	ppbv	99
72) 1,2,3-Trichloropropane	21.551	75	532561	12.91	ppbv	100
74) Isopropylbenzene	22.576	105	1281309	13.34	ppbv	100
75) 2-Chlorotoluene	23.553	91	934281	13.15	ppbv	100
76) n-Propylbenzene	23.695	91	1556226	13.26	ppbv	99
77) 4-Ethyltoluene	24.039	105	1172535	13.21	ppbv	100
78) 1,3,5-Trimethylbenzene	24.235	105	1017717	13.17	ppbv	100
79) 1,2,4-Trimethylbenzene	25.185	105	1010401	13.51	ppbv	98
80) Benzyl Chloride	25.447	91	902906	14.00	ppbv	100
81) 1,3-Dichlorobenzene	25.468	146	709763	12.96	ppbv	99
82) 1,4-Dichlorobenzene	25.638	146	697764	13.15	ppbv	99
83) 1,2-Dichlorobenzene	26.472	146	705102	12.86	ppbv	100
84) 1,2,4-Trichlorobenzene	30.739	180	562944	12.54	ppbv	100
85) Naphthalene	30.936	128	1229029	12.74	ppbv	100
86) Hexachloro-1,3-Butadiene	31.743	225	598582	12.24	ppbv	99

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

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC03.D Vial: 2
Acq On : 27 Dec 2013 4:17 am Operator: 846
Sample : ICAL 12.5PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:05:49 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC02.D Vial: 2
Acq On : 27 Dec 2013 3:30 am Operator: 846
Sample : ICAL 25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:06:10 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.432	130	541433	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.117	114	1891271	25.00	ppbv	0.00
59) Chlorobenzene-d5	19.221	117	1519043	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.436	65	661849	24.81	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.24%	
58) Toluene-d8	15.936	98	1785860	24.91	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.64%	
73) 1,4-Bromofluorobenzene	22.244	95	996225	24.75	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.00%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.056	69	404616	25.61	ppbv	100
3) 1,1-Difluoroethane	4.130	51	594255	24.97	ppbv	100
4) Propene	4.210	41	504488	25.11	ppbv	100
5) Propane	4.238	29	544798	51.56	ppbv	100
6) Dichlorodifluoromethane	4.283	85	1155537	24.45	ppbv	100
7) Chloromethane	4.448	50	207762	24.76	ppbv	100
8) Dichlorotetrafluoroethane	4.561	85	743719	24.28	ppbv	100
9) Isobutane	4.578	43	677083	48.61	ppbv	100
10) Methanol	4.640	31	165099	72.54	ppbv	100
11) Vinyl Chloride	4.674	62	259731	24.70	ppbv	100
12) 1,3-Butadiene	4.822	54	178244	24.84	ppbv	100
13) Butane	4.879	43	635046	49.08	ppbv	100
14) Bromomethane	5.094	94	292824	24.60	ppbv	100
15) Chloroethane	5.270	64	128132	25.43	ppbv	100
16) Ethanol	5.389	45	340634	95.95	ppbv	100
17) Acrolein	5.746	56	95203	25.23	ppbv	100
18) Acetone	5.876	58	111524	23.38	ppbv	100
19) Trichlorofluoromethane	6.075	101	905214	23.48	ppbv	100
20) Isopropanol	6.132	45	900402	29.55	ppbv	100
21) Acrylonitrile	6.364	53	451062	25.97	ppbv	100
22) 1,1-Dichloroethene	6.755	61	759451	24.35	ppbv	100
23) Methylene Chloride	6.874	84	425339	23.85	ppbv	100
24) Tert-Butyl Alcohol (TBA)	6.789	59	1949498	50.06	ppbv	100
25) 1,1,2-Trichloro-1,2,2-...	7.197	101	943715	24.33	ppbv	100
26) Carbon Disulfide	7.220	76	1368152	24.91	ppbv	100
27) t-1,2-Dichloroethene	7.957	96	535671	24.22	ppbv	100
28) 1,1-Dichloroethane	8.199	63	947326	24.52	ppbv	100
29) Methyl-t-Butyl Ether (...	8.275	73	1241770	24.99	ppbv	100
30) Vinyl Acetate	8.379	43	1538635	25.17	ppbv	100
31) 2-Butanone	8.668	43	1132290	24.89	ppbv	96
32) c-1,2-Dichloroethene	9.225	96	531995	25.05	ppbv	100
33) Hexane	9.541	57	671828	23.59	ppbv	100
34) Diisopropyl Ether (DIPE)	9.525	45	1692673	20.78	ppbv	100
35) Ethyl Acetate	9.530	61	150166	25.79	ppbv	100
36) Chloroform	9.607	83	1006177	24.15	ppbv	100
37) Tetrahydrofuran	10.125	42	618260	25.72	ppbv	100
38) Ethyl-t-Butyl Ether (E...	10.234	59	1616653	24.73	ppbv	100
40) 1,2-Dichloroethane	10.583	62	691893	24.37	ppbv	100
41) 1,1,1-Trichloroethane	10.949	97	1009127	24.46	ppbv	100
43) Benzene	11.587	78	1453266	24.73	ppbv	100
44) Carbon Tetrachloride	11.806	117	1104323	24.60	ppbv	100
45) Cyclohexane	11.997	56	836672	24.98	ppbv	100

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Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC02.D Vial: 2
Acq On : 27 Dec 2013 3:30 am Operator: 846
Sample : ICAL 25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:06:10 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

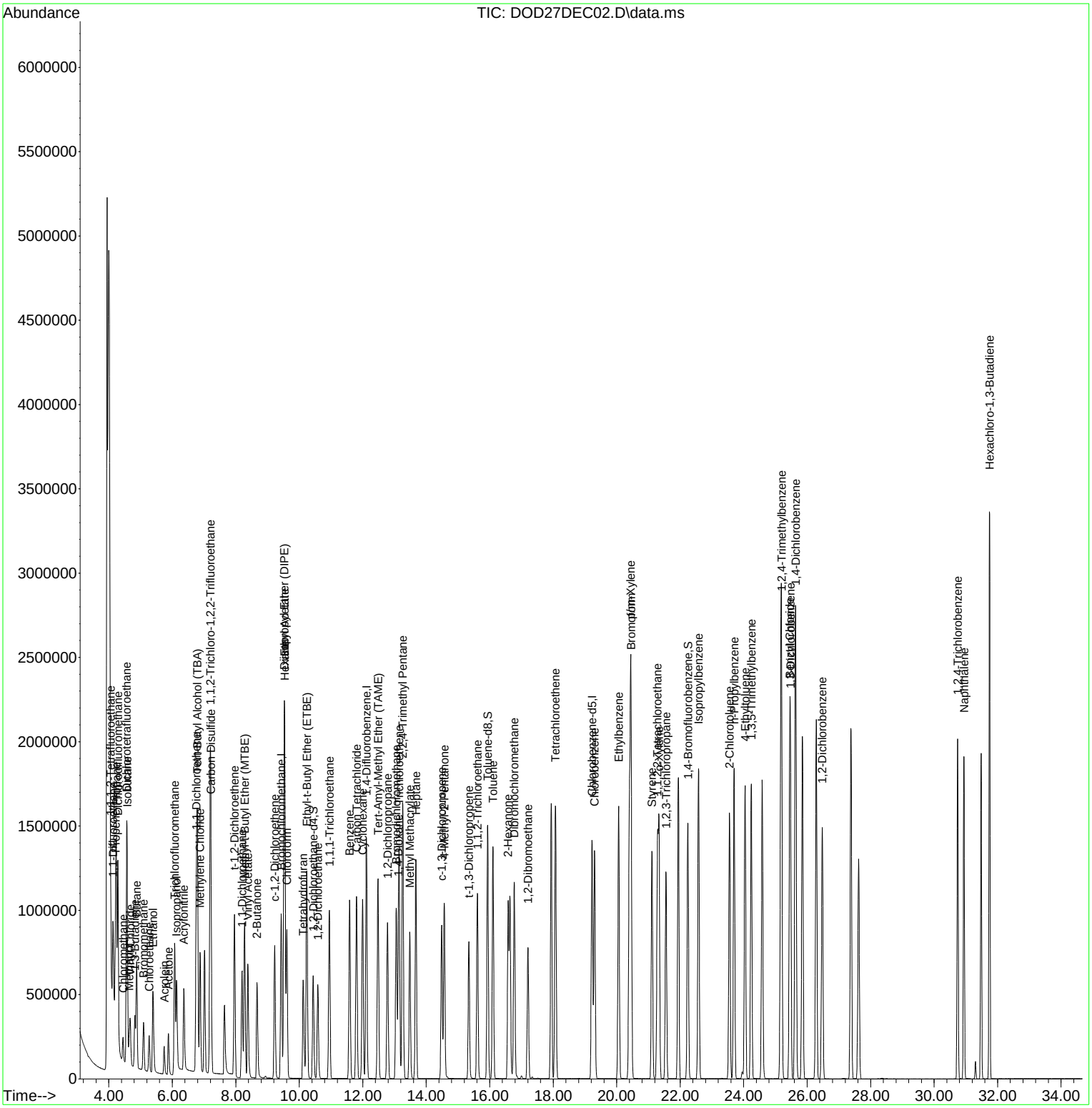
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.482	73	1384345	25.44	ppbv	100
47) 1,2-Dichloropropane	12.777	63	609001	24.71	ppbv	100
48) Bromodichloromethane	13.055	83	1106444	24.87	ppbv	100
49) Trichloroethene	13.142	95	665310	24.61	ppbv	100
50) 2,2,4-Trimethyl Pentane	13.257	57	2554761	24.14	ppbv	100
51) 1,4-Dioxane	13.121	88	344161	26.16	ppbv	100
52) Methyl Methacrylate	13.481	69	535047	25.14	ppbv	100
53) Heptane	13.672	100	134631	25.17	ppbv	100
54) c-1,3-Dichloropropene	14.485	75	891978	25.69	ppbv	100
55) 4-Methyl-2-Pentanone	14.567	58	498797	25.07	ppbv	100
56) t-1,3-Dichloropropene	15.341	75	776089	26.18	ppbv	100
57) 1,1,2-Trichloroethane	15.609	83	551174	24.69	ppbv	100
60) Toluene	16.100	91	1739734	24.69	ppbv	100
61) 2-Hexanone	16.580	58	729049	25.71	ppbv	100
62) Dibromochloromethane	16.771	129	1176447	25.09	ppbv	100
63) 1,2-Dibromoethane	17.202	107	983263	24.77	ppbv	100
64) Tetrachloroethene	18.070	166	904331	24.30	ppbv	100
65) Chlorobenzene	19.303	112	1394263	24.35	ppbv	100
66) Ethylbenzene	20.061	91	2189319	24.97	ppbv	100
67) p/m-Xylene	20.438	91	3377196	49.26	ppbv	100
68) Bromoform	20.454	173	1038747	24.57	ppbv	100
69) Styrene	21.109	104	1263152	25.43	ppbv	100
70) 1,1,2,2-Tetrachloroethane	21.283	83	1279393	24.07	ppbv	100
71) o-Xylene	21.332	91	1684272	24.59	ppbv	100
72) 1,2,3-Trichloropropane	21.556	75	994352	24.08	ppbv	100
74) Isopropylbenzene	22.577	105	2367414	24.63	ppbv	100
75) 2-Chlorotoluene	23.553	91	1749852	24.61	ppbv	100
76) n-Propylbenzene	23.701	91	2875126	24.47	ppbv	100
77) 4-Ethyltoluene	24.044	105	2183307	24.58	ppbv	100
78) 1,3,5-Trimethylbenzene	24.241	105	1877120	24.27	ppbv	100
79) 1,2,4-Trimethylbenzene	25.196	105	1784020	23.82	ppbv	100
80) Benzyl Chloride	25.452	91	1651802	25.58	ppbv	100
81) 1,3-Dichlorobenzene	25.474	146	1286321	23.46	ppbv	100
82) 1,4-Dichlorobenzene	25.643	146	1225400	23.07	ppbv	100
83) 1,2-Dichlorobenzene	26.478	146	1284864	23.42	ppbv	100
84) 1,2,4-Trichlorobenzene	30.739	180	1032651	22.99	ppbv	100
85) Naphthalene	30.941	128	2231183	23.11	ppbv	100
86) Hexachloro-1,3-Butadiene	31.749	225	1030922	21.06	ppbv	100

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

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC02.D Vial: 2
Acq On : 27 Dec 2013 3:30 am Operator: 846
Sample : ICAL 25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:06:10 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC08.D Vial: 1
Acq On : 27 Dec 2013 8:23 am Operator: 846
Sample : ICAL 50PPBV A121813E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:06:52 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.432	130	515419	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.117	114	1802706	25.00	ppbv	0.00
59) Chlorobenzene-d5	19.226	117	1459666	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.442	65	625402	24.63	ppbv	0.00
Spiked Amount 25.000			Recovery	=	98.52%	
58) Toluene-d8	15.936	98	1708381	25.00	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.00%	
73) 1,4-Bromofluorobenzene	22.244	95	965862	24.98	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.92%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.056	69	758657	50.44	ppbv	100
3) 1,1-Difluoroethane	4.136	51	1012907	44.71	ppbv	98
4) Propene	4.209	41	816810	42.70	ppbv	98
5) Propane	4.232	29	822969	81.81	ppbv	95
6) Dichlorodifluoromethane	4.283	85	1995984	44.37	ppbv	99
7) Chloromethane	4.442	50	390396	48.87	ppbv	100
8) Dichlorotetrafluoroethane	4.555	85	1250107	42.88	ppbv	99
9) Isobutane	4.578	43	1123831	84.76	ppbv	99
10) Methanol	4.629	31	314339	145.08	ppbv	99
11) Vinyl Chloride	4.674	62	481989	48.15	ppbv	100
12) 1,3-Butadiene	4.816	54	331790	48.57	ppbv	99
13) Butane	4.867	43	1109406	90.06	ppbv	99
14) Bromomethane	5.088	94	541111	47.75	ppbv	99
15) Chloroethane	5.264	64	237133	49.45	ppbv	98
16) Ethanol	5.389	45	628015	185.82	ppbv	99
17) Acrolein	5.735	56	177399	49.39	ppbv	100
18) Acetone	5.871	58	210936	46.45	ppbv	99
19) Trichlorofluoromethane	6.069	101	2093466	57.05	ppbv	100
20) Isopropanol	6.137	45	1713984	59.09	ppbv	100
21) Acrylonitrile	6.358	53	813213	49.18	ppbv	99
22) 1,1-Dichloroethene	6.750	61	1324603	44.61	ppbv	98
23) Methylene Chloride	6.869	84	773861	45.57	ppbv	94
24) Tert-Butyl Alcohol (TBA)	6.795	59	3418629	92.21	ppbv	97
25) 1,1,2-Trichloro-1,2,2-...	7.192	101	1583135	42.87	ppbv	98
26) Carbon Disulfide	7.214	76	2317730	44.33	ppbv	99
27) t-1,2-Dichloroethene	7.957	96	972410	46.19	ppbv	97
28) 1,1-Dichloroethane	8.193	63	1693330	46.04	ppbv	100
29) Methyl-t-Butyl Ether (...	8.275	73	2316064	48.97	ppbv	96
30) Vinyl Acetate	8.379	43	2668175	45.85	ppbv	98
31) 2-Butanone	8.668	43	2000768	46.20	ppbv	92
32) c-1,2-Dichloroethene	9.225	96	975203	48.23	ppbv	97
33) Hexane	9.547	57	984609	36.32	ppbv	91
34) Diisopropyl Ether (DIPE)	9.519	45	2390788	30.82	ppbv	97
35) Ethyl Acetate	9.530	61	230476	41.58	ppbv	83
36) Chloroform	9.612	83	1793113	45.20	ppbv	99
37) Tetrahydrofuran	10.120	42	1094899	47.84	ppbv	96
38) Ethyl-t-Butyl Ether (E...	10.240	59	2864119	46.02	ppbv	97
40) 1,2-Dichloroethane	10.583	62	1244317	46.04	ppbv	99
41) 1,1,1-Trichloroethane	10.949	97	1812000	46.13	ppbv	99
43) Benzene	11.587	78	2635795	47.05	ppbv	98
44) Carbon Tetrachloride	11.806	117	1942105	45.39	ppbv	100
45) Cyclohexane	11.997	56	1447092	45.32	ppbv	96

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC08.D Vial: 1
Acq On : 27 Dec 2013 8:23 am Operator: 846
Sample : ICAL 50PPBV A121813E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:06:52 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

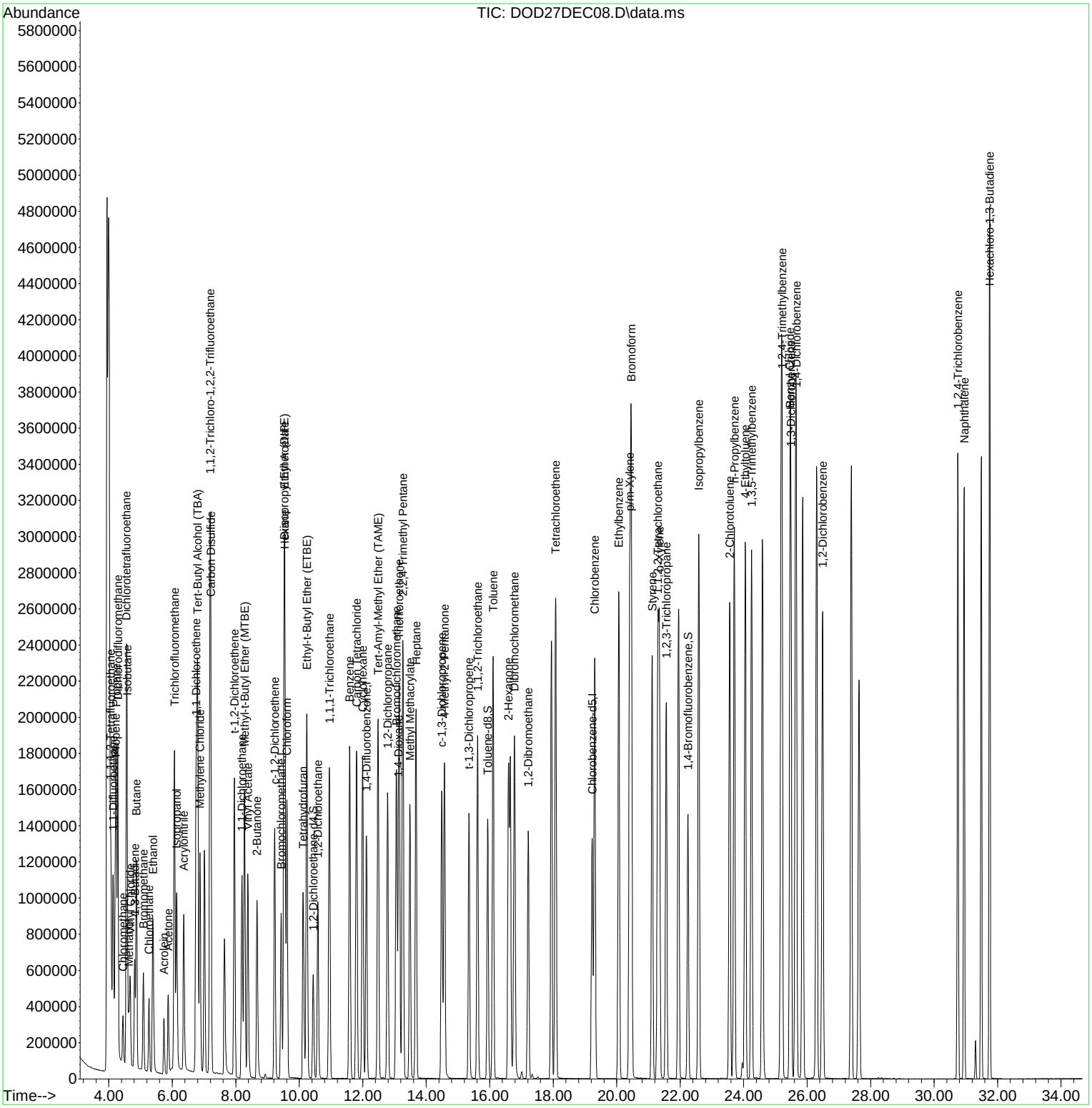
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.482	73	2563492	49.42	ppbv		96
47) 1,2-Dichloropropane	12.782	63	1074094	45.72	ppbv		99
48) Bromodichloromethane	13.061	83	1968747	46.42	ppbv		99
49) Trichloroethene	13.148	95	1160846	45.04	ppbv		99
50) 2,2,4-Trimethyl Pentane	13.262	57	4034067	40.00	ppbv		99
51) 1,4-Dioxane	13.121	88	578905	46.17	ppbv		95
52) Methyl Methacrylate	13.486	69	990091	48.81	ppbv		93
53) Heptane	13.677	100	240606	47.20	ppbv	#	79
54) c-1,3-Dichloropropene	14.490	75	1637037	49.47	ppbv		98
55) 4-Methyl-2-Pentanone	14.572	58	888324	46.84	ppbv		93
56) t-1,3-Dichloropropene	15.347	75	1453846	51.46	ppbv		98
57) 1,1,2-Trichloroethane	15.620	83	989567	46.51	ppbv		100
60) Toluene	16.105	91	3102392	45.82	ppbv		100
61) 2-Hexanone	16.591	58	1252170	45.95	ppbv		93
62) Dibromochloromethane	16.782	129	2086513	46.31	ppbv		99
63) 1,2-Dibromoethane	17.213	107	1776088	46.56	ppbv		99
64) Tetrachloroethene	18.075	166	1585535	44.33	ppbv		99
65) Chlorobenzene	19.308	112	2517790	45.77	ppbv		99
66) Ethylbenzene	20.067	91	3904147	46.34	ppbv		100
67) p/m-Xylene	20.410	91	5433424	82.48	ppbv		97
68) Bromoform	20.459	173	1796377	44.22	ppbv		100
69) Styrene	21.120	104	2337079	48.96	ppbv		99
70) 1,1,2,2-Tetrachloroethane	21.294	83	2234896	43.76	ppbv		99
71) o-Xylene	21.343	91	2917715	44.34	ppbv		100
72) 1,2,3-Trichloropropane	21.562	75	1789343	45.10	ppbv		100
74) Isopropylbenzene	22.587	105	4111847	44.51	ppbv		100
75) 2-Chlorotoluene	23.559	91	3164228	46.32	ppbv		99
76) n-Propylbenzene	23.706	91	5025994	44.52	ppbv		98
77) 4-Ethyltoluene	24.050	105	3932595	46.07	ppbv		100
78) 1,3,5-Trimethylbenzene	24.252	105	3386761	45.57	ppbv		100
79) 1,2,4-Trimethylbenzene	25.212	105	2983925	41.47	ppbv		97
80) Benzyl Chloride	25.463	91	3000363	48.35	ppbv		98
81) 1,3-Dichlorobenzene	25.490	146	2301223	43.68	ppbv		99
82) 1,4-Dichlorobenzene	25.659	146	2139309	41.91	ppbv		99
83) 1,2-Dichlorobenzene	26.489	146	2398616	45.50	ppbv		99
84) 1,2,4-Trichlorobenzene	30.750	180	1947722	45.12	ppbv		100
85) Naphthalene	30.947	128	4025463	43.39	ppbv		99
86) Hexachloro-1,3-Butadiene	31.749	225	1728545	36.74	ppbv		99

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

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC08.D Vial: 1
Acq On : 27 Dec 2013 8:23 am Operator: 846
Sample : ICAL 50PPBV A121813E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:06:52 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC07.D Vial: 1
Acq On : 27 Dec 2013 7:34 am Operator: 846
Sample : ICAL 100PPBV A121813E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:08:47 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.438	130	515303	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.122	114	1791587	25.00	ppbv	0.00
59) Chlorobenzene-d5	19.232	117	1459560	25.00	ppbv	0.01
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.447	65	629596	24.80	ppbv	0.01
Spiked Amount 25.000			Recovery	=	99.20%	
58) Toluene-d8	15.942	98	1699770	25.03	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.12%	
73) 1,4-Bromofluorobenzene	22.249	95	972428	25.15	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.60%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.056	69	1481572	98.53	ppbv	98
3) 1,1-Difluoroethane	4.130	51	2014512	88.95	ppbv	96
4) Propene	4.204	41	1394501	72.91	ppbv	99
5) Propane	4.232	29	1279948	127.27	ppbv	90
6) Dichlorodifluoromethane	4.283	85	3696196	82.18	ppbv	99
7) Chloromethane	4.448	50	731703	91.61	ppbv	99
8) Dichlorotetrafluoroethane	4.555	85	1961686	67.30	ppbv	96
9) Isobutane	4.578	43	1744158	131.58	ppbv	99
10) Methanol	4.629	31	573097	264.57	ppbv	100
11) Vinyl Chloride	4.674	62	876484	87.57	ppbv	100
12) 1,3-Butadiene	4.816	54	598239	87.59	ppbv	99
13) Butane	4.867	43	1849991	150.22	ppbv	99
14) Bromomethane	5.088	94	997459	88.04	ppbv	99
15) Chloroethane	5.264	64	441670	92.12	ppbv	99
16) Ethanol	5.400	45	1120631	331.66	ppbv	99
17) Acrolein	5.735	56	343893	95.76	ppbv	98
18) Acetone	5.876	58	544417	119.90	ppbv	95
19) Trichlorofluoromethane	6.063	101	3797597	103.51	ppbv	99
20) Isopropanol	6.148	45	3139008	108.24	ppbv	99
21) Acrylonitrile	6.364	53	1534688	92.83	ppbv	100
22) 1,1-Dichloroethene	6.749	61	2421725	81.57	ppbv	96
23) Methylene Chloride	6.874	84	1413536	83.26	ppbv #	87
24) Tert-Butyl Alcohol (TBA)	6.812	59	5424618	146.36	ppbv	98
25) 1,1,2-Trichloro-1,2,2-...	7.186	101	2534783	68.66	ppbv	95
26) Carbon Disulfide	7.220	76	3639414	69.62	ppbv	99
27) t-1,2-Dichloroethene	7.957	96	1743559	82.84	ppbv	92
28) 1,1-Dichloroethane	8.199	63	3002487	81.65	ppbv	98
29) Methyl-t-Butyl Ether (...	8.275	73	3911536	82.72	ppbv	95
30) Vinyl Acetate	8.384	43	4537649	77.99	ppbv	95
31) 2-Butanone	8.679	43	3524097	81.39	ppbv	87
32) c-1,2-Dichloroethene	9.230	96	1787212	88.41	ppbv	94
33) Hexane	9.547	57	1371138	50.60	ppbv	92
34) Diisopropyl Ether (DIPE)	9.525	45	3334083	43.00	ppbv	93
35) Ethyl Acetate	9.547	61	324517	58.56	ppbv	78
36) Chloroform	9.623	83	3176702	80.10	ppbv	98
37) Tetrahydrofuran	10.125	42	1930241	84.36	ppbv	92
38) Ethyl-t-Butyl Ether (E...	10.245	59	4526705	72.75	ppbv	93
40) 1,2-Dichloroethane	10.594	62	2283833	84.52	ppbv	97
41) 1,1,1-Trichloroethane	10.954	97	3220051	81.99	ppbv	98
43) Benzene	11.593	78	4677889	84.03	ppbv	97
44) Carbon Tetrachloride	11.806	117	3400041	79.96	ppbv	99
45) Cyclohexane	12.002	56	2403213	75.74	ppbv	90

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC07.D Vial: 1
Acq On : 27 Dec 2013 7:34 am Operator: 846
Sample : ICAL 100PPBV A121813E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:08:47 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.488	73	4208338	81.63	ppbv	93
47) 1,2-Dichloropropane	12.793	63	1825583	78.19	ppbv	99
48) Bromodichloromethane	13.071	83	3444892	81.73	ppbv	98
49) Trichloroethene	13.159	95	1927099	75.24	ppbv	97
50) 2,2,4-Trimethyl Pentane	13.273	57	6067733	60.54	ppbv	98
51) 1,4-Dioxane	13.131	88	953617	76.52	ppbv	88
52) Methyl Methacrylate	13.497	69	1738528	86.23	ppbv #	87
53) Heptane	13.688	100	417850	82.47	ppbv #	57
54) c-1,3-Dichloropropene	14.496	75	2903371	88.28	ppbv	96
55) 4-Methyl-2-Pentanone	14.588	58	1487513	78.92	ppbv #	84
56) t-1,3-Dichloropropene	15.358	75	2636919	93.91	ppbv	96
57) 1,1,2-Trichloroethane	15.630	83	1715910	81.14	ppbv	99
60) Toluene	16.116	91	5329331	78.71	ppbv	100
61) 2-Hexanone	16.613	58	2010708	73.79	ppbv	86
62) Dibromochloromethane	16.793	129	3607442	80.07	ppbv	99
63) 1,2-Dibromoethane	17.235	107	3095739	81.16	ppbv	100
64) Tetrachloroethene	18.086	166	2748266	76.85	ppbv	97
65) Chlorobenzene	19.319	112	4371324	79.47	ppbv	98
66) Ethylbenzene	20.077	91	6591302	78.25	ppbv	99
67) p/m-Xylene	20.421	91	7842483	119.06	ppbv	96
68) Bromoform	20.481	173	2844617	70.03	ppbv	100
69) Styrene	21.131	104	4066661	85.20	ppbv	99
70) 1,1,2,2-Tetrachloroethane	21.311	83	3403444	66.65	ppbv	99
71) o-Xylene	21.365	91	4650463m	70.67	ppbv	
72) 1,2,3-Trichloropropane	21.578	75	3020087	76.13	ppbv	100
74) Isopropylbenzene	22.598	105	6763528	73.22	ppbv	99
75) 2-Chlorotoluene	23.570	91	5327556	77.99	ppbv	96
76) n-Propylbenzene	23.717	91	8070980	71.49	ppbv	95
77) 4-Ethyltoluene	24.061	105	6450133	75.57	ppbv	99
78) 1,3,5-Trimethylbenzene	24.262	105	5547877	74.66	ppbv	99
79) 1,2,4-Trimethylbenzene	25.234	105	4455985	61.93	ppbv	97
80) Benzyl Chloride	25.485	91	4370062	70.43	ppbv	94
81) 1,3-Dichlorobenzene	25.517	146	3714887m	70.52	ppbv	
82) 1,4-Dichlorobenzene	25.687	146	3265510	63.98	ppbv	99
83) 1,2-Dichlorobenzene	26.505	146	4086996	77.53	ppbv	99
84) 1,2,4-Trichlorobenzene	30.756	180	3138725	72.72	ppbv	99
85) Naphthalene	30.952	128	6259669	67.47	ppbv	99
86) Hexachloro-1,3-Butadiene	31.754	225	2361219	50.19	ppbv	100

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

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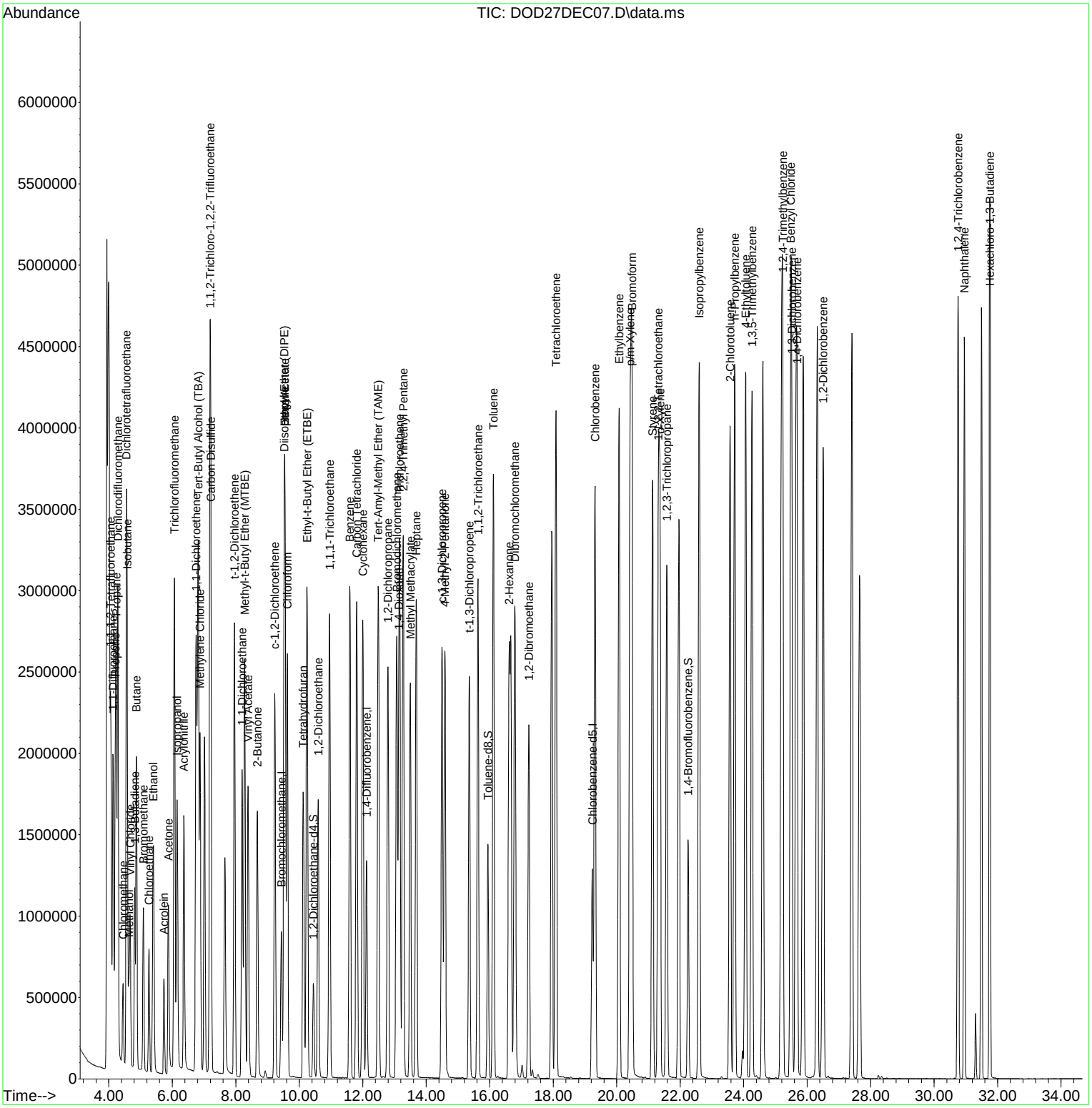
Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC07.D Vial: 1
Acq On : 27 Dec 2013 7:34 am Operator: 846
Sample : ICAL 100PPBV A121813E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:08:47 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:05:03 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC09.D Vial: 2
Acq On : 27 Dec 2013 9:13 am Operator: 846
Sample : ICV/LCS 25PPBV A122313E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:11:28 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.432	130	516110	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.117	114	1820485	25.00	ppbv	0.00
59) Chlorobenzene-d5	19.226	117	1487380	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.436	65	630168	24.78	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.12%	
58) Toluene-d8	15.936	98	1727254	25.03	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.12%	
73) 1,4-Bromofluorobenzene	22.238	95	993522	25.21	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.84%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.051	69	327088	21.72	ppbv	99
3) 1,1-Difluoroethane	4.124	51	571863	25.21	ppbv	99
4) Propene	4.209	41	491638	25.67	ppbv	99
5) Propane	4.232	29	475078	47.16	ppbv	98
6) Dichlorodifluoromethane	4.283	85	1138021	25.26	ppbv	99
7) Chloromethane	4.442	50	214438	26.81	ppbv	100
8) Dichlorotetrafluoroethane	4.561	85	613369	21.01	ppbv	94
9) Isobutane	4.572	43	638957	48.13	ppbv	99
10) Methanol	4.640	31	163536	75.34	ppbv	99
11) Vinyl Chloride	4.674	62	263301	26.27	ppbv	100
12) 1,3-Butadiene	4.822	54	184746	27.01	ppbv	99
13) Butane	4.878	43	592061	48.00	ppbv	100
14) Bromomethane	5.094	94	303519	26.75	ppbv	100
15) Chloroethane	5.270	64	127474	26.54	ppbv	98
16) Ethanol	5.389	45	332648	98.28	ppbv	100
17) Acrolein	5.746	56	94994	26.41	ppbv	97
18) Acetone	5.876	58	112460	24.73	ppbv	99
19) Trichlorofluoromethane	6.069	101	722977	19.67	ppbv	100
20) Isopropanol	6.132	45	417317	14.37	ppbv	97
21) Acrylonitrile	6.364	53	427540	25.82	ppbv	100
22) 1,1-Dichloroethene	6.750	61	782060	26.30	ppbv	100
23) Methylene Chloride	6.874	84	444754	26.16	ppbv	98
24) Tert-Butyl Alcohol (TBA)	6.789	59	1945488	52.41	ppbv	97
25) 1,1,2-Trichloro-1,2,2-...	7.197	101	968221	26.18	ppbv	100
26) Carbon Disulfide	7.220	76	1468924	28.05	ppbv	99
27) t-1,2-Dichloroethene	7.957	96	529447	25.12	ppbv	99
28) 1,1-Dichloroethane	8.199	63	961135	26.10	ppbv	100
29) Methyl-t-Butyl Ether (...	8.275	73	1298326	27.41	ppbv	98
30) Vinyl Acetate	8.379	43	1426425	24.48	ppbv	100
31) 2-Butanone	8.668	43	1162921	26.65	ppbv	99
32) c-1,2-Dichloroethene	9.225	96	538342	26.59	ppbv	100
33) Hexane	9.547	57	683313	25.17	ppbv #	86
34) Diisopropyl Ether (DIPE)	9.525	45	1616758	20.82	ppbv	97
35) Ethyl Acetate	9.530	61	153025	27.57	ppbv	92
36) Chloroform	9.607	83	1027620	25.87	ppbv	100
37) Tetrahydrofuran	10.125	42	613392	26.76	ppbv	99
38) Ethyl-t-Butyl Ether (E...	10.240	59	1595199	25.60	ppbv	99
40) 1,2-Dichloroethane	10.583	62	700913	25.90	ppbv	100
41) 1,1,1-Trichloroethane	10.949	97	997803	25.37	ppbv	100
43) Benzene	11.587	78	1502172	26.56	ppbv	99
44) Carbon Tetrachloride	11.806	117	1118441	25.89	ppbv	99
45) Cyclohexane	11.997	56	843289	26.16	ppbv	99

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Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC09.D Vial: 2
Acq On : 27 Dec 2013 9:13 am Operator: 846
Sample : ICV/LCS 25PPBV A122313E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:11:28 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.482	73	1380074	26.35	ppbv	99
47) 1,2-Dichloropropane	12.782	63	628098	26.48	ppbv	99
48) Bromodichloromethane	13.055	83	1145378	26.75	ppbv	100
49) Trichloroethene	13.142	95	681549	26.19	ppbv	99
50) 2,2,4-Trimethyl Pentane	13.257	57	2515663	24.70	ppbv	100
51) 1,4-Dioxane	13.121	88	308172	24.34	ppbv	99
52) Methyl Methacrylate	13.481	69	551162	26.91	ppbv	98
53) Heptane	13.672	100	136669	26.55	ppbv	97
54) c-1,3-Dichloropropene	14.485	75	938745	28.09	ppbv	99
55) 4-Methyl-2-Pentanone	14.567	58	522552	27.29	ppbv	99
56) t-1,3-Dichloropropene	15.341	75	887746	31.12	ppbv	99
57) 1,1,2-Trichloroethane	15.614	83	566316	26.36	ppbv	100
60) Toluene	16.100	91	1835211	26.60	ppbv	99
61) 2-Hexanone	16.585	58	737603	26.56	ppbv	99
62) Dibromochloromethane	16.771	129	1207242	26.30	ppbv	100
63) 1,2-Dibromoethane	17.207	107	1017556	26.17	ppbv	100
64) Tetrachloroethene	18.070	166	926637	25.43	ppbv	100
65) Chlorobenzene	19.303	112	1450438	25.87	ppbv	100
66) Ethylbenzene	20.061	91	2281801	26.58	ppbv	100
67) p/m-Xylene	20.438	91	3491613	52.01	ppbv	100
68) Bromoform	20.454	173	1090490	26.35	ppbv	100
69) Styrene	21.114	104	1302678	26.78	ppbv	100
70) 1,1,2,2-Tetrachloroethane	21.283	83	1315166	25.27	ppbv	100
71) o-Xylene	21.332	91	1742436	25.98	ppbv	100
72) 1,2,3-Trichloropropane	21.556	75	1005417	24.87	ppbv	100
74) Isopropylbenzene	22.582	105	2311423	24.56	ppbv	100
75) 2-Chlorotoluene	23.553	91	1743607	25.05	ppbv	100
76) n-Propylbenzene	23.700	91	2905747	25.26	ppbv	100
77) 4-Ethyltoluene	24.044	105	2374285	27.30	ppbv	100
78) 1,3,5-Trimethylbenzene	24.241	105	1993755	26.33	ppbv	100
79) 1,2,4-Trimethylbenzene	25.196	105	1893746	25.83	ppbv	100
80) Benzyl Chloride	25.452	91	1911855	30.24	ppbv	100
81) 1,3-Dichlorobenzene	25.474	146	1387706	25.84	ppbv	100
82) 1,4-Dichlorobenzene	25.648	146	1339268	25.75	ppbv	99
83) 1,2-Dichlorobenzene	26.478	146	1367451	25.46	ppbv	100
84) 1,2,4-Trichlorobenzene	30.745	180	1029115	23.40	ppbv	100
85) Naphthalene	30.941	128	2228482	23.57	ppbv	100
86) Hexachloro-1,3-Butadiene	31.749	225	1039131	21.67	ppbv	100

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

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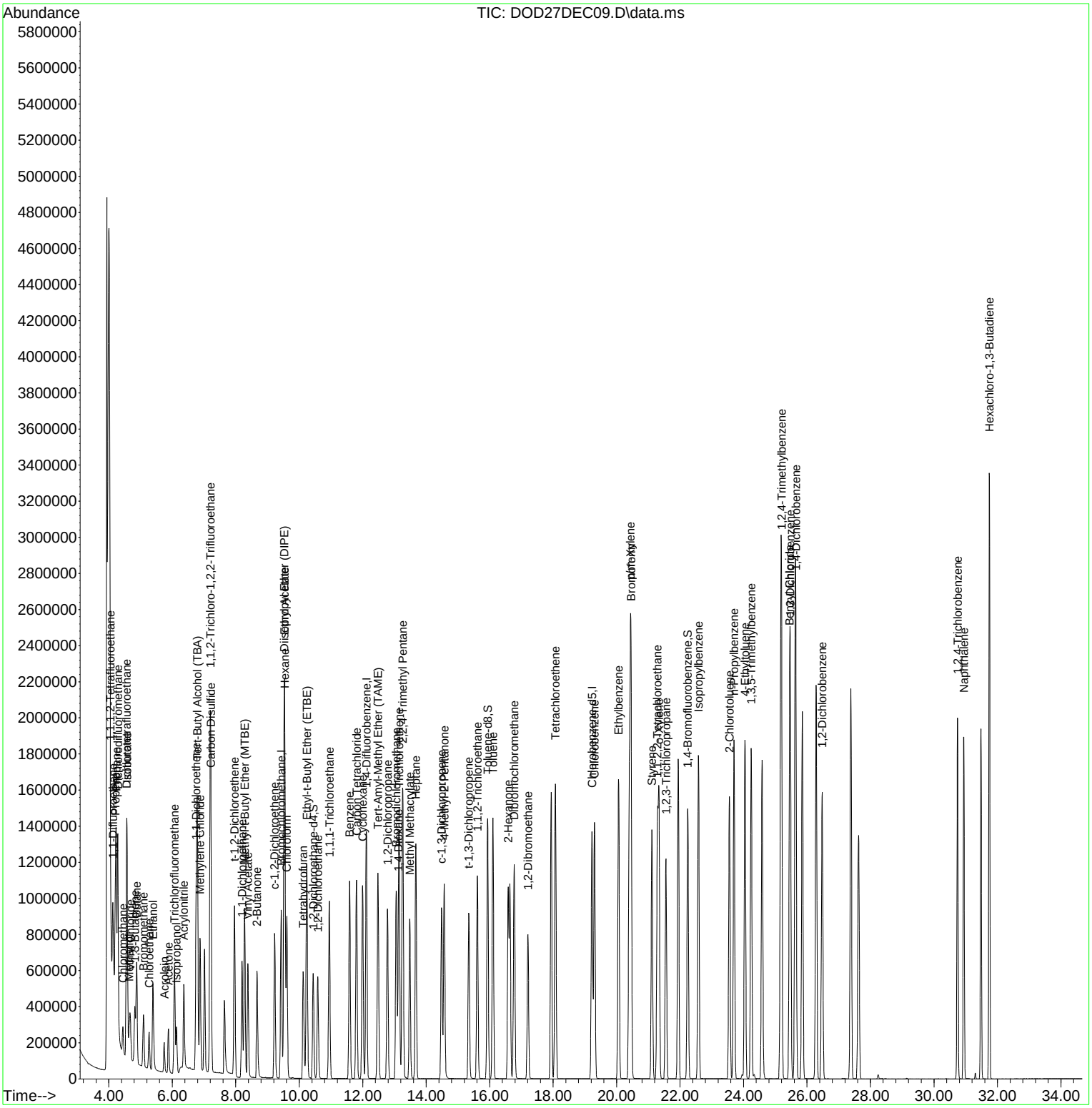
Data File : W:\GCMS_YY_DATA\2013\131227\DOD27DEC09.D Vial: 2
Acq On : 27 Dec 2013 9:13 am Operator: 846
Sample : ICV/LCS 25PPBV A122313E Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 27 18:11:28 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Sample Data

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1615
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 16:33
ANALYST: 460
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC14.D\28DEC14.rr

REVIEWED BY: 326
DATE REVIEWED: 01/02/2014 13:01
EXTRACTION: N/A
D/T EXTRACTED:

 # 1 **CLIENT SAMPLE NUMBER: MW-40-37**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	130	1	130	0.19	0.50	1.2	1	ppb (v/v)	E
Benzene	3.0	1	3.0	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	3.0	1	3.0	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	1.3	1	1.3	0.62	1.2	2.5	1	ppb (v/v)	J
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	1.2	1	1.2	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	100	1	100	0.087	0.20	0.50	1	ppb (v/v)	E
t-1,2-Dichloroethene	26	1	26	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	0.00	1	ND	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.57	1	0.57	0.067	0.10	0.50	1	ppb (v/v)	
4-Ethyltoluene	0.18	1	0.18	0.057	0.20	0.50	1	ppb (v/v)	J
Heptane	0.30	1	0.30	0.21	0.50	1.2	1	ppb (v/v)	J
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1615
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 16:33
ANALYST: 460
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC14.D\28DEC14.rr

REVIEWED BY: 326
DATE REVIEWED: 01/02/2014 13:01
EXTRACTION: N/A
D/T EXTRACTED:

 # 1 **CLIENT SAMPLE NUMBER: MW-40-37**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Hexane	5.4	1	5.4	0.072	0.10	0.50	1	ppb (v/v)	
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	0.81	1	0.81	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	2.5	1	2.5	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.15	1	0.15	0.064	0.20	0.50	1	ppb (v/v)	J
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	4.7	1	4.7	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	1.5	1	1.5	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	20	1	20	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	24	1	24	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	0.00	1	ND	1.3	1.5	15	1	ppb (v/v)	
1,3,5-Trimethylbenzene	0.19	1	0.19	0.051	0.20	0.50	1	ppb (v/v)	J
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.66	1	0.66	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	220	1	220	0.22	0.50	1.2	1	ppb (v/v)	E
Isopropanol	4.8	1	4.8	0.62	1.2	2.5	1	ppb (v/v)	]km

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Data File : W:\GCMS_YY_DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	9.487	130	489904	25.00 ppbv	0.05
42) 1,4-Difluorobenzene	12.149	114	1719302	25.00 ppbv	0.03
59) Chlorobenzene-d5	19.226	117	1344882	25.00 ppbv	0.00
System Monitoring Compounds					
39) 1,2-Dichloroethane-d4	10.485	65	586720	24.31 ppbv	0.05
Spiked Amount 25.000			Recovery	= 97.24%	
58) Toluene-d8	15.947	98	1580578	24.25 ppbv	0.01
Spiked Amount 25.000			Recovery	= 97.00%	
73) 1,4-Bromofluorobenzene	22.244	95	905661	25.42 ppbv	0.00
Spiked Amount 25.000			Recovery	= 101.68%	
Target Compounds					Qvalue
2) 1,1,1,2-Tetrafluoroethane	0.000		0	N.D.	
3) 1,1-Difluoroethane	0.000		0	N.D.	
4) Propene	0.000		0	N.D. d	
5) Propane	0.000		0	N.D.	
6) Dichlorodifluoromethane	0.000		0	N.D.	
7) Chloromethane	0.000		0	N.D.	
8) Dichlorotetrafluoroethane	0.000		0	N.D.	
9) Isobutane	4.544	43	126394	10.03 ppbv	91
10) Methanol	0.000		0+	N.D. d	
11) Vinyl Chloride	4.646	62	2073486m	217.92 ppbv	
12) 1,3-Butadiene	0.000		0	N.D. d	
13) Butane	4.844	43	276850	23.64 ppbv	96
14) Bromomethane	0.000		0	N.D.	
15) Chloroethane	0.000		0	N.D. d	
16) Ethanol	0.000		0	N.D. d	
17) Acrolein	0.000		0	N.D.	
18) Acetone	5.871	58	567346m	131.43 ppbv	
19) Trichlorofluoromethane	0.000		0	N.D.	
20) Isopropanol	6.114	45	131302	4.76 ppbv	96
21) Acrylonitrile	0.000		0	N.D. d	
22) 1,1-Dichloroethene	0.000		0	N.D. d	
23) Methylene Chloride	6.885	84	174	N.D.	
24) Tert-Butyl Alcohol (TBA)	0.000		0	N.D. d	
25) 1,1,2-Trichloro-1,2,2-...	0.000		0	N.D.	
26) Carbon Disulfide	7.192	76	64998	1.31 ppbv #	21
27) t-1,2-Dichloroethene	8.030	96	528443m	26.41 ppbv	
28) 1,1-Dichloroethane	0.000		0	N.D. d	
29) Methyl-t-Butyl Ether (...	0.000		0	N.D.	
30) Vinyl Acetate	0.000		0	N.D. d	
31) 2-Butanone	8.734	43	126084m	3.04 ppbv	
32) c-1,2-Dichloroethene	9.285	96	2002372m	104.19 ppbv	
33) Hexane	9.596	57	137894m	5.35 ppbv	
34) Diisopropyl Ether (DIPE)	9.470	45	2277	N.D.	
35) Ethyl Acetate	9.596	61	73	N.D.	
36) Chloroform	0.000		0	N.D.	
37) Tetrahydrofuran	0.000		0	N.D.	
38) Ethyl-t-Butyl Ether (E...	0.000		0	N.D.	
40) 1,2-Dichloroethane	0.000		0	N.D.	
41) 1,1,1-Trichloroethane	0.000		0	N.D.	
43) Benzene	11.626	78	158186	2.96 ppbv	100
44) Carbon Tetrachloride	0.000		0	N.D.	
45) Cyclohexane	12.035	56	36401	1.20 ppbv	95

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) Tert-Amyl-Methyl Ether...	0.000		0	N.D.	
47) 1,2-Dichloropropane	0.000		0	N.D.	
48) Bromodichloromethane	0.000		0	N.D. d	
49) Trichloroethene	13.170	95	499901	20.34 ppbv	99
50) 2,2,4-Trimethyl Pentane	13.284	57	17478	0.18 ppbv #	62
51) 1,4-Dioxane	0.000		0	N.D.	
52) Methyl Methacrylate	0.000		0	N.D.	
53) Heptane	13.704	100	1438	0.30 ppbv #	40
54) c-1,3-Dichloropropene	0.000		0	N.D.	
55) 4-Methyl-2-Pentanone	0.000		0	N.D. d	
56) t-1,3-Dichloropropene	0.000		0	N.D.	
57) 1,1,2-Trichloroethane	0.000		0	N.D.	
60) Toluene	16.116	91	92722	1.49 ppbv	99
61) 2-Hexanone	0.000		0	N.D. d	
62) Dibromochloromethane	0.000		0	N.D.	
63) 1,2-Dibromoethane	0.000		0	N.D.	
64) Tetrachloroethene	18.080	166	156195	4.74 ppbv	98
65) Chlorobenzene	19.308	112	2352	N.D.	
66) Ethylbenzene	20.061	91	44311	0.57 ppbv	99
67) p/m-Xylene	20.399	91	149891	2.47 ppbv	97
68) Bromoform	0.000		0	N.D.	
69) Styrene	21.120	104	6762	0.15 ppbv	97
70) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
71) o-Xylene	21.327	91	49185	0.81 ppbv	100
72) 1,2,3-Trichloropropane	0.000		0	N.D.	
74) Isopropylbenzene	0.000		0	N.D. d	
75) 2-Chlorotoluene	0.000		0	N.D.	
76) n-Propylbenzene	23.695	91	10602	0.10 ppbv	97
77) 4-Ethyltoluene	24.044	105	14186	0.18 ppbv	99
78) 1,3,5-Trimethylbenzene	24.235	105	12732	0.19 ppbv	98
79) 1,2,4-Trimethylbenzene	25.179	105	43544	0.66 ppbv	92
80) Benzyl Chloride	0.000		0	N.D.	
81) 1,3-Dichlorobenzene	25.463	146	924	N.D.	
82) 1,4-Dichlorobenzene	0.000		0	N.D.	
83) 1,2-Dichlorobenzene	0.000		0	N.D.	
84) 1,2,4-Trichlorobenzene	30.739	180	823	N.D.	
85) Naphthalene	0.000		0	N.D. d	
86) Hexachloro-1,3-Butadiene	31.743	225	164	N.D.	

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

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
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Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
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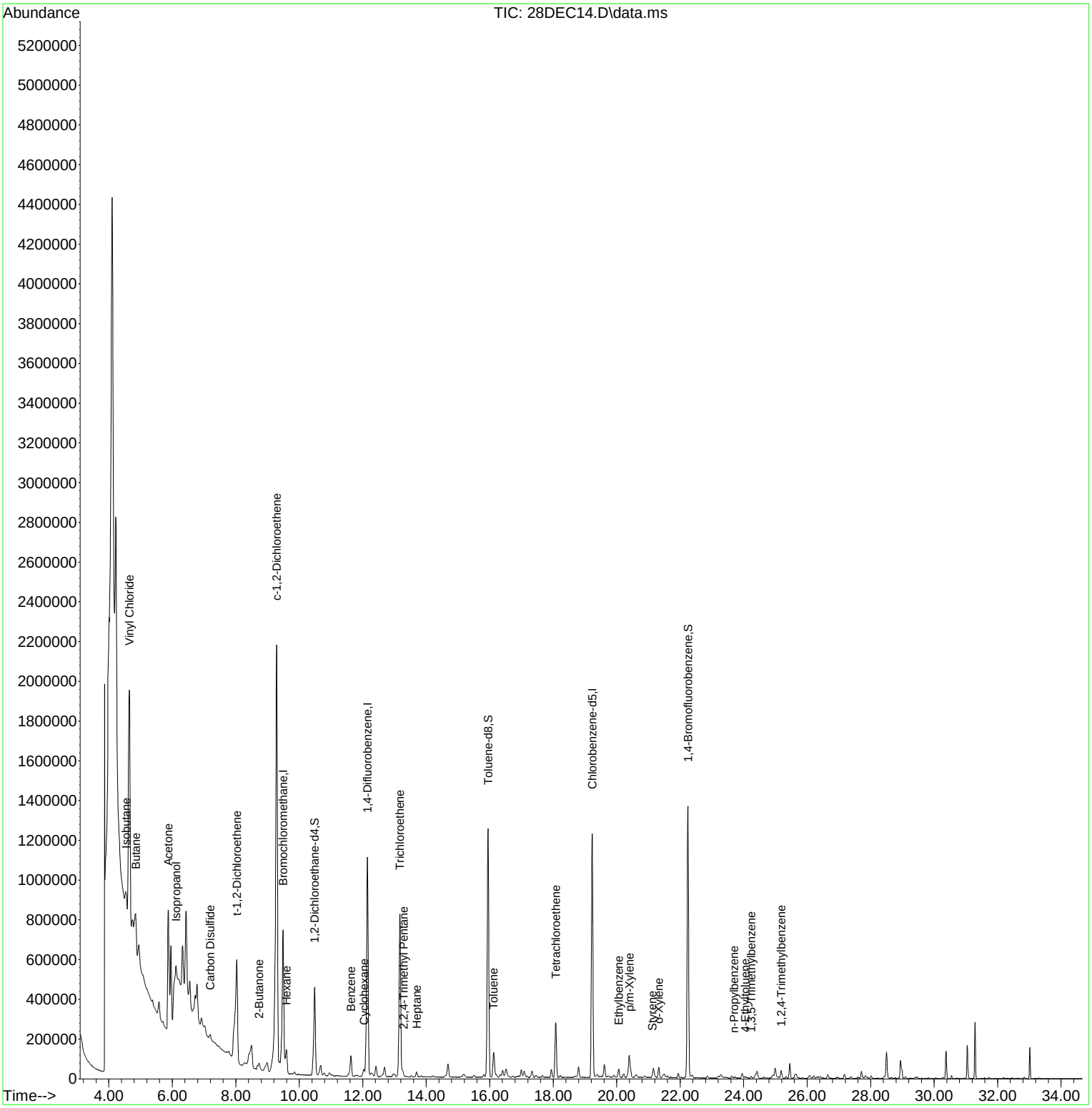
DataAcq Meth:TO15.M



Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
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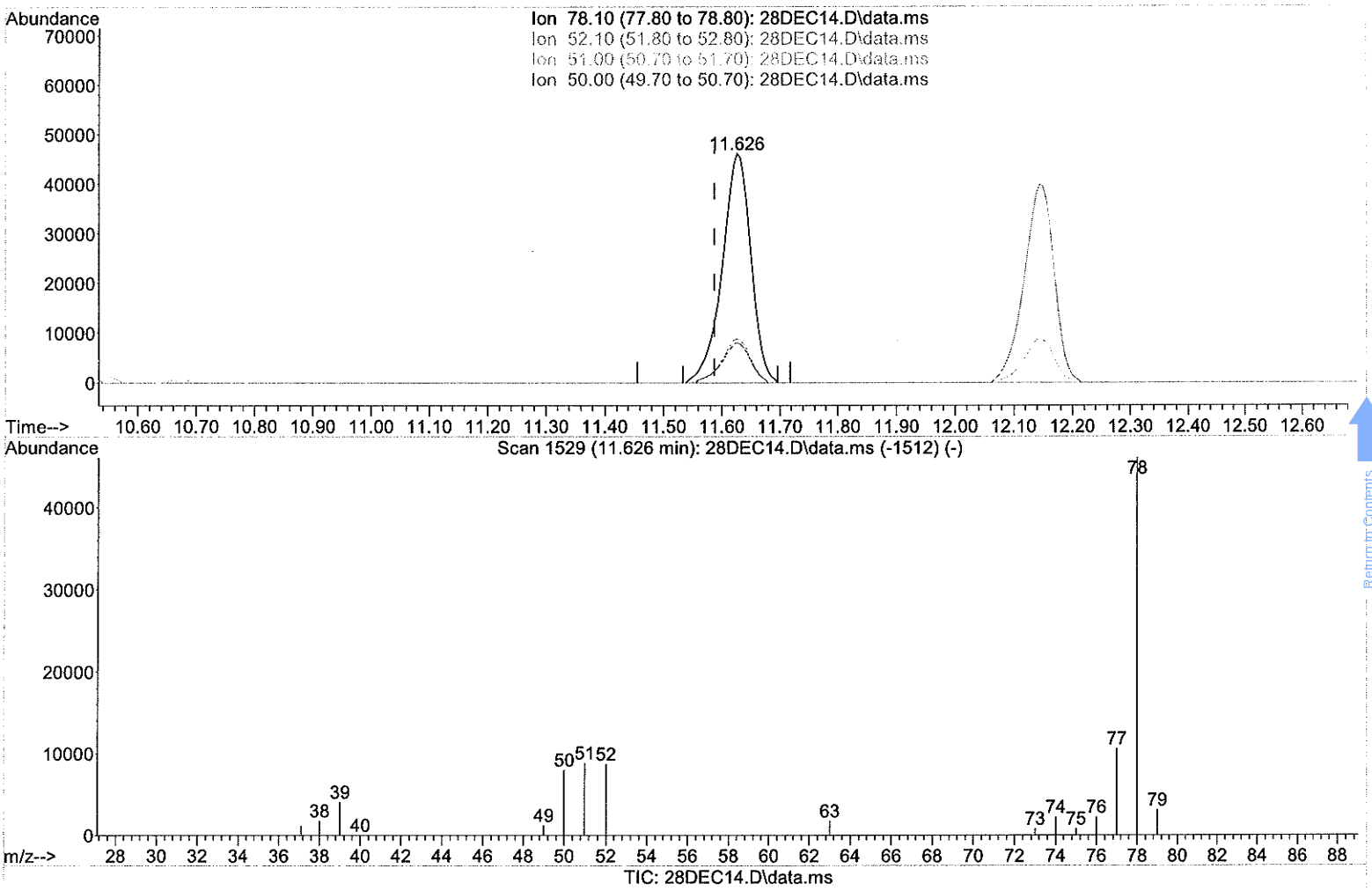
DataAcq Meth:TO15.M



(43) Benzene

11.626min (+0.038) 2.96 ppbv

response 158186

Ion	Exp%	Act%
78.10	100	100
52.10	18.90	18.93
51.00	19.10	19.18
50.00	17.20	17.37

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D
Acq On : 28 Dec 2013 4:33 pm
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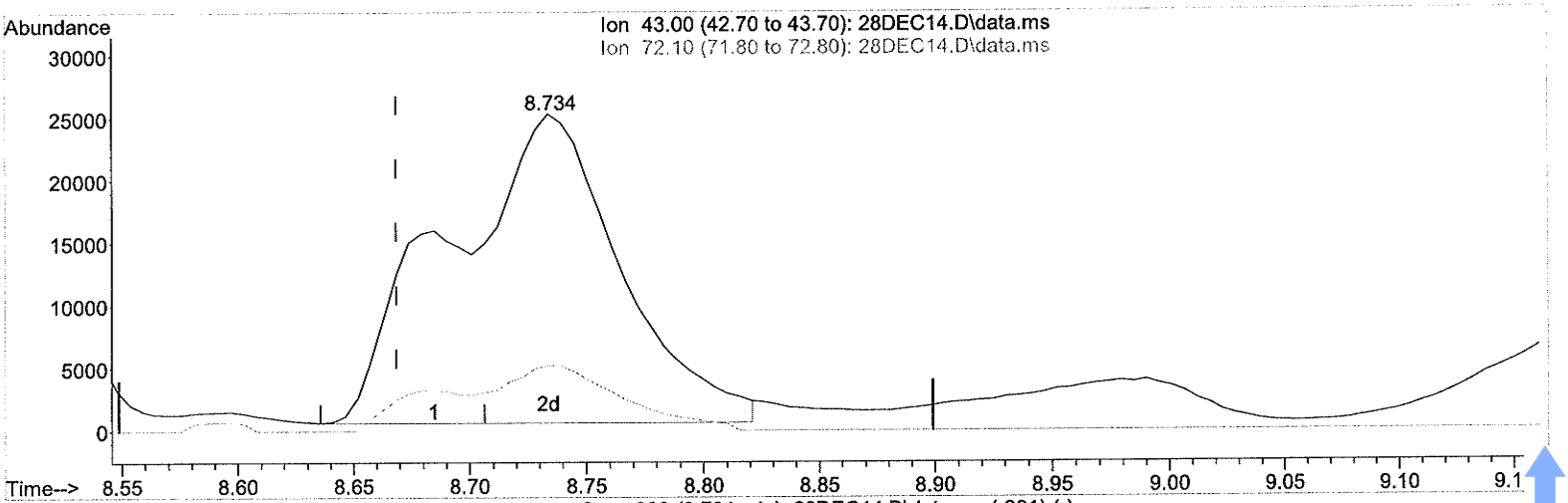
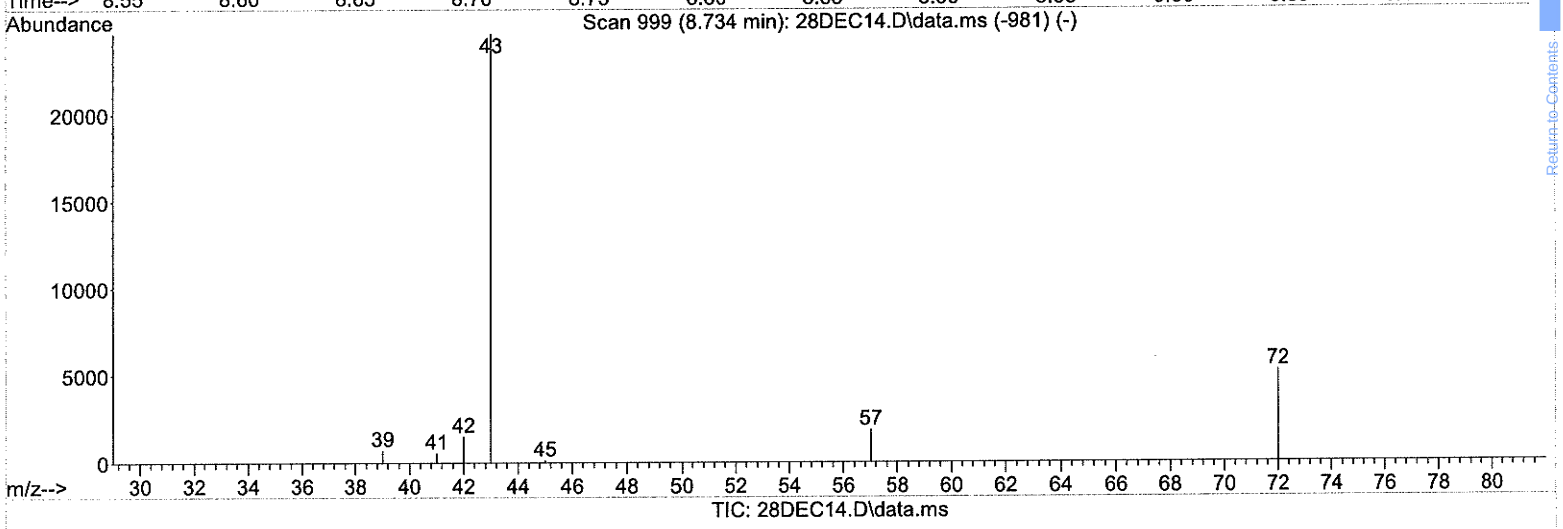
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:27:28 2014
Quant Results File: 131227DOD.RES

Vial: 16
Operator: 846
Inst : GCMS YY

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(31) 2-Butanone

8.734min (+0.065) 3.04 ppbv m

response 126084

Ion	Exp%	Act%
43.00	100	100
72.10	21.30	20.68
0.00	0.00	0.00
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date: 1/2/14
Chemist: 326 GL: 858
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy.

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
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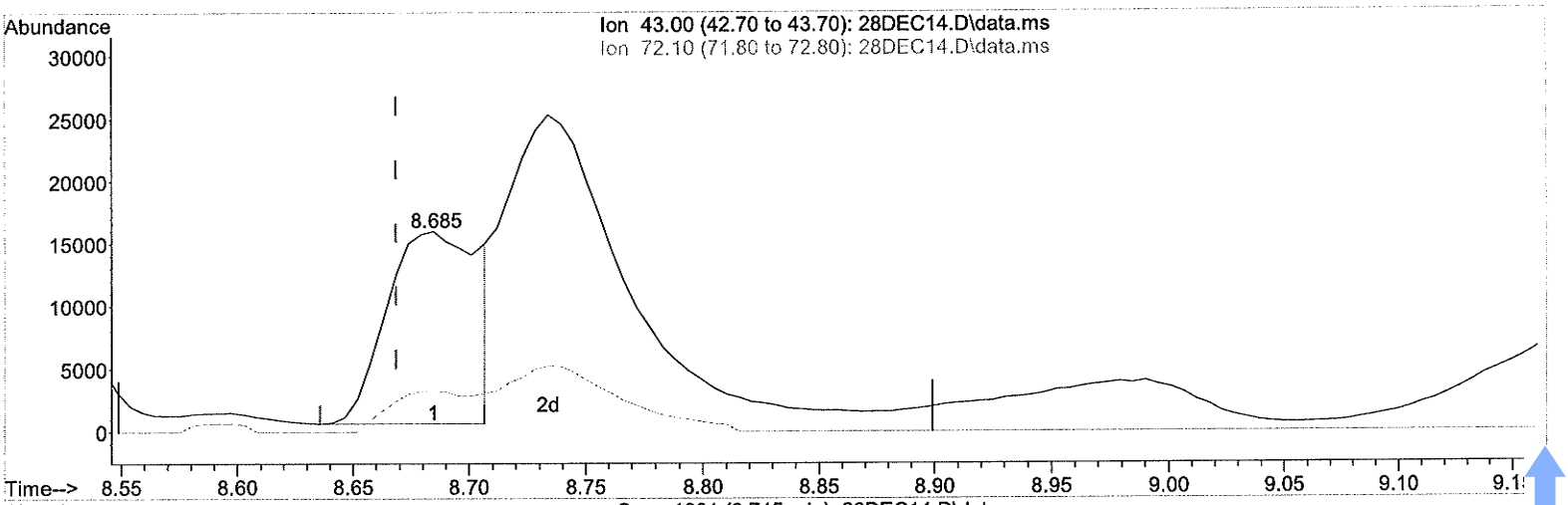
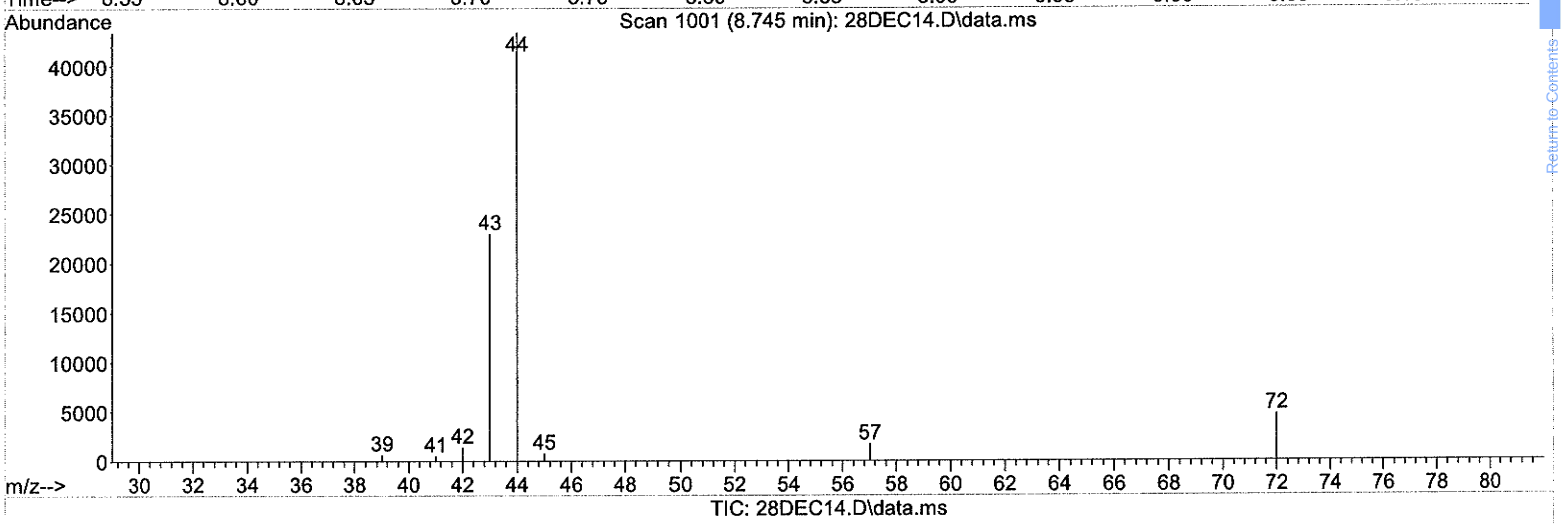
Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(31) 2-Butanone

8.685min (+0.016) 1.02 ppbv

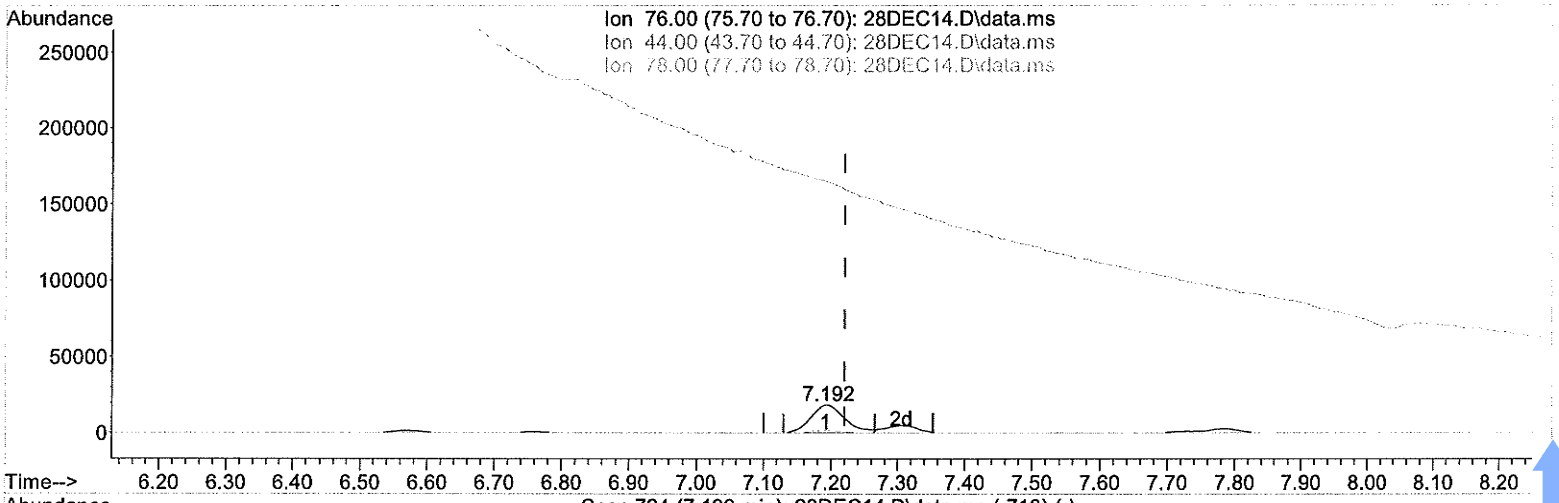
response 42143

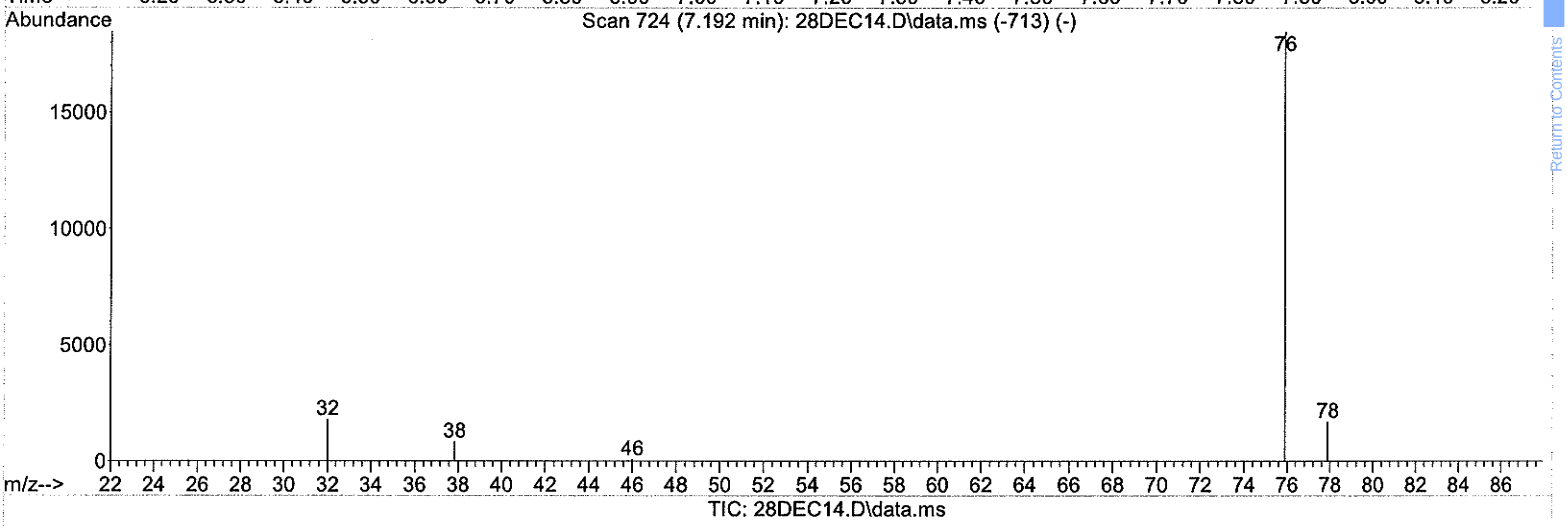
Ion	Exp%	Act%
43.00	100	100
72.10	21.30	20.96
0.00	0.00	0.00
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date:
Chemist: GL:
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy.

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(26) Carbon Disulfide

7.192min (-0.029) 1.31 ppbv

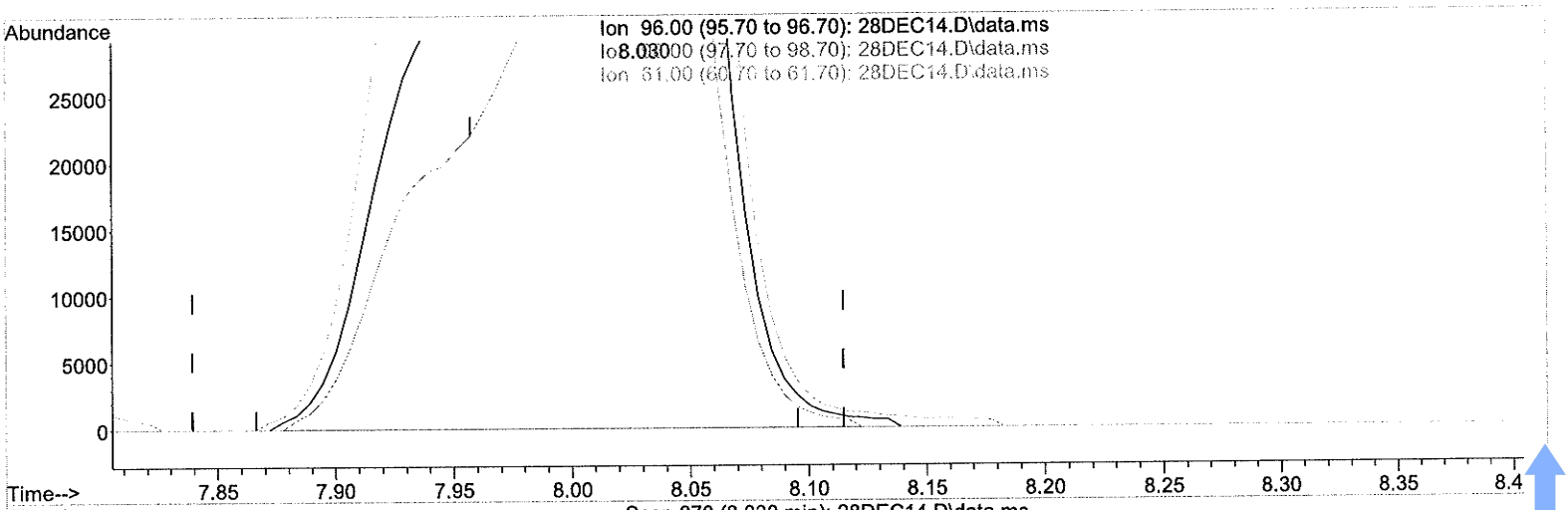
response 64998

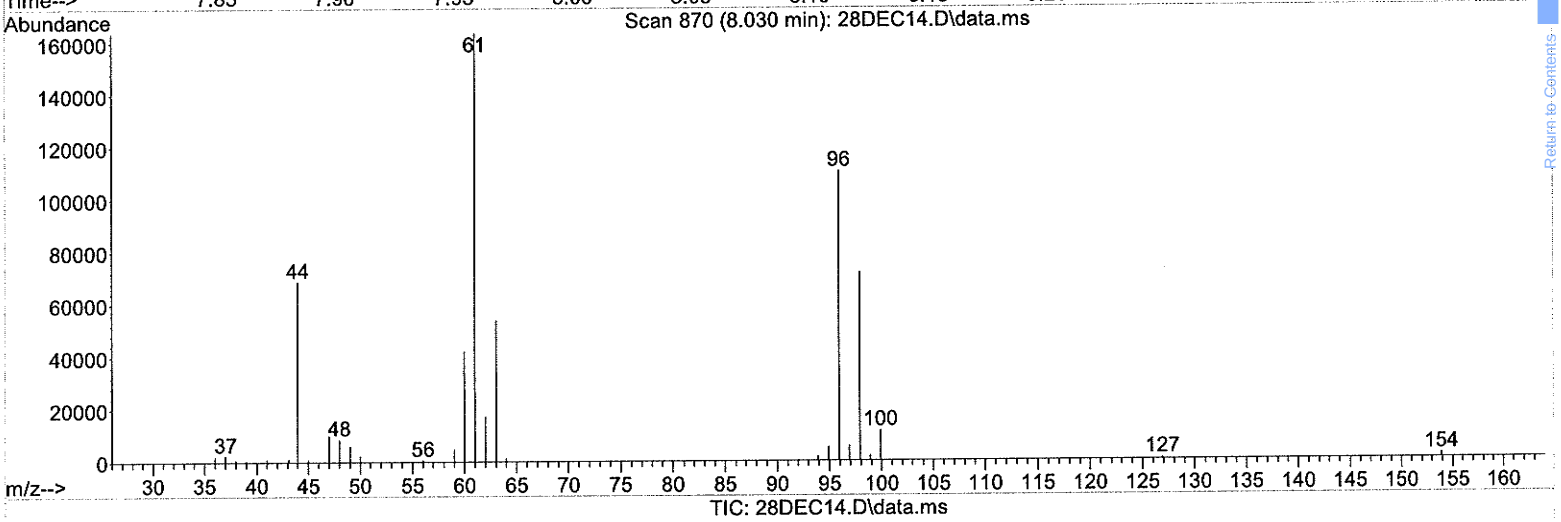
Ion	Exp%	Act%
76.00	100	100
44.00	12.70	67.47#
78.00	9.90	9.20
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D
Acq On : 28 Dec 2013 4:33 pm
Sample : 13-12-1615-1A 400ML
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:27:28 2014
Quant Results File: 131227DOD.RES

Vial: 16
Operator: 846
Inst : GCMS YY

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(27) t-1,2-Dichloroethene

8.030min (+0.073) 26.41 ppbv m

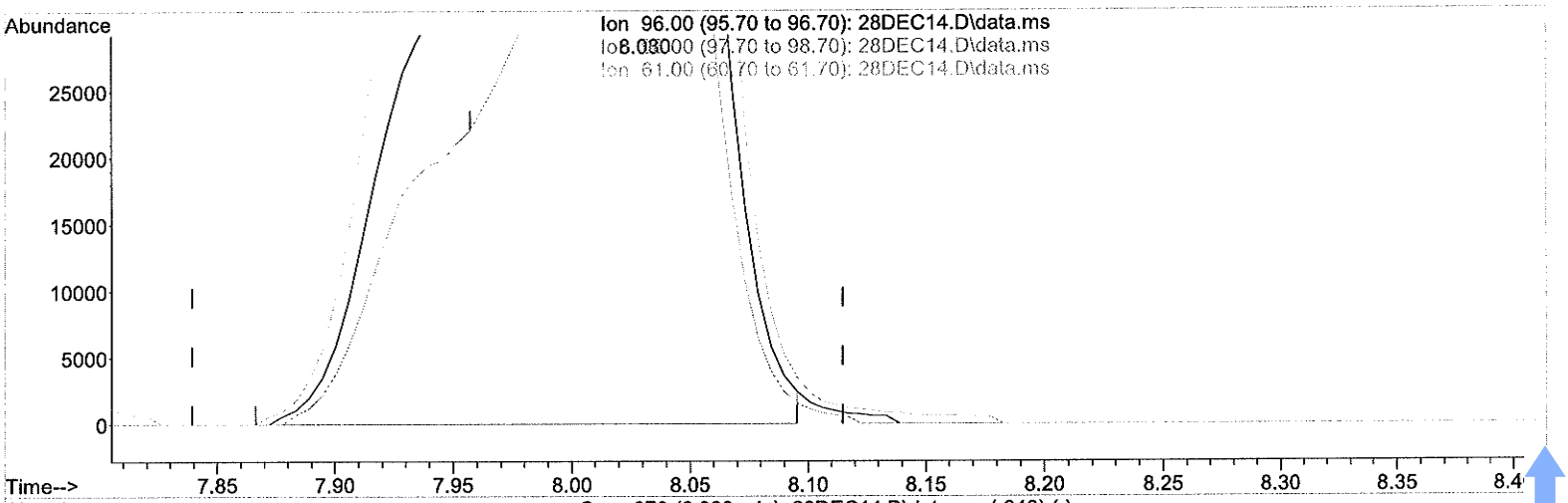
response 528443

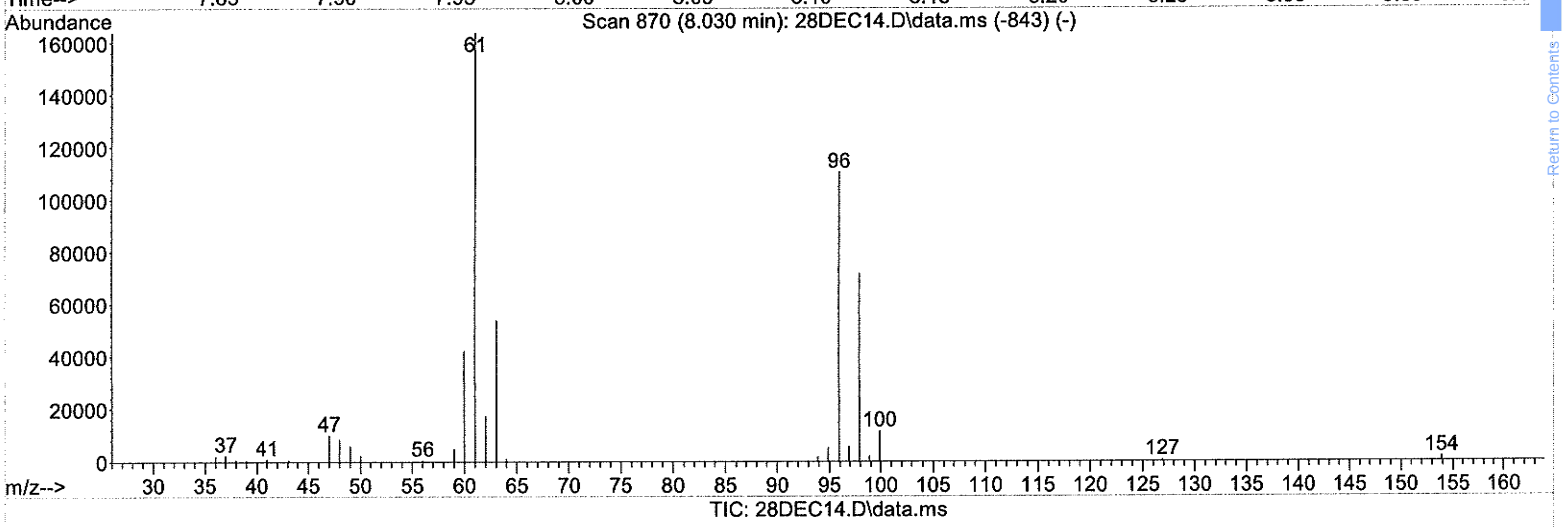
Ion	Exp%	Act%
96.00	100	100
98.00	62.90	65.03
61.00	149.70	148.32
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date: 1/2/14
Chemist: 326 GL: 858
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy.

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:27:28 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(27) t-1,2-Dichloroethene

8.030min (+0.073) 26.60 ppbv

response 532344

Ion	Exp%	Act%
96.00	100	100
98.00	62.90	65.03
61.00	149.70	148.32
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date:
Chemist: GL:
Reason: BASELINE CORR., PEAK ID CORR.
Other :
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Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D
Acq On : 28 Dec 2013 4:33 pm
Sample : 13-12-1615-1A 400ML
Misc : AIR-01-31-15 326
Integrator: RTE
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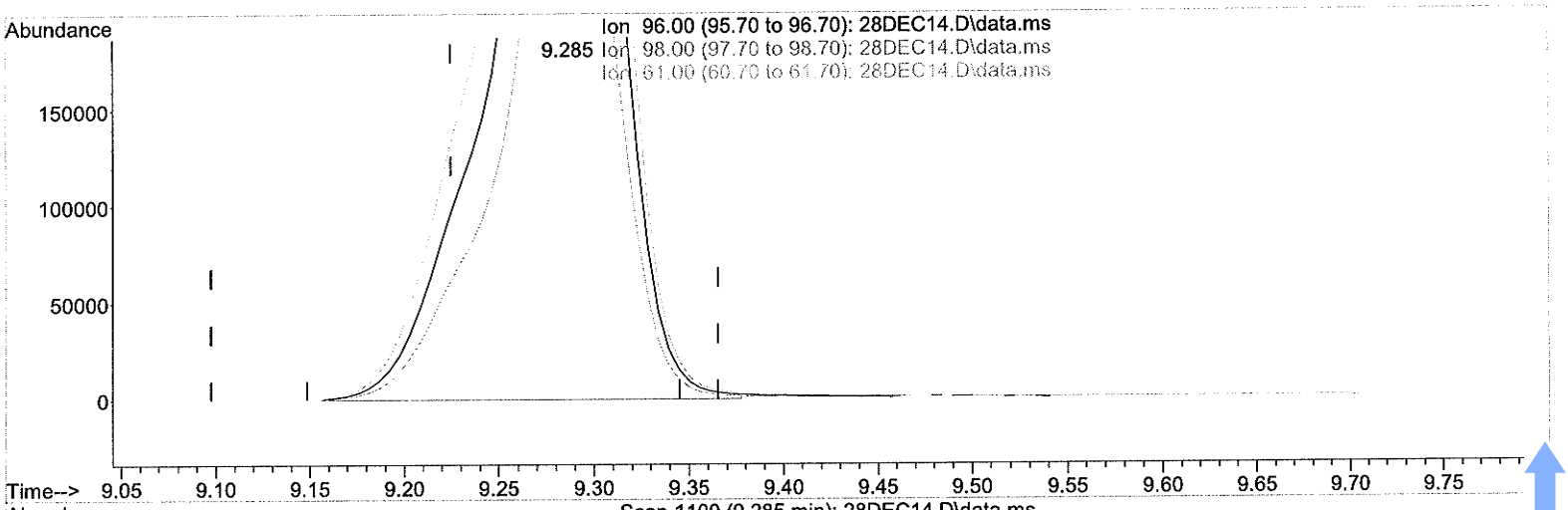
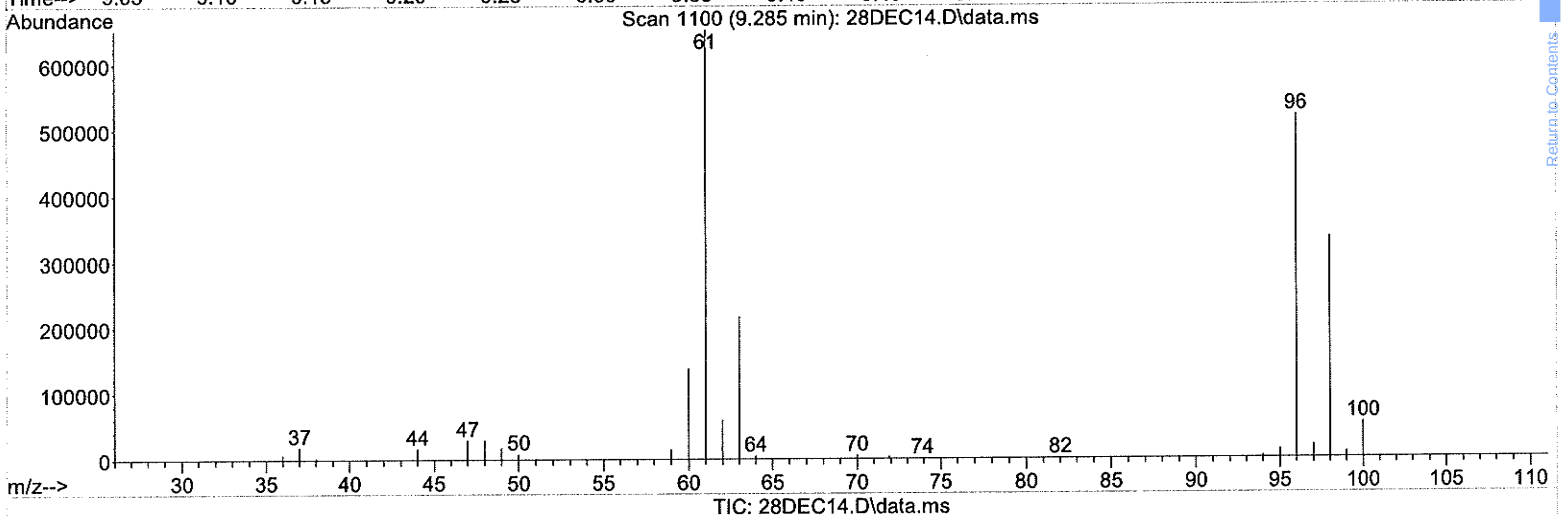
Quant Results File: 131227DOD.RES

Vial: 16
Operator: 846
Inst : GCMS YY

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(32) c-1,2-Dichloroethene

9.285min (+0.060) 104.19 ppbv m

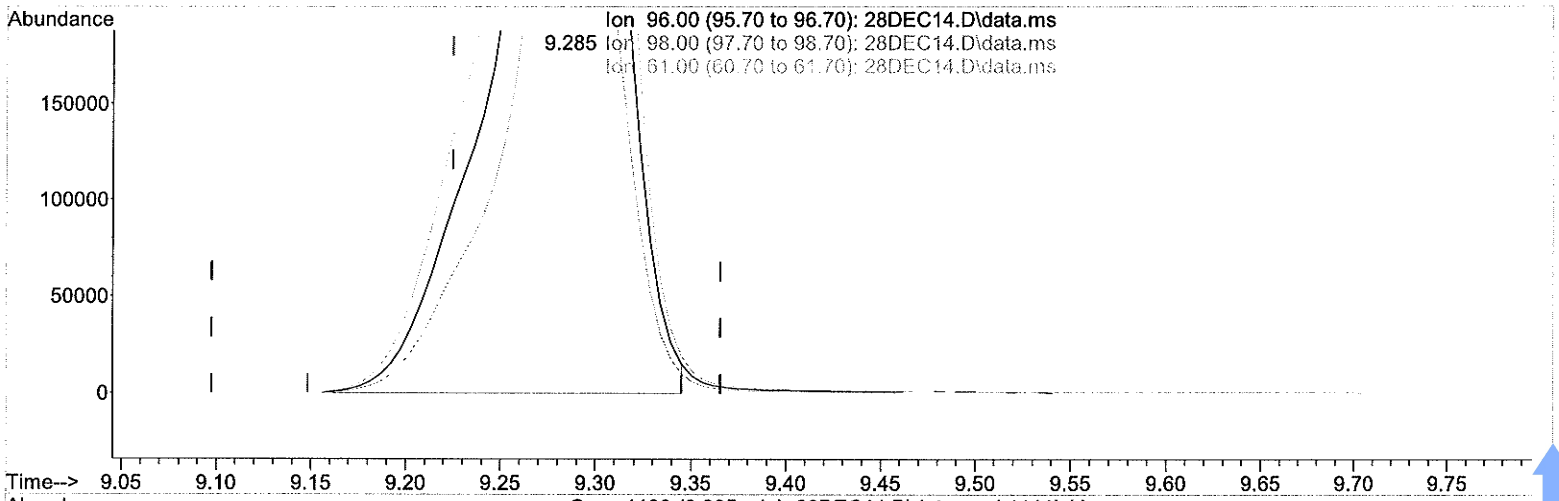
response 2002372

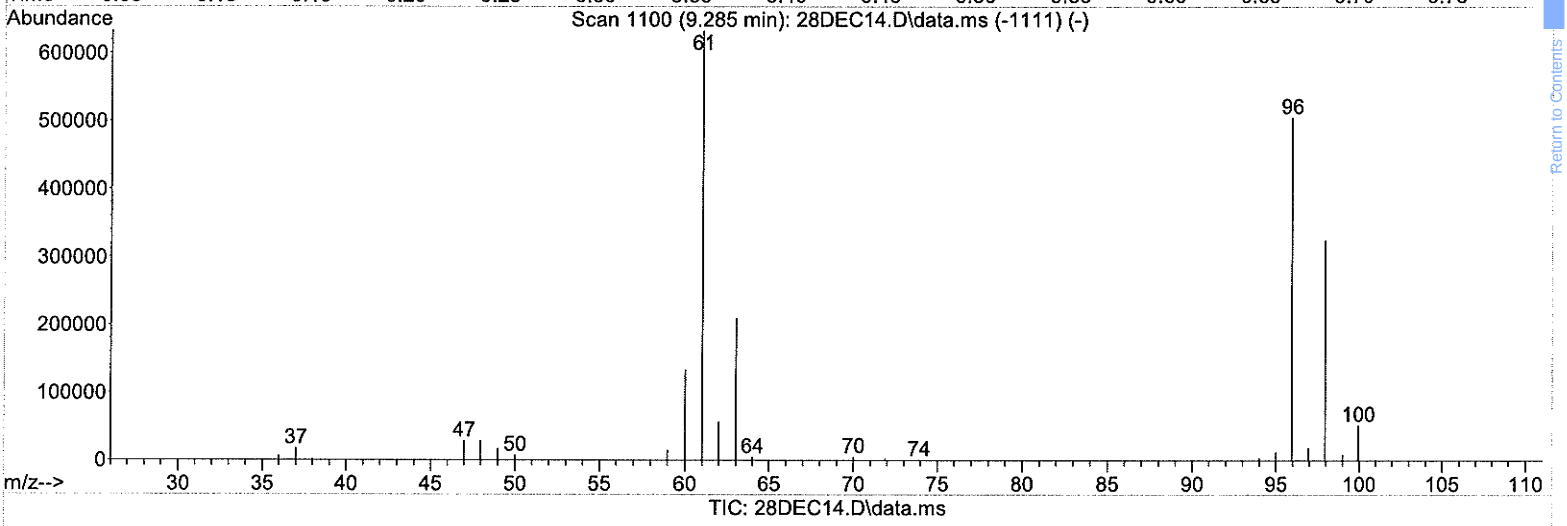
Ion	Exp%	Act%
96.00	100	100
98.00	63.90	64.41
61.00	137.10	125.41
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date: 1/2/14
Chemist: 326 GL: 858
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy.

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:27:28 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(32) c-1,2-Dichloroethene

9.285min (+0.060) 103.74 ppbv

response 1993776

Ion	Exp%	Act%
96.00	100	100
98.00	63.90	64.41
61.00	137.10	125.41
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date:
Chemist: GL:
Reason: BASELINE CORR., PEAK ID CORR.
Other :
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Integrator: RTE
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Quant Results File: 131227DOD.RES

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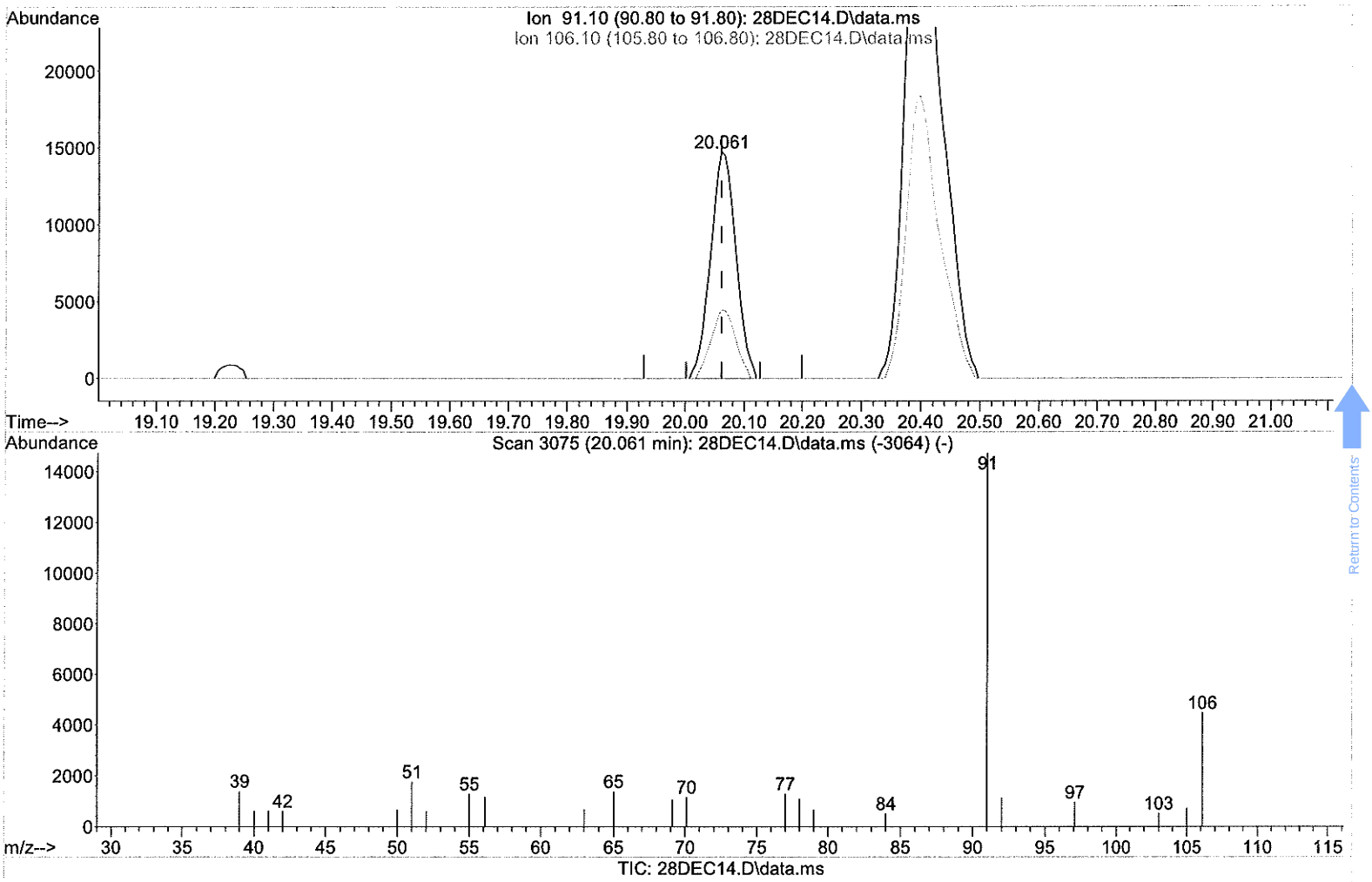
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



(66) Ethylbenzene

20.061min (-0.000) 0.57 ppbv

response 44311

Ion	Exp%	Act%
91.10	100	100
106.10	31.00	30.42
0.00	0.00	0.00
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
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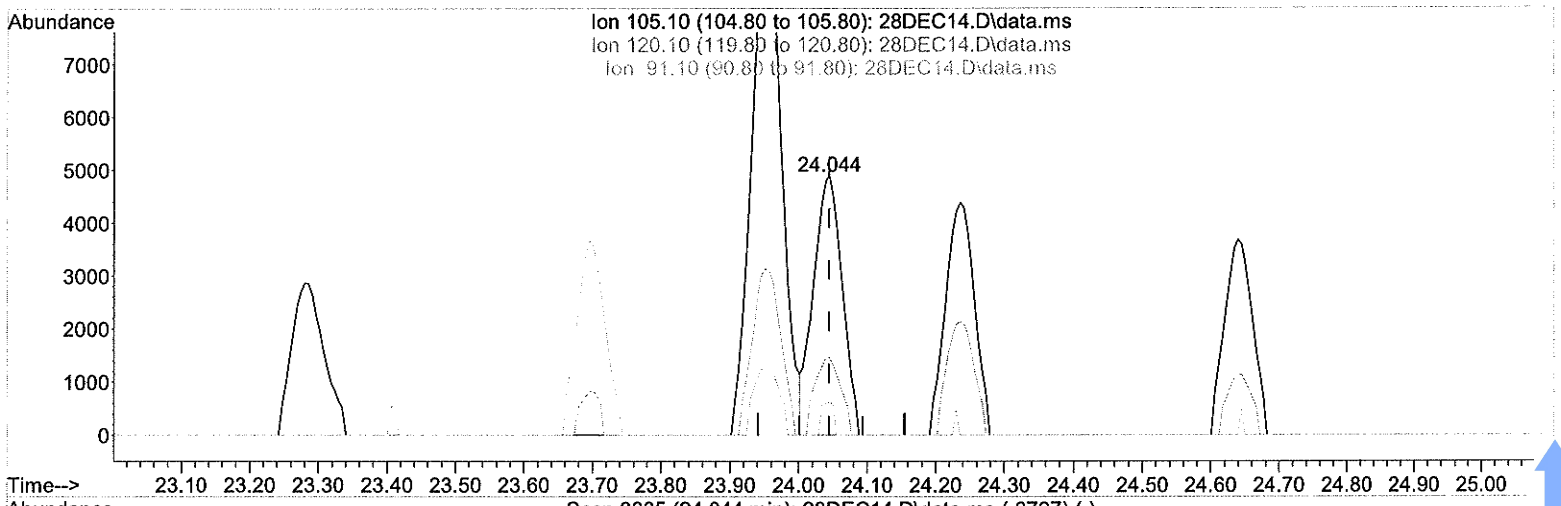
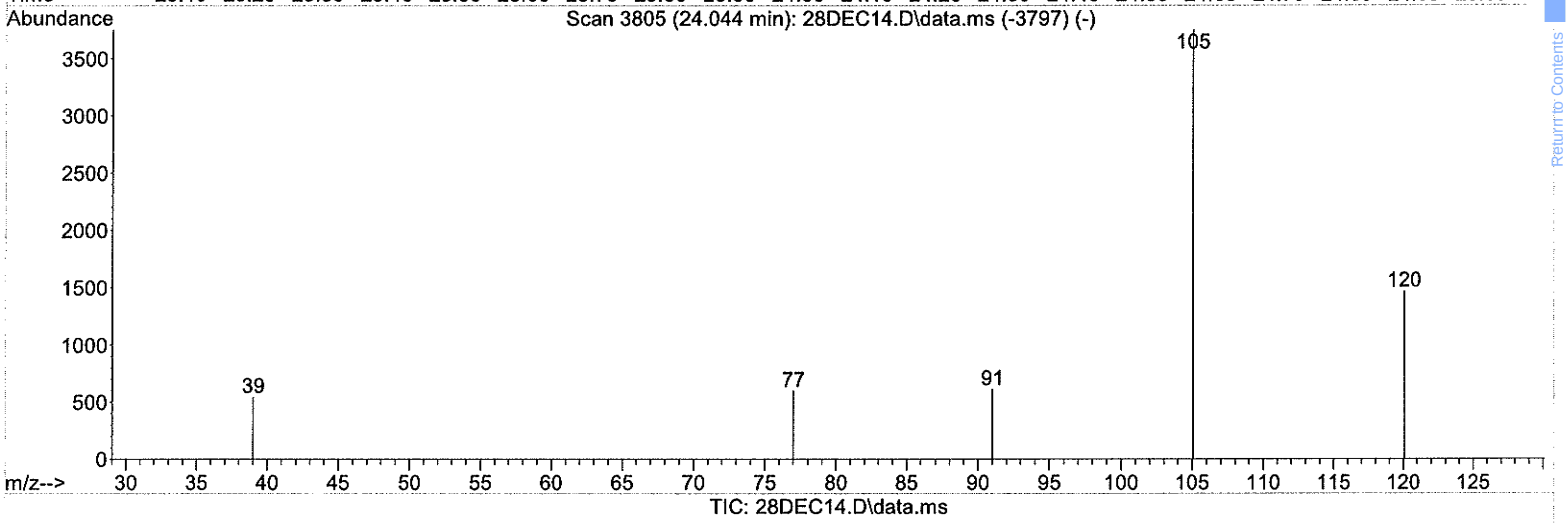




(77) 4-Ethyltoluene

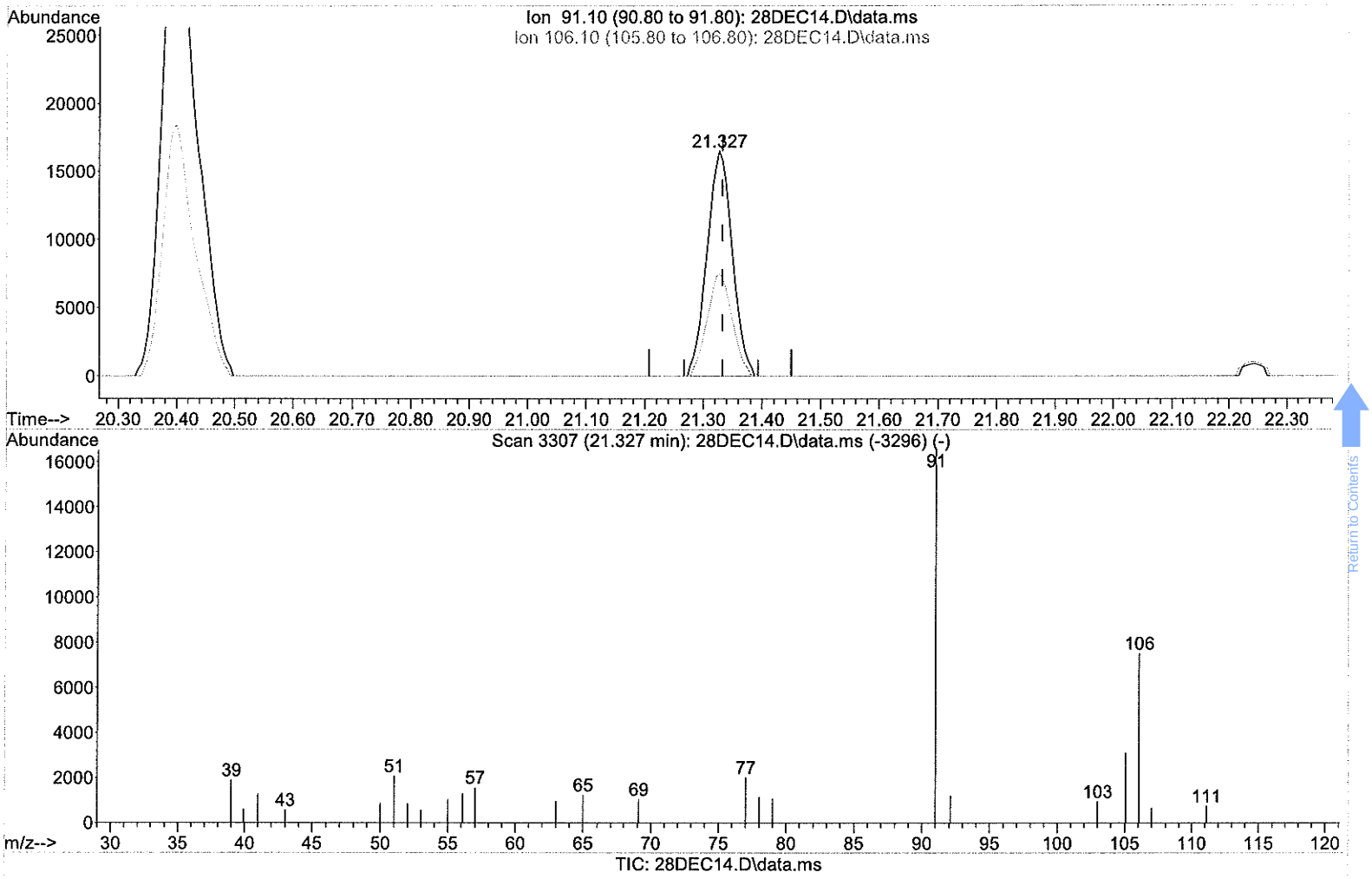
24.044min (-0.000) 0.18 ppbv

response 14186

Ion	Exp%	Act%
105.10	100	100
120.10	30.20	29.90
91.10	11.00	12.51
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



(71) o-Xylene

21.327min (-0.005) 0.81 ppbv

response 49185

Ion	Exp%	Act%
91.10	100	100
106.10	45.80	45.54
0.00	0.00	0.00
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
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Quant Title :
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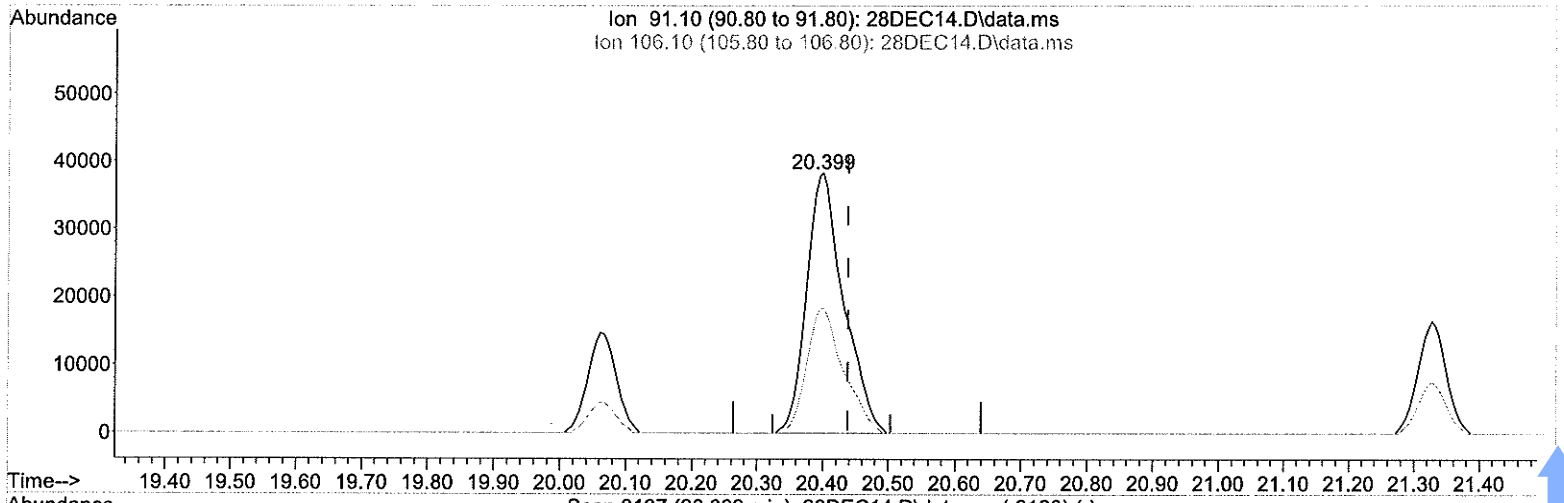
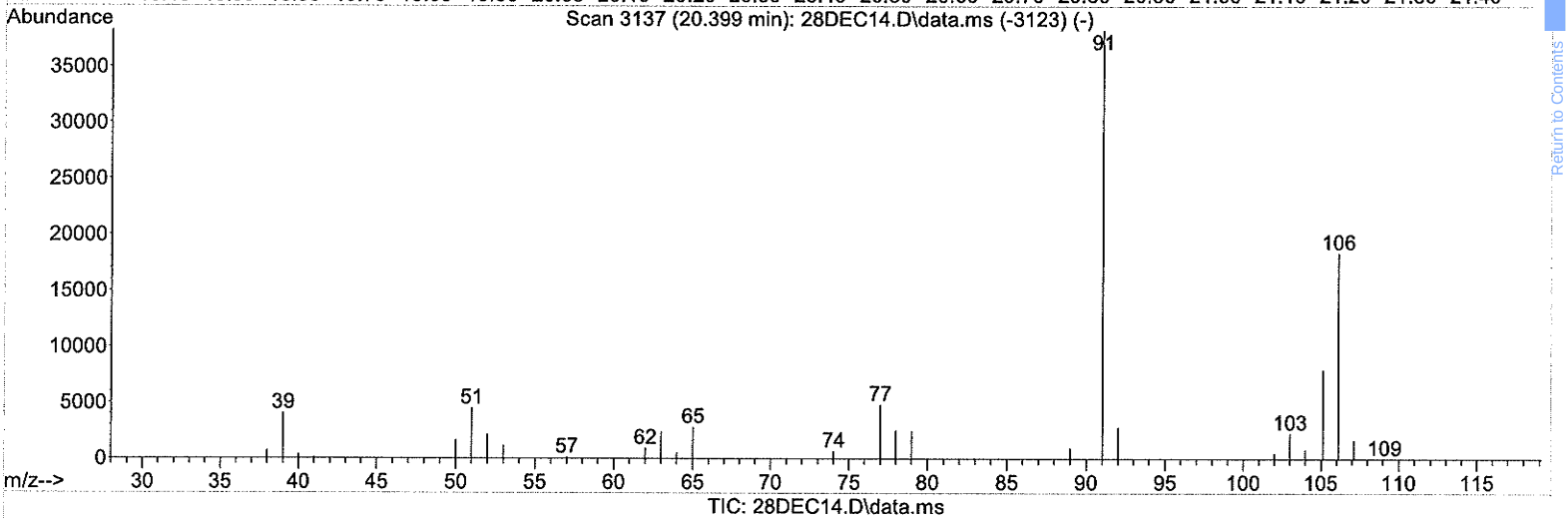
DataAcq Meth:TO15.M





(67) p/m-Xylene

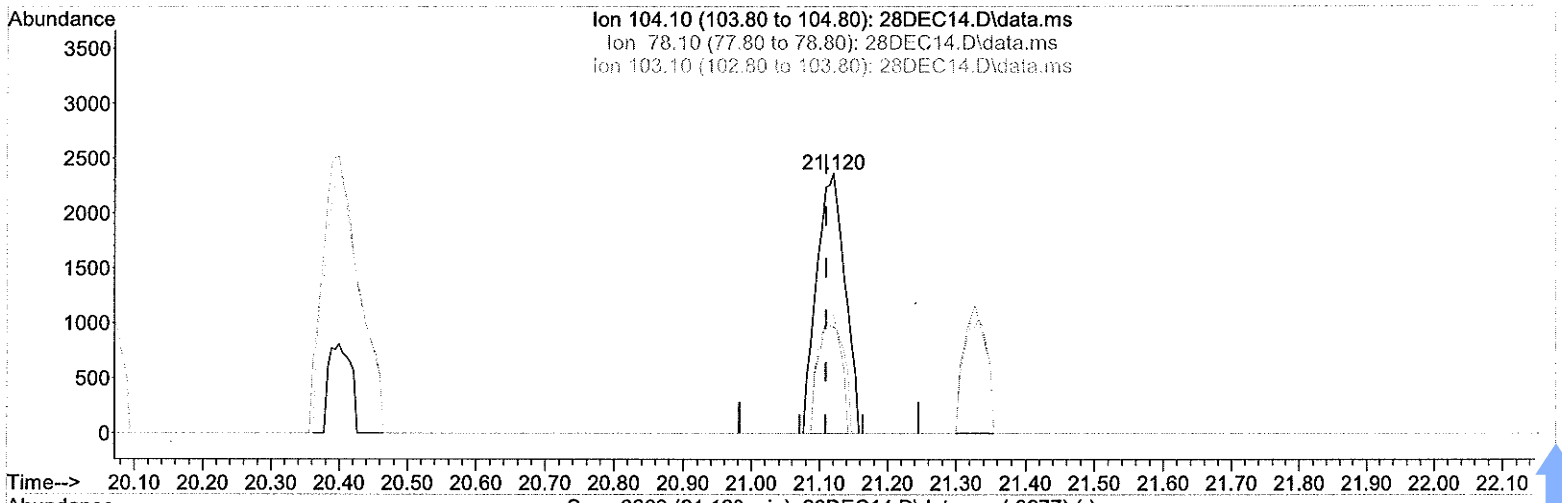
20.399min (-0.038) 2.47 ppbv

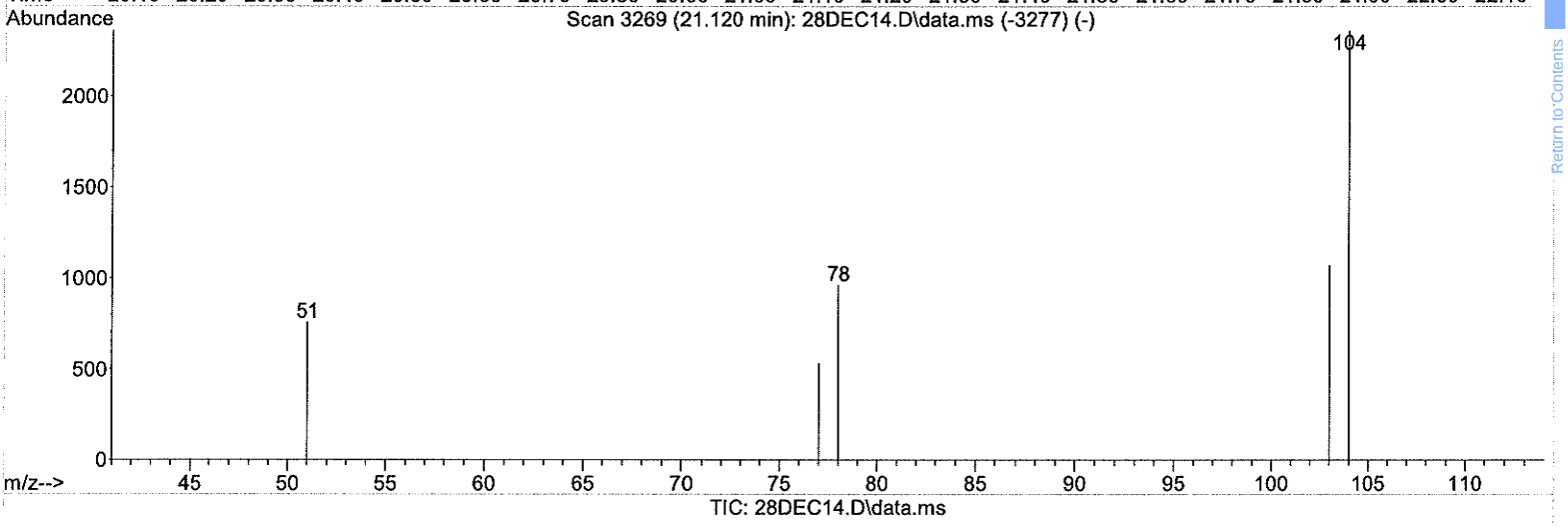
response 149891

Ion	Exp%	Act%
91.10	100	100
106.10	46.30	47.98
0.00	0.00	0.00
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(69) Styrene

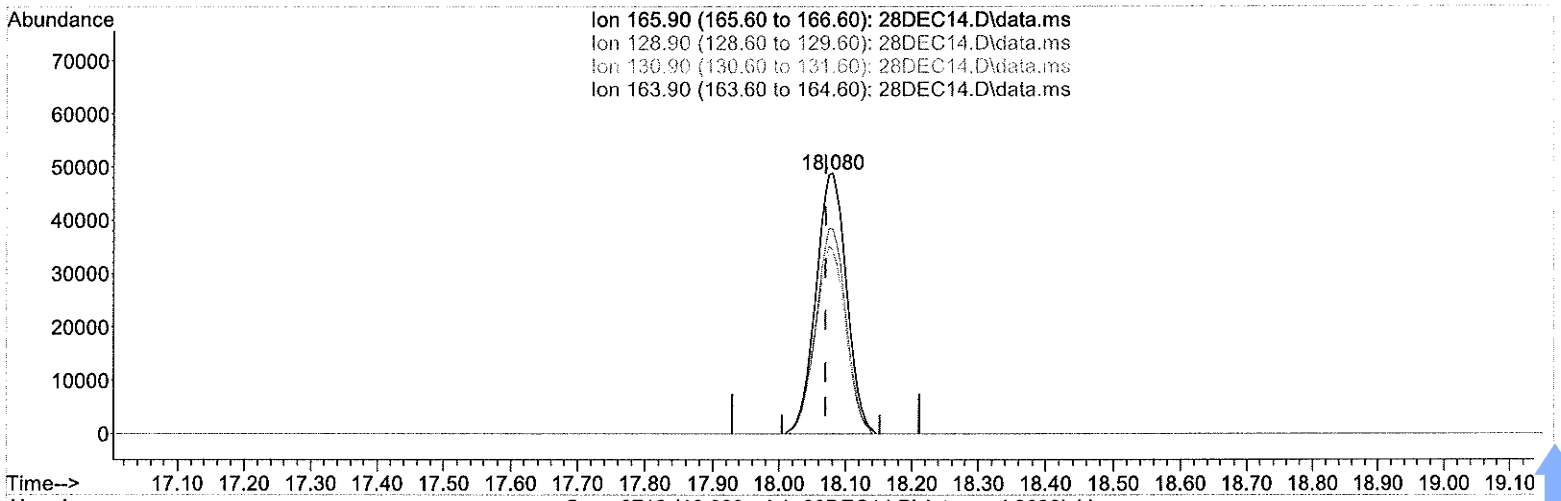
21.120min (+0.011) 0.15 ppbv

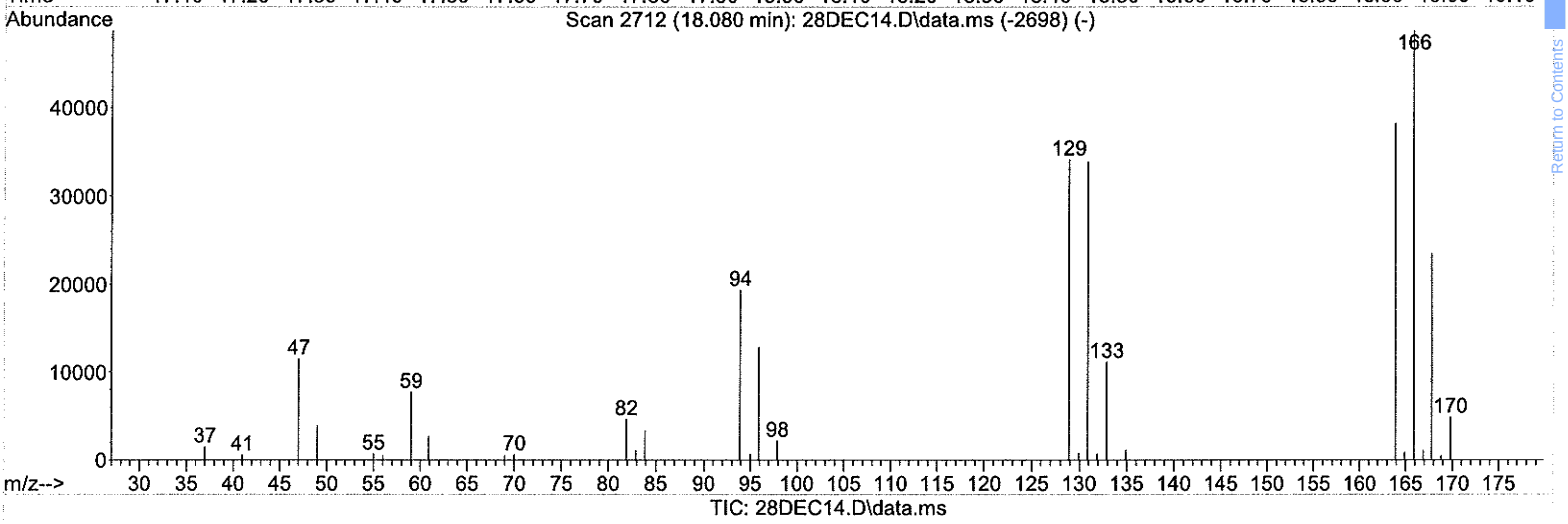
response 6762

Ion	Exp%	Act%
104.10	100	100
78.10	43.10	40.80
103.10	47.10	45.41
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(64) Tetrachloroethene

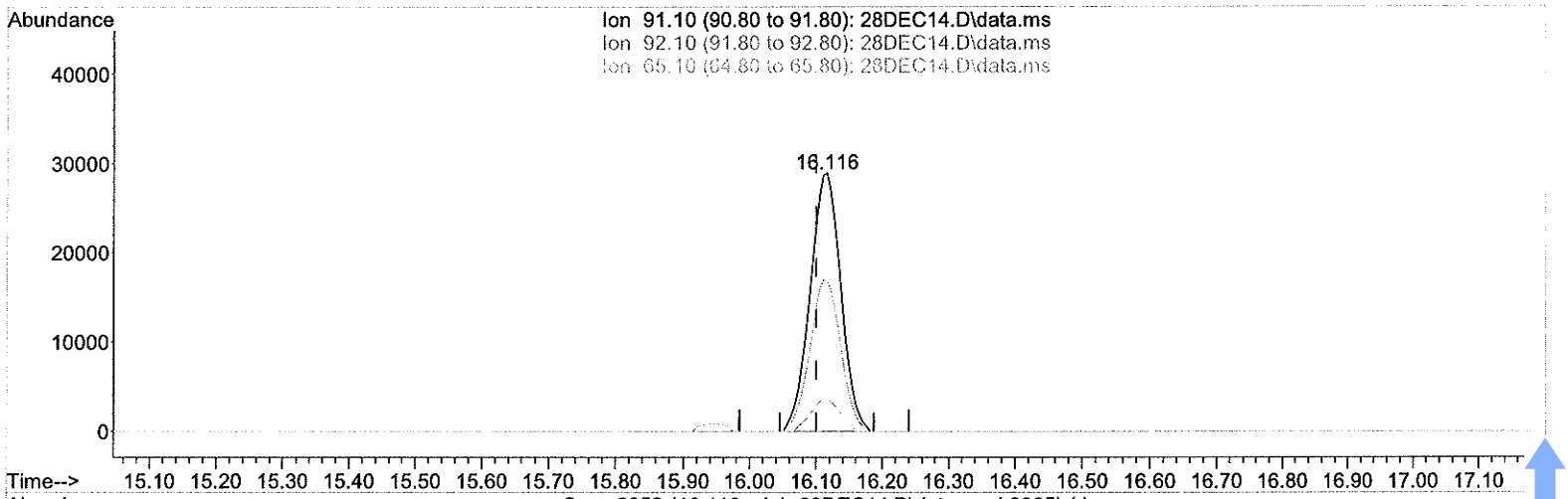
18.080min (+0.011) 4.74 ppbv

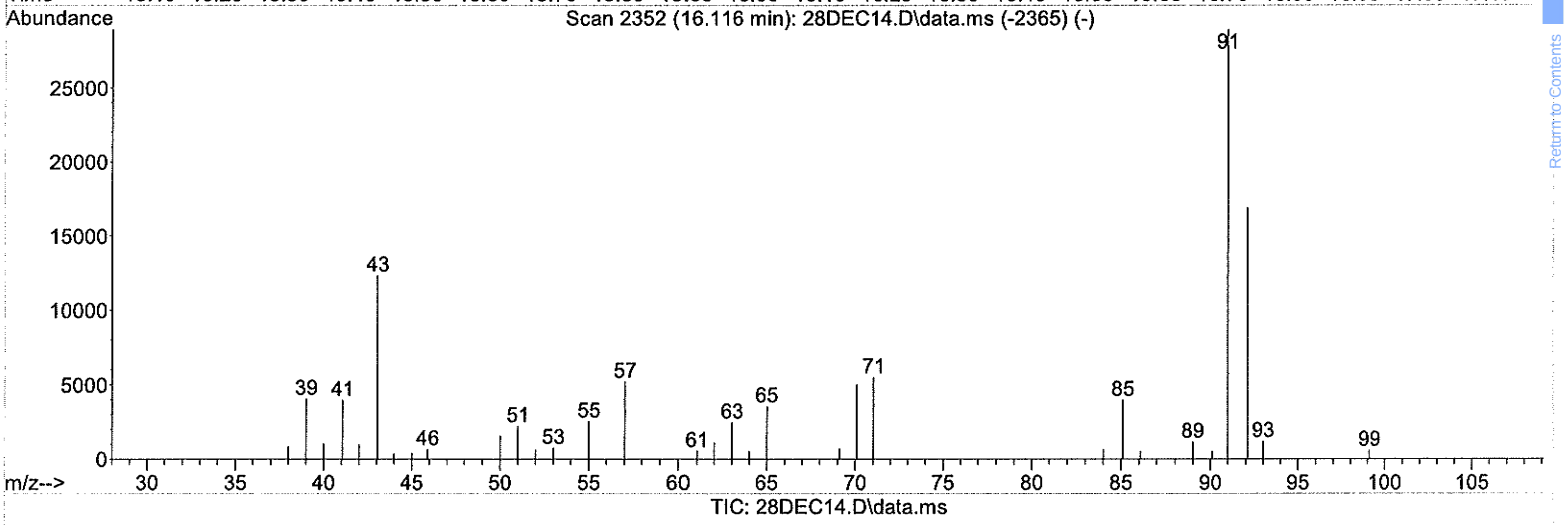
response 156195

Ion	Exp%	Act%
165.90	100	100
128.90	72.90	69.96
130.90	70.30	69.47
163.90	78.80	78.43

