

Prepared for:

DREXEL CHEMICAL COMPANY
120 Cape Road
Cordele, GA 31015

FIRST ANNUAL REPORT
DREXEL CHEMICAL COMPANY
Cordele, Georgia

Prepared by:



1050 Crown Pointe Parkway, Suite 550
Atlanta, Georgia 30338
Tel: 404-315-9113

December 2016

DCN: DREXRPS008

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Kirk Kessler, P.G.
Senior Principal



Alex Testoff
Staff Engineer

December 2016

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CERTIFICATION

Drexel is the current owner of the Property. The draft Environmental Covenant for the Property requires that the current Property owner certify annually that the Activity and Use Limitations in the Covenant are being abided by. Drexel certifies that, in the past twelve months (January through December 2016):

1. There has been no use or extraction of groundwater beneath the Property for potable use.
2. The Monitoring and Maintenance Plan has been followed. A description of the actions that have taken place during this year and associated analytical results are included in this report.

Certified by:

Drexel Chemical Company

Leigh Shockey

CEO

Date:

12/31/2016

1 INTRODUCTION

EPS has prepared this Annual Report on behalf of Drexel Chemical Company (“Drexel”) for the pesticide blending facility located at 120 Cape Road in Cordele, Georgia (Tax Parcel No. 040 031, the “Facility”). Figure 1 shows the location of the Facility and the adjacent property (“Drexel Additional Property”) also owned by Drexel. Drexel completed the soil remediation and initiated the groundwater remediation described in the approved Remediation Plan¹ under the Voluntary Remediation Program (“VRP”). Drexel submitted a Compliance Status Report (“CSR”), which included a proposed Environmental Covenant (“Covenant”) and Monitoring and Maintenance Plan (“M&M Plan”) in June 2016. The CSR is currently under review by the EPD and not officially in effect; however, in the interim Drexel has been conducting the activities specified in the CSR, Covenant, and M&M Plan.

Concentrations of 1,2-Dibromoethane (“EDB”) have been detected in groundwater at the Facility above the Residential Risk Reduction Standard (“RRS”; 0.09 micrograms per liter (“ $\mu\text{g}/\text{L}$ ”)). Drexel has implemented the following engineering and institutional controls to address and assess the presence of EDB in groundwater at the Facility:

- implemented a groundwater treatment system to remove EDB from groundwater per the Remediation Plan, and
- prepared a Covenant to restrict groundwater extraction to non-potable use at the Facility and to monitor EDB in groundwater per the Remediation Plan.

In June 2016, EPS submitted the M&M Plan as an attachment to the CSR (EPS, 2016) that formalized the operation and monitoring of the treatment system, groundwater monitoring, and reporting requirements. Per the M&M Plan, an annual report is due in December of each year. This is the first annual report and describes the actions that have taken place since the groundwater treatment system began operation and associated analytical results.

¹ The Final Remediation Plan was presented in the Fifth Progress Report (EPS, 2013). The plan was approved by the EPD in a letter dated June 19, 2014.

2 GROUNDWATER REMEDIATION

2.1 Treatment System Overview

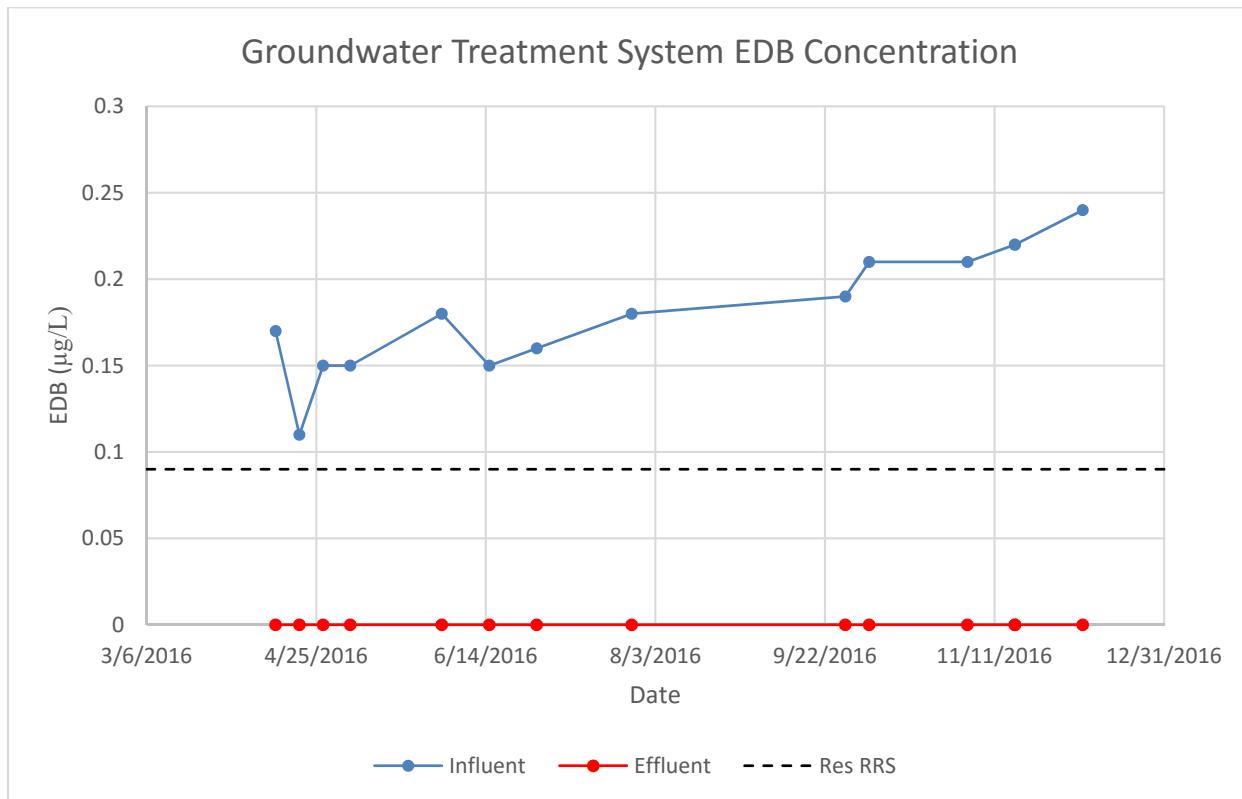
A groundwater treatment system began operation on April 13, 2016 following extensive soil remediation by excavation at the Facility. The goal of the treatment system is to reduce the concentration of EDB in groundwater at the Facility below the Residential RRS. The treatment system consists of an extraction well (EW-1, also called “GACI”). Groundwater pumped from the extraction well flows through two in-series carbon steel tanks. The carbon steel vessels each contain 500 lb of virgin coconut shell carbon (a.k.a. Granular Activated Carbon, “GAC”). The treated water is stored in a 30,000-gallon storage tank for on-demand non-potable use by the facility.