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(60) Toluene

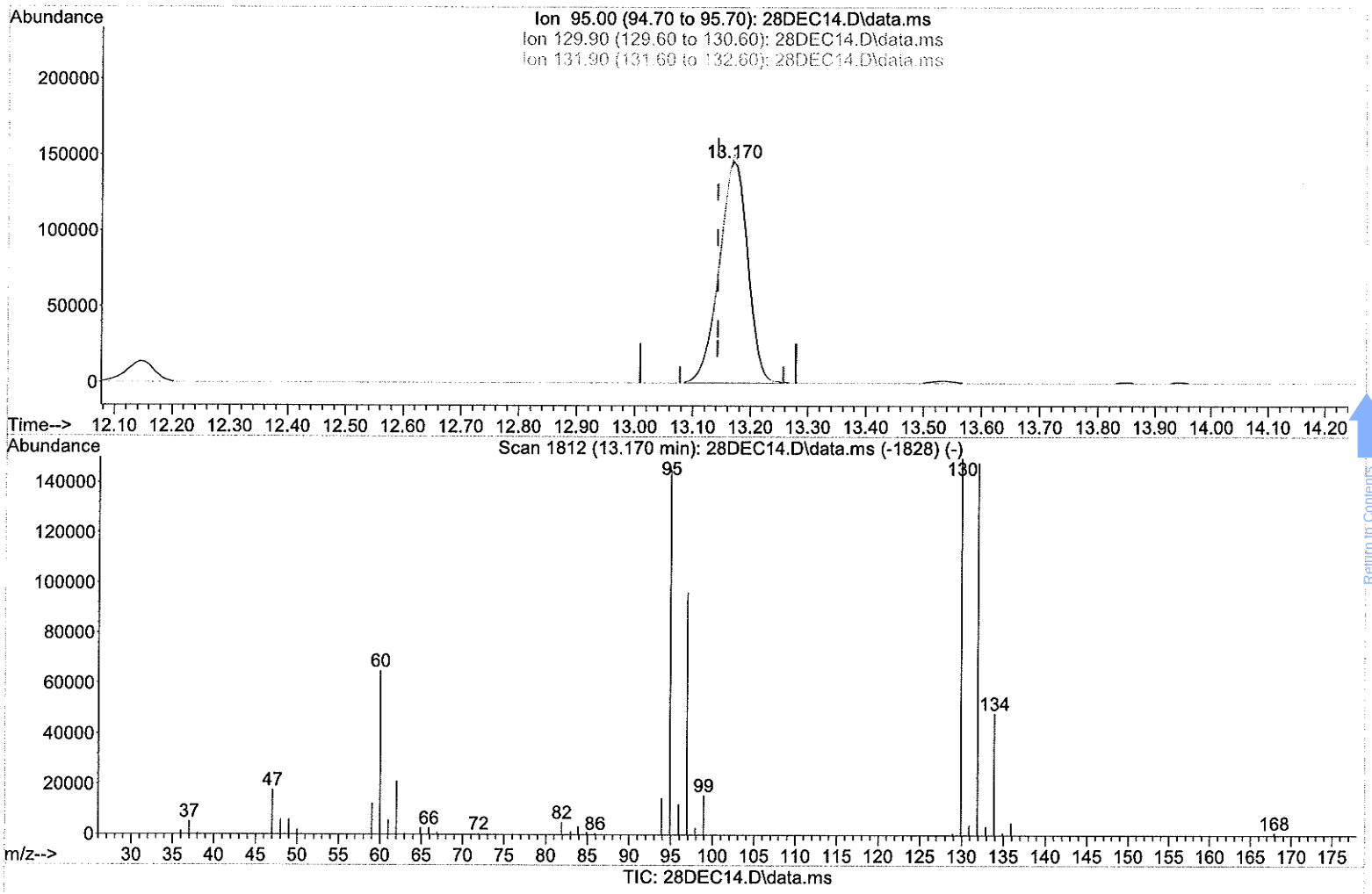
16.116min (+0.016) 1.49 ppbv

response 92722

Ion	Exp%	Act%
91.10	100	100
92.10	59.60	58.43
65.10	12.20	12.27
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



(49) Trichloroethene

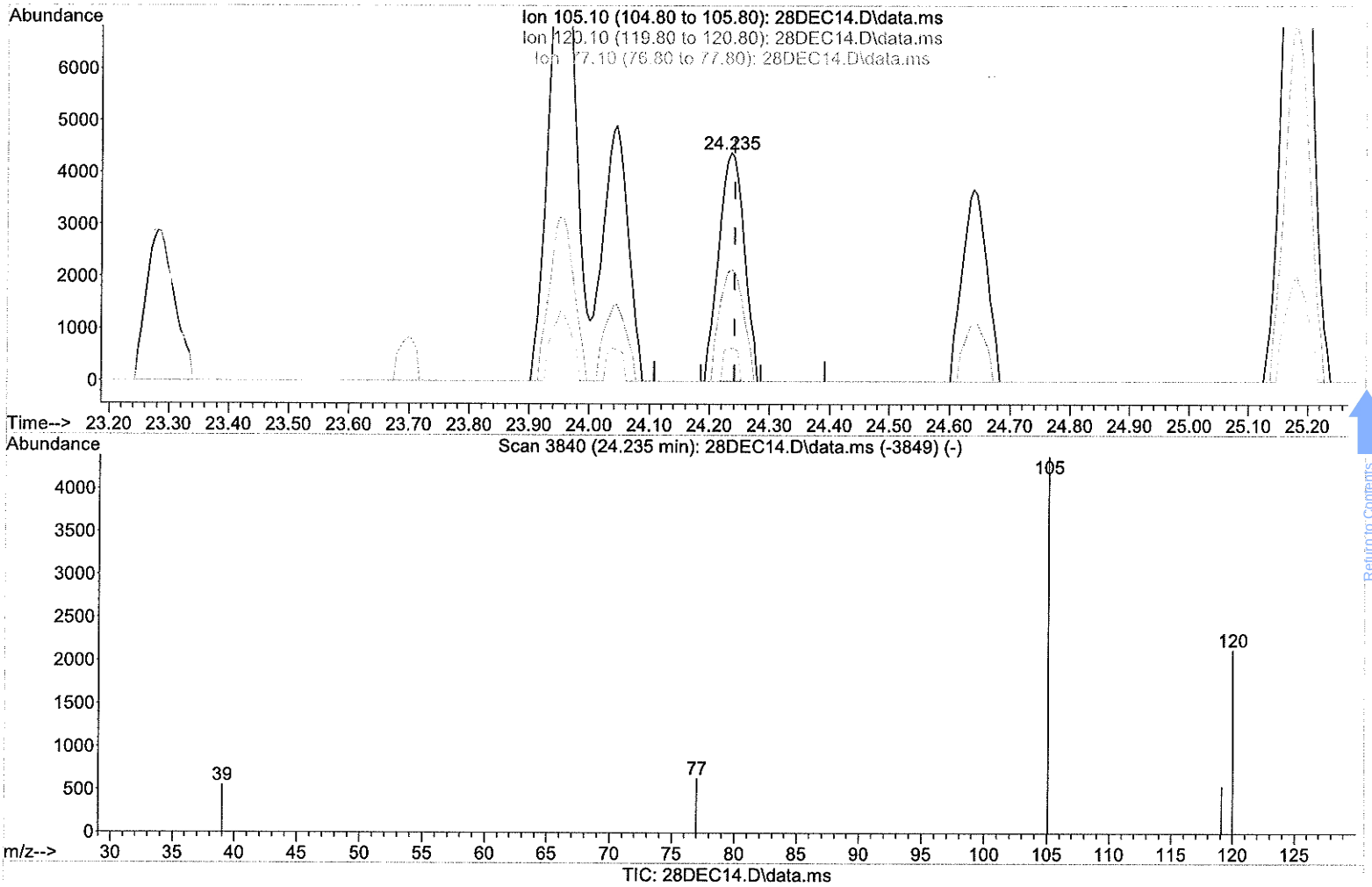
13.170min (+0.027) 20.34 ppbv

response 499901

Ion	Exp%	Act%
95.00	100	100
129.90	102.40	103.24
131.90	100.80	101.89
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



(78) 1,3,5-Trimethylbenzene

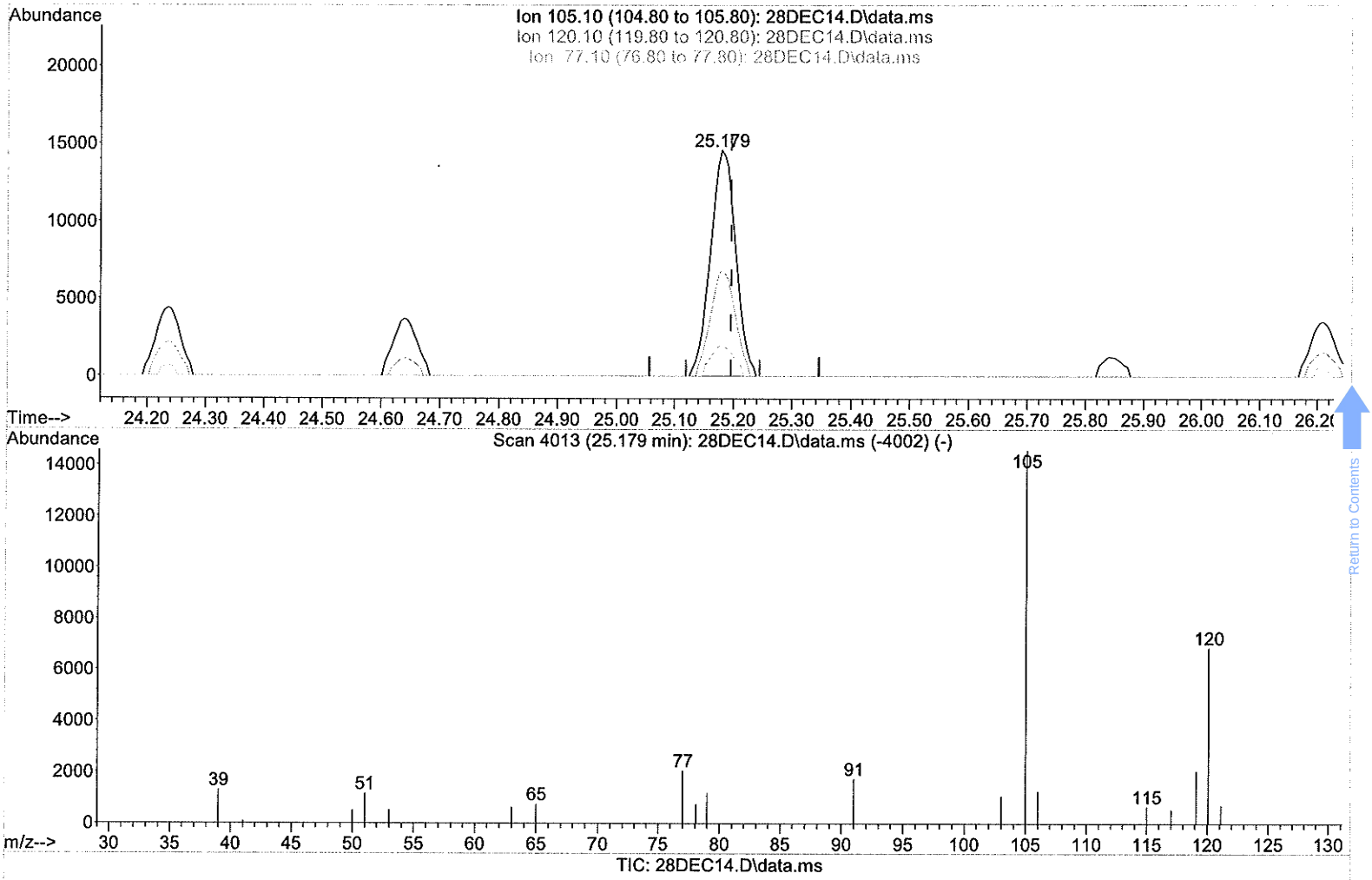
24.235min (-0.005) 0.19 ppbv

response 12732

Ion	Exp%	Act%
105.10	100	100
120.10	49.90	48.64
77.10	12.60	14.51
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:35:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



(79) 1,2,4-Trimethylbenzene

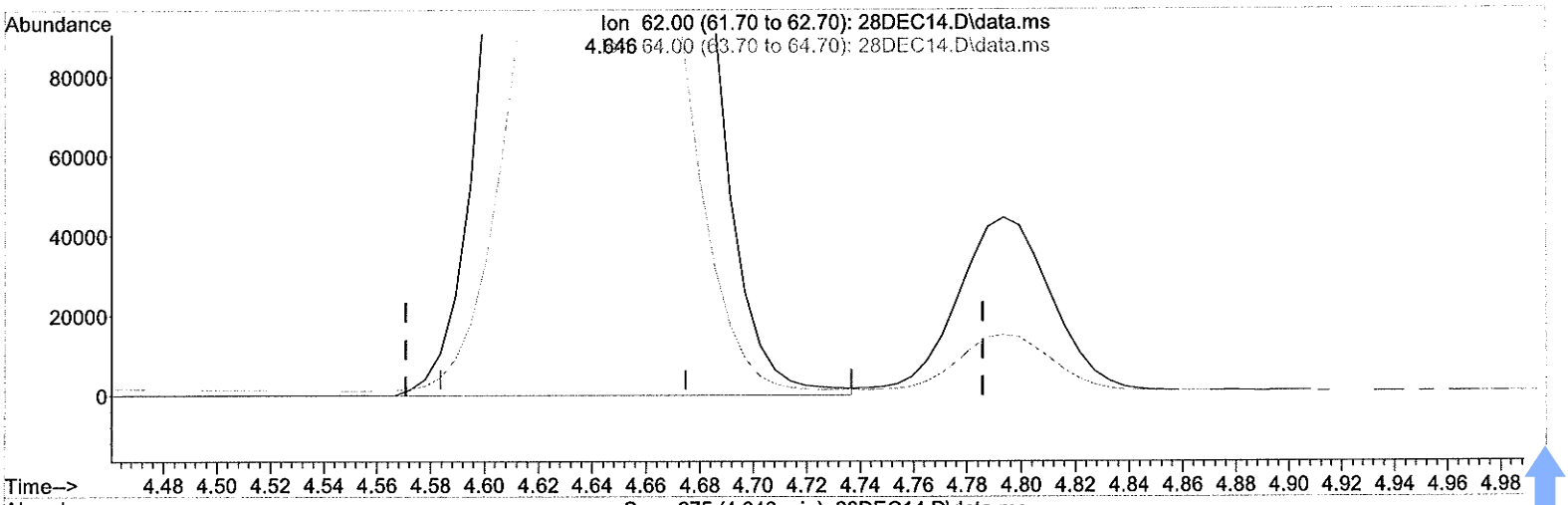
25.179min (-0.016) 0.66 ppbv

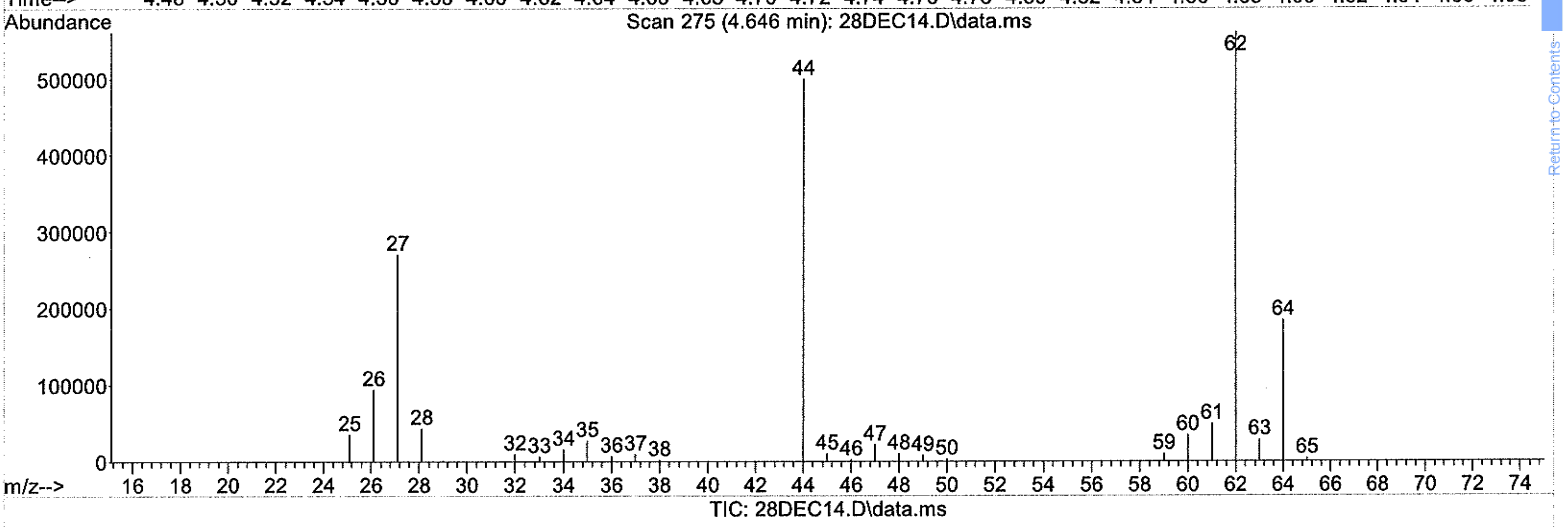
response 43544

Ion	Exp%	Act%
105.10	100	100
120.10	51.80	47.11
77.10	19.00	14.11
0.00	0.00	0.00

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:27:28 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(11) Vinyl Chloride

4.646min (-0.029) 217.92 ppbv m

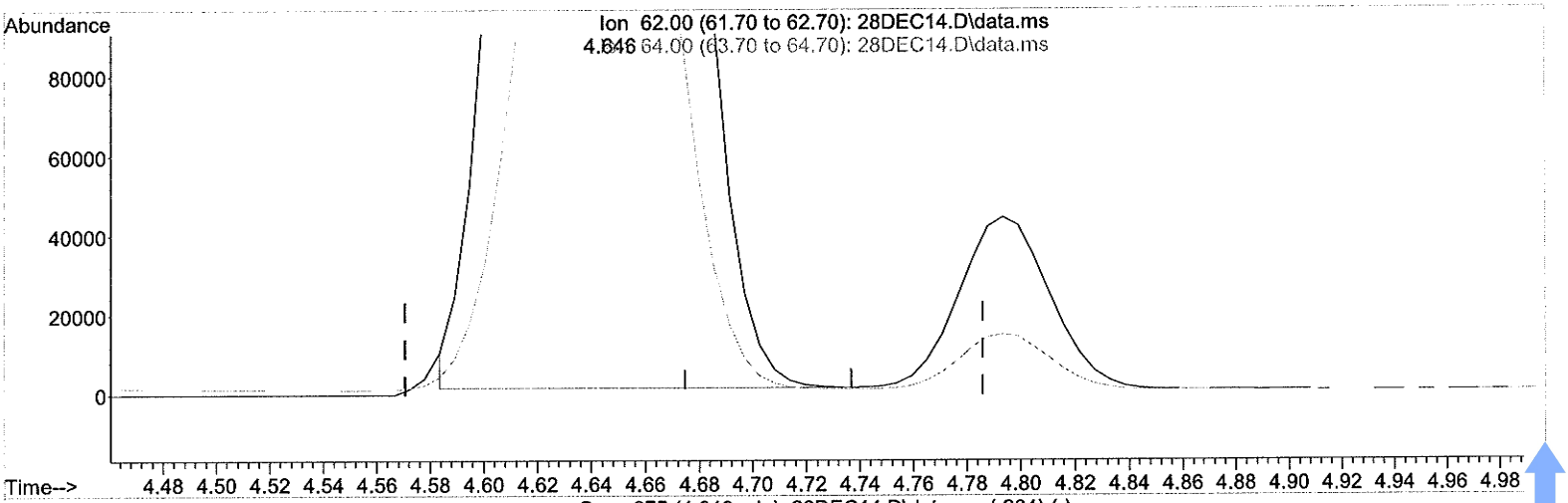
response 2073486

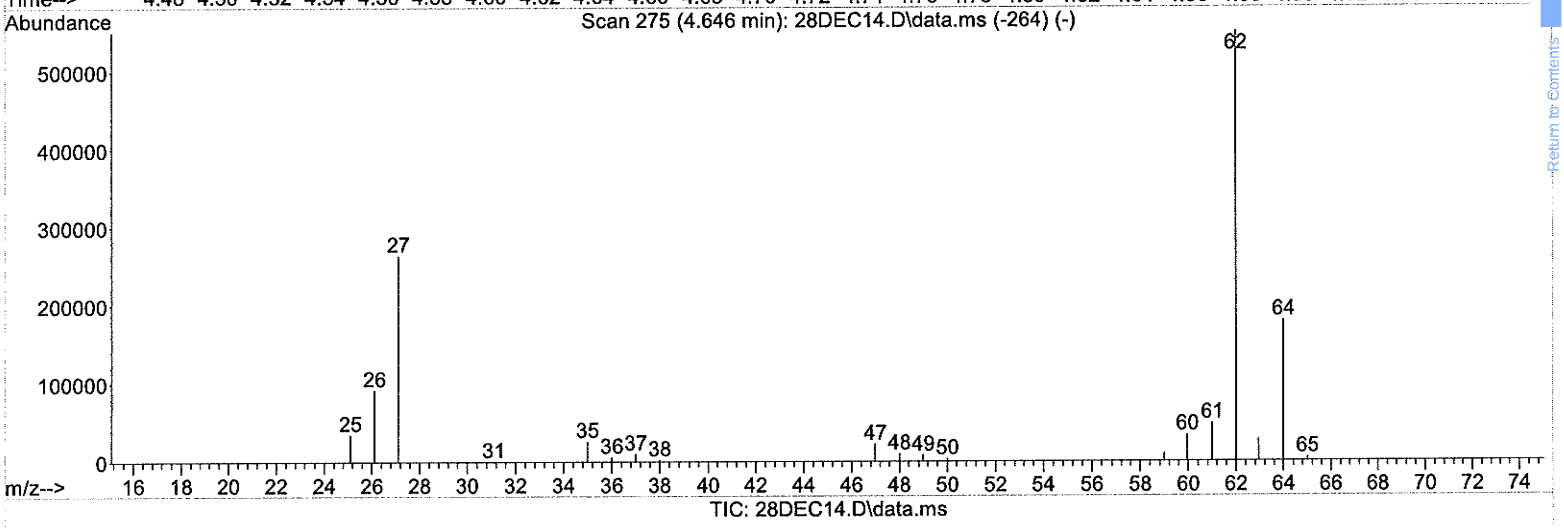
Ion	Exp%	Act%
62.00	100	100
64.00	32.20	32.82
0.00	0.00	0.00
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE AFTER
Date: 1/2/14
Chemist: 326 GL: 858
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy.

Data File : W:\GCMS YY DATA\2013\131228\28DEC14.D Vial: 16
Acq On : 28 Dec 2013 4:33 pm Operator: 846
Sample : 13-12-1615-1A 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:27:28 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(11) Vinyl Chloride

4.646min (-0.029) 215.62 ppbv

response 2051594

Ion	Exp%	Act%
62.00	100	100
64.00	32.20	32.68
0.00	0.00	0.00
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date:
Chemist: GL:
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy.

RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 13-12-1615
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 17:19
ANALYST: 460
DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC15.D\28DEC15.rr

REVIEWED BY: 326
DATE REVIEWED: 01/02/2014 13:01
EXTRACTION: N/A
D/T EXTRACTED:

Rerun Analyses

1 **CLIENT SAMPLE NUMBER: MW-40-37**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	35	4	140	0.77	2.0	5.0	1	ppb (v/v)	D
c-1,2-Dichloroethene	29	4	120	0.35	0.80	2.0	1	ppb (v/v)	D
Vinyl Chloride	63	4	250	0.89	2.0	5.0	1	ppb (v/v)	D

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131228\28DEC15.D Vial: 16
Acq On : 28 Dec 2013 5:19 pm Operator: 846
Sample : 13-12-1615-1A 100ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:37:36 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	9.492	130	486387	25.00 ppbv	0.06
42) 1,4-Difluorobenzene	12.149	114	1692831	25.00 ppbv	0.03
59) Chlorobenzene-d5	19.232	117	1330486	25.00 ppbv	0.01
System Monitoring Compounds					
39) 1,2-Dichloroethane-d4	10.485	65	584012	24.37 ppbv	0.05
Spiked Amount 25.000			Recovery	= 97.48%	
58) Toluene-d8	15.952	98	1572046	24.50 ppbv	0.02
Spiked Amount 25.000			Recovery	= 98.00%	
73) 1,4-Bromofluorobenzene	22.244	95	892078	25.31 ppbv	0.00
Spiked Amount 25.000			Recovery	= 101.24%	
Target Compounds					Qvalue
2) 1,1,1,2-Tetrafluoroethane	0.000		0	N.D.	
3) 1,1-Difluoroethane	0.000		0	N.D.	
4) Propene	4.147	41	18436	1.02 ppbv #	50
5) Propane	0.000		0	N.D.	
6) Dichlorodifluoromethane	0.000		0	N.D.	
7) Chloromethane	0.000		0	N.D.	
8) Dichlorotetrafluoroethane	0.000		0	N.D.	
9) Isobutane	4.527	43	32992	2.64 ppbv	80
10) Methanol	4.669	31	1940	0.95 ppbv #	74
11) Vinyl Chloride	4.629	62	591038m	62.57 ppbv	
12) 1,3-Butadiene	0.000		0	N.D.	
13) Butane	4.827	43	71893	6.18 ppbv	96
14) Bromomethane	0.000		0	N.D.	
15) Chloroethane	5.281	64	119	N.D.	
16) Ethanol	0.000		0	N.D.	
17) Acrolein	0.000		0	N.D.	
18) Acetone	5.950	58	149340m	34.85 ppbv	
19) Trichlorofluoromethane	0.000		0	N.D.	
20) Isopropanol	6.182	45	18856	0.69 ppbv	66
21) Acrylonitrile	6.415	53	184	N.D.	
22) 1,1-Dichloroethene	6.710	61	8799	0.31 ppbv	81
23) Methylene Chloride	6.840	84	1276	0.08 ppbv #	73
24) Tert-Butyl Alcohol (TBA)	6.846	59	992	N.D.	
25) 1,1,2-Trichloro-1,2,2-...	0.000		0	N.D.	
26) Carbon Disulfide	7.180	76	16262	0.33 ppbv #	1
27) t-1,2-Dichloroethene	7.929	96	67193	3.38 ppbv	97
28) 1,1-Dichloroethane	0.000		0	N.D.	
29) Methyl-t-Butyl Ether (...	0.000		0	N.D.	
30) Vinyl Acetate	8.401	43	36802	0.67 ppbv	78
31) 2-Butanone	8.744	43	32366	0.79 ppbv	97
32) c-1,2-Dichloroethene	9.290	96	556873m	29.18 ppbv	
33) Hexane	9.519	57	14218	0.56 ppbv #	20
34) Diisopropyl Ether (DIPE)	9.470	45	165	N.D.	
35) Ethyl Acetate	0.000		0	N.D.	
36) Chloroform	0.000		0	N.D.	
37) Tetrahydrofuran	0.000		0	N.D.	
38) Ethyl-t-Butyl Ether (E...	0.000		0	N.D.	
40) 1,2-Dichloroethane	0.000		0	N.D.	
41) 1,1,1-Trichloroethane	0.000		0	N.D.	
43) Benzene	11.631	78	37646	0.72 ppbv	99
44) Carbon Tetrachloride	0.000		0	N.D.	
45) Cyclohexane	12.029	56	6879	0.23 ppbv #	85

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131228\28DEC15.D Vial: 16
Acq On : 28 Dec 2013 5:19 pm Operator: 846
Sample : 13-12-1615-1A 100ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:37:36 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

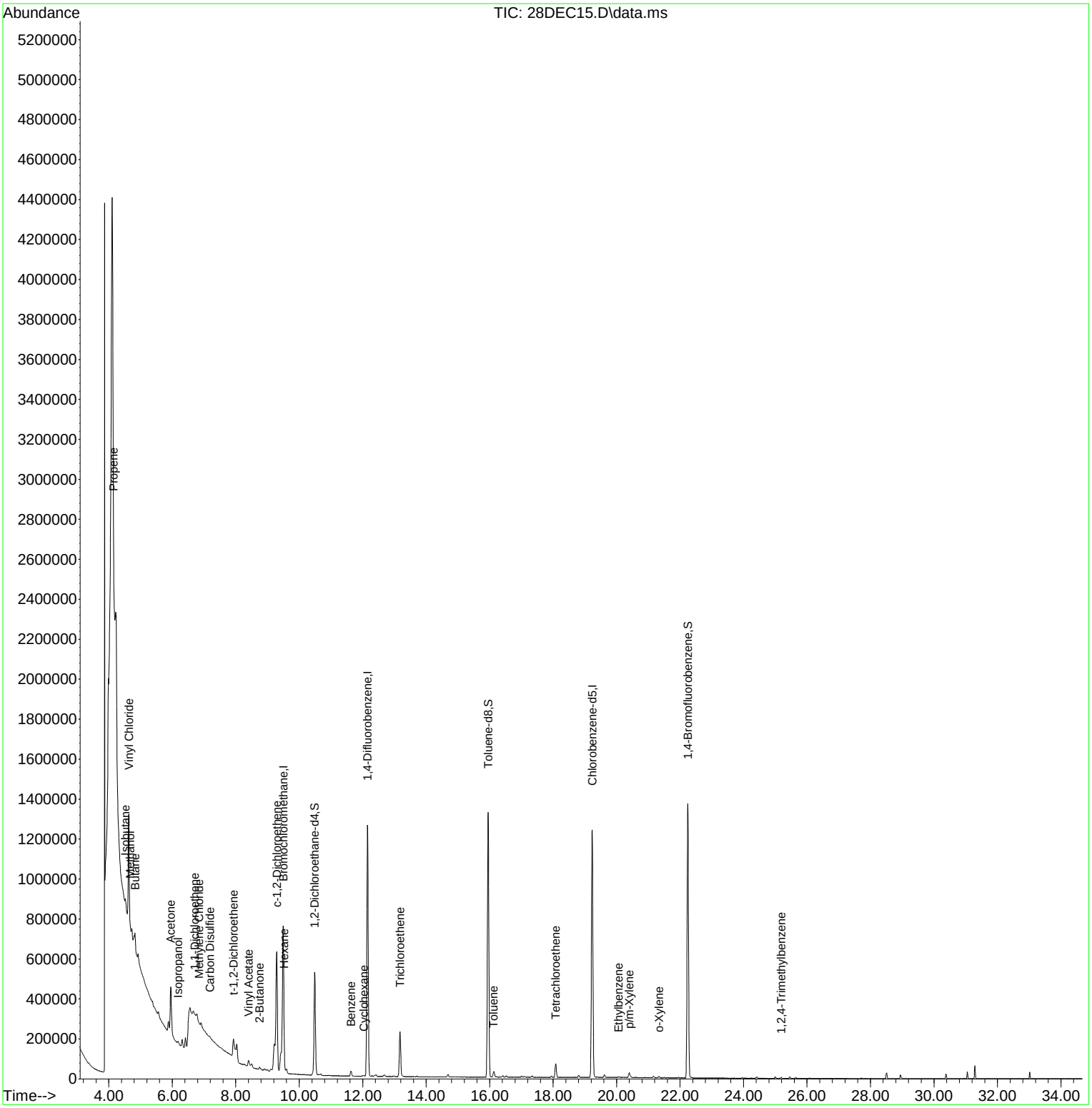
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) Tert-Amyl-Methyl Ether...	0.000		0	N.D.	
47) 1,2-Dichloropropane	0.000		0	N.D.	
48) Bromodichloromethane	0.000		0	N.D.	
49) Trichloroethene	13.175	95	124911	5.16 ppbv	100
50) 2,2,4-Trimethyl Pentane	13.273	57	2855	N.D.	
51) 1,4-Dioxane	0.000		0	N.D.	
52) Methyl Methacrylate	0.000		0	N.D.	
53) Heptane	0.000		0	N.D.	
54) c-1,3-Dichloropropene	0.000		0	N.D.	
55) 4-Methyl-2-Pentanone	0.000		0	N.D.	
56) t-1,3-Dichloropropene	0.000		0	N.D.	
57) 1,1,2-Trichloroethane	0.000		0	N.D.	
60) Toluene	16.121	91	21471	0.35 ppbv	100
61) 2-Hexanone	0.000		0	N.D.	
62) Dibromochloromethane	0.000		0	N.D.	
63) 1,2-Dibromoethane	0.000		0	N.D.	
64) Tetrachloroethene	18.080	166	38279	1.17 ppbv	99
65) Chlorobenzene	0.000		0	N.D.	
66) Ethylbenzene	20.061	91	9808	0.13 ppbv	99
67) p/m-Xylene	20.399	91	35216	0.59 ppbv	98
68) Bromoform	0.000		0	N.D.	
69) Styrene	21.114	104	349	N.D.	
70) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
71) o-Xylene	21.332	91	10733	0.18 ppbv	99
72) 1,2,3-Trichloropropane	0.000		0	N.D.	
74) Isopropylbenzene	0.000		0	N.D.	
75) 2-Chlorotoluene	0.000		0	N.D.	
76) n-Propylbenzene	23.695	91	1598	N.D.	
77) 4-Ethyltoluene	24.044	105	2461	N.D.	
78) 1,3,5-Trimethylbenzene	24.235	105	1990	N.D.	
79) 1,2,4-Trimethylbenzene	25.185	105	9297	0.14 ppbv	83
80) Benzyl Chloride	0.000		0	N.D.	
81) 1,3-Dichlorobenzene	0.000		0	N.D.	
82) 1,4-Dichlorobenzene	0.000		0	N.D.	
83) 1,2-Dichlorobenzene	0.000		0	N.D.	
84) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
85) Naphthalene	30.941	128	1509	N.D.	
86) Hexachloro-1,3-Butadiene	0.000		0	N.D.	

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

Return to Contents

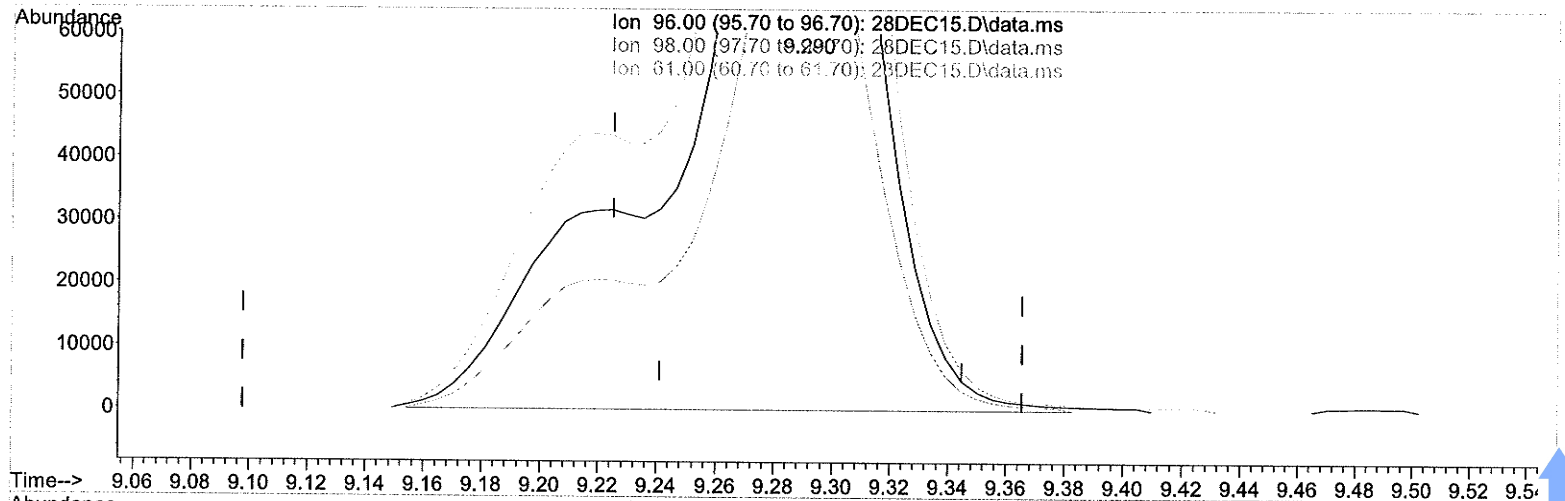
Data File : W:\GCMS_YY_DATA\2013\131228\28DEC15.D Vial: 16
Acq On : 28 Dec 2013 5:19 pm Operator: 846
Sample : 13-12-1615-1A 100ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:37:36 2014
Quant Results File: 131227DOD.RES

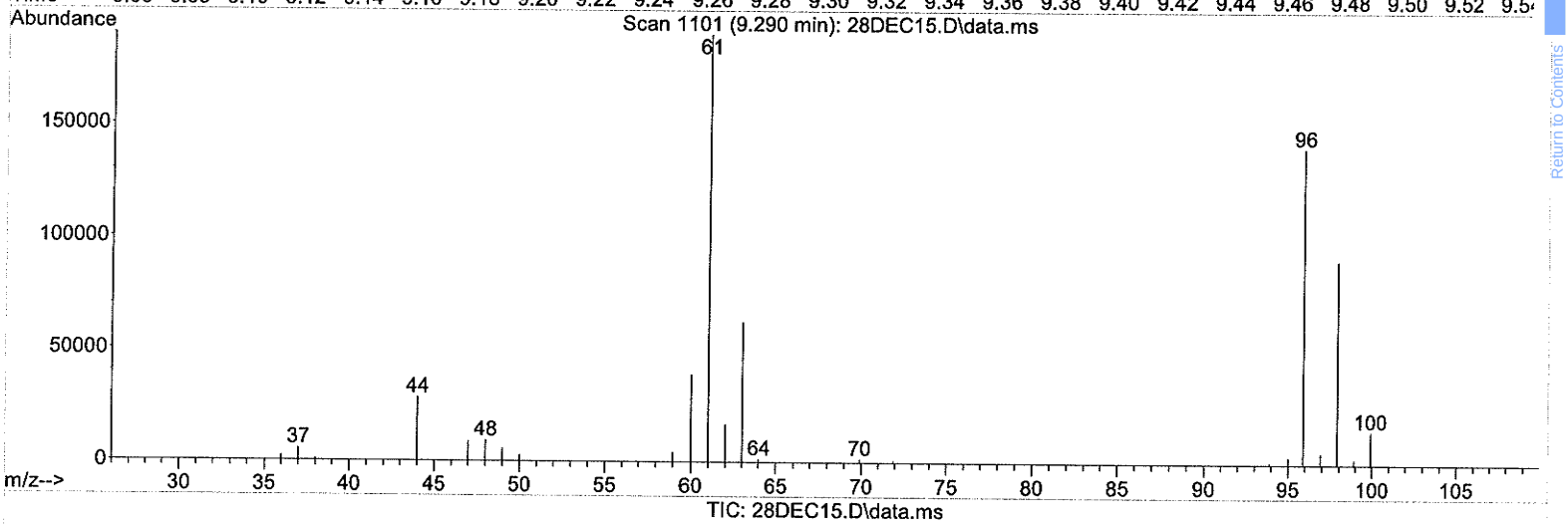
Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Data File : W:\GCMS YY DATA\2013\131228\28DEC15.D Vial: 16
Acq On : 28 Dec 2013 5:19 pm Operator: 846
Sample : 13-12-1615-1A 100ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:36:06 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(32) c-1,2-Dichloroethene

9.290min (+0.065) 29.18 ppbv m

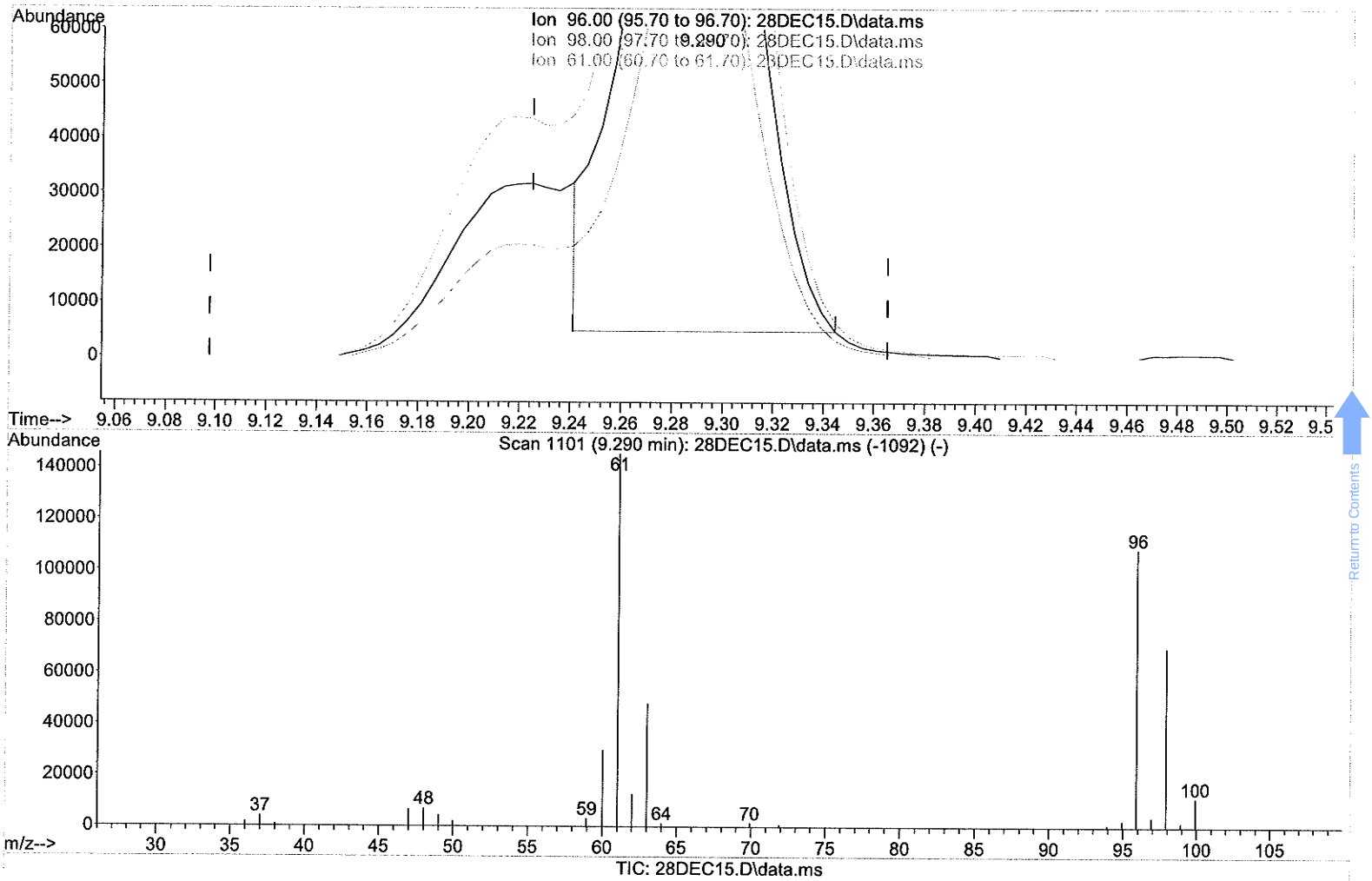
response 556873

Ion	Exp%	Act%
96.00	100	100
98.00	63.90	64.53
61.00	137.10	135.39
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date: 1/2/14 / 1/2/14
Chemist: 326 GL: 794
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy

Data File : W:\GCMS YY DATA\2013\131228\28DEC15.D Vial: 16
Acq On : 28 Dec 2013 5:19 pm Operator: 846
Sample : 13-12-1615-1A 100ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:36:06 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



(32) c-1,2-Dichloroethene

9.290min (+0.065) 21.89 ppbv

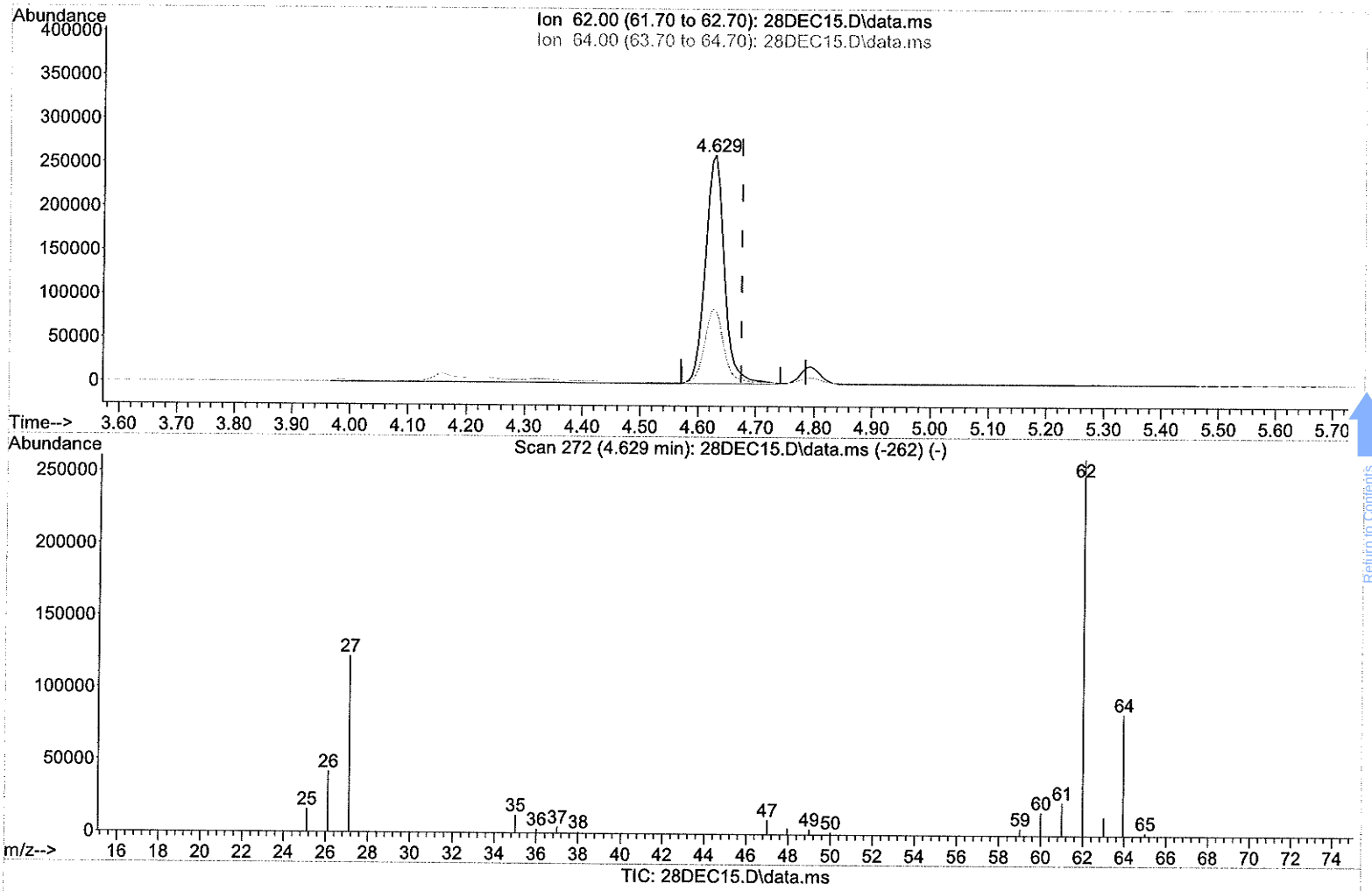
response 417765

Ion	Exp%	Act%
96.00	100	100
98.00	63.90	64.47
61.00	137.10	135.46
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date:
Chemist: GL:
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy.

Data File : W:\GCMS YY DATA\2013\131228\28DEC15.D Vial: 16
Acq On : 28 Dec 2013 5:19 pm Operator: 846
Sample : 13-12-1615-1A 100ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:37:36 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



(11) Vinyl Chloride

4.629min (-0.046) 62.57 ppbv m

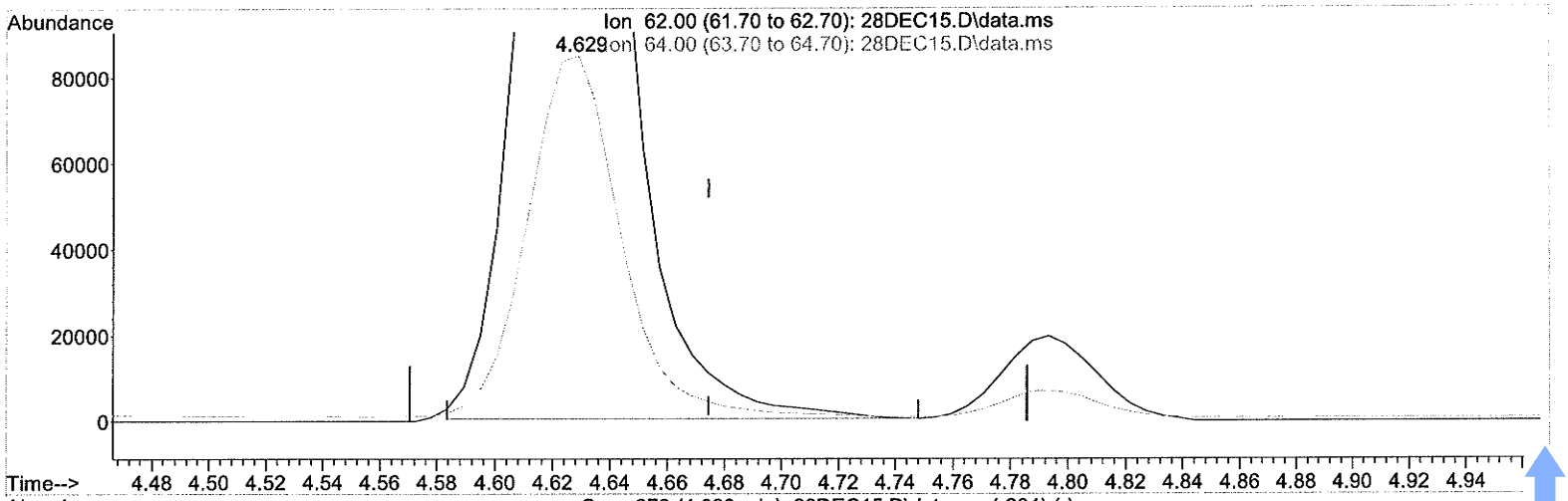
response 591038

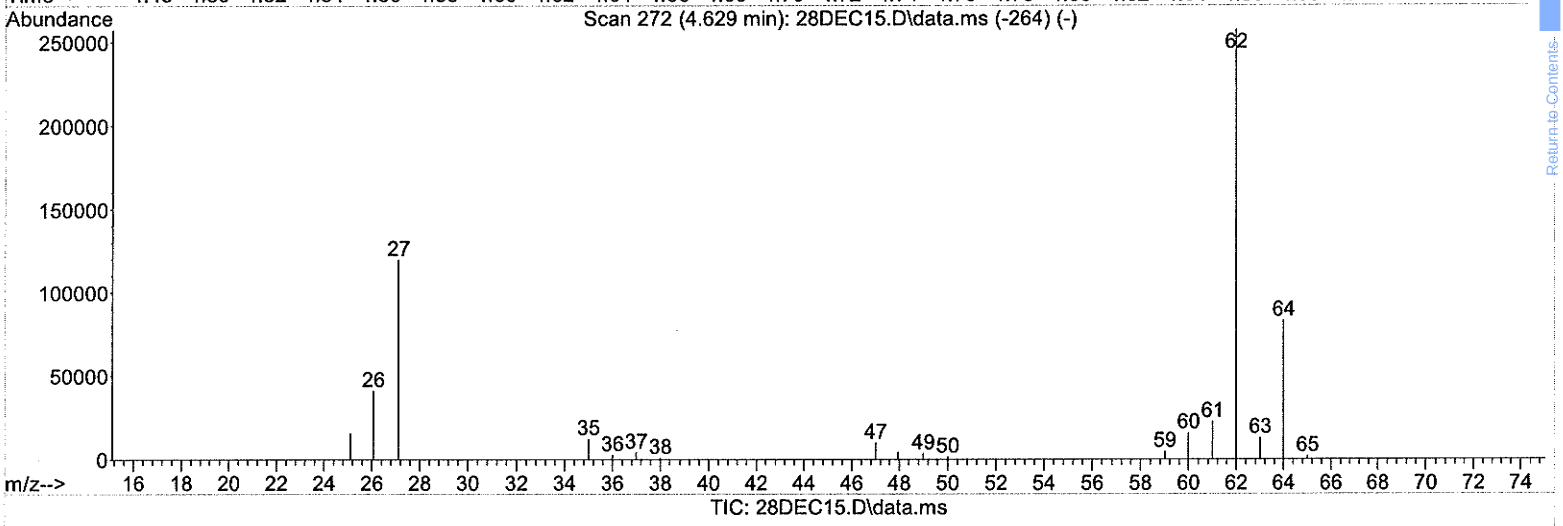
Ion	Exp%	Act%
62.00	100	100
64.00	32.20	32.66
0.00	0.00	0.00
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date: 1/2/14
Chemist: 326 GL: 794
Reason: BASELINE CORR., PEAK ID CORR.
Other:
This stamp appears in red ink on original copy.

Data File : W:\GCMS YY DATA\2013\131228\28DEC15.D Vial: 16
Acq On : 28 Dec 2013 5:19 pm Operator: 846
Sample : 13-12-1615-1A 100ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 12:36:06 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M





(11) Vinyl Chloride

4.629min (-0.046) 61.85 ppbv

response 584267

Ion	Exp%	Act%
62.00	100	100
64.00	32.20	32.35
0.00	0.00	0.00
0.00	0.00	0.00

MANUAL INTEGRATION
BEFORE / AFTER
Date:
Chemist: GL:
Reason: BASELINE CORR., PEAK ID CORR.
Other :
This stamp appears in red ink on original copy.

Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Quality Control Data

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA TO-15

MB Sample ID: 099-14-523-262
MB Batch ID: D131228L01
Instrument: GC/MS YY
Matrix: Air
Analyst: 460
D/T Analyzed: 12/28/2013 10:47
Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

Reviewed By: 326
D/T Reviewed: 01/02/2014 13:01
Extraction: N/A
D/T Extracted:

Work Order #: 13-12-1615

Sample#	Client Sample ID	D/T Analyzed	Data File
1	MW-40-37	12/28/2013 16:33	W:\GCMS_YY_DATA\2013\131228\28DEC14.D\28DEC14.rr
1	MW-40-37	12/28/2013 17:19	W:\GCMS_YY_DATA\2013\131228\28DEC15.D\28DEC15.rr

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 099-14-523
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 10:47
ANALYST: 460
DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

REVIEWED BY: 326
DATE REVIEWED: 01/02/2014 13:01
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	0.00	1	ND	0.19	0.50	1.2	1	ppb (v/v)	
Benzene	0.00	1	ND	0.052	0.20	0.50	1	ppb (v/v)	
Benzyl Chloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromodichloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromoform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Bromomethane	0.00	1	ND	0.14	0.20	0.50	1	ppb (v/v)	
1,3-Butadiene	0.00	1	ND	0.33	0.50	1.2	1	ppb (v/v)	
2-Butanone	0.00	1	ND	0.18	0.50	1.2	1	ppb (v/v)	
Carbon Disulfide	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Carbon Tetrachloride	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chlorobenzene	0.00	1	ND	0.061	0.10	0.50	1	ppb (v/v)	
Chloroethane	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	
Chloroform	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Chloromethane	0.00	1	ND	0.24	0.50	1.2	1	ppb (v/v)	
Cyclohexane	0.00	1	ND	0.16	0.20	0.50	1	ppb (v/v)	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Dichlorodifluoromethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1-Dichloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,1-Dichloroethene	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
1,2-Dibromoethane	0.00	1	ND	0.041	0.10	0.50	1	ppb (v/v)	
Dichlorotetrafluoroethane	0.00	1	ND	0.073	0.20	0.50	1	ppb (v/v)	
1,2-Dichlorobenzene	0.00	1	ND	0.053	0.10	0.50	1	ppb (v/v)	
1,2-Dichloroethane	0.00	1	ND	0.056	0.20	0.50	1	ppb (v/v)	
1,2-Dichloropropane	0.00	1	ND	0.19	0.20	0.50	1	ppb (v/v)	
1,3-Dichlorobenzene	0.00	1	ND	0.052	0.10	0.50	1	ppb (v/v)	
1,4-Dichlorobenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
1,4-Dioxane	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
c-1,2-Dichloroethene	0.00	1	ND	0.087	0.20	0.50	1	ppb (v/v)	
t-1,2-Dichloroethene	0.00	1	ND	0.13	0.20	0.50	1	ppb (v/v)	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Ethanol	0.00	1	ND	0.87	2.0	5.0	1	ppb (v/v)	
Ethyl Acetate	0.00	1	ND	1.0	2.5	5.0	1	ppb (v/v)	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.054	0.10	0.50	1	ppb (v/v)	
Ethylbenzene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
4-Ethyltoluene	0.00	1	ND	0.057	0.20	0.50	1	ppb (v/v)	
Heptane	0.00	1	ND	0.21	0.50	1.2	1	ppb (v/v)	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.078	0.10	0.50	1	ppb (v/v)	
Hexane	0.00	1	ND	0.072	0.10	0.50	1	ppb (v/v)	

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RAW DATA SHEET FOR METHOD: EPA TO-15

WORK ORDER NUMBER: 099-14-523
INSTRUMENT NAME: GC/MS YY
D/T ANALYZED: 12/28/2013 10:47
ANALYST: 460
DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

REVIEWED BY: 326
DATE REVIEWED: 01/02/2014 13:01
EXTRACTION: N/A
D/T EXTRACTED:

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: D131228L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	0.44	0.50	1.2	1	ppb (v/v)	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Methylene Chloride	0.22	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
4-Methyl-2-Pentanone	0.00	1	ND	0.37	0.50	1.2	1	ppb (v/v)	
Naphthalene	0.00	1	ND	0.16	0.50	1.2	1	ppb (v/v)	
o-Xylene	0.00	1	ND	0.055	0.10	0.50	1	ppb (v/v)	
p/m-Xylene	0.00	1	ND	0.15	0.20	1.0	1	ppb (v/v)	
Propene	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Styrene	0.00	1	ND	0.064	0.20	0.50	1	ppb (v/v)	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.049	0.10	0.50	1	ppb (v/v)	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	0.50	1.0	2.5	1	ppb (v/v)	
Tetrachloroethene	0.00	1	ND	0.067	0.10	0.50	1	ppb (v/v)	
Tetrahydrofuran	0.00	1	ND	0.20	0.50	1.2	1	ppb (v/v)	
Toluene	0.00	1	ND	0.080	0.20	0.50	1	ppb (v/v)	
Trichloroethene	0.00	1	ND	0.046	0.10	0.50	1	ppb (v/v)	
Trichlorofluoromethane	0.00	1	ND	0.17	0.50	1.2	1	ppb (v/v)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.10	0.20	0.50	1	ppb (v/v)	
1,1,1-Trichloroethane	0.00	1	ND	0.079	0.10	0.50	1	ppb (v/v)	
1,1,2-Trichloroethane	0.00	1	ND	0.18	0.20	0.50	1	ppb (v/v)	
Butane	0.00	1	ND	0.48	1.0	2.5	1	ppb (v/v)	
Methanol	3.0	1	3.0	1.3	1.5	15	1	ppb (v/v)	J
1,3,5-Trimethylbenzene	0.00	1	ND	0.051	0.20	0.50	1	ppb (v/v)	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
1,2,4-Trimethylbenzene	0.00	1	ND	0.070	0.20	0.50	1	ppb (v/v)	
1,2,4-Trichlorobenzene	0.00	1	ND	0.12	0.20	0.50	1	ppb (v/v)	
Vinyl Acetate	0.00	1	ND	0.25	0.50	1.2	1	ppb (v/v)	
Vinyl Chloride	0.00	1	ND	0.22	0.50	1.2	1	ppb (v/v)	
Isopropanol	0.00	1	ND	0.62	1.2	2.5	1	ppb (v/v)	

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Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D Vial: 10
Acq On : 28 Dec 2013 10:47 am Operator: 846
Sample : MB 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:49:03 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.421	130	546472	25.00	ppbv	-0.01
42) 1,4-Difluorobenzene	12.106	114	1920822	25.00	ppbv	-0.01
59) Chlorobenzene-d5	19.221	117	1505652	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.431	65	685439	25.46	ppbv	0.00
Spiked Amount 25.000			Recovery = 101.84%			
58) Toluene-d8	15.931	98	1791850	24.61	ppbv	0.00
Spiked Amount 25.000			Recovery = 98.44%			
73) 1,4-Bromofluorobenzene	22.238	95	1010421	25.33	ppbv	0.00
Spiked Amount 25.000			Recovery = 101.32%			
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	0.000		0	N.D.		
3) 1,1-Difluoroethane	0.000		0	N.D.		
4) Propene	0.000		0	N.D.		
5) Propane	0.000		0	N.D. d		
6) Dichlorodifluoromethane	0.000		0	N.D.		
7) Chloromethane	0.000		0	N.D.		
8) Dichlorotetrafluoroethane	0.000		0	N.D.		
9) Isobutane	0.000		0	N.D.		
10) Methanol	4.657	31	6780	2.95	ppbv	96
11) Vinyl Chloride	0.000		0	N.D.		
12) 1,3-Butadiene	0.000		0	N.D.		
13) Butane	4.861	43	633	N.D.		
14) Bromomethane	0.000		0	N.D.		
15) Chloroethane	0.000		0	N.D.		
16) Ethanol	0.000		0	N.D.		
17) Acrolein	0.000		0	N.D.		
18) Acetone	0.000		0	N.D.		
19) Trichlorofluoromethane	0.000		0	N.D.		
20) Isopropanol	0.000		0	N.D. d		
21) Acrylonitrile	0.000		0	N.D.		
22) 1,1-Dichloroethene	0.000		0	N.D.		
23) Methylene Chloride	6.863	84	3975	0.22	ppbv	94
24) Tert-Butyl Alcohol (TBA)	0.000		0	N.D.		
25) 1,1,2-Trichloro-1,2,2-...	0.000		0	N.D.		
26) Carbon Disulfide	0.000		0	N.D.		
27) t-1,2-Dichloroethene	0.000		0	N.D.		
28) 1,1-Dichloroethane	0.000		0	N.D.		
29) Methyl-t-Butyl Ether (...	0.000		0	N.D.		
30) Vinyl Acetate	0.000		0	N.D.		
31) 2-Butanone	0.000		0	N.D.		
32) c-1,2-Dichloroethene	0.000		0	N.D.		
33) Hexane	0.000		0	N.D.		
34) Diisopropyl Ether (DIPE)	0.000		0	N.D.		
35) Ethyl Acetate	0.000		0	N.D.		
36) Chloroform	0.000		0	N.D.		
37) Tetrahydrofuran	0.000		0	N.D.		
38) Ethyl-t-Butyl Ether (E...	0.000		0	N.D.		
40) 1,2-Dichloroethane	0.000		0	N.D.		
41) 1,1,1-Trichloroethane	0.000		0	N.D.		
43) Benzene	0.000		0	N.D.		
44) Carbon Tetrachloride	0.000		0	N.D.		
45) Cyclohexane	0.000		0	N.D.		

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Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D Vial: 10
Acq On : 28 Dec 2013 10:47 am Operator: 846
Sample : MB 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:49:03 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc Units Dev(Min)
46) Tert-Amyl-Methyl Ether...	0.000		0	N.D.
47) 1,2-Dichloropropane	0.000		0	N.D.
48) Bromodichloromethane	0.000		0	N.D.
49) Trichloroethene	0.000		0	N.D.
50) 2,2,4-Trimethyl Pentane	0.000		0	N.D.
51) 1,4-Dioxane	0.000		0	N.D.
52) Methyl Methacrylate	0.000		0	N.D.
53) Heptane	0.000		0	N.D.
54) c-1,3-Dichloropropene	0.000		0	N.D.
55) 4-Methyl-2-Pentanone	0.000		0	N.D.
56) t-1,3-Dichloropropene	0.000		0	N.D.
57) 1,1,2-Trichloroethane	0.000		0	N.D.
60) Toluene	0.000		0	N.D.
61) 2-Hexanone	0.000		0	N.D.
62) Dibromochloromethane	0.000		0	N.D.
63) 1,2-Dibromoethane	0.000		0	N.D.
64) Tetrachloroethene	0.000		0	N.D.
65) Chlorobenzene	0.000		0	N.D.
66) Ethylbenzene	0.000		0	N.D.
67) p/m-Xylene	0.000		0	N.D.
68) Bromoform	0.000		0	N.D.
69) Styrene	0.000		0	N.D.
70) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.
71) o-Xylene	0.000		0	N.D.
72) 1,2,3-Trichloropropane	0.000		0	N.D.
74) Isopropylbenzene	0.000		0	N.D.
75) 2-Chlorotoluene	0.000		0	N.D.
76) n-Propylbenzene	0.000		0	N.D.
77) 4-Ethyltoluene	0.000		0	N.D.
78) 1,3,5-Trimethylbenzene	0.000		0	N.D.
79) 1,2,4-Trimethylbenzene	0.000		0	N.D.
80) Benzyl Chloride	0.000		0	N.D.
81) 1,3-Dichlorobenzene	0.000		0	N.D.
82) 1,4-Dichlorobenzene	0.000		0	N.D.
83) 1,2-Dichlorobenzene	0.000		0	N.D.
84) 1,2,4-Trichlorobenzene	30.745	180	1812	N.D.
85) Naphthalene	30.941	128	4106	N.D.
86) Hexachloro-1,3-Butadiene	31.749	225	540	N.D.

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

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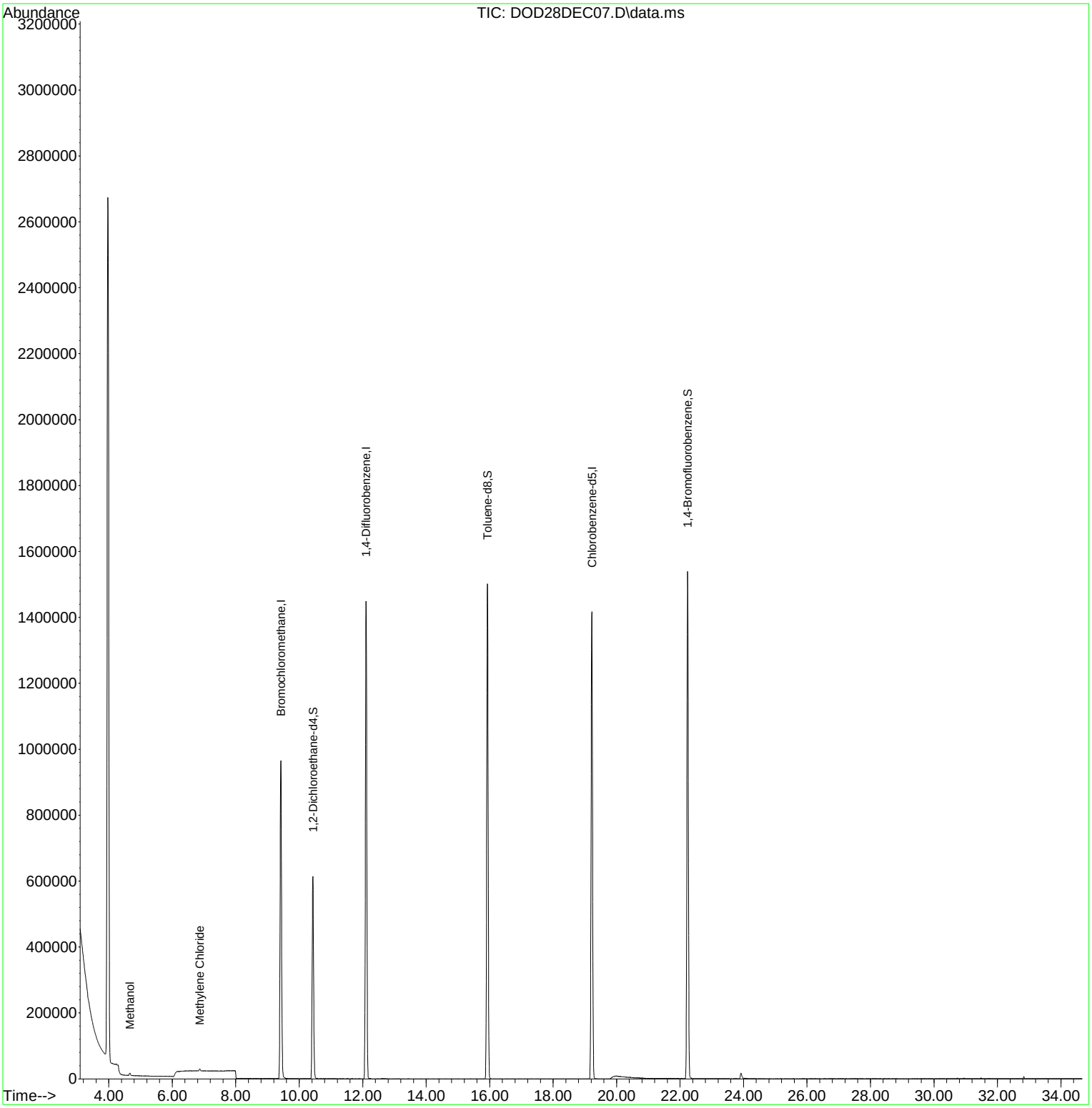
Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D Vial: 10
Acq On : 28 Dec 2013 10:47 am Operator: 846
Sample : MB 400ML Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:49:03 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1615**	D/T REVIEWED:	01/02/2014 13:01	LCS D/T ANALYZED:	12/28/2013 07:08
LCS/LCSD BATCH:	D131228L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/28/2013 07:58
LCS/LCSD SAMPLE I	**099-14-523-262**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	460	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	326				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Acetone	25.00	22.77	91	22.62	90	50-150	33-167	1	0-35	PASS	
Benzene	25.00	24.46	98	24.51	98	60-156	44-172	0	0-40	PASS	
Benzyl Chloride	25.00	25.48	102	25.04	100	50-150	33-167	2	0-35	PASS	
Bromodichloromethane	25.00	24.71	99	24.77	99	50-150	33-167	0	0-35	PASS	
Bromoform	25.00	24.73	99	24.83	99	62-134	50-146	0	0-38	PASS	
Bromomethane	25.00	24.72	99	24.84	99	50-150	33-167	1	0-35	PASS	
1,3-Butadiene	25.00	24.97	100	25.07	100	50-150	33-167	0	0-35	PASS	
2-Butanone	25.00	24.47	98	24.44	98	50-150	33-167	0	0-35	PASS	
Carbon Disulfide	25.00	25.75	103	25.82	103	50-150	33-167	0	0-35	PASS	
Carbon Tetrachloride	25.00	24.09	96	24.15	97	64-154	49-169	0	0-32	PASS	
Chlorobenzene	25.00	24.10	96	24.33	97	50-150	33-167	1	0-35	PASS	
Chloroethane	25.00	24.61	98	24.69	99	50-150	33-167	0	0-35	PASS	
Chloroform	25.00	23.66	95	23.69	95	50-150	33-167	0	0-35	PASS	
Chloromethane	25.00	24.86	99	25.17	101	50-150	33-167	1	0-35	PASS	
Cyclohexane	25.00	24.16	97	24.29	97	50-150	33-167	1	0-35	PASS	
Dibromochloromethane	25.00	24.70	99	24.98	100	50-150	33-167	1	0-35	PASS	
Dichlorodifluoromethane	25.00	23.59	94	23.73	95	50-150	33-167	1	0-35	PASS	
Diisopropyl Ether (DIPE)	25.00	19.33	77	19.34	77	50-150	33-167	0	0-35	PASS	
1,1-Dichloroethane	25.00	23.90	96	23.94	96	50-150	33-167	0	0-35	PASS	
1,1-Dichloroethene	25.00	24.40	98	24.54	98	50-150	33-167	1	0-35	PASS	
1,2-Dibromoethane	25.00	24.37	97	24.67	99	54-144	39-159	1	0-36	PASS	
Dichlorotetrafluoroethane	25.00	19.48	78	19.60	78	50-150	33-167	1	0-35	PASS	
1,2-Dichlorobenzene	25.00	21.67	87	21.42	86	34-160	13-181	1	0-47	PASS	
1,2-Dichloroethane	25.00	23.70	95	23.68	95	69-153	55-167	0	0-35	PASS	
1,2-Dichloropropane	25.00	24.35	97	24.42	98	67-157	52-172	0	0-35	PASS	
1,3-Dichlorobenzene	25.00	22.58	90	22.40	90	50-150	33-167	1	0-35	PASS	
1,4-Dichlorobenzene	25.00	22.15	89	21.77	87	36-156	16-176	2	0-47	PASS	
1,4-Dioxane	25.00	21.66	87	21.59	86	50-150	33-167	0	0-35	PASS	
c-1,3-Dichloropropene	25.00	25.71	103	25.82	103	61-157	45-173	0	0-35	PASS	
c-1,2-Dichloroethene	25.00	24.24	97	24.28	97	50-150	33-167	0	0-35	PASS	
t-1,2-Dichloroethene	25.00	23.13	93	23.24	93	50-150	33-167	0	0-35	PASS	
t-1,3-Dichloropropene	25.00	28.40	114	28.41	114	50-150	33-167	0	0-35	PASS	
Ethanol	100.0	89.88	90	89.66	90	50-150	33-167	0	0-35	PASS	
Ethyl Acetate	25.00	25.48	102	25.47	102	50-150	33-167	0	0-35	PASS	
Ethyl-t-Butyl Ether (ETBE)	25.00	22.82	91	22.95	92	50-150	33-167	1	0-35	PASS	
Ethylbenzene	25.00	24.83	99	25.15	101	52-154	35-171	1	0-38	PASS	
4-Ethyltoluene	25.00	24.87	99	24.95	100	50-150	33-167	0	0-35	PASS	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1615**	D/T REVIEWED:	01/02/2014 13:01	LCS D/T ANALYZED:	12/28/2013 07:08
LCS/LCSD BATCH:	D131228L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/28/2013 07:58
LCS/LCSD SAMPLE I	**099-14-523-262**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	460	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	326				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Heptane	25.00	24.50	98	24.52	98	50-150	33-167	0	0-35	PASS	
Hexachloro-1,3-Butadiene	25.00	20.42	82	20.87	83	50-150	33-167	2	0-35	PASS	
Hexane	25.00	23.30	93	23.30	93	50-150	33-167	0	0-35	PASS	
2-Hexanone	25.00	24.66	99	25.02	100	50-150	33-167	1	0-35	PASS	
Methyl-t-Butyl Ether (MTBE)	25.00	24.52	98	24.68	99	50-150	33-167	1	0-35	PASS	
Methylene Chloride	25.00	23.99	96	24.01	96	50-150	33-167	0	0-35	PASS	
4-Methyl-2-Pentanone	25.00	25.11	100	25.17	101	50-150	33-167	0	0-35	PASS	
Naphthalene	25.00	21.82	87	22.08	88	40-190	15-215	1	0-35	PASS	
o-Xylene	25.00	24.28	97	24.50	98	52-148	36-164	1	0-38	PASS	
p/m-Xylene	50.00	48.83	98	49.46	99	42-156	23-175	1	0-41	PASS	
Propene	25.00	24.69	99	25.16	101	50-150	33-167	2	0-35	PASS	
Styrene	25.00	24.82	99	25.02	100	50-150	33-167	1	0-35	PASS	
Tert-Amyl-Methyl Ether (TAME)	25.00	23.55	94	23.76	95	50-150	33-167	1	0-35	PASS	
Tert-Butyl Alcohol (TBA)	50.00	47.11	94	47.71	95	50-150	33-167	1	0-35	PASS	
Tetrachloroethene	25.00	23.84	95	24.11	96	56-152	40-168	1	0-40	PASS	
Tetrahydrofuran	25.00	24.59	98	24.43	98	50-150	33-167	1	0-35	PASS	
Toluene	25.00	24.82	99	25.21	101	56-146	41-161	2	0-43	PASS	
Trichloroethene	25.00	24.25	97	24.28	97	63-159	47-175	0	0-34	PASS	
Trichlorofluoromethane	25.00	18.20	73	18.51	74	50-150	33-167	2	0-35	PASS	
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.27	97	24.30	97	50-150	33-167	0	0-35	PASS	
1,1,1-Trichloroethane	25.00	23.18	93	23.21	93	50-150	33-167	0	0-35	PASS	
1,1,2-Trichloroethane	25.00	24.30	97	24.24	97	65-149	51-163	0	0-37	PASS	
2-Chlorotoluene	25.00	23.30	93	23.38	94	50-150	33-167	0	0-35	PASS	
1,2,3-Trichloropropane	25.00	23.17	93	23.26	93	50-150	33-167	0	0-35	PASS	
Acrolein	25.00	24.06	96	24.02	96	50-150	33-167	0	0-35	PASS	
Acrylonitrile	25.00	24.02	96	24.16	97	50-150	33-167	1	0-35	PASS	
Methyl Methacrylate	25.00	24.69	99	24.78	99	50-150	33-167	0	0-35	PASS	
Propane	50.00	46.13	92	47.04	94	50-150	33-167	2	0-35	PASS	
Butane	50.00	44.16	88	44.45	89	50-150	33-167	1	0-35	PASS	
Methanol	75.00	64.40	86	64.54	86	50-150	33-167	0	0-35	PASS	
2,2,4-Trimethyl Pentane	25.00	22.94	92	23.00	92	50-150	33-167	0	0-35	PASS	
Isobutane	50.00	44.96	90	45.41	91	50-150	33-167	1	0-35	PASS	
1,1,1,2-Tetrafluoroethane	25.00	23.95	96	24.79	99	50-150	33-167	3	0-35	PASS	
1,3,5-Trimethylbenzene	25.00	23.82	95	23.87	95	50-150	33-167	0	0-35	PASS	
1,1,2,2-Tetrachloroethane	25.00	23.35	93	23.48	94	50-150	33-167	1	0-35	PASS	
1,2,4-Trimethylbenzene	25.00	23.11	92	23.15	93	50-150	33-167	0	0-35	PASS	
1,2,4-Trichlorobenzene	25.00	21.68	87	22.00	88	50-150	33-167	1	0-35	PASS	

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LCS / LCSD QUALITY CONTROL SHEET
METHOD: EPA TO-15

WORK ORDER:	**13-12-1615**	D/T REVIEWED:	01/02/2014 13:01	LCS D/T ANALYZED:	12/28/2013 07:08
LCS/LCSD BATCH:	D131228L01	EXTRACTION:	N/A	LCSD D/T ANALYZED:	12/28/2013 07:58
LCS/LCSD SAMPLE I	**099-14-523-262**	LCS EXTRACTED:		LCS INSTRUMENT NAME:	GC/MS YY
ANALYST:	460	LCSD EXTRACTED:		LCSD INSTRUMENT NAME:	GC/MS YY
REVIEWED BY:	326				

COMMENT:

COMPOUND	ADDED	LCS CONC	% REC	LCSD CONC	% REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Vinyl Acetate	25.00	22.38	90	22.36	89	50-150	33-167	0	0-35	PASS	
Vinyl Chloride	25.00	24.44	98	24.55	98	45-177	23-199	0	0-36	PASS	
1,1-Difluoroethane	25.00	23.85	95	24.21	97	50-150	33-167	2	0-35	PASS	
Isopropanol	**25.00**	**15.60**	**62**	**22.83**	**91**	**50-150**	**33-167**	**38**	**0-35**	**FAIL**	**TX}**

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	DOD28DEC03.rr	W:\GCMS_YY_DATA\2013\131228\DOD28DEC03.D\
LCSD	DOD28DEC04.rr	W:\GCMS_YY_DATA\2013\131228\DOD28DEC04.D\

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC03.D Vial: 2
Acq On : 28 Dec 2013 7:08 am Operator: 846
Sample : LCS 25PPBV A122013D Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:47:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.427	130	525248	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.111	114	1831568	25.00	ppbv	0.00
59) Chlorobenzene-d5	19.221	117	1475951	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.436	65	641272	24.78	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.12%	
58) Toluene-d8	15.936	98	1722472	24.81	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.24%	
73) 1,4-Bromofluorobenzene	22.244	95	992797	25.39	ppbv	0.00
Spiked Amount 25.000			Recovery	=	101.56%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.056	69	367109	23.95	ppbv	99
3) 1,1-Difluoroethane	4.130	51	550527	23.85	ppbv	99
4) Propene	4.209	41	481232	24.69	ppbv	100
5) Propane	4.232	29	472944	46.13	ppbv	95
6) Dichlorodifluoromethane	4.283	85	1081489	23.59	ppbv	99
7) Chloromethane	4.442	50	202427	24.86	ppbv	100
8) Dichlorotetrafluoroethane	4.555	85	578723	19.48	ppbv	94
9) Isobutane	4.572	43	607552	44.96	ppbv	100
10) Methanol	4.635	31	142255	64.40	ppbv	99
11) Vinyl Chloride	4.674	62	249355	24.44	ppbv	99
12) 1,3-Butadiene	4.816	54	173853	24.97	ppbv	99
13) Butane	4.873	43	554446	44.16	ppbv	100
14) Bromomethane	5.088	94	285416	24.72	ppbv	99
15) Chloroethane	5.270	64	120299	24.61	ppbv	100
16) Ethanol	5.383	45	309609	89.88	ppbv	100
17) Acrolein	5.740	56	88057	24.06	ppbv	99
18) Acetone	5.871	58	105383	22.77	ppbv	99
19) Trichlorofluoromethane	6.069	101	680684	18.20	ppbv	100
20) Isopropanol	6.131	45	461166	15.60	ppbv	96
21) Acrylonitrile	6.358	53	404767	24.02	ppbv	100
22) 1,1-Dichloroethene	6.749	61	738356	24.40	ppbv	99
23) Methylene Chloride	6.869	84	415056	23.99	ppbv	99
24) Tert-Butyl Alcohol (TBA)	6.783	59	1779859	47.11	ppbv	100
25) 1,1,2-Trichloro-1,2,2-...	7.192	101	913356	24.27	ppbv	100
26) Carbon Disulfide	7.214	76	1371908	25.75	ppbv	100
27) t-1,2-Dichloroethene	7.951	96	496194	23.13	ppbv	99
28) 1,1-Dichloroethane	8.193	63	895726	23.90	ppbv	100
29) Methyl-t-Butyl Ether (...	8.275	73	1181613	24.52	ppbv	99
30) Vinyl Acetate	8.379	43	1327325	22.38	ppbv	100
31) 2-Butanone	8.668	43	1086443	24.47	ppbv	99
32) c-1,2-Dichloroethene	9.225	96	499399	24.24	ppbv	100
33) Hexane	9.541	57	643669	23.30	ppbv	93
34) Diisopropyl Ether (DIPE)	9.519	45	1527747	19.33	ppbv	99
35) Ethyl Acetate	9.525	61	143899	25.48	ppbv	96
36) Chloroform	9.607	83	956399	23.66	ppbv	99
37) Tetrahydrofuran	10.120	42	573445	24.59	ppbv	100
38) Ethyl-t-Butyl Ether (E...	10.234	59	1447271	22.82	ppbv	100
40) 1,2-Dichloroethane	10.583	62	652734	23.70	ppbv	100
41) 1,1,1-Trichloroethane	10.943	97	927835	23.18	ppbv	99
43) Benzene	11.587	78	1391866	24.46	ppbv	100
44) Carbon Tetrachloride	11.800	117	1046912	24.09	ppbv	99
45) Cyclohexane	11.991	56	783624	24.16	ppbv	100

Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC03.D Vial: 2
Acq On : 28 Dec 2013 7:08 am Operator: 846
Sample : LCS 25PPBV A122013D Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:47:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.477	73	1241220	23.55	ppbv	100
47) 1,2-Dichloropropane	12.777	63	581036	24.35	ppbv	100
48) Bromodichloromethane	13.055	83	1064390	24.71	ppbv	100
49) Trichloroethene	13.142	95	634889	24.25	ppbv	100
50) 2,2,4-Trimethyl Pentane	13.257	57	2350690	22.94	ppbv	100
51) 1,4-Dioxane	13.121	88	275908	21.66	ppbv	99
52) Methyl Methacrylate	13.481	69	508867	24.69	ppbv	98
53) Heptane	13.672	100	126910	24.50	ppbv	98
54) c-1,3-Dichloropropene	14.485	75	864450	25.71	ppbv	99
55) 4-Methyl-2-Pentanone	14.566	58	483805	25.11	ppbv	99
56) t-1,3-Dichloropropene	15.341	75	815050	28.40	ppbv	100
57) 1,1,2-Trichloroethane	15.609	83	525237	24.30	ppbv	100
60) Toluene	16.100	91	1699756	24.82	ppbv	99
61) 2-Hexanone	16.580	58	679533	24.66	ppbv	98
62) Dibromochloromethane	16.771	129	1125367	24.70	ppbv	100
63) 1,2-Dibromoethane	17.202	107	940097	24.37	ppbv	99
64) Tetrachloroethene	18.069	166	862030	23.84	ppbv	99
65) Chlorobenzene	19.303	112	1340426	24.10	ppbv	100
66) Ethylbenzene	20.061	91	2115418	24.83	ppbv	100
67) p/m-Xylene	20.432	91	3252659	48.83	ppbv	100
68) Bromoform	20.448	173	1015726	24.73	ppbv	100
69) Styrene	21.114	104	1197892	24.82	ppbv	100
70) 1,1,2,2-Tetrachloroethane	21.283	83	1205738	23.35	ppbv	100
71) o-Xylene	21.332	91	1615441	24.28	ppbv	99
72) 1,2,3-Trichloropropane	21.551	75	929643	23.17	ppbv	100
74) Isopropylbenzene	22.576	105	2150225	23.02	ppbv	100
75) 2-Chlorotoluene	23.553	91	1609278	23.30	ppbv	99
76) n-Propylbenzene	23.700	91	2668207	23.37	ppbv	100
77) 4-Ethyltoluene	24.044	105	2146751	24.87	ppbv	100
78) 1,3,5-Trimethylbenzene	24.241	105	1789631	23.82	ppbv	99
79) 1,2,4-Trimethylbenzene	25.195	105	1681521	23.11	ppbv	100
80) Benzyl Chloride	25.452	91	1598649	25.48	ppbv	100
81) 1,3-Dichlorobenzene	25.474	146	1203161	22.58	ppbv	100
82) 1,4-Dichlorobenzene	25.643	146	1143329	22.15	ppbv	99
83) 1,2-Dichlorobenzene	26.478	146	1155282	21.67	ppbv	100
84) 1,2,4-Trichlorobenzene	30.739	180	946313	21.68	ppbv	100
85) Naphthalene	30.941	128	2046888	21.82	ppbv	100
86) Hexachloro-1,3-Butadiene	31.749	225	971449	20.42	ppbv	100

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

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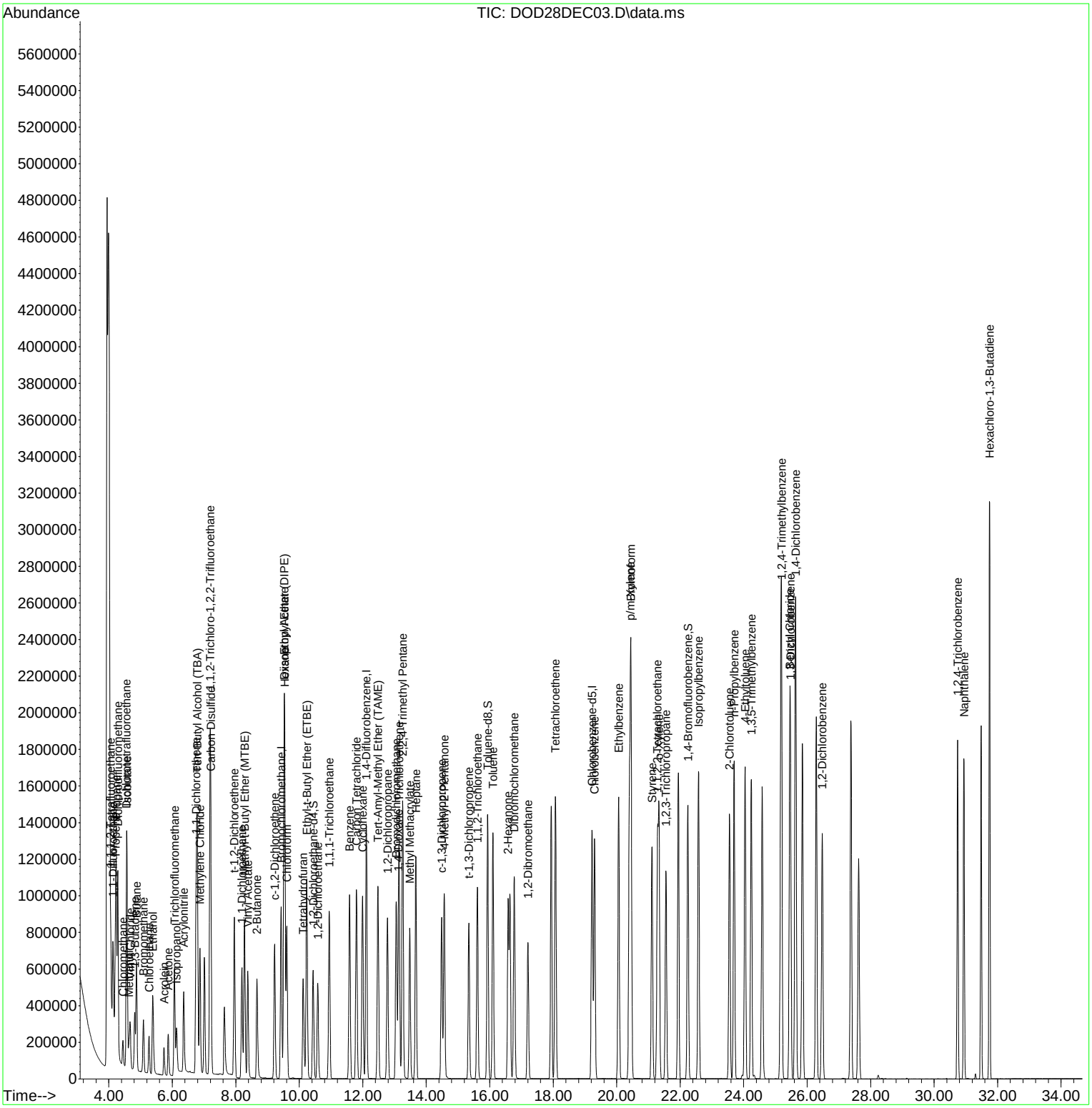
Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC03.D Vial: 2
Acq On : 28 Dec 2013 7:08 am Operator: 846
Sample : LCS 25PPBV A122013D Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:47:44 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



Return to Contents

Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC04.D Vial: 2
Acq On : 28 Dec 2013 7:58 am Operator: 846
Sample : LCSD 25PPBV A122013D Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:48:10 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.427	130	522153	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.111	114	1815956	25.00	ppbv	0.00
59) Chlorobenzene-d5	19.221	117	1443749	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.436	65	636774	24.75	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.00%	
58) Toluene-d8	15.936	98	1698102	24.67	ppbv	0.00
Spiked Amount 25.000			Recovery	=	98.68%	
73) 1,4-Bromofluorobenzene	22.238	95	963273	25.18	ppbv	0.00
Spiked Amount 25.000			Recovery	=	100.72%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.056	69	377775	24.79	ppbv	99
3) 1,1-Difluoroethane	4.130	51	555703	24.21	ppbv	100
4) Propene	4.209	41	487627	25.16	ppbv	99
5) Propane	4.232	29	479421	47.04	ppbv	95
6) Dichlorodifluoromethane	4.283	85	1081609	23.73	ppbv	99
7) Chloromethane	4.442	50	203708	25.17	ppbv	100
8) Dichlorotetrafluoroethane	4.555	85	578907	19.60	ppbv	93
9) Isobutane	4.572	43	609942	45.41	ppbv	100
10) Methanol	4.635	31	141731	64.54	ppbv	100
11) Vinyl Chloride	4.669	62	249011	24.55	ppbv	99
12) 1,3-Butadiene	4.810	54	173497	25.07	ppbv	99
13) Butane	4.867	43	554773	44.45	ppbv	100
14) Bromomethane	5.088	94	285124	24.84	ppbv	99
15) Chloroethane	5.264	64	119972	24.69	ppbv	99
16) Ethanol	5.383	45	307041	89.66	ppbv	100
17) Acrolein	5.735	56	87396	24.02	ppbv	99
18) Acetone	5.871	58	104049	22.62	ppbv	98
19) Trichlorofluoromethane	6.063	101	687978	18.51	ppbv	100
20) Isopropanol	6.131	45	670859	22.83	ppbv	99
21) Acrylonitrile	6.358	53	404810	24.16	ppbv	100
22) 1,1-Dichloroethene	6.744	61	738196	24.54	ppbv	99
23) Methylene Chloride	6.869	84	413045	24.01	ppbv	98
24) Tert-Butyl Alcohol (TBA)	6.784	59	1791770	47.71	ppbv	99
25) 1,1,2-Trichloro-1,2,2-...	7.186	101	909167	24.30	ppbv	99
26) Carbon Disulfide	7.214	76	1368012	25.82	ppbv	99
27) t-1,2-Dichloroethene	7.951	96	495642	23.24	ppbv	100
28) 1,1-Dichloroethane	8.188	63	892222	23.94	ppbv	100
29) Methyl-t-Butyl Ether (...	8.270	73	1182717	24.68	ppbv	99
30) Vinyl Acetate	8.379	43	1318231	22.36	ppbv	100
31) 2-Butanone	8.663	43	1079004	24.44	ppbv	100
32) c-1,2-Dichloroethene	9.219	96	497443	24.28	ppbv	99
33) Hexane	9.541	57	639936	23.30	ppbv	91
34) Diisopropyl Ether (DIPE)	9.519	45	1519732	19.34	ppbv	98
35) Ethyl Acetate	9.525	61	143007	25.47	ppbv	97
36) Chloroform	9.607	83	951858	23.69	ppbv	100
37) Tetrahydrofuran	10.120	42	566333	24.43	ppbv	99
38) Ethyl-t-Butyl Ether (E...	10.234	59	1447142	22.95	ppbv	100
40) 1,2-Dichloroethane	10.583	62	648253	23.68	ppbv	99
41) 1,1,1-Trichloroethane	10.943	97	923701	23.21	ppbv	99
43) Benzene	11.582	78	1383098	24.51	ppbv	100
44) Carbon Tetrachloride	11.800	117	1040735	24.15	ppbv	99
45) Cyclohexane	11.991	56	781154	24.29	ppbv	100

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Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC04.D Vial: 2
Acq On : 28 Dec 2013 7:58 am Operator: 846
Sample : LCSD 25PPBV A122013D Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:48:10 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.477	73	1241603	23.76	ppbv	100
47) 1,2-Dichloropropane	12.777	63	577826	24.42	ppbv	100
48) Bromodichloromethane	13.055	83	1058097	24.77	ppbv	100
49) Trichloroethene	13.142	95	630239	24.28	ppbv	99
50) 2,2,4-Trimethyl Pentane	13.257	57	2336016	23.00	ppbv	100
51) 1,4-Dioxane	13.121	88	272697	21.59	ppbv	100
52) Methyl Methacrylate	13.481	69	506343	24.78	ppbv	98
53) Heptane	13.672	100	125927	24.52	ppbv	99
54) c-1,3-Dichloropropene	14.485	75	860488	25.82	ppbv	99
55) 4-Methyl-2-Pentanone	14.567	58	480833	25.17	ppbv	100
56) t-1,3-Dichloropropene	15.341	75	808583	28.41	ppbv	100
57) 1,1,2-Trichloroethane	15.609	83	519456	24.24	ppbv	100
60) Toluene	16.100	91	1688563	25.21	ppbv	100
61) 2-Hexanone	16.580	58	674210	25.02	ppbv	98
62) Dibromochloromethane	16.771	129	1113018	24.98	ppbv	100
63) 1,2-Dibromoethane	17.202	107	931125	24.67	ppbv	99
64) Tetrachloroethene	18.075	166	852927	24.11	ppbv	99
65) Chlorobenzene	19.303	112	1323711	24.33	ppbv	99
66) Ethylbenzene	20.061	91	2095715	25.15	ppbv	100
67) p/m-Xylene	20.438	91	3222921	49.46	ppbv	100
68) Bromoform	20.454	173	997652	24.83	ppbv	100
69) Styrene	21.114	104	1181404	25.02	ppbv	99
70) 1,1,2,2-Tetrachloroethane	21.283	83	1186216	23.48	ppbv	100
71) o-Xylene	21.332	91	1595024	24.50	ppbv	100
72) 1,2,3-Trichloropropane	21.551	75	912783	23.26	ppbv	99
74) Isopropylbenzene	22.576	105	2121157	23.22	ppbv	100
75) 2-Chlorotoluene	23.553	91	1579753	23.38	ppbv	99
76) n-Propylbenzene	23.700	91	2626250	23.52	ppbv	100
77) 4-Ethyltoluene	24.044	105	2106541	24.95	ppbv	100
78) 1,3,5-Trimethylbenzene	24.241	105	1754388	23.87	ppbv	100
79) 1,2,4-Trimethylbenzene	25.196	105	1647888	23.15	ppbv	99
80) Benzyl Chloride	25.452	91	1537114	25.04	ppbv	100
81) 1,3-Dichlorobenzene	25.474	146	1167226	22.40	ppbv	100
82) 1,4-Dichlorobenzene	25.643	146	1099091	21.77	ppbv	99
83) 1,2-Dichlorobenzene	26.478	146	1117135	21.42	ppbv	100
84) 1,2,4-Trichlorobenzene	30.745	180	939160	22.00	ppbv	99
85) Naphthalene	30.941	128	2026489	22.08	ppbv	100
86) Hexachloro-1,3-Butadiene	31.749	225	971303	20.87	ppbv	100

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

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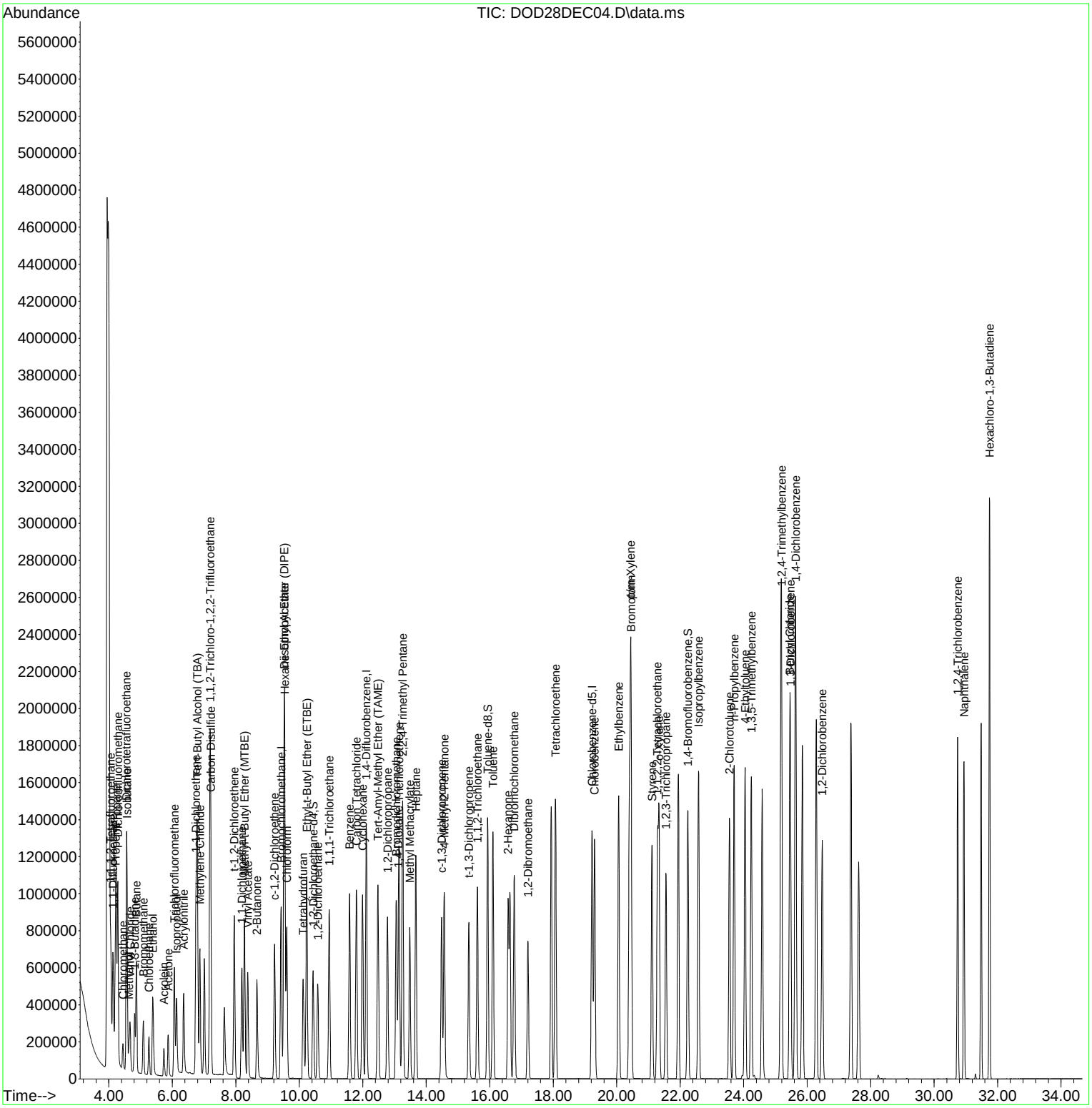
Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC04.D Vial: 2
Acq On : 28 Dec 2013 7:58 am Operator: 846
Sample : LCSD 25PPBV A122013D Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:48:10 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1615 REVIEWED BY: 326

LCS/MB BATCH : D131228L01 DATE REVIEWED: 01/02/2014 13:01

MS BATCH : EXTRACTION : N/A

1 CLIENT SAMPLE NUMBER : MW-40-37

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC14.D\28DEC14.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 1633 ANALYST: 460 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**102**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**97**	**47-137**	**PASS**	
Toluene-d8	**97**	**78-156**	**PASS**	

1R CLIENT SAMPLE NUMBER : MW-40-37

DATA FILE: W:\GCMS_YY_DATA\2013\131228\28DEC15.D\28DEC15.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 1719 ANALYST: 460 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**101**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**97**	**47-137**	**PASS**	
Toluene-d8	**98**	**78-156**	**PASS**	

MB CLIENT SAMPLE NUMBER : Method Blank

DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 1047 ANALYST: 460 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**101**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**102**	**47-137**	**PASS**	
Toluene-d8	**98**	**78-156**	**PASS**	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC03.D\DOD28DEC03.rr

D/T EXTRACTED:
D/T ANALYZED: 12/28/2013 0708 ANALYST: 460 INSTRUMENT NAME: GC/MS YY
COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**102**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**99**	**47-137**	**PASS**	
Toluene-d8	**99**	**78-156**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA TO-15

WORK ORDER NUMBER 13-12-1615

REVIEWED BY: 326

LCS/MB BATCH : D131228L01

DATE REVIEWED: 01/02/2014 13:01

MS BATCH :

EXTRACTION : N/A

 # LCD **CLIENT SAMPLE NUMBER :** **Lab Control Sample Duplicate**

DATA FILE: W:\GCMS_YY_DATA\2013\131228\DOD28DEC04.D\DOD28DEC04.rr

D/T EXTRACTED:

D/T ANALYZED: 12/28/2013 0758 ANALYST: 460 INSTRUMENT NAME: GC/MS YY

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	**101**	**57-129**	**PASS**	
1,2-Dichloroethane-d4	**99**	**47-137**	**PASS**	
Toluene-d8	**99**	**78-156**	**PASS**	

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Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Continuing Calibration Data

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-14-522-203-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131227IC
INITIAL DATE ANALYZED: 12/27/13 6:38
ANALYST: 460

REVIEWED BY: 326
DATE REVIEWED: 1/2/14 13:01
CCV BATCH: D131228A
CCV DATE ANALYZED: 12/28/13 6:19

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	Avg Resp	0.00	0.220	0.193			12	0-30	PASS
Benzene	Avg Resp	0.00	0.777	0.710			9	0-30	PASS
Benzyl Chloride	Avg Resp	0.00	1.063	0.973			8	0-30	PASS
Bromodichloromethane	Avg Resp	0.00	0.588	0.538			9	0-30	PASS
Bromoform	Avg Resp	0.00	0.696	0.634			9	0-30	PASS
Bromomethane	Avg Resp	0.00	0.550	0.505			8	0-30	PASS
1,3-Butadiene	Avg Resp	0.00	0.331	0.310			6	0-30	PASS
2-Butanone	Avg Resp	0.00	2.113	1.929			9	0-30	PASS
Carbon Disulfide	Avg Resp	0.00	2.536	2.338			8	0-30	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.593	0.536			10	0-30	PASS
Chlorobenzene	Avg Resp	0.00	0.942	0.845			10	0-30	PASS
Chloroethane	Avg Resp	0.00	0.233	0.222			4	0-30	PASS
Chloroform	Avg Resp	0.00	1.924	1.719			11	0-30	PASS
Chloromethane	Avg Resp	0.00	0.387	0.362			7	0-30	PASS
Cyclohexane	Avg Resp	0.00	0.443	0.407			8	0-30	PASS
Dibromochloromethane	Avg Resp	0.00	0.772	0.708			8	0-30	PASS
Dichlorodifluoromethane	Avg Resp	0.00	2.182	1.994			9	0-30	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	3.762	2.887			23	0-30	PASS
1,1-Dichloroethane	Avg Resp	0.00	1.784	1.627			9	0-30	PASS
1,1-Dichloroethene	Avg Resp	0.00	1.440	1.312			9	0-30	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.653	0.594			9	0-30	PASS
Dichlorotetrafluoroethane	Avg Resp	0.00	1.414	1.287			9	0-30	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	0.903	0.770			15	0-30	PASS
1,2-Dichloroethane	Avg Resp	0.00	1.311	1.183			10	0-30	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.326	0.296			9	0-30	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	0.902	0.775			14	0-30	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	0.874	0.739			16	0-30	PASS
1,4-Dioxane	Avg Resp	0.00	0.174	0.160			8	0-30	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.459	0.434			5	0-30	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.981	0.910			7	0-30	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	1.021	0.937			8	0-30	PASS
t-1,3-Dichloropropene	Avg Resp	0.00	0.392	0.378			4	0-30	PASS
Ethanol	Avg Resp	0.00	0.164	0.142			13	0-30	PASS
Ethyl Acetate	Avg Resp	0.00	0.269	0.255			5	0-30	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	3.019	2.776			8	0-30	PASS
Ethylbenzene	Avg Resp	0.00	1.443	1.330			8	0-30	PASS
4-Ethyltoluene	Avg Resp	0.00	1.462	1.322			10	0-30	PASS
Heptane	Avg Resp	0.00	0.071	0.066			7	0-30	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-14-522-203-5985
INSTRUMENT NAME: GC/MS YY
INITIAL BATCH: D131227IC
INITIAL DATE ANALYZED: 12/27/13 6:38
ANALYST: 460

REVIEWED BY: 326
DATE REVIEWED: 1/2/14 13:01
CCV BATCH: D131228A
CCV DATE ANALYZED: 12/28/13 6:19

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.806	0.620			23	0-30	PASS
Hexane	Avg Resp	0.00	1.315	1.148			13	0-30	PASS
2-Hexanone	Avg Resp	0.00	0.467	0.423			9	0-30	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	2.294	2.127			7	0-30	PASS
Methylene Chloride	Avg Resp	0.00	0.824	0.729			12	0-30	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.263	0.238			9	0-30	PASS
Naphthalene	Avg Resp	0.00	1.589	1.363			14	0-30	PASS
o-Xylene	Avg Resp	0.00	1.127	1.023			9	0-30	PASS
p/m-Xylene	Avg Resp	0.00	1.128	1.022			9	0-30	PASS
Propene	Avg Resp	0.00	0.928	0.874			6	0-30	PASS
Styrene	Avg Resp	0.00	0.818	0.770			6	0-30	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.719	0.677			6	0-30	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.798	1.634			9	0-30	PASS
Tetrachloroethene	Avg Resp	0.00	0.613	0.545			11	0-30	PASS
Tetrahydrofuran	Avg Resp	0.00	1.110	1.057			5	0-30	PASS
Toluene	Avg Resp	0.00	1.160	1.045			10	0-30	PASS
Trichloroethene	Avg Resp	0.00	0.357	0.326			9	0-30	PASS
Trichlorofluoromethane	Avg Resp	0.00	1.780	1.252			30	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	1.791	1.624			9	0-30	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	1.905	1.726			9	0-30	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.295	0.269			9	0-30	PASS
Butane	Avg Resp	0.00	0.598	0.551			8	0-30	PASS
Methanol	Avg Resp	0.00	0.105	0.095			10	0-30	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.273	1.129			11	0-30	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.00	0.875	0.770			12	0-30	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	1.233	1.073			13	0-30	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	0.739	0.624			16	0-30	PASS
Vinyl Acetate	Avg Resp	0.00	2.823	2.617			7	0-30	PASS
Vinyl Chloride	Avg Resp	0.00	0.486	0.451			7	0-30	PASS
Isopropanol	**Avg Resp**	**0.00**	**1.407**	**0.740**			**47**	0-30	**FAIL**

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_YY_DATA\2013\131228\DOD28DEC02.D\DOD28DEC02.rr

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CCV Association Summary For Method: EPA TO-15

Batch ID: D131228A
Instrument: GC/MS YY

Analyst: 460

Work Order Number: 099-14-522
Matrix: Air

Reviewed By: 326
D/T Reviewed: 01/02/2014 13:01

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
203	Daily Calibration	12/28/2013 06:19	W:\GCMS_YY_DATA\2013\131228\DOD28DEC02.D\DOD28DEC02.rr

Work Order Number: 13-12-1615
Matrix: Air

Reviewed By: 326
D/T Reviewed: 01/02/2014 13:01

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
1	MW-40-37	12/28/2013 16:33	W:\GCMS_YY_DATA\2013\131228\28DEC14.D\28DEC14.rr
1	MW-40-37	12/28/2013 17:19	W:\GCMS_YY_DATA\2013\131228\28DEC15.D\28DEC15.rr

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Data File : W:\GCMS_YY_DATA\2013\131228\28DEC02.D Vial: 2
Acq On : 28 Dec 2013 6:19 am Operator: 846
Sample : CCV 25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 28 08:19:12 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0	103	0.00
2		1,1,1,2-Tetrafluoroethane	0.730	0.732	0	101	0.00
3		1,1-Difluoroethane	1.099	1.021	7	96	0.00
4		Propene	0.928	0.874	6	96	0.00
5		Propane	0.488	0.477	2	97	0.00
6		Dichlorodifluoromethane	2.182	1.994	9	96	0.00
7		Chloromethane	0.387	0.362	6	97	0.00
8		Dichlorotetrafluoroethane	1.414	1.287	9	96	0.00
9		Isobutane	0.643	0.592	8	97	0.00
10		Methanol	0.105	0.095	10	96	0.00
11		Vinyl Chloride	0.486	0.451	7	97	0.00
12		1,3-Butadiene	0.331	0.310	6	97	0.00
13		Butane	0.598	0.551	8	97	0.00
14		Bromomethane	0.550	0.505	8	96	0.00
15		Chloroethane	0.233	0.222	5	97	0.00
16		Ethanol	0.164	0.142	13	93	0.00
17		Acrolein	0.174	0.164	6	96	0.00
18		Acetone	0.220	0.193	12	96	0.00
19		Trichlorofluoromethane	1.780	1.252	30	77	0.00
20		Isopropanol	1.407	0.740	47#	46#	0.00
21		Acrylonitrile	0.802	0.766	4	94	0.00
22		1,1-Dichloroethene	1.440	1.312	9	96	0.00
23		Methylene Chloride	0.824	0.729	12	95	0.00
24		Tert-Butyl Alcohol (TBA)	1.798	1.634	9	93	0.00
25		1,1,2-Trichloro-1,2,2-Trifl	1.791	1.624	9	96	0.00
26		Carbon Disulfide	2.536	2.338	8	95	0.00
27		t-1,2-Dichloroethene	1.021	0.937	8	97	0.00
28		1,1-Dichloroethane	1.784	1.627	9	96	0.00
29		Methyl-t-Butyl Ether (MTBE)	2.294	2.127	7	95	0.00
30		Vinyl Acetate	2.823	2.617	7	95	0.00
31		2-Butanone	2.113	1.929	9	95	0.00
32		c-1,2-Dichloroethene	0.981	0.910	7	95	0.00
33		Hexane	1.315	1.148	13	95	0.00
34		Diisopropyl Ether (DIPE)	3.762	2.887	23	95	0.00
35		Ethyl Acetate	0.269	0.255	5	95	0.00
36		Chloroform	1.924	1.719	11	95	0.00
37		Tetrahydrofuran	1.110	1.057	5	95	0.00
38		Ethyl-t-Butyl Ether (ETBE)	3.019	2.776	8	95	0.00
39	S	1,2-Dichloroethane-d4	1.232	1.226	0	103	0.00
40		1,2-Dichloroethane	1.311	1.183	10	95	0.00
41		1,1,1-Trichloroethane	1.905	1.726	9	95	0.00
42	I	1,4-Difluorobenzene	1.000	1.000	0	103	0.00
43		Benzene	0.777	0.710	9	95	0.00
44		Carbon Tetrachloride	0.593	0.536	10	95	0.00
45		Cyclohexane	0.443	0.407	8	95	0.00
46		Tert-Amyl-Methyl Ether (TAM	0.719	0.677	6	96	0.00
47		1,2-Dichloropropane	0.326	0.296	9	95	0.00
48		Bromodichloromethane	0.588	0.538	9	95	0.00
49		Trichloroethene	0.357	0.326	9	96	0.00
50		2,2,4-Trimethyl Pentane	1.398	1.238	11	95	0.00
51		1,4-Dioxane	0.174	0.160	8	91	0.00

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Data File : W:\GCMS_YY_DATA\2013\131228\28DEC02.D Vial: 2
Acq On : 28 Dec 2013 6:19 am Operator: 846
Sample : CCV 25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Dec 28 08:19:12 2013
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52		Methyl Methacrylate	0.281	0.259	8	95	0.00
53		Heptane	0.071	0.066	7	95	0.00
54		c-1,3-Dichloropropene	0.459	0.434	5	95	0.00
55		4-Methyl-2-Pentanone	0.263	0.238	10	93	0.00
56		t-1,3-Dichloropropene	0.392	0.378	4	95	0.00
57		1,1,2-Trichloroethane	0.295	0.269	9	95	0.00
58	S	Toluene-d8	0.948	0.946	0	103	0.00
59	I	Chlorobenzene-d5	1.000	1.000	0	104	0.00
60		Toluene	1.160	1.045	10	95	0.00
61		2-Hexanone	0.467	0.423	9	92	0.00
62		Dibromochloromethane	0.772	0.708	8	96	0.00
63		1,2-Dibromoethane	0.653	0.594	9	96	0.00
64		Tetrachloroethene	0.613	0.545	11	96	0.00
65		Chlorobenzene	0.942	0.845	10	96	0.00
66		Ethylbenzene	1.443	1.330	8	96	0.00
67		p/m-Xylene	1.128	1.022	9	96	0.00
68		Bromoform	0.696	0.634	9	97	0.00
69		Styrene	0.818	0.770	6	97	0.00
70		1,1,2,2-Tetrachloroethane	0.875	0.770	12	96	0.00
71		o-Xylene	1.127	1.023	9	96	0.00
72		1,2,3-Trichloropropane	0.680	0.601	12	96	0.00
73	S	1,4-Bromofluorobenzene	0.662	0.673	-2	107	0.00
74		Isopropylbenzene	1.582	1.438	9	96	0.00
75		2-Chlorotoluene	1.170	1.064	9	97	0.00
76		n-Propylbenzene	1.934	1.738	10	96	0.00
77		4-Ethyltoluene	1.462	1.322	10	96	0.00
78		1,3,5-Trimethylbenzene	1.273	1.129	11	95	0.00
79		1,2,4-Trimethylbenzene	1.233	1.073	13	95	0.00
80		Benzyl Chloride	1.063	0.973	8	93	0.00
81		1,3-Dichlorobenzene	0.902	0.775	14	96	0.00
82		1,4-Dichlorobenzene	0.874	0.739	15	96	0.00
83		1,2-Dichlorobenzene	0.903	0.770	15	95	0.00
84		1,2,4-Trichlorobenzene	0.739	0.624	16	96	0.00
85		Naphthalene	1.589	1.363	14	97	0.00
86		Hexachloro-1,3-Butadiene	0.806	0.620	23	95	0.00

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

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Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC02.D Vial: 2
Acq On : 28 Dec 2013 6:19 am Operator: 846
Sample : CCV 25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:46:41 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.432	130	556183	25.00	ppbv	0.00
42) 1,4-Difluorobenzene	12.111	114	1953493	25.00	ppbv	0.00
59) Chlorobenzene-d5	19.221	117	1586853	25.00	ppbv	0.00
System Monitoring Compounds						
39) 1,2-Dichloroethane-d4	10.436	65	681829	24.88	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.52%	
58) Toluene-d8	15.936	98	1847529	24.95	ppbv	0.00
Spiked Amount 25.000			Recovery	=	99.80%	
73) 1,4-Bromofluorobenzene	22.244	95	1068049	25.40	ppbv	0.00
Spiked Amount 25.000			Recovery	=	101.60%	
Target Compounds						Qvalue
2) 1,1,1,2-Tetrafluoroethane	4.056	69	407156	25.09	ppbv	99
3) 1,1-Difluoroethane	4.130	51	568037	23.24	ppbv	100
4) Propene	4.209	41	485841	23.54	ppbv	99
5) Propane	4.232	29	530926	48.90	ppbv	95
6) Dichlorodifluoromethane	4.283	85	1109000	22.85	ppbv	100
7) Chloromethane	4.447	50	201134	23.33	ppbv	99
8) Dichlorotetrafluoroethane	4.555	85	715652	22.75	ppbv	99
9) Isobutane	4.578	43	659017	46.06	ppbv	100
10) Methanol	4.635	31	157979	67.54	ppbv	99
11) Vinyl Chloride	4.674	62	251024	23.24	ppbv	100
12) 1,3-Butadiene	4.816	54	172558	23.41	ppbv	100
13) Butane	4.873	43	613333	46.14	ppbv	100
14) Bromomethane	5.088	94	280919	22.97	ppbv	100
15) Chloroethane	5.270	64	123651	23.89	ppbv	99
16) Ethanol	5.389	45	315831	86.59	ppbv	100
17) Acrolein	5.740	56	91161	23.52	ppbv	98
18) Acetone	5.876	58	107561	21.95	ppbv	99
19) Trichlorofluoromethane	6.069	101	696599	17.59	ppbv	100
20) Isopropanol	6.131	45	411749	13.15	ppbv	96
21) Acrylonitrile	6.364	53	425886	23.87	ppbv	99
22) 1,1-Dichloroethene	6.749	61	729495	22.77	ppbv	99
23) Methylene Chloride	6.874	84	405452	22.13	ppbv	100
24) Tert-Butyl Alcohol (TBA)	6.789	59	1817872	45.44	ppbv	99
25) 1,1,2-Trichloro-1,2,2-...	7.192	101	903175	22.67	ppbv	99
26) Carbon Disulfide	7.214	76	1300162	23.04	ppbv	100
27) t-1,2-Dichloroethene	7.957	96	521153	22.94	ppbv	100
28) 1,1-Dichloroethane	8.194	63	904719	22.79	ppbv	100
29) Methyl-t-Butyl Ether (...	8.275	73	1183184	23.18	ppbv	100
30) Vinyl Acetate	8.379	43	1455496	23.18	ppbv	100
31) 2-Butanone	8.668	43	1073125	22.82	ppbv	100
32) c-1,2-Dichloroethene	9.225	96	506046	23.19	ppbv	99
33) Hexane	9.541	57	638518	21.83	ppbv	98
34) Diisopropyl Ether (DIPE)	9.525	45	1605663	19.18	ppbv	99
35) Ethyl Acetate	9.525	61	142076	23.75	ppbv	99
36) Chloroform	9.607	83	956174	22.34	ppbv	100
37) Tetrahydrofuran	10.125	42	587622	23.79	ppbv	100
38) Ethyl-t-Butyl Ether (E...	10.234	59	1543771	22.99	ppbv	100
40) 1,2-Dichloroethane	10.583	62	658133	22.57	ppbv	99
41) 1,1,1-Trichloroethane	10.944	97	960007	22.65	ppbv	100
43) Benzene	11.587	78	1387465	22.86	ppbv	100
44) Carbon Tetrachloride	11.800	117	1046999	22.58	ppbv	99
45) Cyclohexane	11.991	56	794266	22.96	ppbv	100

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Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC02.D Vial: 2
Acq On : 28 Dec 2013 6:19 am Operator: 846
Sample : CCV 25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:46:41 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Tert-Amyl-Methyl Ether...	12.482	73	1323258	23.54	ppbv	100
47) 1,2-Dichloropropane	12.777	63	578462	22.72	ppbv	100
48) Bromodichloromethane	13.055	83	1050769	22.87	ppbv	99
49) Trichloroethene	13.143	95	635900	22.77	ppbv	100
50) 2,2,4-Trimethyl Pentane	13.257	57	2418021	22.13	ppbv	100
51) 1,4-Dioxane	13.121	88	312688	23.01	ppbv	99
52) Methyl Methacrylate	13.481	69	505791	23.01	ppbv	98
53) Heptane	13.672	100	128421	23.25	ppbv	98
54) c-1,3-Dichloropropene	14.485	75	847927	23.65	ppbv	99
55) 4-Methyl-2-Pentanone	14.567	58	465763	22.66	ppbv	99
56) t-1,3-Dichloropropene	15.341	75	737730	24.10	ppbv	100
57) 1,1,2-Trichloroethane	15.609	83	525353	22.79	ppbv	100
60) Toluene	16.100	91	1658877	22.53	ppbv	100
61) 2-Hexanone	16.580	58	670992	22.65	ppbv	100
62) Dibromochloromethane	16.771	129	1123608	22.94	ppbv	100
63) 1,2-Dibromoethane	17.202	107	942536	22.72	ppbv	99
64) Tetrachloroethene	18.070	166	864982	22.25	ppbv	99
65) Chlorobenzene	19.303	112	1341630	22.43	ppbv	100
66) Ethylbenzene	20.061	91	2110559	23.05	ppbv	100
67) p/m-Xylene	20.438	91	3244782	45.31	ppbv	100
68) Bromoform	20.449	173	1005968	22.78	ppbv	100
69) Styrene	21.114	104	1221747	23.54	ppbv	100
70) 1,1,2,2-Tetrachloroethane	21.283	83	1222530	22.02	ppbv	100
71) o-Xylene	21.333	91	1623162	22.69	ppbv	99
72) 1,2,3-Trichloropropane	21.551	75	953542	22.11	ppbv	100
74) Isopropylbenzene	22.582	105	2281969	22.72	ppbv	100
75) 2-Chlorotoluene	23.553	91	1689057	22.74	ppbv	99
76) n-Propylbenzene	23.701	91	2757266	22.46	ppbv	100
77) 4-Ethyltoluene	24.044	105	2097704	22.61	ppbv	100
78) 1,3,5-Trimethylbenzene	24.241	105	1791880	22.18	ppbv	100
79) 1,2,4-Trimethylbenzene	25.196	105	1703294	21.77	ppbv	99
80) Benzyl Chloride	25.452	91	1543853	22.89	ppbv	100
81) 1,3-Dichlorobenzene	25.474	146	1229095	21.46	ppbv	100
82) 1,4-Dichlorobenzene	25.643	146	1172328	21.13	ppbv	99
83) 1,2-Dichlorobenzene	26.478	146	1221388	21.31	ppbv	100
84) 1,2,4-Trichlorobenzene	30.745	180	989753	21.09	ppbv	100
85) Naphthalene	30.941	128	2162413	21.44	ppbv	100
86) Hexachloro-1,3-Butadiene	31.749	225	983394	19.23	ppbv	100

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

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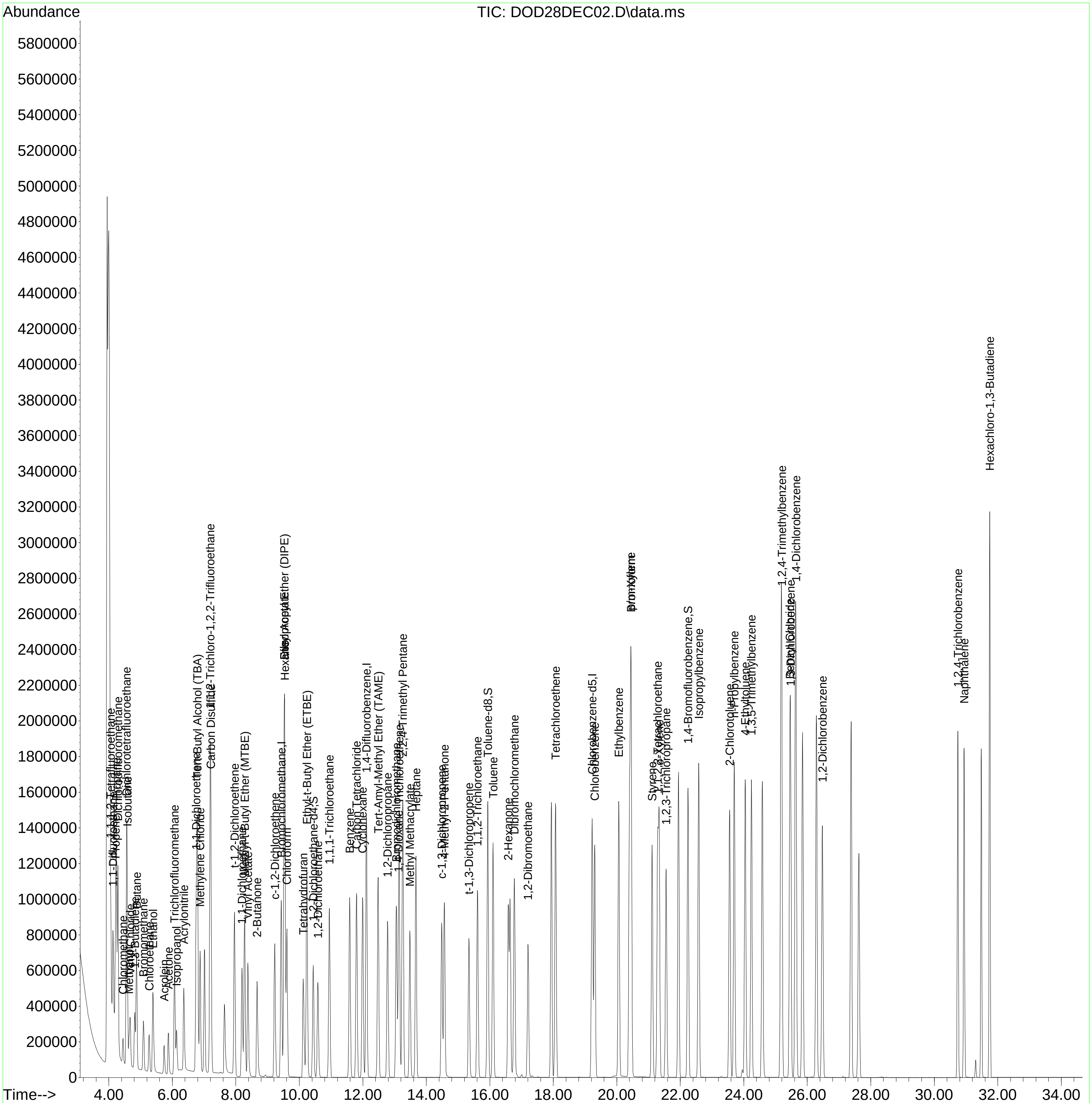
Data File : W:\GCMS_YY_DATA\2013\131228\DOD28DEC02.D Vial: 2
Acq On : 28 Dec 2013 6:19 am Operator: 846
Sample : CCV 25PPBV A122613A Inst : GCMS YY
Misc : AIR-01-31-15 326
Integrator: RTE
Quant Time: Jan 02 10:46:41 2014
Quant Results File: 131227DOD.RES

Quant Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Quant Title :
QLast Update : Fri Dec 27 18:10:47 2013
Response via : Initial Calibration
DataAcq Meth:TO15.M



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ICAL Internal Standards Average Compound Area Report for Method: EPA TO-15

Sample ID: 099-14-522-198 **D/T Analyzed:** 12/27/2013 03:30
Batch ID: D131227IC

Analyte	1	2	3	4	5	6	7	8	9	Avg. Area	Lower Area Limit	Upper Area Limit
Bromochloromethane	542995	540995	538385	534937	541433	515419	515303			532781	319669	745893
1,4-Difluorobenzene	1919722	1915058	1900978	1883151	1891271	1802706	1791587			1872068	1123241	2620895
Chlorobenzene-d5	1555588	1536551	1532860	1517661	1519043	1459666	1459560			1511561	906937	2116186

ICV, CCV And Samples Internal Standard Compounds Area Report for Method: EPA TO-15

ICV
Sample ID: 099-14-522-198 **Run #:** 10
CCV Batch ID: D131228A **D/T Analyzed:** 12/27/2013 09:13
Data File: W:\GCMS_YY_DATA\2013\131227\DOD27DEC09.D\DOD27DEC09.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	516110	319669	745893	9.43	PASS	
1,4-Difluorobenzene	1820485	1123241	2620895	12.12	PASS	
Chlorobenzene-d5	1487380	906937	2116186	19.23	PASS	

CCV
Sample ID: 099-14-522-203 **Run #:** 0
CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 06:19
Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC02.D\DOD28DEC02.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	556183	319669	745893	9.43	PASS	
1,4-Difluorobenzene	1953493	1123241	2620895	12.11	PASS	
Chlorobenzene-d5	1586853	906937	2116186	19.22	PASS	

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LCS

Sample ID: 099-14-523-262 **Run #:** 1

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 07:08

Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC03.D\DOD28DEC03.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	525248	319669	745893	9.43	PASS	
1,4-Difluorobenzene	1831568	1123241	2620895	12.11	PASS	
Chlorobenzene-d5	1475951	906937	2116186	19.22	PASS	

LCSD

Sample ID: 099-14-523-262 **Run #:** 2

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 07:58

Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC04.D\DOD28DEC04.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	522153	319669	745893	9.43	PASS	
1,4-Difluorobenzene	1815956	1123241	2620895	12.11	PASS	
Chlorobenzene-d5	1443749	906937	2116186	19.22	PASS	

MB

Sample ID: 099-14-523-262 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 10:47

Data File: W:\GCMS_YY_DATA\2013\131228\DOD28DEC07.D\DOD28DEC07.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	546472	319669	745893	9.42	PASS	
1,4-Difluorobenzene	1920822	1123241	2620895	12.11	PASS	
Chlorobenzene-d5	1505652	906937	2116186	19.22	PASS	

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CS

Sample ID: 13-12-1615-1 **Run #:** 0

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 16:33

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC14.D\28DEC14.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	489904	319669	745893	9.49	PASS	
1,4-Difluorobenzene	1719302	1123241	2620895	12.15	PASS	
Chlorobenzene-d5	1344882	906937	2116186	19.23	PASS	

CS

Sample ID: 13-12-1615-1 **Run #:** 1

CCV Batch ID: D131228A **D/T Analyzed:** 12/28/2013 17:19

Data File: W:\GCMS_YY_DATA\2013\131228\28DEC15.D\28DEC15.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	486387	319669	745893	9.49	PASS	
1,4-Difluorobenzene	1692831	1123241	2620895	12.15	PASS	
Chlorobenzene-d5	1330486	906937	2116186	19.23	PASS	

Notes:

For all samples including QC, all internal standard area responses must be within 60% to 140% of the mean area response in the initial calibration.

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EPA TO-15 Full List

Tuning Data

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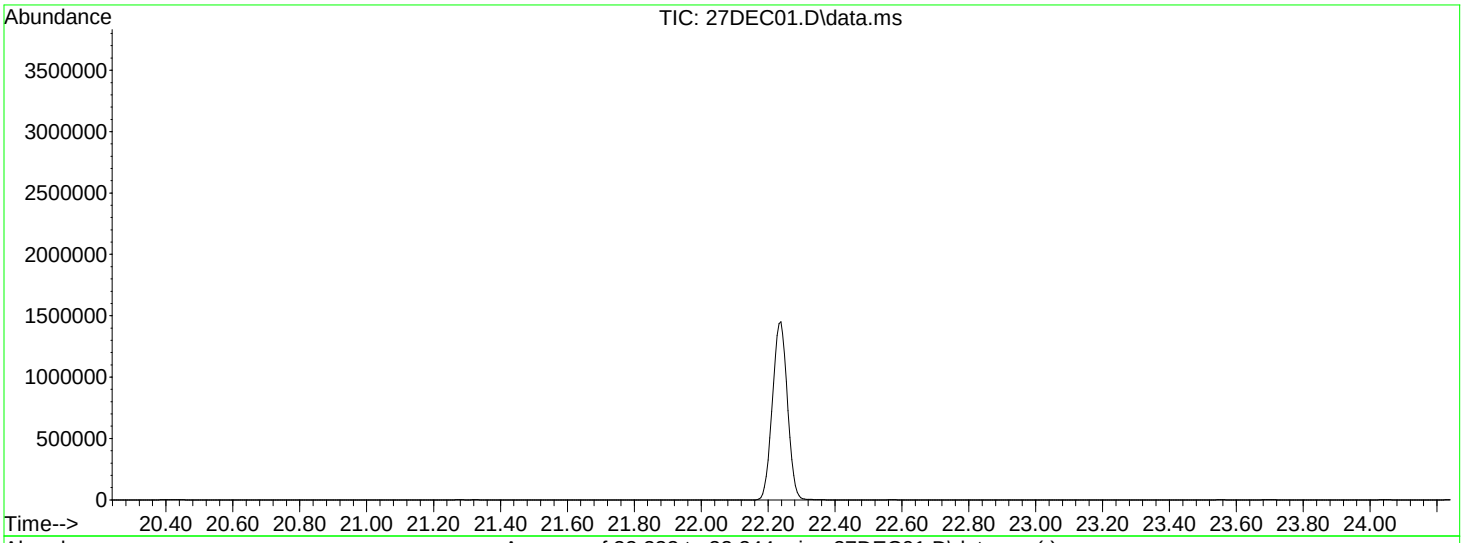
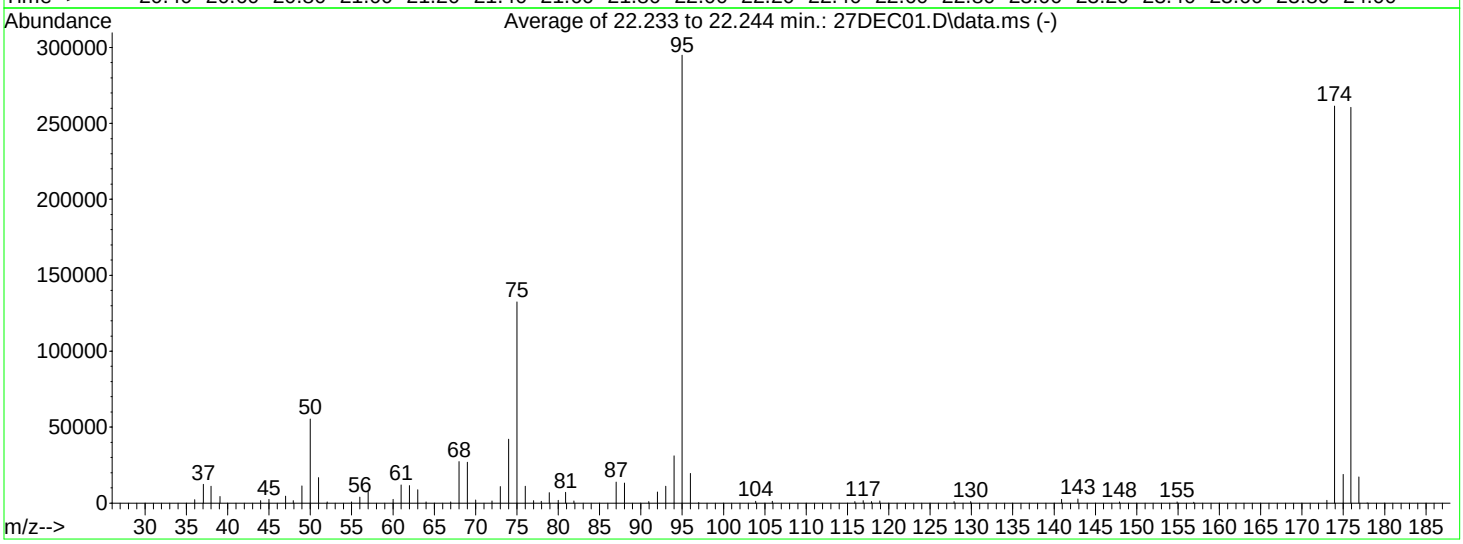
Data Path : W:\GCMS_YY_DATA\2013\131227\
Data File : 27DEC01.D
Acq On : 27 Dec 2013 2:40 am
Operator : 846
Sample : TUNE CHECK
Misc : AIR-01-31-15 326
ALS Vial : 10 Sample Multiplier: 1

Integration File: THR0.3p.P

Method : C:\MSDCHEM\1\METHODS\131227DOD.M
Title :
Last Update : Fri Dec 27 18:10:47 2013





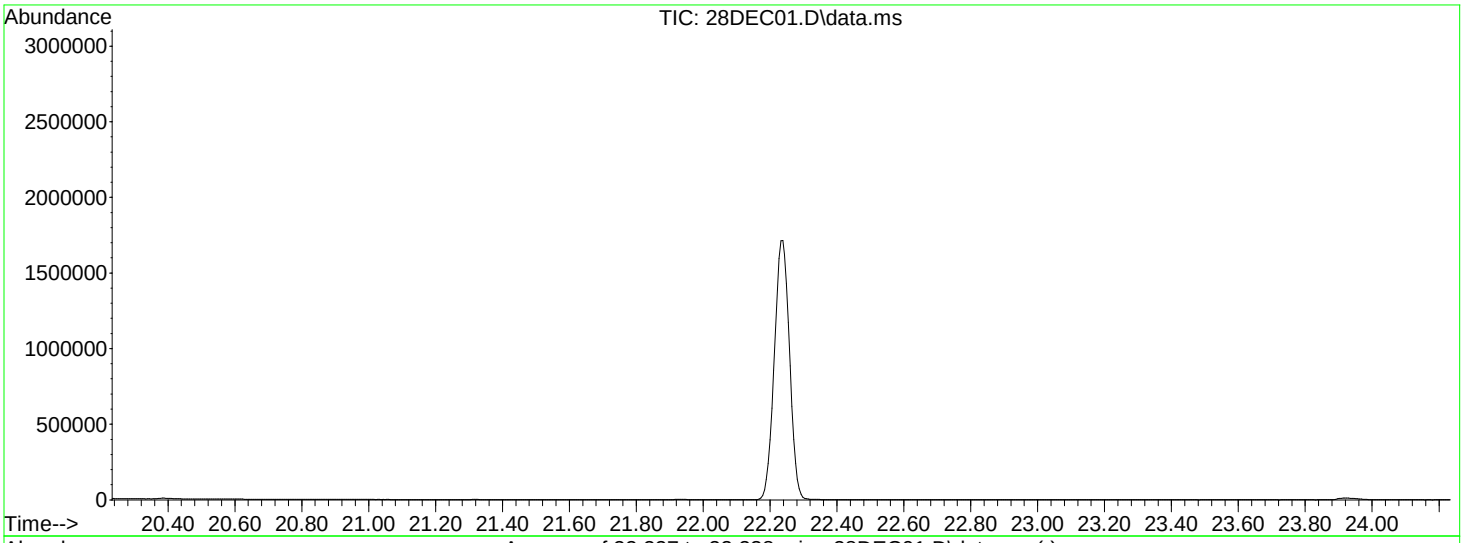
AutoFind: Scans 3473, 3474, 3475; Background Corrected with Scan 3458

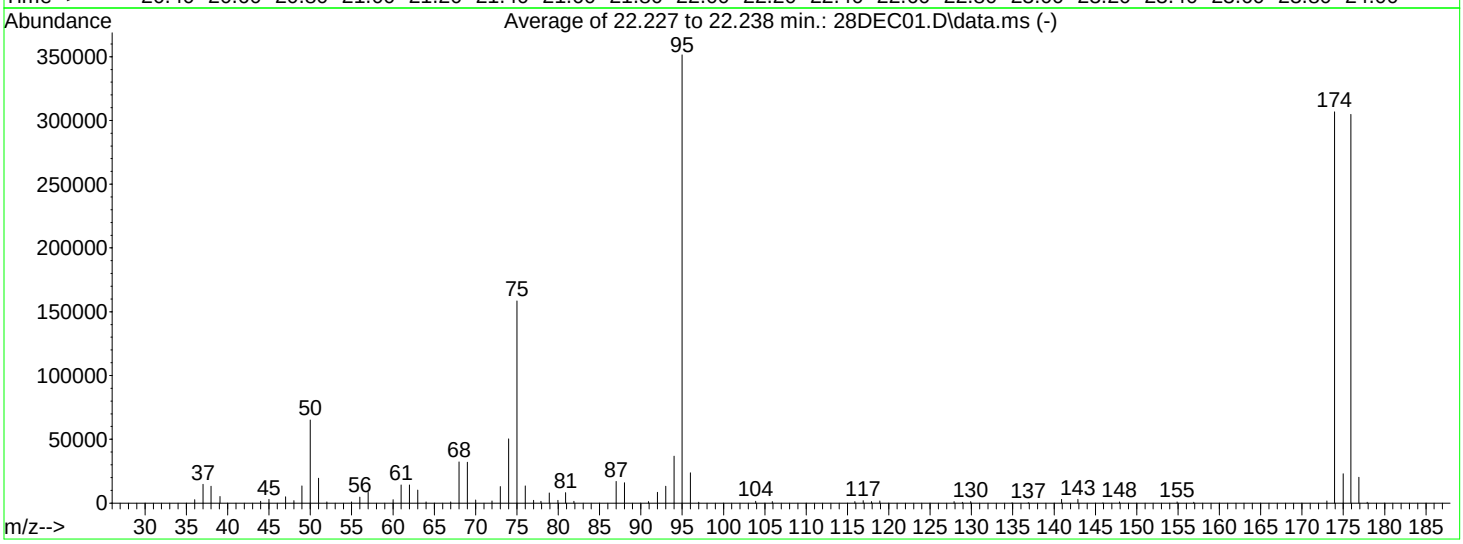
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	55261	PASS
75	95	30	60	44.9	132421	PASS
95	95	100	100	100.0	295019	PASS
96	95	5	9	6.6	19488	PASS
173	174	0.00	2	0.7	1791	PASS
174	95	50	120	88.6	261483	PASS
175	174	5	9	7.2	18883	PASS
176	174	95	101	99.6	260565	PASS
177	176	5	9	6.6	17126	PASS

Data Path : W:\GCMS_YY_DATA\2013\131228\
Data File : 28DEC01.D
Acq On : 28 Dec 2013 5:29 am
Operator : 846
Sample : TUNE CHECK
Misc : AIR-01-31-15 326
ALS Vial : 10 Sample Multiplier: 1

Integration File: THR0.3p.P

Method : C:\MSDCHEM\1\METHODS\131230.M
Title :
Last Update : Sat Jan 04 11:46:36 2014





AutoFind: Scans 3472, 3473, 3474; Background Corrected with Scan 3457

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.6	65192	PASS
75	95	30	60	45.1	158507	PASS
95	95	100	100	100.0	351296	PASS
96	95	5	9	6.7	23669	PASS
173	174	0.00	2	0.5	1535	PASS
174	95	50	120	87.3	306773	PASS
175	174	5	9	7.5	22963	PASS
176	174	95	101	99.3	304683	PASS
177	176	5	9	6.7	20309	PASS

Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Run Logs

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Injection Log

Directory: W:\GCMS_YY_DATA\2013\131227

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	27dec01.d	1.	TUNE CHECK	AIR-01-31-15 326	27 Dec 2013 02:40
2	2	27dec02.d	1.	ICAL 25PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 03:30
3	2	27dec03.d	1.	ICAL 12.5PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 04:17
4	2	27dec04.d	1.	ICAL 6.25PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 05:02
5	4	27dec05.d	1.	ICAL 1.25PPBV A122613B	AIR-01-31-15 326	27 Dec 2013 05:52
6	4	27dec06.d	1.	ICAL 0.5PPBV A122613B	AIR-01-31-15 326	27 Dec 2013 06:38
7	1	27dec07.d	1.	ICAL 100PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 07:34
8	1	27dec08.d	1.	ICAL 50PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 08:23
9	2	27dec09.d	1.	ICV/LCS 25PPBV A122313E	AIR-01-31-15 326	27 Dec 2013 09:13
10	2	27dec10.d	1.	ICV/LCSD 25PPBV A122313E	AIR-01-31-15 326	27 Dec 2013 10:03
11	1	27dec11.d	1.	IB	AIR-01-31-15 326	27 Dec 2013 10:47
12	1	27dec12.d	1.	ICAL 50PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 11:37
13	1	27dec13.d	1.	IB	AIR-01-31-15 326	27 Dec 2013 12:21
14	2	27dec14.d	1.	BQC D813 400ML	AIR-01-31-15 326	27 Dec 2013 13:10
15	10	27dec15.d	1.	MB BQC LC536 400ML	AIR-01-31-15 326	27 Dec 2013 14:05
16	10	27dec16.d	1.	MB BQC D805 400ML	AIR-01-31-15 326	27 Dec 2013 15:15
17	1	27dec17.d	1.	13-12-1277-1A 400ML	AIR-01-31-15 326	27 Dec 2013 16:06
18	2	27dec18.d	1.	13-12-1277-2A 400ML	AIR-01-31-15 326	27 Dec 2013 16:56
19	4	27dec19.d	1.	13-12-1277-3A 400ML	AIR-01-31-15 326	27 Dec 2013 17:47
20	5	27dec20.d	1.	13-12-1277-4A 400ML	AIR-01-31-15 326	27 Dec 2013 18:37
21	6	27dec21.d	1.	13-12-1277-5A 400ML	AIR-01-31-15 326	27 Dec 2013 19:28
22	7	27dec22.d	1.	13-12-1277-6A 400ML	AIR-01-31-15 326	27 Dec 2013 20:18
23	8	27dec23.d	1.	13-12-1277-7A 400ML	AIR-01-31-15 326	27 Dec 2013 21:09
24	9	27dec24.d	1.	13-12-1371-1A 40ML	AIR-01-31-15 326	27 Dec 2013 21:54
25	11	27dec25.d	1.	13-12-1371-3A 40ML	AIR-01-31-15 326	27 Dec 2013 22:38
26	12	27dec26.d	1.	13-12-1371-4A 100ML	AIR-01-31-15 326	27 Dec 2013 23:24
27	13	27dec27.d	1.	13-12-1371-5A 160ML	AIR-01-31-15 326	28 Dec 2013 00:59
28	14	27dec28.d	1.	13-12-1371-6A 160ML	AIR-01-31-15 326	28 Dec 2013 01:46
29	1	27dec29.d	1.	13-12-1371-8A 125ML	AIR-01-31-15 326	28 Dec 2013 02:32
30	2	27dec30.d	1.	13-12-1371-9A 400ML	AIR-01-31-15 326	28 Dec 2013 03:26
31	2	Dod27dec02.d	1.	ICAL 25PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 03:30
32	2	Dod27dec03.d	1.	ICAL 12.5PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 04:17
33	2	Dod27dec04.d	1.	ICAL 6.25PPBV A122613A	AIR-01-31-15 326	27 Dec 2013 05:02
34	4	Dod27dec05.d	1.	ICAL 1.25PPBV A122613B	AIR-01-31-15 326	27 Dec 2013 05:52
35	4	Dod27dec06.d	1.	ICAL 0.5PPBV A122613B	AIR-01-31-15 326	27 Dec 2013 06:38
36	1	Dod27dec07.d	1.	ICAL 100PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 07:34
37	1	Dod27dec08.d	1.	ICAL 50PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 08:23
38	2	Dod27dec09.d	1.	ICV/LCS 25PPBV A122313E	AIR-01-31-15 326	27 Dec 2013 09:13
39	2	Dod27dec10.d	1.	ICV/LCSD 25PPBV A122313E	AIR-01-31-15 326	27 Dec 2013 10:03
40	1	Dod27dec12.d	1.	DTSC 50PPBV A121813E	AIR-01-31-15 326	27 Dec 2013 11:37
41	10	Dod27dec16.d	1.	MB BQC D805 400ML	AIR-01-31-15 326	27 Dec 2013 15:15

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Injection Log

Directory: W:\GCMS_YY_DATA\2013\131228

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	28dec01.d	1.	TUNE CHECK	AIR-01-31-15 326	28 Dec 2013 05:29
2	2	28dec02.d	1.	CCV 25PPBV A122613A	AIR-01-31-15 326	28 Dec 2013 06:19
3	2	28dec03.d	1.	LCS 25PPBV A122013D	AIR-01-31-15 326	28 Dec 2013 07:08
4	2	28dec04.d	1.	LCSD 25PPBV A122013D	AIR-01-31-15 326	28 Dec 2013 07:58
5	1	28dec05.d	1.	IB	AIR-01-31-15 326	28 Dec 2013 08:53
6	10	28dec06.d	1.	CEL BLANK 400ML	AIR-01-31-15 326	28 Dec 2013 09:51
7	10	28dec07.d	1.	MB 400ML	AIR-01-31-15 326	28 Dec 2013 10:47
8	6	28dec08.d	1.	13-12-1277-5A 200ML	AIR-01-31-15 326	28 Dec 2013 11:41
9	7	28dec09.d	1.	13-12-1371-9A 2.95X 200ML	AIR-01-31-15 326	28 Dec 2013 12:28
10	12	28dec10.d	1.	13-12-1371-4A 50ML	AIR-01-31-15 326	28 Dec 2013 13:13
11	4	28dec11.d	1.	13-12-1371-2A 500X 100ML	AIR-01-31-15 326	28 Dec 2013 14:00
12	5	28dec12.d	1.	13-12-1371-7A 250X 400ML	AIR-01-31-15 326	28 Dec 2013 14:57
13	15	28dec13.d	1.	13-12-1371-10A 500X 20ML	AIR-01-31-15 326	28 Dec 2013 15:42
14	16	28dec14.d	1.	13-12-1615-1A 400ML	AIR-01-31-15 326	28 Dec 2013 16:33
15	16	28dec15.d	1.	13-12-1615-1A 100ML	AIR-01-31-15 326	28 Dec 2013 17:19
16	15	28dec16.d	1.	13-12-1614-1A 400ML	AIR-01-31-15 326	28 Dec 2013 18:10
17	2	28dec17.d	1.	13-12-1614-2A 400ML	AIR-01-31-15 326	28 Dec 2013 19:00
18	4	28dec18.d	1.	13-12-1614-3A 400ML	AIR-01-31-15 326	28 Dec 2013 19:50
19	5	28dec19.d	1.	13-12-1614-4A 400ML	AIR-01-31-15 326	28 Dec 2013 20:40
20	6	28dec20.d	1.	13-12-1614-5A 400ML	AIR-01-31-15 326	28 Dec 2013 21:30
21	7	28dec21.d	1.	13-12-1614-6A 400ML	AIR-01-31-15 326	28 Dec 2013 22:20
22	8	28dec22.d	1.	13-12-1614-7A 400ML	AIR-01-31-15 326	28 Dec 2013 23:10
23	9	28dec23.d	1.	13-12-1614-8A 400ML	AIR-01-31-15 326	28 Dec 2013 23:59
24	9	28dec24.d	1.	IB	AIR-01-31-15 326	29 Dec 2013 00:43
25	10	28dec25.d	1.	13-12-1614-9A 400ML	AIR-01-31-15 326	29 Dec 2013 01:34
26	1	28dec26.d	1.	13-12-1887-1A 400ML	AIR-01-31-15 326	29 Dec 2013 02:24
27	11	28dec27.d	1.	13-12-1887-2A 400ML	AIR-01-31-15 326	29 Dec 2013 03:18
28	12	28dec28.d	1.	13-12-1887-3A 289ML	AIR-01-31-15 326	29 Dec 2013 04:13
29	2	Dod28dec02.d	1.	CCV 25PPBV A122613A	AIR-01-31-15 326	28 Dec 2013 06:19
30	2	Dod28dec03.d	1.	LCS 25PPBV A122013D	AIR-01-31-15 326	28 Dec 2013 07:08
31	2	Dod28dec04.d	1.	LCSD 25PPBV A122013D	AIR-01-31-15 326	28 Dec 2013 07:58
32	10	Dod28dec07.d	1.	MB 400ML	AIR-01-31-15 326	28 Dec 2013 10:47

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Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Air/Vapor Sampling Equipment Certification

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Summa Canister Activity Report

Client: Blaine Tech - Carson (Shell)

Work Order: 13-12-1615

Summa Can	Sample #	Vac. Out	Vac. In	Press. To	DF	Analysis Type	Date Changed
D449	1-A	-29.7	-6.0	-6.0	1.00	Pressurize	12/20/2013 11:42:48 AM

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Calscience Environmental Laboratories, Inc.

nelac

BATCH CANISTER QC CERTIFICATION

Certified Canister IDs:

Canister Size:			Canister Size:		
☑ 6L	☐ 1L	D449 (Certified Canister)	☑ 6L	☐ 1L	D498
☑ 6L	☐ 1L	D454	☑ 6L	☐ 1L	D561
☑ 6L	☐ 1L	D528	☑ 6L	☐ 1L	D333
☑ 6L	☐ 1L	D448	☑ 6L	☐ 1L	D417
☑ 6L	☐ 1L	D240	☑ 6L	☐ 1L	D638
☑ 6L	☐ 1L	D426	☑ 6L	☐ 1L	D336

Certification Level: ☐ TO-14 ☑ TO-15 ☐ TO-15 SIM

Date Certified: 12/13/13

Date Cleaned: 12/10/13

Date Leak Checked: 12/16/13

Data File: 13DEC10.D

Instrument ID: gcms 5

Oven/Rack ID: Rack 1

Canisters were cleaned as a batch per Calscience SOP T-016. This certifies that the canisters referenced above contain no target analytes above the reporting limits stated in the applicable SOP.

814
CEL Employee ID

12/16/13
Date

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Calscience Environmental Laboratories, Inc.

EPA TO-15 Full List

Chemical Receiving Logs and Standards Preparation Logs

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Air Standard Preparation Logbook

LINE NO	PREP DATE	NEW STD. ID #	FOR METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STD. ID #	INITIAL VOL. (µL)	INITIAL FLOW CONC. (mL/min)	FINAL PRESSURE	FINAL DILUT. FLOW (mL/min)	FINAL CONC.	EXPIRATION DATE	PREP BY
1	12/17/13	A121713A	TO 15	Propylene (65 compds) Tetrafluoromethane (30 cmpds)	A013102 A012916	– –	20 20	–	760	20ppbv ccv	01/18/14	866
2	12/17/13	A121713B	TO15	Same as A121713A	A013102 A012916	– –	20 20	–	760	20ppbv ccv	↓	↓
3	12/17/13	A121713C	TO-15	propylene (65 compds) Tetrafluoromethane (30 compds)	A01-31-02 A01-29-16	– –	20 20	–	760	25 ppbv ccv	12/31/13	846
4	12/17/13	A121713D	RSK ~~TO-15~~ eln 12/17/13	Alkane C1-C6	A01-29-01	–	5	–	995	0.5ppm	12/20/13	858
5	12/17/13	A121713E	RSK	alkane C1-C6	A01-30-12	–	5	–	995	0.5PPM	12/20/13	878
6	12/18/13	A121813A	TO-15	66 compds (2nd source) 30 compds (2nd source)	A01-31-13 A01-31-14	– –	20 20	–	760	LCS 25ppbv	eln 12/18/13 ~~12/01/13~~ 01/01/14	858
7	12/18/13	A121813B	TO-15	propylene (65 compds) Tetrafluoromethane (30 compds)	A01-31-02 A01-29-16	– –	20 20	–	760	25ppbv ccv	01/01/14	846
8	↓	A121813C	TO-15	25 ppbv ccv	A121813B	–	50	–	950	1.25ppbv ccv	01/01/14	846
9	↓	A121813D	TO-15	Same as A121813B	A01-31-02 A01-29-16	– –	40 40	–	720	50ppbv ccv	01/01/14	846
10	12/18/13	A121813E eln 12/18/13	TO-15	propylene (65 compds) tetrafluoroethane (30 compds)	A01-31-02 A01-29-16	– –	40 40	–	~~700~~ 720 CD 12/19/13	50ppbv ccv	1/1/14	858
11	12/19/13	A121913A	TO-15	Same as A121813E		–	40 40	–	720	↓	01/02/14	858

COMMENTS:

Air Standard Preparation Logbook

LINE NO	PREP DATE	NEW STD. ID #	FOR METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STD. ID #	INITIAL VOL. (µL)	INITIAL FLOW CONC. (mL/min)	FINAL PRESSURE	FINAL DILUT. FLOW (mL/min)	FINAL CONC.	EXPIRATION DATE	PREP BY
1	12/19/13	A121913B	TO-15	Propylene (65 compds)	A01-31-12	–	20	–	760	25ppbv CCV	01/02/14	326
				Tetrafluoroethane	A01-29-16	–	20					
				(30 compds)	–	–	–					
2	↓	A121913C	TO-15	66 compds (2nd source)	A01-31-13	–	20	–	760	25 ppbv ICS	↓	↓
				30 compds (2nd source)	A01-31-14	–	20					
				–	–	–	–					
3	↓	A121913D	TO-15	CCV 25 ppbV	A121913B	–	50	–	950	1.75 ppbV CCV	↓	↓
				–	–	–	–					
				–	–	–	–					
4	12/19/13	A121913E	TO 15	66 compds (2nd source)	A_01-31-13	–	20	–	760	25ppbV LCS	01/02/14	868
				30 compds (2nd source)	A_01_31_14	–	20					
				–	–	–	–					
5	12/19/13	A121913F	TO 15	propylene (65 compds)	A01-31-12	–	20	–	760	25ppbV CCV	01/02/14	860
				Tetrafluoromethane	A01-29-16	–	20					
				(30 compds)	–	–	–					
6	12/20/13	A122013A	TO-15	propylene (65 compds)	A01-31-12	–	20	–	760	25 ppbv CCV	01/03/14	846
				Tetrafluoromethane (30 compds)	A01-29-16	–	20					
				–	–	–	–					
7		A122013B	TO-15	Same as A122013A	–	–	20	–	760	25 ppbv CCV	01/03/14	
				–	–	–	20					
				–	–	–	–					
8		A122013C	TO-15	Same as A122013A	–	–	20	–	760	25 ppbv CCV	01/03/14	
				–	–	–	20					
				–	–	–	–					
9	✓	A122013D	TO-15	66 compds (2nd source)	A01-31-13	–	20	–	760	25 ppbv LCS	01/03/14	
				30 compds (2nd source)	A01-31-14	–	20					
				–	–	–	–					
10		A122013E	TO-15	same as A122013D	–	–	20	–	760	25 ppbv LCS	01/03/14	
				–	–	–	20					
				–	–	–	–					
11	12/20/13	A122013F	TO-15 air	propylene (65 compds)	A01-31-12	–	20	–	760	25ppbv CCV	01/03/14	65
				Tetrafluoromethane (30 compds)	A01-29-16	–	20					
				–	–	–	–					

COMMENTS:

Air Standard Preparation Logbook

LINE NO	PREP DATE	NEW STD. ID #	FOR METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STD. ID #	INITIAL VOL. (µL)	INITIAL FLOW CONC. (mL/min)	FINAL PRESSURE	FINAL DILUT. FLOW (mL/min)	FINAL CONC.	EXPIRATION DATE	PREP BY
1	12/20/13	A122013G	TO-15	25ppbv CCV	A122013F	—	10	—	990	0.25ppbv CCV	01/03/14	GS
2	12/20/13	A122013H	TO-15	25ppbv CCV	A122013F	—	10	—	990	0.25ppbv CCV	01/03/14	↓
3	12/20/13	A122013I	TO15	Propylene (65 compds) Tetrafluoroe (30 compds)	A01-31-02 A01-29-16	— —	40 40	—	720	50ppbv CCV	01/03/14	866
4	12/20/13	A122013J	TO15	66 compds (2nd source) 30 compds (2nd source)	A01-31-13 A01-31-14	— —	20 20	—	760	25ppbv LCS	01/03/14	866
5	12/20/13	A122013K	TO15 1,1,1,2 TCA	1,1,1,2-TCA	A01-27-15	1µL	—	—	999	145 ppmv CCV	12/23/13	326
6	12/20/13	A122013L	TO15 1,1,1,2-TCA	1,1,1,2TCA	A122013K	6.2µL	—	29.4 PSI	—	50 ppbv CCV	3/20/14	↓
7	12/23/13	A122313A	TO-15	propylene (65 compds) tetrafluoroethane (30 compds)	A01-31-02 A01-29-16	— —	20 20	—	760	25ppbv CCV	exp 12/27/13 1/06/14 ~~1/06/14~~	888
8	↓	A122313B	TO-15	CCV 25ppbv	A122313A	—	50	—	950	1.25ppbv CCV	↓	↓
9	↓	A122313C	↓	66 compds (2nd source) 30 compds (2nd source)	A01-31-13 A01-31-14	— —	20 20	—	760	25 ppbv LCS	↓	↓
10	↓	A122313D	↓	same as A122313C	A01-31-13 A01-31-14	— —	20 20	—	760	↓	↓	↓
11	12/23/13	A122313E	TO15	66 compds (2nd source) 30 compds (2nd source)	A01-31-13 A01-31-14	— —	20 20	—	760	25ppbv LCS	1/6/14	866

COMMENTS:

Air Standard Preparation Logbook

LINE NO	PREP DATE	NEW STD. ID #	FOR METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STD. ID #	INITIAL VOL. (µL)	INITIAL FLOW CONC. (mL/min)	FINAL PRESSURE	FINAL DILUT. FLOW (mL/min)	FINAL CONC.	EXPIRATION DATE	PREP BY
1	12/23/2013	A122313F	TO15	propylene (65 compds) Tetrafluoroethane (30 compds)	A01-31-02 A01-29-16	— —	40 40	—	720	50ppbv CCV STD	1/6/14	860
2	12/26/13	A122613A	TO-15	Propylene (65 compds) Tetrafluoroethane (30 compds)	A01-31-02 A01-29-16	— —	20 20	—	760	25ppbv CCV	1/9/14	326
3		(50 12/26/13) ~~A0~~ A122613B	TO-15	CCV 25ppbv	A122613A	—	50	—	950	1.25ppbv CCV	1/9/14	(50 12/26/13) ~~36~~ 326
4	12/26/13	A122613C	TO-15 summa	65 Comp. Mix 30 Comp Mix	A01 3102 A01 2916	— —	8 8	—	984	8ppbv CCV	1/9/14	12
5	12/26/13	A122613D	TO-15 summa	66 Comp 2nd Stc. 30 Comp 2nd Stc.	A01 3113 A01 3114	— —	8 8	—	984	8ppbv LCS	1/9/14	12
6	12/26/13	A122613E	TO-15	65 compds (propylene) ~~prop pane~~ 30 compds (Tetrafluoro ethane)	A01-31-02 A012916	— —	20 20	—	760	25ppbv CCV	1/9/14	866
7	12/27/13	A122713A	TO-15 AIM	65 compd (propylene) 30 compd Tetrafluoroethane	A01-31-02 A012916	— —	20 20	—	760	25ppbv CCV	01/09/14	658
8		A122713B	TO-15 AIM	25ppm CCV	A122613A	—	50	—	950	1.25ppbv CCV	01/09/14	658
9		A122713C	TO-15	propylene (65 compds) tetrafluoroethane (30 compds)	A01-31-02 A01-29-16	— —	20 20	—	760	25ppbv CCV	1/9/14	858
10	12/27/13	A122713D	TO-15 AIM	~~prep~~ 25 12/26/13 25ppm CCV	A122613A	—	50	—	950	1.25ppbv CCV	01/09/14	658
11	12/28/13	A122813A	TO-15	propylene (65 compds) tetrafluoroethane (30 compds)	A01-31-02 A01-29-16	— —	20 20	—	760	25ppbv CCV	1/10/14	858

COMMENTS:

CHEMICAL RECEIVING LOGBOOK

LINE NO.	CHEMICAL	SOURCE	CATALOG NO.	LOT NO.	EXP. DATE	AMOUNT RECEIVED	TYPE CONT.	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO
1	C1-C6 Alkane STD in N_2	AIR LIQUIDE	MB700101-P-30AL	SD00065428	3/12/16	2000 psig 30AL	cylinder	03/18/13	754	3/25/13	777
2	Hexane STD LCS (TO-3M)	AIR LIQUIDE	M2212-P-16AL	S800066391	3/23/16	2000 PSIG 16AL	Cylinder	03/27/13	846	03/27/13	754
3	TCD LCS	Scott	501743	044PLU35R00L	2/15/16	14L 240 psig	cylinder	04/02/13	754	04/02/13	704
4	TCD LCS	Scott	501743	044PLU35R00L	2/13/16	14L 240 psig	cylinder	04/02/13	[illegible]	06/11/13	754
~~5~~	~~TO-17 VOCs LCS~~	~~SS 04/24/13~~									
6	EPA 524.2 SS Revision Ketone Mix	Supelco	457428-U	LB98438	03/01/15	1 mL	Amp.	05/07/13	702	07/19/13	702
7	↓	↓	↓	↓	↓	↓	↓	↓	↓	09/17/13	658
8											
9					SS 05/07/13						
10	EPA 524.2 Revision 4 Mix	Supelco	47427-U	LB94783	~~0~~ 12/01/13	1 mL	Amp	05/07/13	702	07/19/13	702
11	↓	↓	↓	↓	↓	↓	↓	↓	↓	09/17/14	658
12											
13											
14	TO-15 LCS (66 Compounds)	Air Liquid	MAZ00051-Z-30AL	PLU016594	02/15/14	2000 psig 30AL	cylinder	05/09/13	702	05/21/13	702
15	TO-15 LCS (31 compounds - 2nd source)	Air Liquid	MAZ00111-Z-30AL	PLU019068	10/10/13	2000 psig 30AL	cylinder	05/09/13	702	↓	↓
16	✓ TO-15 CCV (30 Compds) -	Linde	P.O # 20132985	Prod. # 1250858	4/22/14	2000 psig 30AL	cylinder	05/09/13	702	06/05/13	702
17	TO-17 ~~502/524~~ ~~SS 05/21/13~~ Volatile Organics Calibration Mix SS 05/16/13	Supelco	5-02-111	LB98658	3/01/15	1 mL	ampule	05/16/13	702	09/17/13	658
18	↓	↓	↓	↓	↓	↓	↓	↓	↓		
19											
20											
21	TO-17 TPH(G) LCS	Absolute	51010	050211	05/02/16	1 mL	ampule	05/21/13	702	06/26/13	702
22	↓	↓	↓	↓	↓	↓	↓	↓	↓	09/18/13	658
23											
24											
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Reviewed by: _____ on ____/____/____

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09/01/95 Revision

CHEMICAL RECEIVING LOGBOOK

LINE NO.	CHEMICAL	SOURCE	CATALOG NO.	LOT NO.	EXP. DATE	AMOUNT RECEIVED	TYPE CONT.	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO
1	California Oxy Mixture #1	Restek	30465	A093856	03/2018	1mL	Amp	08/27/13	702		
2	✓ Propylene (65 compds CCV STD)	Linde	2898320	110668586	08/14/14	1400 psig cylinder and amp 29.5L	Cylinder	08/27/13	702	08/27/13	702
3	VOA Calibration Mix #1	Restek	30006	A090981	12/2015	1mL	Amp.	08/30/13	702	09/17/13	658
4	↓	↓	↓	↓	↓	↓	↓	↓	↓		
5	↓	↓	↓	↓	↓	↓	↓	↓	↓		
6	8260B Calibration Mix #1	Restek	30633	A095254	5/31/16	1mL	Amp	08/30/13	702		
7	↓	↓	↓	↓	↓	↓	↓	↓	↓		
8	↓	↓	↓	↓	↓	↓	↓	↓	↓		
9	California Oxy Mixture #1	Restek	30465	A093856	3/18	1mL	Amp.	08/30/13	702		
10	↓	↓	↓	↓	↓	↓	↓	↓	↓		
11	↓	↓	↓	↓	↓	↓	↓	↓	↓		GO 11/05/13
12	APH STD (LCS 2nd source) (1,3 Butadiene (ppm))	Linde	2013631	AB-8210 1270471	09/18/14	1800 psig	cylinder	10/~~02~~ 10/13	658	11/05/13	326
13	✓ TO-15 ~~LCS~~ LCS (65 compds)	Air LiQuiDE	~~2013361~~ MA200113-2-30AL	PLU0227114	10/01/14	30 AL	cylinder	10/10/13	658	10/10/13	658
14	✓ TO-15 LCS (30 compds)	Air LiQuide	MA200114-2-30	PLU0224627	10/03/14	30 AL	cylinder	10/10/13	846	10/10/13	658
15	TO-15 IS/SURR	SCOTT	20133701	PLU0226689	10/08/16	30 AL	cylinder	10/18/13	846	10/22/13	846
16	Stoddard Solvent	ACROS	#19730010	A0332279	NOT Listed	1 KG	Glass	10/30/13	12	11/05/13	12
17	Stoddard solvent	EMD	SX0995-1	53123321	NOT Listed	4L	Glass	10/29/13	12	11/05/13	12
18	TO-15 SIM IS/SURR (2ppB)	AIR-LiQuiDE	MB700231-2-30AL	PLU0234925	05/05/2014	30 AL	Cylinder	11/08/13	326	11/11/13	326
19	IS/SURR for TO-17	ULTRA	Cus-9349	CK-1766	06/30/2015	1mL	Amp	12/26/13	658	12/26/13	658
20	↓	↓	↓	↓	↓	↓	↓	↓	↓		
21	↓	↓	↓	↓	↓	↓	↓	↓	↓		
22	↓	↓	↓	↓	↓	↓	↓	↓	↓		
23	↓	↓	↓	↓	↓	↓	↓	↓	↓		
24											
25											

Reviewed by: _____ on ____/____/____

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09/01/95 Revision

Calscience Environmental Laboratories, Inc.

Supplemental Report 3

The original report has been revised to include the Level III/IV deliverables package.

CALSCIENCE

WORK ORDER NUMBER: 13-12-1628

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: CKY, Incorporated

Client Project Name: Seal Beach NWS

Attention: Howard Wittenberg
302 West Fifth Street, Ste. 310
San Pedro, CA 90731-2738

Approved for release on 01/15/2014 by:
Richard Villafania
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

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Work Order Number: 13-12-1628

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 1 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-2	**13-12-1628-1-A**	**12/19/13 07:15**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 16:15**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U,ICH
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 2 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	75-120	
Dibromofluoromethane	108	85-115	
1,2-Dichloroethane-d4	111	70-120	
Toluene-d8	101	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 3 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-14	**13-12-1628-2-B**	**12/19/13 09:34**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 13:51**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	3.0	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	0.98	0.37	0.50	1.0	1	J
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	1.2	0.37	0.50	1.0	1	
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	3.5	0.30	0.50	1.0	1	
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 4 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	75-120	
Dibromofluoromethane	108	85-115	
1,2-Dichloroethane-d4	112	70-120	
Toluene-d8	98	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 5 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-22	**13-12-1628-3-A**	**12/19/13 13:28**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 17:10**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U,ICH
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	1.1	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	0.73	0.37	0.50	1.0	1	J
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	1.3	0.30	0.50	1.0	1	
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 6 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	75-120	
Dibromofluoromethane	109	85-115	
1,2-Dichloroethane-d4	112	70-120	
Toluene-d8	101	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 7 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-27	**13-12-1628-4-B**	**12/19/13 08:31**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 14:19**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	2.5	0.37	0.50	1.0	1	
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	0.96	0.37	0.50	1.0	1	J
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	0.53	0.30	0.50	1.0	1	J
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 8 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	75-120	
Dibromofluoromethane	110	85-115	
1,2-Dichloroethane-d4	113	70-120	
Toluene-d8	99	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 9 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-35	**13-12-1628-5-A**	**12/19/13 10:09**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 18:06**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U,ICH
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	0.99	0.48	0.50	1.0	1	J
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	0.25	0.24	0.50	1.0	1	J
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	0.34	0.30	0.50	1.0	1	J
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 10 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	75-120	
Dibromofluoromethane	107	85-115	
1,2-Dichloroethane-d4	113	70-120	
Toluene-d8	103	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 11 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-36	**13-12-1628-6-A**	**12/19/13 10:41**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 18:33**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U,ICH
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	6.0	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	2.7	0.37	0.50	1.0	1	
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	1.2	0.37	0.50	1.0	1	
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	3.5	0.30	0.50	1.0	1	
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 12 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	75-120	
Dibromofluoromethane	112	85-115	
1,2-Dichloroethane-d4	116	70-120	
Toluene-d8	101	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 13 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-37	**13-12-1628-7-B**	**12/19/13 11:19**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 14:48**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	33	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	1.3	0.37	0.50	1.0	1	
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	0.48	0.37	0.50	1.0	1	J
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	4.9	0.30	0.50	1.0	1	
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 14 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	75-120	
Dibromofluoromethane	109	85-115	
1,2-Dichloroethane-d4	115	70-120	
Toluene-d8	99	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 15 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP-2	**13-12-1628-8-A**	**12/19/13 00:00**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 19:28**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U,ICH
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	1.1	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	0.33	0.30	0.50	1.0	1	J
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 16 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	75-120	
Dibromofluoromethane	111	85-115	
1,2-Dichloroethane-d4	115	70-120	
Toluene-d8	102	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 17 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EB-2	**13-12-1628-9-A**	**12/19/13 08:49**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 19:55**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U,ICH
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 18 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	75-120	
Dibromofluoromethane	111	85-115	
1,2-Dichloroethane-d4	114	70-120	
Toluene-d8	102	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 19 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-1	**13-12-1628-10-A**	**12/18/13 07:00**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 20:22**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U,ICH
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 20 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	75-120	
Dibromofluoromethane	112	85-115	
1,2-Dichloroethane-d4	114	70-120	
Toluene-d8	101	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 21 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-08	**13-12-1628-11-B**	**12/18/13 10:27**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 11:55**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	25	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	1.7	0.30	0.50	1.0	1	
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 22 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	75-120	
Dibromofluoromethane	109	85-115	
1,2-Dichloroethane-d4	110	70-120	
Toluene-d8	100	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 23 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-30	**13-12-1628-12-B**	**12/18/13 13:00**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 15:16**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	3.4	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	0.38	0.37	0.50	1.0	1	J
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	3.6	0.30	0.50	1.0	1	
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 24 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	75-120	
Dibromofluoromethane	110	85-115	
1,2-Dichloroethane-d4	114	70-120	
Toluene-d8	99	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 25 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-32	**13-12-1628-13-A**	**12/18/13 11:49**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 21:17**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U,ICH
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	0.94	0.48	0.50	1.0	1	J
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	0.88	0.30	0.50	1.0	1	J
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 26 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	104	75-120	
Dibromofluoromethane	111	85-115	
1,2-Dichloroethane-d4	116	70-120	
Toluene-d8	103	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 27 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IW-2	**13-12-1628-14-B**	**12/18/13 14:37**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 15:45**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 28 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	75-120	
Dibromofluoromethane	111	85-115	
1,2-Dichloroethane-d4	114	70-120	
Toluene-d8	98	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 29 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IW-4	**13-12-1628-15-B**	**12/18/13 13:59**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 16:14**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	0.59	0.48	0.50	1.0	1	J
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	0.96	0.30	0.50	1.0	1	J
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 30 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	89	75-120	
Dibromofluoromethane	111	85-115	
1,2-Dichloroethane-d4	111	70-120	
Toluene-d8	97	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 31 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IW-10	**13-12-1628-16-B**	**12/18/13 11:11**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 16:42**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	1.3	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	0.64	0.37	0.50	1.0	1	J
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	1.6	0.30	0.50	1.0	1	
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 32 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	75-120	
Dibromofluoromethane	113	85-115	
1,2-Dichloroethane-d4	113	70-120	
Toluene-d8	101	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 33 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IW-18	**13-12-1628-17-B**	**12/18/13 15:10**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 17:11**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	0.75	0.48	0.50	1.0	1	J
t-1,2-Dichloroethene	0.70	0.37	0.50	1.0	1	J
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	1.3	0.37	0.50	1.0	1	
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	0.50	0.30	0.50	1.0	1	J
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 34 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	75-120	
Dibromofluoromethane	111	85-115	
1,2-Dichloroethane-d4	115	70-120	
Toluene-d8	100	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 35 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP-1	**13-12-1628-18-B**	**12/18/13 00:00**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 17:39**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	24	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	0.58	0.30	0.50	1.0	1	J
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 36 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	75-120	
Dibromofluoromethane	111	85-115	
1,2-Dichloroethane-d4	113	70-120	
Toluene-d8	100	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 37 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EB-1	**13-12-1628-19-B**	**12/18/13 15:25**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 18:08**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 38 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	75-120	
Dibromofluoromethane	114	85-115	
1,2-Dichloroethane-d4	114	70-120	
Toluene-d8	99	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 39 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DRUM-1	**13-12-1628-20-B**	**12/19/13 14:10**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 18:36**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	0.53	0.48	0.50	1.0	1	J
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	2.3	0.64	1.0	5.0	1	J
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	0.96	0.37	0.50	1.0	1	J
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	0.36	0.30	1.0	10	1	J
o-Xylene	0.28	0.23	0.50	1.0	1	J
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 40 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	89	75-120	
Dibromofluoromethane	113	85-115	
1,2-Dichloroethane-d4	116	70-120	
Toluene-d8	100	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 41 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-07	**13-12-1628-21-C**	**12/19/13 12:49**	**Aqueous**	**GC/MS Z**	**12/23/13**	**12/23/13 14:46**	**131223L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U,ICH
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U,IH
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	2.8	0.48	0.50	1.0	1	
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	1.9	0.37	0.50	1.0	1	
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	7.5	0.30	0.50	1.0	1	
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 42 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	75-120	
Dibromofluoromethane	95	85-115	
1,2-Dichloroethane-d4	96	70-120	
Toluene-d8	99	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 43 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-40-31	**13-12-1628-22-B**	**12/18/13 12:25**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 19:33**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U,ICH
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U,ICH
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 44 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	75-120	
Dibromofluoromethane	113	85-115	
1,2-Dichloroethane-d4	115	70-120	
Toluene-d8	99	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 45 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-479-366**	**N/A**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 11:40**	**131220L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 46 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	75-120	
Dibromofluoromethane	99	85-115	
1,2-Dichloroethane-d4	100	70-120	
Toluene-d8	100	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 47 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-479-367**	**N/A**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 11:27**	**131221L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 48 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	75-120	
Dibromofluoromethane	108	85-115	
1,2-Dichloroethane-d4	112	70-120	
Toluene-d8	99	85-120	

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 49 of 50

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-479-369**	**N/A**	**Aqueous**	**GC/MS Z**	**12/23/13**	**12/23/13 13:52**	**131223L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Benzene	<0.50	0.14	0.50	1.0	1	U
Bromodichloromethane	<0.50	0.21	0.50	5.0	1	U
Bromoform	<1.0	0.50	1.0	10	1	U
2-Butanone	<5.0	2.2	5.0	10	1	U
Carbon Disulfide	<0.50	0.41	0.50	5.0	1	U
Carbon Tetrachloride	<0.50	0.23	0.50	1.0	1	U
Chlorobenzene	<0.50	0.17	0.50	5.0	1	U
Chloroethane	<5.0	2.3	5.0	10	1	U
Chloroform	<0.50	0.46	0.50	5.0	1	U
Chloromethane	<2.0	1.8	2.0	10	1	U
Dibromochloromethane	<0.50	0.25	0.50	1.0	1	U
Dichlorodifluoromethane	<0.50	0.46	0.50	1.0	1	U
1,1-Dichloroethane	<0.50	0.28	0.50	5.0	1	U
1,2-Dichloroethane	<0.50	0.24	0.50	1.0	1	U
1,1-Dichloroethene	<0.50	0.43	0.50	1.0	1	U
c-1,2-Dichloroethene	<0.50	0.48	0.50	1.0	1	U
t-1,2-Dichloroethene	<0.50	0.37	0.50	1.0	1	U
Ethylbenzene	<0.50	0.14	0.50	1.0	1	U
2-Hexanone	<5.0	2.1	5.0	10	1	U
Isopropylbenzene	<1.0	0.58	1.0	5.0	1	U
Methylene Chloride	<1.0	0.64	1.0	5.0	1	U
4-Methyl-2-Pentanone	<5.0	4.4	5.0	10	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.50	0.45	0.50	1.0	1	U
Tetrachloroethene	<0.50	0.39	0.50	1.0	1	U
Toluene	<0.50	0.24	0.50	1.0	1	U
1,1,1-Trichloroethane	<0.50	0.30	0.50	5.0	1	U
1,1,2-Trichloroethane	<0.50	0.38	0.50	1.0	1	U
Trichloroethene	<0.50	0.37	0.50	1.0	1	U
Trichlorofluoromethane	<2.0	1.7	2.0	10	1	U
1,2,4-Trimethylbenzene	<0.50	0.36	0.50	5.0	1	U
1,3,5-Trimethylbenzene	<0.50	0.28	0.50	5.0	1	U
Vinyl Chloride	<0.50	0.30	0.50	1.0	1	U
p/m-Xylene	<1.0	0.30	1.0	10	1	U
o-Xylene	<0.50	0.23	0.50	1.0	1	U
Methyl-t-Butyl Ether (MTBE)	<0.50	0.31	0.50	1.0	1	U
Tert-Butyl Alcohol (TBA)	<5.0	4.6	5.0	25	1	U

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Calscience Environmental Laboratories, Inc.

Analytical Report

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: Seal Beach NWS			Page 50 of 50

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	75-120	
Dibromofluoromethane	95	85-115	
1,2-Dichloroethane-d4	94	70-120	
Toluene-d8	99	85-120	

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Seal Beach NWS			Page 1 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-12-1375-4	**Sample**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 12:07**	**131220S01**
13-12-1375-4	**Matrix Spike**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 12:34**	**131220S01**
13-12-1375-4	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 13:01**	**131220S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	50.11	100	51.06	102	80-120	2	0-20	
Bromodichloromethane	ND	50.00	55.64	111	58.45	117	75-120	5	0-20	
Bromoform	ND	50.00	57.40	115	58.47	117	70-130	2	0-20	
2-Butanone	ND	50.00	51.65	103	51.86	104	30-150	0	0-20	
Carbon Disulfide	ND	50.00	48.55	97	49.30	99	35-160	2	0-20	
Carbon Tetrachloride	ND	50.00	58.34	117	61.54	123	65-140	5	0-20	
Chlorobenzene	ND	50.00	48.29	97	48.83	98	80-120	1	0-20	
Chloroethane	ND	50.00	57.91	116	57.83	116	60-135	0	0-20	
Chloroform	ND	50.00	55.52	111	57.05	114	65-135	3	0-20	
Chloromethane	ND	50.00	51.14	102	53.61	107	40-125	5	0-20	
Dibromochloromethane	ND	50.00	56.22	112	57.54	115	60-135	2	0-20	
Dichlorodifluoromethane	ND	50.00	63.32	127	62.76	126	30-155	1	0-20	
1,1-Dichloroethane	ND	50.00	50.16	100	51.48	103	70-135	3	0-20	
1,2-Dichloroethane	ND	50.00	54.73	109	55.51	111	70-130	1	0-20	
1,1-Dichloroethene	ND	50.00	49.97	100	50.68	101	70-130	1	0-20	
c-1,2-Dichloroethene	ND	50.00	53.07	106	54.79	110	70-125	3	0-20	
t-1,2-Dichloroethene	ND	50.00	52.57	105	52.92	106	60-140	1	0-20	
Ethylbenzene	ND	50.00	51.50	103	52.10	104	75-125	1	0-20	
2-Hexanone	ND	50.00	47.78	96	47.55	95	55-130	0	0-20	
Isopropylbenzene	ND	50.00	48.99	98	49.91	100	75-125	2	0-20	
Methylene Chloride	ND	50.00	52.46	105	53.28	107	55-140	2	0-20	
4-Methyl-2-Pentanone	ND	50.00	49.40	99	51.12	102	60-135	3	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	55.01	110	55.90	112	80-130	2	0-20	
Tetrachloroethene	ND	50.00	56.24	112	55.58	111	45-150	1	0-20	
Toluene	ND	50.00	52.44	105	53.12	106	75-120	1	0-20	
1,1,1-Trichloroethane	ND	50.00	56.55	113	58.83	118	65-130	4	0-20	
1,1,2-Trichloroethane	ND	50.00	50.79	102	51.60	103	75-125	2	0-20	
Trichloroethene	7.785	50.00	62.99	110	63.12	111	70-125	0	0-20	
Trichlorofluoromethane	ND	50.00	60.66	121	59.35	119	60-145	2	0-20	
1,2,4-Trimethylbenzene	ND	50.00	49.16	98	48.24	96	75-130	2	0-20	
1,3,5-Trimethylbenzene	ND	50.00	54.64	109	54.61	109	75-130	0	0-20	
Vinyl Chloride	ND	50.00	55.74	111	55.70	111	50-145	0	0-20	
p/m-Xylene	ND	100.0	97.69	98	97.77	98	75-130	0	0-20	
o-Xylene	ND	50.00	48.70	97	49.22	98	80-120	1	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	48.22	96	49.41	99	65-125	2	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Seal Beach NWS			Page 2 of 6

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tert-Butyl Alcohol (TBA)	ND	250.0	277.0	111	276.5	111	46-154	0	0-35	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Seal Beach NWS			Page 3 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-40-07	**Sample**	**Aqueous**	**GC/MS Z**	**12/23/13**	**12/23/13 14:46**	**131223S01**
MW-40-07	**Matrix Spike**	**Aqueous**	**GC/MS Z**	**12/23/13**	**12/23/13 15:14**	**131223S01**
MW-40-07	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS Z**	**12/23/13**	**12/23/13 15:41**	**131223S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	49.57	99	46.09	92	80-120	7	0-20	
Bromodichloromethane	ND	50.00	55.48	111	51.44	103	75-120	8	0-20	
Bromoform	ND	50.00	61.81	124	58.35	117	70-130	6	0-20	
2-Butanone	ND	50.00	49.31	99	48.20	96	30-150	2	0-20	
Carbon Disulfide	ND	50.00	49.11	98	44.79	90	35-160	9	0-20	
Carbon Tetrachloride	ND	50.00	54.96	110	54.42	109	65-140	1	0-20	
Chlorobenzene	ND	50.00	47.85	96	44.42	89	80-120	7	0-20	
Chloroethane	ND	50.00	55.49	111	52.30	105	60-135	6	0-20	
Chloroform	ND	50.00	51.09	102	47.23	94	65-135	8	0-20	
Chloromethane	ND	50.00	49.39	99	51.26	103	40-125	4	0-20	
Dibromochloromethane	ND	50.00	57.84	116	54.70	109	60-135	6	0-20	
Dichlorodifluoromethane	ND	50.00	58.94	118	55.36	111	30-155	6	0-20	
1,1-Dichloroethane	ND	50.00	48.86	98	44.90	90	70-135	8	0-20	
1,2-Dichloroethane	ND	50.00	54.93	110	51.34	103	70-130	7	0-20	
1,1-Dichloroethene	ND	50.00	48.57	97	45.57	91	70-130	6	0-20	
c-1,2-Dichloroethene	2.752	50.00	55.00	104	51.60	98	70-125	6	0-20	
t-1,2-Dichloroethene	ND	50.00	51.43	103	47.67	95	60-140	8	0-20	
Ethylbenzene	ND	50.00	50.87	102	47.74	95	75-125	6	0-20	
2-Hexanone	ND	50.00	50.19	100	48.75	98	55-130	3	0-20	
Isopropylbenzene	ND	50.00	48.25	96	45.47	91	75-125	6	0-20	
Methylene Chloride	ND	50.00	50.31	101	48.82	98	55-140	3	0-20	
4-Methyl-2-Pentanone	ND	50.00	51.68	103	49.40	99	60-135	5	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	51.35	103	48.96	98	80-130	5	0-20	
Tetrachloroethene	ND	50.00	53.18	106	48.00	96	45-150	10	0-20	
Toluene	ND	50.00	51.75	104	47.87	96	75-120	8	0-20	
1,1,1-Trichloroethane	ND	50.00	54.28	109	51.35	103	65-130	6	0-20	
1,1,2-Trichloroethane	ND	50.00	51.85	104	48.37	97	75-125	7	0-20	
Trichloroethene	1.916	50.00	54.99	106	50.28	97	70-125	9	0-20	
Trichlorofluoromethane	ND	50.00	57.09	114	51.73	103	60-145	10	0-20	
1,2,4-Trimethylbenzene	ND	50.00	51.60	103	48.28	97	75-130	7	0-20	
1,3,5-Trimethylbenzene	ND	50.00	53.80	108	51.69	103	75-130	4	0-20	
Vinyl Chloride	7.547	50.00	61.39	108	57.87	101	50-145	6	0-20	
p/m-Xylene	ND	100.0	95.93	96	90.17	90	75-130	6	0-20	
o-Xylene	ND	50.00	48.00	96	44.92	90	80-120	7	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	52.78	106	50.27	101	65-125	5	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Seal Beach NWS			Page 4 of 6

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tert-Butyl Alcohol (TBA)	ND	250.0	312.4	125	283.9	114	46-154	10	0-35	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Seal Beach NWS			Page 5 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-40-08	**Sample**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 11:55**	**131221S01**
MW-40-08	**Matrix Spike**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 12:25**	**131221S01**
MW-40-08	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 12:53**	**131221S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	50.50	101	51.18	102	80-120	1	0-20	
Bromodichloromethane	ND	50.00	48.65	97	49.92	100	75-120	3	0-20	
Bromoform	ND	50.00	49.83	100	52.32	105	70-130	5	0-20	
2-Butanone	ND	50.00	46.78	94	51.55	103	30-150	10	0-20	
Carbon Disulfide	ND	50.00	40.12	80	40.30	81	35-160	0	0-20	
Carbon Tetrachloride	ND	50.00	49.40	99	49.79	100	65-140	1	0-20	
Chlorobenzene	ND	50.00	46.10	92	47.45	95	80-120	3	0-20	
Chloroethane	ND	50.00	50.06	100	49.94	100	60-135	0	0-20	
Chloroform	ND	50.00	46.65	93	48.06	96	65-135	3	0-20	
Chloromethane	ND	50.00	49.14	98	49.39	99	40-125	0	0-20	
Dibromochloromethane	ND	50.00	49.64	99	50.97	102	60-135	3	0-20	
Dichlorodifluoromethane	ND	50.00	48.29	97	49.17	98	30-155	2	0-20	
1,1-Dichloroethane	ND	50.00	45.88	92	47.60	95	70-135	4	0-20	
1,2-Dichloroethane	ND	50.00	49.59	99	51.00	102	70-130	3	0-20	
1,1-Dichloroethene	ND	50.00	42.92	86	43.27	87	70-130	1	0-20	
c-1,2-Dichloroethene	24.95	50.00	72.80	96	73.54	97	70-125	1	0-20	
t-1,2-Dichloroethene	ND	50.00	48.20	96	49.66	99	60-140	3	0-20	
Ethylbenzene	ND	50.00	52.74	105	53.69	107	75-125	2	0-20	
2-Hexanone	ND	50.00	46.83	94	51.79	104	55-130	10	0-20	
Isopropylbenzene	ND	50.00	50.18	100	50.73	101	75-125	1	0-20	
Methylene Chloride	ND	50.00	48.84	98	49.77	100	55-140	2	0-20	
4-Methyl-2-Pentanone	ND	50.00	48.84	98	53.26	107	60-135	9	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	45.23	90	45.98	92	80-130	2	0-20	
Tetrachloroethene	ND	50.00	47.46	95	48.82	98	45-150	3	0-20	
Toluene	ND	50.00	51.02	102	51.76	104	75-120	1	0-20	
1,1,1-Trichloroethane	ND	50.00	49.15	98	49.90	100	65-130	2	0-20	
1,1,2-Trichloroethane	ND	50.00	50.22	100	51.69	103	75-125	3	0-20	
Trichloroethene	ND	50.00	49.58	99	50.11	100	70-125	1	0-20	
Trichlorofluoromethane	ND	50.00	49.96	100	50.39	101	60-145	1	0-20	
1,2,4-Trimethylbenzene	ND	50.00	54.83	110	55.47	111	75-130	1	0-20	
1,3,5-Trimethylbenzene	ND	50.00	56.41	113	56.60	113	75-130	0	0-20	
Vinyl Chloride	1.666	50.00	54.29	105	55.92	109	50-145	3	0-20	
p/m-Xylene	ND	100.0	105.9	106	107.9	108	75-130	2	0-20	
o-Xylene	ND	50.00	50.55	101	52.09	104	80-120	3	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	47.78	96	50.94	102	65-125	6	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Seal Beach NWS			Page 6 of 6

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tert-Butyl Alcohol (TBA)	ND	250.0	293.4	117	281.3	113	46-154	4	0-35	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Seal Beach NWS			Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-479-366	**LCS**	**Aqueous**	**GC/MS Z**	**12/20/13**	**12/20/13 10:37**	**131220L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Benzene	50.00	46.55	93	80-120	
Bromodichloromethane	50.00	49.30	99	75-120	
Bromoform	50.00	50.88	102	70-130	
2-Butanone	50.00	58.08	116	30-150	
Carbon Disulfide	50.00	46.10	92	35-160	
Carbon Tetrachloride	50.00	56.56	113	65-140	
Chlorobenzene	50.00	45.63	91	80-120	
Chloroethane	50.00	54.04	108	60-135	
Chloroform	50.00	48.73	97	65-135	
Chloromethane	50.00	49.41	99	40-125	
Dibromochloromethane	50.00	50.07	100	60-135	
Dichlorodifluoromethane	50.00	59.50	119	30-155	
1,1-Dichloroethane	50.00	46.03	92	70-135	
1,2-Dichloroethane	50.00	47.75	95	70-130	
1,1-Dichloroethene	50.00	47.52	95	70-130	
c-1,2-Dichloroethene	50.00	48.65	97	70-125	
t-1,2-Dichloroethene	50.00	49.81	100	60-140	
Ethylbenzene	50.00	49.63	99	75-125	
2-Hexanone	50.00	46.77	94	55-130	
Isopropylbenzene	50.00	48.21	96	75-125	
Methylene Chloride	50.00	47.10	94	55-140	
4-Methyl-2-Pentanone	50.00	42.26	85	60-135	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	51.92	104	80-130	
Tetrachloroethene	50.00	52.67	105	45-150	
Toluene	50.00	48.52	97	75-120	
1,1,1-Trichloroethane	50.00	52.97	106	65-130	
1,1,2-Trichloroethane	50.00	43.66	87	75-125	
Trichloroethene	50.00	50.27	101	70-125	
Trichlorofluoromethane	50.00	56.43	113	60-145	
1,2,4-Trimethylbenzene	50.00	48.35	97	75-130	
1,3,5-Trimethylbenzene	50.00	52.81	106	75-130	
Vinyl Chloride	50.00	52.92	106	50-145	
p/m-Xylene	100.0	93.44	93	75-130	
o-Xylene	50.00	46.19	92	80-120	
Methyl-t-Butyl Ether (MTBE)	50.00	40.25	80	65-125	
Tert-Butyl Alcohol (TBA)	250.0	231.0	92	46-154	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Seal Beach NWS			Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-479-369	**LCS**	**Aqueous**	**GC/MS Z**	**12/23/13**	**12/23/13 12:54**	**131223L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Benzene	50.00	49.72	99	80-120	
Bromodichloromethane	50.00	53.18	106	75-120	
Bromoform	50.00	60.60	121	70-130	
2-Butanone	50.00	57.33	115	30-150	
Carbon Disulfide	50.00	51.50	103	35-160	
Carbon Tetrachloride	50.00	60.16	120	65-140	
Chlorobenzene	50.00	47.95	96	80-120	
Chloroethane	50.00	57.27	115	60-135	
Chloroform	50.00	50.17	100	65-135	
Chloromethane	50.00	53.26	107	40-125	
Dibromochloromethane	50.00	54.75	110	60-135	
Dichlorodifluoromethane	50.00	62.92	126	30-155	
1,1-Dichloroethane	50.00	49.22	98	70-135	
1,2-Dichloroethane	50.00	50.75	101	70-130	
1,1-Dichloroethene	50.00	51.61	103	70-130	
c-1,2-Dichloroethene	50.00	50.78	102	70-125	
t-1,2-Dichloroethene	50.00	52.45	105	60-140	
Ethylbenzene	50.00	52.18	104	75-125	
2-Hexanone	50.00	51.49	103	55-130	
Isopropylbenzene	50.00	49.95	100	75-125	
Methylene Chloride	50.00	49.56	99	55-140	
4-Methyl-2-Pentanone	50.00	48.72	97	60-135	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	54.19	108	80-130	
Tetrachloroethene	50.00	54.32	109	45-150	
Toluene	50.00	51.81	104	75-120	
1,1,1-Trichloroethane	50.00	56.42	113	65-130	
1,1,2-Trichloroethane	50.00	47.06	94	75-125	
Trichloroethene	50.00	53.67	107	70-125	
Trichlorofluoromethane	50.00	57.63	115	60-145	
1,2,4-Trimethylbenzene	50.00	53.53	107	75-130	
1,3,5-Trimethylbenzene	50.00	54.94	110	75-130	
Vinyl Chloride	50.00	56.32	113	50-145	
p/m-Xylene	100.0	98.33	98	75-130	
o-Xylene	50.00	48.23	96	80-120	
Methyl-t-Butyl Ether (MTBE)	50.00	47.13	94	65-125	
Tert-Butyl Alcohol (TBA)	250.0	254.0	102	46-154	

RPD: Relative Percent Difference. CL: Control Limits

Return to Contents

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

CKY, Incorporated		Date Received:	12/19/13
302 West Fifth Street, Ste. 310		Work Order:	13-12-1628
San Pedro, CA 90731-2738		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Seal Beach NWS			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-479-367	**LCS**	**Aqueous**	**GC/MS XX**	**12/21/13**	**12/21/13 10:29**	**131221L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Benzene	50.00	50.34	101	80-120	
Bromodichloromethane	50.00	49.07	98	75-120	
Bromoform	50.00	52.19	104	70-130	
2-Butanone	50.00	70.05	140	30-150	
Carbon Disulfide	50.00	40.21	80	35-160	
Carbon Tetrachloride	50.00	49.52	99	65-140	
Chlorobenzene	50.00	46.62	93	80-120	
Chloroethane	50.00	47.99	96	60-135	
Chloroform	50.00	46.85	94	65-135	
Chloromethane	50.00	47.69	95	40-125	
Dibromochloromethane	50.00	49.29	99	60-135	
Dichlorodifluoromethane	50.00	47.64	95	30-155	
1,1-Dichloroethane	50.00	46.88	94	70-135	
1,2-Dichloroethane	50.00	49.04	98	70-130	
1,1-Dichloroethene	50.00	43.20	86	70-130	
c-1,2-Dichloroethene	50.00	50.73	101	70-125	
t-1,2-Dichloroethene	50.00	48.11	96	60-140	
Ethylbenzene	50.00	52.64	105	75-125	
2-Hexanone	50.00	62.00	124	55-130	
Isopropylbenzene	50.00	50.16	100	75-125	
Methylene Chloride	50.00	48.86	98	55-140	
4-Methyl-2-Pentanone	50.00	52.82	106	60-135	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	45.27	91	80-130	
Tetrachloroethene	50.00	51.43	103	45-150	
Toluene	50.00	50.85	102	75-120	
1,1,1-Trichloroethane	50.00	49.62	99	65-130	
1,1,2-Trichloroethane	50.00	49.66	99	75-125	
Trichloroethene	50.00	49.43	99	70-125	
Trichlorofluoromethane	50.00	48.94	98	60-145	
1,2,4-Trimethylbenzene	50.00	55.14	110	75-130	
1,3,5-Trimethylbenzene	50.00	55.16	110	75-130	
Vinyl Chloride	50.00	52.08	104	50-145	
p/m-Xylene	100.0	105.5	105	75-130	
o-Xylene	50.00	50.84	102	80-120	
Methyl-t-Butyl Ether (MTBE)	50.00	49.64	99	65-125	
Tert-Butyl Alcohol (TBA)	250.0	252.0	101	46-154	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 13-12-1628

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 8260B	EPA 5030C	486	GC/MS Z	2
EPA 8260B	EPA 5030C	796	GC/MS Z	2
EPA 8260B	EPA 5030C	796	GC/MS XX	2

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 13-12-1628

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
DL	The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
ICH	Initial calibration verification recovery is above the control limit for this analyte.
ICJ	Initial calibration verification recovery is below the control limit for this analyte.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J	Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LOD	The Limit of Detection (LOD) is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at 99% confidence level.
LOQ	The Limit of Quantitation (LOQ) is the lowest concentration of a substance that produces a quantitative result within specified limits of precision and bias.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
U	Undetected at Detection Limit (DL) and is reported as less than the Limit of Detection (LOD).
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 13-12-1628

DATE: 12/19/13
PAGE: 1 OF 5

LABORATORY CLIENT: CKY
ADDRESS: 302 W. 5th Street
CITY: San Pedro STATE: CA ZIP: 90731
TEL:
E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
P.O. NO.:
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (PRINT) DEIL FRAZIER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF
GLOBAL ID:
LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]					
1	TB-2	12/19/13	0715	W	2		X						X													
2	MW-40-14	↓	0934	↓	3		X						X													
3	MW-40-22		1328		3		X						X													
4	MW-40-27		0831		3		X						X													
5	MW-40-35		1009		3		X						X													
6	MW-40-36		1041		3		X						X													
7	MW-40-37		1119		3		X						X													
8	Dup-2		—		3		X						X													
9	EB-2		0849		3		X						X													

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Nicole	12/19/13	1500
Nicole [signature]	[signature] CEL	12/19/13	1732
[signature]	[signature] CEL	12/19/13	1845

06/01/10 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 12-1628

DATE: 12-18-13
PAGE: 2 OF 5

LABORATORY CLIENT: CKY
ADDRESS: 302 W. 5th Street
CITY: San Pedro STATE: CA ZIP: 90731
TEL:
E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
P.O. NO.:
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (PRINT) DELL FRAZIER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF
GLOBAL ID:
LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]					
10	TB-1	12/18/13	0700	W	2		X						X													
11	MW-40-08		1027		9		X						X													
12	MW-40-30		1300		3		X						X													
13	MW-40-32		1149		3		X						X													
14	IW-2		1437		3		X						X													
15	IW-4		1359		3		X						X													
16	IW-10		1111		3		X						X													
17	IW-18		1510		3		X						X													
18	Dup-1		—		3		X						X													
19	EB-1		1525		3		X						X													

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Nicole	12/19/13	1500
Nicole	[signature] CEL	12/19/13	1732
[signature]	[signature] CEL	12/19/13	1845

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Calscience Environmental Laboratories, Inc.
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CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 12-1628

DATE: 12/19/13
PAGE: 3 OF 5

LABORATORY CLIENT: CKY
ADDRESS: 302 W. 5th Street
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E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
P.O. NO.:
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (PRINT) DEIL FRAZIER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF
GLOBAL ID:
LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]					
20	DRUM-1	12/19/13	1410	W	3		X						X													

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Nicole	12/19/13	1500
Nicole	[signature] CEC	12/19/13	1732
[signature]	[signature]	12/19/13	1845

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CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 12-1628

DATE: 12/19/13
PAGE: 4 OF 5

LABORATORY CLIENT: CKY
ADDRESS: 302 W. 5th Street
CITY: San Pedro STATE: CA ZIP: 90731
TEL:
E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
P.O. NO.:
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (PRINT) DEIL PLAZIER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF
GLOBAL ID:
LOG CODE:

SPECIAL INSTRUCTIONS: LEVEL IV SAMPLE

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]					
21	MW-40-07	12/19/13	1249	W	3		X						X													

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date	Time
	Nicole	12/19/13	1500
Nicole	CEL	12/19/13	1732
	CEL	12/19/13	1845

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GARDEN GROVE, CA 92841-1427
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CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 12-1628

DATE: 12/18/13

PAGE: 5 OF 5

LABORATORY CLIENT: CKY

ADDRESS: 302 W. 5th Street

CITY: San Pedro STATE: CA ZIP: 90731

TEL:

E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS

P.O. NO.:

PROJECT CONTACT: Howard Wittenberg

SAMPLER(S): (PRINT) DEIL FRAZIER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS: LEVEL IV

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]					
22	MW-40-31	12/18/13	1225	W	3		X						X													

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Nicole	12/19/13	1500
Nicole	[signature] CEL	12/19/13	1732
Rudy [signature]	[signature] CEL	12/19/13	1845

06/01/10 Revision

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Richard Villafania

From: Robert Sunjara [rsunjara@blainetech.com]
Sent: Monday, December 23, 2013 12:52 PM
To: Richard Villafania
Cc: Bart Gebbie; Howard Wittenberg
Subject: RE: Sample Receipt for Seal Beach NWS / CEL 13-12-1628
Attachments: doc20131223125200016258.pdf; doc20131223125145016257.pdf; doc20131223125210016259.pdf

Richard,

We need to divide the COCs up into 3 separate reports.

Revised COC's attached.

Thanks,

Robert Sunjara
Project Manager
Blaine Tech Services, Inc.
20735 Belshaw Avenue
Carson, CA 90746

Office: (310) 885-4455 x 115
Fax: (310) 637-5802
Cell: (310) 628-0877
www.blainetech.com

From: Richard Villafania [mailto:rvillafania@calscience.com]
Sent: Friday, December 20, 2013 10:13 AM
To: Richard Villafania; Howard Wittenberg
Cc: Robert Sunjara
Subject: Sample Receipt for Seal Beach NWS / CEL 13-12-1628

Thanks.

Richard Villafania
Project Manager

Calscience

7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494
www.calscience.com

Holiday Schedule:
Dec. 24, Tuesday – CLOSED

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 13-12-1628

DATE: 12/19/13
PAGE: 1 OF 2

LABORATORY CLIENT: CKY
ADDRESS: 302 W. 5th Street
CITY: San Pedro STATE: CA ZIP: 90731
TEL:
E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
P.O. NO.:
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (PRINT) DEIL FRAZIER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF
GLOBAL ID:
LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]
1	TB-2	12/19/13	0715	W	2		X						X								
2	MW-40-14	↓	0934	↓	3		X						X								
3	MW-40-22		1328		3		X						X								
4	MW-40-27		0831		3		X						X								
5	MW-40-35		1009		3		X						X								
6	MW-40-36		1041		3		X						X								
7	MW-40-37		1119		3		X						X								
8	DUP-2		—		3		X						X								
9	EB-2		0849		3		X						X								

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Nicole	12/19/13	1500
Nicole	[signature] CEL	12/19/13	1732
[signature]	[signature] CEL	12/19/13	1845

06/01/10 Revision

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 1 2 - 1 6 2 8

DATE: 12/19/13
PAGE: 2 OF 52 RS 12/23

LABORATORY CLIENT: CKY
ADDRESS: 302 W. 5th Street
CITY: San Pedro STATE: CA ZIP: 90731
TEL:
E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
P.O. NO.:
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (PRINT) DEIL PLATZER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF
GLOBAL ID:
LOG CODE:

SPECIAL INSTRUCTIONS:
LEVEL IV SAMPLE

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]	Level IV			
21	MW-40-07	12/19/13	1249	W	3		X						X									X			

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	Nicole	12/19/13	1500
Nicole	[signature] CEL	12/19/13	1732
[signature]	[signature] CEL	12/19/13	1845

06/01/10 Revision

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO.# / LAB USE ONLY: 1 2 - 1 6 2 8

DATE: 12-18-13
PAGE: 1 ~~2~~ OF ~~5~~ 2

RS 12/23

LABORATORY CLIENT: CKY
ADDRESS: 302 W. 5th Street
CITY: San Pedro STATE: CA ZIP: 90731
TEL:
E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
P.O. NO.:
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (PRINT) DELL FRAZIER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF
GLOBAL ID:
LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]
10	TB-1	12/18/13	0700	W	2		X						X								
11	MW-40-08		1027		9		X						X								
12	MW-40-30		1300		3		X						X								
13	MW-40-32		1149		3		X						X								
14	IW-2		1437		3		X						X								
15	IW-4		1359		3		X						X								
16	IW-10		1111		3		X						X								
17	IW-18		1510		3		X						X								
18	Dup-1		—		3		X						X								
19	EB-1		1525		3		X						X								

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Nicole	12/19/13	1500
Nicole	[signature] CEL	12/19/13	1732
[signature]	[signature] CEL	12/19/13	1845

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 12-1628

DATE: 12/18/13
PAGE: 2 ~~1~~ OF ~~1~~ 2

RS 12/23

LABORATORY CLIENT: CKY
ADDRESS: 302 W. 5th Street
CITY: San Pedro STATE: CA ZIP: 90731
TEL:
E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
P.O. NO.:
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (PRINT) DEIL FRAZIER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF
GLOBAL ID:
LOG CODE:

SPECIAL INSTRUCTIONS: LEVEL IV

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]		Level IV			
22	MW-40-31	12/18/13	1225	W	3		X						X										X			

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Nicole	12/19/13	15 00
Nicole	[signature] CEL	12/19/13	1732
Rudy [signature]	[signature] CEL	12/19/13	1845

06/01/10 Revision

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 12-1628

DATE: 12/19/13
PAGE: 13 OF 31

LABORATORY CLIENT: CKY
ADDRESS: 302 W. 5th Street
CITY: San Pedro STATE: CA ZIP: 90731
TEL:
E-MAIL: howard@ckyinc.com

CLIENT PROJECT NAME / NUMBER: Seal Beach NWS
P.O. NO.:
PROJECT CONTACT: Howard Wittenberg
SAMPLER(S): (PRINT) DEIL FRAZIER

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

☐ COELT EDF
GLOBAL ID:
LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]					
20	DRUM-1	12/19/13	1410	W	3		X						X													

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	Nicole	12/19/13	1500
Nicole	[signature] CCC	12/19/13	1732
[signature]	[signature]	12/19/13	1845

06/01/10 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-12-1628

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: CKY

DATE: 12/19/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.2 °C - 0.2 °C (CF) = 2.0 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Checked by:** 676

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Checked by:** 676

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 854

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☑VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:** * **Labeled/Checked by:** 854

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 681

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 681

*(-1): 130913A, (-10): 130809A

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Calscience Environmental Laboratories, Inc.

Case Narrative

Client Project Name: Seal Beach NWS
Work Order Number: 13-12-1628

CONDITION UPON RECEIPT:

Calscience Laboratories received (22) aqueous samples on December 19th, 2013. A total of 71 containers were received in good condition at a temperature of 2.0°C, which is within the recommended temperature criteria of >0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
TB-2	13-12-1628-1	12/19/2013 07:15	12/19/2013 18:45
MW-40-14	13-12-1628-2	12/19/2013 09:34	12/19/2013 18:45
MW-40-22	13-12-1628-3	12/19/2013 13:28	12/19/2013 18:45
MW-40-27	13-12-1628-4	12/19/2013 08:31	12/19/2013 18:45
MW-40-35	13-12-1628-5	12/19/2013 10:09	12/19/2013 18:45
MW-40-36	13-12-1628-6	12/19/2013 10:41	12/19/2013 18:45
MW-40-37	13-12-1628-7	12/19/2013 11:19	12/19/2013 18:45
DUP-2	13-12-1628-8	12/19/2013 00:00	12/19/2013 18:45
EB-2	13-12-1628-9	12/19/2013 08:49	12/19/2013 18:45
TB-1	13-12-1628-10	12/18/2013 07:00	12/19/2013 18:45
MW-40-08	13-12-1628-11	12/18/2013 10:27	12/19/2013 18:45
MW-40-30	13-12-1628-12	12/18/2013 13:00	12/19/2013 18:45
MW-40-32	13-12-1628-13	12/18/2013 11:49	12/19/2013 18:45
IW-2	13-12-1628-14	12/18/2013 14:37	12/19/2013 18:45
IW-4	13-12-1628-15	12/18/2013 13:59	12/19/2013 18:45
IW-10	13-12-1628-16	12/18/2013 11:11	12/19/2013 18:45
IW-18	13-12-1628-17	12/18/2013 15:10	12/19/2013 18:45
DUP-1	13-12-1628-18	12/18/2013 00:00	12/19/2013 18:45
EB-1	13-12-1628-19	12/18/2013 15:25	12/19/2013 18:45
DRUM-1	13-12-1628-20	12/19/2013 14:10	12/19/2013 18:45
MW-40-07	13-12-1628-21	12/19/2013 12:49	12/19/2013 18:45
MW-40-31	13-12-1628-22	12/18/2013 12:25	12/19/2013 18:45

DATA SUMMARY:

Per the chain of custody (COC), the samples were analyzed for Volatile Organic Compounds by EPA Method 8260B.

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All samples were analyzed within the suggested EPA holding time for the requested method.

Sample results were reported in the DL/LOD/LOQ format. In the instance where a result fell between the DL and the LOQ, a "J" flag was applied to the data indicating an estimated value.

Any dilutions made to the sample(s) and/or QC will be noted in the following narrative. Reporting limits have been adjusted accordingly.

Any manual integration made to the data will be noted in the following narrative. The initial and amended chromatograms have been included in the data package.

Unless otherwise noted below, all sample and instrument QC was within acceptance criteria.

EPA 8260B – VOLATILE ORGANIC COMPOUNDS:

Samples 13-12-1628: -1 through -22 were analyzed for a project-specific list of Volatile Organic Compounds by EPA Method 8260B on 12/20-23/13 in batch #s 131220L01 / 131220S01 and 131223L01 / 131223S01 on GC/MS Z and batch #s 131221L01 / 131221S01 on GC/MS XX.

Initial Calibration and Initial Calibration Verification:

- *ICAL 12/12/13 on GC/MS Z:*

The % RSD for each project-specific analyte was ≤15% with the exception of Bromoform and Dibromochloromethane.

The ICV was within the 20% D acceptance criteria for all project-specific analytes except Bromoform which was biased high.

Manual integrations were performed on one or more non-target analytes in one or more of the ICAL standards to correct the peak and/or baseline integration.

- *ICAL 12/20/13 on GC/MS XX:*

The % RSD for each project-specific analyte was ≤15% with the exception of Carbon Disulfide and Chloromethane. Quadratic regression was used for Chloromethane.

The initial calibration verification was within the 20% D acceptance criteria for all project-specific analytes except 2-Butanone and 2-Hexanone which were biased high.

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Continuing Calibration Verification:

All values were within the 20% D acceptance criteria except Dichlorodifluoromethane which was biased high in CCV batch #131223A on GC/MS Z. All associated samples were non-detect for this analyte.

Tuning Standards:

All instrument tuning standards (BFB) were within criteria.

Sample and QC Data:

- *QC Batch # 131221L01 GC/MS XX:* (Associated with samples -2, -4, -7, -11, -12, -14 through -20, and -22)

The MS/MSD was performed on sample -11. The method blank was non-detect; the LCS and MS/MSD were within acceptance criteria for all target analytes.

All surrogate and internal standard recoveries were within acceptance criteria.

Manual integrations were performed on one or more target analytes in one or more of the samples to correct the peak and/or baseline integration.

- *QC batch # 131220L01 GC/MS Z:* (Associated with samples -1, -3, -5, -6, -8, -9, -10, and -13)

A non-client sample was used for the MS/MSD. The method blank was non-detect; the LCS and MS/MSD were within acceptance criteria for all target analytes.

All surrogate and internal standard recoveries were within acceptance criteria.

- *QC Batch # 131223L01 GC/MS Z:* (Associated with sample -21)

The MS/MSD was performed on sample -21. The method blank was non-detect; the LCS and MS/MSD were within acceptance criteria for all target analytes.

All surrogate and internal standard recoveries were within acceptance criteria.

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7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Level IV Data Package

CLIENT NAME:	**CKY, Incorporated**
PROJECT NAME:	**Seal Beach NWS**
WORK ORDER:	**13-12-1628**

EPA 8260B Volatile Organics (Aqueous)

Initial Calibration Data

Sample Data

Quality Control Data

Continuing Calibration Data

Tuning Data

Run Logs

Chemical Receiving Logs and Standards Preparation Logs

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Calscience Environmental Laboratories, Inc.

EPA 8260B Volatile Organics

Initial Calibration Data

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

Work Order #: 13-12-1628
Instrument: GC/MS Z
ICAL Batch ID: 131212IC
ICAL D/T Analyzed: 12/12/2013 10:15

Reviewed By: 163
D/T Reviewed: 12/18/2013 10:29
Analyst: 796

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
Acetone	Avg Resp			0.070	0.083	0.067	0.069	0.062			0.070	0.00	11	0-15			PASS
Benzene	Avg Resp	1.791	1.657	1.657	1.724	1.654	1.582	1.328			1.628	0.00	9	0-15			PASS
Bromobenzene	Avg Resp		0.473	0.510	0.508	0.501	0.480	0.380			0.475	0.00	10	0-15			PASS
Bromochloromethane	Avg Resp		0.316	0.358	0.385	0.356	0.344	0.300			0.343	0.00	9	0-15			PASS
Bromodichloromethane	Avg Resp		0.378	0.460	0.496	0.505	0.510	0.457			0.468	0.00	11	0-15			PASS
Bromoform	**Avg Resp**		0.211	0.311	0.344	0.411	0.481	0.484			0.374	**0.10**	**28**	**0-15**			**FAIL**
Bromomethane	**Avg Resp**			0.526	0.548	0.307	0.224	0.236			0.368	**0.00**	**43**	**0-15**			**FAIL**
2-Butanone	Avg Resp			0.272	0.335	0.336	0.348	0.343			0.327	0.00	10	0-15			PASS
n-Butylbenzene	**Avg Resp**		3.011	3.401	3.631	3.617	3.499	2.323			3.247	**0.00**	**16**	**0-15**			**FAIL**
sec-Butylbenzene	Avg Resp		3.957	4.349	4.518	4.429	4.341	3.123			4.120	0.00	13	0-15			PASS
tert-Butylbenzene	Avg Resp		0.616	0.723	0.749	0.742	0.720	0.535			0.681	0.00	13	0-15			PASS
Carbon Disulfide	Avg Resp		1.660	1.573	1.737	1.664	1.635	1.409			1.613	0.00	7	0-15			PASS
Carbon Tetrachloride	Avg Resp	0.488	0.396	0.453	0.506	0.541	0.586	0.540			0.501	0.00	13	0-15			PASS
Chlorobenzene	Avg Resp		1.118	1.172	1.173	1.147	1.109	0.887			1.101	0.30	10	0-15			PASS
Chloroethane	Avg Resp		0.332	0.375	0.396	0.370	0.354	0.311			0.356	0.00	9	0-15			PASS
2-Chloroethyl Vinyl Ether	LR - Equal			0.005	0.009	0.014	0.017	0.019							0.999	r>=0.995	PASS
Chloroform	Avg Resp		0.944	1.010	1.086	1.076	1.041	0.928			1.014	0.00	7	0-30			PASS
Chloromethane	Avg Resp		0.958	0.749	0.796	0.761	0.797	0.866			0.821	0.10	10	0-15			PASS
2-Chlorotoluene	Avg Resp		1.512	1.518	1.480	1.432	1.387	1.030			1.393	0.00	13	0-15			PASS
4-Chlorotoluene	Avg Resp		3.268	3.409	3.410	3.246	3.183	2.351			3.144	0.00	13	0-15			PASS
Dibromochloromethane	**Avg Resp**		0.218	0.278	0.297	0.336	0.362	0.334			0.304	**0.00**	**17**	**0-15**			**FAIL**
1,2-Dibromo-3-Chloropropane	Avg Resp			0.156	0.200	0.211	0.229	0.229			0.205	0.00	15	0-15			PASS
1,2-Dibromoethane	Avg Resp		0.261	0.330	0.349	0.366	0.364	0.332			0.334	0.00	12	0-15			PASS
Dibromomethane	Avg Resp		0.208	0.249	0.255	0.247	0.241	0.212			0.235	0.00	9	0-15			PASS
1,2-Dichlorobenzene	Avg Resp		1.920	1.918	1.895	1.845	1.803	1.407			1.798	0.00	11	0-15			PASS
1,3-Dichlorobenzene	Avg Resp		2.040	1.932	2.030	1.940	1.941	1.457			1.890	0.00	12	0-15			PASS
1,4-Dichlorobenzene	Avg Resp		1.995	1.908	1.884	1.857	1.867	1.393			1.817	0.00	12	0-15			PASS
Dichlorodifluoromethane	Avg Resp		0.683	0.788	0.809	0.791	0.759	0.782			0.769	0.00	6	0-15			PASS
1,1-Dichloroethane	Avg Resp		1.027	1.109	1.188	1.171	1.163	1.037			1.116	0.10	6	0-15			PASS
1,2-Dichloroethane	Avg Resp	0.495	0.531	0.574	0.588	0.554	0.538	0.477			0.537	0.00	7	0-15			PASS
1,1-Dichloroethene	Avg Resp		0.897	0.806	0.896	0.864	0.844	0.718			0.838	0.00	8	0-30			PASS
c-1,2-Dichloroethene	Avg Resp		0.563	0.609	0.689	0.663	0.657	0.569			0.625	0.00	8	0-15			PASS
t-1,2-Dichloroethene	Avg Resp		0.562	0.556	0.612	0.610	0.592	0.513			0.574	0.00	7	0-15			PASS
1,2-Dichloropropane	Avg Resp		0.396	0.442	0.468	0.455	0.434	0.382			0.430	0.00	8	0-30			PASS
1,3-Dichloropropane	Avg Resp		0.630	0.642	0.657	0.650	0.631	0.563			0.629	0.00	5	0-15			PASS
2,2-Dichloropropane	Avg Resp		0.621	0.625	0.704	0.714	0.728	0.670			0.677	0.00	7	0-15			PASS
1,1-Dichloropropene	Avg Resp		0.703	0.764	0.819	0.811	0.784	0.651			0.755	0.00	9	0-15			PASS
c-1,3-Dichloropropene	Avg Resp	0.426	0.423	0.502	0.584	0.595	0.601	0.532			0.523	0.00	15	0-15			PASS
t-1,3-Dichloropropene	LR - Equal	0.320	0.344	0.415	0.463	0.515	0.547	0.501							0.999	r>=0.995	PASS
Ethylbenzene	Avg Resp		2.180	2.115	2.136	2.076	1.988	1.506			2.000	0.00	13	0-30			PASS
2-Hexanone	Avg Resp			0.166	0.185	0.187	0.193	0.192			0.185	0.00	6	0-15			PASS
Isopropylbenzene	Avg Resp		1.963	2.078	2.082	2.039	1.937	1.430			1.921	0.00	13	0-15			PASS
p-Isopropyltoluene	Avg Resp		3.413	3.616	3.700	3.625	3.518	2.477			3.392	0.00	14	0-15			PASS
Methylene Chloride	Avg Resp			0.596	0.654	0.644	0.625	0.564			0.616	0.00	6	0-15			PASS
4-Methyl-2-Pentanone	Avg Resp			0.175	0.194	0.189	0.189	0.181			0.186	0.00	4	0-15			PASS

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

Work Order #: 13-12-1628
Instrument: GC/MS Z
ICAL Batch ID: 131212IC
ICAL D/T Analyzed: 12/12/2013 10:15

Reviewed By: 163
D/T Reviewed: 12/18/2013 10:29
Analyst: 796

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
Naphthalene	Avg Resp			2.658	3.045	3.186	3.300	2.801			2.998	0.00	9	0-15			PASS
n-Propylbenzene	Avg Resp		2.485	2.487	2.495	2.406	2.300	1.636			2.301	0.00	15	0-15			PASS
Styrene	Avg Resp		1.199	1.297	1.292	1.251	1.205	0.934			1.196	0.00	11	0-15			PASS
Acetonitrile	Avg Resp			0.566	0.571	0.620	0.589	0.501			0.569	0.00	8	0-15			PASS
Acrylonitrile	Avg Resp			0.257	0.298	0.295	0.282	0.263			0.279	0.00	7	0-15			PASS
Iodomethane	LR - Equal			0.020	0.049	0.249	0.312	0.306							0.998	r>=0.995	PASS
t-1,4-Dichloro-2-Butene	LR - Equal		0.074	0.107	0.126	0.114	0.118	0.113							1.000	r>=0.995	PASS
1,1,1,2-Tetrachloroethane	Avg Resp		0.209	0.261	0.284	0.311	0.327	0.289			0.280	0.00	15	0-15			PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp		0.410	0.470	0.510	0.489	0.479	0.421			0.463	0.00	8	0-15			PASS
1,1,2,2-Tetrachloroethane	Avg Resp		0.852	0.899	0.951	0.924	0.945	0.909			0.913	0.30	4	0-15			PASS
Tetrachloroethene	Avg Resp		0.591	0.644	0.677	0.679	0.648	0.489			0.621	0.00	12	0-15			PASS
Toluene	Avg Resp		1.822	1.841	1.879	1.785	1.689	1.351			1.728	0.00	11	0-30			PASS
1,2,3-Trichlorobenzene	Avg Resp		1.221	1.366	1.444	1.431	1.462	1.089			1.335	0.00	11	0-15			PASS
1,2,4-Trichlorobenzene	Avg Resp		1.255	1.435	1.511	1.506	1.538	1.121			1.395	0.00	12	0-15			PASS
1,1,1-Trichloroethane	Avg Resp		0.665	0.725	0.815	0.823	0.841	0.764			0.772	0.00	9	0-15			PASS
Hexachloro-1,3-Butadiene	**Avg Resp**		0.919	0.952	1.028	0.995	0.944	0.594			0.905	**0.00**	**17**	**0-15**			**FAIL**
1,1,2-Trichloroethane	Avg Resp		0.289	0.338	0.342	0.329	0.323	0.283			0.317	0.00	8	0-15			PASS
Trichloroethene	Avg Resp		0.428	0.467	0.503	0.481	0.450	0.361			0.448	0.00	11	0-15			PASS
Trichlorofluoromethane	Avg Resp		0.866	0.877	0.904	0.862	0.810	0.808			0.855	0.00	4	0-15			PASS
1,2,3-Trichloropropane	Avg Resp		0.113	0.148	0.157	0.152	0.148	0.133			0.142	0.00	11	0-15			PASS
1,2,4-Trimethylbenzene	Avg Resp		3.268	3.330	3.463	3.300	3.246	2.389			3.166	0.00	12	0-15			PASS
1,3,5-Trimethylbenzene	Avg Resp		1.561	1.703	1.714	1.643	1.585	1.134			1.557	0.00	14	0-15			PASS
Vinyl Acetate	Avg Resp			0.063	0.080	0.083	0.091	0.088			0.081	0.00	13	0-15			PASS
Vinyl Chloride	Avg Resp	0.796	0.664	0.763	0.758	0.721	0.692	0.708			0.729	0.00	6	0-30			PASS
p/m-Xylene	Avg Resp	1.769	1.731	1.720	1.676	1.599	1.525	1.137			1.594	0.00	14	0-15			PASS
o-Xylene	Avg Resp	1.702	1.679	1.792	1.798	1.719	1.645	1.260			1.656	0.00	11	0-15			PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp		1.502	1.609	1.749	1.677	1.679	1.579			1.632	0.00	5	0-15			PASS
Tert-Butyl Alcohol (TBA)	Avg Resp		1.153	1.378	1.350	1.393	1.405	1.406			1.348	0.00	7	0-15			PASS
Diisopropyl Ether (DIPE)	Avg Resp		1.865	1.908	2.087	2.001	1.982	1.766			1.935	0.00	6	0-15			PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp		1.550	1.571	1.750	1.760	1.783	1.655			1.678	0.00	6	0-15			PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp		0.968	0.974	1.007	0.967	0.957	0.880			0.959	0.00	4	0-15			PASS
Ethanol	Avg Resp			0.229	0.211	0.197	0.188	0.169			0.199	0.00	11	0-15			PASS

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

Work Order #: 13-12-1628
Instrument: GC/MS Z
ICAL Batch ID: 131212IC
ICAL D/T Analyzed: 12/12/2013 10:15

Reviewed By: 163
D/T Reviewed: 12/18/2013 10:29
Analyst: 796

Data Files:

Level #	D/T Analyzed	Data File
1	12/12/2013 10:15	W:\GCMS_Z_DATA\2013\131212\12DEC002.D\12DEC002.rr
2	12/12/2013 10:42	W:\GCMS_Z_DATA\2013\131212\12DEC003.D\12DEC003.rr
3	12/12/2013 11:10	W:\GCMS_Z_DATA\2013\131212\12DEC004.D\12DEC004.rr
4	12/12/2013 11:37	W:\GCMS_Z_DATA\2013\131212\12DEC005.D\12DEC005.rr
5	12/12/2013 12:05	W:\GCMS_Z_DATA\2013\131212\12DEC006.D\12DEC006.rr
6	12/12/2013 12:32	W:\GCMS_Z_DATA\2013\131212\12DEC007.D\12DEC007.rr
7	12/12/2013 13:00	W:\GCMS_Z_DATA\2013\131212\12DEC008.D\12DEC008.rr

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER:	099-12-041-670-4692	ANALYST:	796
INSTRUMENT NAME:	GC/MS Z	REVIEWED BY:	163
INITIAL BATCH:	131212IC	DATE REVIEWED:	12/18/13 10:29
INITIAL DATE ANALYZED	12/12/13 10:15	ICV DATE ANALYZED	12/12/13 13:34

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Acetone	Avg Resp	0.00	0.070	0.074			-6	0-20	PASS
Benzene	Avg Resp	0.00	1.628	1.616			1	0-20	PASS
Bromobenzene	Avg Resp	0.00	0.475	0.474			0	0-20	PASS
Bromochloromethane	Avg Resp	0.00	0.343	0.343			0	0-20	PASS
Bromodichloromethane	Avg Resp	0.00	0.468	0.499			-7	0-20	PASS
Bromoform	**Avg Resp**	**0.10**	**0.374**	**0.464**			**-24**	0-20	**FAIL**
Bromomethane	Avg Resp	0.00	0.368	0.299			19	0-20	PASS
2-Butanone	Avg Resp	0.00	0.327	0.366			-12	0-20	PASS
n-Butylbenzene	Avg Resp	0.00	3.247	3.514			-8	0-20	PASS
sec-Butylbenzene	Avg Resp	0.00	4.120	4.151			-1	0-20	PASS
tert-Butylbenzene	Avg Resp	0.00	0.681	0.702			-3	0-20	PASS
Carbon Disulfide	Avg Resp	0.00	1.613	1.592			1	0-20	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.501	0.558			-11	0-20	PASS
Chlorobenzene	Avg Resp	0.30	1.101	1.045			5	0-20	PASS
Chloroethane	Avg Resp	0.00	0.356	0.362			-2	0-20	PASS
2-Chloroethyl Vinyl Ether	LR - Equal				50.00	52.089	-4	0-20	PASS
Chloroform	Avg Resp	0.00	1.014	1.031			-2	0-20	PASS
Chloromethane	Avg Resp	0.10	0.821	0.795			3	0-20	PASS
2-Chlorotoluene	Avg Resp	0.00	1.393	1.339			4	0-20	PASS
4-Chlorotoluene	Avg Resp	0.00	3.144	3.015			4	0-20	PASS
Dibromochloromethane	Avg Resp	0.00	0.304	0.347			-14	0-20	PASS
1,2-Dibromo-3-Chloropropane	Avg Resp	0.00	0.205	0.238			-16	0-20	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.334	0.357			-7	0-20	PASS
Dibromomethane	Avg Resp	0.00	0.235	0.241			-3	0-20	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	1.798	1.713			5	0-20	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	1.890	1.794			5	0-20	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	1.817	1.840			-1	0-20	PASS
Dichlorodifluoromethane	Avg Resp	0.00	0.769	0.770			0	0-20	PASS
1,1-Dichloroethane	Avg Resp	0.10	1.116	1.103			1	0-20	PASS
1,2-Dichloroethane	Avg Resp	0.00	0.537	0.545			-2	0-20	PASS
1,1-Dichloroethene	Avg Resp	0.00	0.838	0.802			4	0-20	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.625	0.670			-7	0-20	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	0.574	0.610			-6	0-20	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.430	0.439			-2	0-20	PASS
1,3-Dichloropropane	Avg Resp	0.00	0.629	0.638			-2	0-20	PASS
2,2-Dichloropropane	Avg Resp	0.00	0.677	0.727			-7	0-20	PASS
1,1-Dichloropropene	Avg Resp	0.00	0.755	0.795			-5	0-20	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.523	0.625			-20	0-20	PASS
t-1,3-Dichloropropene	LR - Equal				50.00	49.953	0	0-20	PASS
Ethylbenzene	Avg Resp	0.00	2.000	2.022			-1	0-20	PASS
2-Hexanone	Avg Resp	0.00	0.185	0.213			-16	0-20	PASS

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER:	099-12-041-670-4692	ANALYST:	796
INSTRUMENT NAME:	GC/MS Z	REVIEWED BY:	163
INITIAL BATCH:	131212IC	DATE REVIEWED:	12/18/13 10:29
INITIAL DATE ANALYZED	12/12/13 10:15	ICV DATE ANALYZED	12/12/13 13:34

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Isopropylbenzene	Avg Resp	0.00	1.921	1.855			3	0-20	PASS
p-Isopropyltoluene	Avg Resp	0.00	3.392	3.364			1	0-20	PASS
Methylene Chloride	Avg Resp	0.00	0.616	0.620			-1	0-20	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.186	0.203			-9	0-20	PASS
Naphthalene	Avg Resp	0.00	2.998	3.441			-15	0-20	PASS
n-Propylbenzene	Avg Resp	0.00	2.301	2.152			6	0-20	PASS
Styrene	Avg Resp	0.00	1.196	1.215			-2	0-20	PASS
t-1,4-Dichloro-2-Butene	**LR - Equal**				**50.00**	36.338	**27**	0-20	**FAIL**
Iodomethane	LR - Equal				100.00	88.534	12	0-20	PASS
1,1,1,2-Tetrachloroethane	Avg Resp	0.00	0.280	0.322			-15	0-20	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	0.463	0.469			-1	0-20	PASS
Acetonitrile	Avg Resp	0.00	0.569	0.578			-2	0-20	PASS
Acrylonitrile	Avg Resp	0.00	0.279	0.291			-4	0-20	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.30	0.913	0.982			-8	0-20	PASS
Tetrachloroethene	Avg Resp	0.00	0.621	0.664			-7	0-20	PASS
Toluene	Avg Resp	0.00	1.728	1.755			-2	0-20	PASS
1,2,3-Trichlorobenzene	Avg Resp	0.00	1.335	1.471			-10	0-20	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	1.395	1.500			-8	0-20	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	0.772	0.836			-8	0-20	PASS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.905	0.976			-8	0-20	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.317	0.326			-3	0-20	PASS
Trichloroethene	Avg Resp	0.00	0.448	0.463			-3	0-20	PASS
Trichlorofluoromethane	Avg Resp	0.00	0.855	0.832			3	0-20	PASS
1,2,3-Trichloropropane	Avg Resp	0.00	0.142	0.152			-7	0-20	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	3.166	3.334			-5	0-20	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.557	1.649			-6	0-20	PASS
Vinyl Acetate	**Avg Resp**	**0.00**	**0.081**	**0.103**			**-27**	0-20	**FAIL**
Vinyl Chloride	Avg Resp	0.00	0.729	0.701			4	0-20	PASS
p/m-Xylene	Avg Resp	0.00	1.594	1.512			5	0-20	PASS
o-Xylene	Avg Resp	0.00	1.656	1.601			3	0-20	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	1.632	1.726			-6	0-20	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.348	1.368			-1	0-20	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	1.935	1.999			-3	0-20	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	1.678	1.800			-7	0-20	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.959	1.011			-5	0-20	PASS
Ethanol	Avg Resp	0.00	0.199	0.169			15	0-20	PASS

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER:	099-12-041-670-4692	ANALYST:	796
INSTRUMENT NAME:	GC/MS Z	REVIEWED BY:	163
INITIAL BATCH:	131212IC	DATE REVIEWED:	12/18/13 10:29
INITIAL DATE ANALYZED	12/12/13 10:15	ICV DATE ANALYZED	12/12/13 13:34

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_Z_DATA\2013\131212\12DEC009.D\12DEC009.rr

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Untitled

Response Factor Report GCMS Z

Method Path : C:\MSDCHEM\1\METHODS\
Method File : 131212.M
Title : EPA 8260B/8260C
Last Update : Thu Dec 12 14:04:04 2013
Response Via : Initial Calibration

Calibration Files
0.5 =12DEC002.D 1 =12DEC003.D 10 =12DEC004.D 20 =12DEC005.D 50 =12DEC006.D
100 =12DEC007.D 200 =12DEC008.D

		Compound	0.5	1	10	20	50	100	200	Avg	%RSD
1)	I	Tert-Butyl Alcohol-d9			----------ISTD----------						
2)	T	Ethanol			0.229	0.211	0.197	0.188	0.169	0.199	11
3)	T	Tert-Butyl Alcohol (TBA)		1.153	1.378	1.350	1.393	1.405	1.406	1.348	7
4)	I	Pentafluorobenzene			----------ISTD----------						
5)	T	Dichlorodifluoromethane		0.683	0.788	0.809	0.791	0.759	0.782	0.769	6
6)	P	Chloromethane		0.958	0.749	0.796	0.761	0.797	0.866	0.821	10
7)	CCC	Vinyl Chloride	0.796	0.664	0.763	0.758	0.721	0.692	0.708	0.729	6
8)	T	Bromomethane			0.526	0.548	0.307	0.224	0.236	0.368	43
9)	T	Chloroethane		0.332	0.375	0.396	0.370	0.354	0.311	0.356	9
10)	T	1,3-Butadiene		0.514	0.545	0.609	0.597	0.590	0.529	0.564	7
11)	T	Trichlorofluoromethane		0.866	0.877	0.904	0.862	0.810	0.808	0.855	4
12)	T	Diethyl Ether		0.448	0.360	0.401	0.368	0.379	0.351	0.384	9
13)	T	Acetone			0.070	0.083	0.067	0.069	0.062	0.070#	11
14)	T	Iodomethane			0.020	0.049	0.249	0.312	0.306	0.187	76
15)	CCC	1,1-Dichloroethene		0.897	0.806	0.896	0.864	0.844	0.718	0.838	8
16)	T	1,1,2-Trichloro-1,2,2-Trif...		0.410	0.470	0.510	0.489	0.479	0.421	0.463	8
17)	T	Isopropanol			0.063	0.066	0.061	0.060	0.063	0.063#	3
18)	T	Carbon Disulfide		1.660	1.573	1.737	1.664	1.635	1.409	1.613	7
19)	T	Acetonitrile			0.566	0.571	0.620	0.589	0.501	0.569	8
20)	T	Acrylonitrile			0.257	0.298	0.295	0.282	0.263	0.279	7
21)	T	Allyl Chloride		0.278	0.305	0.308	0.340	0.330	0.284	0.308	8
22)	T	Acrolein			0.110	0.128	0.125	0.124	0.117	0.121	6
23)	T	Methylene Chloride			0.596	0.654	0.644	0.625	0.564	0.616	6
24)	T	t-1,2-Dichloroethene		0.562	0.556	0.612	0.610	0.592	0.513	0.574	7
25)	T	Isobutyl Alcohol			0.024	0.031	0.032	0.037	0.040	0.033#	19
26)	T	Methyl-t-Butyl Ether (MTBE)		1.502	1.609	1.749	1.677	1.679	1.579	1.632	5
27)	T	Hexane		0.924	0.930	1.045	1.023	1.024	0.874	0.970	7
28)	P	1,1-Dichloroethane		1.027	1.109	1.188	1.171	1.163	1.037	1.116	6
29)	T	Vinyl Acetate			0.063	0.080	0.083	0.091	0.088	0.081#	13
30)	T	Diisopropyl Ether (DIPE)		1.865	1.908	2.087	2.001	1.982	1.766	1.935	6
31)	T	Chloroprene			0.877	0.974	0.945	0.925	0.789	0.902	8
32)	T	Ethyl-t-Butyl Ether (ETBE)		1.550	1.571	1.750	1.760	1.783	1.655	1.678	6
33)	T	c-1,2-Dichloroethene		0.563	0.609	0.689	0.663	0.657	0.569	0.625	8
34)	T	2,2-Dichloropropane		0.621	0.625	0.704	0.714	0.728	0.670	0.677	7
35)	T	2-Butanone			0.272	0.335	0.336	0.348	0.343	0.327	10
36)	T	Propionitrile			0.097	0.117	0.116	0.121	0.121	0.114	9
37)	T	Methacrylonitrile			0.386	0.549	0.441	0.442	0.411	0.446	14
38)	T	Bromochloromethane		0.316	0.358	0.385	0.356	0.344	0.300	0.343	9
39)	T	Tetrahydrofuran			0.244	0.268	0.261	0.257	0.251	0.256	4
40)	CCC	Chloroform		0.944	1.010	1.086	1.076	1.041	0.928	1.014	7
41)	S	Dibromofluoromethane	0.393	0.384	0.394	0.431	0.426	0.422	0.429	0.411	5
42)	T	1,1,1-Trichloroethane		0.665	0.725	0.815	0.823	0.841	0.764	0.772	9
43)	T	Cyclohexane			0.946	0.968	0.905	0.904	0.761	0.897	9
44)	T	1,1-Dichloropropene		0.703	0.764	0.819	0.811	0.784	0.651	0.755	9
45)	T	Carbon Tetrachloride	0.488	0.396	0.453	0.506	0.541	0.586	0.540	0.501	13
46)	S	1,2-Dichloroethane-d4	0.532	0.535	0.537	0.594	0.591	0.600	0.594	0.569	6
47)	I	1,4-Difluorobenzene			----------ISTD----------						
48)	T	Benzene	1.791	1.657	1.657	1.724	1.654	1.582	1.328	1.628	9
49)	T	1,2-Dichloroethane	0.495	0.531	0.574	0.588	0.554	0.538	0.477	0.537	7
50)	T	Tert-Amyl-Methyl Ether (TAME)		0.968	0.974	1.007	0.967	0.957	0.880	0.959	4
51)	T	Thiophene		0.768	0.874	0.884	0.854	0.823	0.715	0.820	8
52)	T	2,2,4-Trimethyl Pentane		1.801	1.851	1.903	1.780	1.682	1.434	1.742	10
53)	T	Trichloroethene		0.428	0.467	0.503	0.481	0.450	0.361	0.448	11
54)	T	2-Pentanone			0.030	0.030	0.029	0.028	0.027	0.029#	5
55)	CCC	1,2-Dichloropropane		0.396	0.442	0.468	0.455	0.434	0.382	0.430	8
56)	T	Dibromomethane		0.208	0.249	0.255	0.247	0.241	0.212	0.235	9
57)	T	Methyl Methacrylate			0.277	0.299	0.311	0.308	0.291	0.297	5
58)	T	1,4-Dioxane			0.007	0.007	0.007	0.007	0.006	0.007#	3
59)	T	Bromodichloromethane		0.378	0.460	0.496	0.505	0.510	0.457	0.468	11
60)	T	2-Chloroethyl Vinyl Ether			0.005	0.009	0.014	0.017	0.019	0.013#	46
61)	T	c-1,3-Dichloropropene	0.426	0.423	0.502	0.584	0.595	0.601	0.532	0.523	15
62)	S	Toluene-d8	1.331	1.316	1.327	1.358	1.317	1.292	1.277	1.317	2

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				Untitled							
63)	CCC	Toluene		1.822	1.841	1.879	1.785	1.689	1.351	1.728	11
64)	T	4-Methyl-2-Pentanone			0.175	0.194	0.189	0.189	0.181	0.186	4
65)	I	Chlorobenzene-d5			----------ISTD----------						
66)	T	t-1,3-Dichloropropene	0.320	0.344	0.415	0.463	0.515	0.547	0.501	0.444	20
67)	T	Ethyl Methacrylate			0.470	0.509	0.544	0.565	0.530	0.524	7
68)	T	1,1,2-Trichloroethane		0.289	0.338	0.342	0.329	0.323	0.283	0.317	8
69)	T	Tetrachloroethene		0.591	0.644	0.677	0.679	0.648	0.489	0.621	12
70)	T	1,3-Dichloropropane		0.630	0.642	0.657	0.650	0.631	0.563	0.629	5
71)	T	2-Hexanone			0.166	0.185	0.187	0.193	0.192	0.185	6
72)	T	Dibromochloromethane		0.218	0.278	0.297	0.336	0.362	0.334	0.304	17
73)	T	1,2-Dibromoethane		0.261	0.330	0.349	0.366	0.364	0.332	0.334	12
74)	P	Chlorobenzene		1.118	1.172	1.173	1.147	1.109	0.887	1.101	10
75)	T	1,1,1,2-Tetrachloroethane		0.209	0.261	0.284	0.311	0.327	0.289	0.280	15
76)	CCC	Ethylbenzene		2.180	2.115	2.136	2.076	1.988	1.506	2.000	13
77)	T	p/m-Xylene	1.769	1.731	1.720	1.676	1.599	1.525	1.137	1.594	14
78)	T	o-Xylene	1.702	1.679	1.792	1.798	1.719	1.645	1.260	1.656	11
79)	T	Styrene		1.199	1.297	1.292	1.251	1.205	0.934	1.196	11
80)	T	Isopropylbenzene		1.963	2.078	2.082	2.039	1.937	1.430	1.921	13
81)	S	1,4-Bromofluorobenzene	0.523	0.516	0.526	0.523	0.506	0.503	0.503	0.514	2
82)	T	1,2,3-Trichloropropane		0.113	0.148	0.157	0.152	0.148	0.133	0.142	11
83)	T	Bromobenzene		0.473	0.510	0.508	0.501	0.480	0.380	0.475	10
84)	T	n-Propylbenzene		2.485	2.487	2.495	2.406	2.300	1.636	2.301	15
85)	T	t-1,4-Dichloro-2-Butene		0.074	0.107	0.126	0.114	0.118	0.113	0.109	17
86)	T	2-Chlorotoluene		1.512	1.518	1.480	1.432	1.387	1.030	1.393	13
87)	T	1,3,5-Trimethylbenzene		1.561	1.703	1.714	1.643	1.585	1.134	1.557	14
88)	I	1,4-Dichlorobenzen...			----------ISTD----------						
89)	P	Bromoform		0.211	0.311	0.344	0.411	0.481	0.484	0.374	28
90)	P	1,1,2,2-Tetrachloroethane		0.852	0.899	0.951	0.924	0.945	0.909	0.913	4
91)	T	4-Chlorotoluene		3.268	3.409	3.410	3.246	3.183	2.351	3.144	13
92)	T	1,2,4-Trimethylbenzene		3.268	3.330	3.463	3.300	3.246	2.389	3.166	12
93)	T	tert-Butylbenzene		0.616	0.723	0.749	0.742	0.720	0.535	0.681	13
94)	T	p-Isopropyltoluene		3.413	3.616	3.700	3.625	3.518	2.477	3.392	14
95)	T	sec-Butylbenzene		3.957	4.349	4.518	4.429	4.341	3.123	4.120	13
96)	T	1,3-Dichlorobenzene		2.040	1.932	2.030	1.940	1.941	1.457	1.890	12
97)	T	1,4-Dichlorobenzene		1.995	1.908	1.884	1.857	1.867	1.393	1.817	12
98)	T	1,2-Dichlorobenzene		1.920	1.918	1.895	1.845	1.803	1.407	1.798	11
99)	T	n-Butylbenzene		3.011	3.401	3.631	3.617	3.499	2.323	3.247	16
100)	T	1,2-Dibromo-3-Chloropropane			0.156	0.200	0.211	0.229	0.229	0.205	15
101)	T	1,2,4-Trichlorobenzene		1.255	1.435	1.511	1.506	1.538	1.121	1.395	12
102)	T	Hexachloro-1,3-Butadiene		0.919	0.952	1.028	0.995	0.944	0.594	0.905	17
103)	T	Naphthalene			2.658	3.045	3.186	3.300	2.801	2.998	9
104)	T	1,2,3-Trichlorobenzene		1.221	1.366	1.444	1.431	1.462	1.089	1.335	11

(#) = Out of Range

131212.M Thu Dec 12 14:04:13 2013

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC009.D
Acq On : 12 Dec 2013 1:34 pm
Operator : 486
Sample : ICV V120913D/V120613B
Misc : V111513C
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 14:12:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Tert-Butyl Alcohol-d9	1.000	1.000	0.0	129	0.00
2	T	Ethanol	0.199	0.169	15.1	110	0.00
3	T	Tert-Butyl Alcohol (TBA)	1.348	1.368	-1.5	126	0.00
4	I	Pentafluorobenzene	1.000	1.000	0.0	105	0.00
5	T	Dichlorodifluoromethane	0.769	0.770	-0.1	102	0.00
6	P	Chloromethane	0.821	0.795	3.2	109	-0.03
7	CCC	Vinyl Chloride	0.729	0.701	3.8	102	0.00
8	T	Bromomethane	0.368	0.299	18.8	102	0.00
9	T	Chloroethane	0.356	0.362	-1.7	102	0.00
10	T	1,3-Butadiene	0.564	0.444	21.3#	78	0.00
11	T	Trichlorofluoromethane	0.855	0.832	2.7	101	0.00
12	T	Diethyl Ether	0.384	0.352	8.3	100	0.00
13	T	Acetone	0.070	0.074#	-5.7	115	0.00
14	T	Iodomethane	0.187	0.215	-15.0	90	0.00
15	CCC	1,1-Dichloroethene	0.838	0.802	4.3	97	0.00
16	T	1,1,2-Trichloro-1,2,2-Trifl	0.463	0.469	-1.3	100	0.00
17	T	Isopropanol	0.063	0.071#	-12.7	122	0.00
18	T	Carbon Disulfide	1.613	1.592	1.3	100	0.00
19	T	Acetonitrile	0.569	0.578	-1.6	98	0.00
20	T	Acrylonitrile	0.279	0.291	-4.3	103	0.00
21	T	Allyl Chloride	0.308	0.322	-4.5	99	0.00
22	T	Acrolein	0.121	0.167	-38.0#	140	0.00
23	T	Methylene Chloride	0.616	0.620	-0.6	101	0.00
24	T	t-1,2-Dichloroethene	0.574	0.610	-6.3	105	0.00
25	T	Isobutyl Alcohol	0.033	0.042#	-27.3#	137	0.00
26	T	Methyl-t-Butyl Ether (MTBE)	1.632	1.726	-5.8	108	0.00
27	T	Hexane	0.970	1.008	-3.9	103	0.00
28	P	1,1-Dichloroethane	1.116	1.103	1.2	99	0.00
29	T	Vinyl Acetate	0.081	0.103	-27.2#	130	0.00
30	T	Diisopropyl Ether (DIPE)	1.935	1.999	-3.3	104	0.00
31	T	Chloroprene	0.902	0.979	-8.5	108	0.00
32	T	Ethyl-t-Butyl Ether (ETBE)	1.678	1.800	-7.3	107	0.00
33	T	c-1,2-Dichloroethene	0.625	0.670	-7.2	106	0.00
34	T	2,2-Dichloropropane	0.677	0.727	-7.4	106	0.00
35	T	2-Butanone	0.327	0.366	-11.9	114	0.00
36	T	Propionitrile	0.114	0.130	-14.0	117	0.00
37	T	Methacrylonitrile	0.446	0.439	1.6	104	0.00
38	T	Bromochloromethane	0.343	0.343	0.0	101	0.00
39	T	Tetrahydrofuran	0.256	0.275	-7.4	110	0.00
40	CCC	Chloroform	1.014	1.031	-1.7	100	0.00
41	S	Dibromofluoromethane	0.411	0.425	-3.4	104	0.00
42	T	1,1,1-Trichloroethane	0.772	0.836	-8.3	106	0.00
43	T	Cyclohexane	0.897	0.937	-4.5	108	0.00
44	T	1,1-Dichloropropene	0.755	0.795	-5.3	102	0.00
45	T	Carbon Tetrachloride	0.501	0.558	-11.4	108	0.00
46	S	1,2-Dichloroethane-d4	0.569	0.578	-1.6	102	0.00
47	I	1,4-Difluorobenzene	1.000	1.000	0.0	103	0.00
48	T	Benzene	1.628	1.616	0.7	101	0.00
49	T	1,2-Dichloroethane	0.537	0.545	-1.5	101	0.00
50	T	Tert-Amyl-Methyl Ether (TAM	0.959	1.011	-5.4	108	0.00
51	T	Thiophene	0.820	0.852	-3.9	103	0.00
52	T	2,2,4-Trimethyl Pentane	1.742	1.762	-1.1	102	0.00

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Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC009.D
Acq On : 12 Dec 2013 1:34 pm
Operator : 486
Sample : ICV V120913D/V120613B
Misc : V111513C
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 14:12:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53	T	Trichloroethene	0.448	0.463	-3.3	99	0.00
54	T	2-Pentanone	0.029	0.032#	-10.3	112	0.00
55	CCC	1,2-Dichloropropane	0.430	0.439	-2.1	99	0.00
56	T	Dibromomethane	0.235	0.241	-2.6	101	0.00
57	T	Methyl Methacrylate	0.297	0.335	-12.8	111	0.00
58	T	1,4-Dioxane	0.007	0.008#	-14.3	116	0.00
59	T	Bromodichloromethane	0.468	0.499	-6.6	102	0.00
60	T	2-Chloroethyl Vinyl Ether	0.013	0.016#	-23.1#	120	0.00
61	T	c-1,3-Dichloropropene	0.523	0.625	-19.5	108	0.00
62	S	Toluene-d8	1.317	1.317	0.0	103	0.00
63	CCC	Toluene	1.728	1.755	-1.6	101	0.00
64	T	4-Methyl-2-Pentanone	0.186	0.203	-9.1	111	0.00
65	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00
66	T	t-1,3-Dichloropropene	0.444	0.510	-14.9	103	0.00
67	T	Ethyl Methacrylate	0.524	0.541	-3.2	103	0.00
68	T	1,1,2-Trichloroethane	0.317	0.326	-2.8	103	0.00
69	T	Tetrachloroethene	0.621	0.664	-6.9	102	0.00
70	T	1,3-Dichloropropane	0.629	0.638	-1.4	102	0.00
71	T	2-Hexanone	0.185	0.213	-15.1	118	0.00
72	T	Dibromochloromethane	0.304	0.347	-14.1	107	0.00
73	T	1,2-Dibromoethane	0.334	0.357	-6.9	101	0.00
74	P	Chlorobenzene	1.101	1.045	5.1	95	0.00
75	T	1,1,1,2-Tetrachloroethane	0.280	0.322	-15.0	107	0.00
76	CCC	Ethylbenzene	2.000	2.022	-1.1	101	0.00
77	T	p/m-Xylene	1.594	1.512	5.1	98	0.00
78	T	o-Xylene	1.656	1.601	3.3	97	0.00
79	T	Styrene	1.196	1.215	-1.6	101	0.00
80	T	Isopropylbenzene	1.921	1.855	3.4	94	0.00
81	S	1,4-Bromofluorobenzene	0.514	0.496	3.5	102	0.00
82	T	1,2,3-Trichloropropane	0.142	0.152	-7.0	104	0.00
83	T	Bromobenzene	0.475	0.474	0.2	98	0.00
84	T	n-Propylbenzene	2.301	2.152	6.5	93	0.00
85	T	t-1,4-Dichloro-2-Butene	0.109	0.084#	22.9#	77	0.00
86	T	2-Chlorotoluene	1.393	1.339	3.9	97	0.00
87	T	1,3,5-Trimethylbenzene	1.557	1.649	-5.9	104	0.00
88	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00
89	P	Bromoform	0.374	0.464	-24.1#	114	0.00
90	P	1,1,2,2-Tetrachloroethane	0.913	0.982	-7.6	108	0.00
91	T	4-Chlorotoluene	3.144	3.015	4.1	94	0.00
92	T	1,2,4-Trimethylbenzene	3.166	3.334	-5.3	103	0.00
93	T	tert-Butylbenzene	0.681	0.702	-3.1	96	0.00
94	T	p-Isopropyltoluene	3.392	3.364	0.8	94	0.00
95	T	sec-Butylbenzene	4.120	4.151	-0.8	95	0.00
96	T	1,3-Dichlorobenzene	1.890	1.794	5.1	94	0.00
97	T	1,4-Dichlorobenzene	1.817	1.840	-1.3	101	0.00
98	T	1,2-Dichlorobenzene	1.798	1.713	4.7	94	0.00
99	T	n-Butylbenzene	3.247	3.514	-8.2	99	0.00
100	T	1,2-Dibromo-3-Chloropropane	0.205	0.238	-16.1	114	0.00
101	T	1,2,4-Trichlorobenzene	1.395	1.500	-7.5	101	0.00
102	T	Hexachloro-1,3-Butadiene	0.905	0.976	-7.8	100	0.00
103	T	Naphthalene	2.998	3.441	-14.8	110	0.00
104	T	1,2,3-Trichlorobenzene	1.335	1.471	-10.2	104	0.00

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Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC009.D
Acq On : 12 Dec 2013 1:34 pm
Operator : 486
Sample : ICV V120913D/V120613B
Misc : V111513C
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 14:12:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)

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

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Calibration Plot Report

Method: C:\MSDCHEM\1\METHODS\131212.M
CalUpdate: Thu Dec 12 14:12:02 2013
Instrument: GCMS Z
Date: Thu Dec 12 15:54:08 2013

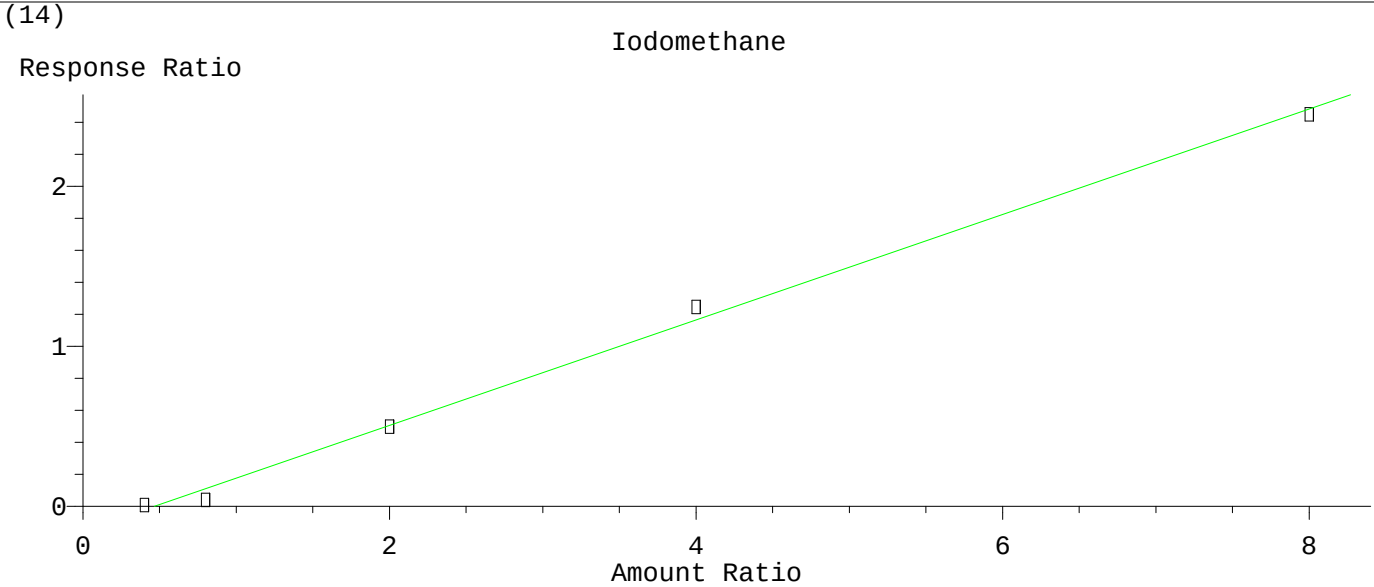
Level	Aqc Time	Data File
0.5	12 Dec 2013 10:15 am	W:\GCMS_Z_DATA\2013\131212\12DEC002.D
1	12 Dec 2013 10:42 am	W:\GCMS_Z_DATA\2013\131212\12DEC003.D
10	12 Dec 2013 11:10 am	W:\GCMS_Z_DATA\2013\131212\12DEC004.D
20	12 Dec 2013 11:37 am	W:\GCMS_Z_DATA\2013\131212\12DEC005.D
50	12 Dec 2013 12:05 pm	W:\GCMS_Z_DATA\2013\131212\12DEC006.D
100	12 Dec 2013 12:32 pm	W:\GCMS_Z_DATA\2013\131212\12DEC007.D
200	12 Dec 2013 1:00 pm	W:\GCMS_Z_DATA\2013\131212\12DEC008.D

Definitions
TC = Target Compound
IS = Internal Standard

R = 0.000000 A*A + 0.329697 A + -0.153807, r^2 = 0.996722

Level	ResponseTC	ResponseIS	AmountTC	AmountIS	ResponseRatio	AmountRatio
10	2904	363367	20.000	50.000	0.00799	0.40000
20	12956	330693	40.000	50.000	0.03918	0.80000
50	165616	332572	100.000	50.000	0.49799	2.00000
100	413109	331303	200.000	50.000	1.24692	4.00000
200	811054	331005	400.000	50.000	2.45028	8.00000

(14)



Resp Ratio = 3.30e-001 * Amt - 1.54e-001
Coef of Det (r^2) = 0.997 Curve Fit: Linear

Return to Contents

Calibration Plot Report

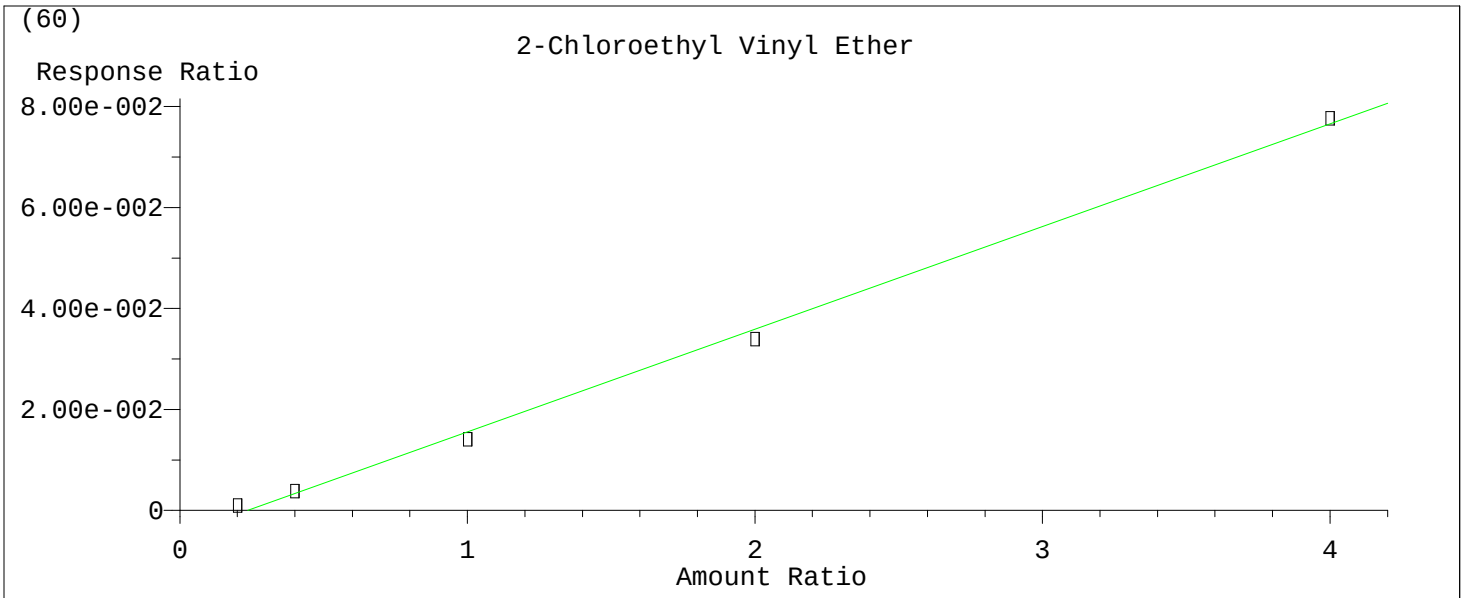
Method: C:\MSDCHEM\1\METHODS\131212.M
CalUpdate: Thu Dec 12 14:12:02 2013
Instrument: GCMS Z
Date: Thu Dec 12 15:54:25 2013

Level	Aqc Time	Data File
0.5	12 Dec 2013 10:15 am	W:\GCMS_Z_DATA\2013\131212\12DEC002.D
1	12 Dec 2013 10:42 am	W:\GCMS_Z_DATA\2013\131212\12DEC003.D
10	12 Dec 2013 11:10 am	W:\GCMS_Z_DATA\2013\131212\12DEC004.D
20	12 Dec 2013 11:37 am	W:\GCMS_Z_DATA\2013\131212\12DEC005.D
50	12 Dec 2013 12:05 pm	W:\GCMS_Z_DATA\2013\131212\12DEC006.D
100	12 Dec 2013 12:32 pm	W:\GCMS_Z_DATA\2013\131212\12DEC007.D
200	12 Dec 2013 1:00 pm	W:\GCMS_Z_DATA\2013\131212\12DEC008.D

Definitions
TC = Target Compound
IS = Internal Standard

R = 0.000000 A*A + 0.020325 A + -0.004815, r^2 = 0.997466

Level	ResponseTC	ResponseIS	AmountTC	AmountIS	ResponseRatio	AmountRatio
10	482	511371	10.000	50.000	0.00094	0.20000
20	1855	491311	20.000	50.000	0.00378	0.40000
50	7112	504912	50.000	50.000	0.01409	1.00000
100	17537	516857	100.000	50.000	0.03393	2.00000
200	40739	524548	200.000	50.000	0.07766	4.00000



Resp Ratio = 2.03e-002 * Amt - 4.81e-003
Coef of Det (r^2) = 0.997 Curve Fit: Linear

Return to Contents

Calibration Plot Report

Method: C:\MSDCHEM\1\METHODS\131212.M
CalUpdate: Thu Dec 12 14:12:02 2013
Instrument: GCMS Z
Date: Thu Dec 12 15:54:33 2013

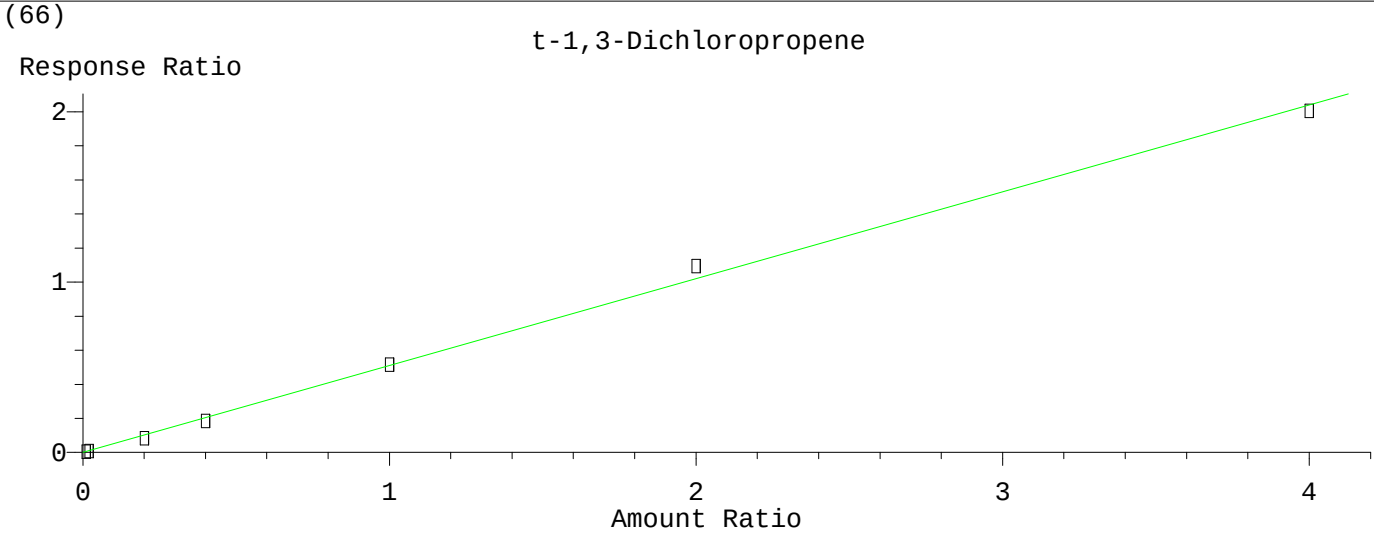
Level	Aqc Time	Data File
0.5	12 Dec 2013 10:15 am	W:\GCMS_Z_DATA\2013\131212\12DEC002.D
1	12 Dec 2013 10:42 am	W:\GCMS_Z_DATA\2013\131212\12DEC003.D
10	12 Dec 2013 11:10 am	W:\GCMS_Z_DATA\2013\131212\12DEC004.D
20	12 Dec 2013 11:37 am	W:\GCMS_Z_DATA\2013\131212\12DEC005.D
50	12 Dec 2013 12:05 pm	W:\GCMS_Z_DATA\2013\131212\12DEC006.D
100	12 Dec 2013 12:32 pm	W:\GCMS_Z_DATA\2013\131212\12DEC007.D
200	12 Dec 2013 1:00 pm	W:\GCMS_Z_DATA\2013\131212\12DEC008.D

Definitions
TC = Target Compound
IS = Internal Standard

R = 0.000000 A*A + 0.509986 A + 0.000037, r^2 = 0.997780

Level	ResponseTC	ResponseIS	AmountTC	AmountIS	ResponseRatio	AmountRatio
0.5	1521	474838	0.500	50.000	0.00320	0.01000
1	3306	480753	1.000	50.000	0.00688	0.02000
10	40021	481865	10.000	50.000	0.08305	0.20000
20	88650	479182	20.000	50.000	0.18500	0.40000
50	246655	479237	50.000	50.000	0.51468	1.00000
100	530822	485267	100.000	50.000	1.09388	2.00000
200	982394	490032	200.000	50.000	2.00475	4.00000

(66)



Resp Ratio = 5.10e-001 * Amt + 3.71e-005
Coef of Det (r^2) = 0.998 Curve Fit: Linear

Return to Contents

Calibration Plot Report

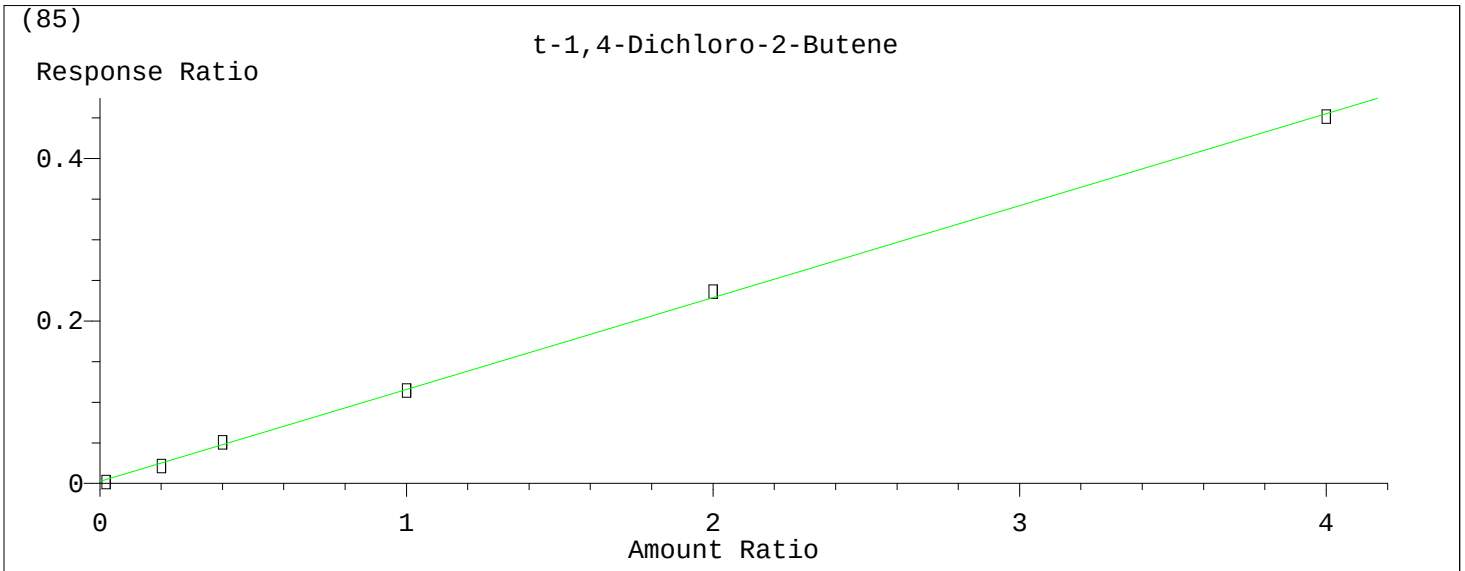
Method: C:\MSDCHEM\1\METHODS\131212.M
CalUpdate: Thu Dec 12 14:12:02 2013
Instrument: GCMS Z
Date: Thu Dec 12 15:54:42 2013

Level	Aqc Time	Data File
0.5	12 Dec 2013 10:15 am	W:\GCMS_Z_DATA\2013\131212\12DEC002.D
1	12 Dec 2013 10:42 am	W:\GCMS_Z_DATA\2013\131212\12DEC003.D
10	12 Dec 2013 11:10 am	W:\GCMS_Z_DATA\2013\131212\12DEC004.D
20	12 Dec 2013 11:37 am	W:\GCMS_Z_DATA\2013\131212\12DEC005.D
50	12 Dec 2013 12:05 pm	W:\GCMS_Z_DATA\2013\131212\12DEC006.D
100	12 Dec 2013 12:32 pm	W:\GCMS_Z_DATA\2013\131212\12DEC007.D
200	12 Dec 2013 1:00 pm	W:\GCMS_Z_DATA\2013\131212\12DEC008.D

Definitions
TC = Target Compound
IS = Internal Standard

R = 0.000000 A*A + 0.113271 A + 0.002024, r^2 = 0.999334

Level	ResponseTC	ResponseIS	AmountTC	AmountIS	ResponseRatio	AmountRatio
1	713	480753	1.000	50.000	0.00148	0.02000
10	10323	481865	10.000	50.000	0.02142	0.20000
20	24242	479182	20.000	50.000	0.05059	0.40000
50	54763	479237	50.000	50.000	0.11427	1.00000
100	114524	485267	100.000	50.000	0.23600	2.00000
200	221247	490032	200.000	50.000	0.45150	4.00000



Resp Ratio = 1.13e-001 * Amt + 2.02e-003
Coef of Det (r^2) = 0.999 Curve Fit: Linear

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC002.D
Acq On : 12 Dec 2013 10:15 am
Operator : 486
Sample : BFB/IC 0.5PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 13:54:30 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.206	65	124935	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	356341	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.554	114	499872	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	474838	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	13.999	152	249502	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.553	113	140197	47.83	ug/l	0.00
Spiked Amount 50.000			Recovery	=	95.66%	
46) 1,2-Dichloroethane-d4	6.983	65	189579	46.75	ug/l	0.00
Spiked Amount 50.000			Recovery	=	93.50%	
62) Toluene-d8	9.367	98	665194	50.52	ug/l	0.00
Spiked Amount 50.000			Recovery	=	101.04%	
81) 1,4-Bromofluorobenzene	12.568	95	248169	50.81	ug/l	0.00
Spiked Amount 50.000			Recovery	=	101.62%	
Target Compounds						Qvalue
2) Ethanol	3.003	45	457	4.59	ug/l #	1
3) Tert-Butyl Alcohol (TBA)	4.332	59	1200	1.78	ug/l #	68
5) Dichlorodifluoromethane	1.708	85	2622	0.48	ug/l	100
6) Chloromethane	1.882	50	4569	0.78	ug/l	85
7) Vinyl Chloride	2.007	62	2838	0.55	ug/l	86
8) Bromomethane	2.345	94	3334	1.27	ug/l	98
9) Chloroethane	2.470	64	1478	0.58	ug/l	56
10) 1,3-Butadiene	2.045	54	1754	0.44	ug/l #	76
11) Trichlorofluoromethane	2.753	101	2874	0.47	ug/l	90
12) Diethyl Ether	3.112	45	1938	0.71	ug/l #	63
13) Acetone	3.488	58	1619	3.23	ug/l #	34
14) Iodomethane	0.000		0	N.D.		
15) 1,1-Dichloroethene	3.390	61	3531	0.59	ug/l	86
16) 1,1,2-Trichloro-1,2,2-...	3.395	101	1587	0.48	ug/l	85
17) Isopropanol	3.733	45	2736	6.11	ug/l	88
18) Carbon Disulfide	3.673	76	6973	0.61	ug/l	78
19) Acetonitrile	3.891	41	4618	1.14	ug/l	83
20) Acrylonitrile	4.484	53	676	0.34	ug/l #	19
21) Allyl Chloride	3.902	76	925	0.42	ug/l #	7
22) Acrolein	3.276	56	484	0.56	ug/l #	32
23) Methylene Chloride	4.087	84	2585	0.59	ug/l	68
24) t-1,2-Dichloroethene	4.479	96	2091	0.51	ug/l	80
25) Isobutyl Alcohol	0.000		0	N.D.		
26) Methyl-t-Butyl Ether (...	4.517	73	5287	0.45	ug/l	98
27) Hexane	4.881	57	3370	0.49	ug/l	94
28) 1,1-Dichloroethane	5.105	63	3622	0.46	ug/l	79
29) Vinyl Acetate	0.000		0	N.D.		
30) Diisopropyl Ether (DIPE)	5.230	45	6141	0.45	ug/l	97
31) Chloroprene	5.219	53	2830	0.44	ug/l	88
32) Ethyl-t-Butyl Ether (E...	5.725	59	5217	0.44	ug/l	96
33) c-1,2-Dichloroethene	5.905	96	2116	0.48	ug/l	77
34) 2,2-Dichloropropane	5.894	77	2219	0.46	ug/l	52
35) 2-Butanone	5.970	43	901	0.39	ug/l	47
36) Propionitrile	0.000		0	N.D.		
37) Methacrylonitrile	6.242	41	996	0.31	ug/l #	45
38) Bromochloromethane	6.226	130	1042	0.43	ug/l	95
39) Tetrahydrofuran	6.280	42	145	N.D.		
40) Chloroform	6.335	83	3237	0.45	ug/l	80
42) 1,1,1-Trichloroethane	6.558	97	2193	0.40	ug/l	85
43) Cyclohexane	6.629	84	11665	1.82	ug/l #	60

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC002.D
Acq On : 12 Dec 2013 10:15 am
Operator : 486
Sample : BFB/IC 0.5PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 13:54:30 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

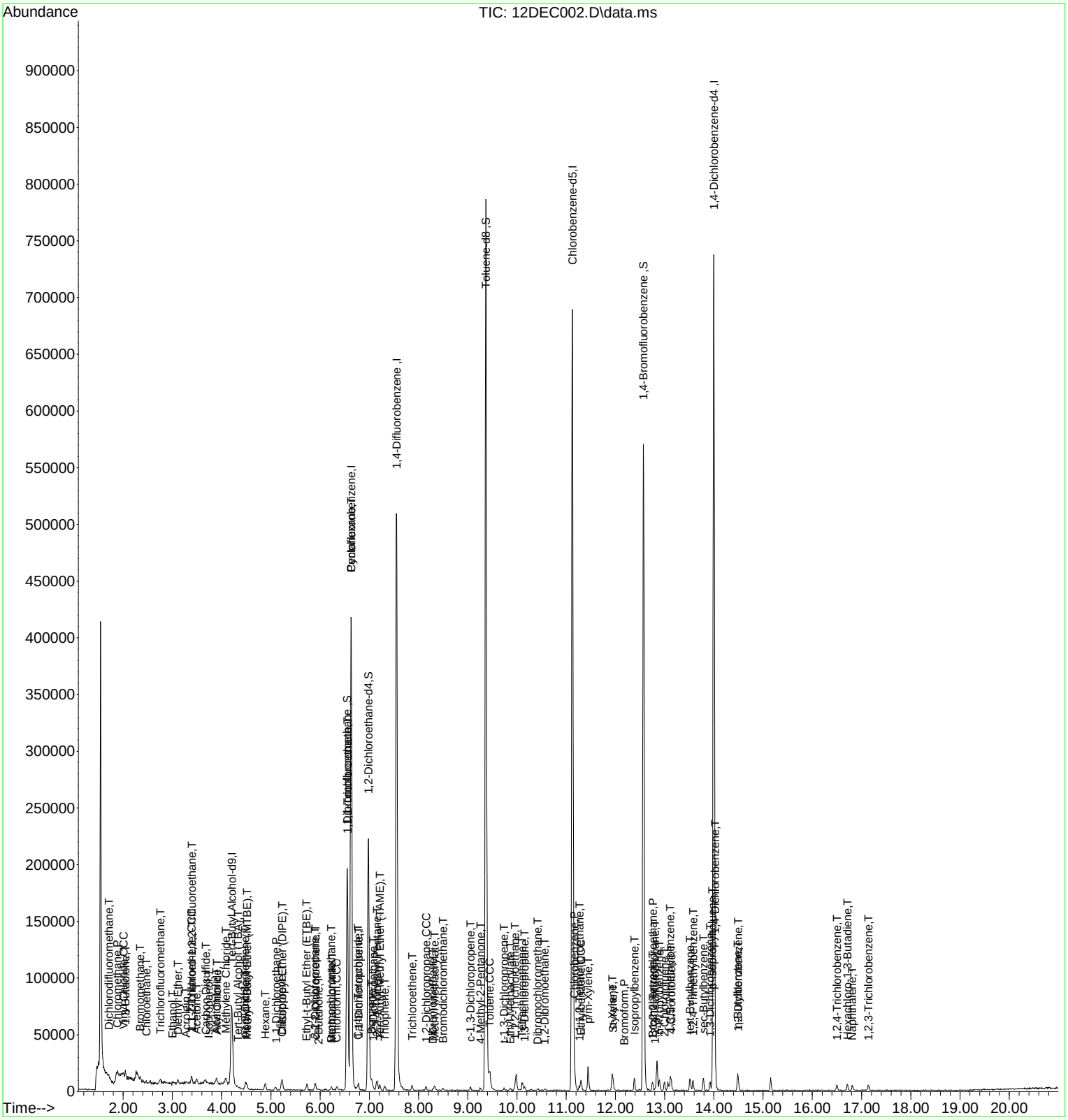
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,1-Dichloropropene	6.781	75	2996	0.56 ug/l	86
45) Carbon Tetrachloride	6.770	117	1738	0.49 ug/l	71
48) Benzene	7.048	78	8955	0.55 ug/l	89
49) 1,2-Dichloroethane	7.081	62	2476	0.46 ug/l	91
50) Tert-Amyl-Methyl Ether...	7.217	73	4834	0.50 ug/l	90
51) Thiophene	7.309	84	4422	0.54 ug/l	81
52) 2,2,4-Trimethyl Pentane	7.157	57	9900	0.57 ug/l	96
53) Trichloroethene	7.870	95	1834	0.41 ug/l	83
54) 2-Pentanone	0.000		0	N.D.	
55) 1,2-Dichloropropane	8.153	63	2060	0.48 ug/l	90
56) Dibromomethane	8.289	93	957	0.41 ug/l	85
57) Methyl Methacrylate	8.322	69	2032	0.68 ug/l	88
58) 1,4-Dioxane	0.000		0	N.D.	
59) Bromodichloromethane	8.496	83	1972	0.42 ug/l	95
60) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.	
61) c-1,3-Dichloropropene	9.057	75	2129	0.41 ug/l	81
63) Toluene	9.443	91	10790	0.62 ug/l	87
64) 4-Methyl-2-Pentanone	9.258	58	314	0.17 ug/l #	31
66) t-1,3-Dichloropropene	9.737	75	1521	0.36 ug/l #	39
67) Ethyl Methacrylate	9.862	69	1520	0.31 ug/l	57
68) 1,1,2-Trichloroethane	9.960	83	1024	0.34 ug/l #	34
69) Tetrachloroethene	10.102	166	2769	0.47 ug/l	84
70) 1,3-Dichloropropane	10.156	76	2665	0.45 ug/l #	43
71) 2-Hexanone	0.000		0	N.D.	
72) Dibromochloromethane	10.418	129	1161	0.40 ug/l	68
73) 1,2-Dibromoethane	10.559	107	1072	0.34 ug/l	95
74) Chlorobenzene	11.163	112	6375	0.61 ug/l	93
75) 1,1,1,2-Tetrachloroethane	11.267	131	1260	0.47 ug/l #	64
76) Ethylbenzene	11.299	91	9648	0.51 ug/l	98
77) p/m-Xylene	11.446	91	16797	1.11 ug/l	96
78) o-Xylene	11.936	91	8080	0.51 ug/l	96
79) Styrene	11.947	104	5827	0.51 ug/l	93
80) Isopropylbenzene	12.388	105	9408	0.52 ug/l	91
82) 1,2,3-Trichloropropane	12.802	110	142	0.11 ug/l #	1
83) Bromobenzene	12.753	156	2011	0.45 ug/l	83
84) n-Propylbenzene	12.894	91	11442	0.52 ug/l	93
85) t-1,4-Dichloro-2-Butene	0.000		0	N.D.	
86) 2-Chlorotoluene	12.998	91	6997	0.53 ug/l	96
87) 1,3,5-Trimethylbenzene	13.112	105	8173	0.55 ug/l	88
89) Bromoform	12.176	173	573	0.31 ug/l #	28
90) 1,1,2,2-Tetrachloroethane	12.758	83	2440	0.54 ug/l	68
91) 4-Chlorotoluene	13.134	91	8814	0.56 ug/l	99
92) 1,2,4-Trimethylbenzene	13.580	105	8141	0.52 ug/l	95
93) tert-Butylbenzene	13.515	134	1479	0.44 ug/l	95
94) p-Isopropyltoluene	13.967	119	8254	0.49 ug/l	84
95) sec-Butylbenzene	13.787	105	10499	0.51 ug/l	89
96) 1,3-Dichlorobenzene	13.929	146	5782	0.61 ug/l	82
97) 1,4-Dichlorobenzene	14.027	146	5767	0.64 ug/l	75
98) 1,2-Dichlorobenzene	14.495	146	4583	0.51 ug/l	89
99) n-Butylbenzene	14.484	91	8220	0.51 ug/l	84
100) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
101) 1,2,4-Trichlorobenzene	16.498	180	3341	0.48 ug/l	90
102) Hexachloro-1,3-Butadiene	16.710	225	2648	0.59 ug/l	90
103) Naphthalene	16.808	128	6241	0.42 ug/l	73
104) 1,2,3-Trichlorobenzene	17.140	180	3458	0.52 ug/l	93

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

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC002.D
Acq On : 12 Dec 2013 10:15 am
Operator : 486
Sample : BFB/IC 0.5PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 13:54:30 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration



Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC003.D
Acq On : 12 Dec 2013 10:42 am
Operator : 486
Sample : IC 1.0PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 12 13:54:34 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.212	65	103694	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	361621	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.549	114	509362	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	480753	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	248278	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.553	113	138990	46.73	ug/l	0.00
Spiked Amount 50.000			Recovery	=	93.46%	
46) 1,2-Dichloroethane-d4	6.977	65	193510	47.02	ug/l	0.00
Spiked Amount 50.000			Recovery	=	94.04%	
62) Toluene-d8	9.367	98	670361	49.97	ug/l	0.00
Spiked Amount 50.000			Recovery	=	99.94%	
81) 1,4-Bromofluorobenzene	12.568	95	248265	50.20	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.40%	
Target Compounds						Qvalue
2) Ethanol	3.014	45	1353	16.36	ug/l #	1
3) Tert-Butyl Alcohol (TBA)	4.343	59	2392	4.28	ug/l #	76
5) Dichlorodifluoromethane	1.702	85	4939	0.89	ug/l	79
6) Chloromethane	1.893	50	6932	1.17	ug/l	85
7) Vinyl Chloride	2.002	62	4799	0.91	ug/l	89
8) Bromomethane	2.329	94	6895	2.59	ug/l	81
9) Chloroethane	2.454	64	2402	0.93	ug/l	84
10) 1,3-Butadiene	2.040	54	3719	0.91	ug/l	99
11) Trichlorofluoromethane	2.748	101	6264	1.01	ug/l	95
12) Diethyl Ether	3.107	45	3237	1.17	ug/l #	72
13) Acetone	3.483	58	1427	2.81	ug/l #	76
14) Iodomethane	0.000		0	N.D.		
15) 1,1-Dichloroethene	3.379	61	6488	1.07	ug/l	95
16) 1,1,2-Trichloro-1,2,2-...	3.379	101	2967	0.89	ug/l	87
17) Isopropanol	3.711	45	5544	12.20	ug/l	88
18) Carbon Disulfide	3.657	76	12005	1.03	ug/l	89
19) Acetonitrile	3.885	41	8763	2.13	ug/l	68
20) Acrylonitrile	4.468	53	1365	0.68	ug/l #	76
21) Allyl Chloride	3.874	76	2014	0.91	ug/l #	42
22) Acrolein	3.281	56	1264	1.44	ug/l	96
23) Methylene Chloride	4.070	84	5689	1.28	ug/l	99
24) t-1,2-Dichloroethene	4.479	96	4066	0.98	ug/l	86
25) Isobutyl Alcohol	0.000		0	N.D.		
26) Methyl-t-Butyl Ether (...	4.500	73	10864	0.92	ug/l	94
27) Hexane	4.882	57	6682	0.95	ug/l	95
28) 1,1-Dichloroethane	5.094	63	7431	0.92	ug/l	91
29) Vinyl Acetate	5.224	86	114	0.19	ug/l #	1
30) Diisopropyl Ether (DIPE)	5.224	45	13487	0.96	ug/l	94
31) Chloroprene	5.214	53	5630	0.86	ug/l	91
32) Ethyl-t-Butyl Ether (E...	5.736	59	11207	0.92	ug/l	91
33) c-1,2-Dichloroethene	5.910	96	4071	0.90	ug/l	97
34) 2,2-Dichloropropane	5.883	77	4493	0.92	ug/l	95
35) 2-Butanone	5.981	43	2474	1.05	ug/l	47
36) Propionitrile	6.063	54	116	0.14	ug/l	65
37) Methacrylonitrile	6.242	41	2707	0.84	ug/l	87
38) Bromochloromethane	6.232	130	2284	0.92	ug/l	82
39) Tetrahydrofuran	6.302	42	1638	0.88	ug/l #	64
40) Chloroform	6.346	83	6827	0.93	ug/l	90
42) 1,1,1-Trichloroethane	6.558	97	4812	0.86	ug/l	91
43) Cyclohexane	6.618	84	15842	2.44	ug/l #	65

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Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC003.D
Acq On : 12 Dec 2013 10:42 am
Operator : 486
Sample : IC 1.0PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 12 13:54:34 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

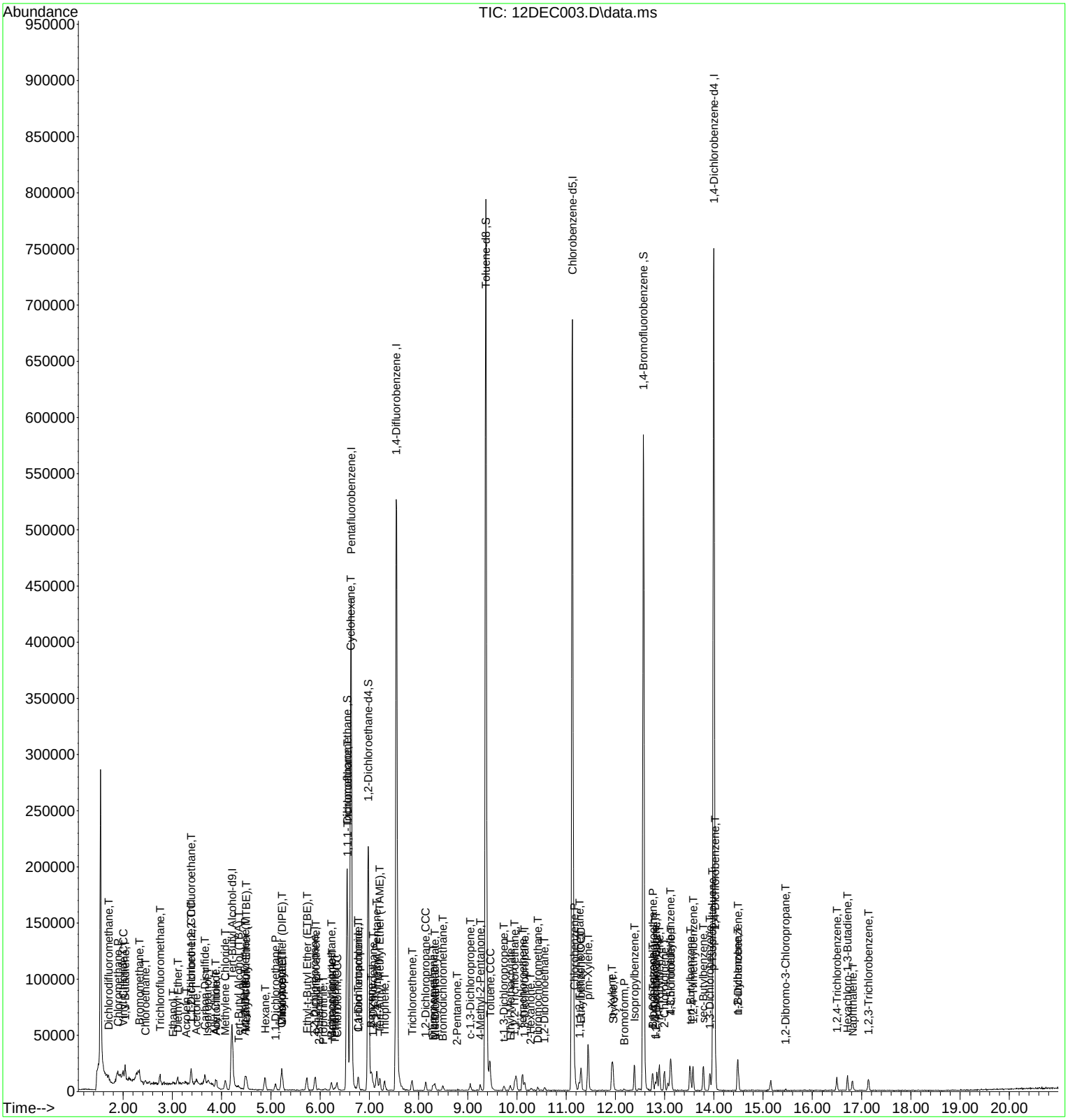
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,1-Dichloropropene	6.776	75	5082	0.93 ug/l	88
45) Carbon Tetrachloride	6.776	117	2867	0.79 ug/l	72
48) Benzene	7.037	78	16883	1.02 ug/l	95
49) 1,2-Dichloroethane	7.075	62	5406	0.99 ug/l	95
50) Tert-Amyl-Methyl Ether...	7.211	73	9858	1.01 ug/l	90
51) Thiophene	7.315	84	7820	0.94 ug/l	95
52) 2,2,4-Trimethyl Pentane	7.146	57	18350	1.03 ug/l	96
53) Trichloroethene	7.870	95	4359	0.95 ug/l	91
54) 2-Pentanone	8.779	43	122	0.42 ug/l #	1
55) 1,2-Dichloropropane	8.142	63	4032	0.92 ug/l	90
56) Dibromomethane	8.295	93	2119	0.88 ug/l #	79
57) Methyl Methacrylate	8.327	69	3574	1.18 ug/l	86
58) 1,4-Dioxane	8.333	88	122	1.79 ug/l #	13
59) Bromodichloromethane	8.491	83	3853	0.81 ug/l	79
60) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.	
61) c-1,3-Dichloropropene	9.051	75	4308	0.81 ug/l	93
63) Toluene	9.454	91	18566	1.05 ug/l	88
64) 4-Methyl-2-Pentanone	9.253	58	1141	0.60 ug/l #	47
66) t-1,3-Dichloropropene	9.732	75	3306	0.78 ug/l	84
67) Ethyl Methacrylate	9.868	69	3575	0.71 ug/l	97
68) 1,1,2-Trichloroethane	9.950	83	2782	0.91 ug/l	84
69) Tetrachloroethene	10.113	166	5682	0.95 ug/l	85
70) 1,3-Dichloropropane	10.151	76	6058	1.00 ug/l	85
71) 2-Hexanone	10.276	58	362	0.20 ug/l	91
72) Dibromochloromethane	10.423	129	2095	0.72 ug/l	81
73) 1,2-Dibromoethane	10.554	107	2511	0.78 ug/l #	68
74) Chlorobenzene	11.163	112	10745	1.02 ug/l	79
75) 1,1,1,2-Tetrachloroethane	11.267	131	2011	0.75 ug/l	82
76) Ethylbenzene	11.300	91	20963	1.09 ug/l	99
77) p/m-Xylene	11.447	91	33286	2.17 ug/l	98
78) o-Xylene	11.926	91	16141	1.01 ug/l	90
79) Styrene	11.953	104	11533	1.00 ug/l	96
80) Isopropylbenzene	12.388	105	18871	1.02 ug/l	87
82) 1,2,3-Trichloropropane	12.807	110	1088	0.80 ug/l #	71
83) Bromobenzene	12.753	156	4547	0.99 ug/l	92
84) n-Propylbenzene	12.895	91	23895	1.08 ug/l	98
85) t-1,4-Dichloro-2-Butene	12.829	53	713	0.68 ug/l #	31
86) 2-Chlorotoluene	12.992	91	14539	1.09 ug/l	88
87) 1,3,5-Trimethylbenzene	13.118	105	15006	1.00 ug/l	94
89) Bromoform	12.176	173	1049	0.56 ug/l #	28
90) 1,1,2,2-Tetrachloroethane	12.758	83	4231	0.93 ug/l	96
91) 4-Chlorotoluene	13.129	91	16226	1.04 ug/l	97
92) 1,2,4-Trimethylbenzene	13.580	105	16226	1.03 ug/l	89
93) tert-Butylbenzene	13.521	134	3059	0.91 ug/l #	56
94) p-Isopropyltoluene	13.967	119	16946	1.01 ug/l	96
95) sec-Butylbenzene	13.782	105	19647	0.96 ug/l	93
96) 1,3-Dichlorobenzene	13.918	146	10129	1.08 ug/l	96
97) 1,4-Dichlorobenzene	14.027	146	9907	1.10 ug/l	88
98) 1,2-Dichlorobenzene	14.489	146	9534	1.07 ug/l	98
99) n-Butylbenzene	14.484	91	14952	0.93 ug/l	89
100) 1,2-Dibromo-3-Chloropr...	15.453	75	111	0.11 ug/l #	7
101) 1,2,4-Trichlorobenzene	16.498	180	6234	0.90 ug/l	96
102) Hexachloro-1,3-Butadiene	16.710	225	4563	1.02 ug/l	92
103) Naphthalene	16.819	128	11658	0.78 ug/l	94
104) 1,2,3-Trichlorobenzene	17.140	180	6064	0.91 ug/l	94

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

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC003.D
Acq On : 12 Dec 2013 10:42 am
Operator : 486
Sample : IC 1.0PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 12 13:54:34 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration



Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC004.D
Acq On : 12 Dec 2013 11:10 am
Operator : 486
Sample : IC 10PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 13:57:14 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.207	65	102798	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	363367	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.554	114	511371	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	481865	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	246996	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.553	113	143169	47.90	ug/l	0.00
Spiked Amount 50.000			Recovery	=	95.80%	
46) 1,2-Dichloroethane-d4	6.977	65	195060	47.17	ug/l	0.00
Spiked Amount 50.000			Recovery	=	94.34%	
62) Toluene-d8	9.367	98	678837	50.40	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.80%	
81) 1,4-Bromofluorobenzene	12.573	95	253630	51.17	ug/l	0.00
Spiked Amount 50.000			Recovery	=	102.34%	
Target Compounds						Qvalue
2) Ethanol	3.009	45	9408	114.73	ug/l	94
3) Tert-Butyl Alcohol (TBA)	4.326	59	28341	51.21	ug/l	97
5) Dichlorodifluoromethane	1.708	85	57277	10.25	ug/l	97
6) Chloromethane	1.882	50	54408	9.12	ug/l	96
7) Vinyl Chloride	2.002	62	55465	10.47	ug/l	98
8) Bromomethane	2.350	94	38239	14.29	ug/l	95
9) Chloroethane	2.470	64	27226	10.52	ug/l	90
10) 1,3-Butadiene	2.040	54	39608	9.66	ug/l	99
11) Trichlorofluoromethane	2.753	101	63699	10.26	ug/l	92
12) Diethyl Ether	3.107	45	26133	9.36	ug/l	93
13) Acetone	3.477	58	5062	9.91	ug/l #	85
14) Iodomethane	3.597	142	2904	2.13	ug/l #	35
15) 1,1-Dichloroethene	3.385	61	58583	9.62	ug/l	90
16) 1,1,2-Trichloro-1,2,2-...	3.390	101	34123	10.14	ug/l	97
17) Isopropanol	3.722	45	23002	50.39	ug/l	100
18) Carbon Disulfide	3.657	76	114288	9.75	ug/l	99
19) Acetonitrile	3.891	41	82259	19.88	ug/l	99
20) Acrylonitrile	4.473	53	18647	9.25	ug/l	99
21) Allyl Chloride	3.902	76	22185	9.93	ug/l #	74
22) Acrolein	3.281	56	15980	18.18	ug/l	100
23) Methylene Chloride	4.076	84	43296	9.66	ug/l	94
24) t-1,2-Dichloroethene	4.484	96	40438	9.69	ug/l	93
25) Isobutyl Alcohol	7.015	43	3490	14.72	ug/l	78
26) Methyl-t-Butyl Ether (...	4.506	73	116899	9.85	ug/l	99
27) Hexane	4.882	57	67601	9.59	ug/l	99
28) 1,1-Dichloroethane	5.099	63	80620	9.94	ug/l	97
29) Vinyl Acetate	5.208	86	4594	7.78	ug/l #	67
30) Diisopropyl Ether (DIPE)	5.230	45	138631	9.86	ug/l	100
31) Chloroprene	5.214	53	63748	9.72	ug/l	93
32) Ethyl-t-Butyl Ether (E...	5.731	59	114189	9.36	ug/l	97
33) c-1,2-Dichloroethene	5.899	96	44238	9.74	ug/l	95
34) 2,2-Dichloropropane	5.894	77	45403	9.23	ug/l	93
35) 2-Butanone	5.959	43	19777	8.32	ug/l	94
36) Propionitrile	6.041	54	7041	8.46	ug/l	85
37) Methacrylonitrile	6.237	41	28064	8.66	ug/l	99
38) Bromochloromethane	6.226	130	25994	10.42	ug/l	96
39) Tetrahydrofuran	6.297	42	17703	9.51	ug/l	89
40) Chloroform	6.340	83	73387	9.96	ug/l	94
42) 1,1,1-Trichloroethane	6.564	97	52669	9.38	ug/l	97
43) Cyclohexane	6.623	84	68743	10.55	ug/l	96

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Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC004.D
Acq On : 12 Dec 2013 11:10 am
Operator : 486
Sample : IC 10PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 13:57:14 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44)	1,1-Dichloropropene	6.776	75	55543	10.12 ug/l	95
45)	Carbon Tetrachloride	6.776	117	32940	9.04 ug/l	96
48)	Benzene	7.048	78	169470	10.18 ug/l	96
49)	1,2-Dichloroethane	7.081	62	58742	10.70 ug/l	96
50)	Tert-Amyl-Methyl Ether...	7.217	73	99636	10.16 ug/l	96
51)	Thiophene	7.315	84	89338	10.66 ug/l	99
52)	2,2,4-Trimethyl Pentane	7.157	57	189261	10.62 ug/l	97
53)	Trichloroethene	7.865	95	47762	10.42 ug/l	95
54)	2-Pentanone	8.333	43	3063	10.38 ug/l #	89
55)	1,2-Dichloropropane	8.148	63	45227	10.30 ug/l	98
56)	Dibromomethane	8.295	93	25430	10.56 ug/l	90
57)	Methyl Methacrylate	8.327	69	28304	9.32 ug/l	96
58)	1,4-Dioxane	8.333	88	6827	99.71 ug/l	89
59)	Bromodichloromethane	8.496	83	47064	9.84 ug/l	98
60)	2-Chloroethyl Vinyl Ether	8.899	63	482m	3.71 ug/l	
61)	c-1,3-Dichloropropene	9.046	75	51366	9.60 ug/l	89
63)	Toluene	9.449	91	188267	10.65 ug/l	98
64)	4-Methyl-2-Pentanone	9.253	58	17946	9.45 ug/l	93
66)	t-1,3-Dichloropropene	9.726	75	40021	9.37 ug/l	96
67)	Ethyl Methacrylate	9.852	69	45319	8.98 ug/l	95
68)	1,1,2-Trichloroethane	9.950	83	32534	10.64 ug/l	95
69)	Tetrachloroethene	10.113	166	62110	10.37 ug/l	96
70)	1,3-Dichloropropane	10.151	76	61862	10.21 ug/l	95
71)	2-Hexanone	10.271	58	15983	8.99 ug/l	88
72)	Dibromochloromethane	10.423	129	26777	9.13 ug/l	86
73)	1,2-Dibromoethane	10.559	107	31825	9.90 ug/l	94
74)	Chlorobenzene	11.158	112	112992	10.65 ug/l	94
75)	1,1,1,2-Tetrachloroethane	11.261	131	25107	9.30 ug/l	87
76)	Ethylbenzene	11.300	91	203862	10.58 ug/l	100
77)	p/m-Xylene	11.441	91	331537	21.58 ug/l	100
78)	o-Xylene	11.931	91	172734	10.82 ug/l	96
79)	Styrene	11.947	104	125030	10.84 ug/l	98
80)	Isopropylbenzene	12.383	105	200233	10.81 ug/l	94
82)	1,2,3-Trichloropropane	12.807	110	14286	10.46 ug/l	96
83)	Bromobenzene	12.753	156	49141	10.72 ug/l	100
84)	n-Propylbenzene	12.894	91	239632	10.80 ug/l	96
85)	t-1,4-Dichloro-2-Butene	12.829	53	10323	9.84 ug/l	84
86)	2-Chlorotoluene	12.992	91	146263	10.90 ug/l	99
87)	1,3,5-Trimethylbenzene	13.112	105	164151	10.94 ug/l	96
89)	Bromoform	12.165	173	15381	8.33 ug/l	97
90)	1,1,2,2-Tetrachloroethane	12.758	83	44402	9.84 ug/l	97
91)	4-Chlorotoluene	13.129	91	168378	10.84 ug/l	98
92)	1,2,4-Trimethylbenzene	13.575	105	164518	10.52 ug/l	93
93)	tert-Butylbenzene	13.515	134	35726	10.63 ug/l	93
94)	p-Isopropyltoluene	13.967	119	178643	10.66 ug/l	97
95)	sec-Butylbenzene	13.787	105	214840	10.56 ug/l	99
96)	1,3-Dichlorobenzene	13.918	146	95419	10.22 ug/l	97
97)	1,4-Dichlorobenzene	14.032	146	94278	10.50 ug/l	96
98)	1,2-Dichlorobenzene	14.489	146	94730	10.67 ug/l	95
99)	n-Butylbenzene	14.479	91	168023	10.48 ug/l	97
100)	1,2-Dibromo-3-Chloropr...	15.464	75	7712	7.61 ug/l	99
101)	1,2,4-Trichlorobenzene	16.493	180	70903	10.29 ug/l	94
102)	Hexachloro-1,3-Butadiene	16.716	225	47048	10.52 ug/l	98
103)	Naphthalene	16.814	128	131302	8.87 ug/l	100
104)	1,2,3-Trichlorobenzene	17.140	180	67461	10.23 ug/l	98

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

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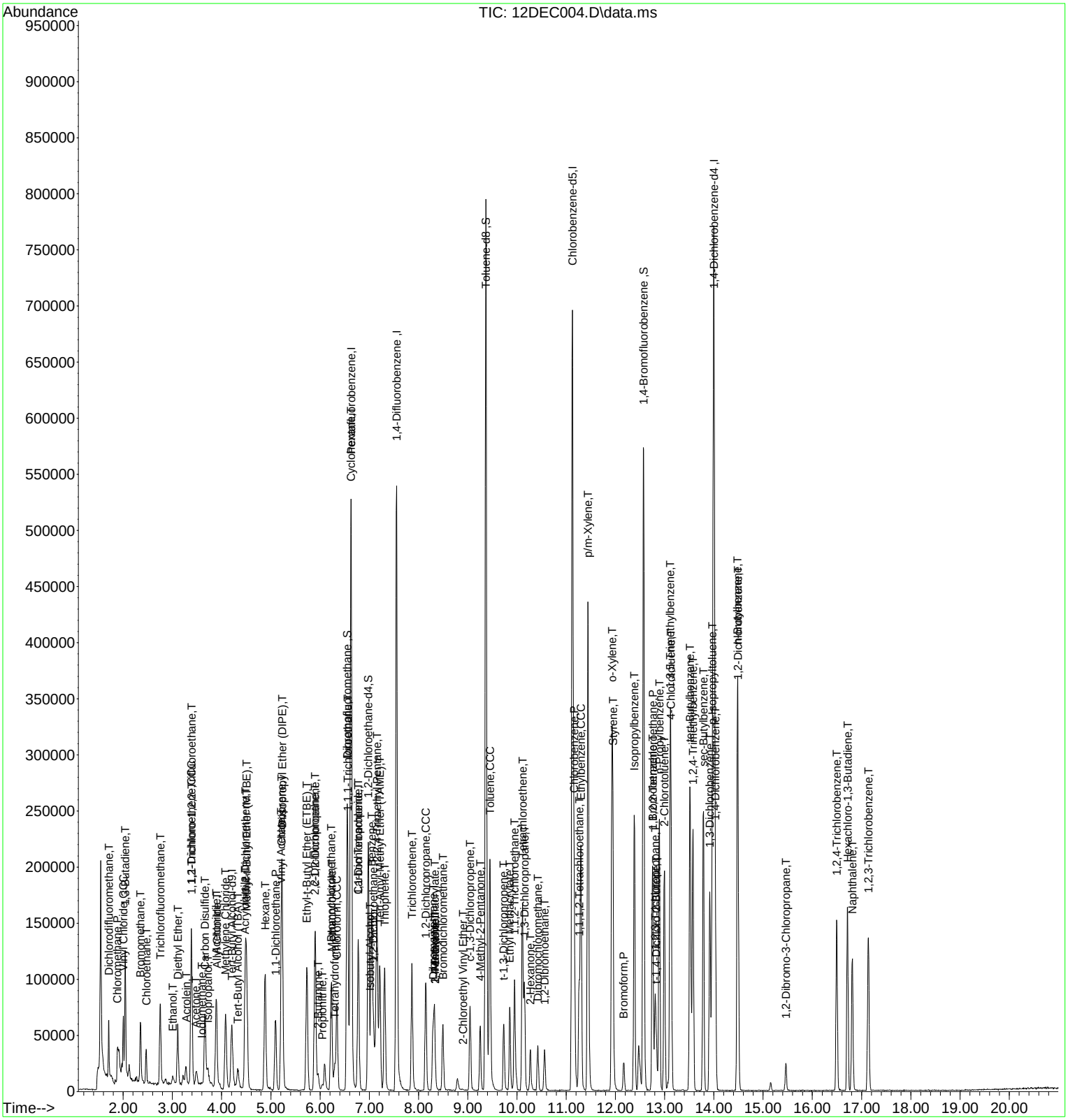
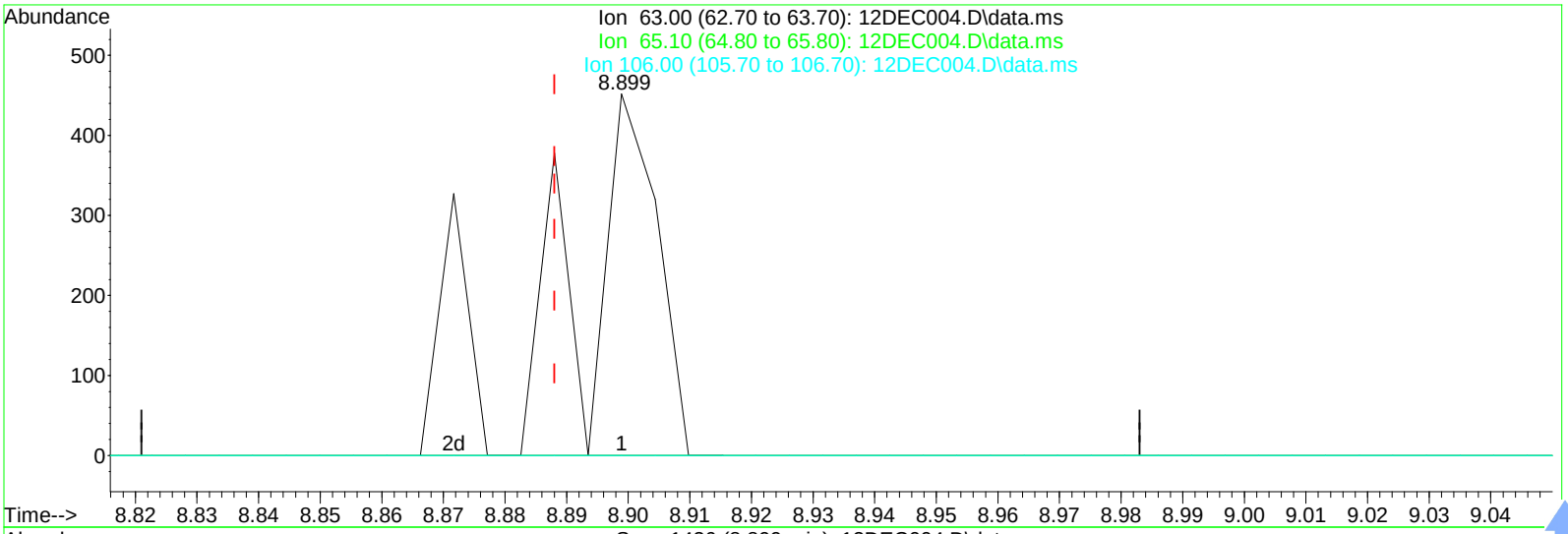
Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC004.D
Acq On : 12 Dec 2013 11:10 am
Operator : 486
Sample : IC 10PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 4 Sample Multiplier: 1

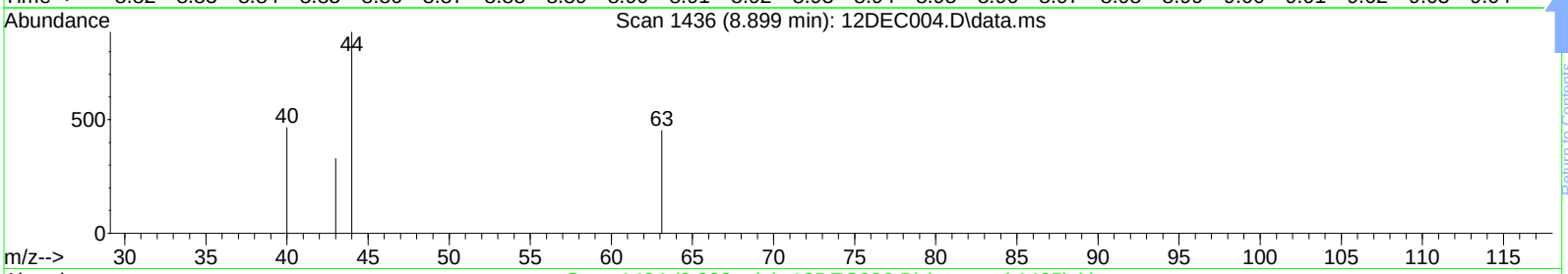
Quant Time: Dec 12 13:57:14 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

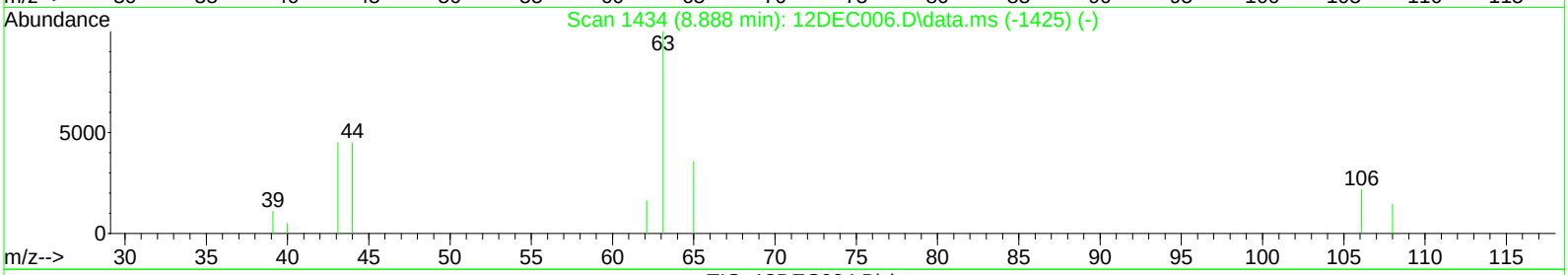


Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC004.D
Acq On : 12 Dec 2013 11:10 am
Operator : 486
Sample : IC 10PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 13:54:38 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration







TIC: 12DEC004.D\data.ms

(60) 2-Chloroethyl Vinyl Ether (T)

8.8989min (+0.0109) 3.7061 ug/l m

response 482

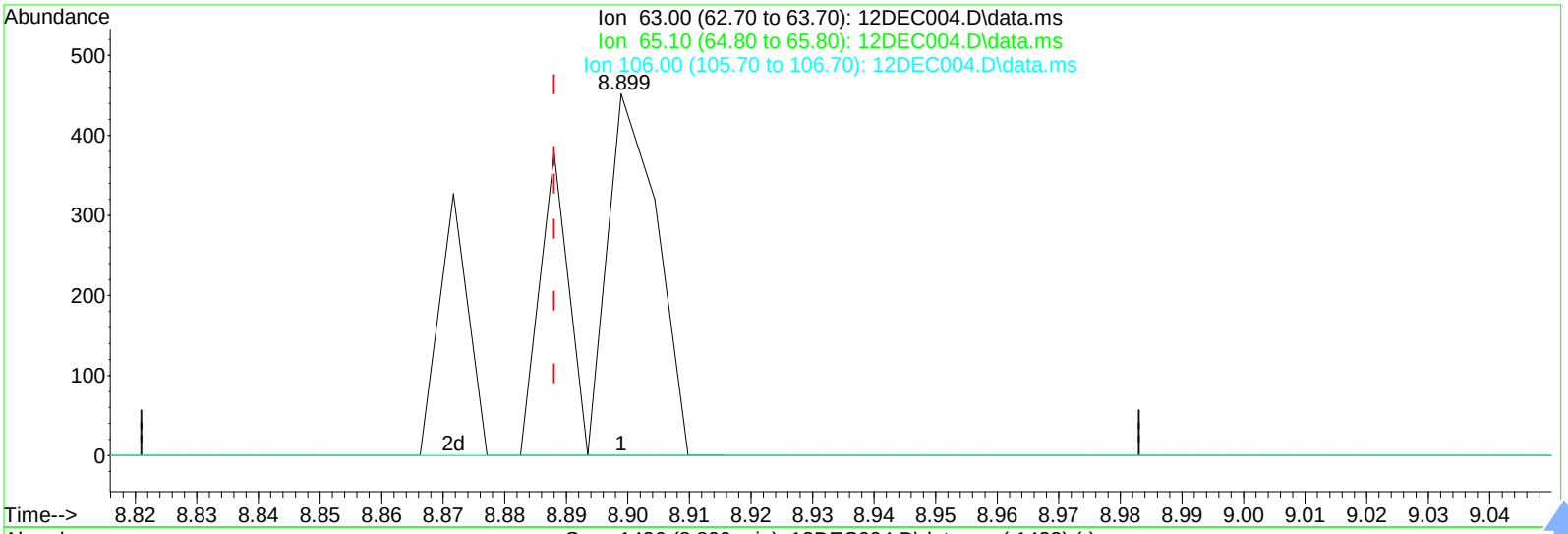
Ion	Exp%	Act%
63.0000	100	100
65.1000	35.8000	0.0000#
106.0000	21.5000	0.0000
0.0000	0.0000	0.0000

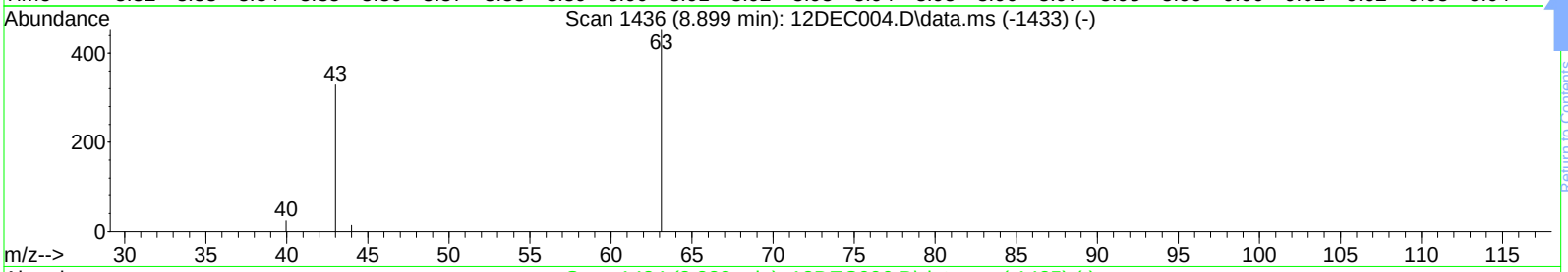
Manual Integration - After

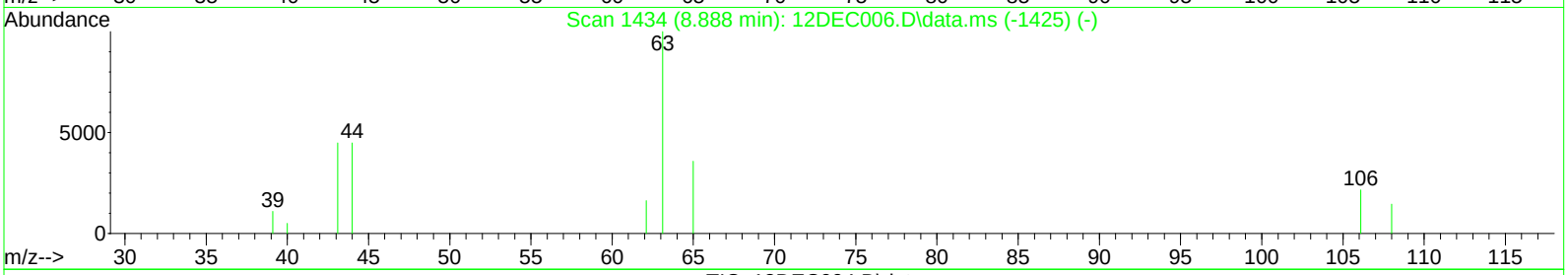
Manual Integration Reason: Baseline or Peak ID Correction

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC004.D
Acq On : 12 Dec 2013 11:10 am
Operator : 486
Sample : IC 10PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 13:54:38 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration







TIC: 12DEC004.D\data.ms

(60) 2-Chloroethyl Vinyl Ether (T)

8.8989min (+0.0109) 2.8910 ug/l

response 376

Ion	Exp%	Act%
63.0000	100	100
65.1000	35.8000	0.0000#
106.0000	21.5000	0.0000
0.0000	0.0000	0.0000

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC005.D
Acq On : 12 Dec 2013 11:37 am
Operator : 486
Sample : IC 20PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 12 13:54:42 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.206	65	107364	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	330693	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.554	114	491311	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	479182	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	13.999	152	239610	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.553	113	142489	52.38	ug/l	0.00
Spiked Amount 50.000			Recovery	=	104.76%	
46) 1,2-Dichloroethane-d4	6.983	65	196538	52.22	ug/l	0.00
Spiked Amount 50.000			Recovery	=	104.44%	
62) Toluene-d8	9.367	98	666972	51.54	ug/l	0.00
Spiked Amount 50.000			Recovery	=	103.08%	
81) 1,4-Bromofluorobenzene	12.568	95	250462	50.81	ug/l	0.00
Spiked Amount 50.000			Recovery	=	101.62%	
Target Compounds						Qvalue
2) Ethanol	3.014	45	18117	211.53	ug/l	92
3) Tert-Butyl Alcohol (TBA)	4.332	59	57995	100.34	ug/l	98
5) Dichlorodifluoromethane	1.702	85	107057	21.06	ug/l	98
6) Chloromethane	1.882	50	105314	19.39	ug/l	97
7) Vinyl Chloride	2.002	62	100218	20.79	ug/l	94
8) Bromomethane	2.345	94	72510	29.77	ug/l	99
9) Chloroethane	2.464	64	52348	22.23	ug/l	99
10) 1,3-Butadiene	2.040	54	80558	21.60	ug/l	98
11) Trichlorofluoromethane	2.753	101	119574	21.16	ug/l	94
12) Diethyl Ether	3.107	45	53005	20.86	ug/l	89
13) Acetone	3.482	58	11002	23.66	ug/l #	78
14) Iodomethane	3.580	142	12956	10.46	ug/l	97
15) 1,1-Dichloroethene	3.384	61	118548	21.40	ug/l	98
16) 1,1,2-Trichloro-1,2,2-...	3.384	101	67409	22.00	ug/l	98
17) Isopropanol	3.722	45	43540	104.81	ug/l	97
18) Carbon Disulfide	3.662	76	229798	21.54	ug/l	99
19) Acetonitrile	3.891	41	151162	40.15	ug/l	98
20) Acrylonitrile	4.473	53	39479	21.51	ug/l	94
21) Allyl Chloride	3.891	76	40722	20.02	ug/l #	86
22) Acrolein	3.270	56	33831	42.29	ug/l	95
23) Methylene Chloride	4.076	84	86476	21.21	ug/l	99
24) t-1,2-Dichloroethene	4.479	96	80941	21.31	ug/l	90
25) Isobutyl Alcohol	7.015	43	8117	37.62	ug/l #	76
26) Methyl-t-Butyl Ether (...	4.506	73	231341	21.42	ug/l	99
27) Hexane	4.876	57	138216	21.55	ug/l	99
28) 1,1-Dichloroethane	5.094	63	157163	21.29	ug/l	97
29) Vinyl Acetate	5.203	86	10609	19.74	ug/l #	88
30) Diisopropyl Ether (DIPE)	5.230	45	276088	21.58	ug/l	99
31) Chloroprene	5.219	53	128876	21.60	ug/l	92
32) Ethyl-t-Butyl Ether (E...	5.731	59	231465	20.86	ug/l	99
33) c-1,2-Dichloroethene	5.905	96	91134	22.05	ug/l	98
34) 2,2-Dichloropropane	5.894	77	93146	20.80	ug/l	97
35) 2-Butanone	5.959	43	44343	20.51	ug/l	97
36) Propionitrile	6.041	54	15427	20.36	ug/l	91
37) Methacrylonitrile	6.237	41	72646	24.63	ug/l	83
38) Bromochloromethane	6.226	130	50979	22.46	ug/l	93
39) Tetrahydrofuran	6.297	42	35460	20.92	ug/l	94
40) Chloroform	6.340	83	143678	21.42	ug/l	97
42) 1,1,1-Trichloroethane	6.563	97	107866	21.12	ug/l	96
43) Cyclohexane	6.618	84	128070	21.59	ug/l	99

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Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC005.D
Acq On : 12 Dec 2013 11:37 am
Operator : 486
Sample : IC 20PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 12 13:54:42 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

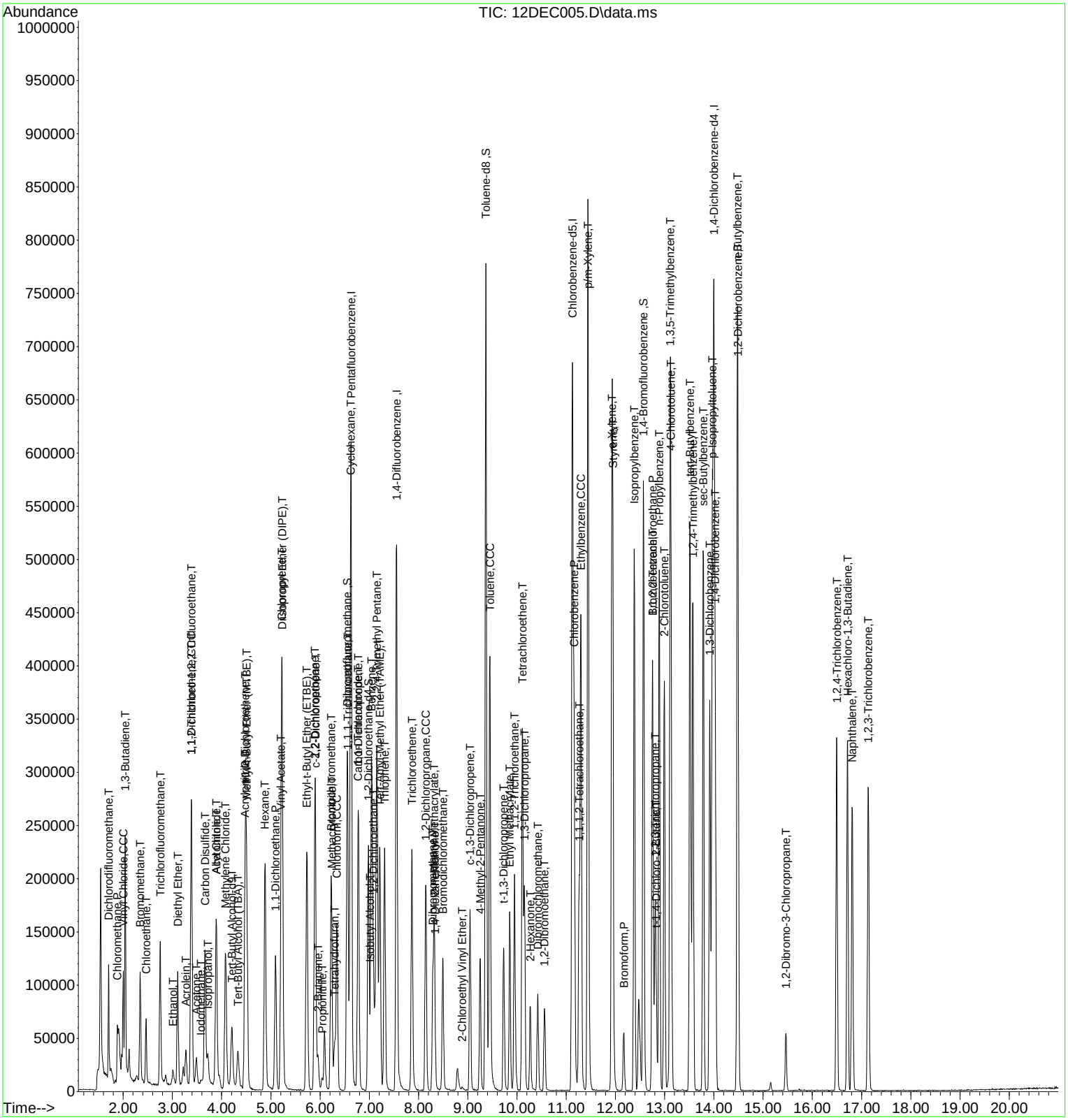
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,1-Dichloropropene	6.776	75	108272	21.68	ug/l	99
45)	Carbon Tetrachloride	6.770	117	66951	20.19	ug/l	92
48)	Benzene	7.043	78	338736	21.18	ug/l	99
49)	1,2-Dichloroethane	7.081	62	115650	21.93	ug/l	98
50)	Tert-Amyl-Methyl Ether...	7.217	73	197977	21.01	ug/l	96
51)	Thiophene	7.309	84	173817	21.58	ug/l	99
52)	2,2,4-Trimethyl Pentane	7.151	57	374065	21.84	ug/l	100
53)	Trichloroethene	7.864	95	98773	22.42	ug/l	98
54)	2-Pentanone	8.327	43	5929	20.91	ug/l	95
55)	1,2-Dichloropropane	8.148	63	91981	21.79	ug/l	99
56)	Dibromomethane	8.289	93	50179	21.69	ug/l	92
57)	Methyl Methacrylate	8.316	69	58670	20.11	ug/l	97
58)	1,4-Dioxane	8.333	88	13347	202.90	ug/l	98
59)	Bromodichloromethane	8.496	83	97568	21.23	ug/l	99
60)	2-Chloroethyl Vinyl Ether	8.882	63	1855	14.85	ug/l	83
61)	c-1,3-Dichloropropene	9.046	75	114773	22.33	ug/l	95
63)	Toluene	9.449	91	369213	21.75	ug/l	98
64)	4-Methyl-2-Pentanone	9.253	58	38162	20.92	ug/l	99
66)	t-1,3-Dichloropropene	9.726	75	88650	20.86	ug/l	94
67)	Ethyl Methacrylate	9.851	69	97487	19.43	ug/l	98
68)	1,1,2-Trichloroethane	9.949	83	65501	21.54	ug/l	95
69)	Tetrachloroethene	10.107	166	129737	21.79	ug/l	98
70)	1,3-Dichloropropane	10.151	76	125839	20.89	ug/l	99
71)	2-Hexanone	10.271	58	35370	20.00	ug/l	92
72)	Dibromochloromethane	10.423	129	56888	19.51	ug/l	90
73)	1,2-Dibromoethane	10.554	107	66898	20.92	ug/l	95
74)	Chlorobenzene	11.158	112	224877	21.31	ug/l	94
75)	1,1,1,2-Tetrachloroethane	11.261	131	54416	20.28	ug/l	97
76)	Ethylbenzene	11.299	91	409343	21.37	ug/l	99
77)	p/m-Xylene	11.441	91	642553	42.07	ug/l	100
78)	o-Xylene	11.925	91	344533	21.71	ug/l	98
79)	Styrene	11.947	104	247637	21.60	ug/l	99
80)	Isopropylbenzene	12.383	105	399082	21.67	ug/l	100
82)	1,2,3-Trichloropropane	12.807	110	30029	22.11	ug/l	88
83)	Bromobenzene	12.753	156	97406	21.38	ug/l	98
84)	n-Propylbenzene	12.889	91	478232	21.68	ug/l	99
85)	t-1,4-Dichloro-2-Butene	12.829	53	24242	23.25	ug/l	86
86)	2-Chlorotoluene	12.992	91	283678	21.25	ug/l	99
87)	1,3,5-Trimethylbenzene	13.112	105	328620	22.03	ug/l	98
89)	Bromoform	12.170	173	32997	18.41	ug/l	96
90)	1,1,2,2-Tetrachloroethane	12.753	83	91101	20.82	ug/l	92
91)	4-Chlorotoluene	13.128	91	326857	21.69	ug/l	100
92)	1,2,4-Trimethylbenzene	13.575	105	331911	21.88	ug/l	100
93)	tert-Butylbenzene	13.515	134	71790	22.02	ug/l	95
94)	p-Isopropyltoluene	13.967	119	354631	21.82	ug/l	99
95)	sec-Butylbenzene	13.782	105	433056	21.94	ug/l	100
96)	1,3-Dichlorobenzene	13.918	146	194579	21.48	ug/l	97
97)	1,4-Dichlorobenzene	14.027	146	180607	20.73	ug/l	97
98)	1,2-Dichlorobenzene	14.489	146	181669	21.08	ug/l	98
99)	n-Butylbenzene	14.478	91	348004	22.36	ug/l	97
100)	1,2-Dibromo-3-Chloropr...	15.464	75	19184	19.52	ug/l	89
101)	1,2,4-Trichlorobenzene	16.498	180	144821	21.67	ug/l	100
102)	Hexachloro-1,3-Butadiene	16.716	225	98504	22.70	ug/l	97
103)	Naphthalene	16.808	128	291824	20.31	ug/l	99
104)	1,2,3-Trichlorobenzene	17.135	180	138368	21.62	ug/l	100

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

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC005.D
Acq On : 12 Dec 2013 11:37 am
Operator : 486
Sample : IC 20PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 12 13:54:42 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration



Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC006.D
Acq On : 12 Dec 2013 12:05 pm
Operator : 486
Sample : IC 50PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 12 13:54:46 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.212	65	111582	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	332572	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.554	114	504912	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	479237	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	236416	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.547	113	141560	51.75	ug/l	0.00
Spiked Amount 50.000			Recovery	=	103.50%	
46) 1,2-Dichloroethane-d4	6.977	65	196535	51.93	ug/l	0.00
Spiked Amount 50.000			Recovery	=	103.86%	
62) Toluene-d8	9.367	98	665163	50.02	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.04%	
81) 1,4-Bromofluorobenzene	12.568	95	242690	49.23	ug/l	0.00
Spiked Amount 50.000			Recovery	=	98.46%	
Target Compounds						Qvalue
2) Ethanol	3.014	45	43975	494.04	ug/l	100
3) Tert-Butyl Alcohol (TBA)	4.337	59	155449	258.78	ug/l	100
5) Dichlorodifluoromethane	1.702	85	263147	51.46	ug/l	100
6) Chloromethane	1.909	50	253030	46.32	ug/l	100
7) Vinyl Chloride	2.002	62	239861	49.48	ug/l	100
8) Bromomethane	2.329	94	102225	41.73	ug/l	100
9) Chloroethane	2.454	64	123038	51.94	ug/l	100
10) 1,3-Butadiene	2.040	54	198574	52.93	ug/l	100
11) Trichlorofluoromethane	2.748	101	286788	50.46	ug/l	100
12) Diethyl Ether	3.107	45	122366	47.89	ug/l	100
13) Acetone	3.488	58	22441	47.98	ug/l	100
14) Iodomethane	3.575	142	165616	133.01	ug/l	100
15) 1,1-Dichloroethene	3.379	61	287329	51.58	ug/l	100
16) 1,1,2-Trichloro-1,2,2-...	3.385	101	162708	52.81	ug/l	100
17) Isopropanol	3.722	45	101831	243.75	ug/l	100
18) Carbon Disulfide	3.657	76	553292	51.58	ug/l	100
19) Acetonitrile	3.891	41	412176	108.85	ug/l	100
20) Acrylonitrile	4.468	53	98110	53.16	ug/l	100
21) Allyl Chloride	3.891	76	112978	55.23	ug/l	100
22) Acrolein	3.270	56	83474	103.75	ug/l	100
23) Methylene Chloride	4.076	84	214208	52.24	ug/l	100
24) t-1,2-Dichloroethene	4.479	96	202789	53.09	ug/l	100
25) Isobutyl Alcohol	7.010	43	21180	97.60	ug/l	100
26) Methyl-t-Butyl Ether (...	4.506	73	557851	51.36	ug/l	100
27) Hexane	4.882	57	340139	52.73	ug/l	100
28) 1,1-Dichloroethane	5.088	63	389413	52.46	ug/l	100
29) Vinyl Acetate	5.203	86	27767	51.39	ug/l	100
30) Diisopropyl Ether (DIPE)	5.230	45	665614	51.73	ug/l	100
31) Chloroprene	5.219	53	314418	52.40	ug/l	100
32) Ethyl-t-Butyl Ether (E...	5.731	59	585216	52.43	ug/l	100
33) c-1,2-Dichloroethene	5.899	96	220486	53.06	ug/l	100
34) 2,2-Dichloropropane	5.894	77	237427	52.72	ug/l	100
35) 2-Butanone	5.954	43	111869	51.44	ug/l	100
36) Propionitrile	6.036	54	38498	50.53	ug/l	100
37) Methacrylonitrile	6.232	41	146759	49.48	ug/l	100
38) Bromochloromethane	6.226	130	118398	51.86	ug/l	100
39) Tetrahydrofuran	6.291	42	86778	50.91	ug/l	100
40) Chloroform	6.340	83	357857	53.05	ug/l	100
42) 1,1,1-Trichloroethane	6.564	97	273843	53.30	ug/l	100
43) Cyclohexane	6.618	84	301104	50.47	ug/l	100

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC006.D
Acq On : 12 Dec 2013 12:05 pm
Operator : 486
Sample : IC 50PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 12 13:54:46 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

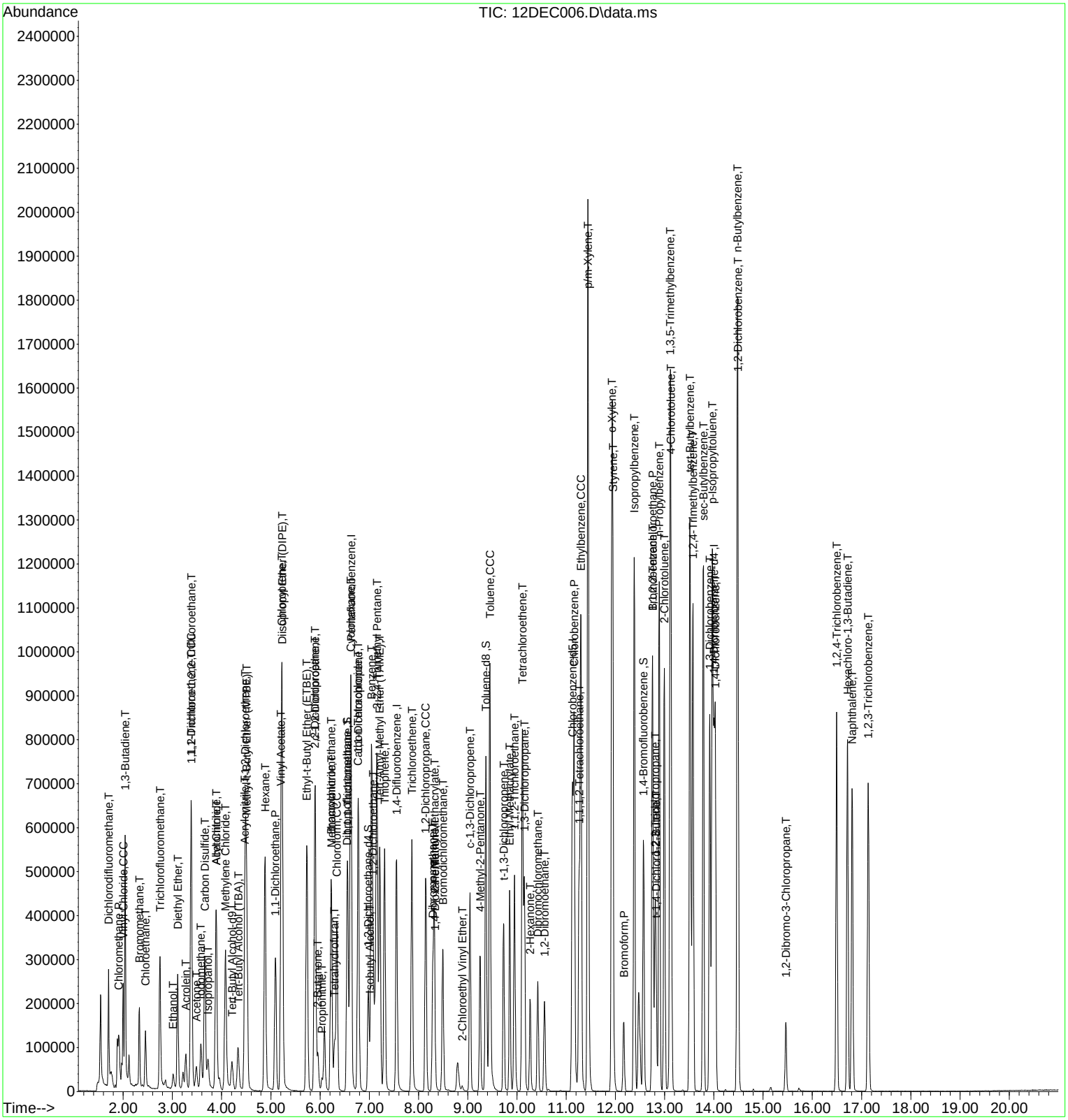
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44)	1,1-Dichloropropene	6.776	75	269607	53.67 ug/l	100
45)	Carbon Tetrachloride	6.770	117	179969	53.95 ug/l	100
48)	Benzene	7.043	78	835344	50.82 ug/l	100
49)	1,2-Dichloroethane	7.075	62	279614	51.58 ug/l	100
50)	Tert-Amyl-Methyl Ether...	7.211	73	488353	50.43 ug/l	100
51)	Thiophene	7.309	84	431135	52.09 ug/l	100
52)	2,2,4-Trimethyl Pentane	7.157	57	898594	51.05 ug/l	100
53)	Trichloroethene	7.865	95	242953	53.66 ug/l	100
54)	2-Pentanone	8.327	43	14888	51.09 ug/l	100
55)	1,2-Dichloropropane	8.142	63	229593	52.93 ug/l	100
56)	Dibromomethane	8.289	93	124818	52.49 ug/l	100
57)	Methyl Methacrylate	8.322	69	156778	52.29 ug/l	100
58)	1,4-Dioxane	8.333	88	34858	515.64 ug/l	100
59)	Bromodichloromethane	8.496	83	254762	53.95 ug/l	100
60)	2-Chloroethyl Vinyl Ether	8.888	63	7112	55.38 ug/l	100
61)	c-1,3-Dichloropropene	9.046	75	300241	56.83 ug/l	100
63)	Toluene	9.449	91	901142	51.65 ug/l	100
64)	4-Methyl-2-Pentanone	9.253	58	95193	50.78 ug/l	100
66)	t-1,3-Dichloropropene	9.732	75	246655	58.04 ug/l	100
67)	Ethyl Methacrylate	9.852	69	260830	51.97 ug/l	100
68)	1,1,2-Trichloroethane	9.950	83	157771	51.87 ug/l	100
69)	Tetrachloroethene	10.107	166	325335	54.62 ug/l	100
70)	1,3-Dichloropropane	10.151	76	311269	51.66 ug/l	100
71)	2-Hexanone	10.265	58	89709	50.72 ug/l	100
72)	Dibromochloromethane	10.423	129	161232	55.28 ug/l	100
73)	1,2-Dibromoethane	10.559	107	175205	54.78 ug/l	100
74)	Chlorobenzene	11.158	112	549564	52.08 ug/l	100
75)	1,1,1,2-Tetrachloroethane	11.261	131	148996	55.52 ug/l	100
76)	Ethylbenzene	11.300	91	994891	51.93 ug/l	100
77)	p/m-Xylene	11.441	91	1532659	100.33 ug/l	100
78)	o-Xylene	11.926	91	823713	51.89 ug/l	100
79)	Styrene	11.947	104	599403	52.27 ug/l	100
80)	Isopropylbenzene	12.383	105	977205	53.06 ug/l	100
82)	1,2,3-Trichloropropane	12.807	110	72660	53.49 ug/l	100
83)	Bromobenzene	12.753	156	240061	52.68 ug/l	100
84)	n-Propylbenzene	12.889	91	1153246	52.28 ug/l	100
85)	t-1,4-Dichloro-2-Butene	12.829	53	54763	52.51 ug/l	100
86)	2-Chlorotoluene	12.992	91	686134	51.39 ug/l	100
87)	1,3,5-Trimethylbenzene	13.112	105	787599	52.79 ug/l	100
89)	Bromoform	12.171	173	97153	54.95 ug/l	100
90)	1,1,2,2-Tetrachloroethane	12.753	83	218353	50.57 ug/l	100
91)	4-Chlorotoluene	13.129	91	767329	51.61 ug/l	100
92)	1,2,4-Trimethylbenzene	13.575	105	780070	52.11 ug/l	100
93)	tert-Butylbenzene	13.515	134	175439	54.53 ug/l	100
94)	p-Isopropyltoluene	13.967	119	857094	53.45 ug/l	100
95)	sec-Butylbenzene	13.787	105	1047111	53.76 ug/l	100
96)	1,3-Dichlorobenzene	13.918	146	458697	51.33 ug/l	100
97)	1,4-Dichlorobenzene	14.032	146	438925	51.05 ug/l	100
98)	1,2-Dichlorobenzene	14.489	146	436214	51.31 ug/l	100
99)	n-Butylbenzene	14.479	91	855078	55.70 ug/l	100
100)	1,2-Dibromo-3-Chloropr...	15.464	75	49871	51.44 ug/l	100
101)	1,2,4-Trichlorobenzene	16.493	180	356110	54.01 ug/l	100
102)	Hexachloro-1,3-Butadiene	16.716	225	235125	54.93 ug/l	100
103)	Naphthalene	16.808	128	753269	53.14 ug/l	100
104)	1,2,3-Trichlorobenzene	17.135	180	338239	53.57 ug/l	100

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

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC006.D
Acq On : 12 Dec 2013 12:05 pm
Operator : 486
Sample : IC 50PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 12 13:54:46 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC007.D
Acq On : 12 Dec 2013 12:32 pm
Operator : 486
Sample : IC 100/60PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 12 13:54:50 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.212	65	116807	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	331303	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.554	114	516857	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	485267	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	235324	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.547	113	139842	51.31	ug/l	0.00
Spiked Amount 50.000			Recovery	=	102.62%	
46) 1,2-Dichloroethane-d4	6.977	65	198864	52.74	ug/l	0.00
Spiked Amount 50.000			Recovery	=	105.48%	
62) Toluene-d8	9.367	98	667955	49.07	ug/l	0.00
Spiked Amount 50.000			Recovery	=	98.14%	
81) 1,4-Bromofluorobenzene	12.568	95	244273	48.93	ug/l	0.00
Spiked Amount 50.000			Recovery	=	97.86%	
Target Compounds						Qvalue
2) Ethanol	3.020	45	87953	943.91	ug/l	98
3) Tert-Butyl Alcohol (TBA)	4.337	59	328300	522.09	ug/l	99
5) Dichlorodifluoromethane	1.702	85	301689	59.22	ug/l	98
6) Chloromethane	1.909	50	316875	58.23	ug/l	98
7) Vinyl Chloride	2.002	62	275035	56.95	ug/l	99
8) Bromomethane	2.323	94	89117	36.52	ug/l	98
9) Chloroethane	2.443	64	140543	59.56	ug/l	98
10) 1,3-Butadiene	2.040	54	390899	104.60	ug/l	99
11) Trichlorofluoromethane	2.742	101	321975	56.87	ug/l	97
12) Diethyl Ether	3.107	45	250824	98.54	ug/l	98
13) Acetone	3.488	58	45606	97.89	ug/l	99
14) Iodomethane	3.575	142	413109	333.06	ug/l	94
15) 1,1-Dichloroethene	3.374	61	559001	100.73	ug/l	97
16) 1,1,2-Trichloro-1,2,2-...	3.379	101	317617	103.49	ug/l	99
17) Isopropanol	3.728	45	200097	480.81	ug/l	98
18) Carbon Disulfide	3.657	76	1083040	101.35	ug/l	98
19) Acetonitrile	3.885	41	780537	206.91	ug/l	99
20) Acrylonitrile	4.473	53	186962	101.69	ug/l	99
21) Allyl Chloride	3.891	76	218838	107.39	ug/l	97
22) Acrolein	3.270	56	164511	205.26	ug/l	96
23) Methylene Chloride	4.076	84	414222	101.41	ug/l	99
24) t-1,2-Dichloroethene	4.479	96	392409	103.13	ug/l	95
25) Isobutyl Alcohol	7.010	43	48712	225.33	ug/l	92
26) Methyl-t-Butyl Ether (...	4.506	73	1112296	102.80	ug/l	98
27) Hexane	4.882	57	678325	105.55	ug/l	98
28) 1,1-Dichloroethane	5.094	63	770581	104.20	ug/l	98
29) Vinyl Acetate	5.203	86	60188	111.81	ug/l #	83
30) Diisopropyl Ether (DIPE)	5.230	45	1313371	102.45	ug/l	99
31) Chloroprene	5.214	53	612700	102.50	ug/l	96
32) Ethyl-t-Butyl Ether (E...	5.731	59	1181155	106.23	ug/l	100
33) c-1,2-Dichloroethene	5.899	96	435053	105.09	ug/l	99
34) 2,2-Dichloropropane	5.894	77	482262	107.50	ug/l	100
35) 2-Butanone	5.954	43	230708	106.50	ug/l	91
36) Propionitrile	6.041	54	80476	106.03	ug/l	93
37) Methacrylonitrile	6.232	41	293069	99.19	ug/l	99
38) Bromochloromethane	6.221	130	228171	100.33	ug/l	100
39) Tetrahydrofuran	6.297	42	170119	100.20	ug/l	97
40) Chloroform	6.340	83	689598	102.63	ug/l	98
42) 1,1,1-Trichloroethane	6.558	97	557210	108.88	ug/l	99
43) Cyclohexane	6.618	84	599041	100.80	ug/l	96

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC007.D
Acq On : 12 Dec 2013 12:32 pm
Operator : 486
Sample : IC 100/60PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 12 13:54:50 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

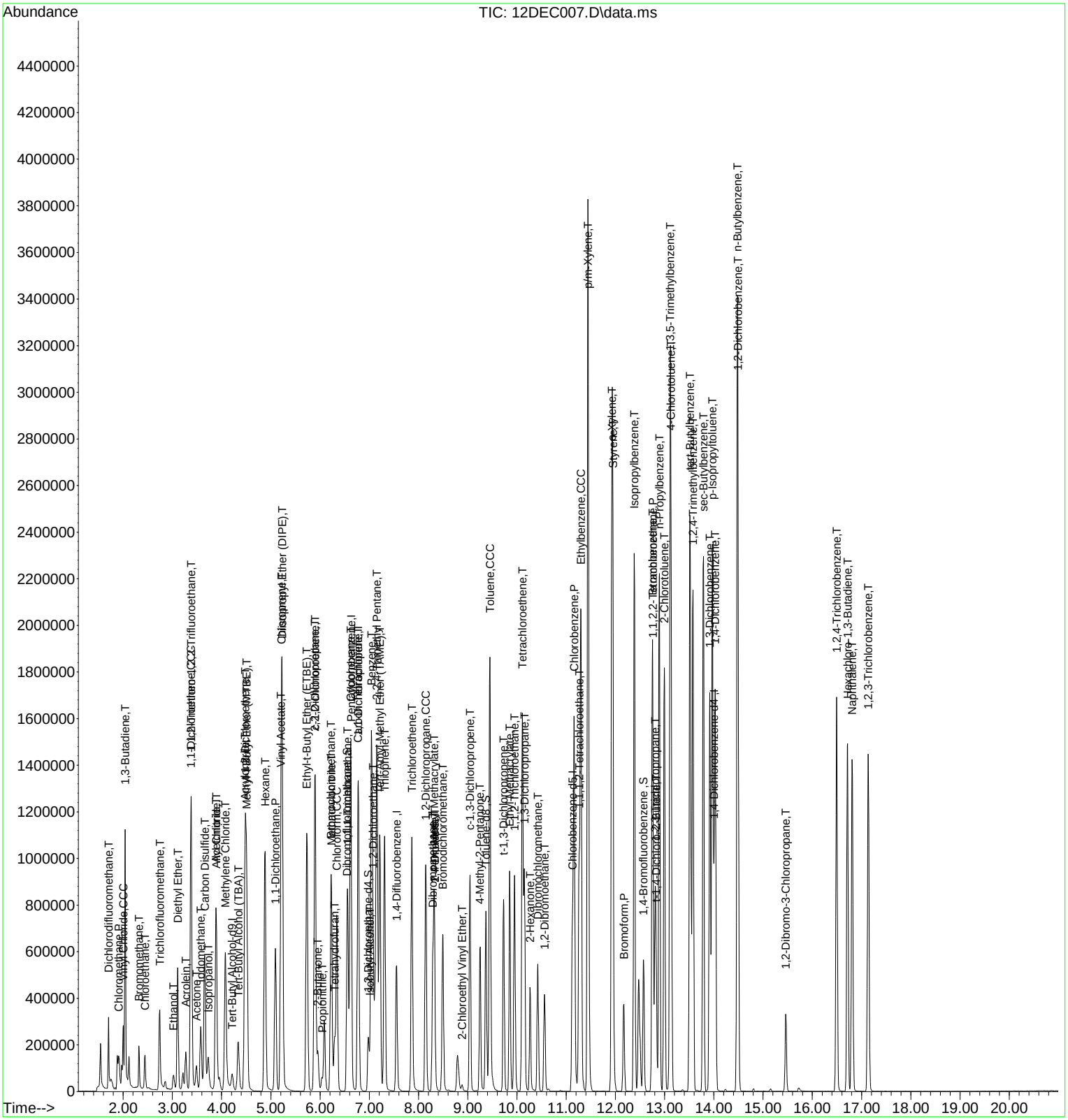
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,1-Dichloropropene	6.776	75	519660	103.84 ug/l	96
45) Carbon Tetrachloride	6.770	117	388050	116.78 ug/l	96
48) Benzene	7.043	78	1635764	97.22 ug/l	98
49) 1,2-Dichloroethane	7.075	62	556206	100.24 ug/l	98
50) Tert-Amyl-Methyl Ether...	7.217	73	988844	99.76 ug/l	99
51) Thiophene	7.309	84	851075	100.45 ug/l	99
52) 2,2,4-Trimethyl Pentane	7.152	57	1738307	96.47 ug/l	97
53) Trichloroethene	7.865	95	465687	100.47 ug/l	96
54) 2-Pentanone	8.327	43	29109	97.59 ug/l	94
55) 1,2-Dichloropropane	8.148	63	448895	101.10 ug/l	100
56) Dibromomethane	8.289	93	249287	102.42 ug/l	95
57) Methyl Methacrylate	8.316	69	318321	103.71 ug/l	94
58) 1,4-Dioxane	8.327	88	69182	999.72 ug/l	98
59) Bromodichloromethane	8.491	83	526784	108.98 ug/l	99
60) 2-Chloroethyl Vinyl Ether	8.883	63	17537	133.41 ug/l	87
61) c-1,3-Dichloropropene	9.046	75	621043	114.84 ug/l	96
63) Toluene	9.449	91	1746108	97.76 ug/l	99
64) 4-Methyl-2-Pentanone	9.247	58	194957	101.60 ug/l	97
66) t-1,3-Dichloropropene	9.726	75	530822	123.36 ug/l	98
67) Ethyl Methacrylate	9.852	69	548408	107.91 ug/l	100
68) 1,1,2-Trichloroethane	9.950	83	313406	101.76 ug/l	97
69) Tetrachloroethene	10.107	166	629028	104.30 ug/l	98
70) 1,3-Dichloropropane	10.151	76	612530	100.39 ug/l	99
71) 2-Hexanone	10.265	58	186949	104.39 ug/l	94
72) Dibromochloromethane	10.423	129	351644	119.07 ug/l	97
73) 1,2-Dibromoethane	10.559	107	353689	109.22 ug/l	97
74) Chlorobenzene	11.158	112	1076324	100.73 ug/l	99
75) 1,1,1,2-Tetrachloroethane	11.261	131	317238	116.73 ug/l	98
76) Ethylbenzene	11.300	91	1929316	99.45 ug/l	99
77) p/m-Xylene	11.441	91	2959961	191.35 ug/l	99
78) o-Xylene	11.926	91	1596404	99.31 ug/l	99
79) Styrene	11.947	104	1169382	100.71 ug/l	100
80) Isopropylbenzene	12.383	105	1879909	100.81 ug/l	99
82) 1,2,3-Trichloropropane	12.807	110	143234	104.13 ug/l	86
83) Bromobenzene	12.753	156	466291	101.05 ug/l	100
84) n-Propylbenzene	12.895	91	2231924	99.92 ug/l	98
85) t-1,4-Dichloro-2-Butene	12.829	53	114524	108.44 ug/l	98
86) 2-Chlorotoluene	12.992	91	1345927	99.55 ug/l	99
87) 1,3,5-Trimethylbenzene	13.112	105	1537832	101.79 ug/l	97
89) Bromoform	12.171	173	226521	128.71 ug/l	96
90) 1,1,2,2-Tetrachloroethane	12.758	83	444679	103.47 ug/l	100
91) 4-Chlorotoluene	13.129	91	1498123	101.23 ug/l	100
92) 1,2,4-Trimethylbenzene	13.575	105	1527639	102.53 ug/l	98
93) tert-Butylbenzene	13.515	134	338695	105.77 ug/l	98
94) p-Isopropyltoluene	13.967	119	1655628	103.72 ug/l	98
95) sec-Butylbenzene	13.787	105	2043274	105.38 ug/l	99
96) 1,3-Dichlorobenzene	13.918	146	913480	102.70 ug/l	99
97) 1,4-Dichlorobenzene	14.027	146	878709	102.68 ug/l	98
98) 1,2-Dichlorobenzene	14.489	146	848346	100.25 ug/l	99
99) n-Butylbenzene	14.479	91	1646732	107.76 ug/l	98
100) 1,2-Dibromo-3-Chloropr...	15.458	75	107864	111.76 ug/l	99
101) 1,2,4-Trichlorobenzene	16.493	180	723834	110.28 ug/l	99
102) Hexachloro-1,3-Butadiene	16.716	225	444512	104.32 ug/l	100
103) Naphthalene	16.808	128	1553126	110.08 ug/l	100
104) 1,2,3-Trichlorobenzene	17.135	180	688232	109.50 ug/l	100

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

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC007.D
Acq On : 12 Dec 2013 12:32 pm
Operator : 486
Sample : IC 100/60PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 12 13:54:50 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration



Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC008.D
Acq On : 12 Dec 2013 1:00 pm
Operator : 486
Sample : IC 200/80PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 12 13:54:54 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.223	65	121058	250.00	ug/l	0.01
4) Pentafluorobenzene	6.629	168	331005	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.549	114	524548	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	490032	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	233165	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.547	113	141867	52.10	ug/l	0.00
Spiked Amount 50.000			Recovery	=	104.20%	
46) 1,2-Dichloroethane-d4	6.977	65	196487	52.16	ug/l	0.00
Spiked Amount 50.000			Recovery	=	104.32%	
62) Toluene-d8	9.367	98	669735	48.48	ug/l	0.00
Spiked Amount 50.000			Recovery	=	96.96%	
81) 1,4-Bromofluorobenzene	12.568	95	246286	48.86	ug/l	0.00
Spiked Amount 50.000			Recovery	=	97.72%	
Target Compounds						Qvalue
2) Ethanol	3.042	45	163218	1690.14	ug/l	98
3) Tert-Butyl Alcohol (TBA)	4.343	59	680659	1044.43	ug/l	97
5) Dichlorodifluoromethane	1.697	85	414254	81.40	ug/l	100
6) Chloromethane	1.877	50	458842	84.40	ug/l	100
7) Vinyl Chloride	2.002	62	375111	77.75	ug/l	99
8) Bromomethane	2.312	94	124815	51.19	ug/l	99
9) Chloroethane	2.421	64	164571	69.81	ug/l	98
10) 1,3-Butadiene	2.040	54	700181	187.52	ug/l	97
11) Trichlorofluoromethane	2.726	101	428086	75.67	ug/l	99
12) Diethyl Ether	3.102	45	464233	182.54	ug/l	98
13) Acetone	3.488	58	82648	177.56	ug/l	95
14) Iodomethane	3.564	142	811054	654.48	ug/l	96
15) 1,1-Dichloroethene	3.368	61	951007	171.52	ug/l	98
16) 1,1,2-Trichloro-1,2,2-...	3.374	101	557549	181.83	ug/l	100
17) Isopropanol	3.738	45	418844	1007.34	ug/l	99
18) Carbon Disulfide	3.646	76	1865018	174.68	ug/l	100
19) Acetonitrile	3.880	41	1327220	352.15	ug/l	96
20) Acrylonitrile	4.468	53	348028	189.46	ug/l	98
21) Allyl Chloride	3.880	76	375558	184.47	ug/l	99
22) Acrolein	3.270	56	310724	388.03	ug/l	94
23) Methylene Chloride	4.071	84	746115	182.83	ug/l	97
24) t-1,2-Dichloroethene	4.473	96	679050	178.63	ug/l	94
25) Isobutyl Alcohol	7.010	43	105480	488.37	ug/l	93
26) Methyl-t-Butyl Ether (...	4.506	73	2090339	193.37	ug/l	96
27) Hexane	4.876	57	1156792	180.17	ug/l	97
28) 1,1-Dichloroethane	5.088	63	1373536	185.91	ug/l	96
29) Vinyl Acetate	5.197	86	117112	217.76	ug/l #	59
30) Diisopropyl Ether (DIPE)	5.230	45	2337616	182.52	ug/l	98
31) Chloroprene	5.214	53	1045262	175.01	ug/l	95
32) Ethyl-t-Butyl Ether (E...	5.731	59	2191690	197.29	ug/l	100
33) c-1,2-Dichloroethene	5.900	96	752714	181.99	ug/l	99
34) 2,2-Dichloropropane	5.889	77	887661	198.04	ug/l	100
35) 2-Butanone	5.954	43	453818	209.68	ug/l	93
36) Propionitrile	6.036	54	160284	211.36	ug/l	96
37) Methacrylonitrile	6.232	41	543584	184.15	ug/l	98
38) Bromochloromethane	6.221	130	397286	174.85	ug/l	98
39) Tetrahydrofuran	6.292	42	332516	196.02	ug/l	97
40) Chloroform	6.340	83	1228416	182.98	ug/l	98
42) 1,1,1-Trichloroethane	6.558	97	1012109	197.94	ug/l	97
43) Cyclohexane	6.618	84	1007426	169.67	ug/l	97

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC008.D
Acq On : 12 Dec 2013 1:00 pm
Operator : 486
Sample : IC 200/80PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 12 13:54:54 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration

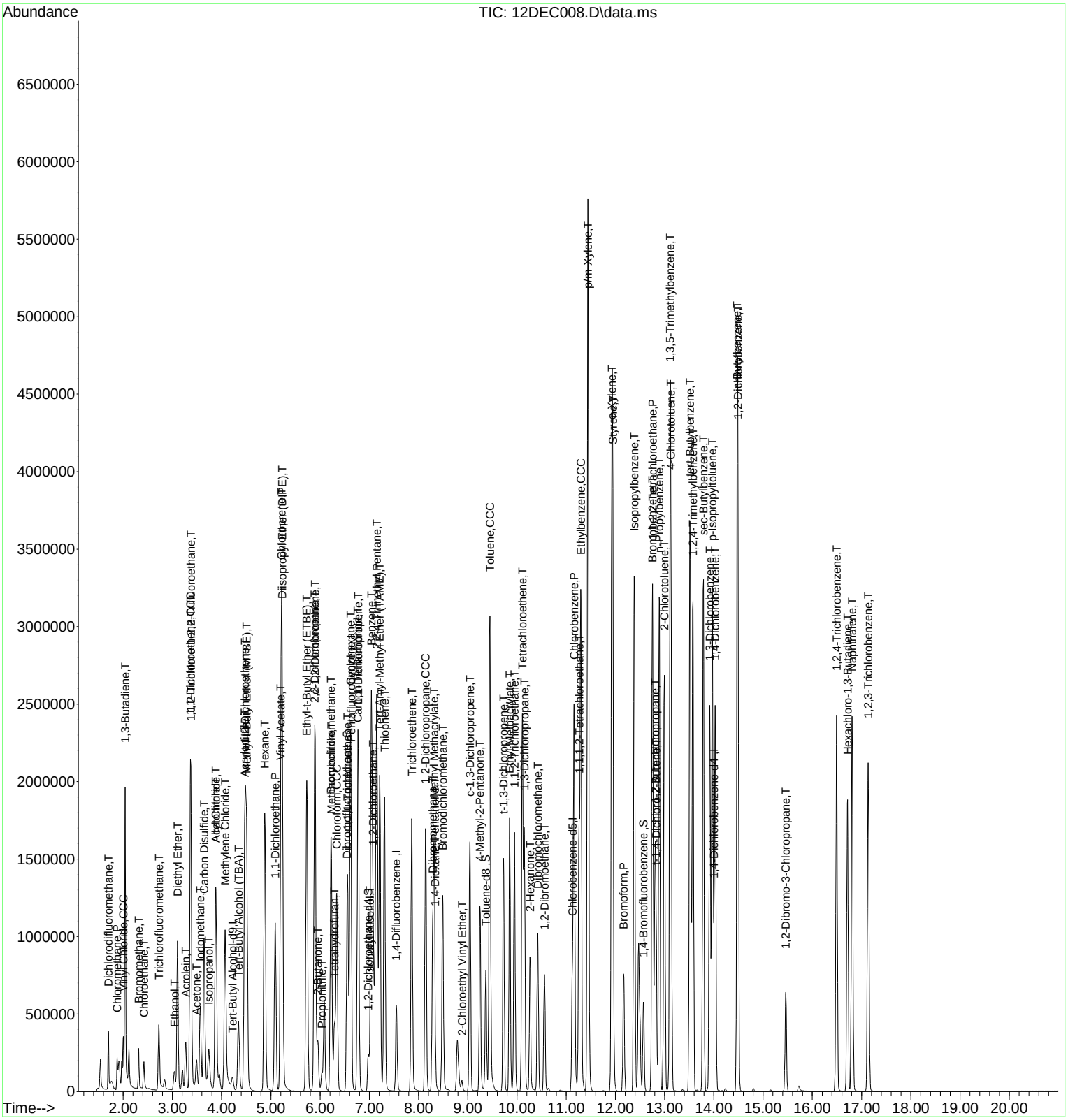
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44)	1,1-Dichloropropene	6.776	75	861881	172.39 ug/l	96
45)	Carbon Tetrachloride	6.765	117	715069	215.39 ug/l	95
48)	Benzene	7.043	78	2785409	163.12 ug/l	100
49)	1,2-Dichloroethane	7.075	62	1000718	177.70 ug/l	99
50)	Tert-Amyl-Methyl Ether...	7.211	73	1846647	183.57 ug/l	98
51)	Thiophene	7.309	84	1500322	174.48 ug/l	99
52)	2,2,4-Trimethyl Pentane	7.152	57	3008719	164.52 ug/l	99
53)	Trichloroethene	7.865	95	757605	161.06 ug/l	95
54)	2-Pentanone	8.327	43	55633	183.77 ug/l	94
55)	1,2-Dichloropropane	8.142	63	801830	177.94 ug/l	100
56)	Dibromomethane	8.289	93	445701	180.43 ug/l	96
57)	Methyl Methacrylate	8.316	69	610366	195.94 ug/l	98
58)	1,4-Dioxane	8.333	88	134476	1914.76 ug/l	98
59)	Bromodichloromethane	8.491	83	957918	195.27 ug/l	98
60)	2-Chloroethyl Vinyl Ether	8.883	63	40739	305.37 ug/l	95
61)	c-1,3-Dichloropropene	9.046	75	1115561	203.25 ug/l	97
63)	Toluene	9.449	91	2834448	156.37 ug/l	100
64)	4-Methyl-2-Pentanone	9.247	58	380515	195.40 ug/l	96
66)	t-1,3-Dichloropropene	9.726	75	982394	226.08 ug/l	99
67)	Ethyl Methacrylate	9.852	69	1038977	202.45 ug/l	100
68)	1,1,2-Trichloroethane	9.950	83	555130	178.49 ug/l	99
69)	Tetrachloroethene	10.107	166	958770	157.43 ug/l	97
70)	1,3-Dichloropropane	10.151	76	1103230	179.06 ug/l	99
71)	2-Hexanone	10.265	58	377174	208.56 ug/l	95
72)	Dibromochloromethane	10.423	129	655532	219.81 ug/l	97
73)	1,2-Dibromoethane	10.559	107	650026	198.77 ug/l	98
74)	Chlorobenzene	11.158	112	1738417	161.11 ug/l	96
75)	1,1,1,2-Tetrachloroethane	11.261	131	565975	206.24 ug/l	98
76)	Ethylbenzene	11.300	91	2951502	150.66 ug/l	99
77)	p/m-Xylene	11.441	91	4456774	285.32 ug/l	99
78)	o-Xylene	11.926	91	2469749	152.15 ug/l	98
79)	Styrene	11.947	104	1831551	156.20 ug/l	99
80)	Isopropylbenzene	12.383	105	2803422	148.87 ug/l	100
82)	1,2,3-Trichloropropane	12.807	110	260898	187.83 ug/l	86
83)	Bromobenzene	12.748	156	745421	159.97 ug/l	97
84)	n-Propylbenzene	12.889	91	3207085	142.18 ug/l	99
85)	t-1,4-Dichloro-2-Butene	12.829	53	221247	207.46 ug/l	91
86)	2-Chlorotoluene	12.993	91	2018229	147.83 ug/l	99
87)	1,3,5-Trimethylbenzene	13.112	105	2221920	145.64 ug/l	99
89)	Bromoform	12.165	173	451835	259.12 ug/l	97
90)	1,1,2,2-Tetrachloroethane	12.753	83	847758	199.09 ug/l	97
91)	4-Chlorotoluene	13.129	91	2192351	149.52 ug/l	99
92)	1,2,4-Trimethylbenzene	13.575	105	2227736	150.90 ug/l	98
93)	tert-Butylbenzene	13.515	134	499411	157.40 ug/l	97
94)	p-Isopropyltoluene	13.967	119	2310352	146.08 ug/l	98
95)	sec-Butylbenzene	13.787	105	2913130	151.64 ug/l	99
96)	1,3-Dichlorobenzene	13.918	146	1358761	154.17 ug/l	98
97)	1,4-Dichlorobenzene	14.027	146	1298768	153.17 ug/l	99
98)	1,2-Dichlorobenzene	14.490	146	1312700	156.56 ug/l	99
99)	n-Butylbenzene	14.473	91	2166425	143.08 ug/l	98
100)	1,2-Dibromo-3-Chloropr...	15.458	75	213487	223.25 ug/l	99
101)	1,2,4-Trichlorobenzene	16.493	180	1045901	160.83 ug/l	99
102)	Hexachloro-1,3-Butadiene	16.716	225	553898	131.20 ug/l	100
103)	Naphthalene	16.808	128	2611933	186.83 ug/l	100
104)	1,2,3-Trichlorobenzene	17.135	180	1015782	163.11 ug/l	100

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

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC008.D
Acq On : 12 Dec 2013 1:00 pm
Operator : 486
Sample : IC 200/80PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 12 13:54:54 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 13:18:18 2013
Response via : Initial Calibration



Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC009.D
Acq On : 12 Dec 2013 1:34 pm
Operator : 486
Sample : ICV V120913D/V120613B
Misc : V111513C
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 14:12:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.212	65	143502	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	347681	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.549	114	519876	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	497483	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	239830	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.553	113	147665	51.63	ug/l	0.00
Spiked Amount 50.000			Recovery	=	103.26%	
46) 1,2-Dichloroethane-d4	6.977	65	200951	50.79	ug/l	0.00
Spiked Amount 50.000			Recovery	=	101.58%	
62) Toluene-d8	9.367	98	684865	50.02	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.04%	
81) 1,4-Bromofluorobenzene	12.568	95	246572	48.18	ug/l	0.00
Spiked Amount 50.000			Recovery	=	96.36%	
Target Compounds						Qvalue
2) Ethanol	3.020	45	48463	424.88	ug/l	98
3) Tert-Butyl Alcohol (TBA)	4.332	59	196273	253.71	ug/l	98
5) Dichlorodifluoromethane	1.708	85	267861	50.11	ug/l	99
6) Chloromethane	1.882	50	276517	48.42	ug/l	99
7) Vinyl Chloride	2.002	62	243815	48.11	ug/l	99
8) Bromomethane	2.329	94	103806	40.53	ug/l	100
9) Chloroethane	2.454	64	125877	50.83	ug/l	97
10) 1,3-Butadiene	2.040	54	154410	39.37	ug/l	99
11) Trichlorofluoromethane	2.748	101	289370	48.70	ug/l	100
12) Diethyl Ether	3.107	45	122299	45.78	ug/l	98
13) Acetone	3.488	58	25892	52.96	ug/l	97
14) Iodomethane	3.581	142	149495	88.53	ug/l	96
15) 1,1-Dichloroethene	3.379	61	278728	47.86	ug/l	99
16) 1,1,2-Trichloro-1,2,2-...	3.385	101	162890	50.57	ug/l	98
17) Isopropanol	3.728	45	123755	283.36	ug/l	99
18) Carbon Disulfide	3.657	76	553623	49.37	ug/l	99
19) Acetonitrile	3.891	41	402203	101.57	ug/l	99
20) Acrylonitrile	4.473	53	101076	52.10	ug/l	97
21) Allyl Chloride	3.891	76	111888	52.32	ug/l	93
22) Acrolein	3.276	56	116467	138.47	ug/l	94
23) Methylene Chloride	4.076	84	215676	50.31	ug/l	98
24) t-1,2-Dichloroethene	4.479	96	211948	53.08	ug/l	91
25) Isobutyl Alcohol	7.010	43	29030	116.22	ug/l	91
26) Methyl-t-Butyl Ether (...	4.506	73	600043	52.86	ug/l	99
27) Hexane	4.882	57	350316	51.94	ug/l	98
28) 1,1-Dichloroethane	5.094	63	383619	49.43	ug/l	100
29) Vinyl Acetate	5.197	86	35968	63.67	ug/l #	60
30) Diisopropyl Ether (DIPE)	5.230	45	695015	51.66	ug/l	100
31) Chloroprene	5.219	53	340549	54.28	ug/l	96
32) Ethyl-t-Butyl Ether (E...	5.731	59	625968	53.65	ug/l	99
33) c-1,2-Dichloroethene	5.900	96	233043	53.64	ug/l	98
34) 2,2-Dichloropropane	5.894	77	252633	53.66	ug/l	99
35) 2-Butanone	5.954	43	127396	56.04	ug/l	93
36) Propionitrile	6.036	54	45093	56.71	ug/l	95
37) Methacrylonitrile	6.232	41	152649	49.23	ug/l	99
38) Bromochloromethane	6.221	130	119317	49.99	ug/l	95
39) Tetrahydrofuran	6.297	42	95518	53.64	ug/l	97
40) Chloroform	6.335	83	358438	50.83	ug/l	93
42) 1,1,1-Trichloroethane	6.558	97	290735	54.13	ug/l	97
43) Cyclohexane	6.618	84	325824	52.24	ug/l	97

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC009.D
Acq On : 12 Dec 2013 1:34 pm
Operator : 486
Sample : ICV V120913D/V120613B
Misc : V111513C
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 14:12:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44)	1,1-Dichloropropene	6.776	75	276308	52.61 ug/l	99
45)	Carbon Tetrachloride	6.771	117	193963	55.62 ug/l	95
48)	Benzene	7.043	78	840122	49.64 ug/l	98
49)	1,2-Dichloroethane	7.075	62	283483	50.79 ug/l	99
50)	Tert-Amyl-Methyl Ether...	7.212	73	525643	52.72 ug/l	99
51)	Thiophene	7.309	84	442911	51.97 ug/l	99
52)	2,2,4-Trimethyl Pentane	7.152	57	915848	50.57 ug/l	99
53)	Trichloroethene	7.865	95	240544	51.60 ug/l	94
54)	2-Pentanone	8.322	43	16650	55.49 ug/l	94
55)	1,2-Dichloropropane	8.148	63	227975	51.05 ug/l	99
56)	Dibromomethane	8.289	93	125519	51.27 ug/l	97
57)	Methyl Methacrylate	8.317	69	173908	56.33 ug/l	98
58)	1,4-Dioxane	8.327	88	40403	580.46 ug/l	94
59)	Bromodichloromethane	8.491	83	259550	53.39 ug/l	97
60)	2-Chloroethyl Vinyl Ether	8.888	63	8505	52.09 ug/l	93
61)	c-1,3-Dichloropropene	9.046	75	325060	59.76 ug/l	97
63)	Toluene	9.449	91	912323	50.78 ug/l	100
64)	4-Methyl-2-Pentanone	9.247	58	105362	54.59 ug/l	99
66)	t-1,3-Dichloropropene	9.726	75	253488	49.95 ug/l	97
67)	Ethyl Methacrylate	9.852	69	269211	51.67 ug/l	99
68)	1,1,2-Trichloroethane	9.944	83	162239	51.38 ug/l	99
69)	Tetrachloroethene	10.107	166	330238	53.41 ug/l	98
70)	1,3-Dichloropropane	10.151	76	317526	50.76 ug/l	99
71)	2-Hexanone	10.265	58	106150	57.82 ug/l	94
72)	Dibromochloromethane	10.423	129	172506	56.98 ug/l	98
73)	1,2-Dibromoethane	10.559	107	177555	53.48 ug/l	96
74)	Chlorobenzene	11.158	112	520110	47.48 ug/l	96
75)	1,1,1,2-Tetrachloroethane	11.262	131	159950	57.41 ug/l	96
76)	Ethylbenzene	11.294	91	1005825	50.54 ug/l	100
77)	p/m-Xylene	11.441	91	1504392	94.87 ug/l	99
78)	o-Xylene	11.926	91	796514	48.33 ug/l	99
79)	Styrene	11.947	104	604439	50.77 ug/l	97
80)	Isopropylbenzene	12.383	105	922988	48.28 ug/l	99
82)	1,2,3-Trichloropropane	12.807	110	75545	53.57 ug/l	87
83)	Bromobenzene	12.753	156	235922	49.87 ug/l	98
84)	n-Propylbenzene	12.889	91	1070562	46.75 ug/l	99
85)	t-1,4-Dichloro-2-Butene	12.829	53	41960	36.34 ug/l	98
86)	2-Chlorotoluene	12.993	91	665995	48.05 ug/l	96
87)	1,3,5-Trimethylbenzene	13.112	105	820589	52.98 ug/l	99
89)	Bromoform	12.171	173	111180	61.99 ug/l	96
90)	1,1,2,2-Tetrachloroethane	12.753	83	235437	53.75 ug/l	95
91)	4-Chlorotoluene	13.123	91	723010	47.94 ug/l	93
92)	1,2,4-Trimethylbenzene	13.575	105	799588	52.66 ug/l	99
93)	tert-Butylbenzene	13.515	134	168435	51.57 ug/l	99
94)	p-Isopropyltoluene	13.967	119	806834	49.60 ug/l	99
95)	sec-Butylbenzene	13.787	105	995527	50.38 ug/l	97
96)	1,3-Dichlorobenzene	13.918	146	430159	47.45 ug/l	98
97)	1,4-Dichlorobenzene	14.027	146	441341	50.63 ug/l	98
98)	1,2-Dichlorobenzene	14.490	146	410784	47.63 ug/l	98
99)	n-Butylbenzene	14.473	91	842831	54.12 ug/l	99
100)	1,2-Dibromo-3-Chloropr...	15.464	75	57096	58.05 ug/l	99
101)	1,2,4-Trichlorobenzene	16.493	180	359648	53.77 ug/l	99
102)	Hexachloro-1,3-Butadiene	16.711	225	234161	53.92 ug/l	100
103)	Naphthalene	16.809	128	825227	57.39 ug/l	99
104)	1,2,3-Trichlorobenzene	17.135	180	352846	55.08 ug/l	98

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

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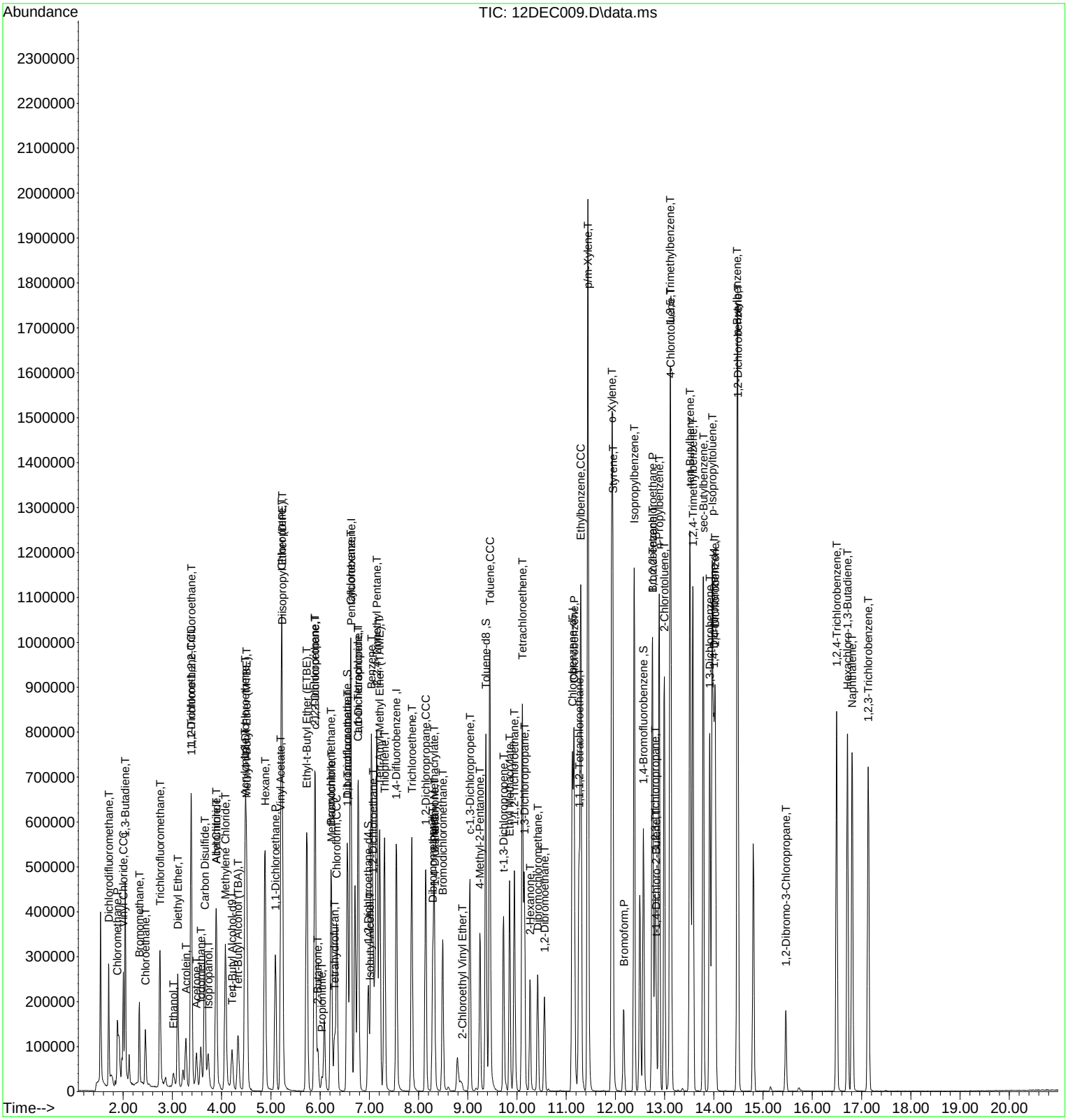
Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC009.D
Acq On : 12 Dec 2013 1:34 pm
Operator : 486
Sample : ICV V120913D/V120613B
Misc : V111513C
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 14:12:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

Work Order #: 13-12-1628
Instrument: GC/MS XX
ICAL Batch ID: 131220IC
ICAL D/T Analyzed: 12/20/2013 11:45

Reviewed By: 163
D/T Reviewed: 12/31/2013 09:53
Analyst: 486

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
Acetone	Avg Resp			0.064	0.050	0.050	0.049	0.046			0.052	0.00	13	0-15			PASS
Benzene	Avg Resp	1.353	1.266	1.221	1.312	1.337	1.291	1.291			1.296	0.00	3	0-15			PASS
Bromobenzene	Avg Resp		0.505	0.465	0.493	0.516	0.501	0.537			0.503	0.00	5	0-15			PASS
Bromochloromethane	Avg Resp		0.405	0.320	0.341	0.350	0.336	0.332			0.347	0.00	9	0-15			PASS
Bromodichloromethane	Avg Resp		0.477	0.426	0.455	0.459	0.444	0.446			0.451	0.00	4	0-15			PASS
Bromoform	Avg Resp		0.495	0.449	0.473	0.485	0.480	0.491			0.479	0.10	3	0-15			PASS
Bromomethane	**Avg Resp**			0.250	0.215	0.253	0.319	0.203			0.248	**0.00**	**18**	**0-15**			**FAIL**
2-Butanone	Avg Resp			0.214	0.224	0.239	0.237	0.238			0.230	0.00	5	0-15			PASS
n-Butylbenzene	Avg Resp		2.233	2.406	2.656	2.912	2.885	3.061			2.692	0.00	12	0-15			PASS
sec-Butylbenzene	Avg Resp		2.715	3.168	3.425	3.636	3.561	3.756			3.377	0.00	11	0-15			PASS
tert-Butylbenzene	Avg Resp		0.589	0.578	0.631	0.668	0.657	0.686			0.635	0.00	7	0-15			PASS
Carbon Disulfide	**Avg Resp**		2.409	1.621	1.670	1.648	1.564	1.574			1.748	**0.00**	**19**	**0-15**			**FAIL**
Carbon Tetrachloride	Avg Resp	0.658	0.708	0.631	0.647	0.643	0.625	0.632			0.649	0.00	4	0-15			PASS
Chlorobenzene	Avg Resp		1.210	1.117	1.153	1.169	1.127	1.156			1.155	0.30	3	0-15			PASS
Chloroethane	Avg Resp		0.447	0.405	0.410	0.411	0.385	0.374			0.405	0.00	6	0-15			PASS
2-Chloroethyl Vinyl Ether	**Avg Resp**			0.002	0.002	0.003	0.003	0.004			0.003	**0.00**	**39**	**0-15**			**FAIL**
Chloroform	Avg Resp		1.033	0.829	0.851	0.833	0.800	0.795			0.857	0.00	10	0-30			PASS
Chloromethane	QR - Equal		1.012	0.753	0.735	0.778	0.721	0.679							0.998	r^2>=0.990	PASS
2-Chlorotoluene	Avg Resp		1.128	1.104	1.225	1.272	1.266	1.332			1.221	0.00	7	0-15			PASS
4-Chlorotoluene	Avg Resp		2.328	2.386	2.490	2.554	2.468	2.526			2.459	0.00	3	0-15			PASS
Dibromochloromethane	Avg Resp		0.466	0.387	0.420	0.424	0.415	0.422			0.422	0.00	6	0-15			PASS
1,2-Dibromo-3-Chloropropane	Avg Resp			0.128	0.125	0.138	0.137	0.139			0.133	0.00	5	0-15			PASS
1,2-Dibromoethane	Avg Resp		0.322	0.317	0.332	0.341	0.333	0.333			0.330	0.00	3	0-15			PASS
Dibromomethane	Avg Resp		0.202	0.193	0.206	0.204	0.198	0.198			0.200	0.00	2	0-15			PASS
1,2-Dichlorobenzene	Avg Resp		1.664	1.534	1.593	1.649	1.592	1.645			1.613	0.00	3	0-15			PASS
1,3-Dichlorobenzene	Avg Resp		1.755	1.573	1.612	1.678	1.615	1.683			1.653	0.00	4	0-15			PASS
1,4-Dichlorobenzene	Avg Resp		2.169	1.700	1.685	1.721	1.651	1.703			1.771	0.00	11	0-15			PASS
Dichlorodifluoromethane	Avg Resp		0.620	0.675	0.683	0.696	0.645	0.639			0.660	0.00	4	0-15			PASS
1,1-Dichloroethane	Avg Resp		0.962	0.869	0.892	0.891	0.848	0.867			0.888	0.10	4	0-15			PASS
1,2-Dichloroethane	Avg Resp	0.490	0.483	0.432	0.468	0.465	0.451	0.440			0.461	0.00	5	0-15			PASS
1,1-Dichloroethene	Avg Resp		0.918	0.728	0.771	0.770	0.739	0.760			0.781	0.00	9	0-30			PASS
c-1,2-Dichloroethene	Avg Resp		0.530	0.498	0.522	0.538	0.521	0.524			0.522	0.00	3	0-15			PASS
t-1,2-Dichloroethene	Avg Resp		0.562	0.483	0.499	0.492	0.478	0.479			0.499	0.00	6	0-15			PASS
1,2-Dichloropropane	Avg Resp		0.328	0.328	0.357	0.360	0.354	0.360			0.348	0.00	4	0-30			PASS
1,3-Dichloropropane	Avg Resp		0.556	0.537	0.567	0.569	0.555	0.564			0.558	0.00	2	0-15			PASS
2,2-Dichloropropane	Avg Resp		0.553	0.490	0.466	0.494	0.496	0.506			0.501	0.00	6	0-15			PASS
1,1-Dichloropropene	Avg Resp		0.655	0.612	0.620	0.617	0.607	0.614			0.621	0.00	3	0-15			PASS
c-1,3-Dichloropropene	Avg Resp	0.339	0.364	0.387	0.431	0.453	0.460	0.480			0.416	0.00	13	0-15			PASS
t-1,3-Dichloropropene	LR - Inv Conc	0.273	0.336	0.355	0.385	0.417	0.431	0.451							0.998	r^2>=0.990	PASS
Ethylbenzene	Avg Resp		1.612	1.598	1.771	1.890	1.864	1.928			1.777	0.00	8	0-30			PASS
2-Hexanone	Avg Resp			0.118	0.134	0.149	0.157	0.166			0.145	0.00	13	0-15			PASS
Isopropylbenzene	Avg Resp		1.364	1.531	1.731	1.887	1.895	2.037			1.741	0.00	15	0-15			PASS
p-Isopropyltoluene	Avg Resp		2.057	2.581	2.825	3.087	3.043	3.198			2.799	0.00	15	0-15			PASS
Methylene Chloride	Avg Resp			0.488	0.508	0.503	0.477	0.475			0.490	0.00	3	0-15			PASS
4-Methyl-2-Pentanone	Avg Resp			0.104	0.118	0.134	0.139	0.146			0.128	0.00	13	0-15			PASS

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

Work Order #: 13-12-1628
Instrument: GC/MS XX
ICAL Batch ID: 131220IC
ICAL D/T Analyzed: 12/20/2013 11:45

Reviewed By: 163
D/T Reviewed: 12/31/2013 09:53
Analyst: 486

Analyte	Calib. Model	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD Control Limit	r or r^2	r or r^2 Control Limit	Status
Naphthalene	Avg Resp			1.963	2.185	2.692	2.734	2.836			2.482	0.00	15	0-15			PASS
n-Propylbenzene	Avg Resp		1.825	1.951	2.190	2.338	2.338	2.481			2.187	0.00	12	0-15			PASS
Styrene	**Avg Resp**		0.804	0.996	1.133	1.236	1.228	1.311			1.118	**0.00**	**17**	**0-15**			**FAIL**
Acetonitrile	Avg Resp			0.415	0.424	0.439	0.450	0.456			0.437	0.00	4	0-15			PASS
Acrylonitrile	Avg Resp			0.185	0.206	0.219	0.217	0.214			0.208	0.00	7	0-15			PASS
Iodomethane	**Avg Resp**			0.143	0.088	0.197	0.275	0.338			0.208	**0.00**	**48**	**0-15**			**FAIL**
t-1,4-Dichloro-2-Butene	Avg Resp		0.115	0.107	0.121	0.130	0.135	0.148			0.126	0.00	12	0-15			PASS
1,1,1,2-Tetrachloroethane	Avg Resp		0.378	0.353	0.371	0.394	0.383	0.395			0.379	0.00	4	0-15			PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp		0.627	0.519	0.523	0.515	0.497	0.490			0.529	0.00	9	0-15			PASS
1,1,2,2-Tetrachloroethane	Avg Resp		0.910	0.806	0.837	0.843	0.816	0.823			0.839	0.30	4	0-15			PASS
Tetrachloroethene	Avg Resp		0.559	0.473	0.481	0.497	0.474	0.482			0.494	0.00	7	0-15			PASS
Toluene	Avg Resp		1.502	1.364	1.478	1.524	1.493	1.524			1.481	0.00	4	0-30			PASS
1,2,3-Trichlorobenzene	Avg Resp		1.208	0.991	1.021	1.128	1.095	1.128			1.095	0.00	7	0-15			PASS
1,2,4-Trichlorobenzene	Avg Resp		1.311	0.980	0.999	1.122	1.138	1.184			1.122	0.00	11	0-15			PASS
1,1,1-Trichloroethane	Avg Resp		0.746	0.653	0.677	0.684	0.665	0.671			0.683	0.00	5	0-15			PASS
Hexachloro-1,3-Butadiene	Avg Resp		0.696	0.640	0.672	0.687	0.663	0.693			0.675	0.00	3	0-15			PASS
1,1,2-Trichloroethane	Avg Resp		0.268	0.274	0.287	0.292	0.280	0.279			0.280	0.00	3	0-15			PASS
Trichloroethene	Avg Resp		0.383	0.327	0.350	0.355	0.345	0.348			0.351	0.00	5	0-15			PASS
Trichlorofluoromethane	Avg Resp		1.036	0.922	0.914	0.920	0.868	0.843			0.917	0.00	7	0-15			PASS
1,2,3-Trichloropropane	Avg Resp		0.134	0.130	0.142	0.147	0.143	0.148			0.140	0.00	5	0-15			PASS
1,2,4-Trimethylbenzene	Avg Resp		1.934	2.267	2.507	2.707	2.601	2.715			2.455	0.00	12	0-15			PASS
1,3,5-Trimethylbenzene	Avg Resp		1.119	1.308	1.485	1.586	1.601	1.733			1.472	0.00	15	0-15			PASS
Vinyl Acetate	Avg Resp			0.050	0.057	0.063	0.066	0.069			0.061	0.00	12	0-15			PASS
Vinyl Chloride	Avg Resp	0.638	0.644	0.740	0.683	0.760	0.709	0.704			0.697	0.00	7	0-30			PASS
p/m-Xylene	Avg Resp	1.105	1.171	1.263	1.408	1.481	1.458	1.533			1.345	0.00	12	0-15			PASS
o-Xylene	Avg Resp	1.149	1.057	1.208	1.328	1.452	1.446	1.534			1.311	0.00	14	0-15			PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp		1.004	0.937	0.974	1.035	1.037	1.042			1.005	0.00	4	0-15			PASS
Tert-Butyl Alcohol (TBA)	Avg Resp		1.327	1.308	1.402	1.423	1.403	1.474			1.390	0.00	4	0-15			PASS
Diisopropyl Ether (DIPE)	Avg Resp		1.451	1.497	1.634	1.722	1.682	1.692			1.613	0.00	7	0-15			PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp		1.016	0.991	1.027	1.108	1.127	1.168			1.073	0.00	7	0-15			PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp		0.499	0.524	0.566	0.627	0.643	0.664			0.587	0.00	12	0-15			PASS
Ethanol	Avg Resp			0.336	0.381	0.341	0.293	0.289			0.328	0.00	12	0-15			PASS

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

Work Order #: 13-12-1628
Instrument: GC/MS XX
ICAL Batch ID: 131220IC
ICAL D/T Analyzed: 12/20/2013 11:45

Reviewed By: 163
D/T Reviewed: 12/31/2013 09:53
Analyst: 486

Data Files:

Level #	D/T Analyzed	Data File
1	12/20/2013 11:45	W:\GCMS_XX_DATA\2013\131220\20DEC005.D\20DEC005.rr
2	12/20/2013 17:01	W:\GCMS_XX_DATA\2013\131220\20DEC014.D\20DEC014.rr
3	12/20/2013 16:09	W:\GCMS_XX_DATA\2013\131220\20DEC013.D\20DEC013.rr
4	12/20/2013 13:11	W:\GCMS_XX_DATA\2013\131220\20DEC008.D\20DEC008.rr
5	12/20/2013 13:39	W:\GCMS_XX_DATA\2013\131220\20DEC009.D\20DEC009.rr
6	12/20/2013 14:08	W:\GCMS_XX_DATA\2013\131220\20DEC010.D\20DEC010.rr
7	12/20/2013 14:37	W:\GCMS_XX_DATA\2013\131220\20DEC011.D\20DEC011.rr

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER:	099-12-041-686-4692	ANALYST:	486
INSTRUMENT NAME:	GC/MS XX	REVIEWED BY:	163
INITIAL BATCH:	131220IC	DATE REVIEWED:	12/31/13 9:53
INITIAL DATE ANALYZED	12/20/13 11:45	ICV DATE ANALYZED	12/20/13 17:41

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Acetone	**Avg Resp**	**0.00**	**0.052**	**0.105**			**-103**	0-20	**FAIL**
Benzene	Avg Resp	0.00	1.296	1.315			-1	0-20	PASS
Bromobenzene	Avg Resp	0.00	0.503	0.513			-2	0-20	PASS
Bromochloromethane	Avg Resp	0.00	0.347	0.332			4	0-20	PASS
Bromodichloromethane	Avg Resp	0.00	0.451	0.436			3	0-20	PASS
Bromoform	Avg Resp	0.10	0.479	0.479			0	0-20	PASS
Bromomethane	Avg Resp	0.00	0.248	0.254			-2	0-20	PASS
2-Butanone	**Avg Resp**	**0.00**	**0.230**	**0.340**			**-48**	0-20	**FAIL**
n-Butylbenzene	Avg Resp	0.00	2.692	2.937			-9	0-20	PASS
sec-Butylbenzene	Avg Resp	0.00	3.377	3.404			-1	0-20	PASS
tert-Butylbenzene	Avg Resp	0.00	0.635	0.633			0	0-20	PASS
Carbon Disulfide	Avg Resp	0.00	1.748	1.497			14	0-20	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.649	0.629			3	0-20	PASS
Chlorobenzene	Avg Resp	0.30	1.155	1.089			6	0-20	PASS
Chloroethane	Avg Resp	0.00	0.405	0.404			0	0-20	PASS
2-Chloroethyl Vinyl Ether	Avg Resp	0.00	0.003	0.003			-11	0-20	PASS
Chloroform	Avg Resp	0.00	0.857	0.818			4	0-20	PASS
Chloromethane	QR - Equal				50.00	51.804	-4	0-20	PASS
2-Chlorotoluene	Avg Resp	0.00	1.221	1.224			0	0-20	PASS
4-Chlorotoluene	Avg Resp	0.00	2.459	2.389			3	0-20	PASS
Dibromochloromethane	Avg Resp	0.00	0.422	0.415			2	0-20	PASS
1,2-Dibromo-3-Chloropropane	Avg Resp	0.00	0.133	0.130			3	0-20	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.330	0.336			-2	0-20	PASS
Dibromomethane	Avg Resp	0.00	0.200	0.199			1	0-20	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	1.613	1.525			5	0-20	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	1.653	1.560			6	0-20	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	1.771	1.735			2	0-20	PASS
Dichlorodifluoromethane	Avg Resp	0.00	0.660	0.702			-6	0-20	PASS
1,1-Dichloroethane	Avg Resp	0.10	0.888	0.852			4	0-20	PASS
1,2-Dichloroethane	Avg Resp	0.00	0.461	0.459			0	0-20	PASS
1,1-Dichloroethene	Avg Resp	0.00	0.781	0.700			10	0-20	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.522	0.540			-3	0-20	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	0.499	0.498			0	0-20	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.348	0.353			-2	0-20	PASS
1,3-Dichloropropane	Avg Resp	0.00	0.558	0.555			0	0-20	PASS
2,2-Dichloropropane	Avg Resp	0.00	0.501	0.509			-2	0-20	PASS
1,1-Dichloropropene	Avg Resp	0.00	0.621	0.638			-3	0-20	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.416	0.463			-11	0-20	PASS
t-1,3-Dichloropropene	LR - Inv Conc				50.00	47.278	5	0-20	PASS
Ethylbenzene	Avg Resp	0.00	1.777	1.896			-7	0-20	PASS
2-Hexanone	**Avg Resp**	**0.00**	**0.145**	**0.182**			**-26**	0-20	**FAIL**

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER:	099-12-041-686-4692	ANALYST:	486
INSTRUMENT NAME:	GC/MS XX	REVIEWED BY:	163
INITIAL BATCH:	131220IC	DATE REVIEWED:	12/31/13 9:53
INITIAL DATE ANALYZED	12/20/13 11:45	ICV DATE ANALYZED	12/20/13 17:41

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Isopropylbenzene	Avg Resp	0.00	1.741	1.752			-1	0-20	PASS
p-Isopropyltoluene	Avg Resp	0.00	2.799	2.885			-3	0-20	PASS
Methylene Chloride	Avg Resp	0.00	0.490	0.493			-1	0-20	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.128	0.133			-4	0-20	PASS
Naphthalene	Avg Resp	0.00	2.482	2.605			-5	0-20	PASS
n-Propylbenzene	Avg Resp	0.00	2.187	2.148			2	0-20	PASS
Styrene	Avg Resp	0.00	1.118	1.225			-10	0-20	PASS
t-1,4-Dichloro-2-Butene	**Avg Resp**	**0.00**	**0.126**	**0.096**			**24**	0-20	**FAIL**
Iodomethane	**Avg Resp**	**0.00**	**0.208**	**0.275**			**-32**	0-20	**FAIL**
1,1,1,2-Tetrachloroethane	Avg Resp	0.00	0.379	0.386			-2	0-20	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	0.529	0.505			5	0-20	PASS
Acetonitrile	Avg Resp	0.00	0.437	0.422			3	0-20	PASS
Acrylonitrile	Avg Resp	0.00	0.208	0.214			-3	0-20	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.30	0.839	0.829			1	0-20	PASS
Tetrachloroethene	Avg Resp	0.00	0.494	0.498			-1	0-20	PASS
Toluene	Avg Resp	0.00	1.481	1.512			-2	0-20	PASS
1,2,3-Trichlorobenzene	Avg Resp	0.00	1.095	1.124			-3	0-20	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	1.122	1.146			-2	0-20	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	0.683	0.680			0	0-20	PASS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.675	0.686			-2	0-20	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.280	0.285			-2	0-20	PASS
Trichloroethene	Avg Resp	0.00	0.351	0.353			0	0-20	PASS
Trichlorofluoromethane	Avg Resp	0.00	0.917	0.921			0	0-20	PASS
1,2,3-Trichloropropane	Avg Resp	0.00	0.140	0.140			0	0-20	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	2.455	2.725			-11	0-20	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.472	1.658			-13	0-20	PASS
Vinyl Acetate	Avg Resp	0.00	0.061	0.073			-19	0-20	PASS
Vinyl Chloride	Avg Resp	0.00	0.697	0.767			-10	0-20	PASS
p/m-Xylene	Avg Resp	0.00	1.345	1.439			-7	0-20	PASS
o-Xylene	Avg Resp	0.00	1.311	1.349			-3	0-20	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	1.005	1.016			-1	0-20	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.390	1.468			-6	0-20	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	1.613	1.727			-7	0-20	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	1.073	1.088			-1	0-20	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.587	0.606			-3	0-20	PASS
Ethanol	Avg Resp	0.00	0.328	0.359			-9	0-20	PASS

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INITIAL CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER:	099-12-041-686-4692	ANALYST:	486
INSTRUMENT NAME:	GC/MS XX	REVIEWED BY:	163
INITIAL BATCH:	131220IC	DATE REVIEWED:	12/31/13 9:53
INITIAL DATE ANALYZED	12/20/13 11:45	ICV DATE ANALYZED	12/20/13 17:41

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_XX_DATA\2013\131220\20DEC015.D\20DEC015.rr

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Response Factor Report GCMS XX

Method Path : C:\MSDCHEM\1\METHODS\
Method File : 131220.M
Title : EPA 8260B/8260C
Last Update : Fri Dec 20 17:34:37 2013
Response Via : Initial Calibration

Calibration Files
0.5 =20DEC005.D 1 =20DEC014.D 10 =20DEC013.D 20 =20DEC008.D 50 =20DEC009.D 100 =20DEC010.D 200 =20DEC011.D

		Compound	0.5	1	10	20	50	100	200	Avg	%RSD
1)	I	Tert-Butyl Alcohol-d9			ISTD						
2)	T	Ethanol			0.336	0.381	0.341	0.293	0.289	0.328	12
3)	T	Tert-Butyl Alcohol (TBA)		1.327	1.308	1.402	1.423	1.403	1.474	1.390	4
4)	I	Pentafluorobenzene			ISTD						
5)	T	Dichlorodifluoromethane		0.620	0.675	0.683	0.696	0.645	0.639	0.660	4
6)	P	Chloromethane		1.012	0.753	0.735	0.778	0.721	0.679	0.780	15
7)	CCC	Vinyl Chloride	0.638	0.644	0.740	0.683	0.760	0.709	0.704	0.697	7
8)	T	Bromomethane			0.250	0.215	0.253	0.319	0.203	0.248	18
9)	T	Chloroethane		0.447	0.405	0.410	0.411	0.385	0.374	0.405	6
10)	T	1,3-Butadiene		0.669	0.651	0.655	0.658	0.630	0.622	0.648	3
11)	T	Trichlorofluoromethane		1.036	0.922	0.914	0.920	0.868	0.843	0.917	7
12)	T	Diethyl Ether		0.624	0.403	0.396	0.380	0.355	0.341	0.417	25
13)	T	Acetone			0.064	0.050	0.050	0.049	0.046	0.052#	13
14)	T	Iodomethane			0.143	0.088	0.197	0.275	0.338	0.208	48
15)	CCC	1,1-Dichloroethene		0.918	0.728	0.771	0.770	0.739	0.760	0.781	9
16)	T	1,1,2-Trichloro-1,2,2-Trif...		0.627	0.519	0.523	0.515	0.497	0.490	0.529	9
17)	T	Isopropanol			0.030	0.033	0.033	0.036	0.036	0.034#	6
18)	T	Carbon Disulfide		2.409	1.621	1.670	1.648	1.564	1.574	1.748	19
19)	T	Acetonitrile			0.415	0.424	0.439	0.450	0.456	0.437	4
20)	T	Acrylonitrile			0.185	0.206	0.219	0.217	0.214	0.208	7
21)	T	Allyl Chloride		0.272	0.223	0.232	0.240	0.235	0.253	0.243	7
22)	T	Acrolein			0.094	0.092	0.107	0.089	0.089	0.094#	8
23)	T	Methylene Chloride			0.488	0.508	0.503	0.477	0.475	0.490	3
24)	T	t-1,2-Dichloroethene		0.562	0.483	0.499	0.492	0.478	0.479	0.499	6
25)	T	Isobutyl Alcohol			0.020	0.019	0.022	0.021	0.024	0.021#	9
26)	T	Methyl-t-Butyl Ether (MTBE)		1.004	0.937	0.974	1.035	1.037	1.042	1.005	4
27)	T	Hexane		0.785	0.757	0.823	0.858	0.842	0.856	0.820	5
28)	P	1,1-Dichloroethane		0.962	0.869	0.892	0.891	0.848	0.867	0.888	4
29)	T	Vinyl Acetate			0.050	0.057	0.063	0.066	0.069	0.061#	12
30)	T	Diisopropyl Ether (DIPE)		1.451	1.497	1.634	1.722	1.682	1.692	1.613	7
31)	T	Chloroprene			0.685	0.732	0.795	0.776	0.785	0.755	6
32)	T	Ethyl-t-Butyl Ether (ETBE)		1.016	0.991	1.027	1.108	1.127	1.168	1.073	7
33)	T	c-1,2-Dichloroethene		0.530	0.498	0.522	0.538	0.521	0.524	0.522	3
34)	T	2,2-Dichloropropane		0.553	0.490	0.466	0.494	0.496	0.506	0.501	6
35)	T	2-Butanone			0.214	0.224	0.239	0.237	0.238	0.230	5
36)	T	Propionitrile			0.076	0.079	0.083	0.082	0.083	0.081#	4
37)	T	Methacrylonitrile			0.365	0.398	0.423	0.413	0.413	0.402	6
38)	T	Bromochloromethane		0.405	0.320	0.341	0.350	0.336	0.332	0.347	9
39)	T	Tetrahydrofuran			0.150	0.165	0.180	0.170	0.171	0.167	7
40)	CCC	Chloroform		1.033	0.829	0.851	0.833	0.800	0.795	0.857	10
41)	S	Dibromofluoromethane	0.506	0.494	0.464	0.459	0.452	0.446	0.452	0.468	5
42)	T	1,1,1-Trichloroethane		0.746	0.653	0.677	0.684	0.665	0.671	0.683	5
43)	T	Cyclohexane			0.753	0.736	0.743	0.723	0.722	0.735	2

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Response Factor Report GCMS XX

Method Path : C:\MSDCHEM\1\METHODS\
Method File : 131220.M

44)	T	1,1-Dichloropropene		0.655	0.612	0.620	0.617	0.607	0.614	0.621	3
45)	T	Carbon Tetrachloride	0.658	0.708	0.631	0.647	0.643	0.625	0.632	0.649	4
46)	S	1,2-Dichloroethane-d4	0.500	0.497	0.459	0.455	0.456	0.439	0.430	0.462	6
47)	I	1,4-Difluorobenzene			----------ISTD----------						
48)	T	Benzene	1.353	1.266	1.221	1.312	1.337	1.291	1.291	1.296	3
49)	T	1,2-Dichloroethane	0.490	0.483	0.432	0.468	0.465	0.451	0.440	0.461	5
50)	T	2-Methyl-2-Butanol (TAA)			0.020	0.020	0.023	0.025	0.028	0.023#	15
51)	T	Tert-Amyl-Methyl Ether (TAME)		0.499	0.524	0.566	0.627	0.643	0.664	0.587	12
52)	T	Thiophene		0.616	0.644	0.706	0.738	0.724	0.724	0.692	7
53)	T	2,2,4-Trimethyl Pentane		1.368	1.473	1.616	1.710	1.675	1.697	1.590	9
54)	T	Trichloroethene		0.383	0.327	0.350	0.355	0.345	0.348	0.351	5
55)	CCC	1,2-Dichloropropane		0.328	0.328	0.357	0.360	0.354	0.360	0.348	4
56)	T	Dibromomethane		0.202	0.193	0.206	0.204	0.198	0.198	0.200	2
57)	T	Methyl Methacrylate			0.173	0.196	0.216	0.223	0.233	0.208	11
58)	T	1,4-Dioxane			0.004	0.004	0.005	0.005	0.005	0.005#	13
59)	T	Bromodichloromethane		0.477	0.426	0.455	0.459	0.444	0.446	0.451	4
60)	T	2-Chloroethyl Vinyl Ether			0.002	0.002	0.003	0.003	0.004	0.003#	39
61)	T	c-1,3-Dichloropropene	0.339	0.364	0.387	0.431	0.453	0.460	0.480	0.416	13
62)	S	Toluene-d8	1.129	1.103	1.110	1.139	1.147	1.155	1.150	1.133	2
63)	CCC	Toluene		1.502	1.364	1.478	1.524	1.493	1.524	1.481	4
64)	T	4-Methyl-2-Pentanone			0.104	0.118	0.134	0.139	0.146	0.128	13
65)	I	Chlorobenzene-d5			----------ISTD----------						
66)	T	t-1,3-Dichloropropene	0.273	0.336	0.355	0.385	0.417	0.431	0.451	0.378	16
67)	T	Ethyl Methacrylate			0.329	0.384	0.424	0.443	0.466	0.409	13
68)	T	1,1,2-Trichloroethane		0.268	0.274	0.287	0.292	0.280	0.279	0.280	3
69)	T	Tetrachloroethene		0.559	0.473	0.481	0.497	0.474	0.482	0.494	7
70)	T	1,3-Dichloropropane		0.556	0.537	0.567	0.569	0.555	0.564	0.558	2
71)	T	2-Hexanone			0.118	0.134	0.149	0.157	0.166	0.145	13
72)	T	Dibromochloromethane		0.466	0.387	0.420	0.424	0.415	0.422	0.422	6
73)	T	1,2-Dibromoethane		0.322	0.317	0.332	0.341	0.333	0.333	0.330	3
74)	P	Chlorobenzene		1.210	1.117	1.153	1.169	1.127	1.156	1.155	3
75)	T	1,1,1,2-Tetrachloroethane		0.378	0.353	0.371	0.394	0.383	0.395	0.379	4
76)	CCC	Ethylbenzene		1.612	1.598	1.771	1.890	1.864	1.928	1.777	8
77)	T	p/m-Xylene	1.105	1.171	1.263	1.408	1.481	1.458	1.533	1.345	12
78)	T	o-Xylene	1.149	1.057	1.208	1.328	1.452	1.446	1.534	1.311	14
79)	T	Styrene		0.804	0.996	1.133	1.236	1.228	1.311	1.118	17
80)	T	Isopropylbenzene		1.364	1.531	1.731	1.887	1.895	2.037	1.741	15
81)	S	1,4-Bromofluorobenzene	0.403	0.404	0.426	0.441	0.448	0.454	0.473	0.435	6
82)	T	1,2,3-Trichloropropane		0.134	0.130	0.142	0.147	0.143	0.148	0.140	5
83)	T	Bromobenzene		0.505	0.465	0.493	0.516	0.501	0.537	0.503	5
84)	T	n-Propylbenzene		1.825	1.951	2.190	2.338	2.338	2.481	2.187	12
85)	T	t-1,4-Dichloro-2-Butene		0.115	0.107	0.121	0.130	0.135	0.148	0.126	12
86)	T	2-Chlorotoluene		1.128	1.104	1.225	1.272	1.266	1.332	1.221	7
87)	T	1,3,5-Trimethylbenzene		1.119	1.308	1.485	1.586	1.601	1.733	1.472	15
88)	I	1,4-Dichlorobenzen...			----------ISTD----------						
89)	P	Bromoform		0.495	0.449	0.473	0.485	0.480	0.491	0.479	3
90)	P	1,1,2,2-Tetrachloroethane		0.910	0.806	0.837	0.843	0.816	0.823	0.839	4
91)	T	4-Chlorotoluene		2.328	2.386	2.490	2.554	2.468	2.526	2.459	3
92)	T	Cyclohexanone			0.025	0.028	0.031	0.031	0.031	0.029#	9
93)	T	1,2,4-Trimethylbenzene		1.934	2.267	2.507	2.707	2.601	2.715	2.455	12
94)	T	tert-Butylbenzene		0.589	0.578	0.631	0.668	0.657	0.686	0.635	7

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Response Factor Report GCMS XX

Method Path : C:\MSDCHEM\1\METHODS\
Method File : 131220.M

95)	T	p-Isopropyltoluene	2.057	2.581	2.825	3.087	3.043	3.198	2.799	15
96)	T	sec-Butylbenzene	2.715	3.168	3.425	3.636	3.561	3.756	3.377	11
97)	T	1,3-Dichlorobenzene	1.755	1.573	1.612	1.678	1.615	1.683	1.653	4
98)	T	1,4-Dichlorobenzene	2.169	1.700	1.685	1.721	1.651	1.703	1.771	11
99)	T	1,2-Dichlorobenzene	1.664	1.534	1.593	1.649	1.592	1.645	1.613	3
100)	T	n-Butylbenzene	2.233	2.406	2.656	2.912	2.885	3.061	2.692	12
101)	T	1,2-Dibromo-3-Chloropropane		0.128	0.125	0.138	0.137	0.139	0.133	5
102)	T	1,2,4-Trichlorobenzene	1.311	0.980	0.999	1.122	1.138	1.184	1.122	11
103)	T	Hexachloro-1,3-Butadiene	0.696	0.640	0.672	0.687	0.663	0.693	0.675	3
104)	T	Naphthalene		1.963	2.185	2.692	2.734	2.836	2.482	15
105)	T	1,2,3-Trichlorobenzene	1.208	0.991	1.021	1.128	1.095	1.128	1.095	7

(#) = Out of Range

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Evaluate Continuing Calibration Report

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC015.D Vial: 15
Acq On : 20 Dec 2013 5:41 pm Operator: 796
Sample : ICV V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 09:14:42 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Tert-Butyl Alcohol-d9	1.000	1.000	0	104	0.00
2	T	Ethanol	0.328	0.359	-9	109	0.00
3	T	Tert-Butyl Alcohol (TBA)	1.390	1.468	-6	107	0.00
4	I	Pentafluorobenzene	1.000	1.000	0	109	0.00
5	T	Dichlorodifluoromethane	0.660	0.702	-6	110	0.00
6	P	Chloromethane	0.780	0.772	1	108	-0.01
7	CCC	Vinyl Chloride	0.697	0.767	-10	110	-0.02
8	T	Bromomethane	0.248	0.254	-2	109	0.00
9	T	Chloroethane	0.405	0.404	0	107	-0.04
10	T	1,3-Butadiene	0.648	0.456	30#	75	0.00
11	T	Trichlorofluoromethane	0.917	0.921	0	109	0.00
12	T	Diethyl Ether	0.417	0.355	15	101	0.00
13	T	Acetone	0.052	0.105	-102#	229#	0.00
14	T	Iodomethane	0.208	0.275	-32#	151#	0.00
15	CCC	1,1-Dichloroethene	0.781	0.700	10	99	0.00
16	T	1,1,2-Trichloro-1,2,2-Trifl	0.529	0.505	5	106	0.00
17	T	Isopropanol	0.034	0.033#	3	108	0.00
18	T	Carbon Disulfide	1.748	1.497	14	99	0.00
19	T	Acetonitrile	0.437	0.422	3	105	0.00
20	T	Acrylonitrile	0.208	0.214	-3	106	0.01
21	T	Allyl Chloride	0.243	0.236	3	107	0.00
22	T	Acrolein	0.094	0.122	-30#	125	0.00
23	T	Methylene Chloride	0.490	0.493	-1	107	0.00
24	T	t-1,2-Dichloroethene	0.499	0.498	0	110	0.00
25	T	Isobutyl Alcohol	0.021	0.020#	5	101	0.00
26	T	Methyl-t-Butyl Ether (MTBE)	1.005	1.016	-1	107	0.00
27	T	Hexane	0.820	0.827	-1	105	0.00
28	P	1,1-Dichloroethane	0.888	0.852	4	104	0.00
29	T	Vinyl Acetate	0.061	0.073#	-20	125	0.00
30	T	Diisopropyl Ether (DIPE)	1.613	1.727	-7	109	0.00
31	T	Chloroprene	0.755	0.833	-10	114	0.00
32	T	Ethyl-t-Butyl Ether (ETBE)	1.073	1.088	-1	107	0.00
33	T	c-1,2-Dichloroethene	0.522	0.540	-3	109	0.00
34	T	2,2-Dichloropropane	0.501	0.509	-2	112	0.00
35	T	2-Butanone	0.230	0.340	-48#	154#	0.00
36	T	Propionitrile	0.081	0.081#	0	106	0.00
37	T	Methacrylonitrile	0.402	0.395	2	101	0.00
38	T	Bromochloromethane	0.347	0.332	4	103	0.00
39	T	Tetrahydrofuran	0.167	0.162	3	98	0.01
40	CCC	Chloroform	0.857	0.818	5	107	0.00
41	S	Dibromofluoromethane	0.468	0.446	5	107	0.00
42	T	1,1,1-Trichloroethane	0.683	0.680	0	108	0.00
43	T	Cyclohexane	0.735	0.759	-3	111	0.00
44	T	1,1-Dichloropropene	0.621	0.638	-3	112	0.00
45	T	Carbon Tetrachloride	0.649	0.629	3	106	0.00
46	S	1,2-Dichloroethane-d4	0.462	0.446	3	106	0.00
47	I	1,4-Difluorobenzene	1.000	1.000	0	109	0.00
48	T	Benzene	1.296	1.315	-1	107	0.00
49	T	1,2-Dichloroethane	0.461	0.459	0	107	0.00
50	T	2-Methyl-2-Butanol (TAA)	0.023	0.024#	-4	113	0.00
51	T	Tert-Amyl-Methyl Ether (TAM	0.587	0.606	-3	105	0.00
52	T	Thiophene	0.692	0.727	-5	107	0.00
53	T	2,2,4-Trimethyl Pentane	1.590	1.712	-8	109	0.00

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Evaluate Continuing Calibration Report

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC015.D Vial: 15
Acq On : 20 Dec 2013 5:41 pm Operator: 796
Sample : ICV V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 09:14:42 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	T	Trichloroethene	0.351	0.353	-1	108	0.00
55	CCC	1,2-Dichloropropane	0.348	0.353	-1	106	0.00
56	T	Dibromomethane	0.200	0.199	1	106	0.00
57	T	Methyl Methacrylate	0.208	0.214	-3	107	0.00
58	T	1,4-Dioxane	0.005	0.004#	20	95	0.00
59	T	Bromodichloromethane	0.451	0.436	3	103	0.00
60	T	2-Chloroethyl Vinyl Ether	0.003	0.003#	0	130	-0.01
61	T	c-1,3-Dichloropropene	0.416	0.463	-11	111	0.00
62	S	Toluene-d8	1.133	1.136	0	108	0.00
63	CCC	Toluene	1.481	1.512	-2	108	0.00
64	T	4-Methyl-2-Pentanone	0.128	0.133	-4	108	0.00
65	I	Chlorobenzene-d5	1.000	1.000	0	108	0.00
66	T	t-1,3-Dichloropropene	0.378	0.411	-9	106	0.00
67	T	Ethyl Methacrylate	0.409	0.396	3	100	0.00
68	T	1,1,2-Trichloroethane	0.280	0.285	-2	105	0.00
69	T	Tetrachloroethene	0.494	0.498	-1	108	0.00
70	T	1,3-Dichloropropane	0.558	0.555	1	105	0.00
71	T	2-Hexanone	0.145	0.182	-26#	131	0.00
72	T	Dibromochloromethane	0.422	0.415	2	105	0.00
73	T	1,2-Dibromoethane	0.330	0.336	-2	106	0.00
74	P	Chlorobenzene	1.155	1.089	6	100	0.00
75	T	1,1,1,2-Tetrachloroethane	0.379	0.386	-2	105	0.00
76	CCC	Ethylbenzene	1.777	1.896	-7	108	0.00
77	T	p/m-Xylene	1.345	1.439	-7	104	0.00
78	T	o-Xylene	1.311	1.349	-3	100	0.00
79	T	Styrene	1.118	1.225	-10	107	0.00
80	T	Isopropylbenzene	1.741	1.752	-1	100	0.00
81	S	1,4-Bromofluorobenzene	0.435	0.451	-4	108	0.00
82	T	1,2,3-Trichloropropane	0.140	0.140	0	103	0.00
83	T	Bromobenzene	0.503	0.513	-2	107	0.00
84	T	n-Propylbenzene	2.187	2.148	2	99	0.00
85	T	t-1,4-Dichloro-2-Butene	0.126	0.096#	24#	79	0.00
86	T	2-Chlorotoluene	1.221	1.224	0	104	0.00
87	T	1,3,5-Trimethylbenzene	1.472	1.658	-13	112	0.00
88	I	1,4-Dichlorobenzene-d4	1.000	1.000	0	109	0.00
89	P	Bromoform	0.479	0.479	0	107	0.00
90	P	1,1,2,2-Tetrachloroethane	0.839	0.829	1	107	0.00
91	T	4-Chlorotoluene	2.459	2.389	3	102	0.00
92	T	Cyclohexanone	0.029	0.210	-624#	747#	0.00
93	T	1,2,4-Trimethylbenzene	2.455	2.725	-11	109	0.00
94	T	tert-Butylbenzene	0.635	0.633	0	103	0.00
95	T	p-Isopropyltoluene	2.799	2.885	-3	102	0.00
96	T	sec-Butylbenzene	3.377	3.404	-1	102	0.00
97	T	1,3-Dichlorobenzene	1.653	1.560	6	101	0.00
98	T	1,4-Dichlorobenzene	1.771	1.735	2	110	0.00
99	T	1,2-Dichlorobenzene	1.613	1.525	5	100	0.00
100	T	n-Butylbenzene	2.692	2.937	-9	110	0.00
101	T	1,2-Dibromo-3-Chloropropane	0.133	0.130	2	103	0.00
102	T	1,2,4-Trichlorobenzene	1.122	1.146	-2	111	0.00
103	T	Hexachloro-1,3-Butadiene	0.675	0.686	-2	108	0.00
104	T	Naphthalene	2.482	2.605	-5	105	0.00
105	T	1,2,3-Trichlorobenzene	1.095	1.124	-3	108	0.00

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Evaluate Continuing Calibration Report

```
Data File : W:\GCMS_XX_DATA\2013\131220\20DEC015.D       Vial: 15
Acq On    : 20 Dec 2013   5:41 pm                    Operator: 796
Sample    : ICV V120913D/V121313B                    Inst    : GCMS XX
Misc      : V121113A                                 Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 09:14:42 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title  : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration


Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 150%

       Compound                      AvgRF   CCRF      %Dev Area% Dev(min)
-----------------------------------------------------------------------------

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

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Calibration Plot Report

Method: C:\MSDCHEM\1\METHODS\131220.M
CalUpdate: Fri Dec 20 17:34:37 2013
Instrument: GCMS XX
Date: Fri Dec 20 17:34:50 2013

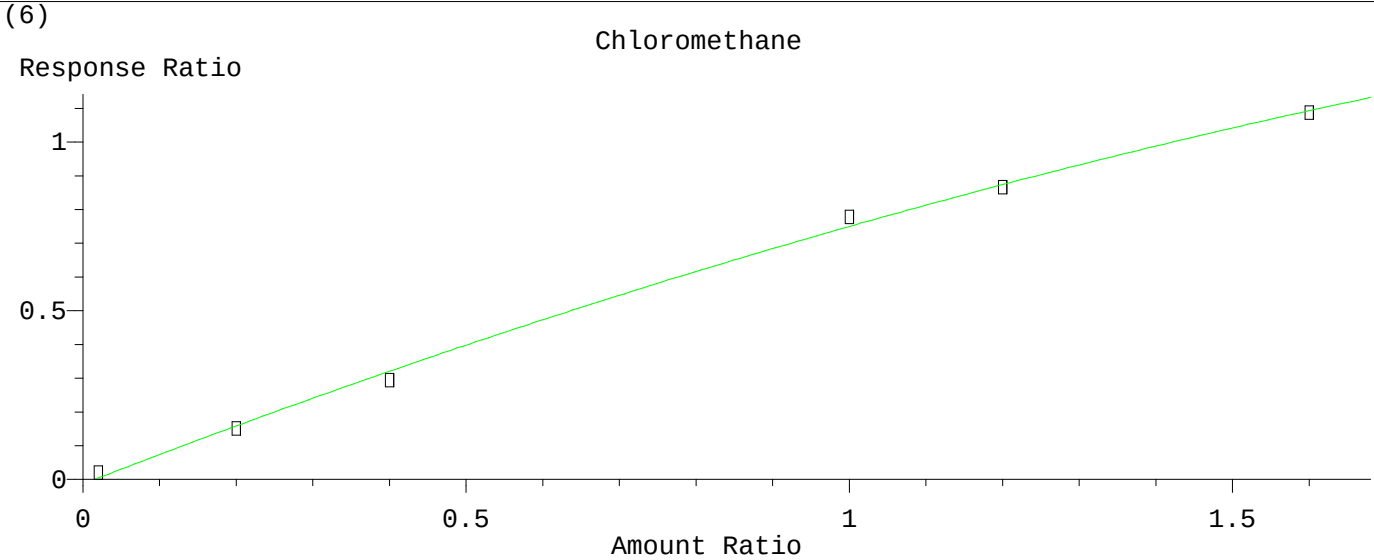
Level	Aqc Time	Data File
0.5	20 Dec 2013 11:45 am	W:\GCMS_XX_DATA\2013\131220\20DEC005.D
1	20 Dec 2013 5:01 pm	W:\GCMS_XX_DATA\2013\131220\20DEC014.D
10	20 Dec 2013 4:09 pm	W:\GCMS_XX_DATA\2013\131220\20DEC013.D
20	20 Dec 2013 1:11 pm	W:\GCMS_XX_DATA\2013\131220\20DEC008.D
50	20 Dec 2013 1:39 pm	W:\GCMS_XX_DATA\2013\131220\20DEC009.D
100	20 Dec 2013 2:08 pm	W:\GCMS_XX_DATA\2013\131220\20DEC010.D
200	20 Dec 2013 2:37 pm	W:\GCMS_XX_DATA\2013\131220\20DEC011.D

Definitions
TC = Target Compound
IS = Internal Standard

R = -0.119322 A*A + 0.882344 A + -0.014046, r^2 = 0.997991

Level	ResponseTC	ResponseIS	AmountTC	AmountIS	ResponseRatio	AmountRatio
1	16565	818709	1.000	50.000	0.02023	0.02000
10	138906	922634	10.000	50.000	0.15055	0.20000
20	255423	868310	20.000	50.000	0.29416	0.40000
50	684141	879656	50.000	50.000	0.77774	1.00000
100	828942	957569	60.000	50.000	0.86567	1.20000
200	1108872	1020304	80.000	50.000	1.08681	1.60000

(6)



R = -1.19e-001 A*A + 8.82e-001 A - 1.40e-002
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic

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Calibration Plot Report

Method: C:\MSDCHEM\1\METHODS\131220.M
CalUpdate: Fri Dec 20 17:34:37 2013
Instrument: GCMS XX
Date: Fri Dec 20 17:34:57 2013

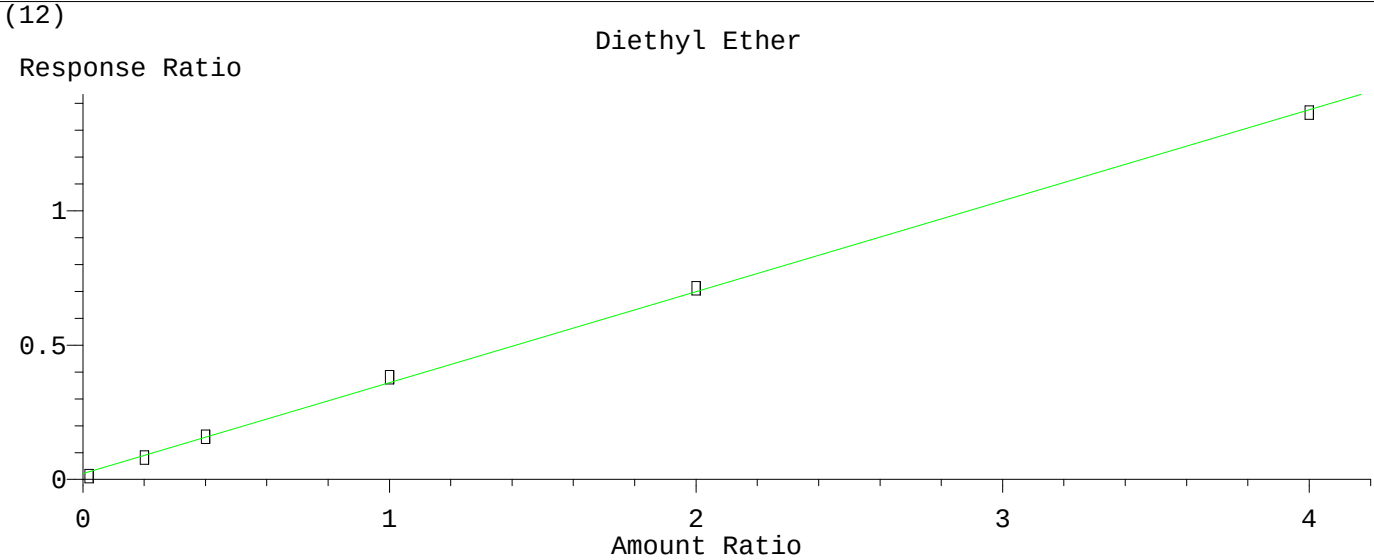
Level	Aqc Time	Data File
0.5	20 Dec 2013 11:45 am	W:\GCMS_XX_DATA\2013\131220\20DEC005.D
1	20 Dec 2013 5:01 pm	W:\GCMS_XX_DATA\2013\131220\20DEC014.D
10	20 Dec 2013 4:09 pm	W:\GCMS_XX_DATA\2013\131220\20DEC013.D
20	20 Dec 2013 1:11 pm	W:\GCMS_XX_DATA\2013\131220\20DEC008.D
50	20 Dec 2013 1:39 pm	W:\GCMS_XX_DATA\2013\131220\20DEC009.D
100	20 Dec 2013 2:08 pm	W:\GCMS_XX_DATA\2013\131220\20DEC010.D
200	20 Dec 2013 2:37 pm	W:\GCMS_XX_DATA\2013\131220\20DEC011.D

Definitions
TC = Target Compound
IS = Internal Standard

R = 0.000000 A*A + 0.338695 A + 0.021071, r^2 = 0.999242

Level	ResponseTC	ResponseIS	AmountTC	AmountIS	ResponseRatio	AmountRatio
1	10210	818709	1.000	50.000	0.01247	0.02000
10	74352	922634	10.000	50.000	0.08059	0.20000
20	137382	868310	20.000	50.000	0.15822	0.40000
50	334681	879656	50.000	50.000	0.38047	1.00000
100	680471	957569	100.000	50.000	0.71062	2.00000
200	1392629	1020304	200.000	50.000	1.36492	4.00000

(12)



Resp Ratio = 3.39e-001 * Amt + 2.11e-002
Coef of Det (r^2) = 0.999 Curve Fit: Linear

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Calibration Plot Report

Method: C:\MSDCHEM\1\METHODS\131220.M
CalUpdate: Fri Dec 20 17:34:37 2013
Instrument: GCMS XX
Date: Fri Dec 20 17:35:02 2013

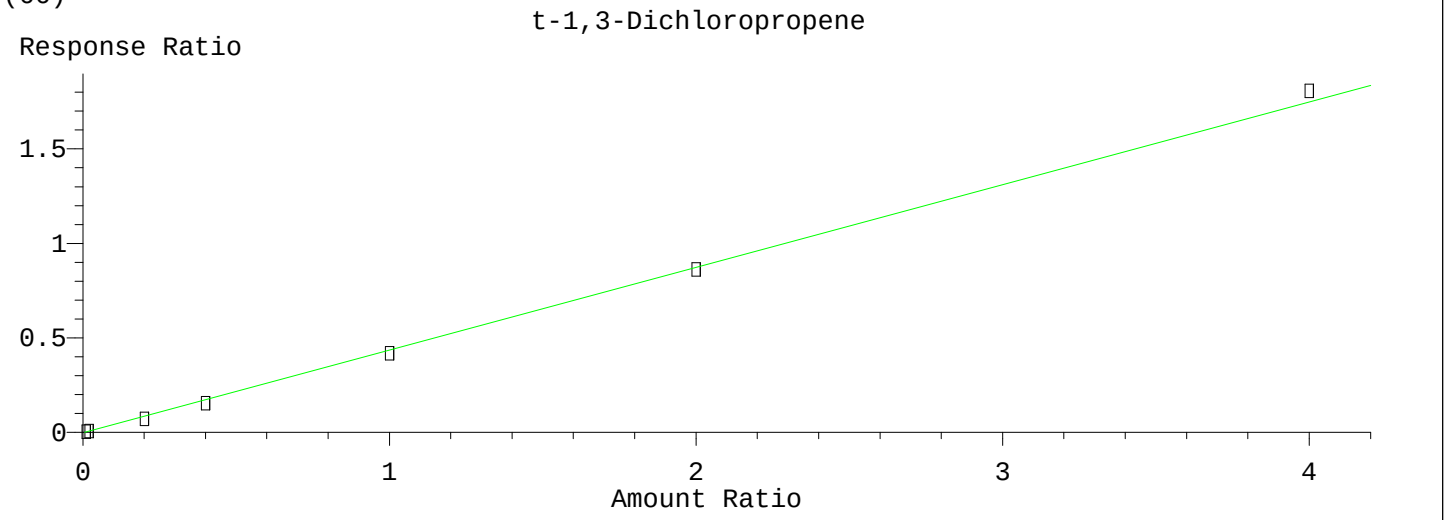
Level	Aqc Time	Data File
0.5	20 Dec 2013 11:45 am	W:\GCMS_XX_DATA\2013\131220\20DEC005.D
1	20 Dec 2013 5:01 pm	W:\GCMS_XX_DATA\2013\131220\20DEC014.D
10	20 Dec 2013 4:09 pm	W:\GCMS_XX_DATA\2013\131220\20DEC013.D
20	20 Dec 2013 1:11 pm	W:\GCMS_XX_DATA\2013\131220\20DEC008.D
50	20 Dec 2013 1:39 pm	W:\GCMS_XX_DATA\2013\131220\20DEC009.D
100	20 Dec 2013 2:08 pm	W:\GCMS_XX_DATA\2013\131220\20DEC010.D
200	20 Dec 2013 2:37 pm	W:\GCMS_XX_DATA\2013\131220\20DEC011.D

Definitions
TC = Target Compound
IS = Internal Standard

R = 0.000000 A*A + 0.437405 A + -0.002594, r^2 = 0.997760

Level	ResponseTC	ResponseIS	AmountTC	AmountIS	ResponseRatio	AmountRatio
0.5	2720	995180	0.500	50.000	0.00273	0.01000
1	7172	1067718	1.000	50.000	0.00672	0.02000
10	82008	1154706	10.000	50.000	0.07102	0.20000
20	166297	1080036	20.000	50.000	0.15397	0.40000
50	459467	1100904	50.000	50.000	0.41735	1.00000
100	1039231	1206363	100.000	50.000	0.86146	2.00000
200	2367457	1310892	200.000	50.000	1.80599	4.00000

(66)



Resp Ratio = 4.37e-001 * Amt - 2.59e-003
Coef of Det (r^2) = 0.998 Curve Fit: wlr(1/a)

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC005.D Vial: 5
Acq On : 20 Dec 2013 11:45 am Operator: 796
Sample : IC 0.5PPB/BFB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:38 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.317	65	140381	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	739933	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.344	114	1106353	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	995180	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	528905	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	374750	54.13	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 108.26%			
46) 1,2-Dichloroethane-d4	7.683	65	370075	54.08	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 108.16%			
62) Toluene-d8	10.324	98	1249326	49.82	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.64%			
81) 1,4-Bromofluorobenzene	13.658	95	401383	46.31	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.62%			
Target Compounds						Qvalue
2) Ethanol	3.062	45	1660	9.02	ug/l #	1
3) Tert-Butyl Alcohol (TBA)	4.448	59	1502	1.93	ug/l #	91
5) Dichlorodifluoromethane	1.785	85	4890	0.50	ug/l	76
6) Chloromethane	1.927	50	9236	0.80	ug/l	78
7) Vinyl Chloride	2.096	62	4718	0.45	ug/l	45
8) Bromomethane	2.522	94	187	N.D.		
9) Chloroethane	2.473	64	12163	2.06	ug/l	51
10) 1,3-Butadiene	2.031	54	4170	0.44	ug/l	98
11) Trichlorofluoromethane	2.773	101	6511	0.48	ug/l	80
12) Diethyl Ether	3.144	45	5782	0.94	ug/l #	67
13) Acetone	3.564	58	349	0.46	ug/l #	68
14) Iodomethane	3.651	142	171	N.D.		
15) 1,1-Dichloroethene	3.438	61	6367	0.55	ug/l	97
16) 1,1,2-Trichloro-1,2,2-...	3.444	101	4536	0.58	ug/l	95
17) Isopropanol	3.804	45	2099	4.21	ug/l	85
18) Carbon Disulfide	3.722	76	18125	0.70	ug/l	92
19) Acetonitrile	3.973	41	7400	1.14	ug/l	82
20) Acrylonitrile	4.633	53	385	0.13	ug/l #	28
21) Allyl Chloride	3.968	76	1437	0.40	ug/l #	34
22) Acrolein	3.318	56	742	0.53	ug/l #	14
23) Methylene Chloride	4.170	84	6900	0.95	ug/l #	57
24) t-1,2-Dichloroethene	4.628	96	3358	0.46	ug/l #	52
25) Isobutyl Alcohol	7.749	43	277	0.89	ug/l #	11
26) Methyl-t-Butyl Ether (...	4.644	73	7363	0.50	ug/l	82
27) Hexane	5.119	57	5653	0.47	ug/l	82
28) 1,1-Dichloroethane	5.397	63	7174	0.55	ug/l	90
29) Vinyl Acetate	0.000		0	N.D.		
30) Diisopropyl Ether (DIPE)	5.572	45	10829	0.45	ug/l	99
31) Chloroprene	5.556	53	3891	0.35	ug/l #	52
32) Ethyl-t-Butyl Ether (E...	6.205	59	6911	0.44	ug/l	96
33) c-1,2-Dichloroethene	6.412	96	4029	0.52	ug/l	91
34) 2,2-Dichloropropane	6.390	77	3577	0.48	ug/l	93
35) 2-Butanone	6.483	43	114	N.D.		
36) Propionitrile	6.685	54	74	N.D.		
37) Methacrylonitrile	6.827	41	1775	0.30	ug/l #	88
38) Bromochloromethane	6.789	130	2909	0.57	ug/l #	62
39) Tetrahydrofuran	6.843	42	97	N.D.		
40) Chloroform	6.941	83	7200	0.57	ug/l	81
42) 1,1,1-Trichloroethane	7.192	97	5164	0.51	ug/l	86
43) Cyclohexane	7.285	84	23202	2.13	ug/l #	34
44) 1,1-Dichloropropene	7.454	75	5652	0.62	ug/l	71

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC005.D Vial: 5
Acq On : 20 Dec 2013 11:45 am Operator: 796
Sample : IC 0.5PPB/BFB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:38 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) Carbon Tetrachloride	7.433	117	4872	0.51 ug/l	97
48) Benzene	7.754	78	14968	0.52 ug/l	83
49) 1,2-Dichloroethane	7.793	62	5422	0.53 ug/l	92
50) 2-Methyl-2-Butanol (TAA)	7.858	59	1486	2.93 ug/l #	84
51) Tert-Amyl-Methyl Ether...	7.945	73	5189	0.40 ug/l	90
52) Thiophene	8.055	84	6631	0.43 ug/l	90
53) 2,2,4-Trimethyl Pentane	7.880	57	16582	0.47 ug/l	95
54) Trichloroethene	8.682	95	3818	0.49 ug/l #	77
55) 1,2-Dichloropropane	8.998	63	4083	0.53 ug/l	88
56) Dibromomethane	9.157	93	2268	0.51 ug/l	87
57) Methyl Methacrylate	9.211	69	1960	0.43 ug/l #	62
58) 1,4-Dioxane	9.233	88	70	0.70 ug/l #	60
59) Bromodichloromethane	9.386	83	5582	0.56 ug/l	93
60) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.	
61) c-1,3-Dichloropropene	10.002	75	3750	0.41 ug/l	90
63) Toluene	10.412	91	17416	0.53 ug/l	99
64) 4-Methyl-2-Pentanone	10.204	58	559	0.20 ug/l #	72
66) t-1,3-Dichloropropene	10.739	75	2720	0.61 ug/l	64
67) Ethyl Methacrylate	10.865	69	2166	0.27 ug/l	85
68) 1,1,2-Trichloroethane	10.957	83	2651	0.48 ug/l	82
69) Tetrachloroethene	11.105	166	5056	0.51 ug/l	89
70) 1,3-Dichloropropane	11.165	76	5072	0.46 ug/l	75
71) 2-Hexanone	11.307	58	267	0.09 ug/l #	19
72) Dibromochloromethane	11.448	129	4099	0.49 ug/l	78
73) 1,2-Dibromoethane	11.590	107	2809	0.43 ug/l	93
74) Chlorobenzene	12.201	112	11211	0.49 ug/l	86
75) 1,1,1,2-Tetrachloroethane	12.316	131	3653	0.48 ug/l	91
76) Ethylbenzene	12.354	91	15956	0.45 ug/l	85
77) p/m-Xylene	12.501	91	21984	0.82 ug/l	92
78) o-Xylene	12.998	91	11439	0.44 ug/l	94
79) Styrene	13.025	104	7442	0.33 ug/l	90
80) Isopropylbenzene	13.462	105	12714	0.37 ug/l	100
82) 1,2,3-Trichloropropane	13.909	110	1672	0.60 ug/l #	64
83) Bromobenzene	13.855	156	4508	0.45 ug/l #	74
84) n-Propylbenzene	13.991	91	16696	0.38 ug/l	99
85) t-1,4-Dichloro-2-Butene	13.942	53	553	0.22 ug/l #	37
86) 2-Chlorotoluene	14.084	91	10109	0.42 ug/l	95
87) 1,3,5-Trimethylbenzene	14.209	105	9826	0.34 ug/l	76
89) Bromoform	13.244	173	2754	0.54 ug/l	72
90) 1,1,2,2-Tetrachloroethane	13.849	83	4290	0.48 ug/l	88
91) 4-Chlorotoluene	14.231	91	10932	0.42 ug/l	67
92) Cyclohexanone	13.604	55	286	0.93 ug/l #	65
93) 1,2,4-Trimethylbenzene	14.679	105	10378	0.40 ug/l	84
94) tert-Butylbenzene	14.613	134	2542	0.38 ug/l #	59
95) p-Isopropyltoluene	15.077	119	11057	0.37 ug/l	95
96) sec-Butylbenzene	14.891	105	14024	0.39 ug/l	78
97) 1,3-Dichlorobenzene	15.028	146	7797	0.45 ug/l	93
98) 1,4-Dichlorobenzene	15.137	146	11218	0.60 ug/l	92
99) 1,2-Dichlorobenzene	15.606	146	7517	0.44 ug/l	84
100) n-Butylbenzene	15.595	91	10492	0.37 ug/l	90
101) 1,2-Dibromo-3-Chloropr...	16.588	75	419	0.30 ug/l #	25
102) 1,2,4-Trichlorobenzene	17.625	180	4899	0.41 ug/l	100
103) Hexachloro-1,3-Butadiene	17.832	225	4053	0.57 ug/l	92
104) Naphthalene	17.941	128	10635	0.41 ug/l	96
105) 1,2,3-Trichlorobenzene	18.242	180	4709	0.41 ug/l	83

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

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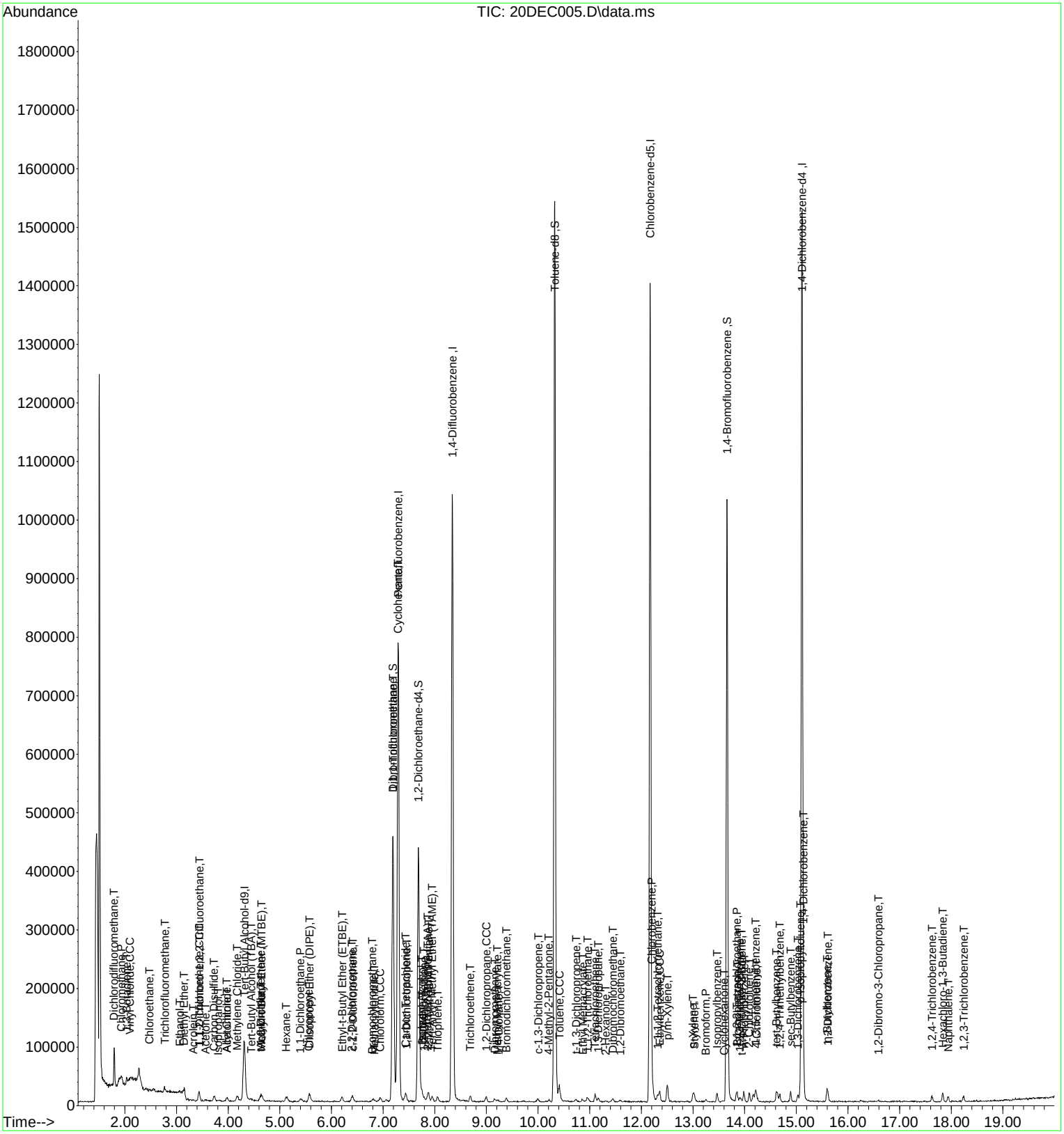
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC005.D Vial: 5
Acq On : 20 Dec 2013 11:45 am Operator: 796
Sample : IC 0.5PPB/BFB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:38 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC014.D Vial: 14
Acq On : 20 Dec 2013 5:01 pm Operator: 796
Sample : IC 1.0PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:31:19 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.323	65	160987	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	818709	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1222746	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1067718	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	582096	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	404696	52.83	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 105.66%			
46) 1,2-Dichloroethane-d4	7.684	65	407198	53.78	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 107.56%			
62) Toluene-d8	10.319	98	1348687	48.67	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.34%			
81) 1,4-Bromofluorobenzene	13.658	95	430906	46.34	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.68%			
Target Compounds						Qvalue
2) Ethanol	3.051	45	3138	14.87	ug/l #	59
3) Tert-Butyl Alcohol (TBA)	4.481	59	4274	4.78	ug/l #	56
5) Dichlorodifluoromethane	1.780	85	10155	0.94	ug/l	80
6) Chloromethane	1.938	50	16565	1.30	ug/l	83
7) Vinyl Chloride	2.096	62	10547	0.92	ug/l #	33
8) Bromomethane	2.336	94	3151	0.69	ug/l	86
9) Chloroethane	2.478	64	7321	1.12	ug/l	97
10) 1,3-Butadiene	2.036	54	10962	1.03	ug/l	88
11) Trichlorofluoromethane	2.773	101	16964	1.13	ug/l	88
12) Diethyl Ether	3.149	45	10210	1.50	ug/l #	74
13) Acetone	3.542	58	3315	3.91	ug/l #	32
14) Iodomethane	3.646	142	2173	0.64	ug/l #	42
15) 1,1-Dichloroethene	3.428	61	15024	1.18	ug/l	87
16) 1,1,2-Trichloro-1,2,2-...	3.433	101	10265	1.19	ug/l	96
17) Isopropanol	3.815	45	3875	7.02	ug/l	85
18) Carbon Disulfide	3.728	76	39447	1.38	ug/l	98
19) Acetonitrile	3.962	41	15022	2.10	ug/l	76
20) Acrylonitrile	4.666	53	2938	0.86	ug/l	100
21) Allyl Chloride	3.962	76	4455	1.12	ug/l #	78
22) Acrolein	3.329	56	5347	3.47	ug/l	94
23) Methylene Chloride	4.170	84	11474	1.43	ug/l #	80
24) t-1,2-Dichloroethene	4.612	96	9197	1.13	ug/l	90
25) Isobutyl Alcohol	7.749	43	230	0.67	ug/l #	34
26) Methyl-t-Butyl Ether (...	4.661	73	16438	1.00	ug/l	99
27) Hexane	5.119	57	12850	0.96	ug/l	87
28) 1,1-Dichloroethane	5.397	63	15747	1.08	ug/l	96
29) Vinyl Acetate	5.567	86	74	N.D.		
30) Diisopropyl Ether (DIPE)	5.588	45	23758	0.90	ug/l	92
31) Chloroprene	5.556	53	10253	0.83	ug/l	85
32) Ethyl-t-Butyl Ether (E...	6.205	59	16641	0.95	ug/l	96
33) c-1,2-Dichloroethene	6.412	96	8685	1.02	ug/l #	79
34) 2,2-Dichloropropane	6.390	77	9050	1.10	ug/l	81
35) 2-Butanone	6.532	43	3955	1.05	ug/l	97
36) Propionitrile	6.609	54	613	0.46	ug/l	57
37) Methacrylonitrile	6.838	41	7113	1.08	ug/l	85
38) Bromochloromethane	6.794	130	6631	1.17	ug/l	87
39) Tetrahydrofuran	6.898	42	2886	1.06	ug/l	81
40) Chloroform	6.942	83	16913	1.21	ug/l	77
42) 1,1,1-Trichloroethane	7.182	97	12215	1.09	ug/l	92
43) Cyclohexane	7.291	84	33252	2.76	ug/l #	64
44) 1,1-Dichloropropene	7.438	75	10717	1.05	ug/l	91

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC014.D Vial: 14
Acq On : 20 Dec 2013 5:01 pm Operator: 796
Sample : IC 1.0PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:31:19 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) Carbon Tetrachloride	7.438	117	11594	1.09 ug/l	90
48) Benzene	7.744	78	30950	0.98 ug/l	73
49) 1,2-Dichloroethane	7.804	62	11822	1.05 ug/l	96
50) 2-Methyl-2-Butanol (TAA)	7.869	59	2545	4.54 ug/l #	82
51) Tert-Amyl-Methyl Ether...	7.956	73	12193	0.85 ug/l	84
52) Thiophene	8.060	84	15054	0.89 ug/l	96
53) 2,2,4-Trimethyl Pentane	7.875	57	33447	0.86 ug/l	92
54) Trichloroethene	8.677	95	9364	1.09 ug/l #	67
55) 1,2-Dichloropropane	8.999	63	8012	0.94 ug/l	83
56) Dibromomethane	9.162	93	4937	1.01 ug/l #	77
57) Methyl Methacrylate	9.217	69	3904	0.77 ug/l #	59
58) 1,4-Dioxane	9.228	88	968	8.79 ug/l #	50
59) Bromodichloromethane	9.386	83	11654	1.06 ug/l	95
60) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.	
61) c-1,3-Dichloropropene	9.992	75	8909	0.88 ug/l	94
63) Toluene	10.406	91	36732	1.01 ug/l	98
64) 4-Methyl-2-Pentanone	10.215	58	2395	0.76 ug/l	97
66) t-1,3-Dichloropropene	10.717	75	7172	1.06 ug/l	87
67) Ethyl Methacrylate	10.859	69	6368	0.73 ug/l	98
68) 1,1,2-Trichloroethane	10.952	83	5730	0.96 ug/l	92
69) Tetrachloroethene	11.105	166	11938	1.13 ug/l	89
70) 1,3-Dichloropropane	11.159	76	11873	1.00 ug/l	91
71) 2-Hexanone	11.318	58	2249	0.73 ug/l #	88
72) Dibromochloromethane	11.449	129	9957	1.10 ug/l	81
73) 1,2-Dibromoethane	11.579	107	6874	0.98 ug/l	93
74) Chlorobenzene	12.207	112	25836	1.05 ug/l	97
75) 1,1,1,2-Tetrachloroethane	12.311	131	8069	1.00 ug/l	91
76) Ethylbenzene	12.354	91	34414	0.91 ug/l	87
77) p/m-Xylene	12.502	91	49991	1.74 ug/l	92
78) o-Xylene	12.998	91	22578	0.81 ug/l	96
79) Styrene	13.015	104	17176	0.72 ug/l	94
80) Isopropylbenzene	13.467	105	29119	0.78 ug/l	100
82) 1,2,3-Trichloropropane	13.909	110	2858	0.95 ug/l #	78
83) Bromobenzene	13.844	156	10780	1.00 ug/l	85
84) n-Propylbenzene	13.980	91	38971	0.83 ug/l	90
85) t-1,4-Dichloro-2-Butene	13.926	53	2458	0.91 ug/l #	63
86) 2-Chlorotoluene	14.089	91	24084	0.92 ug/l	94
87) 1,3,5-Trimethylbenzene	14.209	105	23900	0.76 ug/l	90
89) Bromoform	13.244	173	5763	1.03 ug/l	91
90) 1,1,2,2-Tetrachloroethane	13.849	83	10598	1.08 ug/l	93
91) 4-Chlorotoluene	14.231	91	27106	0.95 ug/l	85
92) Cyclohexanone	13.593	55	1399	4.13 ug/l #	69
93) 1,2,4-Trimethylbenzene	14.673	105	22511	0.79 ug/l	92
94) tert-Butylbenzene	14.613	134	6855	0.93 ug/l #	90
95) p-Isopropyltoluene	15.077	119	23953	0.74 ug/l	92
96) sec-Butylbenzene	14.886	105	31609	0.80 ug/l	95
97) 1,3-Dichlorobenzene	15.033	146	20429	1.06 ug/l	90
98) 1,4-Dichlorobenzene	15.137	146	25251	1.22 ug/l	91
99) 1,2-Dichlorobenzene	15.612	146	19368	1.03 ug/l	89
100) n-Butylbenzene	15.590	91	25993	0.83 ug/l	92
101) 1,2-Dibromo-3-Chloropr...	16.583	75	1593	1.03 ug/l	95
102) 1,2,4-Trichlorobenzene	17.625	180	15267	1.17 ug/l	91
103) Hexachloro-1,3-Butadiene	17.832	225	8108	1.03 ug/l	93
104) Naphthalene	17.936	128	31520	1.09 ug/l	96
105) 1,2,3-Trichlorobenzene	18.236	180	14062	1.10 ug/l	91

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

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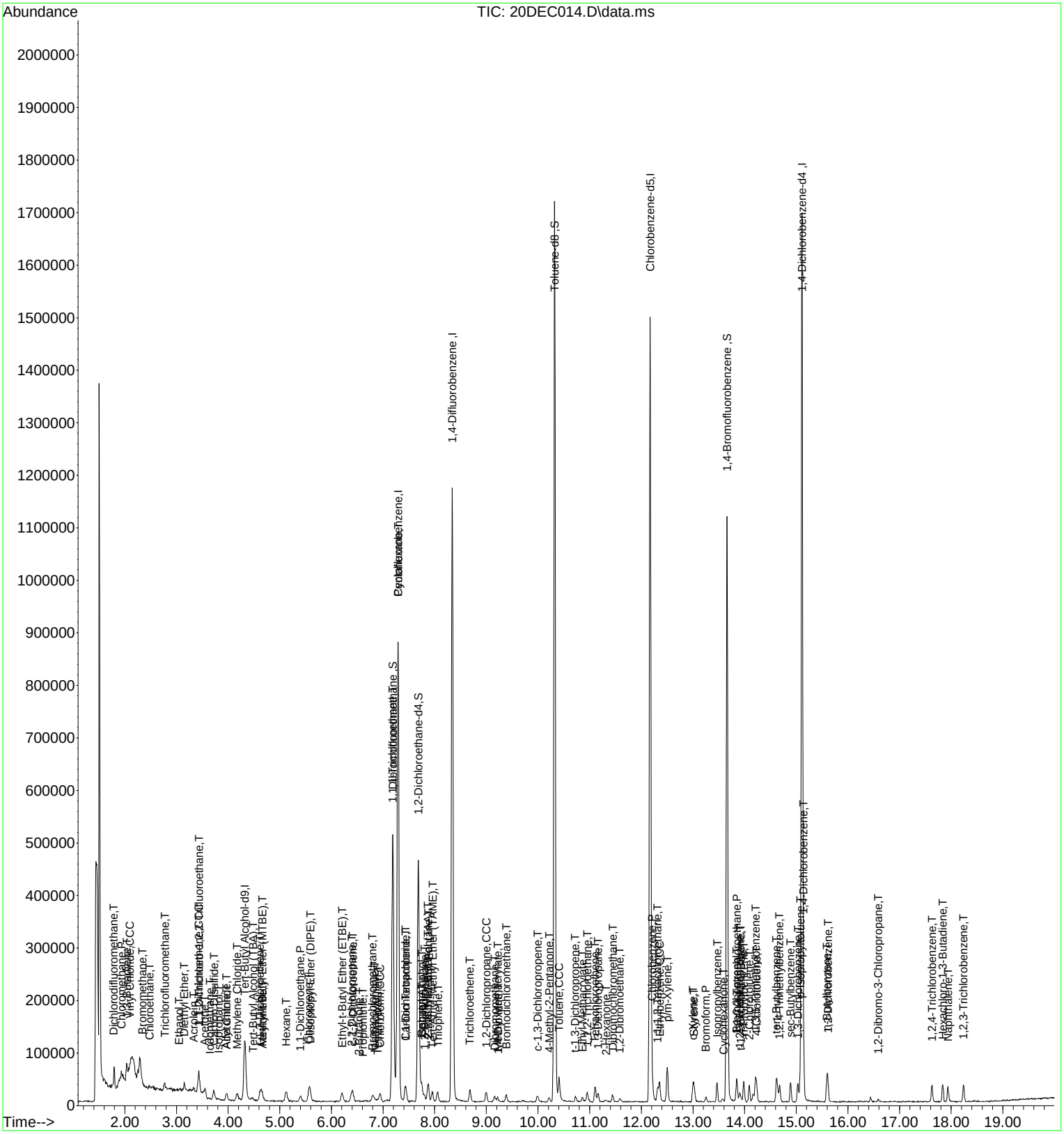
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC014.D Vial: 14
Acq On : 20 Dec 2013 5:01 pm Operator: 796
Sample : IC 1.0PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:31:19 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC013.D Vial: 13
Acq On : 20 Dec 2013 4:09 pm Operator: 796
Sample : IC 10PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:31:12 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.317	65	165364	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	922634	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1336931	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1154706	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.109	152	660846	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	428313	49.62	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 99.24%			
46) 1,2-Dichloroethane-d4	7.683	65	423116	49.58	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 99.16%			
62) Toluene-d8	10.319	98	1484191	48.98	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.96%			
81) 1,4-Bromofluorobenzene	13.658	95	492163	48.94	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.88%			
Target Compounds						Qvalue
2) Ethanol	3.056	45	22256	102.70	ug/l	96
3) Tert-Butyl Alcohol (TBA)	4.453	59	43245	47.11	ug/l	99
5) Dichlorodifluoromethane	1.780	85	124538	10.23	ug/l	95
6) Chloromethane	1.932	50	138906	9.65	ug/l	87
7) Vinyl Chloride	2.091	62	136555	10.52	ug/l	92
8) Bromomethane	2.353	94	46073	8.96	ug/l	92
9) Chloroethane	2.483	64	74684	10.12	ug/l	97
10) 1,3-Butadiene	2.031	54	120218	10.06	ug/l	95
11) Trichlorofluoromethane	2.773	101	170216	10.06	ug/l	92
12) Diethyl Ether	3.155	45	74352	9.67	ug/l	93
13) Acetone	3.558	58	11773	12.33	ug/l	98
14) Iodomethane	3.646	142	52911	13.77	ug/l	94
15) 1,1-Dichloroethene	3.433	61	134272	9.32	ug/l	99
16) 1,1,2-Trichloro-1,2,2-...	3.433	101	95827	9.82	ug/l	98
17) Isopropanol	3.809	45	28109	45.17	ug/l	85
18) Carbon Disulfide	3.728	76	299089	9.27	ug/l	99
19) Acetonitrile	3.973	41	153207	19.01	ug/l	95
20) Acrylonitrile	4.639	53	34084	8.88	ug/l	90
21) Allyl Chloride	3.968	76	41184	9.20	ug/l #	87
22) Acrolein	3.324	56	34613	19.94	ug/l	84
23) Methylene Chloride	4.175	84	90087	9.96	ug/l	98
24) t-1,2-Dichloroethene	4.622	96	89161	9.69	ug/l	96
25) Isobutyl Alcohol	7.749	43	7256	18.65	ug/l #	70
26) Methyl-t-Butyl Ether (...	4.655	73	172900	9.32	ug/l	100
27) Hexane	5.130	57	139695	9.23	ug/l	97
28) 1,1-Dichloroethane	5.403	63	160334	9.78	ug/l	97
29) Vinyl Acetate	5.561	86	9198	8.17	ug/l #	70
30) Diisopropyl Ether (DIPE)	5.577	45	276259	9.28	ug/l	97
31) Chloroprene	5.561	53	126408	9.08	ug/l	98
32) Ethyl-t-Butyl Ether (E...	6.205	59	182828	9.23	ug/l	98
33) c-1,2-Dichloroethene	6.412	96	91893	9.53	ug/l	96
34) 2,2-Dichloropropane	6.396	77	90462	9.79	ug/l	98
35) 2-Butanone	6.499	43	39435	9.28	ug/l	93
36) Propionitrile	6.608	54	14091	9.46	ug/l #	68
37) Methacrylonitrile	6.816	41	67287	9.09	ug/l #	97
38) Bromochloromethane	6.794	130	59001	9.21	ug/l	93
39) Tetrahydrofuran	6.876	42	27626	8.97	ug/l	91
40) Chloroform	6.941	83	152939	9.67	ug/l	94
42) 1,1,1-Trichloroethane	7.187	97	120473	9.57	ug/l	98
43) Cyclohexane	7.258	84	138893	10.24	ug/l	94
44) 1,1-Dichloropropene	7.443	75	112947	9.86	ug/l	95

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC013.D Vial: 13
Acq On : 20 Dec 2013 4:09 pm Operator: 796
Sample : IC 10PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:31:12 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45)	Carbon Tetrachloride	7.432	117	116470	9.72	ug/l		93
48)	Benzene	7.749	78	326457	9.42	ug/l		93
49)	1,2-Dichloroethane	7.793	62	115482	9.36	ug/l		93
50)	2-Methyl-2-Butanol (TAA)	7.858	59	26163	42.69	ug/l		91
51)	Tert-Amyl-Methyl Ether...	7.951	73	140109	8.93	ug/l		97
52)	Thiophene	8.049	84	172220	9.31	ug/l		99
53)	2,2,4-Trimethyl Pentane	7.874	57	393826	9.27	ug/l		98
54)	Trichloroethene	8.687	95	87462	9.31	ug/l		96
55)	1,2-Dichloropropane	8.993	63	87807	9.44	ug/l		100
56)	Dibromomethane	9.157	93	51735	9.67	ug/l		89
57)	Methyl Methacrylate	9.211	69	46388	8.33	ug/l		86
58)	1,4-Dioxane	9.206	88	9620	79.93	ug/l		92
59)	Bromodichloromethane	9.386	83	113881	9.44	ug/l		97
60)	2-Chloroethyl Vinyl Ether	9.795	63	410	5.60	ug/l	#	39
61)	c-1,3-Dichloropropene	9.986	75	103536	9.30	ug/l		95
63)	Toluene	10.406	91	364644	9.21	ug/l		99
64)	4-Methyl-2-Pentanone	10.210	58	27692	8.09	ug/l		94
66)	t-1,3-Dichloropropene	10.717	75	82008	8.41	ug/l		97
67)	Ethyl Methacrylate	10.854	69	76064	8.05	ug/l		96
68)	1,1,2-Trichloroethane	10.946	83	63275	9.78	ug/l		96
69)	Tetrachloroethene	11.105	166	109211	9.57	ug/l		98
70)	1,3-Dichloropropane	11.159	76	124113	9.63	ug/l		96
71)	2-Hexanone	11.290	58	27263	8.15	ug/l		96
72)	Dibromochloromethane	11.443	129	89341	9.16	ug/l		99
73)	1,2-Dibromoethane	11.585	107	73187	9.62	ug/l		98
74)	Chlorobenzene	12.207	112	257857	9.67	ug/l		100
75)	1,1,1,2-Tetrachloroethane	12.316	131	81488	9.31	ug/l		92
76)	Ethylbenzene	12.349	91	369133	8.99	ug/l		99
77)	p/m-Xylene	12.501	91	583427	18.78	ug/l		100
78)	o-Xylene	12.998	91	278879	9.21	ug/l		96
79)	Styrene	13.025	104	230113	8.91	ug/l		99
80)	Isopropylbenzene	13.467	105	353547	8.79	ug/l		96
82)	1,2,3-Trichloropropane	13.909	110	29980	9.24	ug/l		95
83)	Bromobenzene	13.844	156	107353	9.25	ug/l		97
84)	n-Propylbenzene	13.980	91	450473	8.92	ug/l		97
85)	t-1,4-Dichloro-2-Butene	13.925	53	24652	8.47	ug/l		94
86)	2-Chlorotoluene	14.084	91	254983	9.04	ug/l		98
87)	1,3,5-Trimethylbenzene	14.204	105	302094	8.89	ug/l		93
89)	Bromoform	13.249	173	59356	9.38	ug/l		99
90)	1,1,2,2-Tetrachloroethane	13.849	83	106512	9.60	ug/l		95
91)	4-Chlorotoluene	14.226	91	315362	9.70	ug/l		96
92)	Cyclohexanone	13.598	55	16245	42.23	ug/l	#	91
93)	1,2,4-Trimethylbenzene	14.673	105	299574	9.23	ug/l		99
94)	tert-Butylbenzene	14.618	134	76427	9.11	ug/l	#	86
95)	p-Isopropyltoluene	15.077	119	341178	9.23	ug/l		97
96)	sec-Butylbenzene	14.891	105	418653	9.38	ug/l		99
97)	1,3-Dichlorobenzene	15.028	146	207899	9.52	ug/l		99
98)	1,4-Dichlorobenzene	15.142	146	224662	9.60	ug/l		98
99)	1,2-Dichlorobenzene	15.606	146	202717	9.51	ug/l		99
100)	n-Butylbenzene	15.590	91	318061	8.94	ug/l		99
101)	1,2-Dibromo-3-Chloropr...	16.594	75	16872	9.58	ug/l		90
102)	1,2,4-Trichlorobenzene	17.625	180	129559	8.73	ug/l		98
103)	Hexachloro-1,3-Butadiene	17.832	225	84541	9.47	ug/l		97
104)	Naphthalene	17.936	128	259460	7.91	ug/l		98
105)	1,2,3-Trichlorobenzene	18.241	180	131028	9.05	ug/l		99

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

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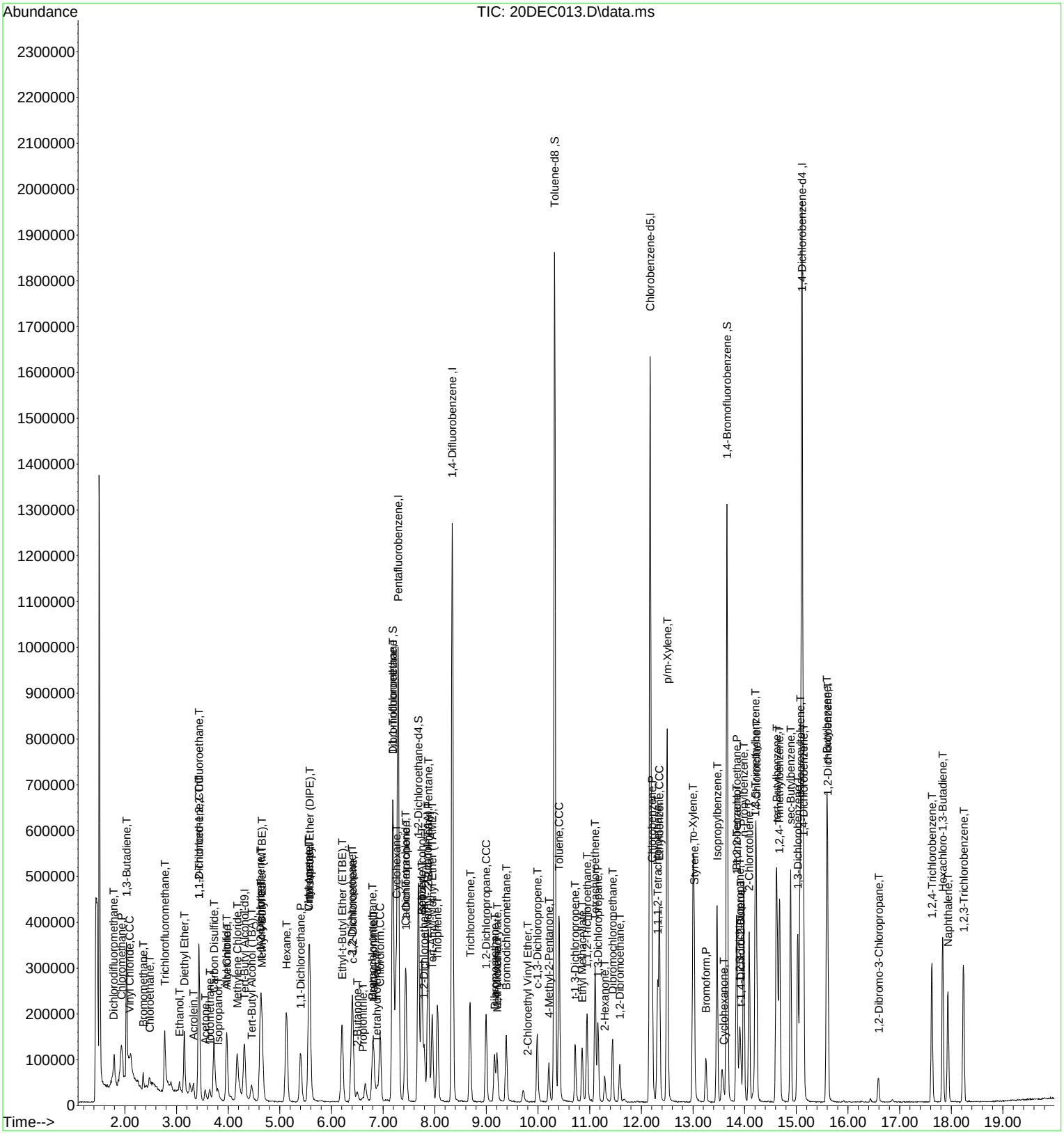
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC013.D Vial: 13
Acq On : 20 Dec 2013 4:09 pm Operator: 796
Sample : IC 10PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:31:12 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC008.D Vial: 8
Acq On : 20 Dec 2013 1:11 pm Operator: 796
Sample : IC 20PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:44 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.311	65	148738	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	868310	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1227957	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1080036	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	644765	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.192	113	398819	49.09	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 98.18%			
46) 1,2-Dichloroethane-d4	7.683	65	395113	49.20	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 98.40%			
62) Toluene-d8	10.319	98	1398927	50.26	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.52%			
81) 1,4-Bromofluorobenzene	13.658	95	476731	50.68	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.36%			
Target Compounds						Qvalue
2) Ethanol	3.056	45	45342	232.62	ug/l	97
3) Tert-Butyl Alcohol (TBA)	4.453	59	83432	101.06	ug/l	99
5) Dichlorodifluoromethane	1.791	85	237265	20.71	ug/l	99
6) Chloromethane	1.932	50	255423	18.86	ug/l	98
7) Vinyl Chloride	2.091	62	237146	19.41	ug/l	99
8) Bromomethane	2.353	94	74838	15.46	ug/l	99
9) Chloroethane	2.484	64	142289	20.49	ug/l	96
10) 1,3-Butadiene	2.031	54	227416	20.22	ug/l	92
11) Trichlorofluoromethane	2.773	101	317300	19.92	ug/l	97
12) Diethyl Ether	3.149	45	137382	18.99	ug/l	95
13) Acetone	3.553	58	17239	19.18	ug/l #	83
14) Iodomethane	3.646	142	60888	16.84	ug/l	97
15) 1,1-Dichloroethene	3.433	61	267655	19.74	ug/l	98
16) 1,1,2-Trichloro-1,2,2-...	3.438	101	181710	19.79	ug/l	98
17) Isopropanol	3.799	45	58095	99.20	ug/l	99
18) Carbon Disulfide	3.728	76	579861	19.11	ug/l	97
19) Acetonitrile	3.973	41	294185	38.78	ug/l	97
20) Acrylonitrile	4.622	53	71530	19.80	ug/l	99
21) Allyl Chloride	3.973	76	80690	19.15	ug/l	92
22) Acrolein	3.324	56	64011	39.19	ug/l	96
23) Methylene Chloride	4.175	84	176308	20.72	ug/l	87
24) t-1,2-Dichloroethene	4.622	96	173220	20.00	ug/l	97
25) Isobutyl Alcohol	7.749	43	13209	36.08	ug/l	95
26) Methyl-t-Butyl Ether (...	4.655	73	338379	19.39	ug/l	98
27) Hexane	5.124	57	285921	20.07	ug/l	99
28) 1,1-Dichloroethane	5.403	63	309864	20.09	ug/l	96
29) Vinyl Acetate	5.555	86	19959	18.85	ug/l #	57
30) Diisopropyl Ether (DIPE)	5.577	45	567426	20.26	ug/l	98
31) Chloroprene	5.561	53	254356	19.41	ug/l	95
32) Ethyl-t-Butyl Ether (E...	6.205	59	356872	19.15	ug/l	100
33) c-1,2-Dichloroethene	6.407	96	181457	20.00	ug/l	98
34) 2,2-Dichloropropane	6.396	77	161699	18.59	ug/l	99
35) 2-Butanone	6.494	43	77656	19.41	ug/l	94
36) Propionitrile	6.592	54	27485	19.60	ug/l	95
37) Methacrylonitrile	6.810	41	138339	19.85	ug/l #	100
38) Bromochloromethane	6.794	130	118374	19.63	ug/l	88
39) Tetrahydrofuran	6.881	42	57395	19.81	ug/l	90
40) Chloroform	6.941	83	295716	19.87	ug/l	98
42) 1,1,1-Trichloroethane	7.187	97	234997	19.82	ug/l	99
43) Cyclohexane	7.252	84	255474	20.01	ug/l	97
44) 1,1-Dichloropropene	7.443	75	215306	19.97	ug/l	98

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC008.D Vial: 8
Acq On : 20 Dec 2013 1:11 pm Operator: 796
Sample : IC 20PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:44 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45)	Carbon Tetrachloride	7.432	117	224726	19.93	ug/l	97
48)	Benzene	7.749	78	644252	20.25	ug/l	98
49)	1,2-Dichloroethane	7.798	62	229989	20.30	ug/l	99
50)	2-Methyl-2-Butanol (TAA)	7.858	59	49312	87.60	ug/l	90
51)	Tert-Amyl-Methyl Ether...	7.951	73	277776	19.27	ug/l	95
52)	Thiophene	8.049	84	346651	20.40	ug/l	99
53)	2,2,4-Trimethyl Pentane	7.874	57	793775	20.33	ug/l	97
54)	Trichloroethene	8.682	95	172105	19.95	ug/l	99
55)	1,2-Dichloropropane	8.993	63	175160	20.51	ug/l	98
56)	Dibromomethane	9.157	93	100944	20.54	ug/l	99
57)	Methyl Methacrylate	9.200	69	96149	18.81	ug/l	93
58)	1,4-Dioxane	9.206	88	20627	186.60	ug/l	85
59)	Bromodichloromethane	9.380	83	223295	20.16	ug/l	97
60)	2-Chloroethyl Vinyl Ether	9.784	63	1037	15.42	ug/l #	39
61)	c-1,3-Dichloropropene	9.986	75	211691	20.70	ug/l	96
63)	Toluene	10.406	91	725869	19.96	ug/l	99
64)	4-Methyl-2-Pentanone	10.210	58	57937	18.42	ug/l	96
66)	t-1,3-Dichloropropene	10.717	75	166297	17.90	ug/l	96
67)	Ethyl Methacrylate	10.848	69	165926	18.77	ug/l	94
68)	1,1,2-Trichloroethane	10.946	83	124123	20.51	ug/l	94
69)	Tetrachloroethene	11.105	166	207726	19.45	ug/l	96
70)	1,3-Dichloropropane	11.159	76	244846	20.31	ug/l	96
71)	2-Hexanone	11.290	58	57925	18.52	ug/l	98
72)	Dibromochloromethane	11.443	129	181295	19.87	ug/l	98
73)	1,2-Dibromoethane	11.579	107	143238	20.12	ug/l	96
74)	Chlorobenzene	12.207	112	498111	19.96	ug/l	99
75)	1,1,1,2-Tetrachloroethane	12.316	131	160465	19.60	ug/l	98
76)	Ethylbenzene	12.349	91	764952	19.93	ug/l	99
77)	p/m-Xylene	12.496	91	1216299	41.85	ug/l	100
78)	o-Xylene	12.998	91	573687	20.26	ug/l	97
79)	Styrene	13.020	104	489396	20.27	ug/l	96
80)	Isopropylbenzene	13.467	105	747778	19.89	ug/l	99
82)	1,2,3-Trichloropropane	13.904	110	61135	20.15	ug/l	95
83)	Bromobenzene	13.844	156	213010	19.61	ug/l	98
84)	n-Propylbenzene	13.980	91	946189	20.03	ug/l	99
85)	t-1,4-Dichloro-2-Butene	13.926	53	52141	19.16	ug/l	96
86)	2-Chlorotoluene	14.084	91	529360	20.07	ug/l	99
87)	1,3,5-Trimethylbenzene	14.204	105	641422	20.17	ug/l	99
89)	Bromoform	13.249	173	121984	19.75	ug/l	95
90)	1,1,2,2-Tetrachloroethane	13.849	83	215747	19.94	ug/l	99
91)	4-Chlorotoluene	14.226	91	642105	20.25	ug/l	97
92)	Cyclohexanone	13.587	55	36544	97.37	ug/l	96
93)	1,2,4-Trimethylbenzene	14.679	105	646450	20.42	ug/l	98
94)	tert-Butylbenzene	14.619	134	162679	19.87	ug/l	95
95)	p-Isopropyltoluene	15.077	119	728586	20.19	ug/l	99
96)	sec-Butylbenzene	14.891	105	883383	20.29	ug/l	100
97)	1,3-Dichlorobenzene	15.028	146	415843	19.51	ug/l	96
98)	1,4-Dichlorobenzene	15.137	146	434453	19.02	ug/l	96
99)	1,2-Dichlorobenzene	15.606	146	410718	19.75	ug/l	96
100)	n-Butylbenzene	15.590	91	684876	19.73	ug/l	97
101)	1,2-Dibromo-3-Chloropr...	16.588	75	32241	18.77	ug/l	99
102)	1,2,4-Trichlorobenzene	17.625	180	257565	17.80	ug/l	100
103)	Hexachloro-1,3-Butadiene	17.832	225	173403	19.91	ug/l	99
104)	Naphthalene	17.936	128	563493	17.61	ug/l	99
105)	1,2,3-Trichlorobenzene	18.236	180	263234	18.64	ug/l	99

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

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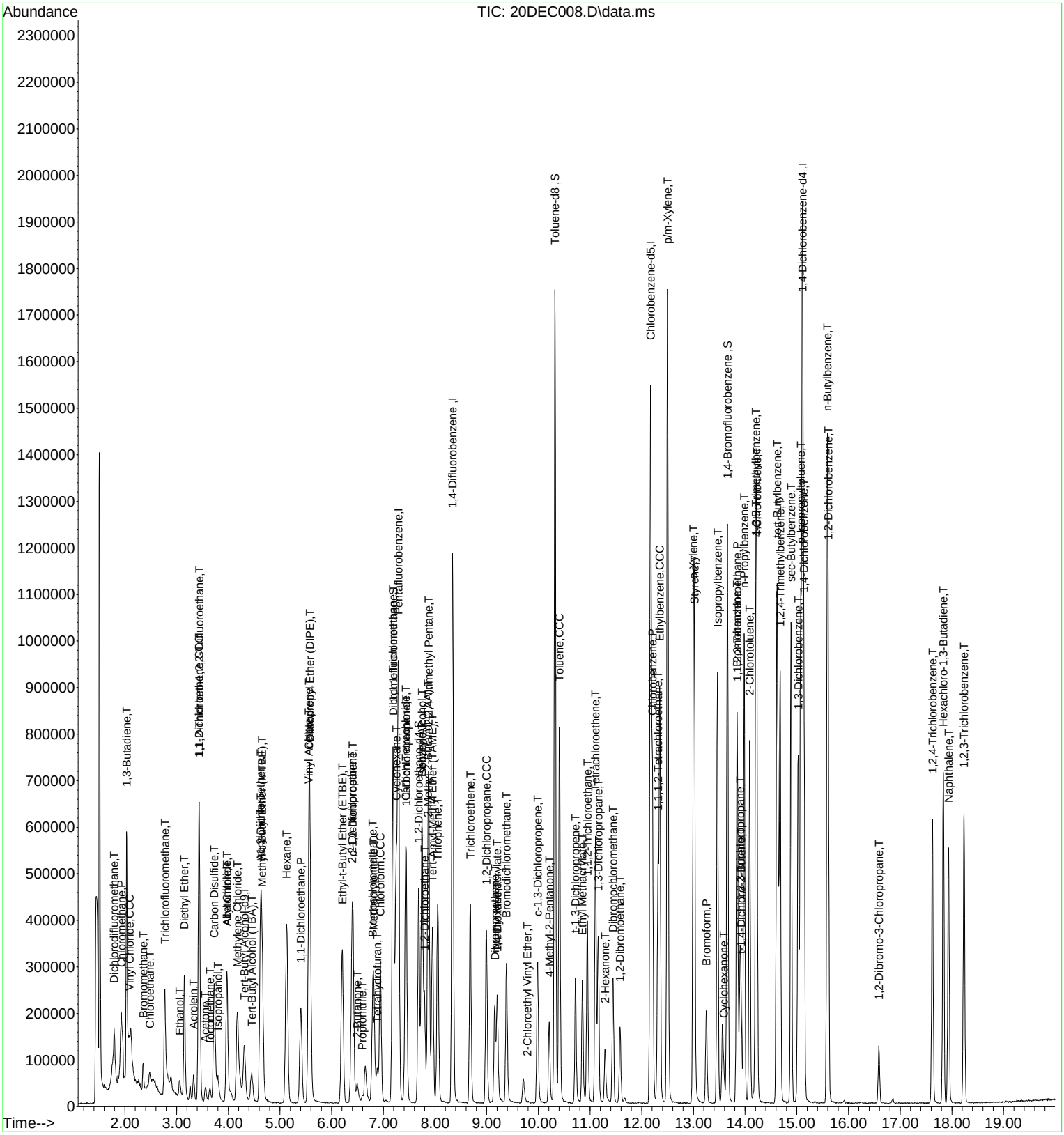
Data File : W:\GCMS_XX_DATA\2013\131220\20DEC008.D Vial: 8
Acq On : 20 Dec 2013 1:11 pm Operator: 796
Sample : IC 20PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:44 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC009.D Vial: 9
Acq On : 20 Dec 2013 1:39 pm Operator: 796
Sample : IC 50PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:51 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.317	65	155711	250.00	ug/l	0.00
4) Pentafluorobenzene	7.296	168	879656	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1235929	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1100904	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	663893	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	397394	48.29	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 96.58%			
46) 1,2-Dichloroethane-d4	7.683	65	400771	49.26	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 98.52%			
62) Toluene-d8	10.319	98	1417356	50.60	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.20%			
81) 1,4-Bromofluorobenzene	13.658	95	492767	51.39	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.78%			
Target Compounds						Qvalue
2) Ethanol	3.062	45	106265	520.77	ug/l	100
3) Tert-Butyl Alcohol (TBA)	4.459	59	221589	256.38	ug/l	100
5) Dichlorodifluoromethane	1.791	85	612500	52.76	ug/l	100
6) Chloromethane	1.938	50	684141	49.87	ug/l	100
7) Vinyl Chloride	2.113	62	668625	54.03	ug/l	100
8) Bromomethane	2.342	94	222740	45.43	ug/l	100
9) Chloroethane	2.522	64	361811	51.43	ug/l	100
10) 1,3-Butadiene	2.031	54	578767	50.80	ug/l	100
11) Trichlorofluoromethane	2.773	101	809641	50.17	ug/l	100
12) Diethyl Ether	3.149	45	334681	45.67	ug/l	100
13) Acetone	3.558	58	43732	48.03	ug/l	94
14) Iodomethane	3.646	142	347371	94.84	ug/l	100
15) 1,1-Dichloroethene	3.428	61	676935	49.28	ug/l	100
16) 1,1,2-Trichloro-1,2,2-...	3.438	101	453434	48.75	ug/l	100
17) Isopropanol	3.809	45	146876	247.56	ug/l	100
18) Carbon Disulfide	3.722	76	1449900	47.16	ug/l	100
19) Acetonitrile	3.973	41	772070	100.46	ug/l	100
20) Acrylonitrile	4.617	53	192322	52.56	ug/l	100
21) Allyl Chloride	3.968	76	211020	49.44	ug/l	100
22) Acrolein	3.329	56	187499	113.31	ug/l	100
23) Methylene Chloride	4.175	84	442077	51.28	ug/l	100
24) t-1,2-Dichloroethene	4.622	96	432377	49.29	ug/l	100
25) Isobutyl Alcohol	7.749	43	38122	102.79	ug/l	100
26) Methyl-t-Butyl Ether (...	4.655	73	910668	51.51	ug/l	100
27) Hexane	5.124	57	754350	52.28	ug/l	100
28) 1,1-Dichloroethane	5.403	63	783943	50.17	ug/l	100
29) Vinyl Acetate	5.556	86	55430	51.67	ug/l	100
30) Diisopropyl Ether (DIPE)	5.577	45	1514353	53.36	ug/l	100
31) Chloroprene	5.561	53	699193	52.66	ug/l	100
32) Ethyl-t-Butyl Ether (E...	6.205	59	974526	51.63	ug/l	100
33) c-1,2-Dichloroethene	6.412	96	473340	51.51	ug/l	100
34) 2,2-Dichloropropane	6.390	77	434339	49.29	ug/l	100
35) 2-Butanone	6.489	43	210439	51.93	ug/l	99
36) Propionitrile	6.592	54	73230	51.54	ug/l	95
37) Methacrylonitrile	6.810	41	372504	52.75	ug/l #	99
38) Bromochloromethane	6.794	130	307649	50.36	ug/l	100
39) Tetrahydrofuran	6.876	42	158143	53.88	ug/l	100
40) Chloroform	6.936	83	732935	48.62	ug/l	100
42) 1,1,1-Trichloroethane	7.187	97	601457	50.09	ug/l	100
43) Cyclohexane	7.247	84	654019	50.55	ug/l	100
44) 1,1-Dichloropropene	7.438	75	543035	49.72	ug/l	100

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC009.D Vial: 9
Acq On : 20 Dec 2013 1:39 pm Operator: 796
Sample : IC 50PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:51 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) Carbon Tetrachloride	7.427	117	565361	49.50	ug/l	100
48) Benzene	7.749	78	1653002	51.61	ug/l	100
49) 1,2-Dichloroethane	7.793	62	574846	50.41	ug/l	100
50) 2-Methyl-2-Butanol (TAA)	7.858	59	139598	246.39	ug/l	99
51) Tert-Amyl-Methyl Ether...	7.951	73	774832	53.41	ug/l	100
52) Thiophene	8.049	84	911541	53.31	ug/l	100
53) 2,2,4-Trimethyl Pentane	7.874	57	2113595	53.80	ug/l	100
54) Trichloroethene	8.682	95	439205	50.58	ug/l	100
55) 1,2-Dichloropropane	8.993	63	445308	51.79	ug/l	100
56) Dibromomethane	9.151	93	252741	51.10	ug/l	100
57) Methyl Methacrylate	9.200	69	266709	51.83	ug/l	100
58) 1,4-Dioxane	9.206	88	61383	551.71	ug/l	100
59) Bromodichloromethane	9.380	83	567531	50.90	ug/l	100
60) 2-Chloroethyl Vinyl Ether	9.795	63	3124	46.14	ug/l	100
61) c-1,3-Dichloropropene	9.981	75	560422	54.45	ug/l	100
63) Toluene	10.406	91	1884013	51.48	ug/l	100
64) 4-Methyl-2-Pentanone	10.210	58	165383	52.25	ug/l	100
66) t-1,3-Dichloropropene	10.717	75	459467	48.00	ug/l	100
67) Ethyl Methacrylate	10.854	69	466424	51.77	ug/l	100
68) 1,1,2-Trichloroethane	10.946	83	321494	52.13	ug/l	100
69) Tetrachloroethene	11.105	166	547531	50.31	ug/l	100
70) 1,3-Dichloropropane	11.159	76	626521	50.99	ug/l	100
71) 2-Hexanone	11.285	58	163713	51.36	ug/l	100
72) Dibromochloromethane	11.443	129	466444	50.16	ug/l	100
73) 1,2-Dibromoethane	11.579	107	375196	51.71	ug/l	100
74) Chlorobenzene	12.207	112	1286653	50.58	ug/l	100
75) 1,1,1,2-Tetrachloroethane	12.310	131	434254	52.03	ug/l	100
76) Ethylbenzene	12.349	91	2081183	53.19	ug/l	100
77) p/m-Xylene	12.496	91	3261636	110.10	ug/l	100
78) o-Xylene	12.998	91	1598758	55.40	ug/l	100
79) Styrene	13.020	104	1360423	55.27	ug/l	100
80) Isopropylbenzene	13.467	105	2077565	54.21	ug/l	100
82) 1,2,3-Trichloropropane	13.904	110	161396	52.20	ug/l	100
83) Bromobenzene	13.844	156	567541	51.27	ug/l	100
84) n-Propylbenzene	13.980	91	2574286	53.46	ug/l	100
85) t-1,4-Dichloro-2-Butene	13.926	53	143538	51.76	ug/l	100
86) 2-Chlorotoluene	14.089	91	1400362	52.08	ug/l	100
87) 1,3,5-Trimethylbenzene	14.204	105	1746331	53.88	ug/l	100
89) Bromoform	13.249	173	321978	50.63	ug/l	100
90) 1,1,2,2-Tetrachloroethane	13.849	83	559991	50.25	ug/l	100
91) 4-Chlorotoluene	14.220	91	1695308	51.93	ug/l	100
92) Cyclohexanone	13.587	55	101600	262.90	ug/l	100
93) 1,2,4-Trimethylbenzene	14.673	105	1797260	55.14	ug/l	100
94) tert-Butylbenzene	14.613	134	443772	52.64	ug/l	100
95) p-Isopropyltoluene	15.077	119	2049224	55.16	ug/l	100
96) sec-Butylbenzene	14.891	105	2413608	53.83	ug/l	100
97) 1,3-Dichlorobenzene	15.028	146	1114264	50.78	ug/l	100
98) 1,4-Dichlorobenzene	15.137	146	1142655	48.58	ug/l	100
99) 1,2-Dichlorobenzene	15.606	146	1094930	51.14	ug/l	100
100) n-Butylbenzene	15.590	91	1933393	54.09	ug/l	100
101) 1,2-Dibromo-3-Chloropr...	16.588	75	91326	51.62	ug/l	100
102) 1,2,4-Trichlorobenzene	17.625	180	744807	49.98	ug/l	100
103) Hexachloro-1,3-Butadiene	17.838	225	456208	50.88	ug/l	100
104) Naphthalene	17.936	128	1787110	54.23	ug/l	100
105) 1,2,3-Trichlorobenzene	18.236	180	748762	51.49	ug/l	100

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

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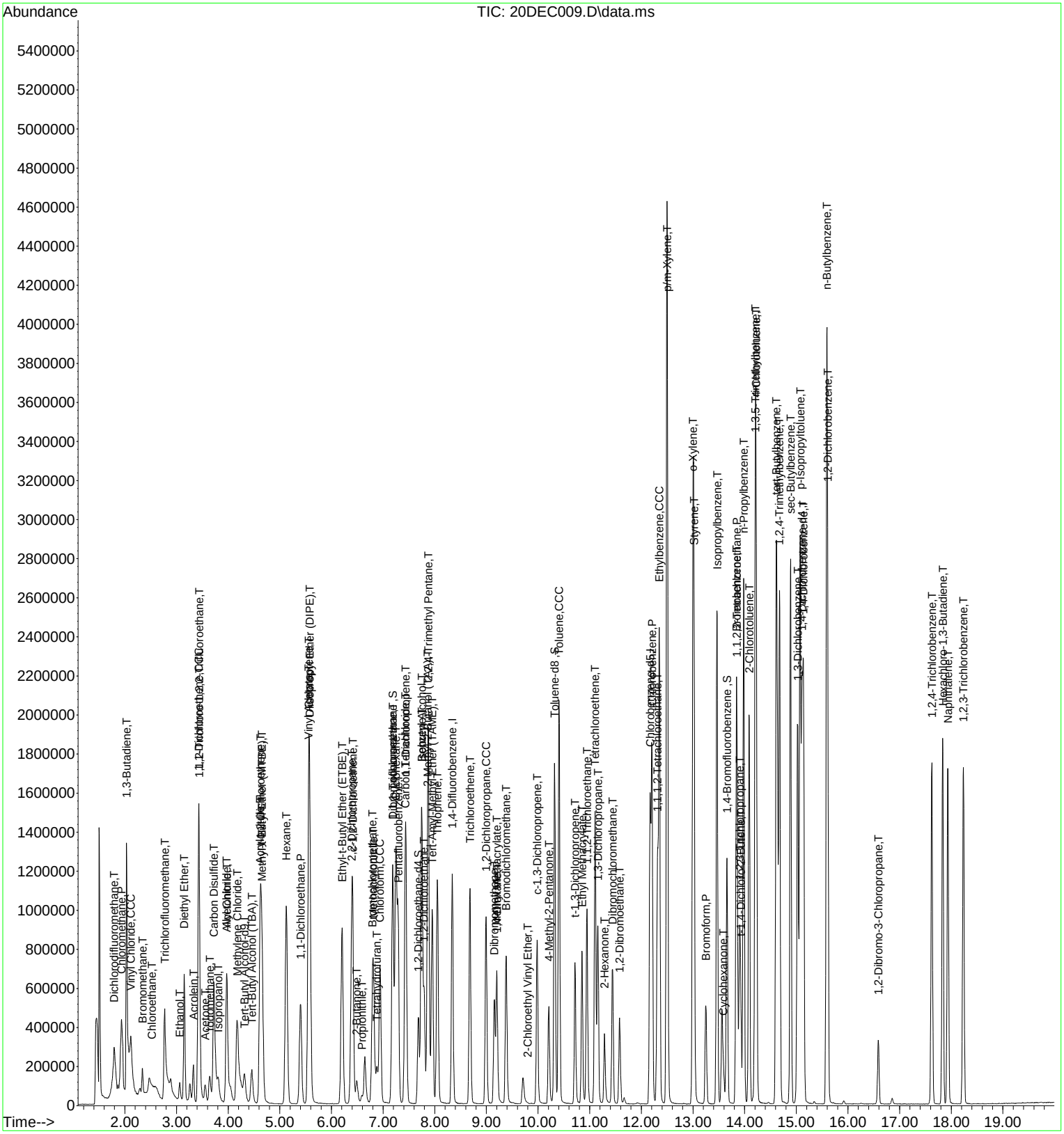
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC009.D Vial: 9
Acq On : 20 Dec 2013 1:39 pm Operator: 796
Sample : IC 50PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:51 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC010.D Vial: 10
Acq On : 20 Dec 2013 2:08 pm Operator: 796
Sample : IC 100/60PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:58 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.317	65	177113	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	957569	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1340958	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1206363	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	748731	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	427205	47.69	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 95.38%			
46) 1,2-Dichloroethane-d4	7.684	65	420267	47.45	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 94.90%			
62) Toluene-d8	10.319	98	1548382	50.95	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.90%			
81) 1,4-Bromofluorobenzene	13.658	95	547123	52.07	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.14%			
Target Compounds						Qvalue
2) Ethanol	3.068	45	207741	895.05	ug/l	99
3) Tert-Butyl Alcohol (TBA)	4.453	59	497152	505.70	ug/l	97
5) Dichlorodifluoromethane	1.802	85	741684	58.69	ug/l	99
6) Chloromethane	1.938	50	828942	55.51	ug/l	96
7) Vinyl Chloride	2.113	62	815044	60.51	ug/l	97
8) Bromomethane	2.331	94	366022	68.57	ug/l	99
9) Chloroethane	2.587	64	442185	57.74	ug/l	100
10) 1,3-Butadiene	2.036	54	1206227	97.26	ug/l	95
11) Trichlorofluoromethane	2.767	101	997615	56.79	ug/l	98
12) Diethyl Ether	3.149	45	680471	85.31	ug/l	98
13) Acetone	3.553	58	94126	94.96	ug/l	97
14) Iodomethane	3.640	142	1052115	263.88	ug/l	99
15) 1,1-Dichloroethene	3.428	61	1415158	94.65	ug/l	97
16) 1,1,2-Trichloro-1,2,2-...	3.433	101	951816	94.01	ug/l	99
17) Isopropanol	3.810	45	340363	527.01	ug/l	97
18) Carbon Disulfide	3.722	76	2994395	89.47	ug/l	100
19) Acetonitrile	3.973	41	1725162	206.20	ug/l	99
20) Acrylonitrile	4.628	53	415713	104.37	ug/l	95
21) Allyl Chloride	3.979	76	450054	96.87	ug/l	93
22) Acrolein	3.329	56	341758	189.72	ug/l	100
23) Methylene Chloride	4.175	84	912977	97.29	ug/l	99
24) t-1,2-Dichloroethene	4.617	96	914554	95.77	ug/l	99
25) Isobutyl Alcohol	7.755	43	80437	199.25	ug/l #	81
26) Methyl-t-Butyl Ether (...	4.650	73	1985725	103.17	ug/l	97
27) Hexane	5.125	57	1612054	102.63	ug/l	99
28) 1,1-Dichloroethane	5.403	63	1623677	95.46	ug/l	99
29) Vinyl Acetate	5.561	86	125910	107.82	ug/l #	94
30) Diisopropyl Ether (DIPE)	5.577	45	3222162	104.30	ug/l	99
31) Chloroprene	5.556	53	1485926	102.82	ug/l	97
32) Ethyl-t-Butyl Ether (E...	6.205	59	2158660	105.06	ug/l	100
33) c-1,2-Dichloroethene	6.407	96	998262	99.79	ug/l	94
34) 2,2-Dichloropropane	6.391	77	950759	99.12	ug/l	99
35) 2-Butanone	6.483	43	453185	102.73	ug/l	98
36) Propionitrile	6.592	54	157019	101.52	ug/l	92
37) Methacrylonitrile	6.811	41	790457	102.83	ug/l #	98
38) Bromochloromethane	6.794	130	643297	96.73	ug/l	99
39) Tetrahydrofuran	6.876	42	324663	101.61	ug/l	97
40) Chloroform	6.942	83	1531795	93.35	ug/l	100
42) 1,1,1-Trichloroethane	7.187	97	1273818	97.45	ug/l	96
43) Cyclohexane	7.247	84	1385089	98.35	ug/l	99
44) 1,1-Dichloropropene	7.438	75	1162488	97.78	ug/l	97

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC010.D Vial: 10
Acq On : 20 Dec 2013 2:08 pm Operator: 796
Sample : IC 100/60PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:58 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) Carbon Tetrachloride	7.427	117	1196444	96.24	ug/l	99
48) Benzene	7.749	78	3463437	99.66	ug/l	99
49) 1,2-Dichloroethane	7.793	62	1208489	97.68	ug/l	98
50) 2-Methyl-2-Butanol (TAA)	7.864	59	334982	544.94	ug/l	88
51) Tert-Amyl-Methyl Ether...	7.951	73	1723787	109.51	ug/l	96
52) Thiophene	8.049	84	1941753	104.66	ug/l	98
53) 2,2,4-Trimethyl Pentane	7.875	57	4491068	105.36	ug/l	99
54) Trichloroethene	8.677	95	924259	98.10	ug/l	98
55) 1,2-Dichloropropane	8.993	63	950055	101.85	ug/l	99
56) Dibromomethane	9.151	93	530422	98.85	ug/l	98
57) Methyl Methacrylate	9.201	69	597017	106.94	ug/l	93
58) 1,4-Dioxane	9.206	88	127640	1057.37	ug/l	98
59) Bromodichloromethane	9.381	83	1191560	98.50	ug/l	99
60) 2-Chloroethyl Vinyl Ether	9.784	63	8594	116.99	ug/l	82
61) c-1,3-Dichloropropene	9.981	75	1233133	110.44	ug/l	96
63) Toluene	10.406	91	4002854	100.80	ug/l	100
64) 4-Methyl-2-Pentanone	10.204	58	373393	108.74	ug/l	98
66) t-1,3-Dichloropropene	10.717	75	1039231	98.77	ug/l	98
67) Ethyl Methacrylate	10.848	69	1068198	108.20	ug/l	99
68) 1,1,2-Trichloroethane	10.947	83	674712	99.83	ug/l	98
69) Tetrachloroethene	11.105	166	1142856	95.83	ug/l	100
70) 1,3-Dichloropropane	11.159	76	1339441	99.48	ug/l	100
71) 2-Hexanone	11.285	58	378305	108.30	ug/l	97
72) Dibromochloromethane	11.443	129	1002219	98.36	ug/l	96
73) 1,2-Dibromoethane	11.580	107	803224	101.03	ug/l	99
74) Chlorobenzene	12.202	112	2719168	97.56	ug/l	99
75) 1,1,1,2-Tetrachloroethane	12.316	131	923423	100.96	ug/l	98
76) Ethylbenzene	12.349	91	4497717	104.90	ug/l	99
77) p/m-Xylene	12.496	91	7034576	216.71	ug/l	99
78) o-Xylene	12.998	91	3489089	110.34	ug/l	100
79) Styrene	13.015	104	2962282	109.82	ug/l	95
80) Isopropylbenzene	13.462	105	4570948	108.84	ug/l	100
82) 1,2,3-Trichloropropane	13.904	110	344763	101.76	ug/l	91
83) Bromobenzene	13.844	156	1209177	99.68	ug/l	97
84) n-Propylbenzene	13.980	91	5641051	106.90	ug/l	99
85) t-1,4-Dichloro-2-Butene	13.926	53	325375	107.07	ug/l	95
86) 2-Chlorotoluene	14.084	91	3053437	103.63	ug/l	99
87) 1,3,5-Trimethylbenzene	14.204	105	3862103	108.74	ug/l	98
89) Bromoform	13.249	173	719045	100.26	ug/l	99
90) 1,1,2,2-Tetrachloroethane	13.849	83	1222617	97.28	ug/l	99
91) 4-Chlorotoluene	14.226	91	3695476	100.38	ug/l	95
92) Cyclohexanone	13.587	55	231407	530.95	ug/l	95
93) 1,2,4-Trimethylbenzene	14.673	105	3894207	105.93	ug/l	99
94) tert-Butylbenzene	14.613	134	984407	103.54	ug/l	98
95) p-Isopropyltoluene	15.072	119	4556093	108.74	ug/l	98
96) sec-Butylbenzene	14.892	105	5331782	105.45	ug/l	99
97) 1,3-Dichlorobenzene	15.028	146	2417812	97.70	ug/l	99
98) 1,4-Dichlorobenzene	15.137	146	2471607	93.18	ug/l	98
99) 1,2-Dichlorobenzene	15.606	146	2383796	98.71	ug/l	96
100) n-Butylbenzene	15.590	91	4320054	107.17	ug/l	100
101) 1,2-Dibromo-3-Chloropr...	16.588	75	205475	102.99	ug/l	99
102) 1,2,4-Trichlorobenzene	17.625	180	1704616	101.42	ug/l	100
103) Hexachloro-1,3-Butadiene	17.838	225	993246	98.22	ug/l	99
104) Naphthalene	17.931	128	4094744	110.17	ug/l	100
105) 1,2,3-Trichlorobenzene	18.236	180	1640294	100.02	ug/l	100

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

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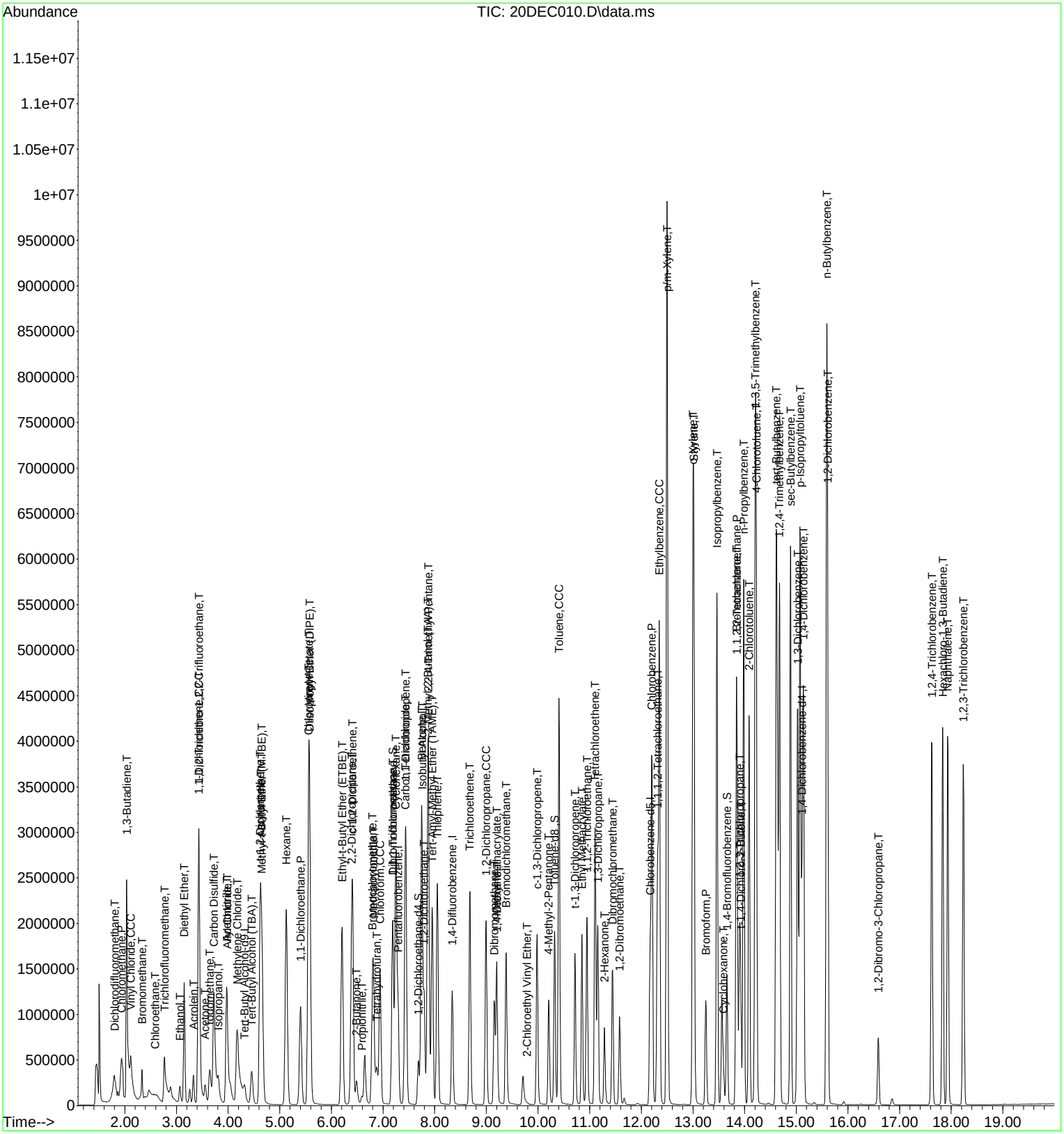
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC010.D Vial: 10
Acq On : 20 Dec 2013 2:08 pm Operator: 796
Sample : IC 100/60PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:30:58 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC011.D Vial: 11
Acq On : 20 Dec 2013 2:37 pm Operator: 796
Sample : IC 200/80PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:31:05 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.323	65	187988	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	1020304	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1438565	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1310892	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	841068	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	461150	48.31	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 96.62%			
46) 1,2-Dichloroethane-d4	7.678	65	438590	46.48	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 92.96%			
62) Toluene-d8	10.319	98	1654898	50.76	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.52%			
81) 1,4-Bromofluorobenzene	13.653	95	619633	54.27	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.54%			
Target Compounds						Qvalue
2) Ethanol	3.073	45	434659	1764.40	ug/l	96
3) Tert-Butyl Alcohol (TBA)	4.459	59	1108013	1061.86	ug/l	94
5) Dichlorodifluoromethane	1.791	85	1043176	77.47	ug/l	98
6) Chloromethane	1.933	50	1108872	69.69	ug/l	99
7) Vinyl Chloride	2.102	62	1149367	80.08	ug/l	98
8) Bromomethane	2.325	94	331776	58.34	ug/l	98
9) Chloroethane	2.582	64	611327	74.92	ug/l	94
10) 1,3-Butadiene	2.036	54	2538125	192.07	ug/l	96
11) Trichlorofluoromethane	2.762	101	1376010	73.51	ug/l	96
12) Diethyl Ether	3.149	45	1392629	163.85	ug/l	97
13) Acetone	3.553	58	189710	179.62	ug/l	96
14) Iodomethane	3.646	142	2756866	648.94	ug/l	98
15) 1,1-Dichloroethene	3.428	61	3101748	194.69	ug/l	95
16) 1,1,2-Trichloro-1,2,2-...	3.433	101	1999563	185.36	ug/l	99
17) Isopropanol	3.810	45	730096	1060.95	ug/l	96
18) Carbon Disulfide	3.722	76	6424837	180.16	ug/l	100
19) Acetonitrile	3.968	41	3724640	417.82	ug/l	97
20) Acrylonitrile	4.623	53	871405	205.32	ug/l	93
21) Allyl Chloride	3.968	76	1032971	208.66	ug/l	97
22) Acrolein	3.324	56	722728	376.54	ug/l	97
23) Methylene Chloride	4.175	84	1937714	193.79	ug/l	99
24) t-1,2-Dichloroethene	4.617	96	1955479	192.18	ug/l	99
25) Isobutyl Alcohol	7.749	43	196296	456.34	ug/l #	82
26) Methyl-t-Butyl Ether (...	4.655	73	4253879	207.43	ug/l	99
27) Hexane	5.125	57	3495077	208.84	ug/l	97
28) 1,1-Dichloroethane	5.403	63	3538496	195.24	ug/l	98
29) Vinyl Acetate	5.556	86	280842	225.70	ug/l #	76
30) Diisopropyl Ether (DIPE)	5.572	45	6907220	209.84	ug/l	99
31) Chloroprene	5.556	53	3203380	208.02	ug/l	98
32) Ethyl-t-Butyl Ether (E...	6.205	59	4764987	217.64	ug/l	100
33) c-1,2-Dichloroethene	6.407	96	2137034	200.50	ug/l	97
34) 2,2-Dichloropropane	6.390	77	2065909	202.14	ug/l	100
35) 2-Butanone	6.483	43	973347	207.08	ug/l	98
36) Propionitrile	6.587	54	337303	204.67	ug/l	92
37) Methacrylonitrile	6.811	41	1684942	205.72	ug/l #	99
38) Bromochloromethane	6.794	130	1355841	191.35	ug/l	96
39) Tetrahydrofuran	6.876	42	699443	205.44	ug/l	94
40) Chloroform	6.942	83	3243008	185.48	ug/l	99
42) 1,1,1-Trichloroethane	7.182	97	2738222	196.59	ug/l	97
43) Cyclohexane	7.247	84	2945398	196.28	ug/l	99
44) 1,1-Dichloropropene	7.438	75	2504903	197.74	ug/l	99

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC011.D Vial: 11
Acq On : 20 Dec 2013 2:37 pm Operator: 796
Sample : IC 200/80PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:31:05 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) Carbon Tetrachloride	7.427	117	2578436	194.65 ug/l	97
48) Benzene	7.749	78	7430529	199.31 ug/l	99
49) 1,2-Dichloroethane	7.793	62	2531806	190.77 ug/l	99
50) 2-Methyl-2-Butanol (TAA)	7.864	59	791248	1199.85 ug/l	80
51) Tert-Amyl-Methyl Ether...	7.951	73	3821819	226.33 ug/l	93
52) Thiophene	8.049	84	4165165	209.27 ug/l	98
53) 2,2,4-Trimethyl Pentane	7.875	57	9763141	213.49 ug/l	99
54) Trichloroethene	8.677	95	2000990	197.97 ug/l	99
55) 1,2-Dichloropropane	8.993	63	2071550	207.01 ug/l	99
56) Dibromomethane	9.151	93	1136537	197.43 ug/l	98
57) Methyl Methacrylate	9.201	69	1341872	224.05 ug/l	94
58) 1,4-Dioxane	9.201	88	286895	2215.37 ug/l	98
59) Bromodichloromethane	9.381	83	2567776	197.85 ug/l	99
60) 2-Chloroethyl Vinyl Ether	9.790	63	24860	315.46 ug/l	80
61) c-1,3-Dichloropropene	9.981	75	2762325	230.60 ug/l	97
63) Toluene	10.406	91	8771334	205.90 ug/l	98
64) 4-Methyl-2-Pentanone	10.210	58	838640	227.65 ug/l	99
66) t-1,3-Dichloropropene	10.712	75	2367457	206.74 ug/l	98
67) Ethyl Methacrylate	10.848	69	2444179	227.83 ug/l	98
68) 1,1,2-Trichloroethane	10.947	83	1465144	199.50 ug/l	98
69) Tetrachloroethene	11.105	166	2527578	195.04 ug/l	99
70) 1,3-Dichloropropane	11.159	76	2956330	202.07 ug/l	100
71) 2-Hexanone	11.285	58	871885	229.69 ug/l	96
72) Dibromochloromethane	11.443	129	2213172	199.88 ug/l	96
73) 1,2-Dibromoethane	11.579	107	1746619	202.16 ug/l	100
74) Chlorobenzene	12.207	112	6062678	200.17 ug/l	98
75) 1,1,1,2-Tetrachloroethane	12.316	131	2072403	208.51 ug/l	98
76) Ethylbenzene	12.349	91	10108415	216.95 ug/l	99
77) p/m-Xylene	12.496	91	16074029	455.70 ug/l	99
78) o-Xylene	12.998	91	8041688	234.03 ug/l	99
79) Styrene	13.020	104	6872892	234.48 ug/l	99
80) Isopropylbenzene	13.462	105	10682976	234.08 ug/l	97
82) 1,2,3-Trichloropropane	13.898	110	775455	210.63 ug/l	98
83) Bromobenzene	13.844	156	2816842	213.70 ug/l	95
84) n-Propylbenzene	13.986	91	13008383	226.85 ug/l	100
85) t-1,4-Dichloro-2-Butene	13.926	53	775769	234.92 ug/l	91
86) 2-Chlorotoluene	14.089	91	6982828	218.10 ug/l	99
87) 1,3,5-Trimethylbenzene	14.204	105	9088982	235.50 ug/l	98
89) Bromoform	13.249	173	1653158	205.20 ug/l	99
90) 1,1,2,2-Tetrachloroethane	13.849	83	2768338	196.09 ug/l	100
91) 4-Chlorotoluene	14.226	91	8498246	205.49 ug/l	97
92) Cyclohexanone	13.587	55	522988	1068.22 ug/l	96
93) 1,2,4-Trimethylbenzene	14.679	105	9133594	221.18 ug/l	99
94) tert-Butylbenzene	14.613	134	2307470	216.05 ug/l	98
95) p-Isopropyltoluene	15.072	119	10760207	228.61 ug/l	98
96) sec-Butylbenzene	14.892	105	12635588	222.46 ug/l	99
97) 1,3-Dichlorobenzene	15.028	146	5660498	203.62 ug/l	99
98) 1,4-Dichlorobenzene	15.137	146	5728126	192.25 ug/l	99
99) 1,2-Dichlorobenzene	15.606	146	5532960	203.97 ug/l	97
100) n-Butylbenzene	15.590	91	10296478	227.39 ug/l	100
101) 1,2-Dibromo-3-Chloropr...	16.588	75	466776	208.27 ug/l	95
102) 1,2,4-Trichlorobenzene	17.625	180	3982306	210.93 ug/l	100
103) Hexachloro-1,3-Butadiene	17.838	225	2331906	205.27 ug/l	99
104) Naphthalene	17.936	128	9541617	228.54 ug/l	100
105) 1,2,3-Trichlorobenzene	18.236	180	3795235	206.01 ug/l	99

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

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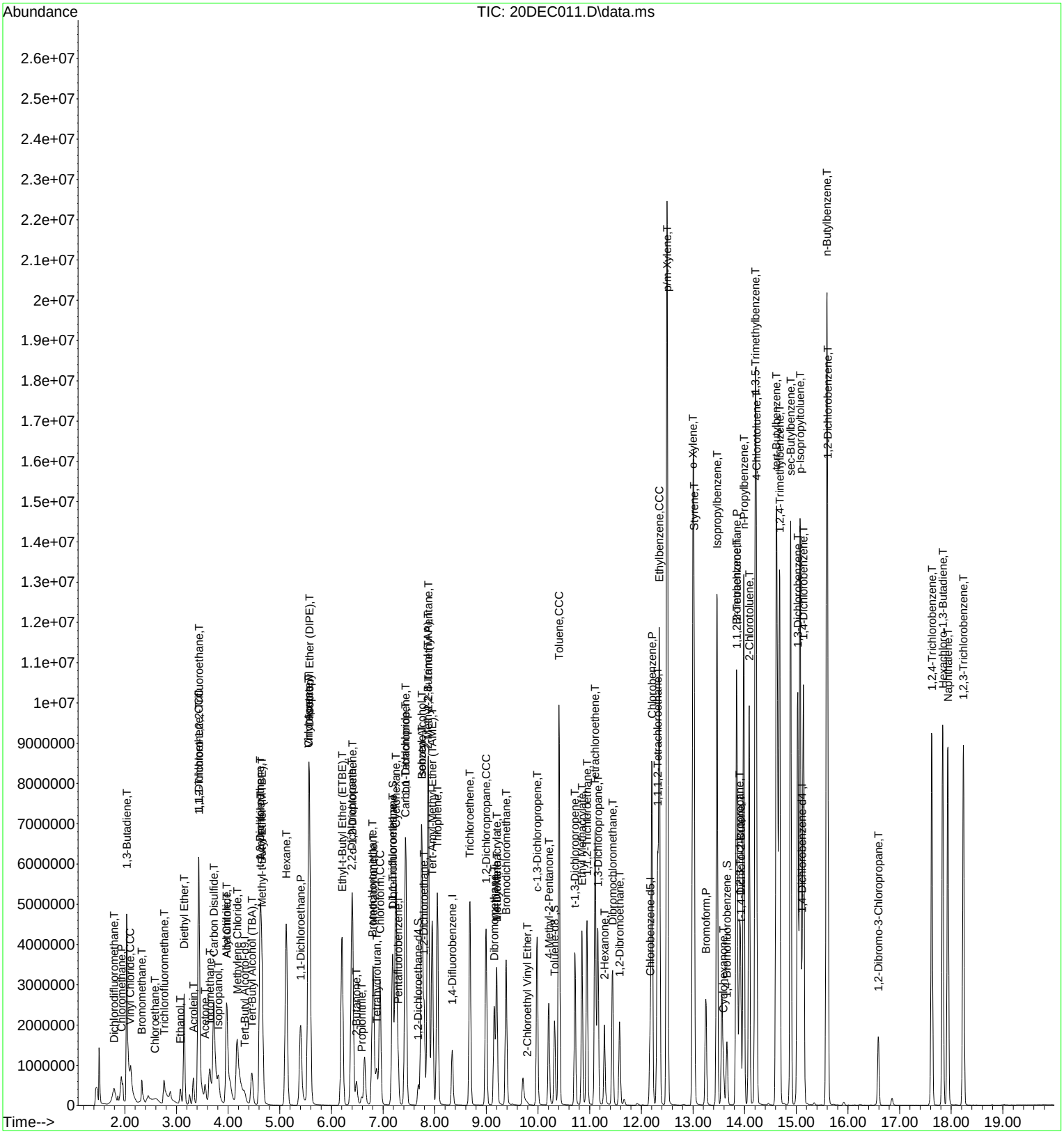
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC011.D Vial: 11
Acq On : 20 Dec 2013 2:37 pm Operator: 796
Sample : IC 200/80PPB V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 20 17:31:05 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:24:26 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC015.D Vial: 15
Acq On : 20 Dec 2013 5:41 pm Operator: 796
Sample : ICV V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 09:14:42 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.311	65	161748	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	956571	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1341777	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1184051	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	721617	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	426993	47.72	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 95.44%			
46) 1,2-Dichloroethane-d4	7.684	65	426801	48.27	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 96.54%			
62) Toluene-d8	10.319	98	1524468	50.12	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.24%			
81) 1,4-Bromofluorobenzene	13.658	95	534594	51.84	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.68%			
Target Compounds						Qvalue
2) Ethanol	3.067	45	116003	546.30	ug/l	96
3) Tert-Butyl Alcohol (TBA)	4.453	59	237493	264.16	ug/l	98
5) Dichlorodifluoromethane	1.791	85	671487	53.19	ug/l	98
6) Chloromethane	1.927	50	738518	51.80	ug/l	98
7) Vinyl Chloride	2.096	62	734072	55.06	ug/l	98
8) Bromomethane	2.336	94	242574	51.12	ug/l	98
9) Chloroethane	2.484	64	386708	49.87	ug/l	93
10) 1,3-Butadiene	2.031	54	436659	35.25	ug/l	96
11) Trichlorofluoromethane	2.767	101	880604	50.18	ug/l	99
12) Diethyl Ether	3.149	45	339691	49.31	ug/l	98
13) Acetone	3.553	58	100312	101.31	ug/l	95
14) Iodomethane	3.640	142	525239	131.88	ug/l	97
15) 1,1-Dichloroethene	3.428	61	669208	44.80	ug/l	98
16) 1,1,2-Trichloro-1,2,2-...	3.438	101	482690	47.73	ug/l	98
17) Isopropanol	3.809	45	159344	246.95	ug/l	99
18) Carbon Disulfide	3.728	76	1431878	42.83	ug/l	98
19) Acetonitrile	3.973	41	807169	96.58	ug/l	97
20) Acrylonitrile	4.628	53	204809	51.47	ug/l	98
21) Allyl Chloride	3.973	76	225890	48.67	ug/l	98
22) Acrolein	3.329	56	234259	130.19	ug/l	100
23) Methylene Chloride	4.175	84	471424	50.29	ug/l	97
24) t-1,2-Dichloroethene	4.617	96	476138	49.91	ug/l	97
25) Isobutyl Alcohol	7.754	43	38470	95.40	ug/l	88
26) Methyl-t-Butyl Ether (...	4.655	73	971541	50.53	ug/l	95
27) Hexane	5.130	57	791008	50.41	ug/l	98
28) 1,1-Dichloroethane	5.397	63	815063	47.97	ug/l	97
29) Vinyl Acetate	5.556	86	69564	59.63	ug/l #	58
30) Diisopropyl Ether (DIPE)	5.572	45	1651592	53.52	ug/l	99
31) Chloroprene	5.556	53	796725	55.19	ug/l	97
32) Ethyl-t-Butyl Ether (E...	6.199	59	1040942	50.72	ug/l	100
33) c-1,2-Dichloroethene	6.407	96	516314	51.67	ug/l	99
34) 2,2-Dichloropropane	6.390	77	486492	50.78	ug/l	99
35) 2-Butanone	6.489	43	324908	73.73	ug/l	99
36) Propionitrile	6.592	54	77487	50.20	ug/l	93
37) Methacrylonitrile	6.816	41	377973	49.10	ug/l #	98
38) Bromochloromethane	6.794	130	317727	47.83	ug/l	97
39) Tetrahydrofuran	6.887	42	154674	48.37	ug/l	92
40) Chloroform	6.941	83	782936	47.76	ug/l	98
42) 1,1,1-Trichloroethane	7.187	97	650687	49.83	ug/l	97
43) Cyclohexane	7.247	84	726413	51.64	ug/l	98
44) 1,1-Dichloropropene	7.443	75	610198	51.38	ug/l	98

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC015.D Vial: 15
Acq On : 20 Dec 2013 5:41 pm Operator: 796
Sample : ICV V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 09:14:42 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

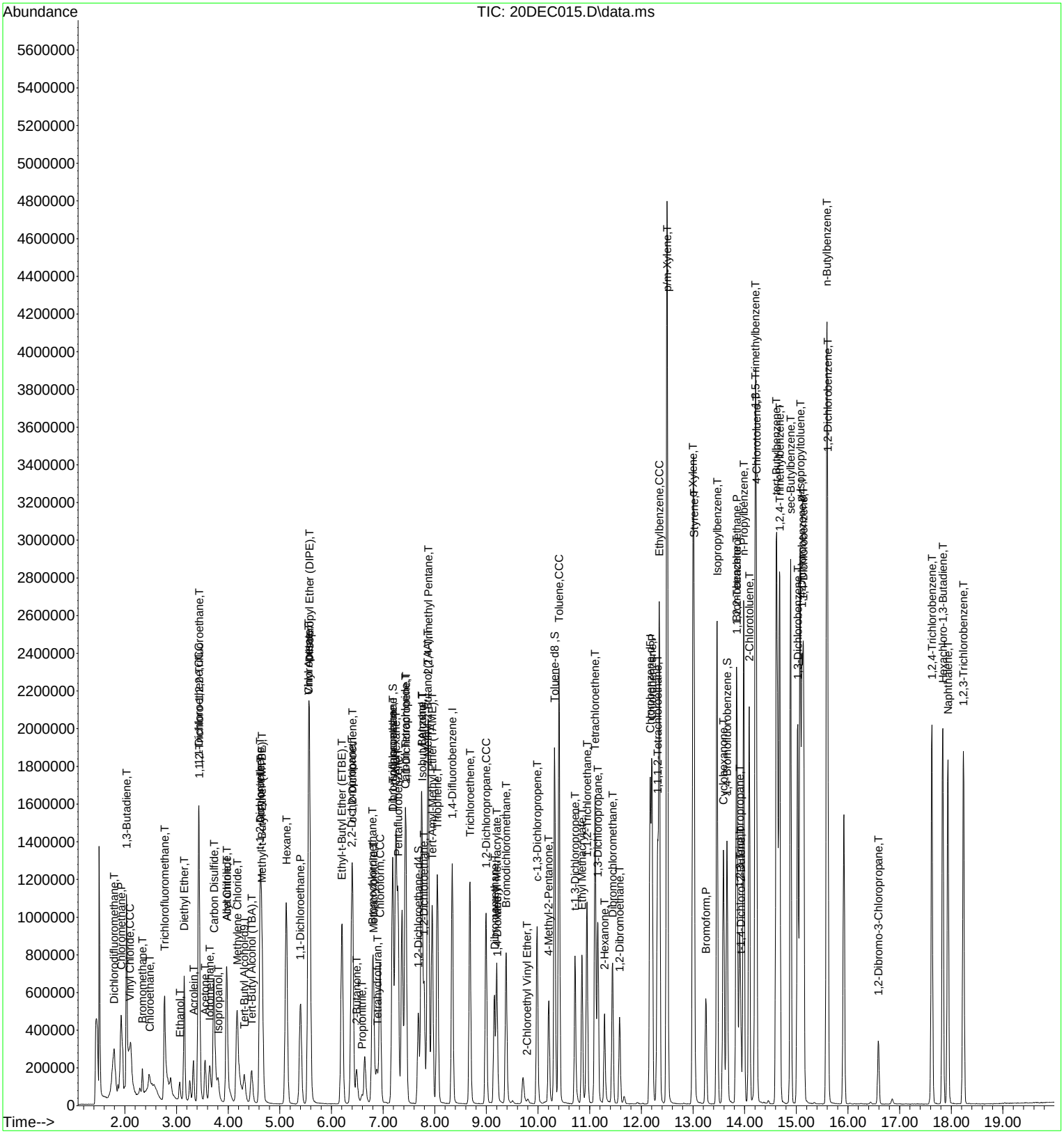
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) Carbon Tetrachloride	7.427	117	601673	48.45 ug/l	98
48) Benzene	7.749	78	1764297	50.73 ug/l	100
49) 1,2-Dichloroethane	7.793	62	615988	49.76 ug/l	97
50) 2-Methyl-2-Butanol (TAA)	7.858	59	157736	256.18 ug/l	91
51) Tert-Amyl-Methyl Ether...	7.951	73	813669	51.65 ug/l	99
52) Thiophene	8.049	84	974842	52.51 ug/l	99
53) 2,2,4-Trimethyl Pentane	7.874	57	2297163	53.85 ug/l	99
54) Trichloroethene	8.682	95	473358	50.20 ug/l	97
55) 1,2-Dichloropropane	8.993	63	474038	50.78 ug/l	99
56) Dibromomethane	9.157	93	266773	49.68 ug/l	95
57) Methyl Methacrylate	9.200	69	286621	51.31 ug/l	95
58) 1,4-Dioxane	9.211	88	58298	482.57 ug/l	97
59) Bromodichloromethane	9.380	83	584997	48.32 ug/l	98
60) 2-Chloroethyl Vinyl Ether	9.784	63	4076	55.45 ug/l	79
61) c-1,3-Dichloropropene	9.981	75	620714	55.55 ug/l	97
63) Toluene	10.406	91	2029437	51.07 ug/l	98
64) 4-Methyl-2-Pentanone	10.204	58	178166	51.84 ug/l	99
66) t-1,3-Dichloropropene	10.717	75	486648	47.28 ug/l	98
67) Ethyl Methacrylate	10.848	69	468414	48.34 ug/l	99
68) 1,1,2-Trichloroethane	10.946	83	337682	50.91 ug/l	98
69) Tetrachloroethene	11.105	166	589356	50.35 ug/l	99
70) 1,3-Dichloropropane	11.154	76	657623	49.76 ug/l	98
71) 2-Hexanone	11.285	58	215278	62.79 ug/l	99
72) Dibromochloromethane	11.443	129	491727	49.17 ug/l	97
73) 1,2-Dibromoethane	11.579	107	398284	51.04 ug/l	97
74) Chlorobenzene	12.207	112	1289331	47.13 ug/l	98
75) 1,1,1,2-Tetrachloroethane	12.316	131	457594	50.97 ug/l	96
76) Ethylbenzene	12.349	91	2245547	53.36 ug/l	100
77) p/m-Xylene	12.496	91	3407180	106.94 ug/l	99
78) o-Xylene	12.998	91	1597436	51.47 ug/l	100
79) Styrene	13.020	104	1450481	54.79 ug/l	99
80) Isopropylbenzene	13.467	105	2073967	50.31 ug/l	100
82) 1,2,3-Trichloropropane	13.904	110	165562	49.79 ug/l	96
83) Bromobenzene	13.844	156	607667	51.04 ug/l	93
84) n-Propylbenzene	13.980	91	2542898	49.10 ug/l	98
85) t-1,4-Dichloro-2-Butene	13.926	53	114094	38.25 ug/l	94
86) 2-Chlorotoluene	14.089	91	1449707	50.13 ug/l	99
87) 1,3,5-Trimethylbenzene	14.204	105	1963183	56.32 ug/l	97
89) Bromoform	13.249	173	345374	49.97 ug/l	96
90) 1,1,2,2-Tetrachloroethane	13.849	83	598170	49.38 ug/l	99
91) 4-Chlorotoluene	14.226	91	1723998	48.59 ug/l	98
92) Cyclohexanone	13.587	55	758962	1806.81 ug/l	94
93) 1,2,4-Trimethylbenzene	14.679	105	1966581	55.51 ug/l	98
94) tert-Butylbenzene	14.613	134	456922	49.86 ug/l	99
95) p-Isopropyltoluene	15.077	119	2081608	51.54 ug/l	98
96) sec-Butylbenzene	14.891	105	2456399	50.41 ug/l	99
97) 1,3-Dichlorobenzene	15.028	146	1125756	47.20 ug/l	99
98) 1,4-Dichlorobenzene	15.137	146	1251739	48.97 ug/l	99
99) 1,2-Dichlorobenzene	15.606	146	1100350	47.28 ug/l	97
100) n-Butylbenzene	15.590	91	2119219	54.54 ug/l	99
101) 1,2-Dibromo-3-Chloropr...	16.588	75	93659	48.71 ug/l	99
102) 1,2,4-Trichlorobenzene	17.625	180	827181	51.07 ug/l	99
103) Hexachloro-1,3-Butadiene	17.838	225	494813	50.77 ug/l	97
104) Naphthalene	17.936	128	1879508	52.47 ug/l	100
105) 1,2,3-Trichlorobenzene	18.236	180	811245	51.32 ug/l	99

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

Return to Contents

Data File : W:\GCMS_XX_DATA\2013\131220\20DEC015.D Vial: 15
Acq On : 20 Dec 2013 5:41 pm Operator: 796
Sample : ICV V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 09:14:42 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration



Calscience Environmental Laboratories, Inc.

EPA 8260B Volatile Organics

Sample Data

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 16:15
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC015.D\20DEC015.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 1 **CLIENT SAMPLE NUMBER: TB-2**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	2.1	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	lm
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	m
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.00	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	m
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.00	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 16:15
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC015.D\20DEC015.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 1 **CLIENT SAMPLE NUMBER: TB-2**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.36	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	m
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	l
Vinyl Chloride	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	0.00	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 13:51
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC010.D\21DEC010.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 2 **CLIENT SAMPLE NUMBER: MW-40-14**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	4.9	1	ND	6.0	10	20	1	ug/L	I
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	I
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.24	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.12	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	3.0	1	3.0	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.98	1	0.98	0.37	0.50	1.0	1	ug/L	J
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 13:51
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC010.D\21DEC010.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 2 **CLIENT SAMPLE NUMBER: MW-40-14**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.25	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.24	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.14	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.13	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	1.2	1	1.2	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	3.5	1	3.5	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.17	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	7.4	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 17:10
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC017.D\20DEC017.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 3 **CLIENT SAMPLE NUMBER: MW-40-22**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	2.1	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	lm
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	m
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.00	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	m
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	1.1	1	1.1	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.73	1	0.73	0.37	0.50	1.0	1	ug/L	J
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 17:10
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC017.D\20DEC017.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 3 **CLIENT SAMPLE NUMBER: MW-40-22**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.26	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	m
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	l
Vinyl Chloride	1.3	1	1.3	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	0.00	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 14:19
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC011.D\21DEC011.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 4 **CLIENT SAMPLE NUMBER: MW-40-27**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	8.0	1	8.0	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.093	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.28	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	1.6	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.080	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.33	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	2.5	1	2.5	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 14:19
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC011.D\21DEC011.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 4 **CLIENT SAMPLE NUMBER: MW-40-27**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.098	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.14	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.095	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.080	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.96	1	0.96	0.37	0.50	1.0	1	ug/L	J
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.53	1	0.53	0.30	0.50	1.0	1	ug/L	J
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.80	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	9.4	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 18:06
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC019.D\20DEC019.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 5 **CLIENT SAMPLE NUMBER: MW-40-35**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	4.0	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	lm
Bromomethane	0.18	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	m
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.00	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	m
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.99	1	0.99	0.48	0.50	1.0	1	ug/L	J
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 18:06
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC019.D\20DEC019.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 5 **CLIENT SAMPLE NUMBER: MW-40-35**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.26	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.25	1	0.25	0.24	0.50	1.0	1	ug/L	J
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	m
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	l
Vinyl Chloride	0.34	1	0.34	0.30	0.50	1.0	1	ug/L	J
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	0.00	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 18:33
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC020.D\20DEC020.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 6 **CLIENT SAMPLE NUMBER: MW-40-36**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	4.8	1	ND	6.0	10	20	1	ug/L	
Benzene	0.087	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	lm
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	m
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.00	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	m
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	6.0	1	6.0	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	2.7	1	2.7	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 18:33
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC020.D\20DEC020.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 6 **CLIENT SAMPLE NUMBER: MW-40-36**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.33	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	m
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	1.2	1	1.2	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	l
Vinyl Chloride	3.5	1	3.5	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	1.2	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 14:48
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC012.D\21DEC012.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 7 **CLIENT SAMPLE NUMBER: MW-40-37**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	8.4	1	8.4	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.21	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.89	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.080	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	33	1	33	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	1.3	1	1.3	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 14:48
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC012.D\21DEC012.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 7 **CLIENT SAMPLE NUMBER: MW-40-37**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.22	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.48	1	0.48	0.37	0.50	1.0	1	ug/L	J
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	4.9	1	4.9	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.47	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	11	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 19:28
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC022.D\20DEC022.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 8 **CLIENT SAMPLE NUMBER: DUP-2**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	3.2	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	lm
Bromomethane	0.65	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	m
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.21	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	m
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	1.1	1	1.1	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 19:28
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC022.D\20DEC022.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 8 **CLIENT SAMPLE NUMBER: DUP-2**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.22	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.22	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	m
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	l
Vinyl Chloride	0.33	1	0.33	0.30	0.50	1.0	1	ug/L	J
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	1.1	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 19:55
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC023.D\20DEC023.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 9 **CLIENT SAMPLE NUMBER: EB-2**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	6.6	1	6.6	6.0	10	20	1	ug/L	J
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	lm
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	m
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.00	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	m
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.00	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 19:55
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC023.D\20DEC023.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 9 **CLIENT SAMPLE NUMBER: EB-2**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.36	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	m
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	l
Vinyl Chloride	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	0.00	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 20:22
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC024.D\20DEC024.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 10 **CLIENT SAMPLE NUMBER: TB-1**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	1.5	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	lm
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	m
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.00	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	m
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.00	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 20:22
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC024.D\20DEC024.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 10 **CLIENT SAMPLE NUMBER: TB-1**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.38	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	m
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	l
Vinyl Chloride	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	0.00	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 11:55
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC006.D\21DEC006.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 11 **CLIENT SAMPLE NUMBER: MW-40-08**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	3.1	1	ND	6.0	10	20	1	ug/L	I
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	I
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.23	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.081	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.12	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	25	1	25	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 11:55
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC006.D\21DEC006.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 11 **CLIENT SAMPLE NUMBER: MW-40-08**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.12	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.12	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	1.7	1	1.7	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.35	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	3.5	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 15:16
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC013.D\21DEC013.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 12 **CLIENT SAMPLE NUMBER: MW-40-30**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	11	1	11	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.23	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	3.4	1	3.4	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.38	1	0.38	0.37	0.50	1.0	1	ug/L	J
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 15:16
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC013.D\21DEC013.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 12 **CLIENT SAMPLE NUMBER: MW-40-30**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.28	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.11	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.34	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	3.6	1	3.6	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	1.8	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	15	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 21:17
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC026.D\20DEC026.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 13 **CLIENT SAMPLE NUMBER: MW-40-32**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	4.3	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	lm
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	m
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.00	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	m
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.94	1	0.94	0.48	0.50	1.0	1	ug/L	J
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 21:17
ANALYST: 486
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC026.D\20DEC026.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

 # 13 **CLIENT SAMPLE NUMBER: MW-40-32**

LCS/MB BATCH: 131220L01
MS/MSD BATCH: 131220S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.19	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	m
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	l
Vinyl Chloride	0.88	1	0.88	0.30	0.50	1.0	1	ug/L	J
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	1.2	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 15:45
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC014.D\21DEC014.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 14 **CLIENT SAMPLE NUMBER: IW-2**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	8.0	1	8.0	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.24	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.00	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 15:45
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC014.D\21DEC014.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 14 **CLIENT SAMPLE NUMBER: IW-2**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.27	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	2.6	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 16:14
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC015.D\21DEC015.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 15 **CLIENT SAMPLE NUMBER: IW-4**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	13	1	13	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.19	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.59	1	0.59	0.48	0.50	1.0	1	ug/L	J
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 16:14
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC015.D\21DEC015.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 15 **CLIENT SAMPLE NUMBER: IW-4**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.25	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.96	1	0.96	0.30	0.50	1.0	1	ug/L	J
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	9.5	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 16:42
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC016.D\21DEC016.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 16 **CLIENT SAMPLE NUMBER: IW-10**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	9.2	1	9.2	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.22	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	1.3	1	1.3	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 16:42
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC016.D\21DEC016.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 16 **CLIENT SAMPLE NUMBER: IW-10**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.24	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.64	1	0.64	0.37	0.50	1.0	1	ug/L	J
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	1.6	1	1.6	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	12	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 17:11
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC017.D\21DEC017.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 17 **CLIENT SAMPLE NUMBER: IW-18**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	9.9	1	9.9	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.35	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.75	1	0.75	0.48	0.50	1.0	1	ug/L	J
t-1,2-Dichloroethene	0.70	1	0.70	0.37	0.50	1.0	1	ug/L	J
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 17:11
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC017.D\21DEC017.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 17 **CLIENT SAMPLE NUMBER: IW-18**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.34	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	1.3	1	1.3	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.50	1	0.50	0.30	0.50	1.0	1	ug/L	J
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	1.6	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	8.9	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 17:39
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC018.D\21DEC018.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 18 **CLIENT SAMPLE NUMBER: DUP-1**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	9.9	1	9.9	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.19	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.32	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.18	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.11	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	24	1	24	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 17:39
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC018.D\21DEC018.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 18 **CLIENT SAMPLE NUMBER: DUP-1**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.28	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.58	1	0.58	0.30	0.50	1.0	1	ug/L	J
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	3.1	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	6.8	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 18:08
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC019.D\21DEC019.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 19 **CLIENT SAMPLE NUMBER: EB-1**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	6.9	1	6.9	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.20	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.25	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.00	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 18:08
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC019.D\21DEC019.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 19 **CLIENT SAMPLE NUMBER: EB-1**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.31	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	1.8	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	4.5	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 18:36
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC020.D\21DEC020.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 20 **CLIENT SAMPLE NUMBER: DRUM-1**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	30	1	30	6.0	10	20	1	ug/L	I
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	I
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.35	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.081	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.19	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.00	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.25	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.15	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.77	1	0.77	0.43	0.50	1.0	1	ug/L	J
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.11	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.53	1	0.53	0.48	0.50	1.0	1	ug/L	J
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 18:36
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC020.D\21DEC020.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 20 **CLIENT SAMPLE NUMBER: DRUM-1**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	2.3	1	2.3	0.64	1.0	5.0	1	ug/L	J
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.14	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.30	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.093	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.96	1	0.96	0.37	0.50	1.0	1	ug/L	J
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.36	1	0.36	0.30	1.0	10	1	ug/L	J
o-Xylene	0.28	1	0.28	0.23	0.50	1.0	1	ug/L	J
Methyl-t-Butyl Ether (MTBE)	0.093	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	2.6	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	22	1	ND	50	50	100	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/23/2013 14:46
ANALYST: 796
DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC008.D\23DEC008.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/23/2013 00:00

 # 21 **CLIENT SAMPLE NUMBER: MW-40-07**

LCS/MB BATCH: 131223L01
MS/MSD BATCH: 131223S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	4.8	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	lm
Bromomethane	0.20	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	m
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.00	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.11	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	m
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	[
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	2.8	1	2.8	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.55	1	0.55	0.36	0.50	1.0	1	ug/L	J
1,1-Dichloropropene	0.089	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/23/2013 14:46
ANALYST: 796
DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC008.D\23DEC008.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/23/2013 00:00

 # 21 **CLIENT SAMPLE NUMBER: MW-40-07**

LCS/MB BATCH: 131223L01
MS/MSD BATCH: 131223S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.26	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.23	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	m
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	1.9	1	1.9	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	l
Vinyl Chloride	7.5	1	7.5	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	9.8	1	ND	4.6	5.0	25	1	ug/L	#
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	1.8	1	ND	50	50	100	1	ug/L	

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC008.D
Acq On : 23 Dec 2013 2:46 pm
Operator : 796
Sample : 13-12-1628-21C 5ML PH<2
Misc : V111513C
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 23 17:45:44 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Tert-Butyl Alcohol-d9	4.212	65	107772	250.00 ug/l	0.00
4) Pentafluorobenzene	6.629	168	345959	50.00 ug/l	0.00
47) 1,4-Difluorobenzene	7.549	114	479641	50.00 ug/l	0.00
65) Chlorobenzene-d5	11.125	117	460573	50.00 ug/l	0.00
88) 1,4-Dichlorobenzene-d4	13.994	152	245001	50.00 ug/l	0.00
System Monitoring Compounds					
41) Dibromofluoromethane	6.553	113	134492	47.26 ug/l	0.00
Spiked Amount 50.000			Recovery	= 94.52%	
46) 1,2-Dichloroethane-d4	6.977	65	189398	48.11 ug/l	0.00
Spiked Amount 50.000			Recovery	= 96.22%	
62) Toluene-d8	9.367	98	626400	49.59 ug/l	0.00
Spiked Amount 50.000			Recovery	= 99.18%	
81) 1,4-Bromofluorobenzene	12.568	95	242555	51.19 ug/l	0.00
Spiked Amount 50.000			Recovery	= 102.38%	
Target Compounds					Qvalue
2) Ethanol	3.025	45	158	1.84 ug/l #	1
3) Tert-Butyl Alcohol (TBA)	0.000		0	N.D. d	
5) Dichlorodifluoromethane	1.697	85	127	N.D.	
6) Chloromethane	0.000		0	N.D. d	
7) Vinyl Chloride	1.996	62	38060	7.55 ug/l	89
8) Bromomethane	0.000		0	N.D. d	
9) Chloroethane	0.000		0	N.D.	
10) 1,3-Butadiene	0.000		0	N.D.	
11) Trichlorofluoromethane	2.737	101	102	N.D.	
12) Diethyl Ether	3.102	45	269	0.10 ug/l #	1
13) Acetone	3.483	58	2351	4.83 ug/l #	47
14) Iodomethane	0.000		0	N.D.	
15) 1,1-Dichloroethene	3.374	61	101	N.D.	
16) 1,1,2-Trichloro-1,2,2-...	0.000		0	N.D.	
17) Isopropanol	3.728	45	224	0.52 ug/l	88
18) Carbon Disulfide	3.657	76	534	N.D.	
19) Acetonitrile	3.896	41	108	N.D.	
20) Acrylonitrile	0.000		0	N.D.	
21) Allyl Chloride	0.000		0	N.D.	
22) Acrolein	0.000		0	N.D.	
23) Methylene Chloride	4.087	84	1098	0.26 ug/l #	19
24) t-1,2-Dichloroethene	4.490	96	228	N.D.	
25) Isobutyl Alcohol	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (...	0.000		0	N.D.	
27) Hexane	0.000		0	N.D.	
28) 1,1-Dichloroethane	0.000		0	N.D.	
29) Vinyl Acetate	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	0.000		0	N.D.	
31) Chloroprene	0.000		0	N.D.	
32) Ethyl-t-Butyl Ether (E...	0.000		0	N.D.	
33) c-1,2-Dichloroethene	5.900	96	11898	2.75 ug/l	88
34) 2,2-Dichloropropane	0.000		0	N.D. d	
35) 2-Butanone	5.965	43	126	N.D.	
36) Propionitrile	0.000		0	N.D.	
37) Methacrylonitrile	0.000		0	N.D.	
38) Bromochloromethane	0.000		0	N.D.	
39) Tetrahydrofuran	0.000		0	N.D.	
40) Chloroform	0.000		0	N.D.	
42) 1,1,1-Trichloroethane	0.000		0	N.D.	
43) Cyclohexane	0.000		0	N.D. d	

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC008.D
Acq On : 23 Dec 2013 2:46 pm
Operator : 796
Sample : 13-12-1628-21C 5ML PH<2
Misc : V111513C
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 23 17:45:44 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44)	1,1-Dichloropropene	0.000		0	N.D. d	
45)	Carbon Tetrachloride	0.000		0	N.D.	
48)	Benzene	7.048	78	623	N.D.	
49)	1,2-Dichloroethane	0.000		0	N.D.	
50)	Tert-Amyl-Methyl Ether...	0.000		0	N.D.	
51)	Thiophene	0.000		0	N.D.	
52)	2,2,4-Trimethyl Pentane	0.000		0	N.D.	
53)	Trichloroethene	7.859	95	8239	1.92 ug/l	93
54)	2-Pentanone	0.000		0	N.D.	
55)	1,2-Dichloropropane	0.000		0	N.D.	
56)	Dibromomethane	0.000		0	N.D.	
57)	Methyl Methacrylate	0.000		0	N.D.	
58)	1,4-Dioxane	0.000		0	N.D.	
59)	Bromodichloromethane	0.000		0	N.D.	
60)	2-Chloroethyl Vinyl Ether	0.000		0	N.D.	
61)	c-1,3-Dichloropropene	0.000		0	N.D.	
63)	Toluene	9.449	91	3822	0.23 ug/l	98
64)	4-Methyl-2-Pentanone	0.000		0	N.D.	
66)	t-1,3-Dichloropropene	0.000		0	N.D.	
67)	Ethyl Methacrylate	0.000		0	N.D.	
68)	1,1,2-Trichloroethane	0.000		0	N.D.	
69)	Tetrachloroethene	0.000		0	N.D.	
70)	1,3-Dichloropropane	0.000		0	N.D.	
71)	2-Hexanone	0.000		0	N.D.	
72)	Dibromochloromethane	0.000		0	N.D.	
73)	1,2-Dibromoethane	0.000		0	N.D.	
74)	Chlorobenzene	0.000		0	N.D.	
75)	1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
76)	Ethylbenzene	11.305	91	110	N.D.	
77)	p/m-Xylene	11.441	91	170	N.D.	
78)	o-Xylene	0.000		0	N.D.	
79)	Styrene	0.000		0	N.D.	
80)	Isopropylbenzene	0.000		0	N.D.	
82)	1,2,3-Trichloropropane	0.000		0	N.D.	
83)	Bromobenzene	0.000		0	N.D.	
84)	n-Propylbenzene	0.000		0	N.D.	
85)	t-1,4-Dichloro-2-Butene	0.000		0	N.D.	
86)	2-Chlorotoluene	0.000		0	N.D.	
87)	1,3,5-Trimethylbenzene	0.000		0	N.D.	
89)	Bromoform	0.000		0	N.D.	
90)	1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
91)	4-Chlorotoluene	0.000		0	N.D.	
92)	1,2,4-Trimethylbenzene	13.586	105	146	N.D.	
93)	tert-Butylbenzene	0.000		0	N.D.	
94)	p-Isopropyltoluene	13.978	119	262	N.D.	
95)	sec-Butylbenzene	0.000		0	N.D.	
96)	1,3-Dichlorobenzene	0.000		0	N.D.	
97)	1,4-Dichlorobenzene	14.021	146	291	N.D.	
98)	1,2-Dichlorobenzene	0.000		0	N.D.	
99)	n-Butylbenzene	0.000		0	N.D.	
100)	1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
101)	1,2,4-Trichlorobenzene	16.504	180	122	N.D.	
102)	Hexachloro-1,3-Butadiene	0.000		0	N.D.	
103)	Naphthalene	16.808	128	373	N.D.	
104)	1,2,3-Trichlorobenzene	0.000		0	N.D.	

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

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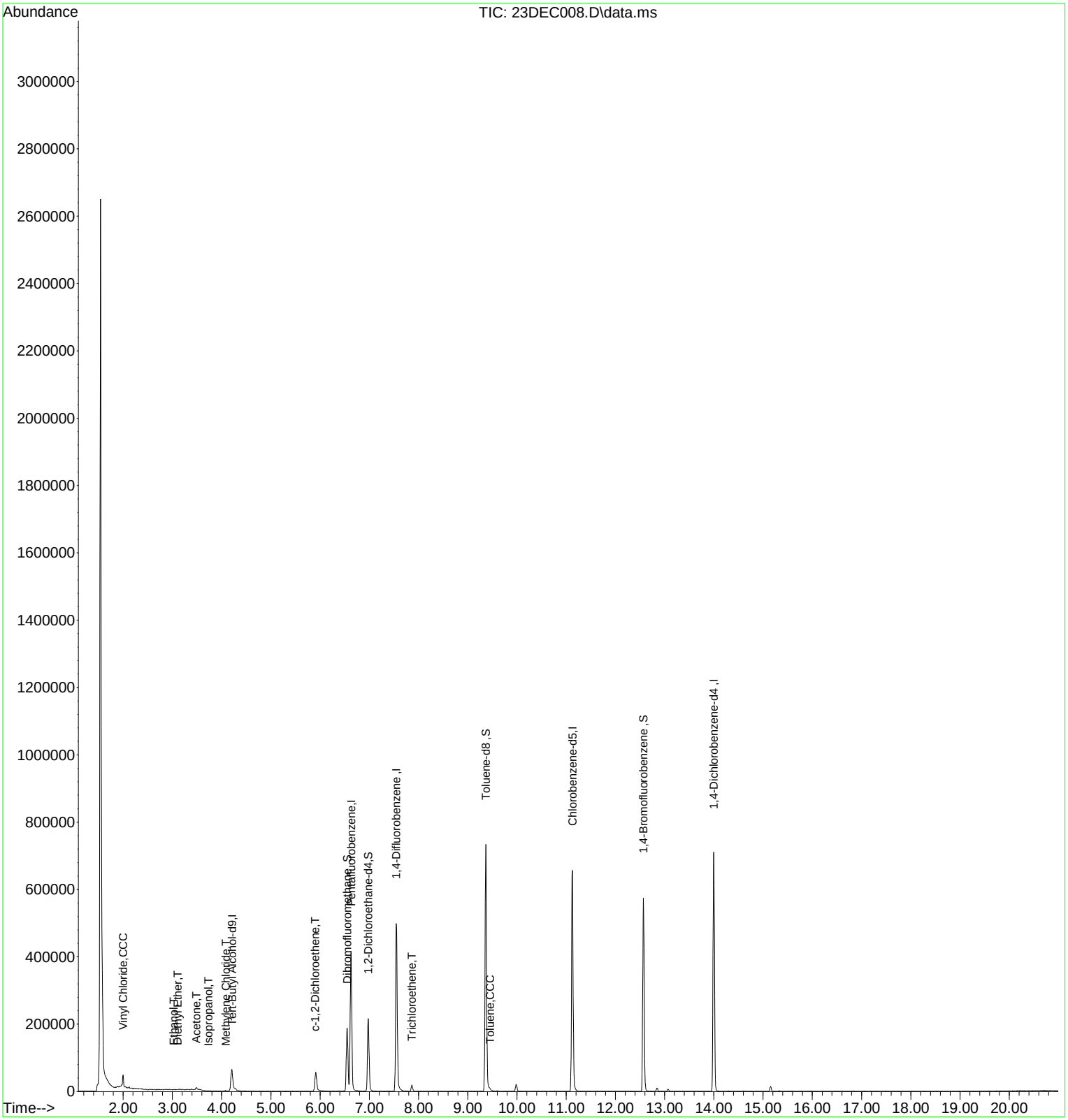
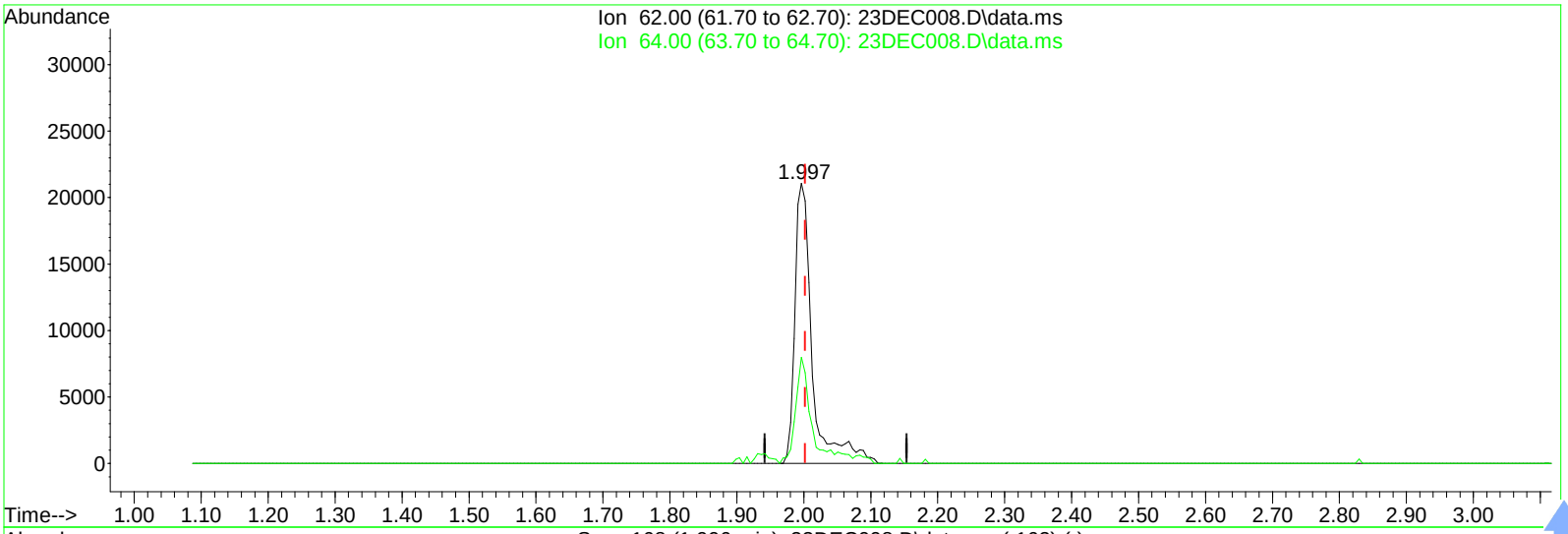
Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC008.D
Acq On : 23 Dec 2013 2:46 pm
Operator : 796
Sample : 13-12-1628-21C 5ML PH<2
Misc : V111513C
ALS Vial : 8 Sample Multiplier: 1

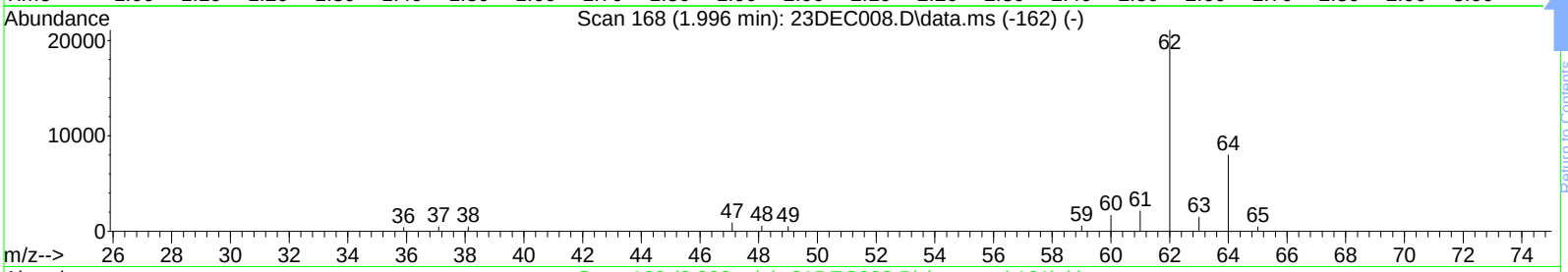
Quant Time: Dec 23 17:45:44 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

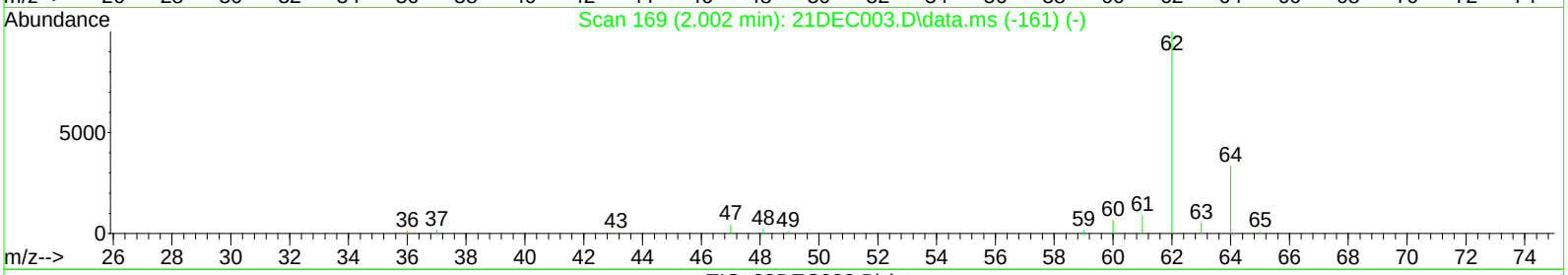


Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC008.D
Acq On : 23 Dec 2013 2:46 pm
Operator : 796
Sample : 13-12-1628-21C 5ML PH<2
Misc : V111513C
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 23 17:11:53 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration







TIC: 23DEC008.D\data.ms

(7) Vinyl Chloride (CCC)

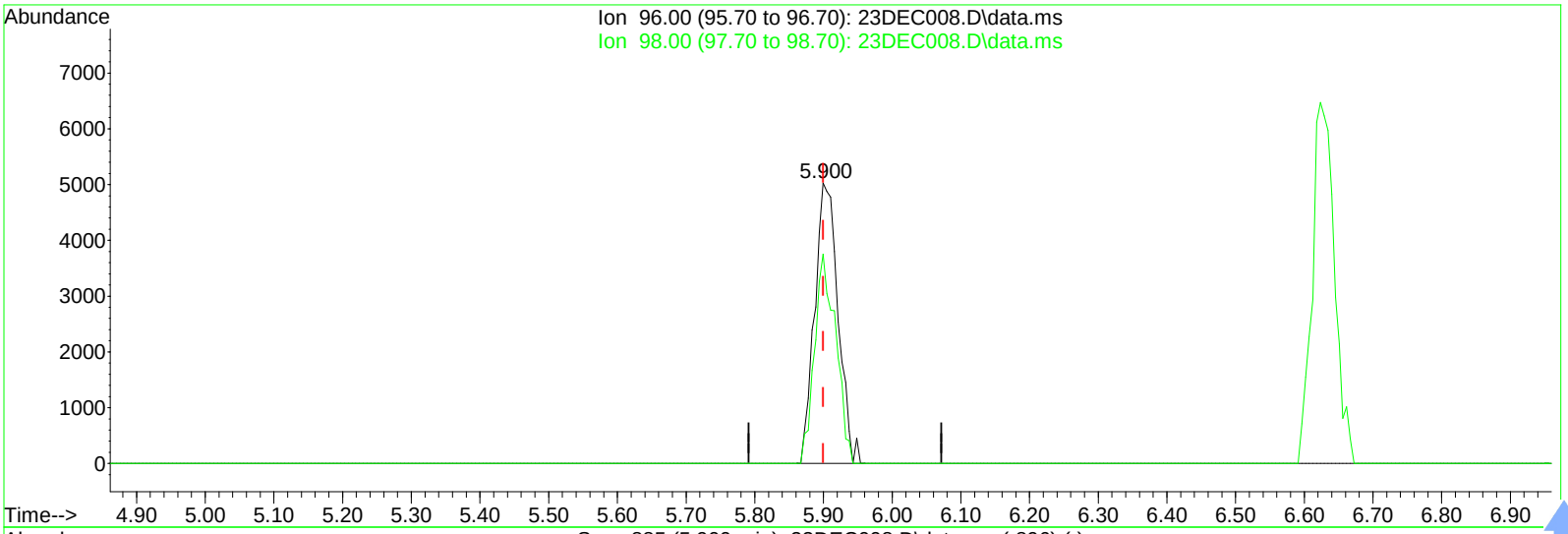
1.9965min (-0.0054) 7.5468 ug/l

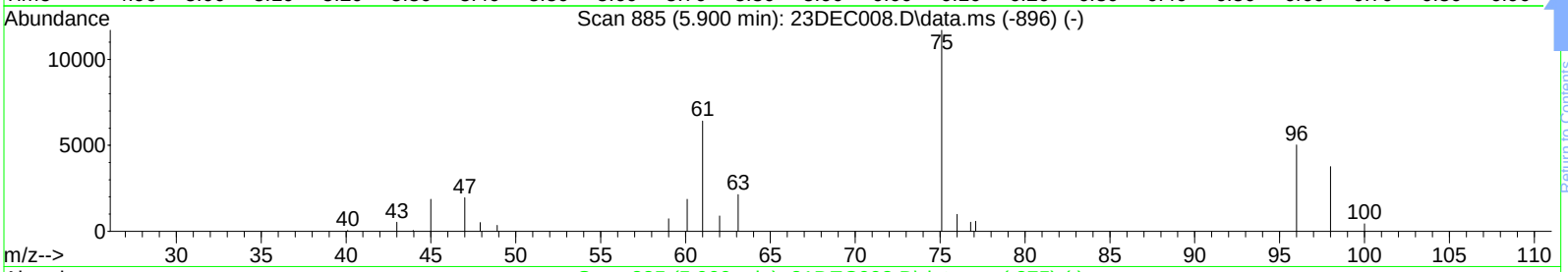
response 38060

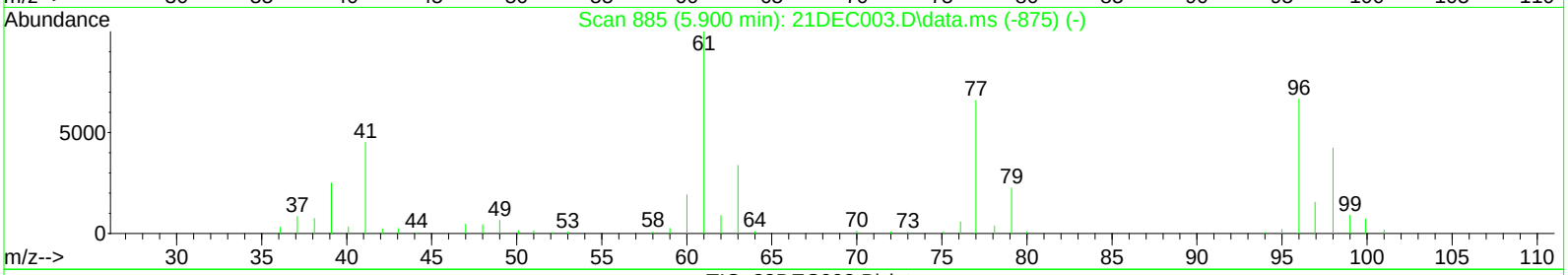
Ion	Exp%	Act%
62.0000	100	100
64.0000	31.7000	37.8319
0.0000	0.0000	0.0000
0.0000	0.0000	0.0000

Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC008.D
Acq On : 23 Dec 2013 2:46 pm
Operator : 796
Sample : 13-12-1628-21C 5ML PH<2
Misc : V111513C
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 23 17:11:53 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration







TIC: 23DEC008.D\data.ms

(33) c-1,2-Dichloroethene (T)

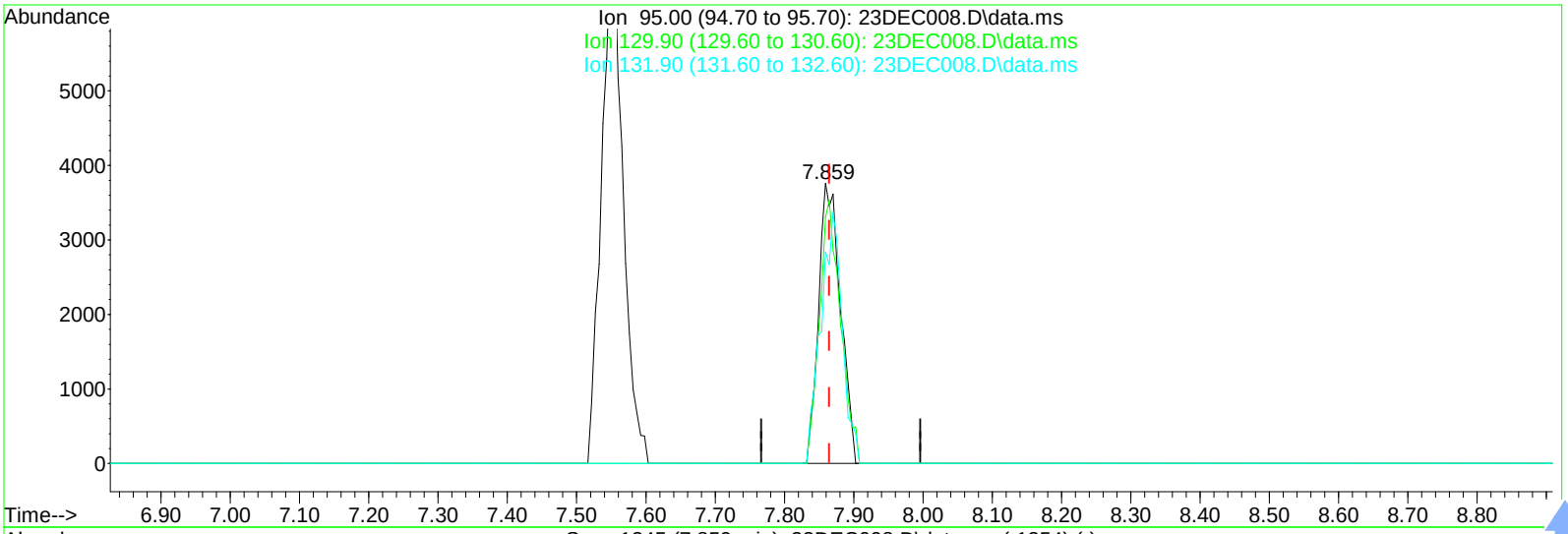
5.8995min (+0.0000) 2.7523 ug/l

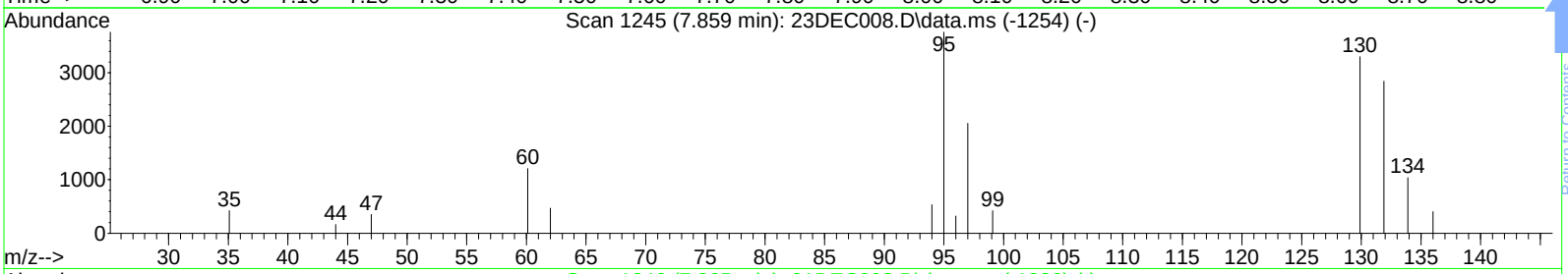
response 11898

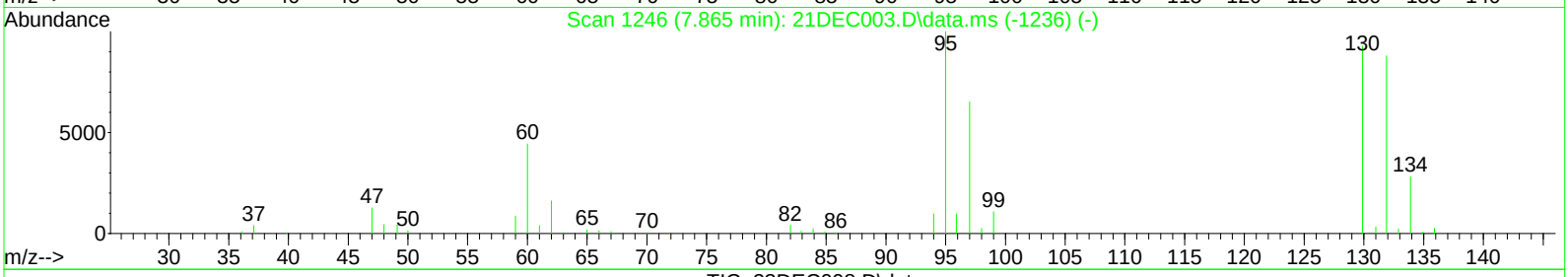
Ion	Exp%	Act%
96.0000	100	100
98.0000	64.9000	74.6518
0.0000	0.0000	0.0000
0.0000	0.0000	0.0000

Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC008.D
Acq On : 23 Dec 2013 2:46 pm
Operator : 796
Sample : 13-12-1628-21C 5ML PH<2
Misc : V111513C
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 23 17:11:53 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration







TIC: 23DEC008.D\data.ms

(53) Trichloroethene (T)

7.8592min (-0.0054) 1.9155 ug/l

response 8239

Ion	Exp%	Act%
95.0000	100	100
129.9000	88.0000	87.7990
131.9000	87.8000	75.4918
0.0000	0.0000	0.0000

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 19:33
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC022.D\21DEC022.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 22 **CLIENT SAMPLE NUMBER: MW-40-31**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	9.0	1	9.0	6.0	10	20	1	ug/L	Jl
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	m
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	l
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.22	1	ND	0.41	0.50	5.0	1	ug/L	m
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	1.2	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.00	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 13-12-1628
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 19:33
ANALYST: 796
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC022.D\21DEC022.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 12:08
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

 # 22 **CLIENT SAMPLE NUMBER: MW-40-31**

LCS/MB BATCH: 131221L01
MS/MSD BATCH: 131221S01
COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	l
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.26	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.00	1	ND	2.5	5.0	10	1	ug/L	m
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	m
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	[lm
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	k
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.43	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	12	1	ND	50	50	100	1	ug/L	

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC022.D Vial: 22
Acq On : 21 Dec 2013 7:33 pm Operator: 486
Sample : 13-12-1628-22B 5ML PH>2 Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 23 12:28:33 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.306	65	131036	250.00	ug/l	-0.01
4) Pentafluorobenzene	7.296	168	705343	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1068143	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.174	117	960075	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	509607	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.192	113	373686	56.63	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 113.26%			
46) 1,2-Dichloroethane-d4	7.684	65	373838	57.33	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 114.66%			
62) Toluene-d8	10.324	98	1199013	49.52	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.04%			
81) 1,4-Bromofluorobenzene	13.658	95	374649	44.80	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 89.60%			
Target Compounds						Qvalue
2) Ethanol	3.057	45	2110	12.27	ug/l #	71
3) Tert-Butyl Alcohol (TBA)	4.481	59	311	0.43	ug/l #	1
5) Dichlorodifluoromethane	0.000		0	N.D.		
6) Chloromethane	1.965	50	5270	1.22	ug/l	61
7) Vinyl Chloride	2.063	62	308	N.D.		
8) Bromomethane	2.451	94	66	N.D.		
9) Chloroethane	0.000		0	N.D.	d	
10) 1,3-Butadiene	2.053	54	378	N.D.		
11) Trichlorofluoromethane	0.000		0	N.D.		
12) Diethyl Ether	3.155	45	2347	Below Cal	#	28
13) Acetone	3.559	58	6574	9.00	ug/l #	43
14) Iodomethane	0.000		0	N.D.		
15) 1,1-Dichloroethene	0.000		0	N.D.		
16) 1,1,2-Trichloro-1,2,2-...	0.000		0	N.D.		
17) Isopropanol	0.000		0	N.D.	d	
18) Carbon Disulfide	3.733	76	5427	0.22	ug/l	75
19) Acetonitrile	4.011	41	164	N.D.		
20) Acrylonitrile	0.000		0	N.D.		
21) Allyl Chloride	4.306	76	70	N.D.		
22) Acrolein	0.000		0	N.D.		
23) Methylene Chloride	4.197	84	1785	0.26	ug/l	93
24) t-1,2-Dichloroethene	0.000		0	N.D.		
25) Isobutyl Alcohol	0.000		0	N.D.	d	
26) Methyl-t-Butyl Ether (...	4.639	73	108	N.D.		
27) Hexane	0.000		0	N.D.		
28) 1,1-Dichloroethane	0.000		0	N.D.		
29) Vinyl Acetate	0.000		0	N.D.		
30) Diisopropyl Ether (DIPE)	5.632	45	74	N.D.		
31) Chloroprene	0.000		0	N.D.		
32) Ethyl-t-Butyl Ether (E...	0.000		0	N.D.		
33) c-1,2-Dichloroethene	0.000		0	N.D.	d	
34) 2,2-Dichloropropane	0.000		0	N.D.	d	
35) 2-Butanone	0.000		0	N.D.	d	
36) Propionitrile	0.000		0	N.D.		
37) Methacrylonitrile	0.000		0	N.D.		
38) Bromochloromethane	0.000		0	N.D.		
39) Tetrahydrofuran	6.887	42	202	0.09	ug/l #	31
40) Chloroform	0.000		0	N.D.		
42) 1,1,1-Trichloroethane	0.000		0	N.D.		
43) Cyclohexane	0.000		0	N.D.	d	
44) 1,1-Dichloropropene	0.000		0	N.D.	d	

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC022.D Vial: 22
Acq On : 21 Dec 2013 7:33 pm Operator: 486
Sample : 13-12-1628-22B 5ML PH>2 Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 23 12:28:33 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45)	Carbon Tetrachloride	7.482	117	76	N.D.	
48)	Benzene	7.765	78	1215	N.D.	
49)	1,2-Dichloroethane	7.765	62	70	N.D.	
50)	2-Methyl-2-Butanol (TAA)	0.000		0	N.D.	d
51)	Tert-Amyl-Methyl Ether...	0.000		0	N.D.	
52)	Thiophene	0.000		0	N.D.	
53)	2,2,4-Trimethyl Pentane	0.000		0	N.D.	
54)	Trichloroethene	0.000		0	N.D.	d
55)	1,2-Dichloropropane	8.911	63	75	N.D.	
56)	Dibromomethane	0.000		0	N.D.	
57)	Methyl Methacrylate	0.000		0	N.D.	
58)	1,4-Dioxane	0.000		0	N.D.	
59)	Bromodichloromethane	0.000		0	N.D.	
60)	2-Chloroethyl Vinyl Ether	0.000		0	N.D.	
61)	c-1,3-Dichloropropene	9.981	75	153	N.D.	
63)	Toluene	10.417	91	1922	N.D.	
64)	4-Methyl-2-Pentanone	0.000		0	N.D.	
66)	t-1,3-Dichloropropene	0.000		0	N.D.	d
67)	Ethyl Methacrylate	0.000		0	N.D.	
68)	1,1,2-Trichloroethane	0.000		0	N.D.	
69)	Tetrachloroethene	0.000		0	N.D.	
70)	1,3-Dichloropropane	0.000		0	N.D.	
71)	2-Hexanone	11.328	58	66	N.D.	
72)	Dibromochloromethane	0.000		0	N.D.	
73)	1,2-Dibromoethane	0.000		0	N.D.	
74)	Chlorobenzene	12.201	112	191	N.D.	
75)	1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
76)	Ethylbenzene	12.349	91	738	N.D.	
77)	p/m-Xylene	12.496	91	642	N.D.	
78)	o-Xylene	13.004	91	352	N.D.	
79)	Styrene	0.000		0	N.D.	
80)	Isopropylbenzene	13.467	105	76	N.D.	
82)	1,2,3-Trichloropropane	0.000		0	N.D.	
83)	Bromobenzene	0.000		0	N.D.	
84)	n-Propylbenzene	13.991	91	184	N.D.	
85)	t-1,4-Dichloro-2-Butene	0.000		0	N.D.	
86)	2-Chlorotoluene	0.000		0	N.D.	
87)	1,3,5-Trimethylbenzene	14.215	105	67	N.D.	
89)	Bromoform	0.000		0	N.D.	
90)	1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
91)	4-Chlorotoluene	0.000		0	N.D.	
92)	Cyclohexanone	0.000		0	N.D.	d
93)	1,2,4-Trimethylbenzene	0.000		0	N.D.	
94)	tert-Butylbenzene	0.000		0	N.D.	
95)	p-Isopropyltoluene	15.071	119	236	N.D.	
96)	sec-Butylbenzene	0.000		0	N.D.	
97)	1,3-Dichlorobenzene	15.028	146	65	N.D.	
98)	1,4-Dichlorobenzene	15.137	146	448	N.D.	
99)	1,2-Dichlorobenzene	15.612	146	123	N.D.	
100)	n-Butylbenzene	0.000		0	N.D.	
101)	1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
102)	1,2,4-Trichlorobenzene	17.636	180	100	N.D.	
103)	Hexachloro-1,3-Butadiene	0.000		0	N.D.	
104)	Naphthalene	17.936	128	849	N.D.	
105)	1,2,3-Trichlorobenzene	18.236	180	69	N.D.	

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

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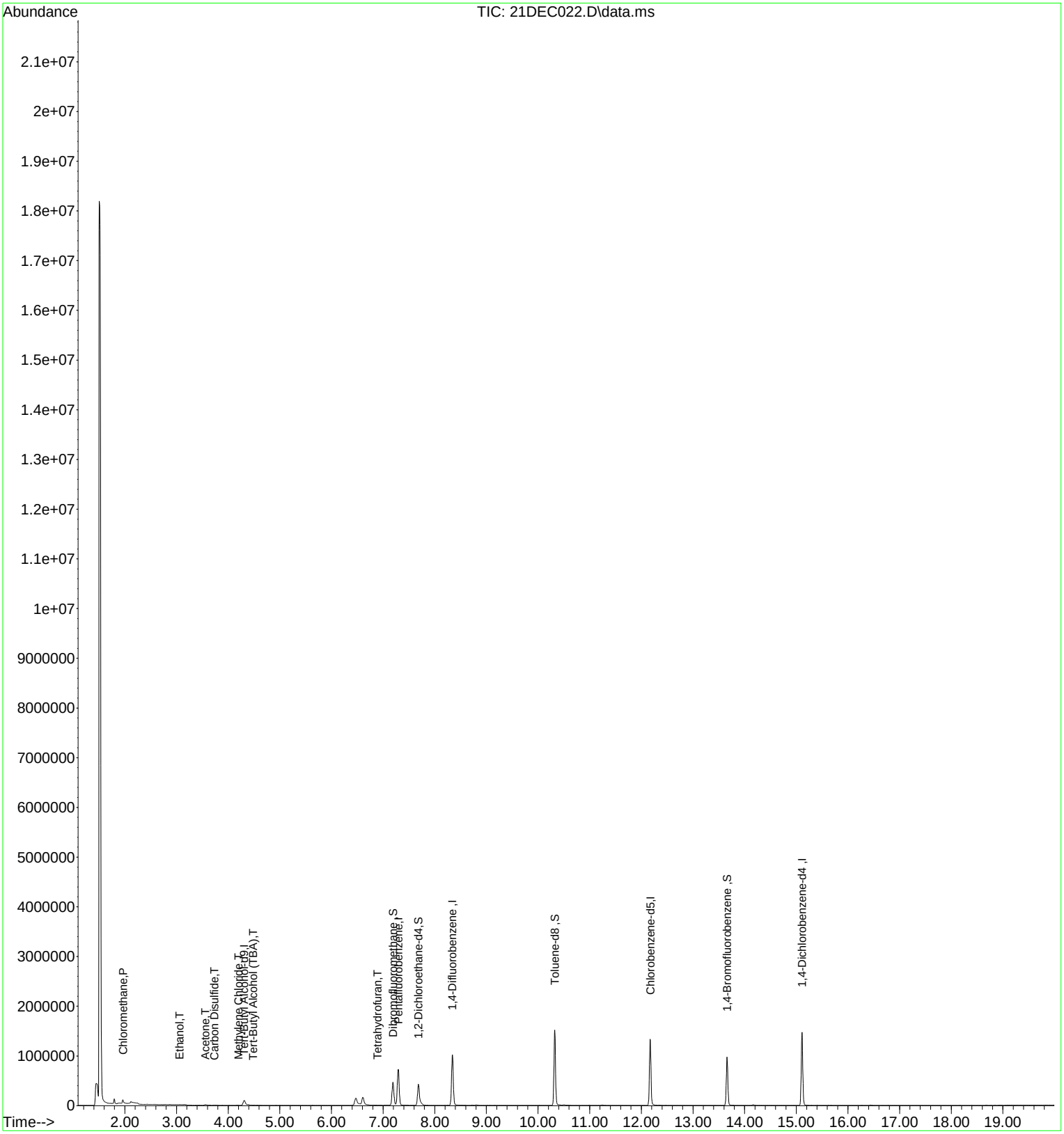
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC022.D Vial: 22
Acq On : 21 Dec 2013 7:33 pm Operator: 486
Sample : 13-12-1628-22B 5ML PH>2 Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 23 12:28:33 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration



Calscience Environmental Laboratories, Inc.

EPA 8260B Volatile Organics

Quality Control Data

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA 8260B

MB Sample ID: 099-14-479-366
MB Batch ID: 131220L01
Instrument: GC/MS Z
Matrix: Water
Analyst: 796
D/T Analyzed: 12/20/2013 11:40
Data File: W:\GCMS_Z_DATA\2013\131220\20DEC005.D\20DEC005.rr

Reviewed By: 163
D/T Reviewed: 12/23/2013 12:55
Extraction: EPA 5030C
D/T Extracted: 12/20/2013 00:00

Work Order #: 13-12-1628

Sample#	Client Sample ID	D/T Analyzed	Data File
1	TB-2	12/20/2013 16:15	W:\GCMS_Z_DATA\2013\131220\20DEC015.D\20DEC015.rr
3	MW-40-22	12/20/2013 17:10	W:\GCMS_Z_DATA\2013\131220\20DEC017.D\20DEC017.rr
5	MW-40-35	12/20/2013 18:06	W:\GCMS_Z_DATA\2013\131220\20DEC019.D\20DEC019.rr
6	MW-40-36	12/20/2013 18:33	W:\GCMS_Z_DATA\2013\131220\20DEC020.D\20DEC020.rr
8	DUP-2	12/20/2013 19:28	W:\GCMS_Z_DATA\2013\131220\20DEC022.D\20DEC022.rr
9	EB-2	12/20/2013 19:55	W:\GCMS_Z_DATA\2013\131220\20DEC023.D\20DEC023.rr
10	TB-1	12/20/2013 20:22	W:\GCMS_Z_DATA\2013\131220\20DEC024.D\20DEC024.rr
13	MW-40-32	12/20/2013 21:17	W:\GCMS_Z_DATA\2013\131220\20DEC026.D\20DEC026.rr

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 099-14-479
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 11:40
ANALYST: 796
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC005.D\20DEC005.rr

REVIEWED BY: 163
DATE REVIEWED: 12/23/2013 12:55
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	0.25	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.11	1	ND	3.9	5.0	20	1	ug/L	
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.00	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.094	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.088	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.00	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 099-14-479
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 11:40
ANALYST: 796
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC005.D\20DEC005.rr

REVIEWED BY: 163
DATE REVIEWED: 12/23/2013 12:55
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131220L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.22	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.11	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.080	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.00	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.086	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	0.00	1	ND	50	50	100	1	ug/L	

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LCS QUALITY CONTROL SHEET FOR METHOD : EPA 8260B

WORK ORDER : **13-12-1628**
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 10:37
ANALYST: 796
LCS/MB BATCH: **131220L01**
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC003.D\20DEC003.rr

REVIEWED BY: 163
DATE REVIEWED: 12/23/2013 12:55
EXTRACTION : EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Acetone	**50.00**	**75.25**	**151**	**40-140**	**ME**	**L$**
Benzene	50.00	46.55	93	80-120	PASS	
Bromobenzene	50.00	47.29	95	75-125	PASS	
Bromochloromethane	50.00	44.90	90	65-130	PASS	
Bromodichloromethane	50.00	49.30	99	75-120	PASS	
Bromoform	50.00	50.88	102	70-130	PASS	
Bromomethane	50.00	50.55	101	30-145	PASS	
2-Butanone	50.00	58.08	116	30-150	PASS	
n-Butylbenzene	50.00	52.11	104	70-135	PASS	
sec-Butylbenzene	50.00	47.03	94	70-125	PASS	
tert-Butylbenzene	50.00	47.21	94	70-130	PASS	
Carbon Disulfide	50.00	46.10	92	35-160	PASS	
Carbon Tetrachloride	50.00	56.56	113	65-140	PASS	
Chlorobenzene	50.00	45.63	91	80-120	PASS	
Chloroethane	50.00	54.04	108	60-135	PASS	
Chloroform	50.00	48.73	97	65-135	PASS	
Chloromethane	50.00	49.41	99	40-125	PASS	
2-Chlorotoluene	50.00	46.97	94	75-125	PASS	
4-Chlorotoluene	50.00	44.22	88	75-130	PASS	
Dibromochloromethane	50.00	50.07	100	60-135	PASS	
1,2-Dibromo-3-Chloropropane	50.00	43.78	88	50-130	PASS	
1,2-Dibromoethane	50.00	46.40	93	80-120	PASS	
Dibromomethane	50.00	45.95	92	75-125	PASS	
1,2-Dichlorobenzene	50.00	43.22	86	70-120	PASS	
1,3-Dichlorobenzene	50.00	44.26	89	75-125	PASS	
1,4-Dichlorobenzene	50.00	46.21	92	75-125	PASS	
Dichlorodifluoromethane	50.00	59.50	119	30-155	PASS	
1,1-Dichloroethane	50.00	46.03	92	70-135	PASS	
1,2-Dichloroethane	50.00	47.75	95	70-130	PASS	
1,1-Dichloroethene	50.00	47.52	95	70-130	PASS	

Compounds listed in bold are required to be reported

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LCS QUALITY CONTROL SHEET FOR METHOD : EPA 8260B

WORK ORDER : **13-12-1628**
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 10:37
ANALYST: 796
LCS/MB BATCH: **131220L01**
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC003.D\20DEC003.rr

REVIEWED BY: 163
DATE REVIEWED: 12/23/2013 12:55
EXTRACTION : EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
c-1,2-Dichloroethene	50.00	48.65	97	70-125	PASS	
t-1,2-Dichloroethene	50.00	49.81	100	60-140	PASS	
1,2-Dichloropropane	50.00	44.56	89	75-125	PASS	
1,3-Dichloropropane	50.00	43.53	87	75-125	PASS	
2,2-Dichloropropane	50.00	52.27	105	70-135	PASS	
1,1-Dichloropropene	50.00	50.52	101	75-130	PASS	
c-1,3-Dichloropropene	50.00	52.01	104	70-130	PASS	
t-1,3-Dichloropropene	50.00	42.75	85	55-140	PASS	
Ethylbenzene	50.00	49.63	99	75-125	PASS	
2-Hexanone	50.00	46.77	94	55-130	PASS	
Isopropylbenzene	50.00	48.21	96	75-125	PASS	
p-Isopropyltoluene	50.00	46.71	93	75-130	PASS	
Methylene Chloride	50.00	47.10	94	55-140	PASS	
4-Methyl-2-Pentanone	50.00	42.26	85	60-135	PASS	
Naphthalene	50.00	44.00	88	55-140	PASS	
n-Propylbenzene	50.00	46.52	93	70-130	PASS	
Styrene	50.00	47.85	96	65-135	PASS	
1,1,1,2-Tetrachloroethane	50.00	54.11	108	80-130	PASS	
1,1,2-Trichloro-1,2,2-Trifluoro ethane	50.00	51.92	104	80-130	PASS	
Acrylonitrile	50.00	44.18	88	70-130	PASS	
Iodomethane	100.0	108.6	109	70-130	PASS	
t-1,4-Dichloro-2-Butene	**50.00**	**31.73**	**63**	**70-130**	**ME**	**M$**
1,1,2,2-Tetrachloroethane	50.00	41.34	83	65-130	PASS	
Tetrachloroethene	50.00	52.67	105	45-150	PASS	
Toluene	50.00	48.52	97	75-120	PASS	
1,2,3-Trichlorobenzene	50.00	48.15	96	55-140	PASS	
1,2,4-Trichlorobenzene	50.00	49.74	99	65-135	PASS	
1,1,1-Trichloroethane	50.00	52.97	106	65-130	PASS	
Hexachloro-1,3-Butadiene	50.00	54.29	109	50-140	PASS	
1,1,2-Trichloroethane	50.00	43.66	87	75-125	PASS	

Compounds listed in bold are required to be reported

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LCS QUALITY CONTROL SHEET FOR METHOD : EPA 8260B

WORK ORDER : **13-12-1628**
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/20/2013 10:37
ANALYST: 796
LCS/MB BATCH: **131220L01**
DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC003.D\20DEC003.rr

REVIEWED BY: 163
DATE REVIEWED: 12/23/2013 12:55
EXTRACTION : EPA 5030C
D/T EXTRACTED: 12/20/2013 00:00

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Trichloroethene	50.00	50.27	101	70-125	PASS	
Trichlorofluoromethane	50.00	56.43	113	60-145	PASS	
1,2,3-Trichloropropane	50.00	44.39	89	75-125	PASS	
1,2,4-Trimethylbenzene	50.00	48.35	97	75-130	PASS	
1,3,5-Trimethylbenzene	50.00	52.81	106	75-130	PASS	
Vinyl Acetate	50.00	48.98	98	80-120	PASS	
Vinyl Chloride	50.00	52.92	106	50-145	PASS	
p/m-Xylene	100.0	93.44	93	75-130	PASS	
o-Xylene	50.00	46.19	92	80-120	PASS	
Methyl-t-Butyl Ether (MTBE)	50.00	40.25	80	65-125	PASS	
Tert-Butyl Alcohol (TBA)	250.0	231.0	92	46-154	PASS	
Diisopropyl Ether (DIPE)	50.00	43.31	87	81-123	PASS	
Ethyl-t-Butyl Ether (ETBE)	50.00	39.41	79	74-122	PASS	
Tert-Amyl-Methyl Ether (TAME)	50.00	38.31	77	76-124	PASS	
Ethanol	500.0	473.1	95	60-138	PASS	

Compounds listed in bold are required to be reported

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

WORK ORDER:	**13-12-1628**	SAMPLE D/T EXTRACTED:	12/20/2013	EXTRACTION:	EPA 5030C
MS/MSD BATCH:	131220S01	MS D/T EXTRACTED:	12/20/2013	ANALYST:	796
SPIKED SAMPLE ID:	**13-12-1375-4**	MSD D/T EXTRACTED:	12/20/2013	SAMPLE INSTRUMENT NAME	GC/MS Z
REVIEWED BY:	163	SAMPLE D/T ANALYZED:	12/20/2013 12:07	MS INSTRUMENT NAME:	GC/MS Z
DATE REVIEWED:	12/27/2013 10:32	MS D/T ANALYZED:	12/20/2013 12:34	MSD INSTRUMENT NAME:	GC/MS Z
		MSD D/T ANALYZED:	12/20/2013 13:01		

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL ADDED	FINAL ADDED	MS CONC	% REC	MSD CONC	% REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Acetone	ND	50.00	50.00	51.14	102	50.85	102	40-140	1	0-20	PASS	
Benzene	ND	50.00	50.00	50.11	100	51.06	102	80-120	2	0-20	PASS	
Bromobenzene	ND	50.00	50.00	51.34	103	52.39	105	75-125	2	0-20	PASS	
Bromochloromethane	ND	50.00	50.00	51.43	103	52.82	106	65-135	3	0-20	PASS	
Bromodichloromethane	ND	50.00	50.00	55.64	111	58.45	117	75-120	5	0-20	PASS	
Bromoform	ND	50.00	50.00	57.40	115	58.47	117	70-130	2	0-20	PASS	
Bromomethane	ND	50.00	50.00	53.76	108	53.14	106	30-145	1	0-20	PASS	
2-Butanone	ND	50.00	50.00	51.65	103	51.86	104	30-150	0	0-20	PASS	
n-Butylbenzene	ND	50.00	50.00	53.99	108	54.88	110	70-135	2	0-20	PASS	
sec-Butylbenzene	ND	50.00	50.00	48.65	97	49.20	98	70-125	1	0-20	PASS	
tert-Butylbenzene	ND	50.00	50.00	48.69	97	50.08	100	70-130	3	0-20	PASS	
Carbon Disulfide	ND	50.00	50.00	48.55	97	49.30	99	35-160	2	0-20	PASS	
Carbon Tetrachloride	ND	50.00	50.00	58.34	117	61.54	123	65-140	5	0-20	PASS	
Chlorobenzene	ND	50.00	50.00	48.29	97	48.83	98	80-120	1	0-20	PASS	
Chloroethane	ND	50.00	50.00	57.91	116	57.83	116	60-135	0	0-20	PASS	
Chloroform	ND	50.00	50.00	55.52	111	57.05	114	65-135	3	0-20	PASS	
Chloromethane	ND	50.00	50.00	51.14	102	53.61	107	40-125	5	0-20	PASS	
2-Chlorotoluene	ND	50.00	50.00	49.26	99	49.61	99	75-125	1	0-20	PASS	
4-Chlorotoluene	ND	50.00	50.00	46.78	94	47.27	95	75-130	1	0-20	PASS	
Dibromochloromethane	ND	50.00	50.00	56.22	112	57.54	115	60-135	2	0-20	PASS	
1,2-Dibromo-3-Chloropropane	ND	50.00	50.00	51.69	103	50.11	100	50-130	3	0-20	PASS	
1,2-Dibromoethane	ND	50.00	50.00	52.95	106	53.05	106	80-120	0	0-20	PASS	
Dibromomethane	ND	50.00	50.00	53.52	107	54.75	110	75-125	2	0-20	PASS	
1,2-Dichlorobenzene	ND	50.00	50.00	46.65	93	46.96	94	70-120	1	0-20	PASS	
1,3-Dichlorobenzene	ND	50.00	50.00	46.77	94	47.75	95	75-125	2	0-20	PASS	
1,4-Dichlorobenzene	ND	50.00	50.00	50.44	101	50.36	101	75-125	0	0-20	PASS	
Dichlorodifluoromethane	ND	50.00	50.00	63.32	127	62.76	126	30-155	1	0-20	PASS	
1,1-Dichloroethane	ND	50.00	50.00	50.16	100	51.48	103	70-135	3	0-20	PASS	
1,2-Dichloroethane	ND	50.00	50.00	54.73	109	55.51	111	70-130	1	0-20	PASS	
1,1-Dichloroethene	ND	50.00	50.00	49.97	100	50.68	101	70-130	1	0-20	PASS	
c-1,2-Dichloroethene	ND	50.00	50.00	53.07	106	54.79	110	70-125	3	0-20	PASS	
t-1,2-Dichloroethene	ND	50.00	50.00	52.57	105	52.92	106	60-140	1	0-20	PASS	
1,2-Dichloropropane	ND	50.00	50.00	50.54	101	51.78	104	75-125	2	0-20	PASS	
1,3-Dichloropropane	ND	50.00	50.00	49.36	99	49.55	99	75-125	0	0-20	PASS	
2,2-Dichloropropane	ND	50.00	50.00	54.77	110	57.25	115	70-135	4	0-20	PASS	
1,1-Dichloropropene	ND	50.00	50.00	53.08	106	55.83	112	75-130	5	0-20	PASS	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

WORK ORDER:	**13-12-1628**	SAMPLE D/T EXTRACTED:	12/20/2013	EXTRACTION:	EPA 5030C
MS/MSD BATCH:	131220S01	MS D/T EXTRACTED:	12/20/2013	ANALYST:	796
SPIKED SAMPLE ID:	**13-12-1375-4**	MSD D/T EXTRACTED:	12/20/2013	SAMPLE INSTRUMENT NAME	GC/MS Z
REVIEWED BY:	163	SAMPLE D/T ANALYZED:	12/20/2013 12:07	MS INSTRUMENT NAME:	GC/MS Z
DATE REVIEWED:	12/27/2013 10:32	MS D/T ANALYZED:	12/20/2013 12:34	MSD INSTRUMENT NAME:	GC/MS Z
		MSD D/T ANALYZED:	12/20/2013 13:01		

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL ADDED	FINAL ADDED	MS CONC	% REC	MSD CONC	% REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
c-1,3-Dichloropropene	ND	50.00	50.00	58.21	116	59.91	120	70-130	3	0-20	PASS	
t-1,3-Dichloropropene	ND	50.00	50.00	47.49	95	48.37	97	55-140	2	0-20	PASS	
Ethylbenzene	ND	50.00	50.00	51.50	103	52.10	104	75-125	1	0-20	PASS	
2-Hexanone	ND	50.00	50.00	47.78	96	47.55	95	55-130	0	0-20	PASS	
Isopropylbenzene	ND	50.00	50.00	48.99	98	49.91	100	75-125	2	0-20	PASS	
p-Isopropyltoluene	ND	50.00	50.00	48.65	97	49.11	98	75-130	1	0-20	PASS	
Methylene Chloride	ND	50.00	50.00	52.46	105	53.28	107	55-140	2	0-20	PASS	
4-Methyl-2-Pentanone	ND	50.00	50.00	49.40	99	51.12	102	60-135	3	0-20	PASS	
Naphthalene	ND	50.00	50.00	48.69	97	49.09	98	55-140	1	0-20	PASS	
n-Propylbenzene	ND	50.00	50.00	48.02	96	48.29	97	70-130	1	0-20	PASS	
Styrene	ND	50.00	50.00	45.73	91	43.56	87	65-135	5	0-20	PASS	
Iodomethane	ND	100.0	100.0	104.2	104	115.5	115	70-130	10	0-20	PASS	
Acrylonitrile	ND	50.00	50.00	50.30	101	49.37	99	70-130	2	0-20	PASS	
1,1,1,2-Tetrachloroethane	ND	50.00	50.00	56.82	114	58.86	118	80-130	4	0-20	PASS	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	50.00	55.01	110	55.90	112	80-130	2	0-20	PASS	
t-1,4-Dichloro-2-Butene	ND	50.00	50.00	37.13	74	35.32	71	70-130	5	0-20	PASS	
1,1,2,2-Tetrachloroethane	ND	50.00	50.00	47.43	95	48.89	98	65-130	3	0-20	PASS	
Tetrachloroethene	ND	50.00	50.00	56.24	112	55.58	111	45-150	1	0-20	PASS	
Toluene	ND	50.00	50.00	52.44	105	53.12	106	75-120	1	0-20	PASS	
1,2,3-Trichlorobenzene	ND	50.00	50.00	53.21	106	54.88	110	55-140	3	0-20	PASS	
1,2,4-Trichlorobenzene	ND	50.00	50.00	54.12	108	54.80	110	65-135	1	0-20	PASS	
1,1,1-Trichloroethane	ND	50.00	50.00	56.55	113	58.83	118	65-130	4	0-20	PASS	
Hexachloro-1,3-Butadiene	ND	50.00	50.00	56.33	113	56.50	113	50-140	0	0-20	PASS	
1,1,2-Trichloroethane	ND	50.00	50.00	50.79	102	51.60	103	75-125	2	0-20	PASS	
Trichloroethene	7.785	50.00	50.00	62.99	110	63.12	111	70-125	0	0-20	PASS	
Trichlorofluoromethane	ND	50.00	50.00	60.66	121	59.35	119	60-145	2	0-20	PASS	
1,2,3-Trichloropropane	ND	50.00	50.00	53.36	107	53.12	106	75-125	0	0-20	PASS	
1,2,4-Trimethylbenzene	ND	50.00	50.00	49.16	98	48.24	96	75-130	2	0-20	PASS	
1,3,5-Trimethylbenzene	ND	50.00	50.00	54.64	109	54.61	109	75-130	0	0-20	PASS	
Vinyl Acetate	ND	50.00	50.00	53.25	106	57.00	114	80-120	7	0-20	PASS	
Vinyl Chloride	ND	50.00	50.00	55.74	111	55.70	111	50-145	0	0-20	PASS	
p/m-Xylene	ND	100.0	100.0	97.69	98	97.77	98	75-130	0	0-20	PASS	
o-Xylene	ND	50.00	50.00	48.70	97	49.22	98	80-120	1	0-20	PASS	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	50.00	48.22	96	49.41	99	65-125	2	0-20	PASS	
Tert-Butyl Alcohol (TBA)	ND	250.0	250.0	277.0	111	276.5	111	46-154	0	0-35	PASS	
Diisopropyl Ether (DIPE)	ND	50.00	50.00	49.02	98	50.34	101	81-123	3	0-20	PASS	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

WORK ORDER:	**13-12-1628**	SAMPLE D/T EXTRACTED:	12/20/2013	EXTRACTION:	EPA 5030C
MS/MSD BATCH:	131220S01	MS D/T EXTRACTED:	12/20/2013	ANALYST:	796
SPIKED SAMPLE ID:	**13-12-1375-4**	MSD D/T EXTRACTED:	12/20/2013	SAMPLE INSTRUMENT NAME	GC/MS Z
REVIEWED BY:	163	SAMPLE D/T ANALYZED:	12/20/2013 12:07	MS INSTRUMENT NAME:	GC/MS Z
DATE REVIEWED:	12/27/2013 10:32	MS D/T ANALYZED:	12/20/2013 12:34	MSD INSTRUMENT NAME:	GC/MS Z
		MSD D/T ANALYZED:	12/20/2013 13:01		

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL ADDED	FINAL ADDED	MS CONC	% REC	MSD CONC	% REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	50.00	45.54	91	46.75	93	74-122	3	0-20	PASS	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	50.00	44.85	90	46.11	92	76-124	3	0-20	PASS	
Ethanol	ND	500.0	500.0	519.1	104	504.6	101	60-138	3	0-35	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	20DEC007.rr	W:\GCMS_Z\GCMS_Z_DATA\2013\131220\20DEC007.D\
MSD	20DEC008.rr	W:\GCMS_Z\GCMS_Z_DATA\2013\131220\20DEC008.D\

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SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628 REVIEWED BY: 163

LCS/MB BATCH : 131220L01 DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131220S01 EXTRACTION : EPA 5030C

1 CLIENT SAMPLE NUMBER : TB-2

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC015.D\20DEC015.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1615 ANALYST: 486 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**108**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**111**	**70-120**	**PASS**	
Toluene-d8	**101**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**101**	**75-120**	**PASS**	

3 CLIENT SAMPLE NUMBER : MW-40-22

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC017.D\20DEC017.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1710 ANALYST: 486 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**109**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**112**	**70-120**	**PASS**	
Toluene-d8	**101**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**101**	**75-120**	**PASS**	

5 CLIENT SAMPLE NUMBER : MW-40-35

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC019.D\20DEC019.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1806 ANALYST: 486 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**107**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**113**	**70-120**	**PASS**	
Toluene-d8	**103**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**101**	**75-120**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628 REVIEWED BY: 163

LCS/MB BATCH : 131220L01 DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131220S01 EXTRACTION : EPA 5030C

6 CLIENT SAMPLE NUMBER : MW-40-36

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC020.D\20DEC020.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1833 ANALYST: 486 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**112**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**116**	**70-120**	**PASS**	
Toluene-d8	**101**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**101**	**75-120**	**PASS**	

8 CLIENT SAMPLE NUMBER : DUP-2

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC022.D\20DEC022.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1928 ANALYST: 486 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**111**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**115**	**70-120**	**PASS**	
Toluene-d8	**102**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**102**	**75-120**	**PASS**	

9 CLIENT SAMPLE NUMBER : EB-2

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC023.D\20DEC023.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1955 ANALYST: 486 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**111**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**114**	**70-120**	**PASS**	
Toluene-d8	**102**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**101**	**75-120**	**PASS**	

10 CLIENT SAMPLE NUMBER : TB-1

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC024.D\20DEC024.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 2022 ANALYST: 486 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**112**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**114**	**70-120**	**PASS**	
Toluene-d8	**101**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**101**	**75-120**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628 REVIEWED BY: 163

LCS/MB BATCH : 131220L01 DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131220S01 EXTRACTION : EPA 5030C

13 CLIENT SAMPLE NUMBER : MW-40-32

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC026.D\20DEC026.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 2117 ANALYST: 486 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**111**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**116**	**70-120**	**PASS**	
Toluene-d8	**103**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**104**	**75-120**	**PASS**	

MB CLIENT SAMPLE NUMBER : Method Blank

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC005.D\20DEC005.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1140 ANALYST: 796 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**99**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**100**	**70-120**	**PASS**	
Toluene-d8	**100**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**100**	**75-120**	**PASS**	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

DATA FILE: W:\GCMS_Z_DATA\2013\131220\20DEC003.D\20DEC003.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1037 ANALYST: 796 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**103**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**102**	**70-120**	**PASS**	
Toluene-d8	**100**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**100**	**75-120**	**PASS**	

MS CLIENT SAMPLE NUMBER : Matrix Spike

DATA FILE: W:\GCMS_Z\GCMS_Z_DATA\2013\131220\20DEC007.D\20DEC007.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1234 ANALYST: 796 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**106**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**109**	**70-120**	**PASS**	
Toluene-d8	**102**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**102**	**75-120**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628

REVIEWED BY: 163

LCS/MB BATCH :

DATE REVIEWED: 12/27/2013 10:32

MS BATCH : 131220S01

EXTRACTION : EPA 5030C

 # MSD **CLIENT SAMPLE NUMBER : Matrix Spike Duplicate**

DATA FILE: W:\GCMS_Z\GCMS_Z_DATA\2013\131220\20DEC008.D\20DEC008.rr

D/T EXTRACTED: 12/20/2013 0000

D/T ANALYZED: 12/20/2013 1301 ANALYST: 796 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**110**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**110**	**70-120**	**PASS**	
Toluene-d8	**103**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**102**	**75-120**	**PASS**	

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA 8260B

MB Sample ID: 099-14-479-369
MB Batch ID: 131223L01
Instrument: GC/MS Z
Matrix: Water
Analyst: 796
D/T Analyzed: 12/23/2013 13:52
Data File: W:\GCMS_Z_DATA\2013\131223\23DEC006.D\23DEC006.rr

Reviewed By: 163
D/T Reviewed: 12/31/2013 10:12
Extraction: EPA 5030C
D/T Extracted: 12/23/2013 00:00

Work Order #: 13-12-1628

Sample#	Client Sample ID	D/T Analyzed	Data File
21	MW-40-07	12/23/2013 14:46	W:\GCMS_Z_DATA\2013\131223\23DEC008.D\23DEC008.rr

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 099-14-479
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/23/2013 13:52
ANALYST: 796
DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC006.D\23DEC006.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:12
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/23/2013 00:00

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131223L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	0.26	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.42	1	ND	3.9	5.0	20	1	ug/L	
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.096	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.17	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.00	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 099-14-479
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/23/2013 13:52
ANALYST: 796
DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC006.D\23DEC006.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:12
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/23/2013 00:00

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131223L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.58	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.17	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.10	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.13	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.00	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.092	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.10	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	2.2	1	ND	50	50	100	1	ug/L	

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC006.D
Acq On : 23 Dec 2013 1:52 pm
Operator : 796
Sample : MB
Misc : V111513C
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 23 15:04:37 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Tert-Butyl Alcohol-d9	4.207	65	112913	250.00 ug/l	0.00
4) Pentafluorobenzene	6.629	168	315465	50.00 ug/l	0.00
47) 1,4-Difluorobenzene	7.554	114	440406	50.00 ug/l	0.00
65) Chlorobenzene-d5	11.125	117	417705	50.00 ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	224054	50.00 ug/l	0.00
System Monitoring Compounds					
41) Dibromofluoromethane	6.553	113	123005	47.40 ug/l	0.00
Spiked Amount 50.000			Recovery	= 94.80%	
46) 1,2-Dichloroethane-d4	6.983	65	168518	46.94 ug/l	0.00
Spiked Amount 50.000			Recovery	= 93.88%	
62) Toluene-d8	9.367	98	575055	49.58 ug/l	0.00
Spiked Amount 50.000			Recovery	= 99.16%	
81) 1,4-Bromofluorobenzene	12.568	95	220515	51.32 ug/l	0.00
Spiked Amount 50.000			Recovery	= 102.64%	
Target Compounds					Qvalue
2) Ethanol	3.020	45	196	2.18 ug/l #	1
3) Tert-Butyl Alcohol (TBA)	0.000		0	N.D.	
5) Dichlorodifluoromethane	1.692	85	105	N.D.	
6) Chloromethane	1.860	50	857	0.17 ug/l #	43
7) Vinyl Chloride	1.986	62	422	0.09 ug/l #	43
8) Bromomethane	2.296	94	969	0.42 ug/l #	4
9) Chloroethane	2.503	64	102	N.D.	
10) 1,3-Butadiene	0.000		0	N.D.	
11) Trichlorofluoromethane	2.737	101	99	N.D.	
12) Diethyl Ether	3.101	45	102	N.D.	
13) Acetone	3.483	58	116	0.26 ug/l #	1
14) Iodomethane	0.000		0	N.D.	
15) 1,1-Dichloroethene	3.379	61	98	N.D.	
16) 1,1,2-Trichloro-1,2,2-...	0.000		0	N.D.	
17) Isopropanol	3.727	45	1694	4.27 ug/l	88
18) Carbon Disulfide	3.646	76	972	0.10 ug/l	74
19) Acetonitrile	3.913	41	99	N.D.	
20) Acrylonitrile	0.000		0	N.D.	
21) Allyl Chloride	0.000		0	N.D.	
22) Acrolein	0.000		0	N.D.	
23) Methylene Chloride	4.076	84	2273	0.58 ug/l	83
24) t-1,2-Dichloroethene	0.000		0	N.D.	
25) Isobutyl Alcohol	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (...	0.000		0	N.D.	
27) Hexane	0.000		0	N.D.	
28) 1,1-Dichloroethane	0.000		0	N.D.	
29) Vinyl Acetate	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	0.000		0	N.D.	
31) Chloroprene	0.000		0	N.D.	
32) Ethyl-t-Butyl Ether (E...	0.000		0	N.D.	
33) c-1,2-Dichloroethene	0.000		0	N.D.	
34) 2,2-Dichloropropane	0.000		0	N.D.	
35) 2-Butanone	0.000		0	N.D.	
36) Propionitrile	0.000		0	N.D.	
37) Methacrylonitrile	6.188	41	99	N.D.	
38) Bromochloromethane	0.000		0	N.D.	
39) Tetrahydrofuran	0.000		0	N.D.	
40) Chloroform	0.000		0	N.D.	
42) 1,1,1-Trichloroethane	0.000		0	N.D.	
43) Cyclohexane	6.629	84	8137	1.44 ug/l #	42

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC006.D
Acq On : 23 Dec 2013 1:52 pm
Operator : 796
Sample : MB
Misc : V111513C
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 23 15:04:37 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44)	1,1-Dichloropropene	0.000		0	N.D.	
45)	Carbon Tetrachloride	0.000		0	N.D.	
48)	Benzene	7.054	78	531	N.D.	
49)	1,2-Dichloroethane	0.000		0	N.D.	
50)	Tert-Amyl-Methyl Ether...	0.000		0	N.D.	
51)	Thiophene	0.000		0	N.D.	
52)	2,2,4-Trimethyl Pentane	0.000		0	N.D.	
53)	Trichloroethene	0.000		0	N.D.	
54)	2-Pentanone	0.000		0	N.D.	
55)	1,2-Dichloropropane	0.000		0	N.D.	
56)	Dibromomethane	0.000		0	N.D.	
57)	Methyl Methacrylate	0.000		0	N.D.	
58)	1,4-Dioxane	0.000		0	N.D.	
59)	Bromodichloromethane	0.000		0	N.D.	
60)	2-Chloroethyl Vinyl Ether	0.000		0	N.D.	
61)	c-1,3-Dichloropropene	0.000		0	N.D.	
63)	Toluene	9.454	91	1539	0.10 ug/l	79
64)	4-Methyl-2-Pentanone	0.000		0	N.D.	
66)	t-1,3-Dichloropropene	0.000		0	N.D.	
67)	Ethyl Methacrylate	0.000		0	N.D.	
68)	1,1,2-Trichloroethane	0.000		0	N.D.	
69)	Tetrachloroethene	0.000		0	N.D.	
70)	1,3-Dichloropropane	0.000		0	N.D.	
71)	2-Hexanone	0.000		0	N.D.	
72)	Dibromochloromethane	0.000		0	N.D.	
73)	1,2-Dibromoethane	0.000		0	N.D.	
74)	Chlorobenzene	11.158	112	112	N.D.	
75)	1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
76)	Ethylbenzene	11.300	91	243	N.D.	
77)	p/m-Xylene	11.446	91	1359	0.10 ug/l #	30
78)	o-Xylene	11.931	91	138	N.D.	
79)	Styrene	11.953	104	230	N.D.	
80)	Isopropylbenzene	12.372	105	131	N.D.	
82)	1,2,3-Trichloropropane	0.000		0	N.D.	
83)	Bromobenzene	0.000		0	N.D.	
84)	n-Propylbenzene	12.911	91	755	N.D.	
85)	t-1,4-Dichloro-2-Butene	0.000		0	N.D.	
86)	2-Chlorotoluene	12.998	91	212	N.D.	
87)	1,3,5-Trimethylbenzene	13.123	105	633	N.D.	
89)	Bromoform	0.000		0	N.D.	
90)	1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
91)	4-Chlorotoluene	13.129	91	118	N.D.	
92)	1,2,4-Trimethylbenzene	13.569	105	785	N.D.	
93)	tert-Butylbenzene	0.000		0	N.D.	
94)	p-Isopropyltoluene	13.978	119	600	N.D.	
95)	sec-Butylbenzene	13.787	105	723	N.D.	
96)	1,3-Dichlorobenzene	13.918	146	284	N.D.	
97)	1,4-Dichlorobenzene	14.038	146	494	N.D.	
98)	1,2-Dichlorobenzene	14.484	146	228	N.D.	
99)	n-Butylbenzene	14.489	91	873	N.D.	
100)	1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
101)	1,2,4-Trichlorobenzene	16.498	180	331	N.D.	
102)	Hexachloro-1,3-Butadiene	16.705	225	120	N.D.	
103)	Naphthalene	16.814	128	2249	0.17 ug/l #	68
104)	1,2,3-Trichlorobenzene	17.135	180	751	0.13 ug/l #	78

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

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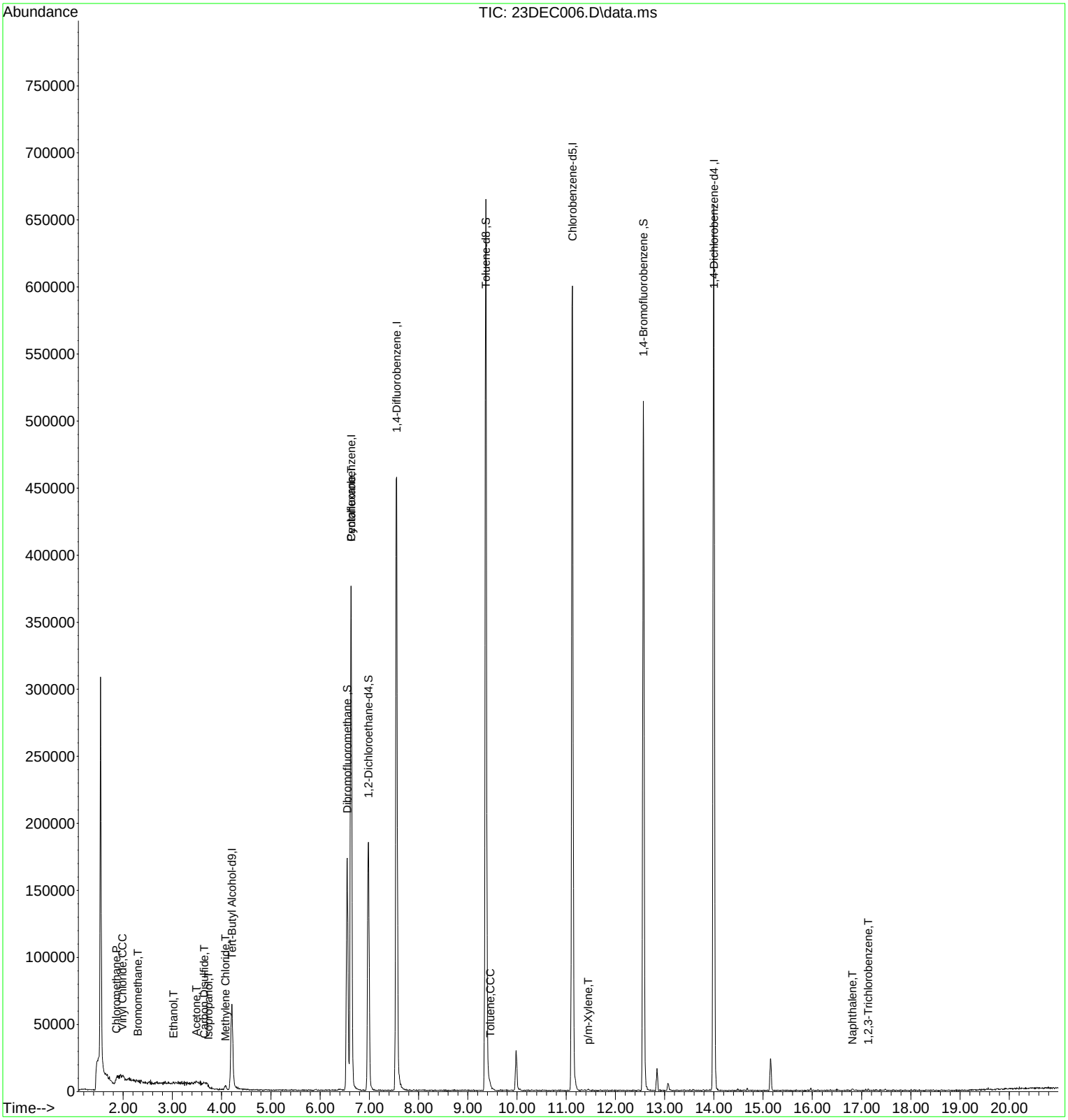
Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC006.D
Acq On : 23 Dec 2013 1:52 pm
Operator : 796
Sample : MB
Misc : V111513C
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 23 15:04:37 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration



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LCS QUALITY CONTROL SHEET FOR METHOD : EPA 8260B

WORK ORDER : **13-12-1628**
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/23/2013 12:54
ANALYST: 796
LCS/MB BATCH: **131223L01**
DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC004.D\23DEC004.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:12
EXTRACTION : EPA 5030C
D/T EXTRACTED: 12/23/2013 00:00

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Acetone	**50.00**	**71.66**	**143**	**40-140**	**ME**	**L$**
Benzene	50.00	49.72	99	80-120	PASS	
Bromobenzene	50.00	50.48	101	75-125	PASS	
Bromochloromethane	50.00	47.36	95	65-130	PASS	
Bromodichloromethane	50.00	53.18	106	75-120	PASS	
Bromoform	50.00	60.60	121	70-130	PASS	
Bromomethane	50.00	51.60	103	30-145	PASS	
2-Butanone	50.00	57.33	115	30-150	PASS	
n-Butylbenzene	50.00	57.45	115	70-135	PASS	
sec-Butylbenzene	50.00	51.73	103	70-125	PASS	
tert-Butylbenzene	50.00	52.57	105	70-130	PASS	
Carbon Disulfide	50.00	51.50	103	35-160	PASS	
Carbon Tetrachloride	50.00	60.16	120	65-140	PASS	
Chlorobenzene	50.00	47.95	96	80-120	PASS	
Chloroethane	50.00	57.27	115	60-135	PASS	
Chloroform	50.00	50.17	100	65-135	PASS	
Chloromethane	50.00	53.26	107	40-125	PASS	
2-Chlorotoluene	50.00	49.01	98	75-125	PASS	
4-Chlorotoluene	50.00	48.15	96	75-130	PASS	
Dibromochloromethane	50.00	54.75	110	60-135	PASS	
1,2-Dibromo-3-Chloropropane	50.00	51.58	103	50-130	PASS	
1,2-Dibromoethane	50.00	50.25	100	80-120	PASS	
Dibromomethane	50.00	49.46	99	75-125	PASS	
1,2-Dichlorobenzene	50.00	47.38	95	70-120	PASS	
1,3-Dichlorobenzene	50.00	48.44	97	75-125	PASS	
1,4-Dichlorobenzene	50.00	51.34	103	75-125	PASS	
Dichlorodifluoromethane	50.00	62.92	126	30-155	PASS	
1,1-Dichloroethane	50.00	49.22	98	70-135	PASS	
1,2-Dichloroethane	50.00	50.75	101	70-130	PASS	
1,1-Dichloroethene	50.00	51.61	103	70-130	PASS	

Compounds listed in bold are required to be reported

Return to Contents

LCS QUALITY CONTROL SHEET FOR METHOD : EPA 8260B

WORK ORDER : **13-12-1628**
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/23/2013 12:54
ANALYST: 796
LCS/MB BATCH: **131223L01**
DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC004.D\23DEC004.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:12
EXTRACTION : EPA 5030C
D/T EXTRACTED: 12/23/2013 00:00

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
c-1,2-Dichloroethene	50.00	50.78	102	70-125	PASS	
t-1,2-Dichloroethene	50.00	52.45	105	60-140	PASS	
1,2-Dichloropropane	50.00	49.93	100	75-125	PASS	
1,3-Dichloropropane	50.00	46.65	93	75-125	PASS	
2,2-Dichloropropane	50.00	60.27	121	70-135	PASS	
1,1-Dichloropropene	50.00	54.36	109	75-130	PASS	
c-1,3-Dichloropropene	50.00	58.36	117	70-130	PASS	
t-1,3-Dichloropropene	50.00	49.12	98	55-140	PASS	
Ethylbenzene	50.00	52.18	104	75-125	PASS	
2-Hexanone	50.00	51.49	103	55-130	PASS	
Isopropylbenzene	50.00	49.95	100	75-125	PASS	
p-Isopropyltoluene	50.00	51.73	103	75-130	PASS	
Methylene Chloride	50.00	49.56	99	55-140	PASS	
4-Methyl-2-Pentanone	50.00	48.72	97	60-135	PASS	
Naphthalene	50.00	51.49	103	55-140	PASS	
n-Propylbenzene	50.00	47.75	96	70-130	PASS	
Styrene	50.00	50.49	101	65-135	PASS	
1,1,1,2-Tetrachloroethane	50.00	56.87	114	80-130	PASS	
1,1,2-Trichloro-1,2,2-Trifluoro ethane	50.00	54.19	108	80-130	PASS	
Acrylonitrile	50.00	46.24	92	70-130	PASS	
Iodomethane	100.0	120.7	121	70-130	PASS	
t-1,4-Dichloro-2-Butene	50.00	35.34	71	70-130	PASS	
1,1,2,2-Tetrachloroethane	50.00	47.92	96	65-130	PASS	
Tetrachloroethene	50.00	54.32	109	45-150	PASS	
Toluene	50.00	51.81	104	75-120	PASS	
1,2,3-Trichlorobenzene	50.00	54.08	108	55-140	PASS	
1,2,4-Trichlorobenzene	50.00	55.61	111	65-135	PASS	
1,1,1-Trichloroethane	50.00	56.42	113	65-130	PASS	
Hexachloro-1,3-Butadiene	50.00	58.80	118	50-140	PASS	
1,1,2-Trichloroethane	50.00	47.06	94	75-125	PASS	

Compounds listed in bold are required to be reported

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LCS QUALITY CONTROL SHEET FOR METHOD : EPA 8260B

WORK ORDER : **13-12-1628**
INSTRUMENT NAME: GC/MS Z
D/T ANALYZED: 12/23/2013 12:54
ANALYST: 796
LCS/MB BATCH: **131223L01**
DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC004.D\23DEC004.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:12
EXTRACTION : EPA 5030C
D/T EXTRACTED: 12/23/2013 00:00

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Trichloroethene	50.00	53.67	107	70-125	PASS	
Trichlorofluoromethane	50.00	57.63	115	60-145	PASS	
1,2,3-Trichloropropane	50.00	49.44	99	75-125	PASS	
1,2,4-Trimethylbenzene	50.00	53.53	107	75-130	PASS	
1,3,5-Trimethylbenzene	50.00	54.94	110	75-130	PASS	
Vinyl Acetate	50.00	57.50	115	80-120	PASS	
Vinyl Chloride	50.00	56.32	113	50-145	PASS	
p/m-Xylene	100.0	98.33	98	75-130	PASS	
o-Xylene	50.00	48.23	96	80-120	PASS	
Methyl-t-Butyl Ether (MTBE)	50.00	47.13	94	65-125	PASS	
Tert-Butyl Alcohol (TBA)	250.0	254.0	102	46-154	PASS	
Diisopropyl Ether (DIPE)	50.00	47.47	95	81-123	PASS	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.54	95	74-122	PASS	
Tert-Amyl-Methyl Ether (TAME)	50.00	47.44	95	76-124	PASS	
Ethanol	500.0	486.6	97	60-138	PASS	

Compounds listed in bold are required to be reported

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC004.D
Acq On : 23 Dec 2013 12:54 pm
Operator : 796
Sample : LCS V120913D/V121313B
Misc : V111513C
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 23 15:04:27 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.207	65	103648	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	296604	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.549	114	426825	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	409723	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	201215	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.547	113	119546	49.00	ug/l	0.00
Spiked Amount 50.000			Recovery	=	98.00%	
46) 1,2-Dichloroethane-d4	6.977	65	161322	47.79	ug/l	0.00
Spiked Amount 50.000			Recovery	=	95.58%	
62) Toluene-d8	9.367	98	563579	50.13	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.26%	
81) 1,4-Bromofluorobenzene	12.568	95	205102	48.66	ug/l	0.00
Spiked Amount 50.000			Recovery	=	97.32%	
Target Compounds						Qvalue
2) Ethanol	3.020	45	40084	486.55	ug/l	98
3) Tert-Butyl Alcohol (TBA)	4.332	59	141934	254.02	ug/l	96
5) Dichlorodifluoromethane	1.702	85	286960	62.92	ug/l	99
6) Chloromethane	1.904	50	259473	53.26	ug/l	99
7) Vinyl Chloride	1.996	62	243501	56.32	ug/l	97
8) Bromomethane	2.329	94	112729	51.60	ug/l	99
9) Chloroethane	2.454	64	120984	57.27	ug/l	98
10) 1,3-Butadiene	2.040	54	136396	40.77	ug/l	98
11) Trichlorofluoromethane	2.742	101	292118	57.63	ug/l	98
12) Diethyl Ether	3.101	45	96598	42.39	ug/l	99
13) Acetone	3.488	58	29888	71.66	ug/l	89
14) Iodomethane	3.581	142	190445	120.70	ug/l	99
15) 1,1-Dichloroethene	3.379	61	256422	51.61	ug/l	99
16) 1,1,2-Trichloro-1,2,2-...	3.385	101	148883	54.19	ug/l	99
17) Isopropanol	3.722	45	91711	246.15	ug/l	98
18) Carbon Disulfide	3.657	76	492738	51.50	ug/l	99
19) Acetonitrile	3.885	41	346284	102.51	ug/l	98
20) Acrylonitrile	4.468	53	76534	46.24	ug/l	95
21) Allyl Chloride	3.885	76	97274	53.32	ug/l	99
22) Acrolein	3.276	56	89313	124.47	ug/l	96
23) Methylene Chloride	4.076	84	181222	49.56	ug/l	99
24) t-1,2-Dichloroethene	4.479	96	178667	52.45	ug/l	94
25) Isobutyl Alcohol	7.005	43	19474	94.36	ug/l	90
26) Methyl-t-Butyl Ether (...	4.506	73	456369	47.13	ug/l	99
27) Hexane	4.882	57	295873	51.43	ug/l	99
28) 1,1-Dichloroethane	5.088	63	325843	49.22	ug/l	98
29) Vinyl Acetate	5.203	86	27709	57.50	ug/l #	81
30) Diisopropyl Ether (DIPE)	5.224	45	544790	47.47	ug/l	99
31) Chloroprene	5.214	53	297403	55.57	ug/l	91
32) Ethyl-t-Butyl Ether (E...	5.731	59	473255	47.54	ug/l	99
33) c-1,2-Dichloroethene	5.899	96	188213	50.78	ug/l	100
34) 2,2-Dichloropropane	5.889	77	242060	60.27	ug/l	96
35) 2-Butanone	5.954	43	111187	57.33	ug/l	95
36) Propionitrile	6.036	54	31078	45.81	ug/l	84
37) Methacrylonitrile	6.226	41	116323	43.98	ug/l	97
38) Bromochloromethane	6.221	130	96424	47.36	ug/l	97
39) Tetrahydrofuran	6.297	42	68558	45.13	ug/l	99
40) Chloroform	6.335	83	301815	50.17	ug/l	97
42) 1,1,1-Trichloroethane	6.558	97	258501	56.42	ug/l	98
43) Cyclohexane	6.618	84	275565	51.79	ug/l	96

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC004.D
Acq On : 23 Dec 2013 12:54 pm
Operator : 796
Sample : LCS V120913D/V121313B
Misc : V111513C
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 23 15:04:27 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,1-Dichloropropene	6.776	75	243537	54.36	ug/l	98
45)	Carbon Tetrachloride	6.770	117	178967	60.16	ug/l	94
48)	Benzene	7.043	78	690906	49.72	ug/l	99
49)	1,2-Dichloroethane	7.075	62	232540	50.75	ug/l	98
50)	Tert-Amyl-Methyl Ether...	7.211	73	388342	47.44	ug/l	99
51)	Thiophene	7.309	84	353658	50.55	ug/l	99
52)	2,2,4-Trimethyl Pentane	7.152	57	773660	52.03	ug/l	99
53)	Trichloroethene	7.865	95	205413	53.67	ug/l	96
54)	2-Pentanone	8.333	43	11863	48.16	ug/l	92
55)	1,2-Dichloropropane	8.142	63	183079	49.93	ug/l	96
56)	Dibromomethane	8.289	93	99415	49.46	ug/l	98
57)	Methyl Methacrylate	8.316	69	122570	48.36	ug/l	94
58)	1,4-Dioxane	8.327	88	28471	498.21	ug/l	95
59)	Bromodichloromethane	8.491	83	212268	53.18	ug/l	97
60)	2-Chloroethyl Vinyl Ether	8.888	63	4826	39.66	ug/l	99
61)	c-1,3-Dichloropropene	9.046	75	260648	58.36	ug/l	96
63)	Toluene	9.449	91	764147	51.81	ug/l	100
64)	4-Methyl-2-Pentanone	9.247	58	77203	48.72	ug/l	96
66)	t-1,3-Dichloropropene	9.726	75	205296	49.12	ug/l	97
67)	Ethyl Methacrylate	9.852	69	197422	46.01	ug/l	95
68)	1,1,2-Trichloroethane	9.944	83	122382	47.06	ug/l	98
69)	Tetrachloroethene	10.113	166	276625	54.32	ug/l	97
70)	1,3-Dichloropropane	10.151	76	240313	46.65	ug/l	99
71)	2-Hexanone	10.260	58	77852	51.49	ug/l	87
72)	Dibromochloromethane	10.423	129	136519	54.75	ug/l	98
73)	1,2-Dibromoethane	10.559	107	137394	50.25	ug/l	99
74)	Chlorobenzene	11.158	112	432577	47.95	ug/l	96
75)	1,1,1,2-Tetrachloroethane	11.261	131	130488	56.87	ug/l	98
76)	Ethylbenzene	11.294	91	855189	52.18	ug/l	99
77)	p/m-Xylene	11.441	91	1284217	98.33	ug/l	99
78)	o-Xylene	11.926	91	654570	48.23	ug/l	99
79)	Styrene	11.942	104	495000	50.49	ug/l	96
80)	Isopropylbenzene	12.383	105	786516	49.95	ug/l	99
82)	1,2,3-Trichloropropane	12.807	110	57414	49.44	ug/l	95
83)	Bromobenzene	12.753	156	196682	50.48	ug/l	96
84)	n-Propylbenzene	12.889	91	900576	47.75	ug/l	98
85)	t-1,4-Dichloro-2-Butene	12.824	53	33630	35.34	ug/l	99
86)	2-Chlorotoluene	12.992	91	559440	49.01	ug/l	99
87)	1,3,5-Trimethylbenzene	13.107	105	700792	54.94	ug/l	98
89)	Bromoform	12.170	173	91186	60.60	ug/l	96
90)	1,1,2,2-Tetrachloroethane	12.753	83	176076	47.92	ug/l	95
91)	4-Chlorotoluene	13.129	91	609323	48.15	ug/l	100
92)	1,2,4-Trimethylbenzene	13.575	105	681927	53.53	ug/l	98
93)	tert-Butylbenzene	13.515	134	144045	52.57	ug/l	94
94)	p-Isopropyltoluene	13.967	119	706020	51.73	ug/l	99
95)	sec-Butylbenzene	13.787	105	857649	51.73	ug/l	97
96)	1,3-Dichlorobenzene	13.912	146	368433	48.44	ug/l	99
97)	1,4-Dichlorobenzene	14.027	146	375483	51.34	ug/l	98
98)	1,2-Dichlorobenzene	14.489	146	342817	47.38	ug/l	98
99)	n-Butylbenzene	14.479	91	750719	57.45	ug/l	97
100)	1,2-Dibromo-3-Chloropr...	15.458	75	42565	51.58	ug/l	100
101)	1,2,4-Trichlorobenzene	16.493	180	312066	55.61	ug/l	99
102)	Hexachloro-1,3-Butadiene	16.710	225	214228	58.80	ug/l	100
103)	Naphthalene	16.808	128	621221	51.49	ug/l	99
104)	1,2,3-Trichlorobenzene	17.135	180	290637	54.08	ug/l	99

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

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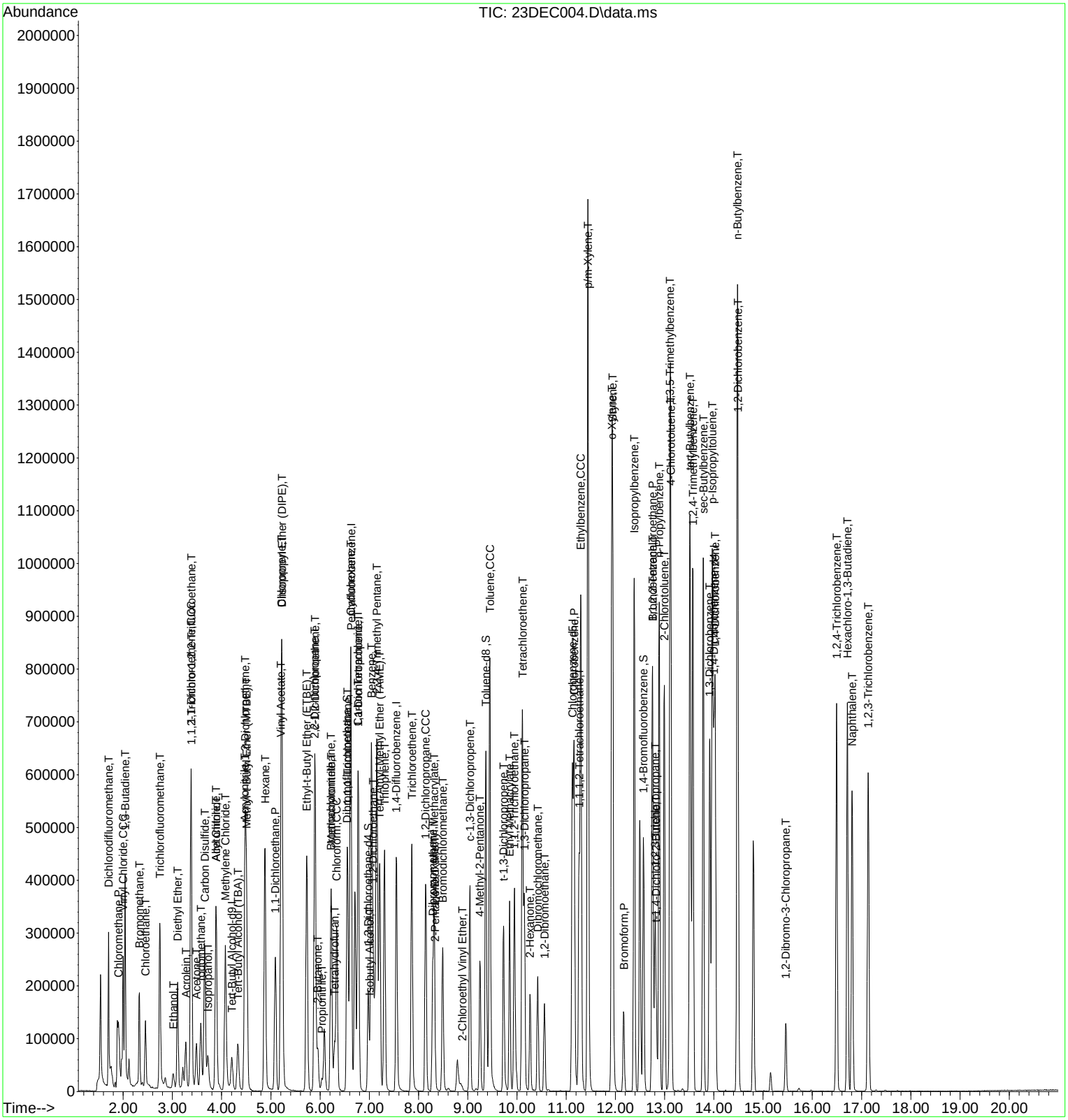
Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC004.D
Acq On : 23 Dec 2013 12:54 pm
Operator : 796
Sample : LCS V120913D/V121313B
Misc : V111513C
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 23 15:04:27 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration



MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

WORK ORDER:	**13-12-1628**	SAMPLE D/T EXTRACTED:	12/23/2013	EXTRACTION:	EPA 5030C
MS/MSD BATCH:	131223S01	MS D/T EXTRACTED:	12/23/2013	ANALYST:	796
SPIKED SAMPLE ID:	**13-12-1628-21**	MSD D/T EXTRACTED:	12/23/2013	SAMPLE INSTRUMENT NAME	GC/MS Z
REVIEWED BY:	163	SAMPLE D/T ANALYZED:	12/23/2013 14:46	MS INSTRUMENT NAME:	GC/MS Z
DATE REVIEWED:	12/31/2013 12:08	MS D/T ANALYZED:	12/23/2013 15:14	MSD INSTRUMENT NAME:	GC/MS Z
		MSD D/T ANALYZED:	12/23/2013 15:41		

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL ADDED	FINAL ADDED	MS CONC	% REC	MSD CONC	% REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Acetone	ND	50.00	50.00	48.05	96	47.06	94	40-140	2	0-20	PASS	
Benzene	ND	50.00	50.00	49.57	99	46.09	92	80-120	7	0-20	PASS	
Bromobenzene	ND	50.00	50.00	52.98	106	49.62	99	75-125	7	0-20	PASS	
Bromochloromethane	ND	50.00	50.00	50.92	102	46.37	93	65-135	9	0-20	PASS	
Bromodichloromethane	ND	50.00	50.00	55.48	111	51.44	103	75-120	8	0-20	PASS	
Bromoform	ND	50.00	50.00	61.81	124	58.35	117	70-130	6	0-20	PASS	
Bromomethane	ND	50.00	50.00	56.09	112	45.90	92	30-145	20	0-20	PASS	
2-Butanone	ND	50.00	50.00	49.31	99	48.20	96	30-150	2	0-20	PASS	
n-Butylbenzene	ND	50.00	50.00	52.87	106	49.86	100	70-135	6	0-20	PASS	
sec-Butylbenzene	ND	50.00	50.00	47.77	96	44.79	90	70-125	6	0-20	PASS	
tert-Butylbenzene	ND	50.00	50.00	48.90	98	46.29	93	70-130	5	0-20	PASS	
Carbon Disulfide	ND	50.00	50.00	49.11	98	44.79	90	35-160	9	0-20	PASS	
Carbon Tetrachloride	ND	50.00	50.00	54.96	110	54.42	109	65-140	1	0-20	PASS	
Chlorobenzene	ND	50.00	50.00	47.85	96	44.42	89	80-120	7	0-20	PASS	
Chloroethane	ND	50.00	50.00	55.49	111	52.30	105	60-135	6	0-20	PASS	
Chloroform	ND	50.00	50.00	51.09	102	47.23	94	65-135	8	0-20	PASS	
Chloromethane	ND	50.00	50.00	49.39	99	51.26	103	40-125	4	0-20	PASS	
2-Chlorotoluene	ND	50.00	50.00	48.19	96	45.45	91	75-125	6	0-20	PASS	
4-Chlorotoluene	ND	50.00	50.00	47.02	94	43.73	87	75-130	7	0-20	PASS	
Dibromochloromethane	ND	50.00	50.00	57.84	116	54.70	109	60-135	6	0-20	PASS	
1,2-Dibromo-3-Chloropropane	ND	50.00	50.00	52.99	106	51.27	103	50-130	3	0-20	PASS	
1,2-Dibromoethane	ND	50.00	50.00	54.78	110	51.37	103	80-120	6	0-20	PASS	
Dibromomethane	ND	50.00	50.00	53.94	108	50.31	101	75-125	7	0-20	PASS	
1,2-Dichlorobenzene	ND	50.00	50.00	47.78	96	44.26	89	70-120	8	0-20	PASS	
1,3-Dichlorobenzene	ND	50.00	50.00	47.52	95	43.85	88	75-125	8	0-20	PASS	
1,4-Dichlorobenzene	ND	50.00	50.00	50.96	102	47.35	95	75-125	7	0-20	PASS	
Dichlorodifluoromethane	ND	50.00	50.00	58.94	118	55.36	111	30-155	6	0-20	PASS	
1,1-Dichloroethane	ND	50.00	50.00	48.86	98	44.90	90	70-135	8	0-20	PASS	
1,2-Dichloroethane	ND	50.00	50.00	54.93	110	51.34	103	70-130	7	0-20	PASS	
1,1-Dichloroethene	ND	50.00	50.00	48.57	97	45.57	91	70-130	6	0-20	PASS	
c-1,2-Dichloroethene	2.752	50.00	50.00	55.00	104	51.60	98	70-125	6	0-20	PASS	
t-1,2-Dichloroethene	ND	50.00	50.00	51.43	103	47.67	95	60-140	8	0-20	PASS	
1,2-Dichloropropane	ND	50.00	50.00	51.97	104	47.88	96	75-125	8	0-20	PASS	
1,3-Dichloropropane	ND	50.00	50.00	50.67	101	47.95	96	75-125	6	0-20	PASS	
2,2-Dichloropropane	ND	50.00	50.00	55.47	111	52.02	104	70-135	6	0-20	PASS	
1,1-Dichloropropene	ND	50.00	50.00	51.59	103	47.84	96	75-130	8	0-20	PASS	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

WORK ORDER:	**13-12-1628**	SAMPLE D/T EXTRACTED:	12/23/2013	EXTRACTION:	EPA 5030C
MS/MSD BATCH:	131223S01	MS D/T EXTRACTED:	12/23/2013	ANALYST:	796
SPIKED SAMPLE ID:	**13-12-1628-21**	MSD D/T EXTRACTED:	12/23/2013	SAMPLE INSTRUMENT NAME	GC/MS Z
REVIEWED BY:	163	SAMPLE D/T ANALYZED:	12/23/2013 14:46	MS INSTRUMENT NAME:	GC/MS Z
DATE REVIEWED:	12/31/2013 12:08	MS D/T ANALYZED:	12/23/2013 15:14	MSD INSTRUMENT NAME:	GC/MS Z
		MSD D/T ANALYZED:	12/23/2013 15:41		

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL ADDED	FINAL ADDED	MS CONC	% REC	MSD CONC	% REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
c-1,3-Dichloropropene	ND	50.00	50.00	61.30	123	56.99	114	70-130	7	0-20	PASS	
t-1,3-Dichloropropene	ND	50.00	50.00	50.50	101	47.97	96	55-140	5	0-20	PASS	
Ethylbenzene	ND	50.00	50.00	50.87	102	47.74	95	75-125	6	0-20	PASS	
2-Hexanone	ND	50.00	50.00	50.19	100	48.75	98	55-130	3	0-20	PASS	
Isopropylbenzene	ND	50.00	50.00	48.25	96	45.47	91	75-125	6	0-20	PASS	
p-Isopropyltoluene	ND	50.00	50.00	48.25	96	45.36	91	75-130	6	0-20	PASS	
Methylene Chloride	ND	50.00	50.00	50.31	101	48.82	98	55-140	3	0-20	PASS	
4-Methyl-2-Pentanone	ND	50.00	50.00	51.68	103	49.40	99	60-135	5	0-20	PASS	
Naphthalene	ND	50.00	50.00	54.04	108	53.22	106	55-140	2	0-20	PASS	
n-Propylbenzene	ND	50.00	50.00	46.23	92	44.06	88	70-130	5	0-20	PASS	
Styrene	ND	50.00	50.00	51.41	103	48.10	96	65-135	7	0-20	PASS	
Iodomethane	ND	100.0	100.0	103.1	103	107.1	107	70-130	4	0-20	PASS	
Acrylonitrile	ND	50.00	50.00	46.60	93	44.41	89	70-130	5	0-20	PASS	
t-1,4-Dichloro-2-Butene	ND	50.00	50.00	37.92	76	36.05	72	70-130	5	0-20	PASS	
1,1,1,2-Tetrachloroethane	ND	50.00	50.00	58.42	117	54.47	109	80-130	7	0-20	PASS	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	50.00	51.35	103	48.96	98	80-130	5	0-20	PASS	
1,1,2,2-Tetrachloroethane	ND	50.00	50.00	52.26	105	48.62	97	65-130	7	0-20	PASS	
Tetrachloroethene	ND	50.00	50.00	53.18	106	48.00	96	45-150	10	0-20	PASS	
Toluene	ND	50.00	50.00	51.75	104	47.87	96	75-120	8	0-20	PASS	
1,2,3-Trichlorobenzene	ND	50.00	50.00	56.04	112	53.86	108	55-140	4	0-20	PASS	
1,2,4-Trichlorobenzene	ND	50.00	50.00	55.74	111	53.26	107	65-135	5	0-20	PASS	
1,1,1-Trichloroethane	ND	50.00	50.00	54.28	109	51.35	103	65-130	6	0-20	PASS	
Hexachloro-1,3-Butadiene	ND	50.00	50.00	53.48	107	50.01	100	50-140	7	0-20	PASS	
1,1,2-Trichloroethane	ND	50.00	50.00	51.85	104	48.37	97	75-125	7	0-20	PASS	
Trichloroethene	1.916	50.00	50.00	54.99	106	50.28	97	70-125	9	0-20	PASS	
Trichlorofluoromethane	ND	50.00	50.00	57.09	114	51.73	103	60-145	10	0-20	PASS	
1,2,3-Trichloropropane	ND	50.00	50.00	53.43	107	50.30	101	75-125	6	0-20	PASS	
1,2,4-Trimethylbenzene	ND	50.00	50.00	51.60	103	48.28	97	75-130	7	0-20	PASS	
1,3,5-Trimethylbenzene	ND	50.00	50.00	53.80	108	51.69	103	75-130	4	0-20	PASS	
Vinyl Acetate	ND	50.00	50.00	57.88	116	59.55	119	80-120	3	0-20	PASS	
Vinyl Chloride	7.547	50.00	50.00	61.39	108	57.87	101	50-145	6	0-20	PASS	
p/m-Xylene	ND	100.0	100.0	95.93	96	90.17	90	75-130	6	0-20	PASS	
o-Xylene	ND	50.00	50.00	48.00	96	44.92	90	80-120	7	0-20	PASS	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	50.00	52.78	106	50.27	101	65-125	5	0-20	PASS	
Tert-Butyl Alcohol (TBA)	ND	250.0	250.0	312.4	125	283.9	114	46-154	10	0-35	PASS	
Diisopropyl Ether (DIPE)	ND	50.00	50.00	50.39	101	47.70	95	81-123	5	0-20	PASS	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

WORK ORDER:	**13-12-1628**	SAMPLE D/T EXTRACTED:	12/23/2013	EXTRACTION:	EPA 5030C
MS/MSD BATCH:	131223S01	MS D/T EXTRACTED:	12/23/2013	ANALYST:	796
SPIKED SAMPLE ID:	**13-12-1628-21**	MSD D/T EXTRACTED:	12/23/2013	SAMPLE INSTRUMENT NAME	GC/MS Z
REVIEWED BY:	163	SAMPLE D/T ANALYZED:	12/23/2013 14:46	MS INSTRUMENT NAME:	GC/MS Z
DATE REVIEWED:	12/31/2013 12:08	MS D/T ANALYZED:	12/23/2013 15:14	MSD INSTRUMENT NAME:	GC/MS Z
		MSD D/T ANALYZED:	12/23/2013 15:41		

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL ADDED	FINAL ADDED	MS CONC	% REC	MSD CONC	% REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	50.00	50.74	101	48.01	96	74-122	6	0-20	PASS	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	50.00	51.04	102	48.40	97	76-124	5	0-20	PASS	
Ethanol	ND	500.0	500.0	497.0	99	475.9	95	60-138	4	0-35	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	23DEC009.rr	W:\GCMS_Z_DATA\2013\131223\23DEC009.D\
MSD	23DEC010.rr	W:\GCMS_Z_DATA\2013\131223\23DEC010.D\

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC009.D
Acq On : 23 Dec 2013 3:14 pm
Operator : 796
Sample : MS 1628-21C V120913D/V121313B
Misc : V111513C 5ML
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 23 17:12:03 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.217	65	99831	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	305422	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.549	114	441688	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	432528	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	218204	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.547	113	123863	49.30	ug/l	0.00
Spiked Amount 50.000			Recovery	=	98.60%	
46) 1,2-Dichloroethane-d4	6.977	65	174132	50.10	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.20%	
62) Toluene-d8	9.367	98	586268	50.40	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.80%	
81) 1,4-Bromofluorobenzene	12.568	95	222891	50.09	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.18%	
Target Compounds						Qvalue
2) Ethanol	3.020	45	39435	496.97	ug/l	93
3) Tert-Butyl Alcohol (TBA)	4.332	59	168140	312.42	ug/l	95
5) Dichlorodifluoromethane	1.702	85	276796	58.94	ug/l	97
6) Chloromethane	1.909	50	247751	49.39	ug/l	99
7) Vinyl Chloride	1.996	62	273339	61.39	ug/l	97
8) Bromomethane	2.323	94	126202	56.09	ug/l	95
9) Chloroethane	2.448	64	120703	55.49	ug/l	99
10) 1,3-Butadiene	2.040	54	123465	35.84	ug/l	99
11) Trichlorofluoromethane	2.742	101	297997	57.09	ug/l	93
12) Diethyl Ether	3.107	45	108912	46.41	ug/l	99
13) Acetone	3.483	58	20637	48.05	ug/l	89
14) Iodomethane	3.575	142	160647	103.09	ug/l	96
15) 1,1-Dichloroethene	3.374	61	248476	48.57	ug/l	98
16) 1,1,2-Trichloro-1,2,2-...	3.379	101	145297	51.35	ug/l	98
17) Isopropanol	3.727	45	87656	228.48	ug/l	99
18) Carbon Disulfide	3.651	76	483794	49.11	ug/l	98
19) Acetonitrile	3.885	41	338020	97.18	ug/l	95
20) Acrylonitrile	4.468	53	79418	46.60	ug/l	97
21) Allyl Chloride	3.885	76	94758	50.44	ug/l	92
22) Acrolein	3.270	56	79387	107.44	ug/l	92
23) Methylene Chloride	4.076	84	189464	50.31	ug/l	100
24) t-1,2-Dichloroethene	4.479	96	180392	51.43	ug/l	97
25) Isobutyl Alcohol	7.010	43	20186	94.90	ug/l	88
26) Methyl-t-Butyl Ether (...	4.506	73	526259	52.78	ug/l	98
27) Hexane	4.876	57	284024	47.94	ug/l	99
28) 1,1-Dichloroethane	5.088	63	333062	48.86	ug/l	99
29) Vinyl Acetate	5.197	86	28725	57.88	ug/l #	74
30) Diisopropyl Ether (DIPE)	5.224	45	595561	50.39	ug/l	99
31) Chloroprene	5.214	53	296550	53.81	ug/l	95
32) Ethyl-t-Butyl Ether (E...	5.731	59	520066	50.74	ug/l	100
33) c-1,2-Dichloroethene	5.899	96	209906	55.00	ug/l	99
34) 2,2-Dichloropropane	5.889	77	229394	55.47	ug/l	98
35) 2-Butanone	5.954	43	98466	49.31	ug/l	95
36) Propionitrile	6.036	54	33047	47.31	ug/l	97
37) Methacrylonitrile	6.226	41	124632	45.76	ug/l	98
38) Bromochloromethane	6.221	130	106763	50.92	ug/l	89
39) Tetrahydrofuran	6.291	42	71696	45.83	ug/l	96
40) Chloroform	6.335	83	316489	51.09	ug/l	97
42) 1,1,1-Trichloroethane	6.558	97	256111	54.28	ug/l	97
43) Cyclohexane	6.618	84	266948	48.73	ug/l	97

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC009.D
Acq On : 23 Dec 2013 3:14 pm
Operator : 796
Sample : MS 1628-21C V120913D/V121313B
Misc : V111513C 5ML
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 23 17:12:03 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44)	1,1-Dichloropropene	6.776	75	237992	51.59	ug/l		99
45)	Carbon Tetrachloride	6.765	117	168362	54.96	ug/l		99
48)	Benzene	7.043	78	712746	49.57	ug/l		97
49)	1,2-Dichloroethane	7.075	62	260483	54.93	ug/l		97
50)	Tert-Amyl-Methyl Ether...	7.211	73	432297	51.04	ug/l		99
51)	Thiophene	7.309	84	382093	52.77	ug/l		99
52)	2,2,4-Trimethyl Pentane	7.152	57	754279	49.02	ug/l		98
53)	Trichloroethene	7.865	95	217817	54.99	ug/l		96
54)	2-Pentanone	8.327	43	12388	48.60	ug/l		90
55)	1,2-Dichloropropane	8.142	63	197179	51.97	ug/l		99
56)	Dibromomethane	8.289	93	112203	53.94	ug/l		93
57)	Methyl Methacrylate	8.316	69	140687	53.64	ug/l		95
58)	1,4-Dioxane	8.333	88	31249	528.42	ug/l		98
59)	Bromodichloromethane	8.491	83	229164	55.48	ug/l		98
60)	2-Chloroethyl Vinyl Ether	8.872	63	1513	20.27	ug/l	#	45
61)	c-1,3-Dichloropropene	9.046	75	283280	61.30	ug/l		98
63)	Toluene	9.449	91	789862	51.75	ug/l		100
64)	4-Methyl-2-Pentanone	9.247	58	84742	51.68	ug/l		97
66)	t-1,3-Dichloropropene	9.726	75	222802	50.50	ug/l		98
67)	Ethyl Methacrylate	9.852	69	231846	51.18	ug/l		99
68)	1,1,2-Trichloroethane	9.950	83	142332	51.85	ug/l		100
69)	Tetrachloroethene	10.107	166	285857	53.18	ug/l		98
70)	1,3-Dichloropropane	10.151	76	275572	50.67	ug/l		99
71)	2-Hexanone	10.265	58	80109	50.19	ug/l		97
72)	Dibromochloromethane	10.423	129	152252	57.84	ug/l		95
73)	1,2-Dibromoethane	10.559	107	158111	54.78	ug/l		96
74)	Chlorobenzene	11.158	112	455708	47.85	ug/l		98
75)	1,1,1,2-Tetrachloroethane	11.261	131	141514	58.42	ug/l		98
76)	Ethylbenzene	11.294	91	880194	50.87	ug/l		99
77)	p/m-Xylene	11.441	91	1322587	95.93	ug/l		99
78)	o-Xylene	11.926	91	687718	48.00	ug/l		99
79)	Styrene	11.947	104	532100	51.41	ug/l		99
80)	Isopropylbenzene	12.383	105	801971	48.25	ug/l		99
82)	1,2,3-Trichloropropane	12.807	110	65508	53.43	ug/l		90
83)	Bromobenzene	12.753	156	217913	52.98	ug/l		94
84)	n-Propylbenzene	12.889	91	920457	46.23	ug/l		97
85)	t-1,4-Dichloro-2-Butene	12.829	53	38027	37.92	ug/l		97
86)	2-Chlorotoluene	12.992	91	580743	48.19	ug/l		98
87)	1,3,5-Trimethylbenzene	13.112	105	724524	53.80	ug/l		97
89)	Bromoform	12.165	173	100873	61.81	ug/l		100
90)	1,1,2,2-Tetrachloroethane	12.753	83	208250	52.26	ug/l		99
91)	4-Chlorotoluene	13.129	91	645206	47.02	ug/l		99
92)	1,2,4-Trimethylbenzene	13.569	105	712847	51.60	ug/l		100
93)	tert-Butylbenzene	13.515	134	145319	48.90	ug/l		96
94)	p-Isopropyltoluene	13.967	119	714144	48.25	ug/l		97
95)	sec-Butylbenzene	13.782	105	858796	47.77	ug/l		99
96)	1,3-Dichlorobenzene	13.918	146	391918	47.52	ug/l		99
97)	1,4-Dichlorobenzene	14.027	146	404167	50.96	ug/l		99
98)	1,2-Dichlorobenzene	14.489	146	374886	47.78	ug/l		99
99)	n-Butylbenzene	14.473	91	749224	52.87	ug/l		98
100)	1,2-Dibromo-3-Chloropr...	15.458	75	47425	52.99	ug/l		98
101)	1,2,4-Trichlorobenzene	16.493	180	339231	55.74	ug/l		100
102)	Hexachloro-1,3-Butadiene	16.716	225	211308	53.48	ug/l		100
103)	Naphthalene	16.808	128	707071	54.04	ug/l		100
104)	1,2,3-Trichlorobenzene	17.135	180	326582	56.04	ug/l		99

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

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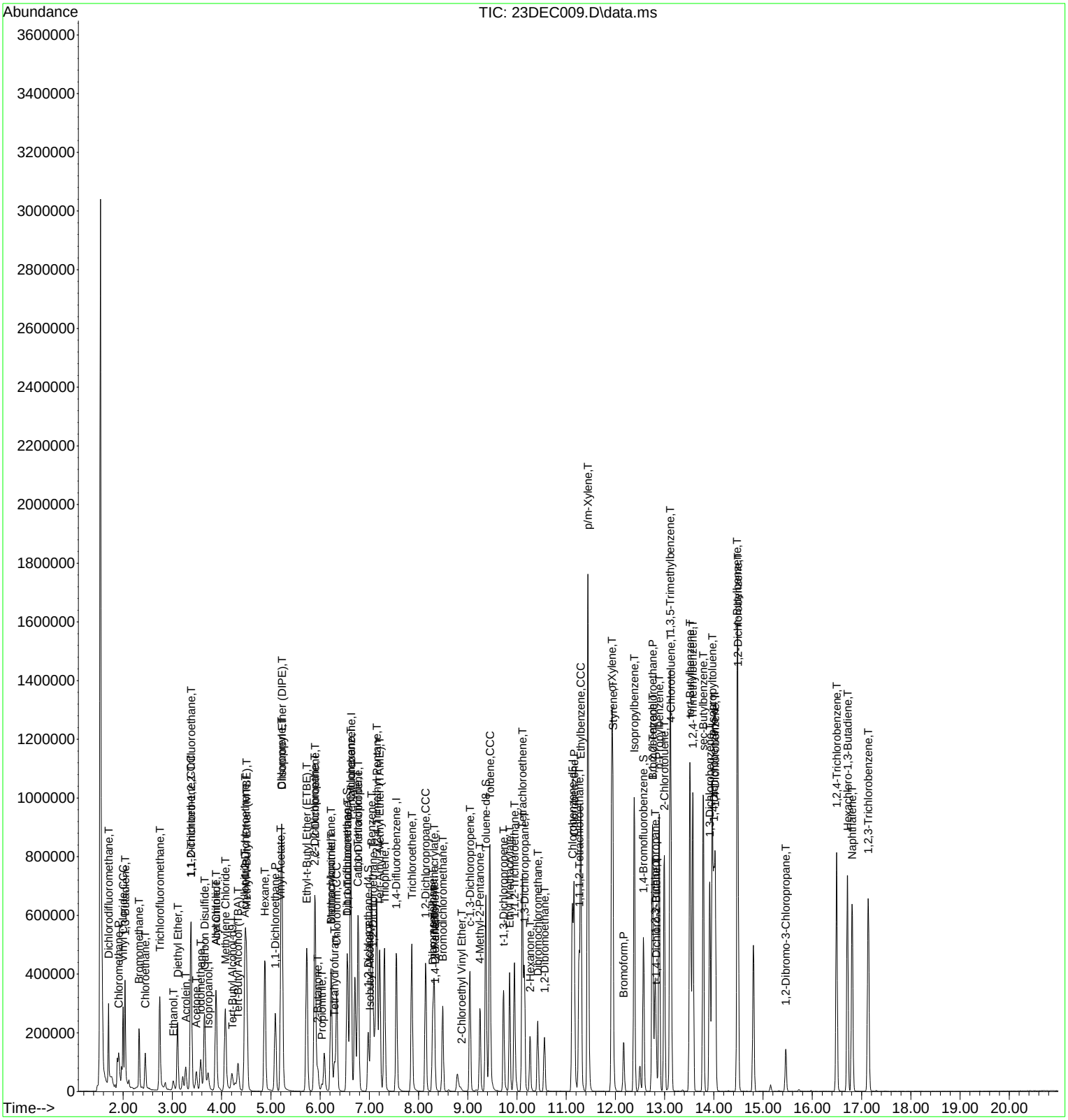
Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC009.D
Acq On : 23 Dec 2013 3:14 pm
Operator : 796
Sample : MS 1628-21C V120913D/V121313B
Misc : V111513C 5ML
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 23 17:12:03 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC010.D
Acq On : 23 Dec 2013 3:41 pm
Operator : 796
Sample : MSD 1628-21C V120913D/V121313B
Misc : V111513C 5ML
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 23 17:12:12 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.212	65	111574	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	308113	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.554	114	448032	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	435811	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	14.000	152	223952	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.547	113	127447	50.29	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.58%	
46) 1,2-Dichloroethane-d4	6.983	65	178437	50.89	ug/l	0.00
Spiked Amount 50.000			Recovery	=	101.78%	
62) Toluene-d8	9.367	98	587532	49.79	ug/l	0.00
Spiked Amount 50.000			Recovery	=	99.58%	
81) 1,4-Bromofluorobenzene	12.568	95	225683	50.34	ug/l	0.00
Spiked Amount 50.000			Recovery	=	100.68%	
Target Compounds						Qvalue
2) Ethanol	3.014	45	42209	475.95	ug/l	97
3) Tert-Butyl Alcohol (TBA)	4.337	59	170738	283.86	ug/l	93
5) Dichlorodifluoromethane	1.703	85	262278	55.36	ug/l	98
6) Chloromethane	1.882	50	259431	51.26	ug/l	96
7) Vinyl Chloride	2.002	62	259923	57.87	ug/l	100
8) Bromomethane	2.329	94	104170	45.90	ug/l	91
9) Chloroethane	2.454	64	114774	52.30	ug/l	99
10) 1,3-Butadiene	2.040	54	116941	33.65	ug/l	99
11) Trichlorofluoromethane	2.748	101	272414	51.73	ug/l	98
12) Diethyl Ether	3.107	45	103636	43.78	ug/l	100
13) Acetone	3.488	58	20390	47.06	ug/l #	83
14) Iodomethane	3.581	142	170290	107.14	ug/l	97
15) 1,1-Dichloroethene	3.379	61	235194	45.57	ug/l	99
16) 1,1,2-Trichloro-1,2,2-...	3.385	101	139756	48.96	ug/l	100
17) Isopropanol	3.728	45	93848	242.48	ug/l	95
18) Carbon Disulfide	3.662	76	445150	44.79	ug/l	99
19) Acetonitrile	3.891	41	325701	92.82	ug/l	100
20) Acrylonitrile	4.473	53	76364	44.41	ug/l	91
21) Allyl Chloride	3.891	76	89911	47.44	ug/l	95
22) Acrolein	3.276	56	78981	105.96	ug/l	96
23) Methylene Chloride	4.076	84	185455	48.82	ug/l	93
24) t-1,2-Dichloroethene	4.479	96	168693	47.67	ug/l	90
25) Isobutyl Alcohol	7.005	43	21014	97.48	ug/l	97
26) Methyl-t-Butyl Ether (...	4.511	73	505641	50.27	ug/l	97
27) Hexane	4.882	57	277139	46.37	ug/l	98
28) 1,1-Dichloroethane	5.094	63	308815	44.90	ug/l	98
29) Vinyl Acetate	5.203	86	29811	59.55	ug/l #	70
30) Diisopropyl Ether (DIPE)	5.230	45	568672	47.70	ug/l	100
31) Chloroprene	5.219	53	277842	49.97	ug/l	95
32) Ethyl-t-Butyl Ether (E...	5.731	59	496444	48.01	ug/l	100
33) c-1,2-Dichloroethene	5.905	96	198676	51.60	ug/l	99
34) 2,2-Dichloropropane	5.889	77	217034	52.02	ug/l	96
35) 2-Butanone	5.954	43	97103	48.20	ug/l	96
36) Propionitrile	6.041	54	31286	44.40	ug/l	95
37) Methacrylonitrile	6.232	41	125144	45.54	ug/l	99
38) Bromochloromethane	6.221	130	98082	46.37	ug/l	97
39) Tetrahydrofuran	6.297	42	72992	46.25	ug/l	98
40) Chloroform	6.340	83	295156	47.23	ug/l	97
42) 1,1,1-Trichloroethane	6.558	97	244409	51.35	ug/l	97
43) Cyclohexane	6.618	84	256938	46.49	ug/l	96

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC010.D
Acq On : 23 Dec 2013 3:41 pm
Operator : 796
Sample : MSD 1628-21C V120913D/V121313B
Misc : V111513C 5ML
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 23 17:12:12 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,1-Dichloropropene	6.776	75	222634	47.84 ug/l	96
45) Carbon Tetrachloride	6.771	117	168180	54.42 ug/l	97
48) Benzene	7.043	78	672172	46.09 ug/l	96
49) 1,2-Dichloroethane	7.075	62	246944	51.34 ug/l	98
50) Tert-Amyl-Methyl Ether...	7.211	73	415891	48.40 ug/l	99
51) Thiophene	7.309	84	355307	48.38 ug/l	100
52) 2,2,4-Trimethyl Pentane	7.152	57	710311	45.51 ug/l	98
53) Trichloroethene	7.865	95	202030	50.28 ug/l	94
54) 2-Pentanone	8.327	43	12516	48.41 ug/l	96
55) 1,2-Dichloropropane	8.148	63	184301	47.88 ug/l	98
56) Dibromomethane	8.289	93	106141	50.31 ug/l	97
57) Methyl Methacrylate	8.317	69	137008	51.49 ug/l	96
58) 1,4-Dioxane	8.327	88	30479	508.10 ug/l	95
59) Bromodichloromethane	8.496	83	215546	51.44 ug/l	96
60) 2-Chloroethyl Vinyl Ether	8.877	63	859	16.56 ug/l	82
61) c-1,3-Dichloropropene	9.046	75	267142	56.99 ug/l	97
63) Toluene	9.449	91	741077	47.87 ug/l	98
64) 4-Methyl-2-Pentanone	9.247	58	82162	49.40 ug/l	96
66) t-1,3-Dichloropropene	9.726	75	213256	47.97 ug/l	99
67) Ethyl Methacrylate	9.852	69	223636	49.00 ug/l	98
68) 1,1,2-Trichloroethane	9.944	83	133791	48.37 ug/l	96
69) Tetrachloroethene	10.107	166	259991	48.00 ug/l	97
70) 1,3-Dichloropropane	10.146	76	262766	47.95 ug/l	98
71) 2-Hexanone	10.265	58	78411	48.75 ug/l	94
72) Dibromochloromethane	10.418	129	145070	54.70 ug/l	99
73) 1,2-Dibromoethane	10.559	107	149404	51.37 ug/l	99
74) Chlorobenzene	11.158	112	426276	44.42 ug/l	98
75) 1,1,1,2-Tetrachloroethane	11.262	131	132947	54.47 ug/l	98
76) Ethylbenzene	11.294	91	832269	47.74 ug/l	98
77) p/m-Xylene	11.441	91	1252635	90.17 ug/l	98
78) o-Xylene	11.926	91	648546	44.92 ug/l	99
79) Styrene	11.947	104	501626	48.10 ug/l	99
80) Isopropylbenzene	12.383	105	761449	45.47 ug/l	99
82) 1,2,3-Trichloropropane	12.807	110	62141	50.30 ug/l	95
83) Bromobenzene	12.748	156	205645	49.62 ug/l	97
84) n-Propylbenzene	12.889	91	883759	44.06 ug/l	100
85) t-1,4-Dichloro-2-Butene	12.829	53	36478	36.05 ug/l	93
86) 2-Chlorotoluene	12.993	91	551808	45.45 ug/l	100
87) 1,3,5-Trimethylbenzene	13.107	105	701324	51.69 ug/l	98
89) Bromoform	12.165	173	97733	58.35 ug/l	100
90) 1,1,2,2-Tetrachloroethane	12.753	83	198868	48.62 ug/l	98
91) 4-Chlorotoluene	13.129	91	615937	43.73 ug/l	99
92) 1,2,4-Trimethylbenzene	13.570	105	684668	48.28 ug/l	99
93) tert-Butylbenzene	13.510	134	141188	46.29 ug/l	93
94) p-Isopropyltoluene	13.967	119	689068	45.36 ug/l	99
95) sec-Butylbenzene	13.782	105	826515	44.79 ug/l	98
96) 1,3-Dichlorobenzene	13.918	146	371158	43.85 ug/l	99
97) 1,4-Dichlorobenzene	14.027	146	385425	47.35 ug/l	96
98) 1,2-Dichlorobenzene	14.490	146	356461	44.26 ug/l	99
99) n-Butylbenzene	14.473	91	725090	49.86 ug/l	97
100) 1,2-Dibromo-3-Chloropr...	15.459	75	47086	51.27 ug/l	93
101) 1,2,4-Trichlorobenzene	16.493	180	332652	53.26 ug/l	99
102) Hexachloro-1,3-Butadiene	16.716	225	202779	50.01 ug/l	99
103) Naphthalene	16.808	128	714656	53.22 ug/l	99
104) 1,2,3-Trichlorobenzene	17.135	180	322172	53.86 ug/l	100

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

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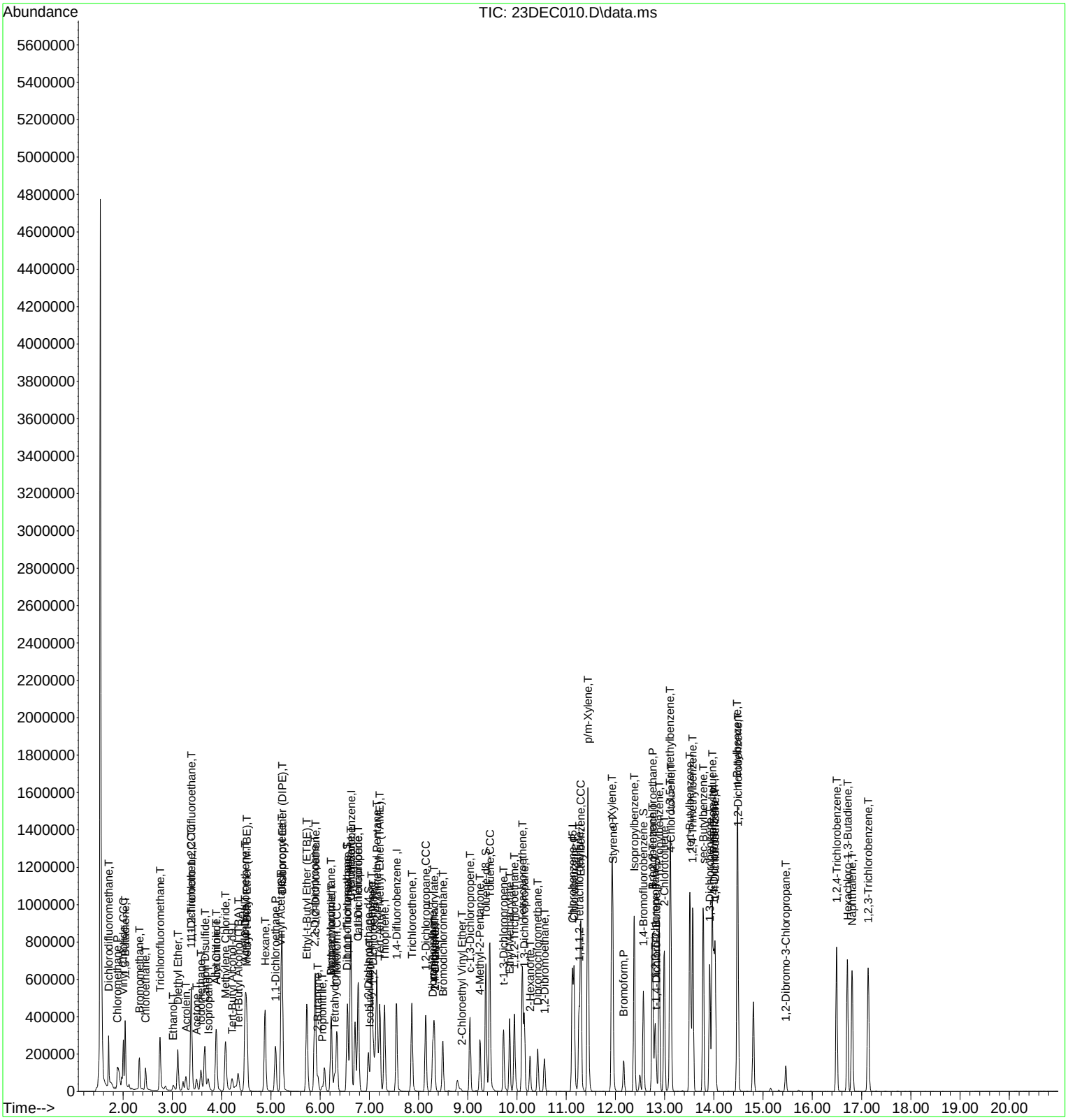
Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC010.D
Acq On : 23 Dec 2013 3:41 pm
Operator : 796
Sample : MSD 1628-21C V120913D/V121313B
Misc : V111513C 5ML
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 23 17:12:12 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration



SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628 REVIEWED BY: 163

LCS/MB BATCH : 131223L01 DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131223S01 EXTRACTION : EPA 5030C

21 CLIENT SAMPLE NUMBER : MW-40-07

DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC008.D\23DEC008.rr

D/T EXTRACTED: 12/23/2013 0000

D/T ANALYZED: 12/23/2013 1446 ANALYST: 796 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**95**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**96**	**70-120**	**PASS**	
Toluene-d8	**99**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**102**	**75-120**	**PASS**	

MB CLIENT SAMPLE NUMBER : Method Blank

DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC006.D\23DEC006.rr

D/T EXTRACTED: 12/23/2013 0000

D/T ANALYZED: 12/23/2013 1352 ANALYST: 796 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**95**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**94**	**70-120**	**PASS**	
Toluene-d8	**99**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**103**	**75-120**	**PASS**	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC004.D\23DEC004.rr

D/T EXTRACTED: 12/23/2013 0000

D/T ANALYZED: 12/23/2013 1254 ANALYST: 796 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**98**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**96**	**70-120**	**PASS**	
Toluene-d8	**100**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**97**	**75-120**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628

REVIEWED BY: 163

LCS/MB BATCH :

DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131223S01

EXTRACTION : EPA 5030C

MS CLIENT SAMPLE NUMBER : Matrix Spike

DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC009.D\23DEC009.rr

D/T EXTRACTED: 12/23/2013 0000

D/T ANALYZED: 12/23/2013 1514 ANALYST: 796 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**99**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**100**	**70-120**	**PASS**	
Toluene-d8	**101**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**100**	**75-120**	**PASS**	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

DATA FILE: W:\GCMS_Z_DATA\2013\131223\23DEC010.D\23DEC010.rr

D/T EXTRACTED: 12/23/2013 0000

D/T ANALYZED: 12/23/2013 1541 ANALYST: 796 INSTRUMENT NAME: GC/MS Z

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**101**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**102**	**70-120**	**PASS**	
Toluene-d8	**100**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**101**	**75-120**	**PASS**	

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METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA 8260B

MB Sample ID: 099-14-479-367
MB Batch ID: 131221L01
Instrument: GC/MS XX
Matrix: Water
Analyst: 486
D/T Analyzed: 12/21/2013 11:27
Data File: W:\GCMS_XX_DATA\2013\131221\21DEC005.D\21DEC005.rr

Reviewed By: 163
D/T Reviewed: 12/31/2013 10:11
Extraction: EPA 5030C
D/T Extracted: 12/21/2013 00:00

Work Order #: 13-12-1628

Sample#	Client Sample ID	D/T Analyzed	Data File
2	MW-40-14	12/21/2013 13:51	W:\GCMS_XX_DATA\2013\131221\21DEC010.D\21DEC010.rr
4	MW-40-27	12/21/2013 14:19	W:\GCMS_XX_DATA\2013\131221\21DEC011.D\21DEC011.rr
7	MW-40-37	12/21/2013 14:48	W:\GCMS_XX_DATA\2013\131221\21DEC012.D\21DEC012.rr
11	MW-40-08	12/21/2013 11:55	W:\GCMS_XX_DATA\2013\131221\21DEC006.D\21DEC006.rr
12	MW-40-30	12/21/2013 15:16	W:\GCMS_XX_DATA\2013\131221\21DEC013.D\21DEC013.rr
14	IW-2	12/21/2013 15:45	W:\GCMS_XX_DATA\2013\131221\21DEC014.D\21DEC014.rr
15	IW-4	12/21/2013 16:14	W:\GCMS_XX_DATA\2013\131221\21DEC015.D\21DEC015.rr
16	IW-10	12/21/2013 16:42	W:\GCMS_XX_DATA\2013\131221\21DEC016.D\21DEC016.rr
17	IW-18	12/21/2013 17:11	W:\GCMS_XX_DATA\2013\131221\21DEC017.D\21DEC017.rr
18	DUP-1	12/21/2013 17:39	W:\GCMS_XX_DATA\2013\131221\21DEC018.D\21DEC018.rr
19	EB-1	12/21/2013 18:08	W:\GCMS_XX_DATA\2013\131221\21DEC019.D\21DEC019.rr
20	DRUM-1	12/21/2013 18:36	W:\GCMS_XX_DATA\2013\131221\21DEC020.D\21DEC020.rr
22	MW-40-31	12/21/2013 19:33	W:\GCMS_XX_DATA\2013\131221\21DEC022.D\21DEC022.rr

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 099-14-479
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 11:27
ANALYST: 486
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC005.D\21DEC005.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:11
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131221L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Acetone	0.63	1	ND	6.0	10	20	1	ug/L	
Benzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
Bromobenzene	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
Bromochloromethane	0.00	1	ND	0.48	0.50	5.0	1	ug/L	
Bromodichloromethane	0.00	1	ND	0.21	0.50	5.0	1	ug/L	
Bromoform	0.00	1	ND	0.50	1.0	10	1	ug/L	
Bromomethane	0.00	1	ND	3.9	5.0	20	1	ug/L	
2-Butanone	0.00	1	ND	2.2	5.0	10	1	ug/L	
n-Butylbenzene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
sec-Butylbenzene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
tert-Butylbenzene	0.00	1	ND	0.28	0.50	1.0	1	ug/L	
Carbon Disulfide	0.25	1	ND	0.41	0.50	5.0	1	ug/L	
Carbon Tetrachloride	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Chlorobenzene	0.00	1	ND	0.17	0.50	5.0	1	ug/L	
Chloroethane	0.00	1	ND	2.3	5.0	10	1	ug/L	
Chloroform	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
Chloromethane	0.83	1	ND	1.8	2.0	10	1	ug/L	
2-Chlorotoluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
4-Chlorotoluene	0.00	1	ND	0.13	0.50	1.0	1	ug/L	
Dibromochloromethane	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
1,2-Dibromo-3-Chloropropane	0.00	1	ND	1.2	2.0	10	1	ug/L	
1,2-Dibromoethane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
Dibromomethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,2-Dichlorobenzene	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,3-Dichlorobenzene	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,4-Dichlorobenzene	0.10	1	ND	0.43	0.50	1.0	1	ug/L	
Dichlorodifluoromethane	0.00	1	ND	0.46	0.50	1.0	1	ug/L	
1,1-Dichloroethane	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
1,2-Dichloroethane	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,1-Dichloroethene	0.00	1	ND	0.43	0.50	1.0	1	ug/L	
c-1,2-Dichloroethene	0.00	1	ND	0.48	0.50	1.0	1	ug/L	
t-1,2-Dichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
1,2-Dichloropropane	0.00	1	ND	0.42	0.50	1.0	1	ug/L	
1,3-Dichloropropane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
2,2-Dichloropropane	0.00	1	ND	0.36	0.50	1.0	1	ug/L	
1,1-Dichloropropene	0.00	1	ND	0.46	0.50	5.0	1	ug/L	
c-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
t-1,3-Dichloropropene	0.00	1	ND	0.25	0.50	1.0	1	ug/L	
Ethylbenzene	0.00	1	ND	0.14	0.50	1.0	1	ug/L	
2-Hexanone	0.00	1	ND	2.1	5.0	10	1	ug/L	

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RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER NUMBER: 099-14-479
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 11:27
ANALYST: 486
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC005.D\21DEC005.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:11
EXTRACTION: EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 131221L01
MS/MSD BATCH:
COMMENT:

COMPOUND	INI. CONC	DF	CONC	DL	LOD	LOQ	PF	UNITS	QUAL
Isopropylbenzene	0.00	1	ND	0.58	1.0	5.0	1	ug/L	
p-Isopropyltoluene	0.00	1	ND	0.16	0.50	5.0	1	ug/L	
Methylene Chloride	0.34	1	ND	0.64	1.0	5.0	1	ug/L	
4-Methyl-2-Pentanone	0.00	1	ND	4.4	5.0	10	1	ug/L	
Naphthalene	0.19	1	ND	2.5	5.0	10	1	ug/L	
n-Propylbenzene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
Styrene	0.00	1	ND	0.17	0.50	1.0	1	ug/L	
1,1,1,2-Tetrachloroethane	0.00	1	ND	0.40	0.50	1.0	1	ug/L	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.00	1	ND	0.45	0.50	1.0	1	ug/L	
Acrylonitrile	0.00	1	ND	8.0	10	20	1	ug/L	
Iodomethane	0.00	1	ND	9.0	10	40	1	ug/L	
t-1,4-Dichloro-2-Butene	0.00	1	ND	2.2	5.0	20	1	ug/L	
1,1,2,2-Tetrachloroethane	0.00	1	ND	0.41	0.50	1.0	1	ug/L	
Tetrachloroethene	0.00	1	ND	0.39	0.50	1.0	1	ug/L	
Toluene	0.00	1	ND	0.24	0.50	1.0	1	ug/L	
1,2,3-Trichlorobenzene	0.11	1	ND	0.51	1.0	5.0	1	ug/L	
1,2,4-Trichlorobenzene	0.11	1	ND	0.50	1.0	5.0	1	ug/L	
1,1,1-Trichloroethane	0.00	1	ND	0.30	0.50	5.0	1	ug/L	
Hexachloro-1,3-Butadiene	0.00	1	ND	0.32	0.50	1.0	1	ug/L	
1,1,2-Trichloroethane	0.00	1	ND	0.38	0.50	1.0	1	ug/L	
Trichloroethene	0.00	1	ND	0.37	0.50	1.0	1	ug/L	
Trichlorofluoromethane	0.00	1	ND	1.7	2.0	10	1	ug/L	
1,2,3-Trichloropropane	0.00	1	ND	0.64	1.0	5.0	1	ug/L	
1,2,4-Trimethylbenzene	0.00	1	ND	0.36	0.50	5.0	1	ug/L	
1,3,5-Trimethylbenzene	0.00	1	ND	0.28	0.50	5.0	1	ug/L	
Vinyl Acetate	0.00	1	ND	2.8	5.0	10	1	ug/L	
Vinyl Chloride	0.00	1	ND	0.30	0.50	1.0	1	ug/L	
p/m-Xylene	0.00	1	ND	0.30	1.0	10	1	ug/L	
o-Xylene	0.00	1	ND	0.23	0.50	1.0	1	ug/L	
Methyl-t-Butyl Ether (MTBE)	0.00	1	ND	0.31	0.50	1.0	1	ug/L	
Tert-Butyl Alcohol (TBA)	0.00	1	ND	4.6	5.0	25	1	ug/L	
Diisopropyl Ether (DIPE)	0.00	1	ND	0.33	0.50	1.0	1	ug/L	
Ethyl-t-Butyl Ether (ETBE)	0.00	1	ND	0.44	0.50	5.0	1	ug/L	
Tert-Amyl-Methyl Ether (TAME)	0.00	1	ND	0.22	0.50	5.0	1	ug/L	
Ethanol	1.4	1	ND	50	50	100	1	ug/L	

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC005.D Vial: 5
Acq On : 21 Dec 2013 11:27 am Operator: 486
Sample : MB Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 12:11:07 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Tert-Butyl Alcohol-d9	4.312	65	145951	250.00 ug/l	0.00
4) Pentafluorobenzene	7.291	168	783409	50.00 ug/l	0.00
47) 1,4-Difluorobenzene	8.344	114	1183901	50.00 ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1072881	50.00 ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	561518	50.00 ug/l	0.00
System Monitoring Compounds					
41) Dibromofluoromethane	7.193	113	395608	53.98 ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 107.96%		
46) 1,2-Dichloroethane-d4	7.684	65	405283	55.96 ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 111.92%		
62) Toluene-d8	10.324	98	1331781	49.63 ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.26%		
81) 1,4-Bromofluorobenzene	13.658	95	420073	44.95 ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 89.90%		
Target Compounds					Qvalue
2) Ethanol	3.067	45	277	1.45 ug/l #	1
3) Tert-Butyl Alcohol (TBA)	0.000		0	N.D.	
5) Dichlorodifluoromethane	0.000		0	N.D.	
6) Chloromethane	1.938	50	438	0.83 ug/l	80
7) Vinyl Chloride	1.944	62	168	N.D.	
8) Bromomethane	2.435	94	188	N.D.	
9) Chloroethane	0.000		0	N.D. d	
10) 1,3-Butadiene	2.042	54	69	N.D.	
11) Trichlorofluoromethane	0.000		0	N.D.	
12) Diethyl Ether	3.149	45	1161	Below Cal #	29
13) Acetone	3.564	58	510	0.63 ug/l #	12
14) Iodomethane	0.000		0	N.D.	
15) 1,1-Dichloroethene	0.000		0	N.D.	
16) 1,1,2-Trichloro-1,2,2-...	0.000		0	N.D.	
17) Isopropanol	3.799	45	324	0.61 ug/l	85
18) Carbon Disulfide	3.722	76	6826	0.25 ug/l	75
19) Acetonitrile	3.984	41	232	N.D.	
20) Acrylonitrile	0.000		0	N.D.	
21) Allyl Chloride	0.000		0	N.D.	
22) Acrolein	0.000		0	N.D.	
23) Methylene Chloride	4.175	84	2622	0.34 ug/l #	34
24) t-1,2-Dichloroethene	0.000		0	N.D.	
25) Isobutyl Alcohol	0.000		0	N.D. d	
26) Methyl-t-Butyl Ether (...	0.000		0	N.D.	
27) Hexane	5.125	57	69	N.D.	
28) 1,1-Dichloroethane	0.000		0	N.D.	
29) Vinyl Acetate	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	5.779	45	70	N.D.	
31) Chloroprene	0.000		0	N.D.	
32) Ethyl-t-Butyl Ether (E...	0.000		0	N.D.	
33) c-1,2-Dichloroethene	0.000		0	N.D.	
34) 2,2-Dichloropropane	0.000		0	N.D.	
35) 2-Butanone	6.532	43	97	N.D.	
36) Propionitrile	0.000		0	N.D.	
37) Methacrylonitrile	0.000		0	N.D.	
38) Bromochloromethane	0.000		0	N.D.	
39) Tetrahydrofuran	6.914	42	209	N.D.	
40) Chloroform	0.000		0	N.D.	
42) 1,1,1-Trichloroethane	0.000		0	N.D.	
43) Cyclohexane	0.000		0	N.D. d	
44) 1,1-Dichloropropene	0.000		0	N.D.	

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC005.D Vial: 5
Acq On : 21 Dec 2013 11:27 am Operator: 486
Sample : MB Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 12:11:07 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) Carbon Tetrachloride	0.000		0	N.D.	
48) Benzene	7.749	78	1638	N.D.	
49) 1,2-Dichloroethane	7.727	62	123	N.D.	
50) 2-Methyl-2-Butanol (TAA)	0.000		0	N.D.	
51) Tert-Amyl-Methyl Ether...	0.000		0	N.D.	
52) Thiophene	8.060	84	89	N.D.	
53) 2,2,4-Trimethyl Pentane	7.880	57	169	N.D.	
54) Trichloroethene	0.000		0	N.D.	
55) 1,2-Dichloropropane	0.000		0	N.D.	
56) Dibromomethane	0.000		0	N.D.	
57) Methyl Methacrylate	0.000		0	N.D.	
58) 1,4-Dioxane	0.000		0	N.D.	
59) Bromodichloromethane	0.000		0	N.D.	
60) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.	
61) c-1,3-Dichloropropene	0.000		0	N.D.	
63) Toluene	10.412	91	2403	N.D.	
64) 4-Methyl-2-Pentanone	0.000		0	N.D.	
66) t-1,3-Dichloropropene	0.000		0	N.D.	
67) Ethyl Methacrylate	0.000		0	N.D.	
68) 1,1,2-Trichloroethane	0.000		0	N.D.	
69) Tetrachloroethene	11.094	166	140	N.D.	
70) 1,3-Dichloropropane	0.000		0	N.D.	
71) 2-Hexanone	0.000		0	N.D.	
72) Dibromochloromethane	0.000		0	N.D.	
73) 1,2-Dibromoethane	0.000		0	N.D.	
74) Chlorobenzene	12.201	112	542	N.D.	
75) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
76) Ethylbenzene	12.360	91	780	N.D.	
77) p/m-Xylene	12.496	91	1758	N.D.	
78) o-Xylene	13.020	91	837	N.D.	
79) Styrene	13.025	104	140	N.D.	
80) Isopropylbenzene	0.000		0	N.D.	
82) 1,2,3-Trichloropropane	0.000		0	N.D.	
83) Bromobenzene	13.844	156	445	N.D.	
84) n-Propylbenzene	13.980	91	254	N.D.	
85) t-1,4-Dichloro-2-Butene	0.000		0	N.D.	
86) 2-Chlorotoluene	14.084	91	692	N.D.	
87) 1,3,5-Trimethylbenzene	14.198	105	134	N.D.	
89) Bromoform	0.000		0	N.D.	
90) 1,1,2,2-Tetrachloroethane	13.855	83	70	N.D.	
91) 4-Chlorotoluene	14.248	91	970	N.D.	
92) Cyclohexanone	0.000		0	N.D. d	
93) 1,2,4-Trimethylbenzene	14.673	105	260	N.D.	
94) tert-Butylbenzene	0.000		0	N.D.	
95) p-Isopropyltoluene	15.104	119	113	N.D.	
96) sec-Butylbenzene	14.891	105	593	N.D.	
97) 1,3-Dichlorobenzene	15.039	146	1100	N.D.	
98) 1,4-Dichlorobenzene	15.137	146	2065	0.10 ug/l #	48
99) 1,2-Dichlorobenzene	15.606	146	1161	N.D.	
100) n-Butylbenzene	15.590	91	501	N.D.	
101) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
102) 1,2,4-Trichlorobenzene	17.636	180	1410	0.11 ug/l	88
103) Hexachloro-1,3-Butadiene	17.843	225	148	N.D.	
104) Naphthalene	17.942	128	5304	0.19 ug/l	85
105) 1,2,3-Trichlorobenzene	18.231	180	1385	0.11 ug/l #	63

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

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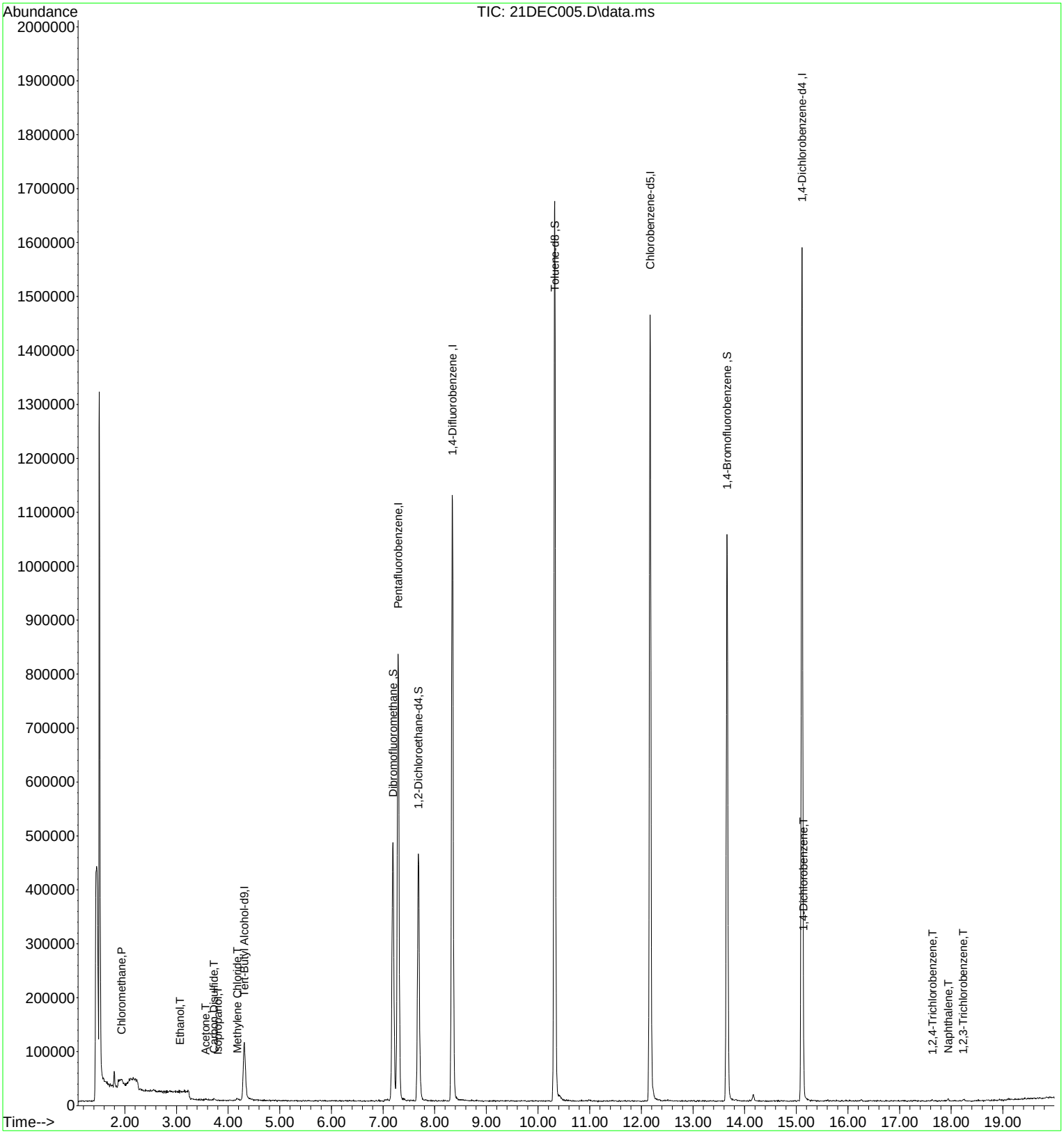
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC005.D
Acq On : 21 Dec 2013 11:27 am
Sample : MB
Misc : V121113A
Integrator: RTE
Quant Time: Dec 21 12:11:07 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Vial: 5
Operator: 486
Inst : GCMS XX
Multiplr: 1.00

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration



LCS QUALITY CONTROL SHEET FOR METHOD : EPA 8260B

WORK ORDER : **13-12-1628**
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 10:29
ANALYST: 486
LCS/MB BATCH: **131221L01**
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC003.D\21DEC003.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:11
EXTRACTION : EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Acetone	**50.00**	**96.82**	**194**	**40-140**	**FAIL**	**LX**
Benzene	50.00	50.34	101	80-120	PASS	
Bromobenzene	50.00	49.99	100	75-125	PASS	
Bromochloromethane	50.00	47.05	94	65-130	PASS	
Bromodichloromethane	50.00	49.07	98	75-120	PASS	
Bromoform	50.00	52.19	104	70-130	PASS	
Bromomethane	50.00	59.40	119	30-145	PASS	
2-Butanone	50.00	70.05	140	30-150	PASS	
n-Butylbenzene	50.00	53.91	108	70-135	PASS	
sec-Butylbenzene	50.00	50.14	100	70-125	PASS	
tert-Butylbenzene	50.00	49.28	99	70-130	PASS	
Carbon Disulfide	50.00	40.21	80	35-160	PASS	
Carbon Tetrachloride	50.00	49.52	99	65-140	PASS	
Chlorobenzene	50.00	46.62	93	80-120	PASS	
Chloroethane	50.00	47.99	96	60-135	PASS	
Chloroform	50.00	46.85	94	65-135	PASS	
Chloromethane	50.00	47.69	95	40-125	PASS	
2-Chlorotoluene	50.00	49.26	99	75-125	PASS	
4-Chlorotoluene	50.00	48.37	97	75-130	PASS	
Dibromochloromethane	50.00	49.29	99	60-135	PASS	
1,2-Dibromo-3-Chloropropane	50.00	49.84	100	50-130	PASS	
1,2-Dibromoethane	50.00	51.07	102	80-120	PASS	
Dibromomethane	50.00	49.77	100	75-125	PASS	
1,2-Dichlorobenzene	50.00	47.01	94	70-120	PASS	
1,3-Dichlorobenzene	50.00	46.41	93	75-125	PASS	
1,4-Dichlorobenzene	50.00	48.00	96	75-125	PASS	
Dichlorodifluoromethane	50.00	47.64	95	30-155	PASS	
1,1-Dichloroethane	50.00	46.88	94	70-135	PASS	
1,2-Dichloroethane	50.00	49.04	98	70-130	PASS	
1,1-Dichloroethene	50.00	43.20	86	70-130	PASS	

Compounds listed in bold are required to be reported

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LCS QUALITY CONTROL SHEET FOR METHOD : EPA 8260B

WORK ORDER : **13-12-1628**
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 10:29
ANALYST: 486
LCS/MB BATCH: **131221L01**
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC003.D\21DEC003.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:11
EXTRACTION : EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
c-1,2-Dichloroethene	50.00	50.73	101	70-125	PASS	
t-1,2-Dichloroethene	50.00	48.11	96	60-140	PASS	
1,2-Dichloropropane	50.00	50.00	100	75-125	PASS	
1,3-Dichloropropane	50.00	49.44	99	75-125	PASS	
2,2-Dichloropropane	50.00	50.17	100	70-135	PASS	
1,1-Dichloropropene	50.00	50.60	101	75-130	PASS	
c-1,3-Dichloropropene	50.00	55.72	111	70-130	PASS	
t-1,3-Dichloropropene	50.00	47.52	95	55-140	PASS	
Ethylbenzene	50.00	52.64	105	75-125	PASS	
2-Hexanone	50.00	62.00	124	55-130	PASS	
Isopropylbenzene	50.00	50.16	100	75-125	PASS	
p-Isopropyltoluene	50.00	50.74	101	75-130	PASS	
Methylene Chloride	50.00	48.86	98	55-140	PASS	
4-Methyl-2-Pentanone	50.00	52.82	106	60-135	PASS	
Naphthalene	50.00	51.80	104	55-140	PASS	
n-Propylbenzene	50.00	48.80	98	70-130	PASS	
Styrene	50.00	54.20	108	65-135	PASS	
1,1,1,2-Tetrachloroethane	50.00	51.92	104	80-130	PASS	
1,1,2-Trichloro-1,2,2-Trifluoro ethane	50.00	45.27	91	80-130	PASS	
Acrylonitrile	50.00	49.01	98	70-130	PASS	
Iodomethane	**100.0**	**141.7**	**142**	**70-130**	**FAIL**	**LX**
t-1,4-Dichloro-2-Butene	50.00	37.98	76	70-130	PASS	
1,1,2,2-Tetrachloroethane	50.00	49.52	99	65-130	PASS	
Tetrachloroethene	50.00	51.43	103	45-150	PASS	
Toluene	50.00	50.85	102	75-120	PASS	
1,2,3-Trichlorobenzene	50.00	49.99	100	55-140	PASS	
1,2,4-Trichlorobenzene	50.00	49.94	100	65-135	PASS	
1,1,1-Trichloroethane	50.00	49.62	99	65-130	PASS	
Hexachloro-1,3-Butadiene	50.00	50.74	101	50-140	PASS	
1,1,2-Trichloroethane	50.00	49.66	99	75-125	PASS	

Compounds listed in bold are required to be reported

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LCS QUALITY CONTROL SHEET FOR METHOD : EPA 8260B

WORK ORDER : **13-12-1628**
INSTRUMENT NAME: GC/MS XX
D/T ANALYZED: 12/21/2013 10:29
ANALYST: 486
LCS/MB BATCH: **131221L01**
DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC003.D\21DEC003.rr

REVIEWED BY: 163
DATE REVIEWED: 12/31/2013 10:11
EXTRACTION : EPA 5030C
D/T EXTRACTED: 12/21/2013 00:00

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Trichloroethene	50.00	49.43	99	70-125	PASS	
Trichlorofluoromethane	50.00	48.94	98	60-145	PASS	
1,2,3-Trichloropropane	50.00	50.86	102	75-125	PASS	
1,2,4-Trimethylbenzene	50.00	55.14	110	75-130	PASS	
1,3,5-Trimethylbenzene	50.00	55.16	110	75-130	PASS	
Vinyl Acetate	50.00	57.66	115	80-120	PASS	
Vinyl Chloride	50.00	52.08	104	50-145	PASS	
p/m-Xylene	100.0	105.5	105	75-130	PASS	
o-Xylene	50.00	50.84	102	80-120	PASS	
Methyl-t-Butyl Ether (MTBE)	50.00	49.64	99	65-125	PASS	
Tert-Butyl Alcohol (TBA)	250.0	252.0	101	46-154	PASS	
Diisopropyl Ether (DIPE)	50.00	52.01	104	81-123	PASS	
Ethyl-t-Butyl Ether (ETBE)	50.00	51.58	103	74-122	PASS	
Tert-Amyl-Methyl Ether (TAME)	50.00	54.43	109	76-124	PASS	
Ethanol	500.0	514.8	103	60-138	PASS	

Compounds listed in bold are required to be reported

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC003.D Vial: 3
Acq On : 21 Dec 2013 10:29 am Operator: 486
Sample : LCS V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 10:57:24 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.317	65	161507	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	960915	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1339737	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1193951	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	721026	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.192	113	431544	48.01	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 96.02%			
46) 1,2-Dichloroethane-d4	7.678	65	418598	47.12	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 94.24%			
62) Toluene-d8	10.319	98	1544807	50.87	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.74%			
81) 1,4-Bromofluorobenzene	13.658	95	540860	52.01	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.02%			
Target Compounds						Qvalue
2) Ethanol	3.062	45	109161	514.85	ug/l	94
3) Tert-Butyl Alcohol (TBA)	4.453	59	226185	251.96	ug/l	96
5) Dichlorodifluoromethane	1.791	85	604124	47.64	ug/l	98
6) Chloromethane	1.933	50	690940	47.69	ug/l	97
7) Vinyl Chloride	2.102	62	697415	52.08	ug/l	97
8) Bromomethane	2.342	94	283148	59.40	ug/l	98
9) Chloroethane	2.473	64	373847	47.99	ug/l	97
10) 1,3-Butadiene	2.036	54	387994	31.18	ug/l	95
11) Trichlorofluoromethane	2.767	101	862768	48.94	ug/l	99
12) Diethyl Ether	3.149	45	330917	47.73	ug/l	99
13) Acetone	3.553	58	96308	96.82	ug/l	94
14) Iodomethane	3.651	142	566819	141.67	ug/l	97
15) 1,1-Dichloroethene	3.433	61	648137	43.20	ug/l	99
16) 1,1,2-Trichloro-1,2,2-...	3.438	101	459963	45.27	ug/l	100
17) Isopropanol	3.804	45	154782	238.80	ug/l	96
18) Carbon Disulfide	3.722	76	1350548	40.21	ug/l	99
19) Acetonitrile	3.973	41	806179	96.03	ug/l	98
20) Acrylonitrile	4.622	53	195883	49.01	ug/l	93
21) Allyl Chloride	3.973	76	215569	46.24	ug/l	98
22) Acrolein	3.329	56	231246	127.93	ug/l	93
23) Methylene Chloride	4.175	84	460099	48.86	ug/l	99
24) t-1,2-Dichloroethene	4.622	96	461058	48.11	ug/l	98
25) Isobutyl Alcohol	7.754	43	36103	89.12	ug/l	95
26) Methyl-t-Butyl Ether (...	4.655	73	958669	49.64	ug/l	100
27) Hexane	5.130	57	746064	47.34	ug/l	99
28) 1,1-Dichloroethane	5.403	63	800247	46.89	ug/l	99
29) Vinyl Acetate	5.556	86	67564	57.66	ug/l #	68
30) Diisopropyl Ether (DIPE)	5.577	45	1612225	52.01	ug/l	99
31) Chloroprene	5.561	53	784409	54.09	ug/l	96
32) Ethyl-t-Butyl Ether (E...	6.205	59	1063420	51.58	ug/l	99
33) c-1,2-Dichloroethene	6.412	96	509191	50.73	ug/l	96
34) 2,2-Dichloropropane	6.390	77	482857	50.17	ug/l	98
35) 2-Butanone	6.489	43	310066	70.05	ug/l	97
36) Propionitrile	6.587	54	77362	49.90	ug/l	88
37) Methacrylonitrile	6.816	41	373079	48.24	ug/l #	99
38) Bromochloromethane	6.794	130	313979	47.05	ug/l	99
39) Tetrahydrofuran	6.876	42	151168	47.06	ug/l	97
40) Chloroform	6.941	83	771428	46.85	ug/l	98
42) 1,1,1-Trichloroethane	7.187	97	650873	49.62	ug/l	99
43) Cyclohexane	7.247	84	700290	49.55	ug/l	98
44) 1,1-Dichloropropene	7.438	75	603601	50.60	ug/l	99

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC003.D Vial: 3
Acq On : 21 Dec 2013 10:29 am Operator: 486
Sample : LCS V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 10:57:24 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) Carbon Tetrachloride	7.427	117	617821	49.52	ug/l	100
48) Benzene	7.749	78	1747816	50.34	ug/l	98
49) 1,2-Dichloroethane	7.793	62	606155	49.04	ug/l	98
50) 2-Methyl-2-Butanol (TAA)	7.864	59	151944	247.15	ug/l	96
51) Tert-Amyl-Methyl Ether...	7.951	73	856134	54.43	ug/l	99
52) Thiophene	8.055	84	969694	52.31	ug/l	98
53) 2,2,4-Trimethyl Pentane	7.874	57	2218084	52.07	ug/l	100
54) Trichloroethene	8.677	95	465341	49.43	ug/l	96
55) 1,2-Dichloropropane	8.993	63	466006	50.00	ug/l	99
56) Dibromomethane	9.157	93	266836	49.77	ug/l	99
57) Methyl Methacrylate	9.200	69	287743	51.59	ug/l	95
58) 1,4-Dioxane	9.206	88	60893	504.82	ug/l	94
59) Bromodichloromethane	9.386	83	593136	49.07	ug/l	99
60) 2-Chloroethyl Vinyl Ether	9.773	63	3797	51.73	ug/l	98
61) c-1,3-Dichloropropene	9.981	75	621721	55.72	ug/l	97
63) Toluene	10.406	91	2017793	50.85	ug/l	99
64) 4-Methyl-2-Pentanone	10.210	58	181232	52.82	ug/l	99
66) t-1,3-Dichloropropene	10.717	75	493228	47.52	ug/l	98
67) Ethyl Methacrylate	10.848	69	461052	47.18	ug/l	98
68) 1,1,2-Trichloroethane	10.946	83	332177	49.66	ug/l	99
69) Tetrachloroethene	11.105	166	607048	51.43	ug/l	99
70) 1,3-Dichloropropane	11.154	76	658769	49.44	ug/l	99
71) 2-Hexanone	11.285	58	214364	62.00	ug/l	98
72) Dibromochloromethane	11.443	129	497082	49.29	ug/l	91
73) 1,2-Dibromoethane	11.579	107	401879	51.07	ug/l	97
74) Chlorobenzene	12.207	112	1286160	46.62	ug/l	100
75) 1,1,1,2-Tetrachloroethane	12.316	131	469986	51.92	ug/l	98
76) Ethylbenzene	12.349	91	2233907	52.64	ug/l	100
77) p/m-Xylene	12.496	91	3388856	105.48	ug/l	99
78) o-Xylene	12.998	91	1590977	50.84	ug/l	98
79) Styrene	13.020	104	1446944	54.20	ug/l	100
80) Isopropylbenzene	13.467	105	2084944	50.16	ug/l	97
82) 1,2,3-Trichloropropane	13.904	110	170555	50.86	ug/l	96
83) Bromobenzene	13.844	156	600138	49.99	ug/l	97
84) n-Propylbenzene	13.980	91	2548738	48.80	ug/l	99
85) t-1,4-Dichloro-2-Butene	13.926	53	114242	37.98	ug/l	95
86) 2-Chlorotoluene	14.089	91	1436435	49.26	ug/l	100
87) 1,3,5-Trimethylbenzene	14.204	105	1939071	55.16	ug/l	98
89) Bromoform	13.249	173	360426	52.19	ug/l	95
90) 1,1,2,2-Tetrachloroethane	13.849	83	599360	49.52	ug/l	96
91) 4-Chlorotoluene	14.226	91	1714773	48.37	ug/l	97
92) Cyclohexanone	13.587	55	734070	1748.99	ug/l	93
93) 1,2,4-Trimethylbenzene	14.673	105	1951927	55.14	ug/l	98
94) tert-Butylbenzene	14.613	134	451201	49.28	ug/l	98
95) p-Isopropyltoluene	15.071	119	2047796	50.74	ug/l	99
96) sec-Butylbenzene	14.891	105	2441688	50.14	ug/l	100
97) 1,3-Dichlorobenzene	15.028	146	1105926	46.41	ug/l	98
98) 1,4-Dichlorobenzene	15.137	146	1226167	48.00	ug/l	99
99) 1,2-Dichlorobenzene	15.606	146	1093291	47.01	ug/l	98
100) n-Butylbenzene	15.590	91	2092721	53.91	ug/l	100
101) 1,2-Dibromo-3-Chloropr...	16.583	75	95765	49.84	ug/l	98
102) 1,2,4-Trichlorobenzene	17.625	180	808277	49.94	ug/l	99
103) Hexachloro-1,3-Butadiene	17.838	225	494179	50.74	ug/l	99
104) Naphthalene	17.936	128	1854218	51.80	ug/l	100
105) 1,2,3-Trichlorobenzene	18.236	180	789502	49.99	ug/l	99

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

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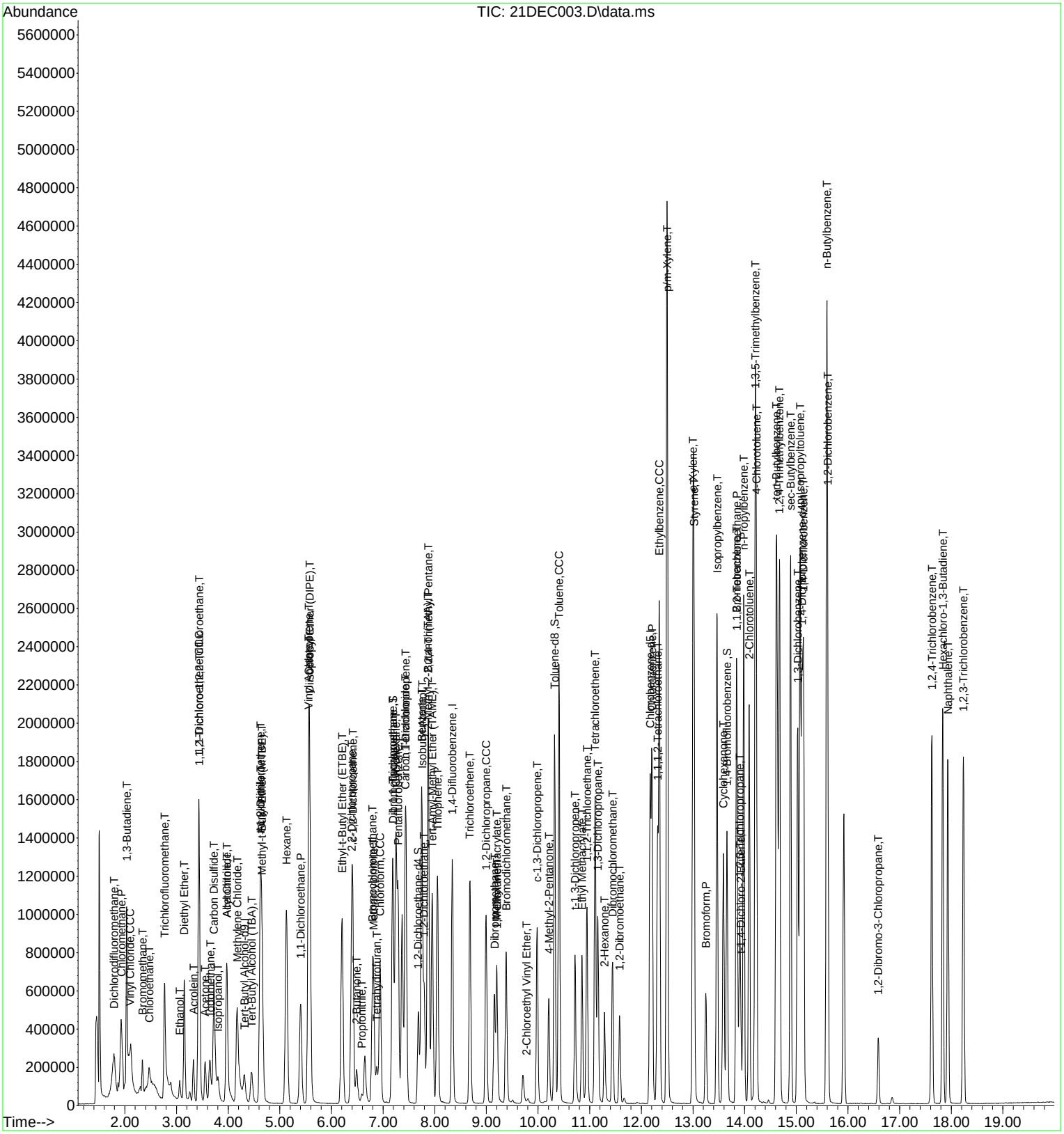
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC003.D
Acq On : 21 Dec 2013 10:29 am
Sample : LCS V120913D/V121313B
Misc : V121113A
Integrator: RTE
Quant Time: Dec 21 10:57:24 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Vial: 3
Operator: 486
Inst : GCMS XX
Multiplr: 1.00

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration



MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

WORK ORDER:	**13-12-1628**	SAMPLE D/T EXTRACTED:	12/21/2013	EXTRACTION:	EPA 5030C
MS/MSD BATCH:	131221S01	MS D/T EXTRACTED:	12/21/2013	ANALYST:	486
SPIKED SAMPLE ID:	**13-12-1628-11**	MSD D/T EXTRACTED:	12/21/2013	SAMPLE INSTRUMENT NAME	GC/MS XX
REVIEWED BY:	163	SAMPLE D/T ANALYZED:	12/21/2013 11:55	MS INSTRUMENT NAME:	GC/MS XX
DATE REVIEWED:	12/31/2013 12:08	MS D/T ANALYZED:	12/21/2013 12:25	MSD INSTRUMENT NAME:	GC/MS XX
		MSD D/T ANALYZED:	12/21/2013 12:53		

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL ADDED	FINAL ADDED	MS CONC	% REC	MSD CONC	% REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Acetone	ND	50.00	50.00	46.48	93	51.36	103	40-140	10	0-20	PASS	
Benzene	ND	50.00	50.00	50.50	101	51.18	102	80-120	1	0-20	PASS	
Bromobenzene	ND	50.00	50.00	49.84	100	50.32	101	75-125	1	0-20	PASS	
Bromochloromethane	ND	50.00	50.00	48.05	96	48.74	97	65-135	1	0-20	PASS	
Bromodichloromethane	ND	50.00	50.00	48.65	97	49.92	100	75-120	3	0-20	PASS	
Bromoform	ND	50.00	50.00	49.83	100	52.32	105	70-130	5	0-20	PASS	
Bromomethane	ND	50.00	50.00	61.77	124	60.18	120	30-145	3	0-20	PASS	
2-Butanone	ND	50.00	50.00	46.78	94	51.55	103	30-150	10	0-20	PASS	
n-Butylbenzene	ND	50.00	50.00	54.05	108	54.73	109	70-135	1	0-20	PASS	
sec-Butylbenzene	ND	50.00	50.00	49.50	99	50.91	102	70-125	3	0-20	PASS	
tert-Butylbenzene	ND	50.00	50.00	49.03	98	50.53	101	70-130	3	0-20	PASS	
Carbon Disulfide	ND	50.00	50.00	40.12	80	40.30	81	35-160	0	0-20	PASS	
Carbon Tetrachloride	ND	50.00	50.00	49.40	99	49.79	100	65-140	1	0-20	PASS	
Chlorobenzene	ND	50.00	50.00	46.10	92	47.45	95	80-120	3	0-20	PASS	
Chloroethane	ND	50.00	50.00	50.06	100	49.94	100	60-135	0	0-20	PASS	
Chloroform	ND	50.00	50.00	46.65	93	48.06	96	65-135	3	0-20	PASS	
Chloromethane	ND	50.00	50.00	49.14	98	49.39	99	40-125	0	0-20	PASS	
2-Chlorotoluene	ND	50.00	50.00	49.34	99	49.75	99	75-125	1	0-20	PASS	
4-Chlorotoluene	ND	50.00	50.00	47.77	96	49.25	98	75-130	3	0-20	PASS	
Dibromochloromethane	ND	50.00	50.00	49.64	99	50.97	102	60-135	3	0-20	PASS	
1,2-Dibromo-3-Chloropropane	ND	50.00	50.00	46.70	93	50.91	102	50-130	9	0-20	PASS	
1,2-Dibromoethane	ND	50.00	50.00	49.76	100	51.85	104	80-120	4	0-20	PASS	
Dibromomethane	ND	50.00	50.00	50.34	101	50.93	102	75-125	1	0-20	PASS	
1,2-Dichlorobenzene	ND	50.00	50.00	46.18	92	47.91	96	70-120	4	0-20	PASS	
1,3-Dichlorobenzene	ND	50.00	50.00	45.85	92	47.12	94	75-125	3	0-20	PASS	
1,4-Dichlorobenzene	ND	50.00	50.00	48.16	96	49.58	99	75-125	3	0-20	PASS	
Dichlorodifluoromethane	ND	50.00	50.00	48.29	97	49.17	98	30-155	2	0-20	PASS	
1,1-Dichloroethane	ND	50.00	50.00	45.88	92	47.60	95	70-135	4	0-20	PASS	
1,2-Dichloroethane	ND	50.00	50.00	49.59	99	51.00	102	70-130	3	0-20	PASS	
1,1-Dichloroethene	ND	50.00	50.00	42.92	86	43.27	87	70-130	1	0-20	PASS	
c-1,2-Dichloroethene	24.95	50.00	50.00	72.80	96	73.54	97	70-125	1	0-20	PASS	
t-1,2-Dichloroethene	ND	50.00	50.00	48.20	96	49.66	99	60-140	3	0-20	PASS	
1,2-Dichloropropane	ND	50.00	50.00	49.79	100	51.21	102	75-125	3	0-20	PASS	
1,3-Dichloropropane	ND	50.00	50.00	49.33	99	50.70	101	75-125	3	0-20	PASS	
2,2-Dichloropropane	ND	50.00	50.00	50.92	102	51.23	102	70-135	1	0-20	PASS	
1,1-Dichloropropene	ND	50.00	50.00	50.95	102	50.72	101	75-130	0	0-20	PASS	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

WORK ORDER:	**13-12-1628**	SAMPLE D/T EXTRACTED:	12/21/2013	EXTRACTION:	EPA 5030C
MS/MSD BATCH:	131221S01	MS D/T EXTRACTED:	12/21/2013	ANALYST:	486
SPIKED SAMPLE ID:	**13-12-1628-11**	MSD D/T EXTRACTED:	12/21/2013	SAMPLE INSTRUMENT NAME	GC/MS XX
REVIEWED BY:	163	SAMPLE D/T ANALYZED:	12/21/2013 11:55	MS INSTRUMENT NAME:	GC/MS XX
DATE REVIEWED:	12/31/2013 12:08	MS D/T ANALYZED:	12/21/2013 12:25	MSD INSTRUMENT NAME:	GC/MS XX
		MSD D/T ANALYZED:	12/21/2013 12:53		

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL ADDED	FINAL ADDED	MS CONC	% REC	MSD CONC	% REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
c-1,3-Dichloropropene	ND	50.00	50.00	55.72	111	57.27	115	70-130	3	0-20	PASS	
t-1,3-Dichloropropene	ND	50.00	50.00	46.49	93	48.83	98	55-140	5	0-20	PASS	
Ethylbenzene	ND	50.00	50.00	52.74	105	53.69	107	75-125	2	0-20	PASS	
2-Hexanone	ND	50.00	50.00	46.83	94	51.79	104	55-130	10	0-20	PASS	
Isopropylbenzene	ND	50.00	50.00	50.18	100	50.73	101	75-125	1	0-20	PASS	
p-Isopropyltoluene	ND	50.00	50.00	50.87	102	51.88	104	75-130	2	0-20	PASS	
Methylene Chloride	ND	50.00	50.00	48.84	98	49.77	100	55-140	2	0-20	PASS	
4-Methyl-2-Pentanone	ND	50.00	50.00	48.84	98	53.26	107	60-135	9	0-20	PASS	
Naphthalene	ND	50.00	50.00	49.76	100	54.28	109	55-140	9	0-20	PASS	
n-Propylbenzene	ND	50.00	50.00	48.92	98	49.58	99	70-130	1	0-20	PASS	
Styrene	ND	50.00	50.00	54.46	109	55.39	111	65-135	2	0-20	PASS	
Iodomethane	**ND**	**100.0**	**100.0**	**137.0**	**137**	**143.6**	**144**	**70-130**	**5**	**0-20**	**FAIL**	**3F**
Acrylonitrile	ND	50.00	50.00	46.90	94	52.24	104	70-130	11	0-20	PASS	
1,1,1,2-Tetrachloroethane	ND	50.00	50.00	50.77	102	52.19	104	80-130	3	0-20	PASS	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	50.00	45.23	90	45.98	92	80-130	2	0-20	PASS	
t-1,4-Dichloro-2-Butene	ND	50.00	50.00	38.00	76	38.22	76	70-130	1	0-20	PASS	
1,1,2,2-Tetrachloroethane	ND	50.00	50.00	47.83	96	51.14	102	65-130	7	0-20	PASS	
Tetrachloroethene	ND	50.00	50.00	47.46	95	48.82	98	45-150	3	0-20	PASS	
Toluene	ND	50.00	50.00	51.02	102	51.76	104	75-120	1	0-20	PASS	
1,2,3-Trichlorobenzene	ND	50.00	50.00	49.18	98	52.07	104	55-140	6	0-20	PASS	
1,2,4-Trichlorobenzene	ND	50.00	50.00	48.59	97	50.69	101	65-135	4	0-20	PASS	
1,1,1-Trichloroethane	ND	50.00	50.00	49.15	98	49.90	100	65-130	2	0-20	PASS	
Hexachloro-1,3-Butadiene	ND	50.00	50.00	51.38	103	51.77	104	50-140	1	0-20	PASS	
1,1,2-Trichloroethane	ND	50.00	50.00	50.22	100	51.69	103	75-125	3	0-20	PASS	
Trichloroethene	ND	50.00	50.00	49.58	99	50.11	100	70-125	1	0-20	PASS	
Trichlorofluoromethane	ND	50.00	50.00	49.96	100	50.39	101	60-145	1	0-20	PASS	
1,2,3-Trichloropropane	ND	50.00	50.00	49.35	99	50.81	102	75-125	3	0-20	PASS	
1,2,4-Trimethylbenzene	ND	50.00	50.00	54.83	110	55.47	111	75-130	1	0-20	PASS	
1,3,5-Trimethylbenzene	ND	50.00	50.00	56.41	113	56.60	113	75-130	0	0-20	PASS	
Vinyl Acetate	**ND**	**50.00**	**50.00**	**56.98**	**114**	**60.41**	**121**	**80-120**	**6**	**0-20**	**FAIL**	**3F**
Vinyl Chloride	1.666	50.00	50.00	54.29	105	55.92	109	50-145	3	0-20	PASS	
p/m-Xylene	ND	100.0	100.0	105.9	106	107.9	108	75-130	2	0-20	PASS	
o-Xylene	ND	50.00	50.00	50.55	101	52.09	104	80-120	3	0-20	PASS	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	50.00	47.78	96	50.94	102	65-125	6	0-20	PASS	
Tert-Butyl Alcohol (TBA)	ND	250.0	250.0	293.4	117	281.3	113	46-154	4	0-35	PASS	
Diisopropyl Ether (DIPE)	ND	50.00	50.00	51.72	103	53.18	106	81-123	3	0-20	PASS	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

WORK ORDER:	**13-12-1628**	SAMPLE D/T EXTRACTED:	12/21/2013	EXTRACTION:	EPA 5030C
MS/MSD BATCH:	131221S01	MS D/T EXTRACTED:	12/21/2013	ANALYST:	486
SPIKED SAMPLE ID:	**13-12-1628-11**	MSD D/T EXTRACTED:	12/21/2013	SAMPLE INSTRUMENT NAME	GC/MS XX
REVIEWED BY:	163	SAMPLE D/T ANALYZED:	12/21/2013 11:55	MS INSTRUMENT NAME:	GC/MS XX
DATE REVIEWED:	12/31/2013 12:08	MS D/T ANALYZED:	12/21/2013 12:25	MSD INSTRUMENT NAME:	GC/MS XX
		MSD D/T ANALYZED:	12/21/2013 12:53		

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL ADDED	FINAL ADDED	MS CONC	% REC	MSD CONC	% REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	50.00	49.79	100	51.17	102	74-122	3	0-20	PASS	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	50.00	52.34	105	54.27	109	76-124	4	0-20	PASS	
Ethanol	ND	500.0	500.0	548.9	110	515.4	103	60-138	6	0-35	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	21DEC007.rr	W:\GCMS_XX_DATA\2013\131221\21DEC007.D\
MSD	21DEC008.rr	W:\GCMS_XX_DATA\2013\131221\21DEC008.D\

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC007.D Vial: 7
Acq On : 21 Dec 2013 12:25 pm Operator: 486
Sample : MS 1628-11B V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 12:49:55 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.311	65	139027	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	900324	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1248815	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1122341	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	692203	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	403149	47.87	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 95.74%			
46) 1,2-Dichloroethane-d4	7.683	65	400636	48.14	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 96.28%			
62) Toluene-d8	10.324	98	1442934	50.97	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.94%			
81) 1,4-Bromofluorobenzene	13.658	95	497372	50.88	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.76%			
Target Compounds						Qvalue
2) Ethanol	3.067	45	100178	548.88	ug/l	98
3) Tert-Butyl Alcohol (TBA)	4.448	59	226689	293.35	ug/l	93
5) Dichlorodifluoromethane	1.780	85	573736	48.29	ug/l	96
6) Chloromethane	1.927	50	664362	49.14	ug/l	96
7) Vinyl Chloride	2.096	62	681193	54.29	ug/l	97
8) Bromomethane	2.342	94	275877	61.77	ug/l	95
9) Chloroethane	2.478	64	365416	50.06	ug/l	94
10) 1,3-Butadiene	2.031	54	360703	30.93	ug/l	99
11) Trichlorofluoromethane	2.767	101	825079	49.95	ug/l	100
12) Diethyl Ether	3.149	45	306917	47.21	ug/l	99
13) Acetone	3.558	58	43317	46.48	ug/l	88
14) Iodomethane	3.651	142	513596	137.01	ug/l	98
15) 1,1-Dichloroethene	3.433	61	603317	42.92	ug/l	99
16) 1,1,2-Trichloro-1,2,2-...	3.433	101	430533	45.23	ug/l	98
17) Isopropanol	3.804	45	134156	220.90	ug/l	97
18) Carbon Disulfide	3.728	76	1262508	40.12	ug/l	99
19) Acetonitrile	3.973	41	741311	94.24	ug/l	97
20) Acrylonitrile	4.628	53	175653	46.90	ug/l	92
21) Allyl Chloride	3.973	76	200279	45.85	ug/l	95
22) Acrolein	3.324	56	164146	96.92	ug/l	100
23) Methylene Chloride	4.175	84	430944	48.84	ug/l	97
24) t-1,2-Dichloroethene	4.628	96	432771	48.20	ug/l	93
25) Isobutyl Alcohol	7.754	43	32055	84.45	ug/l #	81
26) Methyl-t-Butyl Ether (...	4.650	73	864555	47.78	ug/l	99
27) Hexane	5.130	57	700917	47.46	ug/l	99
28) 1,1-Dichloroethane	5.403	63	733787	45.88	ug/l	97
29) Vinyl Acetate	5.555	86	62567	56.98	ug/l #	59
30) Diisopropyl Ether (DIPE)	5.577	45	1502100	51.72	ug/l	100
31) Chloroprene	5.561	53	734711	54.07	ug/l	99
32) Ethyl-t-Butyl Ether (E...	6.205	59	961848	49.79	ug/l	100
33) c-1,2-Dichloroethene	6.412	96	684627	72.80	ug/l	98
34) 2,2-Dichloropropane	6.390	77	459156	50.92	ug/l	96
35) 2-Butanone	6.489	43	194029	46.78	ug/l	96
36) Propionitrile	6.598	54	68060	46.85	ug/l	89
37) Methacrylonitrile	6.810	41	345221	47.64	ug/l #	99
38) Bromochloromethane	6.794	130	300438	48.05	ug/l	97
39) Tetrahydrofuran	6.881	42	136439	45.34	ug/l	97
40) Chloroform	6.941	83	719684	46.65	ug/l	99
42) 1,1,1-Trichloroethane	7.187	97	604027	49.15	ug/l	100
43) Cyclohexane	7.247	84	642881	48.55	ug/l	99
44) 1,1-Dichloropropene	7.443	75	569492	50.95	ug/l	97

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC007.D Vial: 7
Acq On : 21 Dec 2013 12:25 pm Operator: 486
Sample : MS 1628-11B V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 12:49:55 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) Carbon Tetrachloride	7.427	117	577422	49.40	ug/l	100
48) Benzene	7.749	78	1634479	50.50	ug/l	97
49) 1,2-Dichloroethane	7.793	62	571409	49.59	ug/l	97
50) 2-Methyl-2-Butanol (TAA)	7.864	59	133064	232.20	ug/l	98
51) Tert-Amyl-Methyl Ether...	7.951	73	767385	52.34	ug/l	99
52) Thiophene	8.055	84	906465	52.46	ug/l	99
53) 2,2,4-Trimethyl Pentane	7.874	57	2082201	52.44	ug/l	99
54) Trichloroethene	8.682	95	435069	49.58	ug/l	98
55) 1,2-Dichloropropane	8.993	63	432625	49.79	ug/l	97
56) Dibromomethane	9.157	93	251595	50.34	ug/l	97
57) Methyl Methacrylate	9.200	69	257031	49.44	ug/l	94
58) 1,4-Dioxane	9.206	88	58750	522.51	ug/l	94
59) Bromodichloromethane	9.386	83	548137	48.65	ug/l	100
60) 2-Chloroethyl Vinyl Ether	9.784	63	3913	57.19	ug/l	85
61) c-1,3-Dichloropropene	9.981	75	579482	55.72	ug/l	97
63) Toluene	10.406	91	1886897	51.02	ug/l	99
64) 4-Methyl-2-Pentanone	10.204	58	156204	48.84	ug/l	96
66) t-1,3-Dichloropropene	10.717	75	453499	46.49	ug/l	97
67) Ethyl Methacrylate	10.854	69	419626	45.69	ug/l	96
68) 1,1,2-Trichloroethane	10.946	83	315786	50.22	ug/l	99
69) Tetrachloroethene	11.105	166	526577	47.46	ug/l	99
70) 1,3-Dichloropropane	11.159	76	617878	49.33	ug/l	99
71) 2-Hexanone	11.290	58	152196	46.83	ug/l	98
72) Dibromochloromethane	11.443	129	470589	49.64	ug/l	97
73) 1,2-Dibromoethane	11.579	107	368080	49.76	ug/l	97
74) Chlorobenzene	12.207	112	1195456	46.10	ug/l	100
75) 1,1,1,2-Tetrachloroethane	12.316	131	432058	50.77	ug/l	99
76) Ethylbenzene	12.349	91	2103836	52.74	ug/l	100
77) p/m-Xylene	12.501	91	3198271	105.90	ug/l	99
78) o-Xylene	12.998	91	1487074	50.55	ug/l	97
79) Styrene	13.020	104	1366576	54.46	ug/l	97
80) Isopropylbenzene	13.467	105	1960884	50.18	ug/l	98
82) 1,2,3-Trichloropropane	13.904	110	155559	49.35	ug/l	98
83) Bromobenzene	13.844	156	562428	49.84	ug/l	99
84) n-Propylbenzene	13.980	91	2401826	48.92	ug/l	99
85) t-1,4-Dichloro-2-Butene	13.920	53	107432	38.00	ug/l	83
86) 2-Chlorotoluene	14.089	91	1352485	49.34	ug/l	99
87) 1,3,5-Trimethylbenzene	14.204	105	1864062	56.41	ug/l	96
89) Bromoform	13.249	173	330364	49.83	ug/l	99
90) 1,1,2,2-Tetrachloroethane	13.849	83	555709	47.83	ug/l	99
91) 4-Chlorotoluene	14.226	91	1625833	47.77	ug/l	97
92) Cyclohexanone	13.593	55	78933	195.90	ug/l	96
93) 1,2,4-Trimethylbenzene	14.679	105	1863545	54.83	ug/l	100
94) tert-Butylbenzene	14.613	134	430985	49.03	ug/l	98
95) p-Isopropyltoluene	15.077	119	1971000	50.87	ug/l	99
96) sec-Butylbenzene	14.891	105	2313986	49.50	ug/l	100
97) 1,3-Dichlorobenzene	15.028	146	1049091	45.85	ug/l	99
98) 1,4-Dichlorobenzene	15.137	146	1180945	48.16	ug/l	98
99) 1,2-Dichlorobenzene	15.606	146	1030890	46.18	ug/l	100
100) n-Butylbenzene	15.590	91	2014354	54.05	ug/l	100
101) 1,2-Dibromo-3-Chloropr...	16.588	75	86139	46.70	ug/l	98
102) 1,2,4-Trichlorobenzene	17.625	180	755040	48.59	ug/l	99
103) Hexachloro-1,3-Butadiene	17.838	225	480381	51.38	ug/l	99
104) Naphthalene	17.936	128	1709957	49.76	ug/l	100
105) 1,2,3-Trichlorobenzene	18.236	180	745686	49.18	ug/l	100

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

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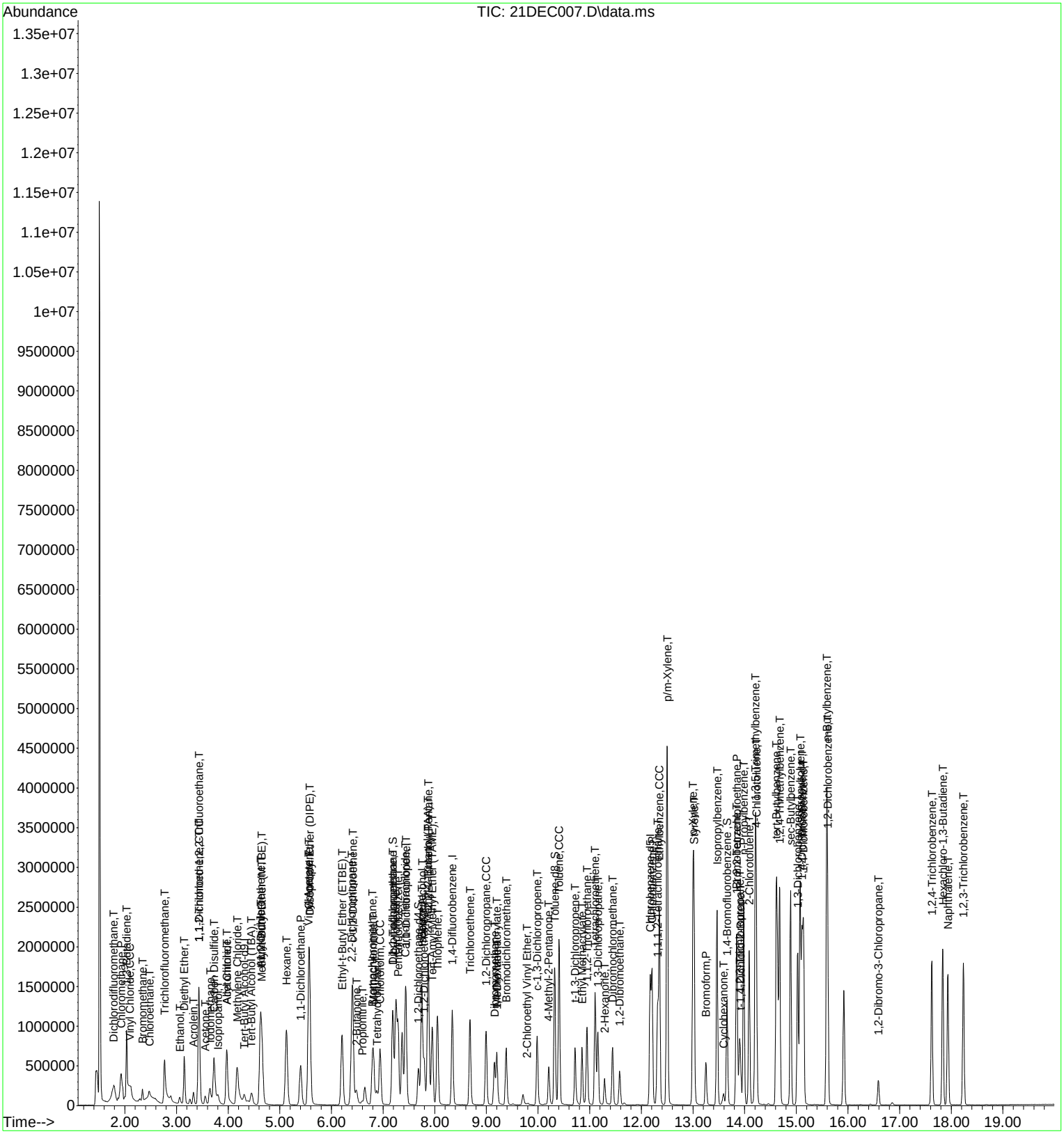
Data File : W:\GCMS_XX_DATA\2013\131221\21DEC007.D Vial: 7
Acq On : 21 Dec 2013 12:25 pm Operator: 486
Sample : MS 1628-11B V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 12:49:55 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC008.D Vial: 8
Acq On : 21 Dec 2013 12:53 pm Operator: 486
Sample : MSD 1628-11B V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 13:35:28 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.312	65	160576	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	911809	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1265182	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1126505	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	683432	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	409992	48.07	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 96.14%			
46) 1,2-Dichloroethane-d4	7.678	65	408690	48.49	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 96.98%			
62) Toluene-d8	10.319	98	1474410	51.41	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.82%			
81) 1,4-Bromofluorobenzene	13.658	95	499724	50.93	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.86%			
Target Compounds						Qvalue
2) Ethanol	3.062	45	108657	515.44	ug/l	98
3) Tert-Butyl Alcohol (TBA)	4.453	59	251083	281.32	ug/l	95
5) Dichlorodifluoromethane	1.785	85	591629	49.17	ug/l	100
6) Chloromethane	1.927	50	675717	49.39	ug/l	96
7) Vinyl Chloride	2.085	62	710689	55.92	ug/l	98
8) Bromomethane	2.336	94	272181	60.18	ug/l	99
9) Chloroethane	2.473	64	369138	49.94	ug/l	95
10) 1,3-Butadiene	2.031	54	376016	31.84	ug/l	95
11) Trichlorofluoromethane	2.767	101	842892	50.39	ug/l	98
12) Diethyl Ether	3.149	45	319334	48.59	ug/l	98
13) Acetone	3.559	58	48471	51.36	ug/l #	79
14) Iodomethane	3.646	142	545045	143.57	ug/l	98
15) 1,1-Dichloroethene	3.433	61	616058	43.27	ug/l	98
16) 1,1,2-Trichloro-1,2,2-...	3.433	101	443272	45.98	ug/l	99
17) Isopropanol	3.804	45	156442	254.35	ug/l	96
18) Carbon Disulfide	3.728	76	1284463	40.30	ug/l	99
19) Acetonitrile	3.968	41	755634	94.85	ug/l	99
20) Acrylonitrile	4.628	53	198136	52.24	ug/l	95
21) Allyl Chloride	3.973	76	204864	46.31	ug/l	96
22) Acrolein	3.324	56	185273	108.02	ug/l	97
23) Methylene Chloride	4.175	84	444734	49.77	ug/l	99
24) t-1,2-Dichloroethene	4.623	96	451597	49.66	ug/l	97
25) Isobutyl Alcohol	7.755	43	40944	106.51	ug/l #	84
26) Methyl-t-Butyl Ether (...	4.655	73	933493	50.94	ug/l	95
27) Hexane	5.130	57	719456	48.11	ug/l	99
28) 1,1-Dichloroethane	5.403	63	770899	47.60	ug/l	99
29) Vinyl Acetate	5.556	86	67178	60.41	ug/l #	59
30) Diisopropyl Ether (DIPE)	5.572	45	1564344	53.18	ug/l	99
31) Chloroprene	5.561	53	745105	54.15	ug/l	99
32) Ethyl-t-Butyl Ether (E...	6.205	59	1001171	51.17	ug/l	99
33) c-1,2-Dichloroethene	6.407	96	700479	73.54	ug/l	99
34) 2,2-Dichloropropane	6.396	77	467916	51.23	ug/l	98
35) 2-Butanone	6.489	43	216527	51.55	ug/l	94
36) Propionitrile	6.587	54	75575	51.37	ug/l	90
37) Methacrylonitrile	6.816	41	371031	50.56	ug/l #	100
38) Bromochloromethane	6.794	130	308626	48.74	ug/l	99
39) Tetrahydrofuran	6.876	42	148634	48.77	ug/l	91
40) Chloroform	6.942	83	750964	48.06	ug/l	98
42) 1,1,1-Trichloroethane	7.182	97	621112	49.90	ug/l	99
43) Cyclohexane	7.253	84	668375	49.84	ug/l	98
44) 1,1-Dichloropropene	7.444	75	574173	50.72	ug/l	100

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC008.D Vial: 8
Acq On : 21 Dec 2013 12:53 pm Operator: 486
Sample : MSD 1628-11B V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 13:35:28 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) Carbon Tetrachloride	7.427	117	589410	49.79 ug/l	98
48) Benzene	7.744	78	1678298	51.18 ug/l	100
49) 1,2-Dichloroethane	7.798	62	595311	51.00 ug/l	96
50) 2-Methyl-2-Butanol (TAA)	7.858	59	153028	263.58 ug/l	92
51) Tert-Amyl-Methyl Ether...	7.951	73	806136	54.27 ug/l	99
52) Thiophene	8.049	84	920469	52.58 ug/l	98
53) 2,2,4-Trimethyl Pentane	7.875	57	2124607	52.82 ug/l	100
54) Trichloroethene	8.682	95	445525	50.11 ug/l	98
55) 1,2-Dichloropropane	8.999	63	450751	51.21 ug/l	98
56) Dibromomethane	9.151	93	257891	50.93 ug/l	99
57) Methyl Methacrylate	9.201	69	281219	53.39 ug/l	95
58) 1,4-Dioxane	9.206	88	61149	536.81 ug/l	91
59) Bromodichloromethane	9.381	83	569843	49.92 ug/l	97
60) 2-Chloroethyl Vinyl Ether	9.790	63	4302	62.06 ug/l	87
61) c-1,3-Dichloropropene	9.981	75	603387	57.27 ug/l	97
63) Toluene	10.406	91	1939502	51.76 ug/l	100
64) 4-Methyl-2-Pentanone	10.210	58	172590	53.26 ug/l	97
66) t-1,3-Dichloropropene	10.717	75	478250	48.83 ug/l	99
67) Ethyl Methacrylate	10.848	69	452443	49.08 ug/l	97
68) 1,1,2-Trichloroethane	10.947	83	326199	51.69 ug/l	99
69) Tetrachloroethene	11.105	166	543705	48.82 ug/l	98
70) 1,3-Dichloropropane	11.154	76	637438	50.70 ug/l	99
71) 2-Hexanone	11.290	58	168946	51.79 ug/l	92
72) Dibromochloromethane	11.443	129	484959	50.97 ug/l	93
73) 1,2-Dibromoethane	11.579	107	384941	51.85 ug/l	99
74) Chlorobenzene	12.207	112	1235058	47.45 ug/l	98
75) 1,1,1,2-Tetrachloroethane	12.316	131	445754	52.19 ug/l	97
76) Ethylbenzene	12.349	91	2149648	53.69 ug/l	99
77) p/m-Xylene	12.502	91	3269909	107.88 ug/l	99
78) o-Xylene	12.998	91	1538053	52.09 ug/l	99
79) Styrene	13.020	104	1395169	55.39 ug/l	100
80) Isopropylbenzene	13.467	105	1989642	50.73 ug/l	99
82) 1,2,3-Trichloropropane	13.904	110	160746	50.81 ug/l	99
83) Bromobenzene	13.844	156	570026	50.32 ug/l	96
84) n-Propylbenzene	13.980	91	2443088	49.58 ug/l	99
85) t-1,4-Dichloro-2-Butene	13.920	53	108469	38.22 ug/l	92
86) 2-Chlorotoluene	14.089	91	1368625	49.75 ug/l	97
87) 1,3,5-Trimethylbenzene	14.209	105	1877295	56.60 ug/l	99
89) Bromoform	13.249	173	342520	52.32 ug/l	98
90) 1,1,2,2-Tetrachloroethane	13.849	83	586685	51.14 ug/l	99
91) 4-Chlorotoluene	14.226	91	1654972	49.25 ug/l	98
92) Cyclohexanone	13.587	55	91267	229.41 ug/l	96
93) 1,2,4-Trimethylbenzene	14.673	105	1861210	55.47 ug/l	100
94) tert-Butylbenzene	14.613	134	438529	50.53 ug/l	100
95) p-Isopropyltoluene	15.072	119	1984464	51.88 ug/l	100
96) sec-Butylbenzene	14.892	105	2349899	50.91 ug/l	99
97) 1,3-Dichlorobenzene	15.022	146	1064295	47.12 ug/l	99
98) 1,4-Dichlorobenzene	15.143	146	1200418	49.58 ug/l	99
99) 1,2-Dichlorobenzene	15.606	146	1055969	47.91 ug/l	96
100) n-Butylbenzene	15.590	91	2014041	54.73 ug/l	99
101) 1,2-Dibromo-3-Chloropr...	16.588	75	92723	50.91 ug/l	99
102) 1,2,4-Trichlorobenzene	17.625	180	777668	50.69 ug/l	99
103) Hexachloro-1,3-Butadiene	17.838	225	477850	51.77 ug/l	99
104) Naphthalene	17.936	128	1841642	54.28 ug/l	100
105) 1,2,3-Trichlorobenzene	18.231	180	779442	52.07 ug/l	100

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

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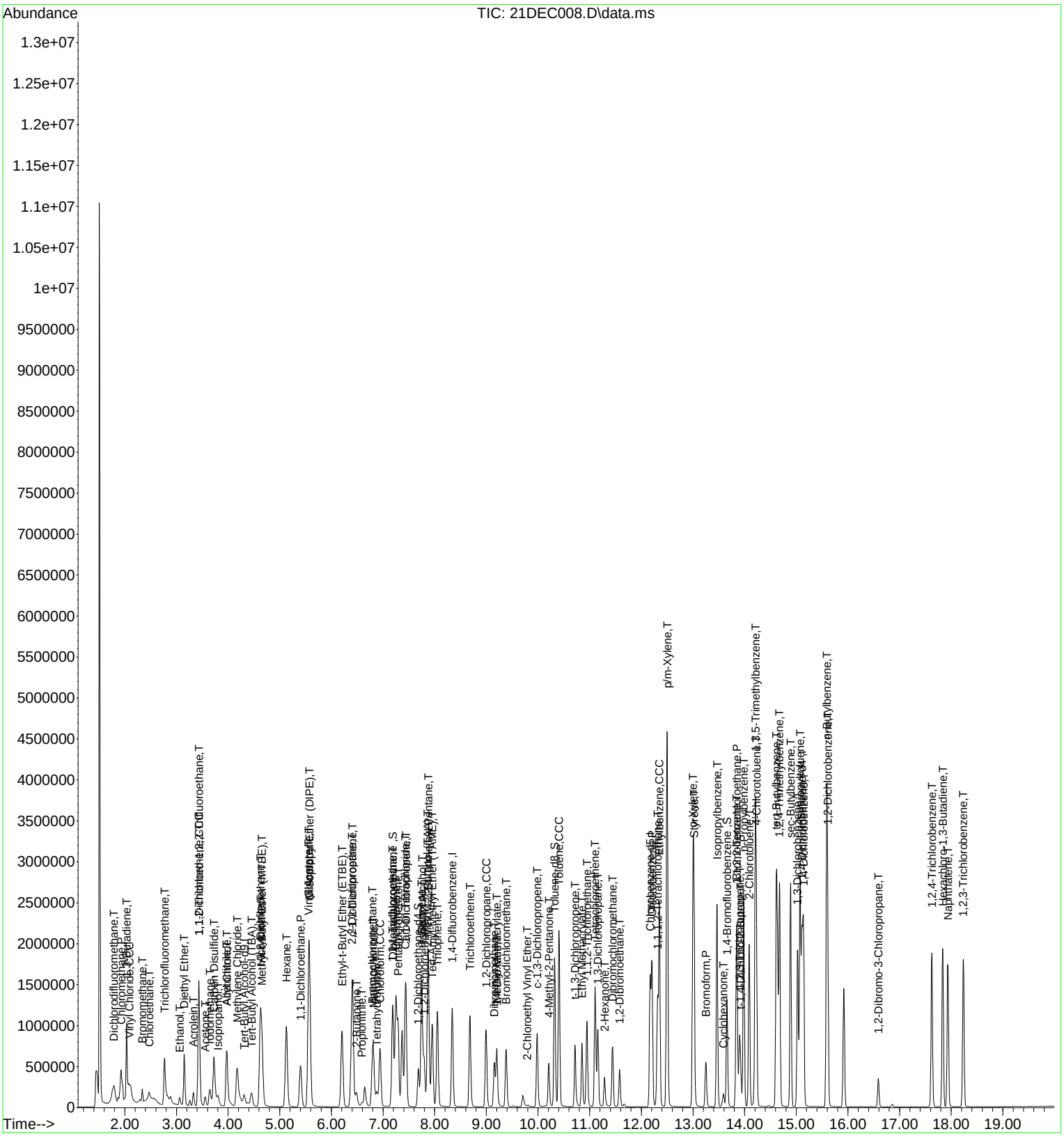
Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC008.D Vial: 8
Acq On : 21 Dec 2013 12:53 pm Operator: 486
Sample : MSD 1628-11B V120913D/V121313B Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 13:35:28 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration



SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628 REVIEWED BY: 163

LCS/MB BATCH : 131221L01 DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131221S01 EXTRACTION : EPA 5030C

2 CLIENT SAMPLE NUMBER : MW-40-14

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC010.D\21DEC010.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1351 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**108**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**112**	**70-120**	**PASS**	
Toluene-d8	**98**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**91**	**75-120**	**PASS**	

4 CLIENT SAMPLE NUMBER : MW-40-27

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC011.D\21DEC011.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1419 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**110**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**113**	**70-120**	**PASS**	
Toluene-d8	**99**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**90**	**75-120**	**PASS**	

7 CLIENT SAMPLE NUMBER : MW-40-37

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC012.D\21DEC012.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1448 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**109**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**115**	**70-120**	**PASS**	
Toluene-d8	**99**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**91**	**75-120**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628 REVIEWED BY: 163

LCS/MB BATCH : 131221L01 DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131221S01 EXTRACTION : EPA 5030C

11 CLIENT SAMPLE NUMBER : MW-40-08

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC006.D\21DEC006.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1155 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**109**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**110**	**70-120**	**PASS**	
Toluene-d8	**100**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**91**	**75-120**	**PASS**	

12 CLIENT SAMPLE NUMBER : MW-40-30

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC013.D\21DEC013.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1516 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**110**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**114**	**70-120**	**PASS**	
Toluene-d8	**99**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**91**	**75-120**	**PASS**	

14 CLIENT SAMPLE NUMBER : IW-2

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC014.D\21DEC014.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1545 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**111**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**114**	**70-120**	**PASS**	
Toluene-d8	**98**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**90**	**75-120**	**PASS**	

15 CLIENT SAMPLE NUMBER : IW-4

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC015.D\21DEC015.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1614 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**111**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**111**	**70-120**	**PASS**	
Toluene-d8	**97**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**89**	**75-120**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628 REVIEWED BY: 163

LCS/MB BATCH : 131221L01 DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131221S01 EXTRACTION : EPA 5030C

16 CLIENT SAMPLE NUMBER : IW-10

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC016.D\21DEC016.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1642 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**113**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**113**	**70-120**	**PASS**	
Toluene-d8	**101**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**91**	**75-120**	**PASS**	

17 CLIENT SAMPLE NUMBER : IW-18

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC017.D\21DEC017.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1711 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**111**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**115**	**70-120**	**PASS**	
Toluene-d8	**100**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**91**	**75-120**	**PASS**	

18 CLIENT SAMPLE NUMBER : DUP-1

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC018.D\21DEC018.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1739 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**111**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**113**	**70-120**	**PASS**	
Toluene-d8	**100**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**90**	**75-120**	**PASS**	

19 CLIENT SAMPLE NUMBER : EB-1

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC019.D\21DEC019.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1808 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**114**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**114**	**70-120**	**PASS**	
Toluene-d8	**99**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**90**	**75-120**	**PASS**	

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SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628 REVIEWED BY: 163

LCS/MB BATCH : 131221L01 DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131221S01 EXTRACTION : EPA 5030C

20 CLIENT SAMPLE NUMBER : DRUM-1

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC020.D\21DEC020.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1836 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**113**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**116**	**70-120**	**PASS**	
Toluene-d8	**100**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**89**	**75-120**	**PASS**	

22 CLIENT SAMPLE NUMBER : MW-40-31

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC022.D\21DEC022.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1933 ANALYST: 796 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**113**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**115**	**70-120**	**PASS**	
Toluene-d8	**99**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**90**	**75-120**	**PASS**	

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MB CLIENT SAMPLE NUMBER : Method Blank

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC005.D\21DEC005.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1127 ANALYST: 486 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**108**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**112**	**70-120**	**PASS**	
Toluene-d8	**99**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**90**	**75-120**	**PASS**	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC003.D\21DEC003.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1029 ANALYST: 486 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**96**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**94**	**70-120**	**PASS**	
Toluene-d8	**102**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**104**	**75-120**	**PASS**	

SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER NUMBER 13-12-1628

REVIEWED BY: 163

LCS/MB BATCH :

DATE REVIEWED: 12/31/2013 12:08

MS BATCH : 131221S01

EXTRACTION : EPA 5030C

MS CLIENT SAMPLE NUMBER : Matrix Spike

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC007.D\21DEC007.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1225 ANALYST: 486 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**96**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**96**	**70-120**	**PASS**	
Toluene-d8	**102**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**102**	**75-120**	**PASS**	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

DATA FILE: W:\GCMS_XX_DATA\2013\131221\21DEC008.D\21DEC008.rr

D/T EXTRACTED: 12/21/2013 0000

D/T ANALYZED: 12/21/2013 1253 ANALYST: 486 INSTRUMENT NAME: GC/MS XX

COMMENT:

COMPOUND_NAME	% RECOVERY	% REC_CONTROL_LIMIT	STATUS	QUALIFIERS
Dibromofluoromethane	**96**	**85-115**	**PASS**	
1,2-Dichloroethane-d4	**97**	**70-120**	**PASS**	
Toluene-d8	**103**	**85-120**	**PASS**	
1,4-Bromofluorobenzene	**102**	**75-120**	**PASS**	

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Calscience Environmental Laboratories, Inc.

EPA 8260B Volatile Organics

Continuing Calibration Data

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-12-041-684-4692
INSTRUMENT NAME: GC/MS Z
INITIAL BATCH: 131212IC
INITIAL DATE ANALYZED: 12/12/13 10:15
ANALYST: 796

REVIEWED BY: 163
DATE REVIEWED: 12/27/13 10:25
CCV BATCH: 131220A
CCV DATE ANALYZED: 12/20/13 10:05

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	Avg Resp	0.00	0.070	0.074			-6	0-20	PASS
Benzene	Avg Resp	0.00	1.628	1.557			4	0-20	PASS
Bromobenzene	Avg Resp	0.00	0.475	0.465			2	0-20	PASS
Bromochloromethane	Avg Resp	0.00	0.343	0.327			5	0-20	PASS
Bromodichloromethane	Avg Resp	0.00	0.468	0.504			-8	0-20	PASS
Bromoform	Avg Resp	0.10	0.374	0.387			-3	0-20	PASS
Bromomethane	Avg Resp	0.00	0.368	0.394			-7	0-20	PASS
2-Butanone	Avg Resp	0.00	0.327	0.342			-5	0-20	PASS
n-Butylbenzene	Avg Resp	0.00	3.247	3.412			-5	0-20	PASS
sec-Butylbenzene	Avg Resp	0.00	4.120	4.171			-1	0-20	PASS
tert-Butylbenzene	Avg Resp	0.00	0.681	0.683			0	0-20	PASS
Carbon Disulfide	Avg Resp	0.00	1.613	1.544			4	0-20	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.501	0.593			-18	0-20	PASS
Chlorobenzene	Avg Resp	0.30	1.101	1.082			2	0-20	PASS
Chloroethane	Avg Resp	0.00	0.356	0.376			-6	0-20	PASS
Chloroform	Avg Resp	0.00	1.014	1.040			-3	0-20	PASS
Chloromethane	Avg Resp	0.10	0.821	0.755			8	0-20	PASS
2-Chlorotoluene	Avg Resp	0.00	1.393	1.376			1	0-20	PASS
4-Chlorotoluene	Avg Resp	0.00	3.144	3.032			4	0-20	PASS
Dibromochloromethane	Avg Resp	0.00	0.304	0.327			-7	0-20	PASS
1,2-Dibromo-3-Chloropropane	Avg Resp	0.00	0.205	0.184			10	0-20	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.334	0.322			4	0-20	PASS
Dibromomethane	Avg Resp	0.00	0.235	0.236			0	0-20	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	1.798	1.667			7	0-20	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	1.890	1.792			5	0-20	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	1.817	1.727			5	0-20	PASS
Dichlorodifluoromethane	Avg Resp	0.00	0.769	0.881			-15	0-20	PASS
1,1-Dichloroethane	Avg Resp	0.10	1.116	1.109			1	0-20	PASS
1,2-Dichloroethane	Avg Resp	0.00	0.537	0.548			-2	0-20	PASS
1,1-Dichloroethene	Avg Resp	0.00	0.838	0.860			-3	0-20	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.625	0.624			0	0-20	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	0.574	0.581			-1	0-20	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.430	0.414			4	0-20	PASS
1,3-Dichloropropane	Avg Resp	0.00	0.629	0.582			7	0-20	PASS
2,2-Dichloropropane	Avg Resp	0.00	0.677	0.719			-6	0-20	PASS
1,1-Dichloropropene	Avg Resp	0.00	0.755	0.789			-5	0-20	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.523	0.553			-6	0-20	PASS
t-1,3-Dichloropropene	LR - Equal				50.00	45.372	9	0-20	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-12-041-684-4692
INSTRUMENT NAME: GC/MS Z
INITIAL BATCH: 131212IC
INITIAL DATE ANALYZED: 12/12/13 10:15
ANALYST: 796

REVIEWED BY: 163
DATE REVIEWED: 12/27/13 10:25
CCV BATCH: 131220A
CCV DATE ANALYZED: 12/20/13 10:05

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Ethylbenzene	Avg Resp	0.00	2.000	1.983			1	0-20	PASS
2-Hexanone	Avg Resp	0.00	0.185	0.167			9	0-20	PASS
Isopropylbenzene	Avg Resp	0.00	1.921	1.958			-2	0-20	PASS
p-Isopropyltoluene	Avg Resp	0.00	3.392	3.403			0	0-20	PASS
Methylene Chloride	Avg Resp	0.00	0.616	0.558			9	0-20	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.186	0.163			12	0-20	PASS
Naphthalene	Avg Resp	0.00	2.998	2.688			10	0-20	PASS
n-Propylbenzene	Avg Resp	0.00	2.301	2.332			-1	0-20	PASS
Styrene	Avg Resp	0.00	1.196	1.155			3	0-20	PASS
t-1,4-Dichloro-2-Butene	LR - Equal				50.00	46.298	7	0-20	PASS
1,1,1,2-Tetrachloroethane	Avg Resp	0.00	0.280	0.309			-10	0-20	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	0.463	0.505			-9	0-20	PASS
Acrylonitrile	Avg Resp	0.00	0.279	0.259			7	0-20	PASS
Iodomethane	LR - Equal				100.00	81.110	19	0-20	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.30	0.913	0.769			16	0-20	PASS
Tetrachloroethene	Avg Resp	0.00	0.621	0.697			-12	0-20	PASS
Toluene	Avg Resp	0.00	1.728	1.706			1	0-20	PASS
1,2,3-Trichlorobenzene	Avg Resp	0.00	1.335	1.312			2	0-20	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	1.395	1.411			-1	0-20	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	0.772	0.855			-11	0-20	PASS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.905	0.978			-8	0-20	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.317	0.301			5	0-20	PASS
Trichloroethene	Avg Resp	0.00	0.448	0.484			-8	0-20	PASS
Trichlorofluoromethane	Avg Resp	0.00	0.855	0.952			-11	0-20	PASS
1,2,3-Trichloropropane	Avg Resp	0.00	0.142	0.136			4	0-20	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	3.166	3.123			1	0-20	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.557	1.594			-2	0-20	PASS
Vinyl Acetate	Avg Resp	0.00	0.081	0.065			19	0-20	PASS
Vinyl Chloride	Avg Resp	0.00	0.729	0.735			-1	0-20	PASS
p/m-Xylene	Avg Resp	0.00	1.594	1.535			4	0-20	PASS
o-Xylene	Avg Resp	0.00	1.656	1.607			3	0-20	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	1.632	1.461			10	0-20	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.348	1.239			8	0-20	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	1.935	1.752			9	0-20	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	1.678	1.387			17	0-20	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.959	0.789			18	0-20	PASS
Ethanol	Avg Resp	0.00	0.199	0.185			7	0-20	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-12-041-684-4692
INSTRUMENT NAME: GC/MS Z
INITIAL BATCH: 131212IC
INITIAL DATE ANALYZED: 12/12/13 10:15
ANALYST: 796

REVIEWED BY: 163
DATE REVIEWED: 12/27/13 10:25
CCV BATCH: 131220A
CCV DATE ANALYZED: 12/20/13 10:05

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_Z_DATA\2013\131220\20DEC002.D\20DEC002.rr

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CCV Association Summary For Method: EPA 8260B

Batch ID: 131220A
Instrument: GC/MS Z

Analyst: 796

Work Order Number: 099-12-041
Matrix: Water

Reviewed By: 163
D/T Reviewed: 12/27/2013 10:25

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
684	Daily Calibration	12/20/2013 10:05	W:\GCMS_Z_DATA\2013\131220\20DEC002.D\20DEC002.rr

Work Order Number: 13-12-1628
Matrix: Water

Reviewed By: 163
D/T Reviewed: 12/31/2013 12:08

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
1	TB-2	12/20/2013 16:15	W:\GCMS_Z_DATA\2013\131220\20DEC015.D\20DEC015.rr
3	MW-40-22	12/20/2013 17:10	W:\GCMS_Z_DATA\2013\131220\20DEC017.D\20DEC017.rr
5	MW-40-35	12/20/2013 18:06	W:\GCMS_Z_DATA\2013\131220\20DEC019.D\20DEC019.rr
6	MW-40-36	12/20/2013 18:33	W:\GCMS_Z_DATA\2013\131220\20DEC020.D\20DEC020.rr
8	DUP-2	12/20/2013 19:28	W:\GCMS_Z_DATA\2013\131220\20DEC022.D\20DEC022.rr
9	EB-2	12/20/2013 19:55	W:\GCMS_Z_DATA\2013\131220\20DEC023.D\20DEC023.rr
10	TB-1	12/20/2013 20:22	W:\GCMS_Z_DATA\2013\131220\20DEC024.D\20DEC024.rr
13	MW-40-32	12/20/2013 21:17	W:\GCMS_Z_DATA\2013\131220\20DEC026.D\20DEC026.rr

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ICAL Midpoint Internal Standard Compounds Area Report
EPA 8260B

ICAL

Sample ID: 099-12-041-670 **D/T Analyzed:** 12/12/2013 12:05

ICAL Batch ID: 131212IC

Data File: W:\GCMS_Z_DATA\2013\131212\12DEC006.D\12DEC006.rr

IS Compound	Area	Retention Time
1,4-Dichlorobenzene-d4	236416	14.00
1,4-Difluorobenzene	504912	7.55
Pentafluorobenzene	332572	6.63
Chlorobenzene-d5	479237	11.13
Tert-Butyl Alcohol-d9	111582	4.21

Daily CCV And Samples Internal Standard Compounds Area Report
EPA 8260B

ICV

Sample ID: 099-12-041-670 **Run #:** 10

CCV Batch ID: 131220A **D/T Analyzed:** 12/12/2013 13:34

Data File: W:\GCMS_Z_DATA\2013\131212\12DEC009.D\12DEC009.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	239830	118208	472832	14.00	PASS	
1,4-Difluorobenzene	519876	252456	1009824	7.55	PASS	
Pentafluorobenzene	347681	166286	665144	6.63	PASS	
Chlorobenzene-d5	497483	239618	958474	11.13	PASS	
Tert-Butyl Alcohol-d9	143502	55791	223164	4.21	PASS	

CCV

Sample ID: 099-12-041-684 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 10:05

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC002.D\20DEC002.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	214917	118208	472832	14.00	PASS	
1,4-Difluorobenzene	434914	252456	1009824	7.55	PASS	
Pentafluorobenzene	291630	166286	665144	6.63	PASS	
Chlorobenzene-d5	417963	239618	958474	11.13	PASS	
Tert-Butyl Alcohol-d9	106514	55791	223164	4.21	PASS	

LCS

Sample ID: 099-14-479-366 **Run #:** 1

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 10:37

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC003.D\20DEC003.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	219183	107458	429834	14.00	PASS	
1,4-Difluorobenzene	445608	217457	869828	7.55	PASS	
Pentafluorobenzene	301389	145815	583260	6.63	PASS	
Chlorobenzene-d5	422411	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	104866	53257	213028	4.21	PASS	

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MB

Sample ID: 099-14-479-366 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 11:40

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC005.D\20DEC005.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	214158	107458	429834	14.00	PASS	
1,4-Difluorobenzene	442330	217457	869828	7.55	PASS	
Pentafluorobenzene	308750	145815	583260	6.63	PASS	
Chlorobenzene-d5	416761	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	116349	53257	213028	4.20	PASS	

MS

Sample ID: 13-12-1375-4 **Run #:** 4

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 12:34

Data File: W:\GCMS_Z\GCMS_Z_DATA\2013\131220\20DEC007.D\20DEC007.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	215039	107458	429834	14.00	PASS	
1,4-Difluorobenzene	426232	217457	869828	7.55	PASS	
Pentafluorobenzene	286368	145815	583260	6.63	PASS	
Chlorobenzene-d5	415561	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	98358	53257	213028	4.21	PASS	

MSD

Sample ID: 13-12-1375-4 **Run #:** 5

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 13:01

Data File: W:\GCMS_Z\GCMS_Z_DATA\2013\131220\20DEC008.D\20DEC008.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	216164	107458	429834	14.00	PASS	
1,4-Difluorobenzene	424589	217457	869828	7.55	PASS	
Pentafluorobenzene	286815	145815	583260	6.63	PASS	
Chlorobenzene-d5	417986	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	104538	53257	213028	4.21	PASS	

CS

Sample ID: 13-12-1628-1 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 16:15

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC015.D\20DEC015.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	213971	107458	429834	14.00	PASS	
1,4-Difluorobenzene	417582	217457	869828	7.55	PASS	
Pentafluorobenzene	283340	145815	583260	6.63	PASS	
Chlorobenzene-d5	409450	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	123254	53257	213028	4.18	PASS	

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CS

Sample ID: 13-12-1628-3 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 17:10

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC017.D\20DEC017.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	225956	107458	429834	14.00	PASS	
1,4-Difluorobenzene	427612	217457	869828	7.55	PASS	
Pentafluorobenzene	291305	145815	583260	6.63	PASS	
Chlorobenzene-d5	422832	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	115440	53257	213028	4.20	PASS	

CS

Sample ID: 13-12-1628-5 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 18:06

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC019.D\20DEC019.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	228881	107458	429834	14.00	PASS	
1,4-Difluorobenzene	440690	217457	869828	7.55	PASS	
Pentafluorobenzene	301624	145815	583260	6.63	PASS	
Chlorobenzene-d5	436802	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	108897	53257	213028	4.20	PASS	

CS

Sample ID: 13-12-1628-6 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 18:33

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC020.D\20DEC020.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	219684	107458	429834	14.00	PASS	
1,4-Difluorobenzene	420603	217457	869828	7.55	PASS	
Pentafluorobenzene	280978	145815	583260	6.63	PASS	
Chlorobenzene-d5	415594	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	99915	53257	213028	4.21	PASS	

CS

Sample ID: 13-12-1628-8 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 19:28

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC022.D\20DEC022.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	248333	107458	429834	14.00	PASS	
1,4-Difluorobenzene	466732	217457	869828	7.55	PASS	
Pentafluorobenzene	313730	145815	583260	6.63	PASS	
Chlorobenzene-d5	467708	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	136888	53257	213028	4.20	PASS	

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CS

Sample ID: 13-12-1628-9 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 19:55

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC023.D\20DEC023.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	219362	107458	429834	14.00	PASS	
1,4-Difluorobenzene	425622	217457	869828	7.55	PASS	
Pentafluorobenzene	288448	145815	583260	6.63	PASS	
Chlorobenzene-d5	418702	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	100639	53257	213028	4.21	PASS	

CS

Sample ID: 13-12-1628-10 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 20:22

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC024.D\20DEC024.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	229123	107458	429834	14.00	PASS	
1,4-Difluorobenzene	444469	217457	869828	7.55	PASS	
Pentafluorobenzene	296897	145815	583260	6.63	PASS	
Chlorobenzene-d5	430985	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	104796	53257	213028	4.21	PASS	

CS

Sample ID: 13-12-1628-13 **Run #:** 0

CCV Batch ID: 131220A **D/T Analyzed:** 12/20/2013 21:17

Data File: W:\GCMS_Z_DATA\2013\131220\20DEC026.D\20DEC026.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	248554	107458	429834	14.00	PASS	
1,4-Difluorobenzene	463197	217457	869828	7.55	PASS	
Pentafluorobenzene	315924	145815	583260	6.63	PASS	
Chlorobenzene-d5	461102	208982	835926	11.13	PASS	
Tert-Butyl Alcohol-d9	108911	53257	213028	4.20	PASS	

Notes:
1) For CCV, all IS areas must be within 50% to 200% of the mid-point of the initial calibration IS area to be considered PASS.
2) For all samples including QC, all IS areas must be within 50% to 200% of the CCV IS area to be considered PASS.

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-12-041-691-4692
INSTRUMENT NAME: GC/MS Z
INITIAL BATCH: 131212IC
INITIAL DATE ANALYZED: 12/12/13 10:15
ANALYST: 796

REVIEWED BY:
DATE REVIEWED:
CCV BATCH: 131223A
CCV DATE ANALYZED: 12/23/13 12:26

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	Avg Resp	0.00	0.070	0.071			0	0-20	PASS
Benzene	Avg Resp	0.00	1.628	1.611			1	0-20	PASS
Bromobenzene	Avg Resp	0.00	0.475	0.480			-1	0-20	PASS
Bromochloromethane	Avg Resp	0.00	0.343	0.334			3	0-20	PASS
Bromodichloromethane	Avg Resp	0.00	0.468	0.500			-7	0-20	PASS
Bromoform	Avg Resp	0.10	0.374	0.417			-11	0-20	PASS
Bromomethane	Avg Resp	0.00	0.368	0.428			-16	0-20	PASS
2-Butanone	Avg Resp	0.00	0.327	0.324			1	0-20	PASS
n-Butylbenzene	Avg Resp	0.00	3.247	3.633			-12	0-20	PASS
sec-Butylbenzene	Avg Resp	0.00	4.120	4.383			-6	0-20	PASS
tert-Butylbenzene	Avg Resp	0.00	0.681	0.715			-5	0-20	PASS
Carbon Disulfide	Avg Resp	0.00	1.613	1.777			-10	0-20	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.501	0.586			-17	0-20	PASS
Chlorobenzene	Avg Resp	0.30	1.101	1.106			0	0-20	PASS
Chloroethane	Avg Resp	0.00	0.356	0.413			-16	0-20	PASS
Chloroform	Avg Resp	0.00	1.014	1.011			0	0-20	PASS
Chloromethane	Avg Resp	0.10	0.821	0.844			-3	0-20	PASS
2-Chlorotoluene	Avg Resp	0.00	1.393	1.410			-1	0-20	PASS
4-Chlorotoluene	Avg Resp	0.00	3.144	3.179			-1	0-20	PASS
Dibromochloromethane	Avg Resp	0.00	0.304	0.327			-7	0-20	PASS
1,2-Dibromo-3-Chloropropane	Avg Resp	0.00	0.205	0.207			-1	0-20	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.334	0.332			0	0-20	PASS
Dibromomethane	Avg Resp	0.00	0.235	0.233			1	0-20	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	1.798	1.762			2	0-20	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	1.890	1.880			1	0-20	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	1.817	1.813			0	0-20	PASS
Dichlorodifluoromethane	**Avg Resp**	**0.00**	**0.769**	**0.937**			**-22**	0-20	**FAIL**
1,1-Dichloroethane	Avg Resp	0.10	1.116	1.121			0	0-20	PASS
1,2-Dichloroethane	Avg Resp	0.00	0.537	0.551			-3	0-20	PASS
1,1-Dichloroethene	Avg Resp	0.00	0.838	0.903			-8	0-20	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.625	0.613			2	0-20	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	0.574	0.588			-2	0-20	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.430	0.425			1	0-20	PASS
1,3-Dichloropropane	Avg Resp	0.00	0.629	0.592			6	0-20	PASS
2,2-Dichloropropane	Avg Resp	0.00	0.677	0.787			-16	0-20	PASS
1,1-Dichloropropene	Avg Resp	0.00	0.755	0.789			-4	0-20	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.523	0.581			-11	0-20	PASS
t-1,3-Dichloropropene	LR - Equal				50.00	49.522	1	0-20	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-12-041-691-4692
INSTRUMENT NAME: GC/MS Z
INITIAL BATCH: 131212IC
INITIAL DATE ANALYZED: 12/12/13 10:15
ANALYST: 796

REVIEWED BY:
DATE REVIEWED:
CCV BATCH: 131223A
CCV DATE ANALYZED: 12/23/13 12:26

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Ethylbenzene	Avg Resp	0.00	2.000	2.054			-3	0-20	PASS
2-Hexanone	Avg Resp	0.00	0.185	0.182			1	0-20	PASS
Isopropylbenzene	Avg Resp	0.00	1.921	2.037			-6	0-20	PASS
p-Isopropyltoluene	Avg Resp	0.00	3.392	3.620			-7	0-20	PASS
Methylene Chloride	Avg Resp	0.00	0.616	0.617			0	0-20	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.186	0.178			4	0-20	PASS
Naphthalene	Avg Resp	0.00	2.998	3.067			-2	0-20	PASS
n-Propylbenzene	Avg Resp	0.00	2.301	2.363			-3	0-20	PASS
Styrene	Avg Resp	0.00	1.196	1.198			0	0-20	PASS
t-1,4-Dichloro-2-Butene	LR - Equal				50.00	48.792	2	0-20	PASS
1,1,1,2-Tetrachloroethane	Avg Resp	0.00	0.280	0.304			-8	0-20	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	0.463	0.519			-12	0-20	PASS
Acrylonitrile	Avg Resp	0.00	0.279	0.266			5	0-20	PASS
Iodomethane	LR - Equal				100.00	82.539	18	0-20	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	0.30	0.913	0.802			12	0-20	PASS
Tetrachloroethene	Avg Resp	0.00	0.621	0.695			-12	0-20	PASS
Toluene	Avg Resp	0.00	1.728	1.777			-3	0-20	PASS
1,2,3-Trichlorobenzene	Avg Resp	0.00	1.335	1.434			-7	0-20	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	1.395	1.555			-12	0-20	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	0.772	0.851			-10	0-20	PASS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.905	1.020			-13	0-20	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.317	0.301			5	0-20	PASS
Trichloroethene	Avg Resp	0.00	0.448	0.479			-7	0-20	PASS
Trichlorofluoromethane	Avg Resp	0.00	0.855	0.970			-14	0-20	PASS
1,2,3-Trichloropropane	Avg Resp	0.00	0.142	0.142			0	0-20	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	3.166	3.277			-4	0-20	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.557	1.654			-6	0-20	PASS
Vinyl Acetate	Avg Resp	0.00	0.081	0.075			8	0-20	PASS
Vinyl Chloride	Avg Resp	0.00	0.729	0.811			-11	0-20	PASS
p/m-Xylene	Avg Resp	0.00	1.594	1.608			-1	0-20	PASS
o-Xylene	Avg Resp	0.00	1.656	1.687			-2	0-20	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	1.632	1.571			4	0-20	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.348	1.296			4	0-20	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	1.935	1.807			7	0-20	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	1.678	1.651			2	0-20	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.959	0.926			3	0-20	PASS
Ethanol	Avg Resp	0.00	0.199	0.177			11	0-20	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-12-041-691-4692
INSTRUMENT NAME: GC/MS Z
INITIAL BATCH: 131212IC
INITIAL DATE ANALYZED: 12/12/13 10:15
ANALYST: 796

REVIEWED BY:
DATE REVIEWED:
CCV BATCH: 131223A
CCV DATE ANALYZED: 12/23/13 12:26

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_Z_DATA\2013\131223\23DEC003.D\23DEC003.rr

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CCV Association Summary For Method: EPA 8260B

Batch ID: 131223A
Instrument: GC/MS Z

Analyst: 796

Work Order Number: 099-12-041
Matrix: Water

Reviewed By:
D/T Reviewed:

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
691	Daily Calibration	12/23/2013 12:26	W:\GCMS_Z_DATA\2013\131223\23DEC003.D\23DEC003.rr

Work Order Number: 13-12-1628
Matrix: Water

Reviewed By: 163
D/T Reviewed: 12/31/2013 12:08

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
21	MW-40-07	12/23/2013 14:46	W:\GCMS_Z_DATA\2013\131223\23DEC008.D\23DEC008.rr
21	MW-40-07	12/23/2013 15:14	W:\GCMS_Z_DATA\2013\131223\23DEC009.D\23DEC009.rr
21	MW-40-07	12/23/2013 15:41	W:\GCMS_Z_DATA\2013\131223\23DEC010.D\23DEC010.rr

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Evaluate Continuing Calibration Report

Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC003.D
Acq On : 23 Dec 2013 12:26 pm
Operator : 796
Sample : CCV/BFB V120913C/V121313A
Misc : V111513C
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 13:09:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Tert-Butyl Alcohol-d9	1.000	1.000	0.0	92	0.00
2	T	Ethanol	0.199	0.177	11.1	83	0.00
3	T	Tert-Butyl Alcohol (TBA)	1.348	1.296	3.9	86	-0.01
4	I	Pentafluorobenzene	1.000	1.000	0.0	87	0.00
5	T	Dichlorodifluoromethane	0.769	0.937	-21.8#	103	0.00
6	P	Chloromethane	0.821	0.844	-2.8	96	0.00
7	CCC	Vinyl Chloride	0.729	0.811	-11.2	98	0.00
8	T	Bromomethane	0.368	0.428	-16.3	121	0.00
9	T	Chloroethane	0.356	0.413	-16.0	97	0.00
10	T	1,3-Butadiene	0.564	0.660	-17.0	96	0.00
11	T	Trichlorofluoromethane	0.855	0.970	-13.5	98	0.00
12	T	Diethyl Ether	0.384	0.354	7.8	84	0.00
13	T	Acetone	0.070	0.071#	-1.4	91	0.00
14	T	Iodomethane	0.187	0.195	-4.3	68	0.00
15	CCC	1,1-Dichloroethene	0.838	0.903	-7.8	91	0.00
16	T	1,1,2-Trichloro-1,2,2-Trifl	0.463	0.519	-12.1	92	0.00
17	T	Isopropanol	0.063	0.060#	4.8	86	0.00
18	T	Carbon Disulfide	1.613	1.777	-10.2	93	0.00
19	T	Acetonitrile	0.569	0.597	-4.9	84	0.00
20	T	Acrylonitrile	0.279	0.266	4.7	78	0.00
21	T	Allyl Chloride	0.308	0.334	-8.4	86	0.00
22	T	Acrolein	0.121	0.116	4.1	80	0.00
23	T	Methylene Chloride	0.616	0.617	-0.2	83	0.00
24	T	t-1,2-Dichloroethene	0.574	0.588	-2.4	84	0.00
25	T	Isobutyl Alcohol	0.033	0.031#	6.1	85	0.00
26	T	Methyl-t-Butyl Ether (MTBE)	1.632	1.571	3.7	81	0.00
27	T	Hexane	0.970	1.010	-4.1	86	0.00
28	P	1,1-Dichloroethane	1.116	1.121	-0.4	83	0.00
29	T	Vinyl Acetate	0.081	0.075#	7.4	78	0.00
30	T	Diisopropyl Ether (DIPE)	1.935	1.807	6.6	78	0.00
31	T	Chloroprene	0.902	0.943	-4.5	87	0.00
32	T	Ethyl-t-Butyl Ether (ETBE)	1.678	1.651	1.6	82	0.00
33	T	c-1,2-Dichloroethene	0.625	0.613	1.9	80	0.00
34	T	2,2-Dichloropropane	0.677	0.787	-16.2	96	0.00
35	T	2-Butanone	0.327	0.324	0.9	84	0.00
36	T	Propionitrile	0.114	0.106	7.0	79	0.00
37	T	Methacrylonitrile	0.446	0.390	12.6	77	-0.01
38	T	Bromochloromethane	0.343	0.334	2.6	81	0.00
39	T	Tetrahydrofuran	0.256	0.234	8.6	78	0.00
40	CCC	Chloroform	1.014	1.011	0.3	82	0.00
41	S	Dibromofluoromethane	0.411	0.396	3.6	81	0.00
42	T	1,1,1-Trichloroethane	0.772	0.851	-10.2	90	0.00
43	T	Cyclohexane	0.897	0.900	-0.3	86	0.00
44	T	1,1-Dichloropropene	0.755	0.789	-4.5	85	0.00
45	T	Carbon Tetrachloride	0.501	0.586	-17.0	94	0.00
46	S	1,2-Dichloroethane-d4	0.569	0.557	2.1	82	0.00

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47	I	1,4-Difluorobenzene	1.000	1.000	0.0	83	0.00
48	T	Benzene	1.628	1.611	1.0	81	0.00
49	T	1,2-Dichloroethane	0.537	0.551	-2.6	82	0.00
50	T	Tert-Amyl-Methyl Ether (TAM	0.959	0.926	3.4	79	0.00
51	T	Thiophene	0.820	0.812	1.0	79	0.00
52	T	2,2,4-Trimethyl Pentane	1.742	1.781	-2.2	83	0.00
53	T	Trichloroethene	0.448	0.479	-6.9	82	0.00
54	T	2-Pentanone	0.029	0.027#	6.9	76	0.00
55	CCC	1,2-Dichloropropane	0.430	0.425	1.2	77	0.00
56	T	Dibromomethane	0.235	0.233	0.9	78	0.00
57	T	Methyl Methacrylate	0.297	0.284	4.4	76	0.00
58	T	1,4-Dioxane	0.007	0.007#	0.0	83	0.00
59	T	Bromodichloromethane	0.468	0.500	-6.8	82	0.00
60	T	2-Chloroethyl Vinyl Ether	0.013	0.015#	-15.4	87	0.00
61	T	c-1,3-Dichloropropene	0.523	0.581	-11.1	81	0.00
62	S	Toluene-d8	1.317	1.323	-0.5	83	0.00
63	CCC	Toluene	1.728	1.777	-2.8	83	0.00
64	T	4-Methyl-2-Pentanone	0.186	0.178	4.3	78	0.00
65	I	Chlorobenzene-d5	1.000	1.000	0.0	85	0.00
66	T	t-1,3-Dichloropropene	0.444	0.505	-13.7	84	0.00
67	T	Ethyl Methacrylate	0.524	0.508	3.1	80	0.00
68	T	1,1,2-Trichloroethane	0.317	0.301	5.0	78	0.00
69	T	Tetrachloroethene	0.621	0.695	-11.9	87	0.00
70	T	1,3-Dichloropropane	0.629	0.592	5.9	78	0.00
71	T	2-Hexanone	0.185	0.182	1.6	83	0.00
72	T	Dibromochloromethane	0.304	0.327	-7.6	83	0.00
73	T	1,2-Dibromoethane	0.334	0.332	0.6	78	0.00
74	P	Chlorobenzene	1.101	1.106	-0.5	82	0.00
75	T	1,1,1,2-Tetrachloroethane	0.280	0.304	-8.6	83	0.00
76	CCC	Ethylbenzene	2.000	2.054	-2.7	85	0.00
77	T	p/m-Xylene	1.594	1.608	-0.9	86	0.00
78	T	o-Xylene	1.656	1.687	-1.9	84	0.00
79	T	Styrene	1.196	1.198	-0.2	82	0.00
80	T	Isopropylbenzene	1.921	2.037	-6.0	85	0.00
81	S	1,4-Bromofluorobenzene	0.514	0.509	1.0	86	0.00
82	T	1,2,3-Trichloropropane	0.142	0.142	0.0	80	0.00
83	T	Bromobenzene	0.475	0.480	-1.1	82	0.00
84	T	n-Propylbenzene	2.301	2.363	-2.7	84	0.00
85	T	t-1,4-Dichloro-2-Butene	0.109	0.113	-3.7	84	0.00
86	T	2-Chlorotoluene	1.393	1.410	-1.2	84	0.00
87	T	1,3,5-Trimethylbenzene	1.557	1.654	-6.2	86	0.00
88	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	87	0.00
89	P	Bromoform	0.374	0.417	-11.5	89	0.00
90	P	1,1,2,2-Tetrachloroethane	0.913	0.802	12.2	76	0.00
91	T	4-Chlorotoluene	3.144	3.179	-1.1	86	0.00
92	T	1,2,4-Trimethylbenzene	3.166	3.277	-3.5	87	0.00
93	T	tert-Butylbenzene	0.681	0.715	-5.0	84	0.00
94	T	p-Isopropyltoluene	3.392	3.620	-6.7	87	0.00
95	T	sec-Butylbenzene	4.120	4.383	-6.4	87	0.00
96	T	1,3-Dichlorobenzene	1.890	1.880	0.5	85	0.00
97	T	1,4-Dichlorobenzene	1.817	1.813	0.2	85	0.00
98	T	1,2-Dichlorobenzene	1.798	1.762	2.0	84	0.00
99	T	n-Butylbenzene	3.247	3.633	-11.9	88	0.00
100	T	1,2-Dibromo-3-Chloropropane	0.205	0.207	-1.0	86	0.00
101	T	1,2,4-Trichlorobenzene	1.395	1.555	-11.5	90	0.00
102	T	Hexachloro-1,3-Butadiene	0.905	1.020	-12.7	90	0.00
103	T	Naphthalene	2.998	3.067	-2.3	84	0.00
104	T	1,2,3-Trichlorobenzene	1.335	1.434	-7.4	88	0.00

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

131212.M Mon Dec 23 15:03:53 2013

Return to Contents

Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC003.D
Acq On : 23 Dec 2013 12:26 pm
Operator : 796
Sample : CCV/BFB V120913C/V121313A
Misc : V111513C
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 13:09:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.206	65	102847	250.00	ug/l	0.00
4) Pentafluorobenzene	6.629	168	289107	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	7.549	114	418417	50.00	ug/l	0.00
65) Chlorobenzene-d5	11.125	117	409375	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	13.999	152	206816	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	6.547	113	114468	48.13	ug/l	0.00
Spiked Amount 50.000			Recovery = 96.26%			
46) 1,2-Dichloroethane-d4	6.977	65	160992	48.93	ug/l	0.00
Spiked Amount 50.000			Recovery = 97.86%			
62) Toluene-d8	9.367	98	553725	50.25	ug/l	0.00
Spiked Amount 50.000			Recovery = 100.50%			
81) 1,4-Bromofluorobenzene	12.568	95	208422	49.49	ug/l	0.00
Spiked Amount 50.000			Recovery = 98.98%			
Target Compounds						Qvalue
2) Ethanol	3.014	45	36327	444.38	ug/l	89
3) Tert-Butyl Alcohol (TBA)	4.326	59	133266	240.36	ug/l	99
5) Dichlorodifluoromethane	1.702	85	270760	60.91	ug/l	96
6) Chloromethane	1.904	50	244003	51.38	ug/l	99
7) Vinyl Chloride	1.996	62	234337	55.60	ug/l	99
8) Bromomethane	2.323	94	123853	58.16	ug/l	97
9) Chloroethane	2.448	64	119358	57.97	ug/l	97
10) 1,3-Butadiene	2.034	54	190739	58.49	ug/l	98
11) Trichlorofluoromethane	2.742	101	280556	56.78	ug/l	96
12) Diethyl Ether	3.101	45	102486	46.14	ug/l	97
13) Acetone	3.482	58	20388	50.15	ug/l	98
14) Iodomethane	3.575	142	112882	82.54	ug/l	93
15) 1,1-Dichloroethene	3.374	61	261002	53.89	ug/l	99
16) 1,1,2-Trichloro-1,2,2-...	3.379	101	150094	56.04	ug/l	99
17) Isopropanol	3.717	45	87346	240.52	ug/l	98
18) Carbon Disulfide	3.657	76	513874	55.11	ug/l	98
19) Acetonitrile	3.885	41	345114	104.82	ug/l	99
20) Acrylonitrile	4.468	53	76819	47.62	ug/l	96
21) Allyl Chloride	3.885	76	96619	54.33	ug/l	90
22) Acrolein	3.270	56	67138	95.99	ug/l	100
23) Methylene Chloride	4.076	84	178491	50.08	ug/l	94
24) t-1,2-Dichloroethene	4.473	96	170113	51.23	ug/l	93
25) Isobutyl Alcohol	7.004	43	18053	90.43	ug/l	89
26) Methyl-t-Butyl Ether (...	4.506	73	454313	48.13	ug/l	99
27) Hexane	4.876	57	291984	52.07	ug/l	98
28) 1,1-Dichloroethane	5.088	63	324108	50.23	ug/l	98
29) Vinyl Acetate	5.203	86	21662	46.12	ug/l #	86
30) Diisopropyl Ether (DIPE)	5.224	45	522499	46.71	ug/l	99
31) Chloroprene	5.213	53	272603	52.26	ug/l	96
32) Ethyl-t-Butyl Ether (E...	5.731	59	477190	49.18	ug/l	99
33) c-1,2-Dichloroethene	5.899	96	177124	49.03	ug/l	97
34) 2,2-Dichloropropane	5.889	77	227630	58.15	ug/l	98
35) 2-Butanone	5.954	43	93813	49.63	ug/l	97
36) Propionitrile	6.035	54	30594	46.27	ug/l	94
37) Methacrylonitrile	6.221	41	112614	43.68	ug/l	98
38) Bromochloromethane	6.221	130	96424	48.59	ug/l	98
39) Tetrahydrofuran	6.291	42	67716	45.73	ug/l	97
40) Chloroform	6.335	83	292324	49.85	ug/l	94
42) 1,1,1-Trichloroethane	6.558	97	246116	55.11	ug/l	99
43) Cyclohexane	6.612	84	260157	50.17	ug/l	97

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Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC003.D
Acq On : 23 Dec 2013 12:26 pm
Operator : 796
Sample : CCV/BFB V120913C/V121313A
Misc : V111513C
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 13:09:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,1-Dichloropropene	6.770	75	228030	52.22	ug/l	99
45)	Carbon Tetrachloride	6.770	117	169362	58.41	ug/l	97
48)	Benzene	7.043	78	674084	49.49	ug/l	96
49)	1,2-Dichloroethane	7.075	62	230441	51.30	ug/l	98
50)	Tert-Amyl-Methyl Ether...	7.211	73	387540	48.30	ug/l	98
51)	Thiophene	7.304	84	339716	49.53	ug/l	100
52)	2,2,4-Trimethyl Pentane	7.151	57	745035	51.12	ug/l	98
53)	Trichloroethene	7.865	95	200322	53.39	ug/l	93
54)	2-Pentanone	8.327	43	11344	46.98	ug/l	92
55)	1,2-Dichloropropane	8.142	63	177912	49.50	ug/l	97
56)	Dibromomethane	8.289	93	97315	49.39	ug/l	93
57)	Methyl Methacrylate	8.316	69	119030	47.90	ug/l	94
58)	1,4-Dioxane	8.333	88	28969	517.11	ug/l	92
59)	Bromodichloromethane	8.491	83	209300	53.49	ug/l	99
60)	2-Chloroethyl Vinyl Ether	8.882	63	6201	48.30	ug/l	98
61)	c-1,3-Dichloropropene	9.040	75	243012	55.51	ug/l	100
63)	Toluene	9.449	91	743470	51.42	ug/l	99
64)	4-Methyl-2-Pentanone	9.247	58	74604	48.03	ug/l	99
66)	t-1,3-Dichloropropene	9.726	75	206794	49.52	ug/l	96
67)	Ethyl Methacrylate	9.851	69	208018	48.52	ug/l	99
68)	1,1,2-Trichloroethane	9.949	83	123194	47.42	ug/l	97
69)	Tetrachloroethene	10.107	166	284549	55.93	ug/l	97
70)	1,3-Dichloropropane	10.151	76	242241	47.06	ug/l	99
71)	2-Hexanone	10.265	58	74481	49.30	ug/l	97
72)	Dibromochloromethane	10.423	129	133868	53.73	ug/l	100
73)	1,2-Dibromoethane	10.559	107	136069	49.81	ug/l	97
74)	Chlorobenzene	11.158	112	452592	50.21	ug/l	98
75)	1,1,1,2-Tetrachloroethane	11.261	131	124267	54.20	ug/l	98
76)	Ethylbenzene	11.294	91	840878	51.35	ug/l	98
77)	p/m-Xylene	11.441	91	1316598	100.89	ug/l	100
78)	o-Xylene	11.925	91	690790	50.94	ug/l	97
79)	Styrene	11.942	104	490622	50.08	ug/l	94
80)	Isopropylbenzene	12.383	105	833713	53.00	ug/l	99
82)	1,2,3-Trichloropropane	12.802	110	58215	50.17	ug/l	93
83)	Bromobenzene	12.753	156	196581	50.50	ug/l	100
84)	n-Propylbenzene	12.889	91	967268	51.33	ug/l	99
85)	t-1,4-Dichloro-2-Butene	12.829	53	46078	48.79	ug/l	97
86)	2-Chlorotoluene	12.992	91	577036	50.59	ug/l	99
87)	1,3,5-Trimethylbenzene	13.112	105	677047	53.12	ug/l	97
89)	Bromoform	12.165	173	86189	55.72	ug/l	99
90)	1,1,2,2-Tetrachloroethane	12.753	83	165797	43.90	ug/l	96
91)	4-Chlorotoluene	13.128	91	657434	50.55	ug/l	99
92)	1,2,4-Trimethylbenzene	13.569	105	677644	51.75	ug/l	99
93)	tert-Butylbenzene	13.510	134	147859	52.50	ug/l	97
94)	p-Isopropyltoluene	13.967	119	748578	53.36	ug/l	98
95)	sec-Butylbenzene	13.782	105	906393	53.19	ug/l	97
96)	1,3-Dichlorobenzene	13.918	146	388787	49.73	ug/l	99
97)	1,4-Dichlorobenzene	14.027	146	374970	49.88	ug/l	100
98)	1,2-Dichlorobenzene	14.489	146	364479	49.01	ug/l	99
99)	n-Butylbenzene	14.473	91	751310	55.94	ug/l	99
100)	1,2-Dibromo-3-Chloropr...	15.458	75	42843	50.51	ug/l	100
101)	1,2,4-Trichlorobenzene	16.493	180	321565	55.75	ug/l	99
102)	Hexachloro-1,3-Butadiene	16.710	225	210933	56.33	ug/l	100
103)	Naphthalene	16.808	128	634226	51.15	ug/l	99
104)	1,2,3-Trichlorobenzene	17.135	180	296495	53.68	ug/l	99

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

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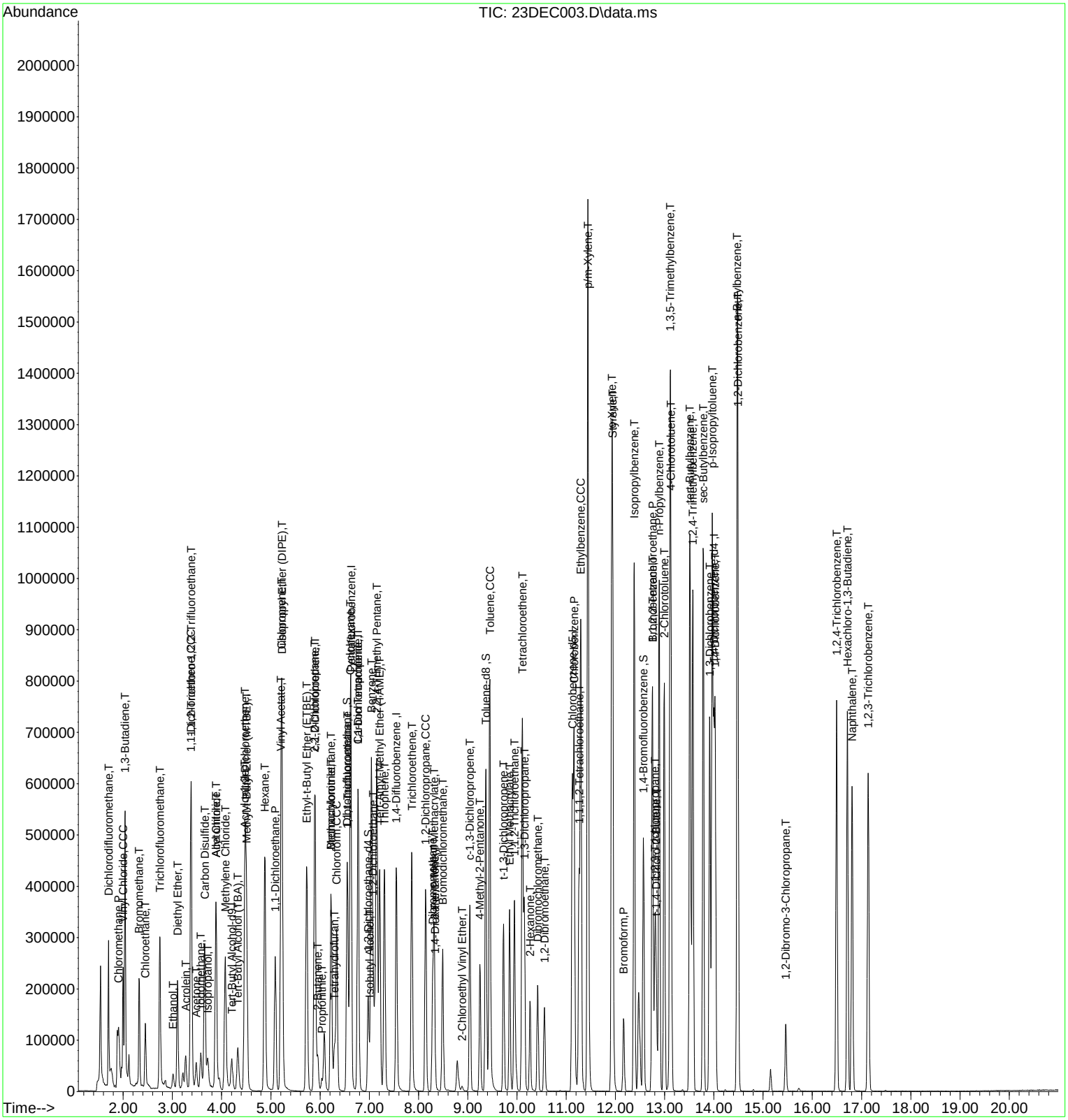
Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC003.D
Acq On : 23 Dec 2013 12:26 pm
Operator : 796
Sample : CCV/BFB V120913C/V121313A
Misc : V111513C
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 13:09:31 2013
Quant Method : C:\MSDCHEM\1\METHODS\131212.M
Quant Title : EPA 8260B/8260C
QLast Update : Thu Dec 12 14:12:02 2013
Response via : Initial Calibration



ICAL Midpoint Internal Standard Compounds Area Report
EPA 8260B

ICAL

Sample ID: 099-12-041-670 **D/T Analyzed:** 12/12/2013 12:05

ICAL Batch ID: 131212IC

Data File: W:\GCMS_Z_DATA\2013\131212\12DEC006.D\12DEC006.rr

IS Compound	Area	Retention Time
1,4-Dichlorobenzene-d4	236416	14.00
1,4-Difluorobenzene	504912	7.55
Pentafluorobenzene	332572	6.63
Chlorobenzene-d5	479237	11.13
Tert-Butyl Alcohol-d9	111582	4.21

Daily CCV And Samples Internal Standard Compounds Area Report
EPA 8260B

ICV

Sample ID: 099-12-041-670 **Run #:** 10

CCV Batch ID: 131223A **D/T Analyzed:** 12/12/2013 13:34

Data File: W:\GCMS_Z_DATA\2013\131212\12DEC009.D\12DEC009.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	239830	118208	472832	14.00	PASS	
1,4-Difluorobenzene	519876	252456	1009824	7.55	PASS	
Pentafluorobenzene	347681	166286	665144	6.63	PASS	
Chlorobenzene-d5	497483	239618	958474	11.13	PASS	
Tert-Butyl Alcohol-d9	143502	55791	223164	4.21	PASS	

CCV

Sample ID: 099-12-041-691 **Run #:** 0

CCV Batch ID: 131223A **D/T Analyzed:** 12/23/2013 12:26

Data File: W:\GCMS_Z_DATA\2013\131223\23DEC003.D\23DEC003.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	206816	118208	472832	14.00	PASS	
1,4-Difluorobenzene	418417	252456	1009824	7.55	PASS	
Pentafluorobenzene	289107	166286	665144	6.63	PASS	
Chlorobenzene-d5	409375	239618	958474	11.13	PASS	
Tert-Butyl Alcohol-d9	102847	55791	223164	4.21	PASS	

LCS

Sample ID: 099-14-479-369 **Run #:** 1

CCV Batch ID: 131223A **D/T Analyzed:** 12/23/2013 12:54

Data File: W:\GCMS_Z_DATA\2013\131223\23DEC004.D\23DEC004.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	201215	103408	413632	14.00	PASS	
1,4-Difluorobenzene	426825	209208	836834	7.55	PASS	
Pentafluorobenzene	296604	144554	578214	6.63	PASS	
Chlorobenzene-d5	409723	204688	818750	11.13	PASS	
Tert-Butyl Alcohol-d9	103648	51424	205694	4.21	PASS	

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MB

Sample ID: 099-14-479-369 **Run #:** 0

CCV Batch ID: 131223A **D/T Analyzed:** 12/23/2013 13:52

Data File: W:\GCMS_Z_DATA\2013\131223\23DEC006.D\23DEC006.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	224054	103408	413632	14.00	PASS	
1,4-Difluorobenzene	440406	209208	836834	7.55	PASS	
Pentafluorobenzene	315465	144554	578214	6.63	PASS	
Chlorobenzene-d5	417705	204688	818750	11.13	PASS	
Tert-Butyl Alcohol-d9	112913	51424	205694	4.21	PASS	

CS

Sample ID: 13-12-1628-21 **Run #:** 0

CCV Batch ID: 131223A **D/T Analyzed:** 12/23/2013 14:46

Data File: W:\GCMS_Z_DATA\2013\131223\23DEC008.D\23DEC008.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	245001	103408	413632	13.99	PASS	
1,4-Difluorobenzene	479641	209208	836834	7.55	PASS	
Pentafluorobenzene	345959	144554	578214	6.63	PASS	
Chlorobenzene-d5	460573	204688	818750	11.13	PASS	
Tert-Butyl Alcohol-d9	107772	51424	205694	4.21	PASS	

MS

Sample ID: 13-12-1628-21 **Run #:** 4

CCV Batch ID: 131223A **D/T Analyzed:** 12/23/2013 15:14

Data File: W:\GCMS_Z_DATA\2013\131223\23DEC009.D\23DEC009.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	218204	103408	413632	14.00	PASS	
1,4-Difluorobenzene	441688	209208	836834	7.55	PASS	
Pentafluorobenzene	305422	144554	578214	6.63	PASS	
Chlorobenzene-d5	432528	204688	818750	11.13	PASS	
Tert-Butyl Alcohol-d9	99831	51424	205694	4.22	PASS	

MSD

Sample ID: 13-12-1628-21 **Run #:** 5

CCV Batch ID: 131223A **D/T Analyzed:** 12/23/2013 15:41

Data File: W:\GCMS_Z_DATA\2013\131223\23DEC010.D\23DEC010.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	223952	103408	413632	14.00	PASS	
1,4-Difluorobenzene	448032	209208	836834	7.55	PASS	
Pentafluorobenzene	308113	144554	578214	6.63	PASS	
Chlorobenzene-d5	435811	204688	818750	11.13	PASS	
Tert-Butyl Alcohol-d9	111574	51424	205694	4.21	PASS	

Notes:
1) For CCV, all IS areas must be within 50% to 200% of the mid-point of the initial calibration IS area to be considered PASS.
2) For all samples including QC, all IS areas must be within 50% to 200% of the CCV IS area to be considered PASS.

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-12-041-688-4692
INSTRUMENT NAME: GC/MS XX
INITIAL BATCH: 131220IC
INITIAL DATE ANALYZED: 12/20/13 11:45
ANALYST: 486

REVIEWED BY:
DATE REVIEWED:
CCV BATCH: 131221A
CCV DATE ANALYZED: 12/21/13 10:01

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	Avg Resp	0.00	0.052	0.060			-15	0-20	PASS
Benzene	Avg Resp	0.00	1.296	1.355			-5	0-20	PASS
Bromobenzene	Avg Resp	0.00	0.503	0.521			-4	0-20	PASS
Bromochloromethane	Avg Resp	0.00	0.347	0.347			0	0-20	PASS
Bromodichloromethane	Avg Resp	0.00	0.451	0.470			-4	0-20	PASS
Bromoform	Avg Resp	0.10	0.479	0.505			-5	0-20	PASS
Bromomethane	Avg Resp	0.00	0.248	0.291			-17	0-20	PASS
2-Butanone	Avg Resp	0.00	0.230	0.267			-16	0-20	PASS
n-Butylbenzene	Avg Resp	0.00	2.692	2.946			-9	0-20	PASS
sec-Butylbenzene	Avg Resp	0.00	3.377	3.684			-9	0-20	PASS
tert-Butylbenzene	Avg Resp	0.00	0.635	0.677			-7	0-20	PASS
Carbon Disulfide	Avg Resp	0.00	1.748	1.459			16	0-20	PASS
Carbon Tetrachloride	Avg Resp	0.00	0.649	0.680			-5	0-20	PASS
Chlorobenzene	Avg Resp	0.30	1.155	1.201			-4	0-20	PASS
Chloroethane	Avg Resp	0.00	0.405	0.399			2	0-20	PASS
Chloroform	Avg Resp	0.00	0.857	0.852			1	0-20	PASS
Chloromethane	QR - Equal				50.00	47.547	5	0-20	PASS
2-Chlorotoluene	Avg Resp	0.00	1.221	1.322			-8	0-20	PASS
4-Chlorotoluene	Avg Resp	0.00	2.459	2.600			-6	0-20	PASS
Dibromochloromethane	Avg Resp	0.00	0.422	0.446			-6	0-20	PASS
1,2-Dibromo-3-Chloropropane	Avg Resp	0.00	0.133	0.136			-2	0-20	PASS
1,2-Dibromoethane	Avg Resp	0.00	0.330	0.352			-7	0-20	PASS
Dibromomethane	Avg Resp	0.00	0.200	0.212			-6	0-20	PASS
1,2-Dichlorobenzene	Avg Resp	0.00	1.613	1.648			-2	0-20	PASS
1,3-Dichlorobenzene	Avg Resp	0.00	1.653	1.681			-2	0-20	PASS
1,4-Dichlorobenzene	Avg Resp	0.00	1.771	1.740			2	0-20	PASS
Dichlorodifluoromethane	Avg Resp	0.00	0.660	0.614			7	0-20	PASS
1,1-Dichloroethane	Avg Resp	0.10	0.888	0.888			0	0-20	PASS
1,2-Dichloroethane	Avg Resp	0.00	0.461	0.477			-3	0-20	PASS
1,1-Dichloroethene	Avg Resp	0.00	0.781	0.807			-3	0-20	PASS
c-1,2-Dichloroethene	Avg Resp	0.00	0.522	0.534			-2	0-20	PASS
t-1,2-Dichloroethene	Avg Resp	0.00	0.499	0.488			2	0-20	PASS
1,2-Dichloropropane	Avg Resp	0.00	0.348	0.366			-5	0-20	PASS
1,3-Dichloropropane	Avg Resp	0.00	0.558	0.591			-6	0-20	PASS
2,2-Dichloropropane	Avg Resp	0.00	0.501	0.531			-6	0-20	PASS
1,1-Dichloropropene	Avg Resp	0.00	0.621	0.627			-1	0-20	PASS
c-1,3-Dichloropropene	Avg Resp	0.00	0.416	0.466			-12	0-20	PASS
t-1,3-Dichloropropene	LR - Inv Conc				50.00	51.723	-3	0-20	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-12-041-688-4692
INSTRUMENT NAME: GC/MS XX
INITIAL BATCH: 131220IC
INITIAL DATE ANALYZED: 12/20/13 11:45
ANALYST: 486

REVIEWED BY:
DATE REVIEWED:
CCV BATCH: 131221A
CCV DATE ANALYZED: 12/21/13 10:01

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Ethylbenzene	Avg Resp	0.00	1.777	1.938			-9	0-20	PASS
2-Hexanone	Avg Resp	0.00	0.145	0.157			-9	0-20	PASS
Isopropylbenzene	Avg Resp	0.00	1.741	1.962			-13	0-20	PASS
p-Isopropyltoluene	Avg Resp	0.00	2.799	3.137			-12	0-20	PASS
Methylene Chloride	Avg Resp	0.00	0.490	0.486			1	0-20	PASS
4-Methyl-2-Pentanone	Avg Resp	0.00	0.128	0.133			-4	0-20	PASS
Naphthalene	Avg Resp	0.00	2.482	2.549			-3	0-20	PASS
n-Propylbenzene	Avg Resp	0.00	2.187	2.427			-11	0-20	PASS
Styrene	Avg Resp	0.00	1.118	1.276			-14	0-20	PASS
t-1,4-Dichloro-2-Butene	Avg Resp	0.00	0.126	0.144			-14	0-20	PASS
1,1,1,2-Tetrachloroethane	Avg Resp	0.00	0.379	0.410			-8	0-20	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp	0.00	0.529	0.542			-3	0-20	PASS
Acrylonitrile	Avg Resp	0.00	0.208	0.221			-6	0-20	PASS
Iodomethane	**Avg Resp**	**0.00**	**0.208**	**0.253**			**-21**	0-20	**FAIL**
1,1,2,2-Tetrachloroethane	Avg Resp	0.30	0.839	0.847			-1	0-20	PASS
Tetrachloroethene	Avg Resp	0.00	0.494	0.517			-5	0-20	PASS
Toluene	Avg Resp	0.00	1.481	1.552			-5	0-20	PASS
1,2,3-Trichlorobenzene	Avg Resp	0.00	1.095	1.098			0	0-20	PASS
1,2,4-Trichlorobenzene	Avg Resp	0.00	1.122	1.113			1	0-20	PASS
1,1,1-Trichloroethane	Avg Resp	0.00	0.683	0.706			-3	0-20	PASS
Hexachloro-1,3-Butadiene	Avg Resp	0.00	0.675	0.689			-2	0-20	PASS
1,1,2-Trichloroethane	Avg Resp	0.00	0.280	0.297			-6	0-20	PASS
Trichloroethene	Avg Resp	0.00	0.351	0.362			-3	0-20	PASS
Trichlorofluoromethane	Avg Resp	0.00	0.917	0.923			-1	0-20	PASS
1,2,3-Trichloropropane	Avg Resp	0.00	0.140	0.145			-3	0-20	PASS
1,2,4-Trimethylbenzene	Avg Resp	0.00	2.455	2.699			-10	0-20	PASS
1,3,5-Trimethylbenzene	Avg Resp	0.00	1.472	1.651			-12	0-20	PASS
Vinyl Acetate	Avg Resp	0.00	0.061	0.060			1	0-20	PASS
Vinyl Chloride	Avg Resp	0.00	0.697	0.722			-4	0-20	PASS
p/m-Xylene	Avg Resp	0.00	1.345	1.526			-13	0-20	PASS
o-Xylene	Avg Resp	0.00	1.311	1.485			-13	0-20	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp	0.00	1.005	1.035			-3	0-20	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp	0.00	1.390	1.395			0	0-20	PASS
Diisopropyl Ether (DIPE)	Avg Resp	0.00	1.613	1.716			-6	0-20	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp	0.00	1.073	1.137			-6	0-20	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp	0.00	0.587	0.654			-11	0-20	PASS
Ethanol	Avg Resp	0.00	0.328	0.330			0	0-20	PASS

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CONTINUING CALIBRATION VERIFICATION OUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-12-041-688-4692
INSTRUMENT NAME: GC/MS XX
INITIAL BATCH: 131220IC
INITIAL DATE ANALYZED: 12/20/13 11:45
ANALYST: 486

REVIEWED BY:
DATE REVIEWED:
CCV BATCH: 131221A
CCV DATE ANALYZED: 12/21/13 10:01

COMPOUND NAME	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS

MIN RF: Method Specified Minimum Response Factor

Data File:

Data File Name:

W:\GCMS_XX_DATA\2013\131221\21DEC002.D\21DEC002.rr

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CCV Association Summary For Method: EPA 8260B

Batch ID: 131221A
Instrument: GC/MS XX

Analyst: 486

Work Order Number: 099-12-041
Matrix: Water

Reviewed By:
D/T Reviewed:

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
688	Daily Calibration	12/21/2013 10:01	W:\GCMS_XX_DATA\2013\131221\21DEC002.D\21DEC002.rr

Work Order Number: 13-12-1628
Matrix: Water

Reviewed By: 163
D/T Reviewed: 12/31/2013 12:08

CEL Sample #	Client Sample ID	D/T Analyzed	Dataset File
2	MW-40-14	12/21/2013 13:51	W:\GCMS_XX_DATA\2013\131221\21DEC010.D\21DEC010.rr
4	MW-40-27	12/21/2013 14:19	W:\GCMS_XX_DATA\2013\131221\21DEC011.D\21DEC011.rr
7	MW-40-37	12/21/2013 14:48	W:\GCMS_XX_DATA\2013\131221\21DEC012.D\21DEC012.rr
11	MW-40-08	12/21/2013 11:55	W:\GCMS_XX_DATA\2013\131221\21DEC006.D\21DEC006.rr
11	MW-40-08	12/21/2013 12:25	W:\GCMS_XX_DATA\2013\131221\21DEC007.D\21DEC007.rr
11	MW-40-08	12/21/2013 12:53	W:\GCMS_XX_DATA\2013\131221\21DEC008.D\21DEC008.rr
12	MW-40-30	12/21/2013 15:16	W:\GCMS_XX_DATA\2013\131221\21DEC013.D\21DEC013.rr
14	IW-2	12/21/2013 15:45	W:\GCMS_XX_DATA\2013\131221\21DEC014.D\21DEC014.rr
15	IW-4	12/21/2013 16:14	W:\GCMS_XX_DATA\2013\131221\21DEC015.D\21DEC015.rr
16	IW-10	12/21/2013 16:42	W:\GCMS_XX_DATA\2013\131221\21DEC016.D\21DEC016.rr
17	IW-18	12/21/2013 17:11	W:\GCMS_XX_DATA\2013\131221\21DEC017.D\21DEC017.rr
18	DUP-1	12/21/2013 17:39	W:\GCMS_XX_DATA\2013\131221\21DEC018.D\21DEC018.rr
19	EB-1	12/21/2013 18:08	W:\GCMS_XX_DATA\2013\131221\21DEC019.D\21DEC019.rr
20	DRUM-1	12/21/2013 18:36	W:\GCMS_XX_DATA\2013\131221\21DEC020.D\21DEC020.rr
22	MW-40-31	12/21/2013 19:33	W:\GCMS_XX_DATA\2013\131221\21DEC022.D\21DEC022.rr

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Evaluate Continuing Calibration Report

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC002.D Vial: 2
Acq On : 21 Dec 2013 10:01 am Operator: 486
Sample : BFB/CCV V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 10:30:57 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Tert-Butyl Alcohol-d9	1.000	1.000	0	106	0.00
2	T	Ethanol	0.328	0.330	-1	103	0.00
3	T	Tert-Butyl Alcohol (TBA)	1.390	1.395	0	104	0.00
4	I	Pentafluorobenzene	1.000	1.000	0	107	0.00
5	T	Dichlorodifluoromethane	0.660	0.614	7	95	0.00
6	P	Chloromethane	0.780	0.717	8	99	-0.01
7	CCC	Vinyl Chloride	0.697	0.722	-4	102	-0.03
8	T	Bromomethane	0.248	0.291	-17	123	0.00
9	T	Chloroethane	0.405	0.399	1	104	-0.05
10	T	1,3-Butadiene	0.648	0.517	20	84	0.00
11	T	Trichlorofluoromethane	0.917	0.923	-1	108	0.00
12	T	Diethyl Ether	0.417	0.370	11	104	0.00
13	T	Acetone	0.052	0.060#	-15	129	0.00
14	T	Iodomethane	0.208	0.253	-22#	137	0.00
15	CCC	1,1-Dichloroethene	0.781	0.807	-3	113	0.00
16	T	1,1,2-Trichloro-1,2,2-Trifl	0.529	0.542	-2	113	0.00
17	T	Isopropanol	0.034	0.032#	6	103	0.00
18	T	Carbon Disulfide	1.748	1.459	17	95	0.00
19	T	Acetonitrile	0.437	0.440	-1	107	0.00
20	T	Acrylonitrile	0.208	0.221	-6	108	0.01
21	T	Allyl Chloride	0.243	0.243	0	109	0.00
22	T	Acrolein	0.094	0.100#	-6	101	0.00
23	T	Methylene Chloride	0.490	0.486	1	104	0.00
24	T	t-1,2-Dichloroethene	0.499	0.488	2	106	0.00
25	T	Isobutyl Alcohol	0.021	0.020#	5	98	0.00
26	T	Methyl-t-Butyl Ether (MTBE)	1.005	1.035	-3	107	0.00
27	T	Hexane	0.820	0.793	3	99	0.00
28	P	1,1-Dichloroethane	0.888	0.888	0	107	0.00
29	T	Vinyl Acetate	0.061	0.060#	2	103	0.00
30	T	Diisopropyl Ether (DIPE)	1.613	1.716	-6	107	0.00
31	T	Chloroprene	0.755	0.790	-5	107	0.00
32	T	Ethyl-t-Butyl Ether (ETBE)	1.073	1.137	-6	110	0.00
33	T	c-1,2-Dichloroethene	0.522	0.534	-2	107	0.00
34	T	2,2-Dichloropropane	0.501	0.531	-6	115	0.00
35	T	2-Butanone	0.230	0.267	-16	120	0.00
36	T	Propionitrile	0.081	0.082#	-1	105	0.00
37	T	Methacrylonitrile	0.402	0.422	-5	107	0.00
38	T	Bromochloromethane	0.347	0.347	0	106	0.00
39	T	Tetrahydrofuran	0.167	0.170	-2	101	0.00
40	CCC	Chloroform	0.857	0.852	1	110	0.00
41	S	Dibromofluoromethane	0.468	0.461	1	109	0.00
42	T	1,1,1-Trichloroethane	0.683	0.706	-3	111	0.00
43	T	Cyclohexane	0.735	0.736	0	106	0.00
44	T	1,1-Dichloropropene	0.621	0.627	-1	109	0.00
45	T	Carbon Tetrachloride	0.649	0.680	-5	113	0.00
46	S	1,2-Dichloroethane-d4	0.462	0.458	1	108	0.00
47	I	1,4-Difluorobenzene	1.000	1.000	0	107	0.00
48	T	Benzene	1.296	1.355	-5	109	0.00
49	T	1,2-Dichloroethane	0.461	0.477	-3	110	0.00
50	T	2-Methyl-2-Butanol (TAA)	0.023	0.024#	-4	113	0.00
51	T	Tert-Amyl-Methyl Ether (TAM	0.587	0.654	-11	112	0.00
52	T	Thiophene	0.692	0.742	-7	108	0.00
53	T	2,2,4-Trimethyl Pentane	1.590	1.709	-7	107	0.00

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Evaluate Continuing Calibration Report

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC002.D Vial: 2
Acq On : 21 Dec 2013 10:01 am Operator: 486
Sample : BFB/CCV V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 10:30:57 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	T	Trichloroethene	0.351	0.362	-3	109	0.00
55	CCC	1,2-Dichloropropane	0.348	0.366	-5	109	0.00
56	T	Dibromomethane	0.200	0.212	-6	111	0.00
57	T	Methyl Methacrylate	0.208	0.215	-3	107	0.00
58	T	1,4-Dioxane	0.005	0.005#	0	101	0.00
59	T	Bromodichloromethane	0.451	0.470	-4	110	0.00
60	T	2-Chloroethyl Vinyl Ether	0.003	0.002#	33#	99	0.00
61	T	c-1,3-Dichloropropene	0.416	0.466	-12	110	0.00
62	S	Toluene-d8	1.133	1.157	-2	108	0.00
63	CCC	Toluene	1.481	1.552	-5	109	0.00
64	T	4-Methyl-2-Pentanone	0.128	0.133	-4	107	0.00
65	I	Chlorobenzene-d5	1.000	1.000	0	107	0.00
66	T	t-1,3-Dichloropropene	0.378	0.450	-19	115	0.00
67	T	Ethyl Methacrylate	0.409	0.421	-3	106	0.00
68	T	1,1,2-Trichloroethane	0.280	0.297	-6	109	0.00
69	T	Tetrachloroethene	0.494	0.517	-5	111	0.00
70	T	1,3-Dichloropropane	0.558	0.591	-6	111	0.00
71	T	2-Hexanone	0.145	0.157	-8	113	0.00
72	T	Dibromochloromethane	0.422	0.446	-6	113	0.00
73	T	1,2-Dibromoethane	0.330	0.352	-7	111	0.00
74	P	Chlorobenzene	1.155	1.201	-4	110	0.00
75	T	1,1,1,2-Tetrachloroethane	0.379	0.410	-8	111	0.00
76	CCC	Ethylbenzene	1.777	1.938	-9	110	0.00
77	T	p/m-Xylene	1.345	1.526	-13	110	0.00
78	T	o-Xylene	1.311	1.485	-13	109	0.00
79	T	Styrene	1.118	1.276	-14	110	0.00
80	T	Isopropylbenzene	1.741	1.962	-13	111	0.00
81	S	1,4-Bromofluorobenzene	0.435	0.456	-5	109	0.00
82	T	1,2,3-Trichloropropane	0.140	0.145	-4	106	0.00
83	T	Bromobenzene	0.503	0.521	-4	108	0.00
84	T	n-Propylbenzene	2.187	2.427	-11	111	0.00
85	T	t-1,4-Dichloro-2-Butene	0.126	0.144	-14	118	0.00
86	T	2-Chlorotoluene	1.221	1.322	-8	111	0.00
87	T	1,3,5-Trimethylbenzene	1.472	1.651	-12	111	0.00
88	I	1,4-Dichlorobenzene-d4	1.000	1.000	0	110	0.00
89	P	Bromoform	0.479	0.505	-5	114	0.00
90	P	1,1,2,2-Tetrachloroethane	0.839	0.847	-1	110	0.00
91	T	4-Chlorotoluene	2.459	2.600	-6	112	0.00
92	T	Cyclohexanone	0.029	0.033#	-14	118	0.00
93	T	1,2,4-Trimethylbenzene	2.455	2.699	-10	110	0.00
94	T	tert-Butylbenzene	0.635	0.677	-7	111	0.00
95	T	p-Isopropyltoluene	2.799	3.137	-12	112	0.00
96	T	sec-Butylbenzene	3.377	3.684	-9	111	0.00
97	T	1,3-Dichlorobenzene	1.653	1.681	-2	110	0.00
98	T	1,4-Dichlorobenzene	1.771	1.740	2	111	0.00
99	T	1,2-Dichlorobenzene	1.613	1.648	-2	110	0.00
100	T	n-Butylbenzene	2.692	2.946	-9	111	0.00
101	T	1,2-Dibromo-3-Chloropropane	0.133	0.136	-2	109	0.00
102	T	1,2,4-Trichlorobenzene	1.122	1.113	1	109	0.00
103	T	Hexachloro-1,3-Butadiene	0.675	0.689	-2	110	0.00
104	T	Naphthalene	2.482	2.549	-3	104	0.00
105	T	1,2,3-Trichlorobenzene	1.095	1.098	0	107	0.00

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Evaluate Continuing Calibration Report

```
Data File : W:\GCMS_XX_DATA\2013\131221\21DEC002.D       Vial: 2
Acq On    : 21 Dec 2013  10:01 am                    Operator: 486
Sample    : BFB/CCV V120913C/V121313A                Inst    : GCMS XX
Misc      : V121113A                                 Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 10:30:57 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title  : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration


Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 150%

       Compound                      AvgRF   CCRF      %Dev Area% Dev(min)
-----------------------------------------------------------------------------

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

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC002.D Vial: 2
Acq On : 21 Dec 2013 10:01 am Operator: 486
Sample : BFB/CCV V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 10:30:57 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert-Butyl Alcohol-d9	4.323	65	165545	250.00	ug/l	0.00
4) Pentafluorobenzene	7.291	168	943521	50.00	ug/l	0.00
47) 1,4-Difluorobenzene	8.338	114	1326214	50.00	ug/l	0.00
65) Chlorobenzene-d5	12.169	117	1178285	50.00	ug/l	0.00
88) 1,4-Dichlorobenzene-d4	15.110	152	729302	50.00	ug/l	0.00
System Monitoring Compounds						
41) Dibromofluoromethane	7.187	113	434911	49.27	ug/l	0.00
Spiked Amount 50.000	Range 80 - 126		Recovery = 98.54%			
46) 1,2-Dichloroethane-d4	7.684	65	432445	49.58	ug/l	0.00
Spiked Amount 50.000	Range 80 - 134		Recovery = 99.16%			
62) Toluene-d8	10.325	98	1534289	51.04	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.08%			
81) 1,4-Bromofluorobenzene	13.658	95	537587	52.38	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.76%			
Target Compounds						Qvalue
2) Ethanol	3.062	45	109176	502.36	ug/l	96
3) Tert-Butyl Alcohol (TBA)	4.464	59	230926	250.97	ug/l	97
5) Dichlorodifluoromethane	1.785	85	579629	46.55	ug/l	93
6) Chloromethane	1.927	50	676601	47.55	ug/l	98
7) Vinyl Chloride	2.085	62	680763	51.77	ug/l	98
8) Bromomethane	2.342	94	274840	58.72	ug/l	97
9) Chloroethane	2.473	64	376251	49.19	ug/l	91
10) 1,3-Butadiene	2.036	54	487722	39.91	ug/l	96
11) Trichlorofluoromethane	2.773	101	871327	50.34	ug/l	100
12) Diethyl Ether	3.155	45	348985	51.49	ug/l	98
13) Acetone	3.559	58	56377	57.72	ug/l	97
14) Iodomethane	3.640	142	476540	121.30	ug/l	98
15) 1,1-Dichloroethene	3.428	61	761563	51.69	ug/l	98
16) 1,1,2-Trichloro-1,2,2-...	3.433	101	511535	51.28	ug/l	97
17) Isopropanol	3.815	45	151099	237.41	ug/l	98
18) Carbon Disulfide	3.722	76	1376752	41.75	ug/l	99
19) Acetonitrile	3.968	41	829907	100.68	ug/l	98
20) Acrylonitrile	4.628	53	208435	53.11	ug/l	92
21) Allyl Chloride	3.968	76	229179	50.06	ug/l	98
22) Acrolein	3.329	56	188577	106.25	ug/l	93
23) Methylene Chloride	4.175	84	458096	49.54	ug/l	95
24) t-1,2-Dichloroethene	4.617	96	460092	48.90	ug/l	98
25) Isobutyl Alcohol	7.755	43	37444	94.14	ug/l	95
26) Methyl-t-Butyl Ether (...	4.655	73	976140	51.48	ug/l	99
27) Hexane	5.125	57	748000	48.33	ug/l	99
28) 1,1-Dichloroethane	5.403	63	837711	49.98	ug/l	97
29) Vinyl Acetate	5.561	86	56866	49.42	ug/l #	85
30) Diisopropyl Ether (DIPE)	5.583	45	1618809	53.18	ug/l	99
31) Chloroprene	5.561	53	744998	52.32	ug/l	99
32) Ethyl-t-Butyl Ether (E...	6.205	59	1072993	53.00	ug/l	100
33) c-1,2-Dichloroethene	6.412	96	504234	51.16	ug/l	98
34) 2,2-Dichloropropane	6.390	77	501013	53.01	ug/l	96
35) 2-Butanone	6.489	43	251907	57.96	ug/l	96
36) Propionitrile	6.592	54	76942	50.54	ug/l	85
37) Methacrylonitrile	6.816	41	397827	52.39	ug/l #	98
38) Bromochloromethane	6.794	130	327566	49.99	ug/l	95
39) Tetrahydrofuran	6.882	42	159933	50.71	ug/l	96
40) Chloroform	6.942	83	803878	49.72	ug/l	99
42) 1,1,1-Trichloroethane	7.187	97	666258	51.73	ug/l	97
43) Cyclohexane	7.247	84	694498	50.05	ug/l	99
44) 1,1-Dichloropropene	7.444	75	591769	50.52	ug/l	98

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Quantitation Report (QT Reviewed)

Data File : W:\GCMS_XX_DATA\2013\131221\21DEC002.D Vial: 2
Acq On : 21 Dec 2013 10:01 am Operator: 486
Sample : BFB/CCV V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 10:30:57 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) Carbon Tetrachloride	7.427	117	641313	52.35 ug/l	98
48) Benzene	7.749	78	1797516	52.30 ug/l	98
49) 1,2-Dichloroethane	7.793	62	632555	51.69 ug/l	98
50) 2-Methyl-2-Butanol (TAA)	7.864	59	157720	259.16 ug/l	95
51) Tert-Amyl-Methyl Ether...	7.951	73	867292	55.70 ug/l	100
52) Thiophene	8.055	84	983392	53.59 ug/l	99
53) 2,2,4-Trimethyl Pentane	7.875	57	2266016	53.74 ug/l	99
54) Trichloroethene	8.682	95	480551	51.56 ug/l	98
55) 1,2-Dichloropropane	8.993	63	484763	52.54 ug/l	98
56) Dibromomethane	9.157	93	281135	52.97 ug/l	99
57) Methyl Methacrylate	9.200	69	285655	51.74 ug/l	95
58) 1,4-Dioxane	9.211	88	62116	520.21 ug/l	98
59) Bromodichloromethane	9.386	83	623820	52.13 ug/l	99
60) 2-Chloroethyl Vinyl Ether	9.795	63	3098	42.64 ug/l	67
61) c-1,3-Dichloropropene	9.981	75	617372	55.90 ug/l	98
63) Toluene	10.406	91	2058334	52.41 ug/l	98
64) 4-Methyl-2-Pentanone	10.210	58	176998	52.11 ug/l	97
66) t-1,3-Dichloropropene	10.717	75	530090	51.72 ug/l	96
67) Ethyl Methacrylate	10.848	69	496585	51.50 ug/l	100
68) 1,1,2-Trichloroethane	10.947	83	350521	53.10 ug/l	95
69) Tetrachloroethene	11.105	166	609061	52.29 ug/l	99
70) 1,3-Dichloropropane	11.154	76	696856	52.99 ug/l	99
71) 2-Hexanone	11.290	58	185166	54.27 ug/l	98
72) Dibromochloromethane	11.443	129	526041	52.86 ug/l	91
73) 1,2-Dibromoethane	11.579	107	415169	53.46 ug/l	97
74) Chlorobenzene	12.207	112	1415249	51.99 ug/l	99
75) 1,1,1,2-Tetrachloroethane	12.316	131	482799	54.04 ug/l	99
76) Ethylbenzene	12.349	91	2283530	54.53 ug/l	100
77) p/m-Xylene	12.496	91	3595894	113.42 ug/l	100
78) o-Xylene	12.998	91	1749786	56.65 ug/l	99
79) Styrene	13.020	104	1503096	57.05 ug/l	98
80) Isopropylbenzene	13.467	105	2311677	56.35 ug/l	100
82) 1,2,3-Trichloropropane	13.904	110	170335	51.47 ug/l	87
83) Bromobenzene	13.838	156	614167	51.84 ug/l	98
84) n-Propylbenzene	13.980	91	2859309	55.48 ug/l	98
85) t-1,4-Dichloro-2-Butene	13.926	53	169761	57.19 ug/l	95
86) 2-Chlorotoluene	14.084	91	1557279	54.12 ug/l	100
87) 1,3,5-Trimethylbenzene	14.204	105	1944829	56.06 ug/l	95
89) Bromoform	13.249	173	368261	52.72 ug/l	95
90) 1,1,2,2-Tetrachloroethane	13.849	83	617936	50.48 ug/l	96
91) 4-Chlorotoluene	14.226	91	1896451	52.88 ug/l	95
92) Cyclohexanone	13.587	55	120318	283.42 ug/l	97
93) 1,2,4-Trimethylbenzene	14.673	105	1968601	54.98 ug/l	99
94) tert-Butylbenzene	14.613	134	493618	53.30 ug/l	99
95) p-Isopropyltoluene	15.072	119	2287535	56.04 ug/l	99
96) sec-Butylbenzene	14.886	105	2686522	54.55 ug/l	99
97) 1,3-Dichlorobenzene	15.028	146	1225985	50.86 ug/l	99
98) 1,4-Dichlorobenzene	15.137	146	1268889	49.11 ug/l	99
99) 1,2-Dichlorobenzene	15.606	146	1201900	51.10 ug/l	99
100) n-Butylbenzene	15.590	91	2148197	54.71 ug/l	100
101) 1,2-Dibromo-3-Chloropr...	16.588	75	99457	51.18 ug/l	99
102) 1,2,4-Trichlorobenzene	17.625	180	811554	49.57 ug/l	99
103) Hexachloro-1,3-Butadiene	17.838	225	502521	51.01 ug/l	98
104) Naphthalene	17.936	128	1859313	51.36 ug/l	99
105) 1,2,3-Trichlorobenzene	18.236	180	800740	50.13 ug/l	100

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

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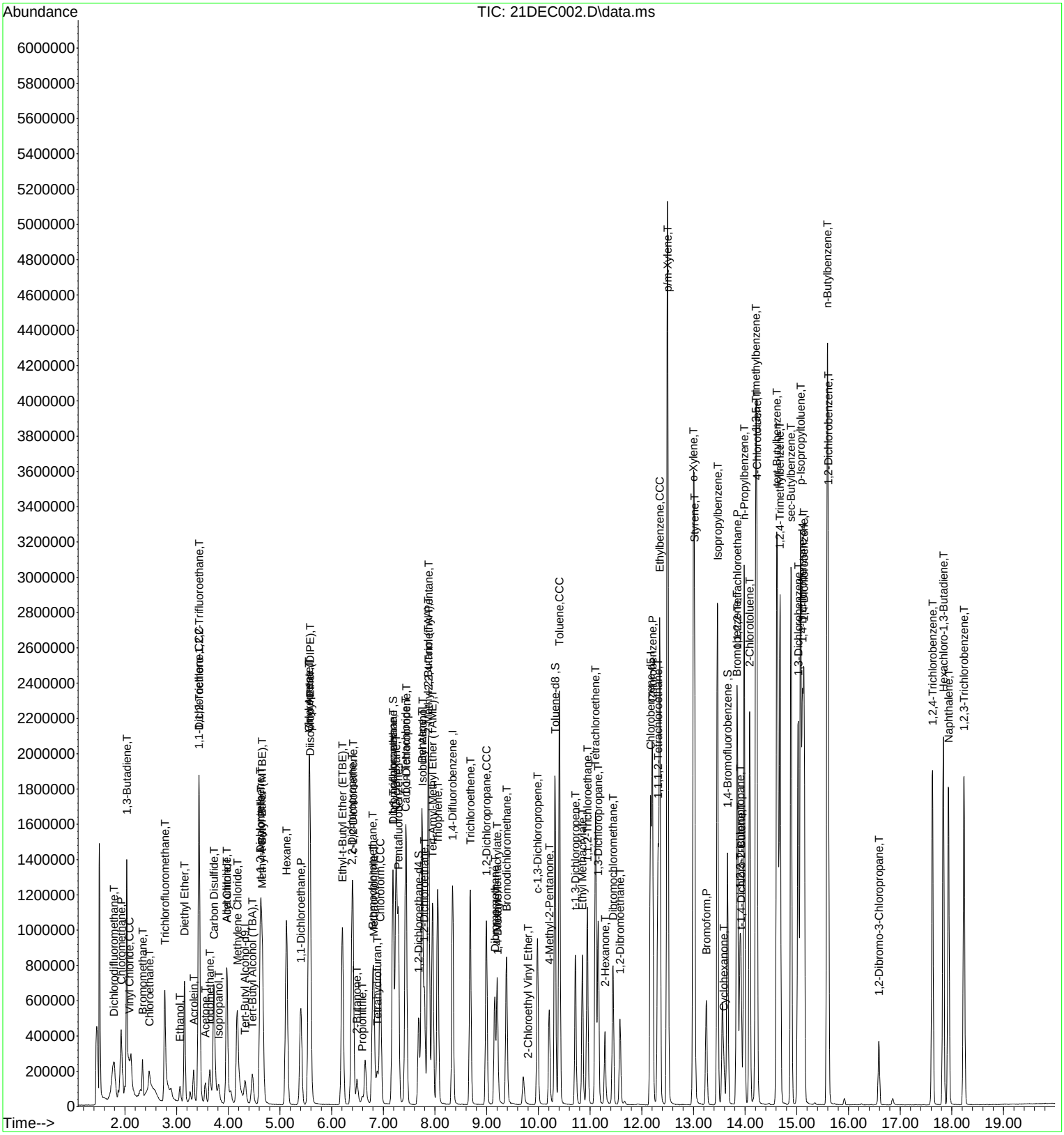
Data File : W:\GCMS_XX_DATA\2013\131221\21DEC002.D Vial: 2
Acq On : 21 Dec 2013 10:01 am Operator: 486
Sample : BFB/CCV V120913C/V121313A Inst : GCMS XX
Misc : V121113A Multiplr: 1.00
Integrator: RTE
Quant Time: Dec 21 10:30:57 2013
Quant Results File: 131220.RES
Quant Method : C:\MSDCHEM\1\METHODS\131220.M

Quant Title : EPA 8260B/8260C
QLast Update : Fri Dec 20 17:34:37 2013
Response via : Initial Calibration



ICAL Midpoint Internal Standard Compounds Area Report
EPA 8260B

ICAL

Sample ID: 099-12-041-686 **D/T Analyzed:** 12/20/2013 13:39

ICAL Batch ID: 131220IC

Data File: W:\GCMS_XX_DATA\2013\131220\20DEC009.D\20DEC009.rr

IS Compound	Area	Retention Time
1,4-Dichlorobenzene-d4	663893	15.11
1,4-Difluorobenzene	1235929	8.34
Pentafluorobenzene	879656	7.30
Chlorobenzene-d5	1100904	12.17
Tert-Butyl Alcohol-d9	155711	4.32

Daily CCV And Samples Internal Standard Compounds Area Report
EPA 8260B

ICV

Sample ID: 099-12-041-686 **Run #:** 10

CCV Batch ID: 131221A **D/T Analyzed:** 12/20/2013 17:41

Data File: W:\GCMS_XX_DATA\2013\131220\20DEC015.D\20DEC015.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	721617	331946	1327786	15.11	PASS	
1,4-Difluorobenzene	1341777	617964	2471858	8.34	PASS	
Pentafluorobenzene	956571	439828	1759312	7.29	PASS	
Chlorobenzene-d5	1184051	550452	2201808	12.17	PASS	
Tert-Butyl Alcohol-d9	161748	77856	311422	4.31	PASS	

CCV

Sample ID: 099-12-041-688 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 10:01

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC002.D\21DEC002.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	729302	331946	1327786	15.11	PASS	
1,4-Difluorobenzene	1326214	617964	2471858	8.34	PASS	
Pentafluorobenzene	943521	439828	1759312	7.29	PASS	
Chlorobenzene-d5	1178285	550452	2201808	12.17	PASS	
Tert-Butyl Alcohol-d9	165545	77856	311422	4.32	PASS	

LCS

Sample ID: 099-14-479-367 **Run #:** 1

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 10:29

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC003.D\21DEC003.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	721026	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1339737	663107	2652428	8.34	PASS	
Pentafluorobenzene	960915	471760	1887042	7.29	PASS	
Chlorobenzene-d5	1193951	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	161507	82772	331090	4.32	PASS	

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MB

Sample ID: 099-14-479-367 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 11:27

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC005.D\21DEC005.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	561518	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1183901	663107	2652428	8.34	PASS	
Pentafluorobenzene	783409	471760	1887042	7.29	PASS	
Chlorobenzene-d5	1072881	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	145951	82772	331090	4.31	PASS	

CS

Sample ID: 13-12-1628-11 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 11:55

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC006.D\21DEC006.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	546840	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1155119	663107	2652428	8.34	PASS	
Pentafluorobenzene	771784	471760	1887042	7.30	PASS	
Chlorobenzene-d5	1029422	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	132592	82772	331090	4.31	PASS	

MS

Sample ID: 13-12-1628-11 **Run #:** 4

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 12:25

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC007.D\21DEC007.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	692203	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1248815	663107	2652428	8.34	PASS	
Pentafluorobenzene	900324	471760	1887042	7.29	PASS	
Chlorobenzene-d5	1122341	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	139027	82772	331090	4.31	PASS	

MSD

Sample ID: 13-12-1628-11 **Run #:** 5

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 12:53

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC008.D\21DEC008.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	683432	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1265182	663107	2652428	8.34	PASS	
Pentafluorobenzene	911809	471760	1887042	7.29	PASS	
Chlorobenzene-d5	1126505	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	160576	82772	331090	4.31	PASS	

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CS

Sample ID: 13-12-1628-2 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 13:51

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC010.D\21DEC010.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	541752	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1145695	663107	2652428	8.34	PASS	
Pentafluorobenzene	745021	471760	1887042	7.29	PASS	
Chlorobenzene-d5	1020100	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	137862	82772	331090	4.31	PASS	

CS

Sample ID: 13-12-1628-4 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 14:19

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC011.D\21DEC011.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	509144	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1089117	663107	2652428	8.34	PASS	
Pentafluorobenzene	711513	471760	1887042	7.30	PASS	
Chlorobenzene-d5	969839	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	138385	82772	331090	4.31	PASS	

CS

Sample ID: 13-12-1628-7 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 14:48

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC012.D\21DEC012.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	530815	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1119925	663107	2652428	8.34	PASS	
Pentafluorobenzene	738850	471760	1887042	7.29	PASS	
Chlorobenzene-d5	1000522	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	131142	82772	331090	4.31	PASS	

CS

Sample ID: 13-12-1628-12 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 15:16

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC013.D\21DEC013.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	513588	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1074298	663107	2652428	8.34	PASS	
Pentafluorobenzene	714837	471760	1887042	7.29	PASS	
Chlorobenzene-d5	961931	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	127018	82772	331090	4.32	PASS	

Return to Contents

CS

Sample ID: 13-12-1628-14 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 15:45

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC014.D\21DEC014.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	483644	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1010804	663107	2652428	8.34	PASS	
Pentafluorobenzene	674797	471760	1887042	7.29	PASS	
Chlorobenzene-d5	914628	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	128875	82772	331090	4.32	PASS	

CS

Sample ID: 13-12-1628-15 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 16:14

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC015.D\21DEC015.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	489610	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1072656	663107	2652428	8.34	PASS	
Pentafluorobenzene	714468	471760	1887042	7.29	PASS	
Chlorobenzene-d5	944106	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	127395	82772	331090	4.31	PASS	

CS

Sample ID: 13-12-1628-16 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 16:42

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC016.D\21DEC016.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	522147	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1092497	663107	2652428	8.34	PASS	
Pentafluorobenzene	730624	471760	1887042	7.30	PASS	
Chlorobenzene-d5	990845	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	128375	82772	331090	4.32	PASS	

CS

Sample ID: 13-12-1628-17 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 17:11

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC017.D\21DEC017.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	496128	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1056941	663107	2652428	8.34	PASS	
Pentafluorobenzene	700241	471760	1887042	7.29	PASS	
Chlorobenzene-d5	946278	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	133807	82772	331090	4.32	PASS	

Return to Contents

CS

Sample ID: 13-12-1628-18 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 17:39

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC018.D\21DEC018.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	513433	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1076307	663107	2652428	8.34	PASS	
Pentafluorobenzene	714203	471760	1887042	7.30	PASS	
Chlorobenzene-d5	965259	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	130673	82772	331090	4.31	PASS	

CS

Sample ID: 13-12-1628-19 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 18:08

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC019.D\21DEC019.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	508936	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1066161	663107	2652428	8.34	PASS	
Pentafluorobenzene	700305	471760	1887042	7.30	PASS	
Chlorobenzene-d5	955165	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	127637	82772	331090	4.32	PASS	

CS

Sample ID: 13-12-1628-20 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 18:36

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC020.D\21DEC020.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	453556	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	958777	663107	2652428	8.34	PASS	
Pentafluorobenzene	639941	471760	1887042	7.29	PASS	
Chlorobenzene-d5	854688	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	135143	82772	331090	4.33	PASS	

CS

Sample ID: 13-12-1628-22 **Run #:** 0

CCV Batch ID: 131221A **D/T Analyzed:** 12/21/2013 19:33

Data File: W:\GCMS_XX_DATA\2013\131221\21DEC022.D\21DEC022.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
1,4-Dichlorobenzene-d4	509607	364651	1458604	15.11	PASS	
1,4-Difluorobenzene	1068143	663107	2652428	8.34	PASS	
Pentafluorobenzene	705343	471760	1887042	7.30	PASS	
Chlorobenzene-d5	960075	589142	2356570	12.17	PASS	
Tert-Butyl Alcohol-d9	131036	82772	331090	4.31	PASS	

Notes:
1) For CCV, all IS areas must be within 50% to 200% of the mid-point of the initial calibration IS area to be considered PASS.
2) For all samples including QC, all IS areas must be within 50% to 200% of the CCV IS area to be considered PASS.

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EPA 8260B Volatile Organics

Tuning Data

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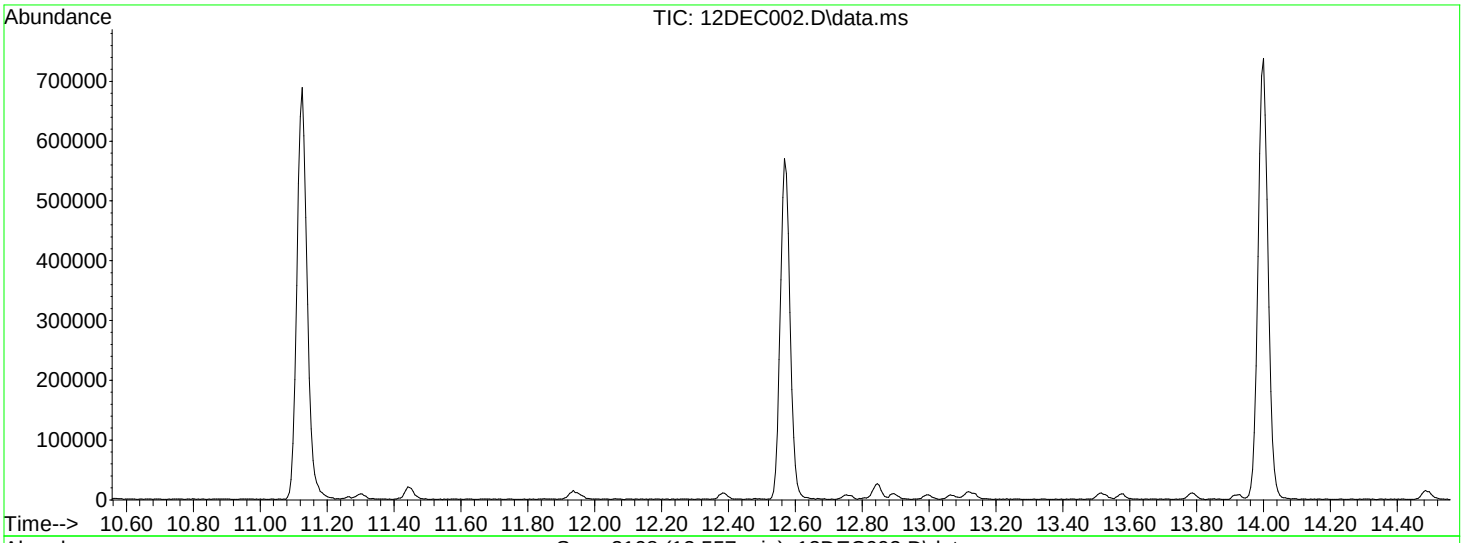
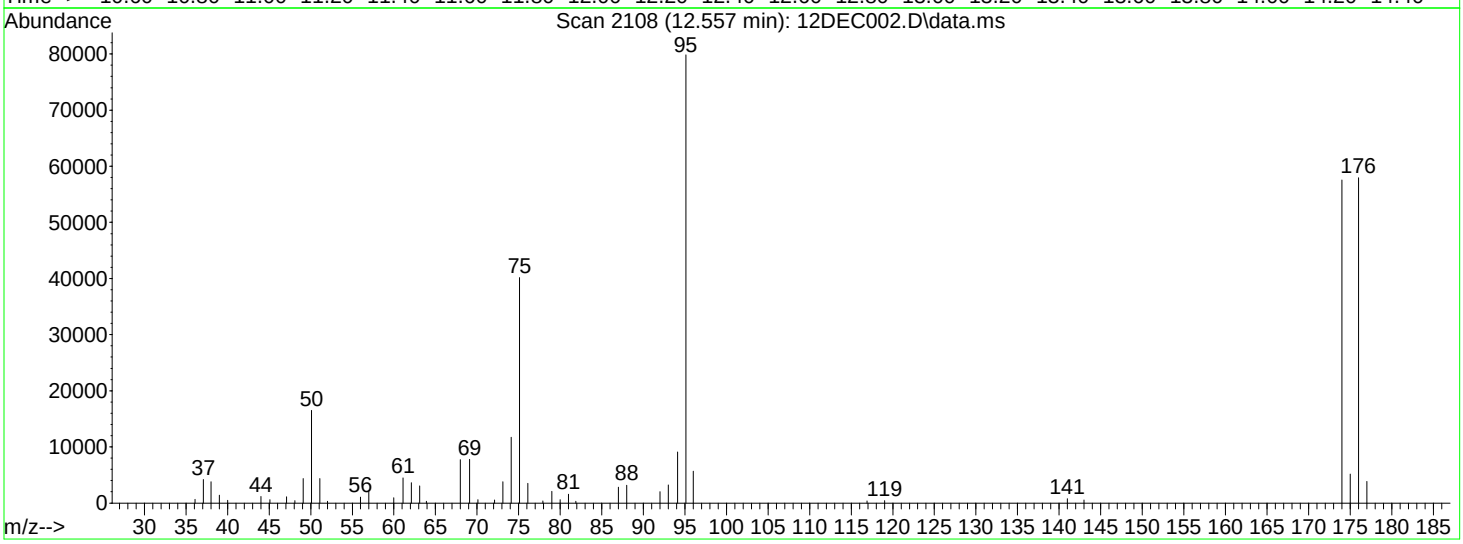
Data Path : W:\GCMS_Z_DATA\2013\131212\
Data File : 12DEC002.D
Acq On : 12 Dec 2013 10:15 am
Operator : 486
Sample : BFB/IC 0.5PPB V120913C/V120613A
Misc : V111513C
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\131212.M
Title : EPA 8260B/8260C
Last Update : Thu Dec 12 13:18:18 2013





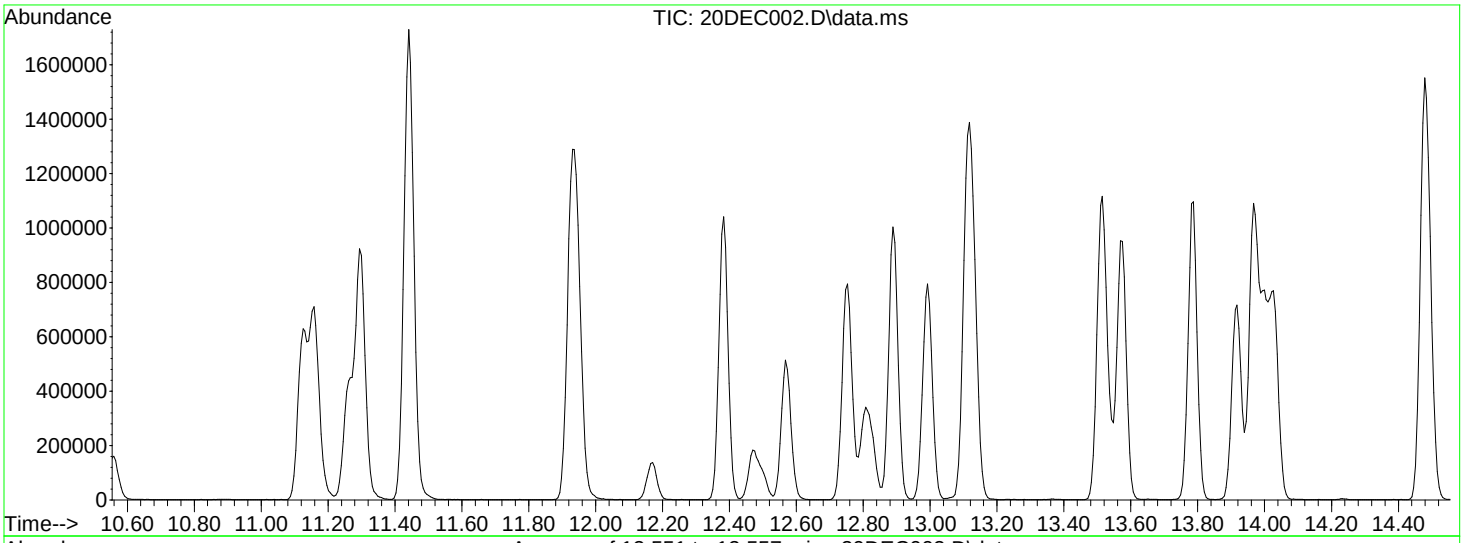
Spectrum Information: Scan 2108

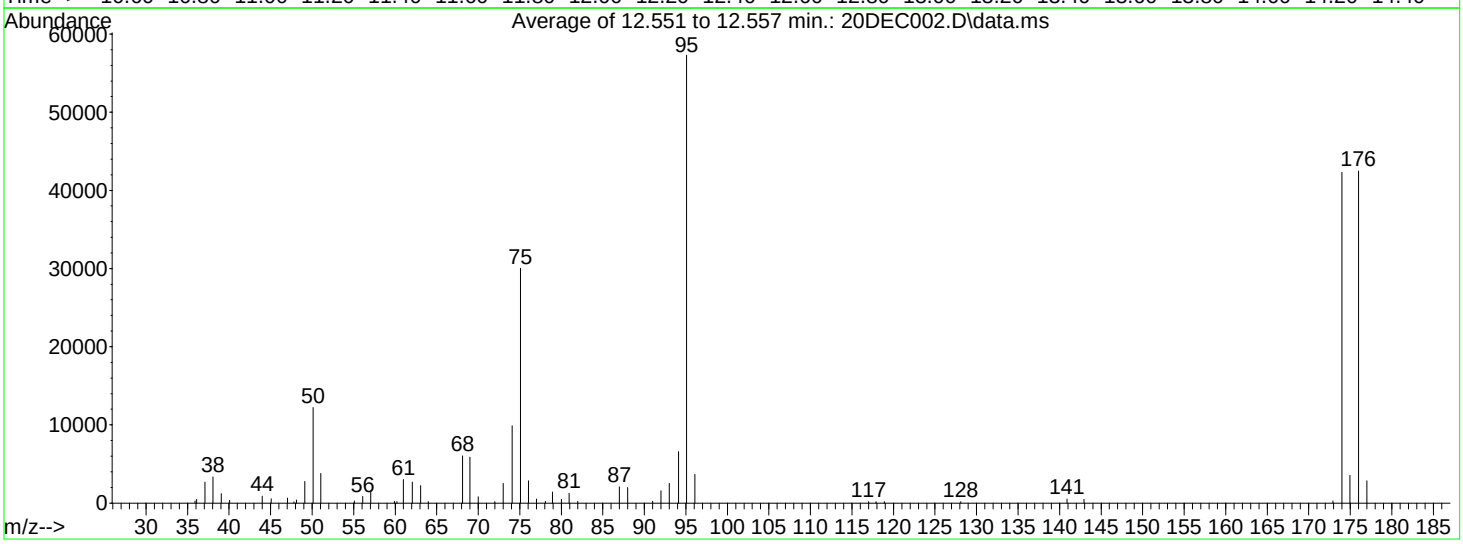
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.7	16528	PASS
75	95	30	60	50.3	40176	PASS
95	95	100	100	100.0	79816	PASS
96	95	5	9	7.1	5683	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	72.1	57568	PASS
175	174	5	9	9.0	5164	PASS
176	174	95	101	100.7	57952	PASS
177	176	5	9	6.6	3845	PASS

Data Path : W:\GCMS_Z_DATA\2013\131220\
Data File : 20DEC002.D
Acq On : 20 Dec 2013 10:05 am
Operator : 796
Sample : CCV/BFB V120913C/V121313A
Misc : V111513C
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\131212.M
Title : EPA 8260B/8260C
Last Update : Thu Dec 12 14:12:02 2013





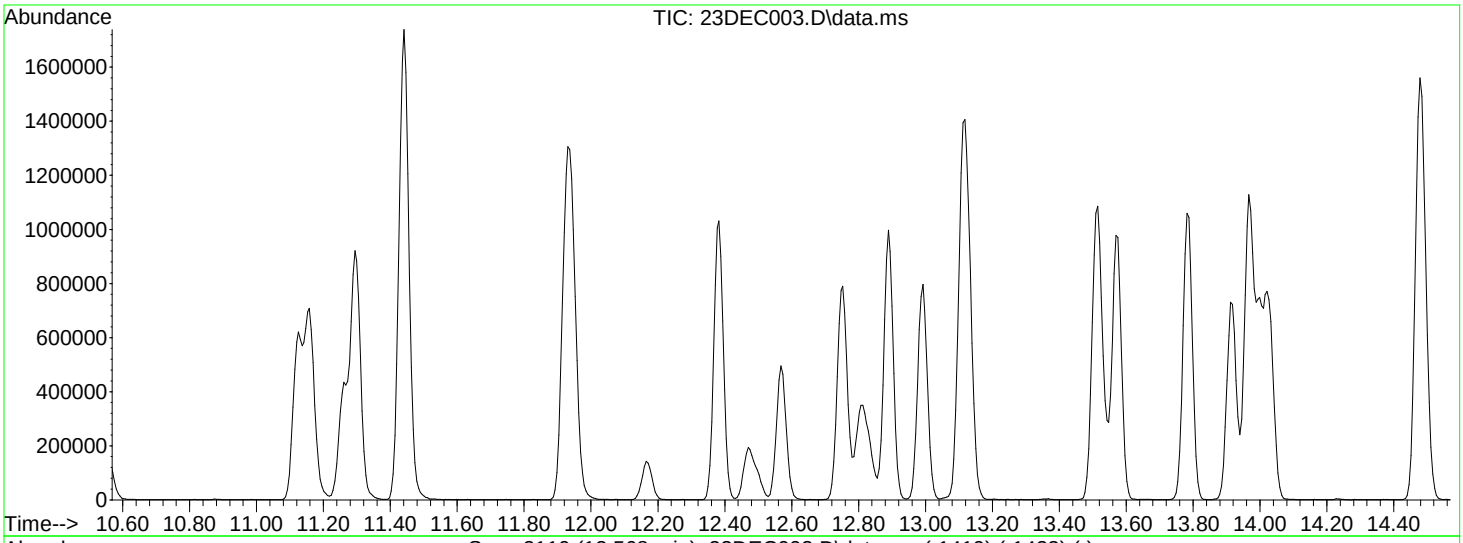
Spectrum Information: Average of 12.551 to 12.557 min.

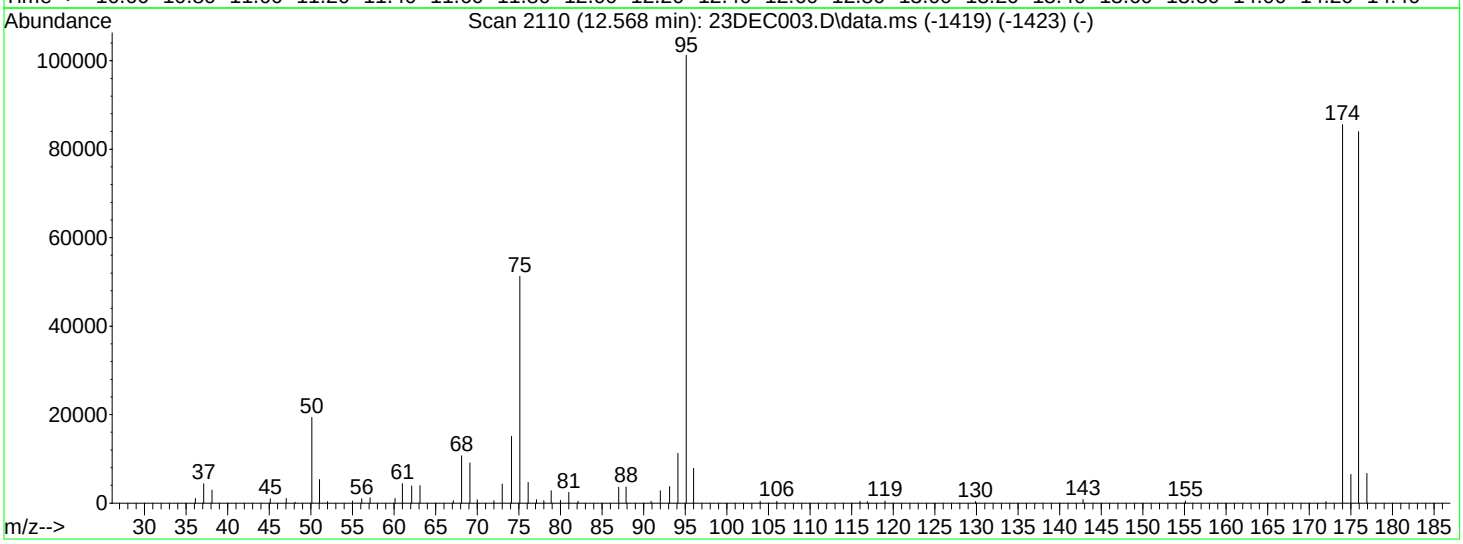
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.3	12205	PASS
75	95	30	60	52.4	30040	PASS
95	95	100	100	100.0	57320	PASS
96	95	5	9	6.4	3663	PASS
173	174	0.00	2	0.6	254	PASS
174	95	50	100	73.8	42328	PASS
175	174	5	9	8.4	3543	PASS
176	174	95	101	100.4	42496	PASS
177	176	5	9	6.7	2865	PASS

Data Path : W:\GCMS_Z_DATA\2013\131223\
Data File : 23DEC003.D
Acq On : 23 Dec 2013 12:26 pm
Operator : 796
Sample : CCV/BFB V120913C/V121313A
Misc : V111513C
ALS Vial : 3 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\131212.M
Title : EPA 8260B/8260C
Last Update : Thu Dec 12 14:12:02 2013





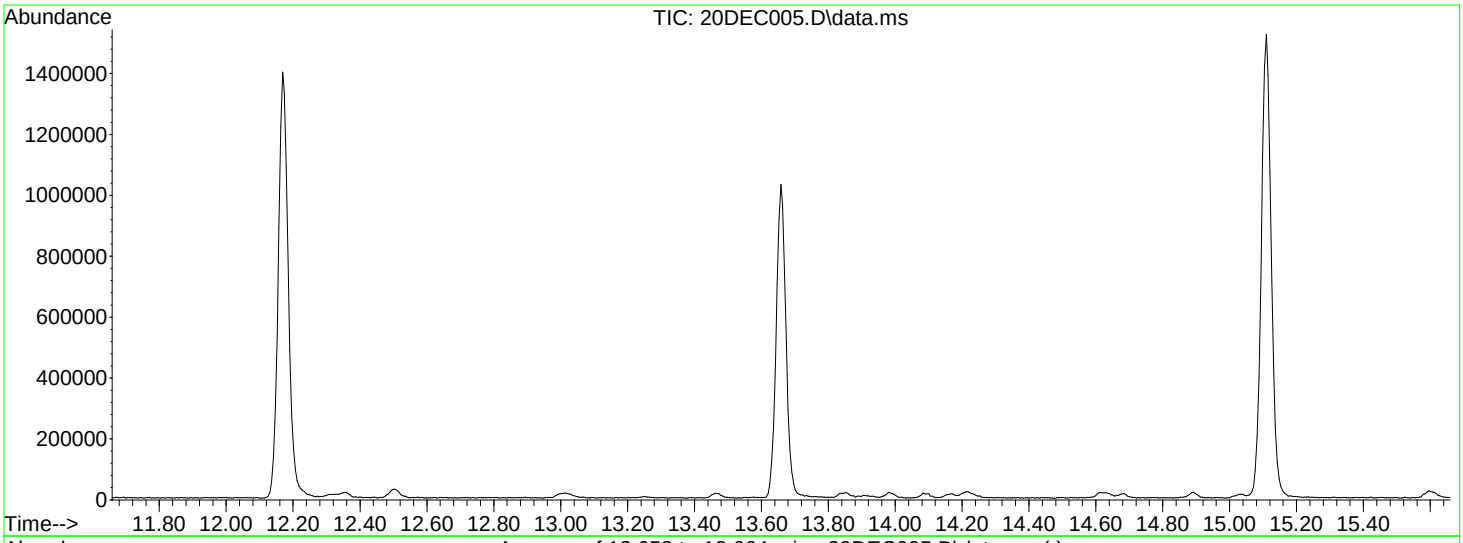
Spectrum Information: Scan 2110

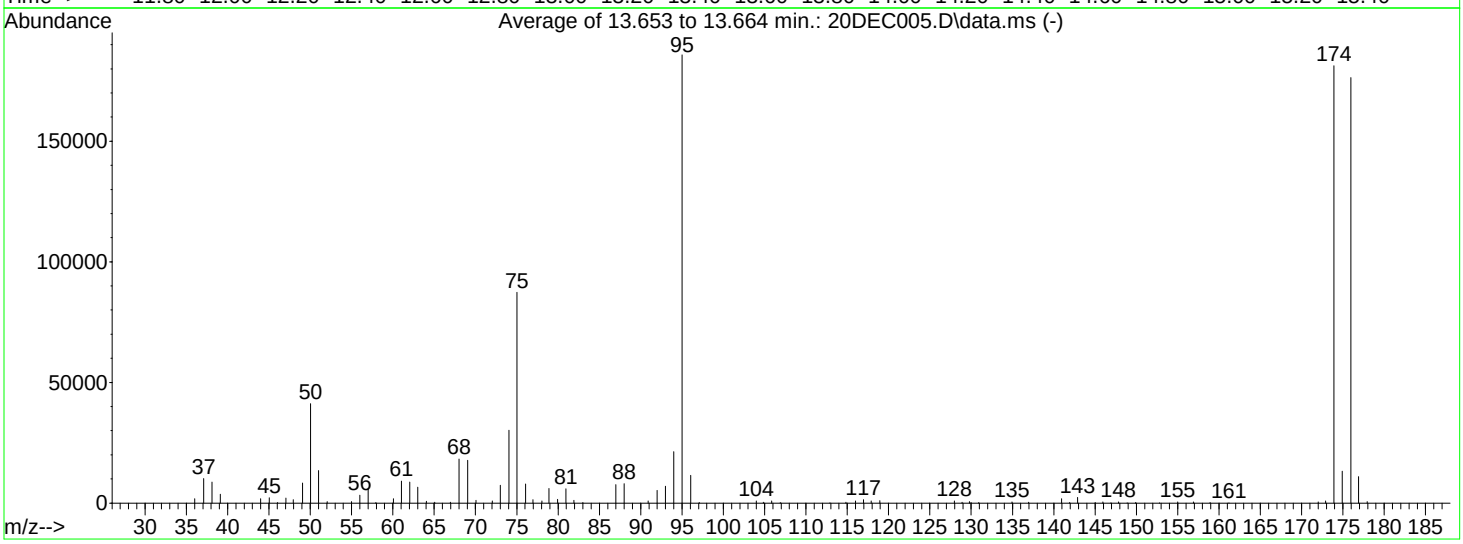
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.1	19376	PASS
75	95	30	60	50.6	51240	PASS
95	95	100	100	100.0	101288	PASS
96	95	5	9	7.8	7880	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	84.5	85544	PASS
175	174	5	9	7.6	6493	PASS
176	174	95	101	98.1	83928	PASS
177	176	5	9	8.0	6688	PASS

Data Path : W:\GCMS_XX_DATA\2013\131220\
Data File : 20DEC005.D
Acq On : 20 Dec 2013 11:45 am
Operator : 796
Sample : IC 0.5PPB/BFB V120913C/V121313A
Misc : V121113A
ALS Vial : 5 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\131220.M
Title : EPA 8260B/8260C
Last Update : Fri Dec 20 17:34:37 2013





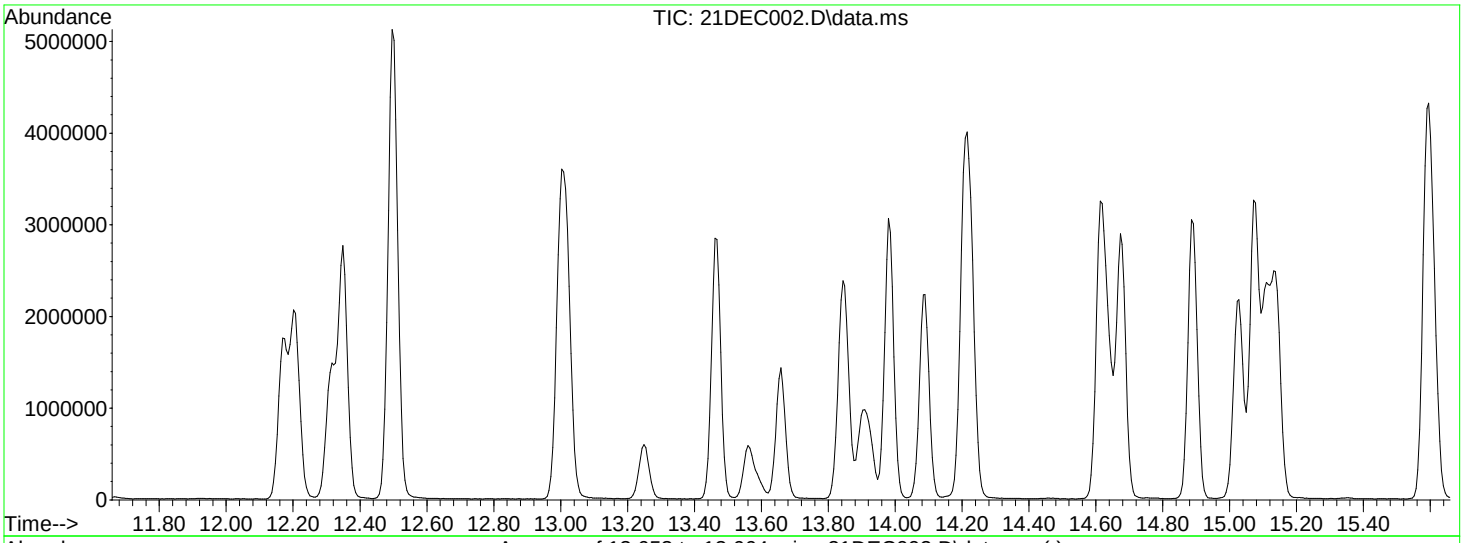
Spectrum Information: Average of 13.653 to 13.664 min.

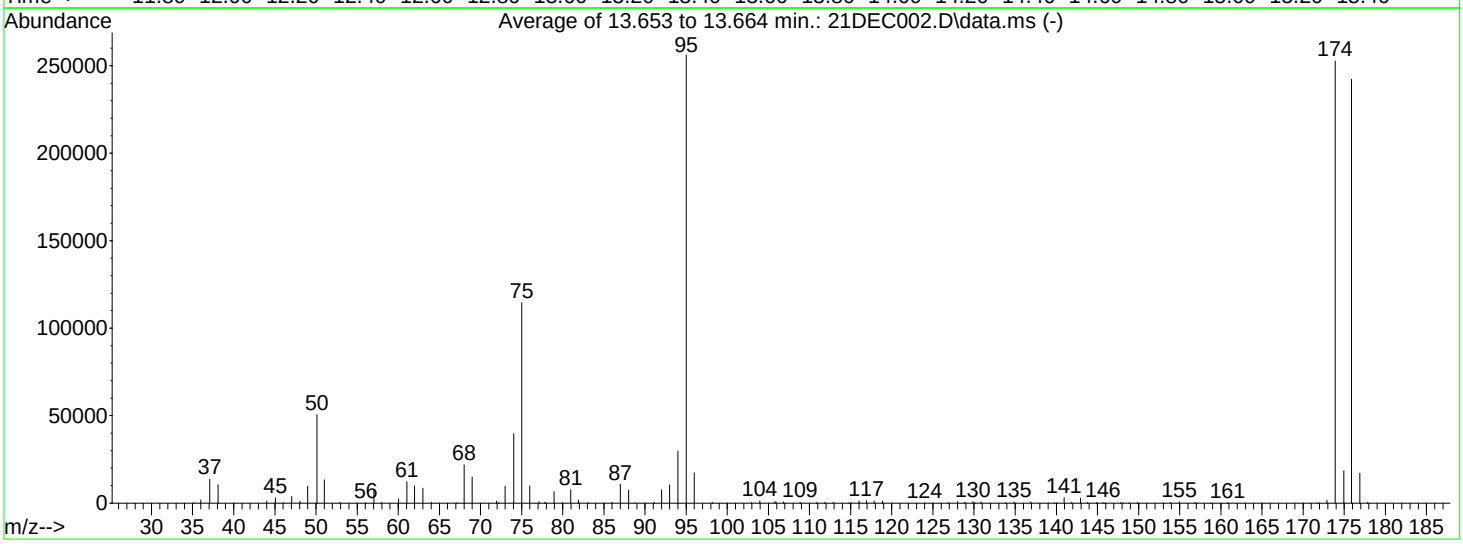
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	41136	PASS
75	95	30	60	47.0	87368	PASS
95	95	100	100	100.0	185728	PASS
96	95	5	9	6.1	11419	PASS
173	174	0.00	2	0.5	917	PASS
174	95	50	100	97.6	181312	PASS
175	174	5	9	7.3	13197	PASS
176	174	95	101	97.3	176363	PASS
177	176	5	9	6.2	10978	PASS

Data Path : W:\GCMS_XX_DATA\2013\131221\
Data File : 21DEC002.D
Acq On : 21 Dec 2013 10:01 am
Operator : 486
Sample : BFB/CCV V120913C/V121313A
Misc : V121113A
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\131220.M
Title : EPA 8260B/8260C
Last Update : Fri Dec 20 17:34:37 2013





Spectrum Information: Average of 13.653 to 13.664 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.7	50527	PASS
75	95	30	60	44.7	114611	PASS
95	95	100	100	100.0	256149	PASS
96	95	5	9	6.7	17256	PASS
173	174	0.00	2	0.6	1495	PASS
174	95	50	100	98.7	252757	PASS
175	174	5	9	7.3	18371	PASS
176	174	95	101	95.9	242389	PASS
177	176	5	9	7.0	17080	PASS

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Run Logs

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Injection Log

Directory: W:\GCMS_Z_DATA\2013\131212

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	12dec001.d	1.	BLANK	V111513C GC/MS "Z"	12 Dec 2013 09:48
2	2	12dec002.d	1.	BFB/IC 0.5PPB V120913C/V120...	V111513C	12 Dec 2013 10:15
3	3	12dec003.d	1.	IC 1.0PPB V120913C/V120613A	V111513C	12 Dec 2013 10:42
4	4	12dec004.d	1.	IC 10PPB V120913C/V120613A	V111513C	12 Dec 2013 11:10
5	5	12dec005.d	1.	IC 20PPB V120913C/V120613A	V111513C	12 Dec 2013 11:37
6	6	12dec006.d	1.	IC 50PPB V120913C/V120613A	V111513C	12 Dec 2013 12:05
7	7	12dec007.d	1.	IC 100/60PPB V120913C/V120613A	V111513C	12 Dec 2013 12:32
8	8	12dec008.d	1.	IC 200/80PPB V120913C/V120613A	V111513C	12 Dec 2013 13:00
9	9	12dec009.d	1.	ICV V120913D/V120613B	V111513C	12 Dec 2013 13:34
10	10	12dec010.d	1.	BFB/CCV V120913C/V120613A	V111513C	12 Dec 2013 14:28
11	11	12dec011.d	1.	LCS V120913D/V120613B	V111513C	12 Dec 2013 15:16
12	12	12dec012.d	1.	BLANK	V111513C	12 Dec 2013 15:53
13	13	12dec013.d	1.	MB	V111513C	12 Dec 2013 16:20
14	14	12dec014.d	1.	13-12-0824-1A 5ML PH<2	V111513C	12 Dec 2013 16:47
15	15	12dec015.d	1.	MS 0824-1A V120913D/V120613B	V111513C	12 Dec 2013 17:15
16	16	12dec016.d	1.	MSD 0824-1A V120913D/V120613B	V111513C	12 Dec 2013 17:43
17	17	12dec017.d	1.	BLANK	V111513C	12 Dec 2013 18:10
18	18	12dec018.d	1.	13-12-0824-2A 5ML PH<2	V111513C	12 Dec 2013 18:37
19	19	12dec019.d	1.	13-12-0824-3A 5ML PH<2	V111513C	12 Dec 2013 19:05
20	20	12dec020.d	1.	13-12-0824-4A 5ML PH<2	V111513C	12 Dec 2013 19:32
21	21	12dec021.d	1.	13-12-0881-1A 5ML PH<2	V111513C	12 Dec 2013 19:59
22	22	12dec022.d	1.	13-12-0881-2A 5ML PH<2	V111513C EB	12 Dec 2013 20:26
23	23	12dec023.d	1.	13-12-0881-3A 25X 200uL PH<2	V111513C	12 Dec 2013 20:54
24	24	12dec024.d	1.	13-12-0881-4A 5ML PH<2	V111513C	12 Dec 2013 21:21
25	25	12dec025.d	1.	13-12-0881-5A 5ML PH<2	V111513C	12 Dec 2013 21:49
26	26	12dec026.d	1.	13-12-0881-6A 5ML PH<2	V111513C	12 Dec 2013 22:16
27	27	12dec027.d	1.	13-12-0881-7A 5ML PH<2	V111513C	12 Dec 2013 22:43
28	28	12dec028.d	1.	13-12-0881-8A 5ML PH<2	V111513C	12 Dec 2013 23:10
29	29	12dec029.d	1.	13-12-0881-9A 5ML PH<2	V111513C TB	12 Dec 2013 23:38
30	30	12dec030.d	1.	13-12-0840-1A 50X 100uL PH<2	V111513C	13 Dec 2013 00:05
31	31	12dec031.d	1.	13-12-0840-2A 50X 100uL PH<2	V111513C	13 Dec 2013 00:32
32	32	12dec032.d	1.	13-12-0840-3A 5X 1ML PH<2	V111513C	13 Dec 2013 00:59
33	33	12dec033.d	1.	13-12-0840-4A 5ML PH<2	V111513C	13 Dec 2013 01:27
34	34	12dec034.d	1.	13-12-0840-5A 5ML PH<2	V111513C	13 Dec 2013 01:54
35	35	12dec035.d	1.	BLANK	V111513C	13 Dec 2013 02:21
36	36	12dec036.d	1.	BFB/CCV V120913C/V120613A	V111513C	13 Dec 2013 02:48
37	37	12dec037.d	1.	LCS V120913D/V120613B	V111513C	13 Dec 2013 03:15
38	38	12dec038.d	1.	BLANK	V111513C	13 Dec 2013 03:43
39	39	12dec039.d	1.	MB	V111513C	13 Dec 2013 04:10

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Injection Log

Directory: W:\GCMS_Z_DATA\2013\131220

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	20dec001.d	1.	BLANK	V111513C GC/MS "Z"	20 Dec 2013 09:38
2	2	20dec002.d	1.	CCV/BFB V120913C/V121313A	V111513C	20 Dec 2013 10:05
3	3	20dec003.d	1.	LCS V120913D/V121313B	V111513C	20 Dec 2013 10:37
4	4	20dec004.d	1.	BLANK	V111513C	20 Dec 2013 11:12
5	5	20dec005.d	1.	MB	V111513C	20 Dec 2013 11:40
6	6	20dec006.d	1.	13-12-1375-4B 5ML PH<2	V111513C	20 Dec 2013 12:07
7	7	20dec007.d	1.	MS 1375-4B V120913D/V121313B	V111513C 5ML	20 Dec 2013 12:34
8	8	20dec008.d	1.	MSD 1375-4B V120913D/V121313B	V111513C 5ML	20 Dec 2013 13:01
9	9	20dec009.d	1.	13-12-1164-10C 5X 1ML PH<2	V111513C E-FLAG	20 Dec 2013 13:30
10	10	20dec010.d	1.	13-12-1173-6C 5ML PH<2	V111513C	20 Dec 2013 13:57
11	11	20dec011.d	1.	13-12-1167-2C 5ML PH<2	V111513C 0.5G G00...	20 Dec 2013 14:24
12	12	20dec012.d	1.	13-12-1169-2C 5ML PH<2	V111513C 0.5G G00...	20 Dec 2013 14:52
13	13	20dec013.d	1.	13-12-1374-12B 5ML PH<2	V111513C	20 Dec 2013 15:20
14	14	20dec014.d	1.	13-12-1376-7B 5ML PH>2	V111513C 0.5G G00...	20 Dec 2013 15:47
15	15	20dec015.d	1.	13-12-1628-1A 5ML PH<2.	V111513C TB	20 Dec 2013 16:15
16	16	20dec016.d	1.	13-12-1628-2A 5ML PH>2.	V111513C	20 Dec 2013 16:43
17	17	20dec017.d	1.	13-12-1628-3A 5ML PH<2.	V111513C	20 Dec 2013 17:10
18	18	20dec018.d	1.	13-12-1628-4A 5ML PH>2.	V111513C	20 Dec 2013 17:39
19	19	20dec019.d	1.	13-12-1628-5A 5ML PH<2.	V111513C	20 Dec 2013 18:06
20	20	20dec020.d	1.	13-12-1628-6A 5ML PH<2.	V111513C	20 Dec 2013 18:33
21	21	20dec021.d	1.	13-12-1628-7A 5ML PH<2.	V111513C	20 Dec 2013 19:00
22	22	20dec022.d	1.	13-12-1628-8A 5ML PH>2.	V111513C	20 Dec 2013 19:28
23	23	20dec023.d	1.	13-12-1628-9A 5ML PH<2.	V111513C	20 Dec 2013 19:55
24	24	20dec024.d	1.	13-12-1628-10A 5ML PH<2.	V111513C TB	20 Dec 2013 20:22
25	25	20dec025.d	1.	13-12-1628-12A 5ML PH>2.	V111513C	20 Dec 2013 20:50
26	26	20dec026.d	1.	13-12-1628-13A 5ML PH<2.	V111513C	20 Dec 2013 21:17
27	27	20dec027.d	1.	BLANK	V111513C	20 Dec 2013 21:45
28	28	20dec028.d	1.	CCV/BFB V120913C/V121313A	V111513C	20 Dec 2013 22:12
29	29	20dec029.d	1.	LCS V120913D/V121313B	V111513C	20 Dec 2013 22:39
30	30	20dec030.d	1.	BLANK	V111513C	20 Dec 2013 23:06
31	31	20dec031.d	1.	MB	V111513C	20 Dec 2013 23:34
32	32	20dec032.d	1.	13-12-1628-11A 5ML PH<2	V111513C	21 Dec 2013 00:01
33	33	20dec033.d	1.	MS 1628-11A V120913D/V121313B	V111513C 5ML	21 Dec 2013 00:29
34	34	20dec034.d	1.	MSD 1628-11A V120913D/V121313B	V111513C 5ML	21 Dec 2013 00:56
35	35	20dec035.d	1.	BLK	V111513C	21 Dec 2013 01:23
36	36	20dec036.d	1.	13-12-1628-14A 5ML PH<2.	V111513C	21 Dec 2013 01:51
37	37	20dec037.d	1.	13-12-1628-15A 5ML PH<2.	V111513C	21 Dec 2013 02:18
38	38	20dec038.d	1.	13-12-1628-16A 5ML PH<2.	V111513C	21 Dec 2013 02:45
39	39	20dec039.d	1.	13-12-1628-17A 5ML PH<2.	V111513C	21 Dec 2013 03:13
40	40	20dec040.d	1.	13-12-1628-18A 5ML PH<2.	V111513C	21 Dec 2013 03:40
41	41	20dec041.d	1.	13-12-1628-19A 5ML PH<2.	V111513C	21 Dec 2013 04:08
42	42	20dec042.d	1.	13-12-1628-20A 5ML PH<2.	V111513C	21 Dec 2013 04:35
43	43	20dec043.d	1.	13-12-1628-21A 5ML PH<2.	V111513C	21 Dec 2013 05:02
44	44	20dec044.d	1.	13-12-1628-22A 5ML PH>2.	V111513C	21 Dec 2013 05:30
45	45	20dec045.d	1.	13-12-1630-1A 5ML PH<2.	V111513C	21 Dec 2013 05:58
46	46	20dec046.d	1.	13-12-1630-2A 5ML PH<2.	V111513C	21 Dec 2013 06:25
47	47	20dec047.d	1.	13-12-1630-3A 5ML PH<2.	V111513C	21 Dec 2013 06:53
48	48	20dec048.d	1.	13-12-1630-4A 5ML PH<2.	V111513C	21 Dec 2013 07:21
49	49	20dec049.d	1.	13-12-1630-5A 5ML PH<2.	V111513C	21 Dec 2013 07:49
50	50	20dec050.d	1.	13-12-1630-6A 5ML PH<2.	V111513C	21 Dec 2013 08:17
51		20dec051.d	1.	No MS or GC data present		

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Injection Log

Directory: W:\GCMS_Z_DATA\2013\131223

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	23dec001.d	1.	BLANK	V111513C GC/MS "Z"	23 Dec 2013 11:31
2	2	23dec002.d	1.	BLANK	V111513C	23 Dec 2013 11:58
3	3	23dec003.d	1.	CCV/BFB V120913C/V121313A	V111513C	23 Dec 2013 12:26
4	4	23dec004.d	1.	LCS V120913D/V121313B	V111513C	23 Dec 2013 12:54
5	5	23dec005.d	1.	BLANK	V111513C	23 Dec 2013 13:25
6	6	23dec006.d	1.	MB	V111513C	23 Dec 2013 13:52
7	7	23dec007.d	1.	13-12-1630-7B 5ML PH<2	V111513C TB	23 Dec 2013 14:19
8	8	23dec008.d	1.	13-12-1628-21C 5ML PH<2	V111513C	23 Dec 2013 14:46
9	9	23dec009.d	1.	MS 1628-21C V120913D/V121313B	V111513C 5ML	23 Dec 2013 15:14
10	10	23dec010.d	1.	MSD 1628-21C V120913D/V121313B	V111513C 5ML	23 Dec 2013 15:41
11	11	23dec011.d	1.	BLK	V111513C	23 Dec 2013 16:08
12	12	23dec012.d	1.	13-12-1630-2C 5ML PH<2	V111513C	23 Dec 2013 16:35
13	13	23dec013.d	1.	13-12-1630-3C 5ML PH<2	V111513C	23 Dec 2013 17:03
14	14	23dec014.d	1.	13-12-1532-1A 5ML PH<2	V111513C	23 Dec 2013 17:30
15		23dec015.d	1.	No MS or GC data present		

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	20dec001.d	1.	BLANK	V121113A "GC/MS XX"	20 Dec 2013 09:38
2	2	20dec002.d	1.	BLANK	V121113A	20 Dec 2013 10:06
3	3	20dec003.d	1.	BLANK	V121113A	20 Dec 2013 10:47
4	4	20dec004.d	1.	BLANK	V121113A	20 Dec 2013 11:17
5	5	20dec005.d	1.	IC 0.5PPB/BFB V120913C/V121...	V121113A	20 Dec 2013 11:45
6	6	20dec006.d	1.	X IC 1.0PPB V120913C/V121313A	V121113A	20 Dec 2013 12:14
7	7	20dec007.d	1.	X IC 10PPB V120913C/V121313A	V121113A	20 Dec 2013 12:42
8	8	20dec008.d	1.	IC 20PPB V120913C/V121313A	V121113A	20 Dec 2013 13:11
9	9	20dec009.d	1.	IC 50PPB V120913C/V121313A	V121113A	20 Dec 2013 13:39
10	10	20dec010.d	1.	IC 100/60PPB V120913C/V121313A	V121113A	20 Dec 2013 14:08
11	11	20dec011.d	1.	IC 200/80PPB V120913C/V121313A	V121113A	20 Dec 2013 14:37
12	12	20dec012.d	1.	BLANK	V121113A	20 Dec 2013 15:40
13	13	20dec013.d	1.	IC 10PPB V120913C/V121313A	V121113A	20 Dec 2013 16:09
14	14	20dec014.d	1.	IC 1.0PPB V120913C/V121313A	V121113A	20 Dec 2013 17:01
15	15	20dec015.d	1.	ICV V120913D/V121313B	V121113A	20 Dec 2013 17:41
16	16	20dec016.d	1.	BLANK	V121113A	20 Dec 2013 18:16
17	17	20dec017.d	1.	LOQ 20PPB V120913C/V121313A	V121113A SOIL	20 Dec 2013 18:45
18	18	20dec018.d	1.	LOD/LOQ 10PPB V120913C/V121...	V121113A SOIL	20 Dec 2013 19:13
19	19	20dec019.d	1.	LOD/LOQ 5PPB V120913C/V121313A	V121113A SOIL	20 Dec 2013 19:42
20	20	20dec020.d	1.	LOD 2PPB V120913C/V121313A	V121113A SOIL	20 Dec 2013 20:10
21	21	20dec021.d	1.	LOQ 1PPB V120913C/V121313A	V121113A SOIL	20 Dec 2013 20:39
22	22	20dec022.d	1.	LOD/LOQ 0.5PPB V120913C/V12...	V121113A SOIL	20 Dec 2013 21:08
23	23	20dec023.d	1.	LOD 0.2PPB V120913C/V121313A	V121113A SOIL	20 Dec 2013 21:36

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	21dec001.d	1.	BLANK	V121113A "GC/MS XX"	21 Dec 2013 09:32
2	2	21dec002.d	1.	BFB/CCV V120913C/V121313A	V121113A	21 Dec 2013 10:01
3	3	21dec003.d	1.	LCS V120913D/V121313B	V121113A	21 Dec 2013 10:29
4	4	21dec004.d	1.	BLANK	V121113A	21 Dec 2013 10:58
5	5	21dec005.d	1.	MB	V121113A	21 Dec 2013 11:27
6	6	21dec006.d	1.	13-12-1628-11B 5ML PH<2	V121113A	21 Dec 2013 11:55
7	7	21dec007.d	1.	MS 1628-11B V120913D/V121313B	V121113A	21 Dec 2013 12:25
8	8	21dec008.d	1.	MSD 1628-11B V120913D/V121313B	V121113A	21 Dec 2013 12:53
9	9	21dec009.d	1.	BLANK	V121113A	21 Dec 2013 13:22
10	10	21dec010.d	1.	13-12-1628-2B 5ML PH>2	V121113A	21 Dec 2013 13:51
11	11	21dec011.d	1.	13-12-1628-4B 5ML PH>2	V121113A	21 Dec 2013 14:19
12	12	21dec012.d	1.	13-12-1628-7B 5ML PH<2	V121113A	21 Dec 2013 14:48
13	13	21dec013.d	1.	13-12-1628-12B 5ML PH<2	V121113A	21 Dec 2013 15:16
14	14	21dec014.d	1.	13-12-1628-14B 5ML PH<2	V121113A	21 Dec 2013 15:45
15	15	21dec015.d	1.	13-12-1628-15B 5ML PH<2	V121113A	21 Dec 2013 16:14
16	16	21dec016.d	1.	13-12-1628-16B 5ML PH<2	V121113A	21 Dec 2013 16:42
17	17	21dec017.d	1.	13-12-1628-17B 5ML PH<2	V121113A	21 Dec 2013 17:11
18	18	21dec018.d	1.	13-12-1628-18B 5ML PH<2	V121113A	21 Dec 2013 17:39
19	19	21dec019.d	1.	13-12-1628-19B 5ML PH<2	V121113A	21 Dec 2013 18:08
20	20	21dec020.d	1.	13-12-1628-20B 5ML PH<2	V121113A	21 Dec 2013 18:36
21	21	21dec021.d	1.	13-12-1628-21B 5ML PH>2	V121113A	21 Dec 2013 19:05
22	22	21dec022.d	1.	13-12-1628-22B 5ML PH>2	V121113A	21 Dec 2013 19:33
23	23	21dec023.d	1.	13-12-1630-7A 5ML PH<2	V121113A TB	21 Dec 2013 20:02
24	24	21dec024.d	1.	13-12-1630-1B 5X 1ML PH<2	V121113A	21 Dec 2013 20:30
25	25	21dec025.d	1.	13-12-1630-2B 5ML PH<2	V121113A	21 Dec 2013 20:58
26	26	21dec026.d	1.	13-12-1630-3B 5ML PH<2	V121113A	21 Dec 2013 21:27
27	27	21dec027.d	1.	BLANK	V121113A	21 Dec 2013 21:55
28	28	21dec028.d	1.	BFB/CCV V120913C/V121313A	V121113A "GC/MS XX"	21 Dec 2013 22:24
29	29	21dec029.d	1.	LCS V120913D/V121313B	V121113A	21 Dec 2013 22:52
30	30	21dec030.d	1.	BLANK	V121113A	21 Dec 2013 23:21
31	31	21dec031.d	1.	MB	V121113A	21 Dec 2013 23:49
32	32	21dec032.d	1.	13-12-1631-3A 5ML PH<2	V121113A TB	22 Dec 2013 00:18
33	33	21dec033.d	1.	13-12-1630-6B 5ML PH<2	V121113A	22 Dec 2013 00:46
34	34	21dec034.d	1.	MS 1630-6B V120913D/V121313B	V121113A	22 Dec 2013 01:14
35	35	21dec035.d	1.	MSD 1630-6B V120913D/V121313B	V121113A	22 Dec 2013 01:43
36	36	21dec036.d	1.	BLANK	V121113A	22 Dec 2013 02:11
37	37	21dec037.d	1.	13-12-1630-5B 5ML PH<2	V121113A	22 Dec 2013 02:40
38	38	21dec038.d	1.	13-12-1630-4B 2X 2.5ML PH<2	V121113A	22 Dec 2013 03:08
39	39	21dec039.d	1.	13-12-1630-4B 5XE 1ML PH<2	V121113A	22 Dec 2013 03:37
40	40	21dec040.d	1.	13-12-1631-1A 5ML PH<2	V121113A	22 Dec 2013 04:05
41	41	21dec041.d	1.	13-12-1631-2A 5ML PH<2	V121113A	22 Dec 2013 04:33
42	42	21dec042.d	1.	13-12-1620-1A 5ML PH<2	V121113A	22 Dec 2013 05:02
43	43	21dec043.d	1.	BLANK	V121113A	22 Dec 2013 05:30
44	44	21dec044.d	1.	13-12-1620-2A 5ML PH<2	V121113A	22 Dec 2013 05:59
45	45	21dec045.d	1.	BLANK	V121113A	22 Dec 2013 06:27
46	46	21dec046.d	1.	13-12-1539-1A 10X 0.5ML PH<2	V121113A	22 Dec 2013 06:56
47	47	21dec047.d	1.	13-12-1539-2A 5X 1ML PH<2	V121113A	22 Dec 2013 07:24
48	48	21dec048.d	1.	13-12-1539-3A 25X 200uL PH<2	V121113A	22 Dec 2013 07:53
49	49	21dec049.d	1.	13-12-1539-4A 5X 1ML PH<2	V121113A	22 Dec 2013 08:21
50	50	21dec050.d	1.	13-12-1539-5A 5ML PH<2	V121113A TB	22 Dec 2013 08:50
51	51	21dec051.d	1.	BLANK	V121113A	22 Dec 2013 09:18

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Calscience Environmental Laboratories, Inc.

EPA 8260B Volatile Organics

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PREP DATE	NEW STANDARD ID #	TEST METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STANDARD ID #	INITIAL AMOUNT	INITIAL CONC.	FINAL VOLUME	FINAL CONC.	SOLVENT NAME	SOLVENT ID #	EXPIR. DATE	PREP BY	COMMENTS
8/12/13	V081213A	8260	250 ppm IS/surr std.	V-06-09-08	2 mL	12500 ppm	100 ml.	250 ppm	MeOH	V-06-25-13	11/12/13	316	
~~8/16/13~~	~~V081613A~~	~~8260~~	(CCV) ~~CFC custom STD 50ppm~~										670 8/16/13
~~8/16/13~~	~~V081613B~~	~~8260~~	(LCS) ~~VOA custom STD 50ppm~~										670 8/16/13
8/16/13	V081613A	8260	CCV(G) 502.2 Calib. Mix #1	V-06-22-15	1.25ml	2000ppm	50ml	50 ppm	MeOH	V-06-25-13	8/25/13	670	
8/16/13	V081613B	8260	LCS(G) 502.2 Calib. Mix #1	V-06-23-16	↓	↓	↓	↓	↓	↓	↓	↓	
8/19/13	V081913A	8260	250ppm Cyclohexanone + TAA	V071513A	250µl	10000ppm	10ml	250ppm	MeOH	V06-25-13 ~~V06-[illegible]~~	1/15/14 ~~[illegible]~~	131	} 8/30
8/23/13	V082313A	8260 CCV(G)	502.2 Calib Mix #1	V-06-22-16	1.25mL	2000ppm	50mL	50ppm	MeOH	V06-25-13 ~~V06-25-[illegible]~~	9/1/13 ~~[illegible]~~	486	
↓	V082313B	8260 LCS(G)	VOC high conc Mix #6	V-06-24-08	1mL	↓	40mL	↓	↓	↓	↓	↓	
8/23/13	608 08/28/13 V082313C ~~A~~	8260CCV	Freon 1,2,3	V06-02-04	50ul	1000ppm	1ml	50ppm	MeOH	V06-25-13	09/~~28~~ 24/13	608 08/28/13 608	
↓	↓	↓	1,2-Dichlorotrifluoro ethane	V06-07-20	↓	↓	↓	↓	↓	↓	↓	↓	
↓	V082313D	8260 LCS	2,2-Dichloro-1,1,1-tri fluoroethane	V06-16-25	250ul	200ppm	1ml	50ppm	↓	↓	↓	↓	
↓	↓	↓	1,2-Dichlorotrifluoro ethane	V06-07-25	↓	1000ppm	↓	↓	↓	↓	↓	↓	
8/23/13	V082313E	8260 LCS(G)	VOC-gases	V06-19-22	1ml	2000ppm	40ml	50ppm	MeOH	V06-25-19	9/1/13	131	
8/28/13	V082813A	8260	250ppm IS/surr std.	V06-09-08	2mL	12500 ppm	100ml	250ppm	MeOH	V06-25-19	11/28/13	626	
8/30/13	V083013A	CCV(G) 8260	502.2 Calib Mix #1	V06-22-17	1.25mL	2000ppm	50ml	50ppm	MeOH	V06-25-19	9/8/13 ~~11/28/13~~ 823 8/30	823 8/30	
8/30/13	V083013B	LCS(G) 8260	502.2 Calib Mix #1 ~~VOC Gases~~ 823 8/30	V06-27-01	↓	↓	↓	↓	↓	↓	↓	↓	
9/4/13	V090413A	SRL 524M IS/surr std	Custom IS/SURR (soil)	V06-01-23	250ul	ppm 10-6250	10mL	ppm 0.2-125	MeOH	V06-26-04	12/4/13	486	
9/4/13	V090413B	8260(CCV)	Vinyl Acetate	V06-11-9	21.4µl	neat	10ml	2000ppm	MeOH	V06-26-04	3/4/14	131	
9/4/13	V090413C	8260L(CCV)	Custom VOC std	V06-17-9	1ml	2000-20000ppm	40ml	50-500 ppm	MeOH	V06-26-04	10/6/13	131	
↓	↓	↓	Acrolein	V08061 3A	0.4ml	10000 ppm	↓	↓	↓	↓	↓	↓	

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PREP DATE	NEW STANDARD ID #	TEST METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STANDARD ID #	INITIAL AMOUNT	INITIAL CONC.	FINAL VOLUME	FINAL CONC.	SOLVENT NAME	SOLVENT ID #	EXPIR. DATE	PREP BY	COMMENTS
10/17/13	V101713B	8260L(LCS)	Vinyl Acetate	V101713D	1ml	2000ppm	40ml	50-500 ppm	MeOH	V.06.29.17	11/17/13	131	
↓	↓	↓	Volatile organic Compds	V.06.20.9	1ml	2000ppm	↓	↓	↓	↓	↓	↓	
			Chloroprene	V.06.23.5	1ml	2000ppm							
			2-CEVE	V.06.29.7	1ml	2000ppm							
			VOA Calib. Mix #1	V.06.25.23	0.4ml	5000ppm							
			EPA 524.2 Rev.4 Mix	V.06.24.20	1ml	2000ppm							
↓	↓	↓	TAA + Cyclohexanone	V071513A	1ml	10,000ppm	↓	↓	↓	↓	↓	↓	
10/17/13	V101713C	8260	Acrolein (LCS)	V.06.24.13	60µl	neat	5ml	10,000ppm	MeOH	V.06.29.17	12/17/13	316	
10/17/13	V101713D	8260	Vinyl Acetate (LCS)	V.06.11.9	21.4µl	neat	10ml	2000ppm	MeOH	V.06.29.17	4/17/14	↓	
10/18/13	V101813A	8260	502.2 Calib mix#1 CCV gas	V-06-26-22	1.25mL	2000PPM	50mL	50PPM	meoH	V-06-29-17	10/26/13	823	
↓	V101813B	8260	502.2 Calib mix#1 LCS gas	V-06-27-08	↓	↓	↓	↓	↓	↓	↓	↓	
10/19/13	V101913A	8260 (IS/SS)	250PPM IS/SS	V-06-21-03	2mL	12500PPM	100mL	250PPM	MeOH	V-06-29-17	1/19/14	823	
10/25/13	V102513A	8260 CCV (g)	502.2 Calib Mix #1	V-06-26-23	1.25mL	2000 ppm	50mL	50ppm	MeOH	V-06-29-21	11/03/13	486	
↓	V102513B	8260 LCS (g)	502.2 Calib mix #1	V-06-27-09	↓	↓	↓	↓	↓	↓	↓	↓	
11/01/13	V110113A	8260 CCV (g)	502.2 Calib Mix #1	V-06-26-24	1.25ml	2000ppm	50ml	50ppm	MeOH	V-06-30-24	11/10/13	608	
↓	V110113B	8260 LCS (g)	502.2 Calib Mix #1	V-06-27-10	↓	↓	↓	↓	↓	↓	↓	↓	
11/07/13	V110713A	IS/SUR. SRL-524M	Custom IS/SUR	V06-02.03	1mL	ppm 10.6250	10mL	ppm 1.625	MeOH	V06-30-24	02/07/14	486	
11/08/13	V110813A	8260 CCV (g)	502.2 Calib. mix#1	V-06-26-25	1.25ml	2000ppm	50ml	50ppm	MeOH	V-06-30-24	11/17/13	316	
↓	V110813B	8260 LCS (g)	502.2 Calib. mix #1	V-06-31-21	↓	↓	↓	↓	↓	↓	↓	↓	
11/08/13	V1108BC	524.2	524 IS/Surr. Mix	V-05-63-25	250 ~~20~~ µl	2000ppm	20ml	25ppm	MeOH	V-06-30-24	02/08/14	608	

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PREP DATE	NEW STANDARD ID #	TEST METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STANDARD ID #	INITIAL AMOUNT	INITIAL CONC.	FINAL VOLUME	FINAL CONC.	SOLVENT NAME	SOLVENT ID #	EXPIR. DATE	PREP BY	COMMENTS
11/08/13	V1108 13D	8260 CCV	Freon 1,23	V06-~~27~~-13	50ul	1000ppm	1ml	50ppm	MeOH	V-06-30-24	12/08/13	66f	
↓	↓	↓	1,2-Dichlorotrifluoro ethane	V06-07-20	↓	↓	↓	↓	↓	↓	↓	↓	
↓	V1108 13E	8260 LCS	2,2-Dichloro-1,1,1-tri fluoroethane	V06-16-25	250ul	200ppm	1ml	↓	↓	↓	↓	↓	
↓	↓	↓	1,2-Dichlorotrifluoro ethane	V06-07-25	66f 11/08/13 50~~0~~ul	1000ppm	↓	↓	↓	↓	↓	↓	
11/11/13	V11 11 13A	8260	Acrolein (CCV)	V06.24.13	60µl	neat	5ml	10,000ppm	MeOH	V.06.30.24	1/11/14	131	
11/12/13	V111213A	8260L(CCV)	Custom VOC std.	V06.17.12	1ml	2000-2000ppm	40ml	50-500 ppm	MeOH	V.06.30.24	12/15/13	131	
↓	↓	↓	Acrolein	V111113A	0.4ml	10000ppm	↓	↓	↓	↓	↓	↓	
			Vinyl Acetate	V090413B	1ml	2000ppm							
			2-CEVE	V.06.28.12	1ml	2000ppm							
			Calif. Oxyg. Mix#1	V.06.15.19	1ml	2000-2000ppm							
			8260B Calib. Mix#1	V06.28.7	1ml	2000ppm							
			VOA Calib. Mix#1	V.06.15.15	0.4ml	5000ppm							
↓	↓	↓	TAA+Cyclohexanone	V071513A	1ml	10000ppm	↓	↓	↓	↓	↓	↓	
11/12/13	V111213B	8260L(LCS)	VOA Custom Std	V.06.18.11	1ml	2000-2000ppm	40ml	50-500 ppm	MeOH	V.06.30.24	12/15/13	131	
↓	↓	↓	Acrolein	V101713C	0.4ml	10,000ppm	↓	↓	↓	↓	↓	↓	
			Vinyl Acetate	V101713D	1ml	2000ppm							
			Volatile Organic Compds	V.06.20.10	1ml	2000ppm							
			Chloroprene	V.06.23.6	1ml	2000ppm							
			2-CEVE	V.06.29.8	1ml	2000ppm							
↓	↓	↓	VOA Calib. Mix#1	V.06.25.23	0.4ml	5000ppm	↓	↓	↓	↓	↓	↓	

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PREP DATE	NEW STANDARD ID #	TEST METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STANDARD ID #	INITIAL AMOUNT	INITIAL CONC.	FINAL VOLUME	FINAL CONC.	SOLVENT NAME	SOLVENT ID #	EXPIR. DATE	PREP BY	COMMENTS
11/12/13	V111213B	8260L(LCS)	EPA 524.2 Rev.4 Mix	V-06-24-21	1ml	2000ppm	~~50-500 RP40ml~~	50-500 ppm	MeOH	V-06-30-24	12/15/13	131	
↓	↓	↓	TAA + Cyclohexanone	V071513A	1ml	10000ppm	40ml	↓	↓	↓	↓	↓	
11/15/13	V111513A	8260 CCV (G)	502.2 Calib mix #1	V-06-31-11	1.25 ml	2000 ppm	50 ml	50ppm	MeOH	V-06-31-06	12/8/13 ~~11/29/13~~	510	12/2/13
↓	V111513B	8260 LCS (G)	502.2 Calib mix #1	V-06-31-22	↓	↓	↓	↓	↓	↓	12/8/13 ↓	↓	
11/15/13	V111513C	8260(IS/SS)	250PPM IS/SS	V-06-21-04	2mL	12500PPM	100mL	250ppm	MeOH	V-06-31-06	~~02/15/13~~ 2/15/14 823 11/20	823	
11/20/13	V112013A	8260(IS/SS)	50PPM IS/surr	V-06-21-05	2mL	12500 PPM	500mL	50PPM	MeOH	V-06-31-9	2/20/14 ~~Lot expired 823 11/26/13~~	849	
11/22/13 ~~11/21~~ 823 11/22	V112213A	8260 CCV (G)	502.2 Calib mix #1	V-06-31-12	1.25mL	2000PPM	50mL	50PPM	MeOH	V-06-31-09	11/30/13	823	
11/22/13	V112213B	8260 LCS (G)	502.2 Calib mix #1	V-06-31-23	1.25mL	2000PPM	50mL	50PPM	MeOH	V-06-31-9	11/30/13	849	
11/25/13	V112513A	8260	CCV Chlorotrifluoroethane	V-06-32-6	50µl	1000ppm	1ml	50ppm	MeOH	V-06-31-9	2/25/~~14~~ 14 ~~Lot expired 13~~	131	
11/25/13	V112513B	8260	LCS Chlorotrifluoroethane	V-06-32-8	50µl	1000 ppm	1ml	50ppm	MeOH	V-06-31-9	2/25/~~14~~ 14 ~~Lot expired 13~~	131	
11/25/13	V112513C	8260	Chlorotrifluoroethane	V-06-27-12	50µl	1000ppm	1ml	50ppm	MeOH	V-06-31-9	2/25/14	131	
12/2/13	V120213A	8260	CCV 2-Chloro-1,1,1-trifluoroethane	V-06-27-13	50µl	1000ppm	1ml	50ppm	MeOH	V-06-32-12	3/2/14	131	
12/2/13	V120213B	8260	LCS 2-Chloro-1,1,1-trifluoroethane	V-06-32-22	5µl	10000ppm	1ml	50ppm	MeOH	V-06-32-12	3/2/14	131	
12/06/13	V120613A	8260 CCV (G)	502.2 Calib Mix #1	V-06-31-13	1.25mL	2000ppm	50mL	50ppm	MeOH	V06-32-12	12/15/13	486	
↓	V120613B	8260 LCS (G)	502.2 Calib Mix #1	V-06-31-24	↓	↓	↓	↓	↓	↓	↓	↓	
12/09/13	V120913A	8260	Acrolein (LCS)	V-06-24-13	60µl	neat	5ml	10,000ppm	MeOH	V-06-32-12	2/9/14	131	
12/09/13	V120913B	8260	Cyclohexanone	V-05-88-25	110µl	neat	10ml	10,000ppm	MeOH	V-06-32-12	6/9/14	131	
↓	↓	↓	TAA	V-05-88-24	125µl	↓	↓	↓	↓	↓	↓	↓	
12/09/13	V120913C	8260L(CCV)	Custom VOC Std.	V-06-17-13	1ml	2000-20000ppm	40ml	50-500 ppm	MeOH	V-06-32-12	1/16/14	131	
↓	↓	↓	Acrolein	V111113A	0.4ml	10000 ppm	↓	↓	↓	↓	↓	↓	

Book Number: 10

Standard Preparation Logbook

PREP DATE	NEW STANDARD ID #	TEST METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STANDARD ID #	INITIAL AMOUNT	INITIAL CONC.	FINAL VOLUME	FINAL CONC.	SOLVENT NAME	SOLVENT ID #	EXPIR. DATE	PREP BY	COMMENTS
12/09/13	V120913C	8260 L(CCV)	Vinyl Acetate	V090413B	1ml	2000ppm	40ml	50-500 ppm	MeOH	V.06-32-12	1/11/14	131	
			2-CEVE	V.06.28.13	1ml	2000ppm							
			Calif. oxyg. Mix #1	V.06-15.20	1ml	2000 – 20000 ppm							
			8260B Calib. Mix #1	V.06 28.8	1ml	2000 ppm							
			VOA Calib. Mix #1	V.06.15.16	0.4ml	5000 ppm							
			TAA+Cyclohexanone	V120913B	1ml	10000ppm							
12/09/13	V120913D	8260L(LCS)	VOA Custom std	V.06.18.~~8~~ 12 12/9/13	1ml	2000 – 20000 ppm	40ml	50-500 ppm	MeOH	V.06.32.12	1/11/14	131	
			Acrolein	V120913A	0.4ml	10000ppm							
			Vinyl Acetate	V101713D	1ml	2000ppm							
			Volatile Organic Compds	V06.20-11	1ml	2000 ppm							
			Chloroprene	V06.30-3	1ml	2000 ppm							
			2-CEVE	V.06.29.9	1ml	2000ppm							
			VOA Calib. Mix #1	V.06.25.23	0.4ml	5000ppm							
			EPA 524.2 Rev.4 Mix	V.06.30.18	1ml	2000 ppm							
			TAA+Cyclohexanone	V120913B	1ml	10000ppm							
12/10/13	V121013A	8260 (CCV)	Freon 1,2,3	V-06-29-13	50µl	1000 ppm ~~10000 ppm~~ 31L 12/10	1ml	50 ppm	meOH	V-06-32-12	01/10/14	316	
			1,2-Dichloro-~~1,1,1~~ 31L 12/10 trifluoroethane	V-06-07-20									
	V121013B	8260 (LCS)	2,2-Dichloro-1,1,1 trifluoroethane	V-06-17-01	250µl	200 ppm ~~2000 ppm~~ 31L 12/10							
			1,2-Dichloro-trifluoroethane	V-06-07-25	50µl	1000 ppm							
12/10/13	V121013C	8260/524 SIM	EDB/DBCP Mix	V.05-89.02	5µl	2000 ppm	2ml	5ppm	MeOH	V.06.32-12	3/10/14	131	

Standard Preparation Logbook

PREP DATE	NEW STANDARD ID #	TEST METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STANDARD ID #	INITIAL AMOUNT	INITIAL CONC.	FINAL VOLUME	FINAL CONC.	SOLVENT NAME	SOLVENT ID #	EXPIR. DATE	PREP BY	COMMENTS
12/10/13	V121013D	CCV SRL524 / 8260 SIM	Custom Standard	V.05.75.10	0.5ml	0.5 - 1250ppm	5ml	0.05 - 125ppm	MeOH	V06-32-12 (32) 12/10/13	2/28/14	131	
↓	↓	↓	EDB/DBCP Mix	V121013C	50µl	5ppm	5ml	↓	MeOH	↓	↓	↓	
12/10/13	V121013E	SRL524/8260 SIM	504.1 Calib. Mix	V.05.89.14	50µl	200 ppm 12/10/13	1ml	10ppm	MeOH	V.06.32-12	3/10/14	131	
12/10/13	V121013F	LCS SRL524/8260 SIM	Ethanol	V.05-89-9	125µl	10,000ppm	10ml	0.05 - 125	MeOH	V.06.32-12	3/10/14	131	
↓	↓	↓	504.1 Calib. Mix	V121013E	50µl	10ppm	↓	↓	↓	↓	↓	↓	
↓	↓	↓	1,4-Dioxane	V05-89-13	250µl	2000ppm	↓	↓	↓	↓	↓	↓	
12/11/13	V121113A	8260 IS/SUR	250ppm IS/SUR	V-06-21-06	2mL	12500 ppm	100mL	250 ppm	MeOH	V06-32-17	3/11/14	486	
12/12/13	V121213A	524.2	524.2 IS/SURR mix	V-05-63-25	250µl	2000ppm	20ml.	25ppm	MeOH	V-06-32-17	3/12/14	316	
12/13/13	V121313A	8260 CCV(G)	502.2 Calib. mix #1	V-06-31-14	1.25ml	2000ppm	50ml.	50ppm	MeOH	V-06-32-17	12/22/13	316	
↓	V121313B	8260 LCS(G)	↓	V-06-31-25	↓	↓	↓	↓	↓	↓	↓	↓	
12/13/13	V121313C	8260	CCV Chlorotrifluoroethane	V.06.32.6	50µl	1000ppm	1ml	50ppm	MeOH	V.06.32-17	1/13/14	131	
↓	V121313D	↓	LCS Chlorotrifluoroethane	V.06.32.8	50µl	1000ppm	1ml	50ppm	↓	↓	↓	↓	
12/16/13	V121613A	SRL 524M IS/SUR/soil	Custom IS/SUR (soil)	V-06-31-22	200µl	10.6 ppm 250	10mL	0.2 ppm - 125	MeOH	V06-32-17	3/16/14 12/16/14	486	

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CHEMICAL RECEIVING LOGBOOK

LINE NO.	CHEMICAL	SOURCE	CATALOG NO.	LOT NO.	EXP. DATE	AMOUNT RECEIVED	TYPE CONT.	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO
1	Methanol	Fisher	A453-1	135540	07/2015	1 L	Glass	07/17/12	163	07/18/12	697
2										07/20/12	697
3										07/26/12	697
4										07/26/12	826
5										07/27/12	70
6										07/30/12	697
7										08/04/12	697
8										08/10/12	697
9										08/14/12	697
10										08/14/12	697
11										8/17/12	316
12										08/17/12	697
13	Cyclohexanone	Accustandard	M-554-04	21.2071049	Jan 05/2013	1 ml.	Amp	07/17/12	70	Disposed 1/17/13	70
14	VOA Custom std.	Supelco	21551859	LB94004	7/13	1 ml.	Amp	07/19/12	70	07/27/12	70
15										08/21/12	70
16										09/14/12	70
17											70
18										Disposed 12/03/12	
19											
20											
21											
22											
23											
24	2-Methyl-2-butanol	FluKa	19954	BCBB9501V	07/2015	1 ml.	Glass	07/23/12	70	07/23/12	70
25	Cyclohexanone	FluKa	02482	BCBG1242V	07/2015	1 ml	Glass	07/23/12	70	07/23/12	70

Reviewed by: JW on 7/17/12

09/01/99 Revision

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	California Oxygenates Mix 1	Restek	30465	A089093	6/17	1 ml	Amp	11/16/12	131	1/24/13	131	
2										2/8/13	131	
3										3/7/13	131	
4										3/19/13	131	
5										4/18/13	131	
6										5/7/13	131	
7										5/30/13	131	
8										6/21/13	131	
9	Vinyl Acetate	ChemService	N-13746-10G	838900	9/30/17	10G	Amp	11/16/12	131	1/14/13	131	
10	Acrolein	ChemService	N-11030-1G	701100	8/31/13	1g	Amp	11/16/12	131	11/30/12	131	
11												
12	Methanol	Fisher	A453-1	117046	12/12/15	1L	glass	12/12/12	131	12/21/12	670	
13										12/22/12	697	
14										12/28/12	697	
15										1/04/13	430	
16										1/7/13	721	
17										1/10/13	849	
18										1/15/13	697	
19										01/17/13	841	
20										1/21/13	849	
21										1/22/13	721	
22										1/23/13	849	
23										01/24/13	697	
24	Methanol Production Grade	VWR	BDH2018	08221102	12/15	1G	Plastic	12/13/12	791	12/13/12	791	
25	for un source cleaning								1	11/9/12	791	

COMMENTS: 6

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	502.2 Calibration Mix#1	Restek	30042	A091556	06/2019	1ml	Ampule	3/22/13	131	3/22/13	721	
2										3/29/13	670	
3										4/5/13	486	
4										4/12/13	608	
5										4/12/13	131	
6										4/19/13	721	
7										4/26/13	316	
8										5/3/13	670	
9										5/10/13	486	
10	~~VOA Calibration Mix#1~~	~~Restek~~	~~30006~~	~~A090791~~	~~12/2015~~	~~1ml~~	~~Ampule~~	~~3/22/13~~	~~131~~	5/17/13	608	
11												
12										Void	131	3/22/13
13										from line #11 to 14		
14										Void	131	3/22/13
15	VOA Calibration Mix#1	Restek	30006	A090791	12/2015	1ml	Ampule	3/22/13	131	9/28/13	131	
16										12/9/13	131	
17												
18												
19	California Oxygenates Mix#1	Restek	30465	A096673	09/2017	1ml	Ampule	3/22/13	131	11/12/13	131	
20										12/9/13	131	
21												
22												
23												
24	BTEX Standard	Restek	30213	A089584	08/2019	1ml	Ampule	3/22/13	131			
25												

COMMENTS:

Book Number: 6

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	Freon 123	Accustandard	M-REF-X-05	21012001	12/1/20	1ml	Ampule	3/29/13	131	12/10/13	316	
2												
3												
4	Custom VOC standard	Accustandard	S-21698-R7	2130314 73	5/28/14	1ml	Ampule	3/29/13	131	5/7/13	131	
5										5/30/13	131	
6										6/21/13	131	
7										7/16/13	131	
8										8/8/13	131	
9										9/4/13	131	
10										9/28/13	131	
11										10/17/13	131	
12										11/12/13	131	
13										12/9/13	131	
14	Me OH	Fisher	A453-1	117046	4/16	1L	glass	4/1/13	131	4/3/13	834	
15												
16										4/5/13	697	
17										4/10/13	697	
18										4/12/13	697	
19										4/12/13	608	
20										4/16/13	697	
21										4/19/13	697	
22										4/19/13	697	
23										4/25/13	697	
24										4/25/13	697	
25										04/30/13	841	

COMMENTS:

Book Number: 6

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	Crotonaldehyde	Accustandard	M-524-03	212011058-01	8/18/12	1ml	Ampule	4/8/13	131	4/8/13	131	
2	2,2-Dichloro-1,1,1-trifluoroethane	Absolute	71261	012510	01/25/15	1 ml.	Ampule	04/9/13	70			
3	2-Pentanone	Accystd	M-8015B/221-22	B7020174-45	01/17/13	1ml.	Amp.	04/09/13	70	4/9/13	131	EXP. 02/06/14
4	VOA Custom standard	Supelco	21651B34	LB 99662	10/14	1ml	Amp.	4/10/13	131	5/30/13	131	
5	↓	↓	↓	↓	↓	↓	↓	↓	↓	6/21/13	131	
6										7/16/13	131	
7										8/8/13	131	
8										9/4/13	131	
9										9/28/13	131	
10										10/17/13	131	
11										11/12/13	131	
12										12/9/13	131	
13	↓	↓	↓	↓	↓	↓	↓	↓	↓			
14	2-Pentanone (LCS)	Spexcertificate	S-2986	C112115016	04/10/15	1ml.	Amp	04/11/13	70	4/18/13	131	
15	2,2-Dichloro-1,1,1-trifluoroethane	Absolute	71261	012510	1/25/15	1ml	Amp.	4/17/13	131			
16	MeOH	Fisher	A453-1	117046	4/16	1L	Glass	4/22/13	131	4/30/13	697	
17	↓	↓	↓	↓	↓	↓	↓	↓	↓	5/2/13	697	
18										5/9/13	697	
19										↓	↓	
20										5/8/13	626	
21										05/08/13	697	
22										05/10/13	697	
23										05/15/13	697	
24										5/20/13	316	
25	↓	↓	↓	↓	↓	↓	↓	↓	↓	5/20/13	697	

COMMENTS:

Book Number: 6

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	Volatile Organic CMPDS – Gases	Accustandard	M-502B-10X-PAK	213030448	5/12/16	1ml	Ampule	5/16/13	131			
2												
3	Volatile Organic CMPDS – Liquids	Accustandard	M502A-R-10X-PAK	212101379	11/2/15	1ml	Ampule	5/16/13	131	5/30/13	131	
4										6/21/13	131	
5										7/16/13	131	
6										8/8/13	131	
7										9/4/13	131	
8										9/28/13	131	
9										10/17/13	131	
10										11/12/13	131	
11										12/9/13	131	
12												
13	Methanol	Fisher	A453-1	125253	5/17/16	1L	glass	5/17/13	131	5/24/13	721	
14										5/25/13	697	
15										5/30/13	697	
16										06/05/13	eH	
17										06/06/13	697	
18										06/12/13	697	
19										06/14/13	420	
20										06/15/13	697	
21										06/20/13	697	
22										06/25/13	791	
23										06/25/13	697	
24										06/28/13	697	
25	Custom std. Quote# 103012-889 (8260 25/55)	ultra Scientific	CUS-9349	CK-1766	6/30/15	1ml	Ampule	6/4/13	131	09/20/13	823	

COMMENTS:

Book Number: 6

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	Custom Std. Quote# 103012-889	Ultra Scientific	CUS-~~9349~~	CK-1766	6/30/15	1ml	Ampule	6/4/13	131	09/20/13	823	
2	(8260 IS/SS)		CUS-9349 (10/1/13)							10/1/13	131	
3										~~10/1/13~~ 10/19/13	~~131~~ 823	TW 10/1/13
4										11/15/13	823	
5										11/20/13	849	
6										12/11/13	480	
7										12/28/13	626	
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20	VOA Calibration Mix #1	Restek	30006	A090791	12/15	1ml	Ampule	6/4/13	131	7/16/13	131	
21												
22												
23	8260B Calibration Mix #1	Restek	30633	A093741	2/16	1ml	Ampule	6/4/13	131	7/16/13	131	
24										8/4/13	131	
25										9/4/13	131	

COMMENTS:

Book Number: 6

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	MeOH	Fisher	A453-1	125253	6/21/15	1L	glass	6/21/13	131	~~6/28/13~~ 6/28/13	6/28/13 823	823
2	↓	↓	↓	↓	↓	↓	↓	↓	↓	7/16/13	697	
3	↓	↓	↓	↓	↓	↓	↓	↓	↓	07/17/13	697	
4	Sodium Bisulfate	Fisher	S240-3	126178	6/28/16	3kg	plastic	6/28/13	131	7/2/13	834	
5	↓	↓	↓	↓	↓	↓	↓	↓	↓	8/19/13	607	
6	↓	↓	↓	↓	↓	↓	↓	↓	↓	09/11/13	607	
7	↓	↓	↓	↓	↓	↓	↓	↓	↓	10/03/13	607	
8	Volatile Organics High Conc. Mix #6	ChemService	M-VOHC6M5-1ml	1657100	6/30/14	1ml	Ampule	7/1/13	131	8/23/13	480	
9	↓	↓	↓	↓	↓	↓	↓	↓	↓			
10	↓	↓	↓	↓	↓	↓	↓	↓	↓			
11	↓	↓	↓	↓	↓	↓	↓	↓	↓			
12	↓	↓	↓	↓	↓	↓	↓	↓	↓			
13	Acrolein	ChemService	N-11030-1G	1506200	5/30/14	1ml	Ampule	7/1/13	131	10/1/13	131	
14	Cyclohexanone	ChemService	N-11531-10G	1365600	1/31/18	10g	glass	7/1/13	131			
15	tert-Amyl Alcohol (TAA)	ChemService	N-13518/06	1593900	5/31/19	10g	glass	7/1/13	131			
16	Sea Sand	Fisher	S25-3	123310	7/2/16	3kg	plastic	7/2/13	131	07/02/13	697	
17	EPA 524.2 Rev. 4 Mix	Supelco	47427-U	LC01101	9/14	1ml	Ampule	7/11/13	131	8/8/13	131	
18	↓	↓	↓	↓	↓	↓	↓	↓	↓	9/4/13	131	
19	↓	↓	↓	↓	↓	↓	↓	↓	↓	9/28/13	131	
20	↓	↓	↓	↓	↓	↓	↓	↓	↓	10/17/13	131	
21	↓	↓	↓	↓	↓	↓	↓	↓	↓	11/12/13	131	
22	MeOH	Fisher	A453-1	125253	7/12/15	1L	glass	7/12/13	131	07/18/13	697	
23	↓	↓	↓	↓	↓	↓	↓	↓	↓	07/19/13	486	
24	↓	↓	↓	↓	↓	↓	↓	↓	↓	07/19/13	697	
25	↓	↓	↓	↓	↓	↓	↓	↓	↓	07/19/13	697	

COMMENTS:

Book Number: 6

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	Me OH	Fisher	A453-1	125253	7/12/15	1L	glass	7/12/13	131	07/19/13	697	
2										07/24/13	697	
3										07/24/13	791	
4										07/25/13	791	
5										07/26/13	697	
6										7/27/13	670	
7										7/31/13	697	
8												
9	Sea Sand	Fisher	S25-3	123310A	7/16/16	3Kg	plastic	7/16/13	131	07/17/13	697	
10	Me OH	Fisher	A453-1	125253	7/26/15	1L	Glass	7/26/13	131	08/02/13	626	
11										08/08/13	697	
12										08/08/13	876	
13										8/12/13	316	
14										08/12/13	697	
15										08/15/13	791	
16										08/16/13	697	
17										08/17/13	697	
18										08/21/13	697	
19										08/23/13	626	
20										8/26/13	131	
21										8/29/13	697	
22	VOA Calibration Mix #1 (LCS)	Restek	30006	A090981	12/15	1ml	Ampule	7/29/13	131	8/8/13	131	
23										10/17/13	131	
24										11/12/13	131	
25												

COMMENTS:

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Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	MeOH	Fisher	A453-1	125253	9/15	1L	Glass	9/18/13	697	10/10/13	697	
2	Sodium Bisulfate	Fisher	S240-3	126178	9/16	3kg	plastic	9/26/13	131	10/31/13	607	
3										12/03/13	697	
4												
5												
6	Sea Sand	Fisher	S25-3	123310A	10/16	3kg	plastic	10/7/13	131	10/07/13	697	
7	8260B Calibration Mix #1	Restek	30633	A095254	5/31/16	1ml	Ampule	10/7/13	131	11/12/13	131	
8										12/9/13	131	
9												
10												
11												
12	2-CEVE	Restek	30265	A094738	04/18	1ml	Ampule	10/7/13	131	11/12/13	131	
13										12/9/13	131	
14												
15												
16												
17	Calif. Oxyg. Mix #1	Restek	30465	A096049	6/30/18	1ml	Ampule	10/7/13	131			
18												
19												
20												
21												
22	Volatile Organic Compds. Liquids	Accustandard	M-502A-R-10X	213071090	7/10/16	1ml	Ampule	10/8/13	131			
23												
24												
25												

COMMENTS:

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Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	Volatile Organic Compds Liquids	Accustandard	M-SQA-R-10X	21307109O	7/10/16	1ml	Ampule	10/8/13	131			
2												
3												
4												
5												
6												
7	2-CEVE	Supelco	86-1206	LB94166	7/15	1ml	Ampule	10/8/13	131	10/17/13	131	
8										11/12/13	131	
9										12/9/13	131	
10												
11												
12												
13	Freon 123	Supelco	CRM4841 2	LC01303	6/16	1ml	Ampule	10/8/13	131	10/10/13	RP	
14												
15												
16	Methanol	Fisher	A453-1	125253	10/15	1L	Glass	10/10/13	131	10/10/13	697	
17										10/11/13	131	
18										10/14/13	697	
19										↓	↓	
20										10/19/13	697	
21										10/19/13	823	
22										10/21/13	697	
23										10/22/13	697	
24										10/23/13	697	
25												

COMMENTS:

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Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	Methanol	Fisher	A453-1	125253	10/15	1L	Glass	10/10/13	131	10/29/13	697	
2	↓	↓	↓	↓	↓	↓	↓	↓	↓	11/01/13	697	
3	Chloroprene	Supelco	86145	LC03221	10/14	1ml	glass	10/11/13	131	12/9/13	131	
4	↓	↓	↓	↓	↓	↓	↓	↓	↓			
5												
6												
7	↓	↓	↓	↓	↓	↓	↓	↓	↓			
8	Custom VOC standard	Accustandard	S-21698-R7	213101103	10/10/14	1ml	glass	10/16/13	131			
9	↓	↓	↓	↓	↓	↓	↓	↓	↓			
10												
11												
12												
13												
14												
15												
16												
17	↓	↓	↓	↓	↓	↓	↓	↓	↓			
18	EPA 524.2 Rev. 4 Mix	Supelco	47427-U	LC01101	9/14	1ml	Ampule	10/17/13	131	12/9/13	131	
19	↓	↓	↓	↓	↓	↓	↓	↓	↓			
20												
21												
22	↓	↓	↓	↓	↓	↓	↓	↓	↓			
23	Sea sand	Fisher	S25-3	121747	10/25/16	3Kg	plastic	10/25/13	131	10/25/13	697	
24	Methanol	Fisher	A453-1	125253	10/25/15	1L	glass	10/25/13	131	11/01/13	608	
25	↓	↓	↓	↓	↓	↓	↓	↓	↓	11/05/13	697	

COMMENTS:

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Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	Methanol	Fisher	A453-1	125253	6/25/15	1L	glass	10/25/13	131	11/05/13	697	
2										11/06/13	697	
3										11/08/13	697	
4										11/11/13	626	
5										11/12/13	697	
6										11/12/13	608	
7										11/14/13	697	
8										11/20/13	697	
9										11/20/13	849	
10										11/22/13	697	
11	ICV 502.2 Calibration Mix#1	Restek	30042	A097263	4/30/20	1ml	Ampule	11/6/13	131	11/15/13	510	
12										11/22/13	823	
13										12/06/13	486	
14										12/13/13	316	
15												
16												
17												
18												
19												
20												
21	LCS 502.2 Calibration Mix#1	Restek	30042	A098774	6/30/20	1ml	Ampula	11/6/13	131	11/08/13	316	
22										11/15/13	510	
23										11/22/13	849	
24										12/06/13	486	
25										12/13/13	316	

COMMENTS:

05/22/12 Revision