2.2 Treatment System Monitoring

Drexel monitors the treatment system regularly and weekly records the water flow meter reading, flow rate and system pressure. Table 1 shows the log of these readings.

Per the Plan, the influent and effluent of the treatment system was to be monitored weekly for a month, biweekly for two months, monthly for nine months and then semi-annually. Table 2 shows the results of the sampling. The timing of the monthly sampling changed from the end of the month to the beginning of the month in October in order to meet requirements of the Facility’s National Pollutant Discharge Elimination System permit. Water samples were collected from the influent (groundwater extracted from EW-1/GACI) to and effluent from (GACE) the treatment system. The samples were analyzed for EDB using EPA Method 504.1. Appendix A includes the laboratory data reports for the treatment system.

The time series plot below shows the concentration of EDB detected in samples collected from the groundwater treatment system since its inception. EDB was detected above the Residential RRS ($0.09 \mu\text{g/L}$) in every influent sample collected from April 13, 2016 to December 7, 2016. The results ranged from $0.11 \mu\text{g/L}$ to $0.24 \mu\text{g/L}$. EDB was not detected in any of the effluent samples; thus, no breakthrough of the primary and secondary carbon vessels has occurred.



The analytical results from the first reporting period indicate that EDB concentrations in groundwater at the Facility do not meet Residential RRS. Accordingly, Drexel will continue to operate the groundwater treatment system per the M&M Plan:

- Monthly for at least two months beginning the start of the new year (last monthly samples collected in February 2017), then
- Semi-annually until the treatment system is no longer in operation.

2.3 EDB Removal

As of December 7, 2016, the system has treated approximately 1,550,290 gallons of groundwater and removed approximately 1.08 grams of EDB. Table 3 shows the EDB removal calculations.

2.4 Treatment System Maintenance

No maintenance was required on the treatment system during the first annual reporting period. No observable breakthrough of the carbon vessels has occurred.

3 GROUNDWATER MONITORING

3.1 Overview

The groundwater monitoring program includes semi-annual sampling of the extraction well (GAC-I / EW-1) and annual sampling of this well, plus five additional monitoring wells, as shown on Figure 2. The extraction well has been sampled regularly as part of the treatment system sampling described in Section 2. EPS conducted the annual sampling event on November 17 and 18, 2016 that involved sampling wells located in the area of highest groundwater EDB concentrations (BW-1, BW-6-1 and EW-1) and wells downgradient of this area (BW-2, BW-5 and Well D). Figure 2 shows the locations of these wells. Groundwater samples were analyzed for EDB. The groundwater sampling results are summarized in Section 3.2. All laboratory analytical reports are included in Appendix A.

3.2 Groundwater Sampling Methods

Three different methods were used to purge monitoring wells. Wells BW-1, BW-2, and BW-5 were purged and sampled using a traditional low-flow, down-well pump. The pump was connected to Teflon-lined tubing and then lowered to the top of the water column. Each monitoring well was purged of a minimum of three well volumes and until three consecutive readings were stable according to the following criteria: (i) specific conductance $\pm 5\%$, (ii) pH ± 0.1 standard pH units, and (iii) turbidity < 10 NTU or stable. All Well Sampling Forms are included in Appendix B.

EW-1 was installed in April 2016 as an extraction well for the groundwater treatment system described in Section 2 of this report. The groundwater sample from EW-1/GACI was collected from the influent to the treatment system via discharge from a faucet connected to the system. Similarly, the Well D groundwater sample was collected via discharge from a faucet connected to a water supply system that Drexel installed in well D at the beginning of 2015 for on-demand non-potable use by the Facility. The faucets at both EW-1/GACI and Well D were left open to purge for at least 15 minutes prior to sampling to evacuate water from the pump tubing and well annulus, and ensure a sample representative of the nearby groundwater condition.

BW-6-1 (the FLUTE well) was purged and sampled using the methodology recommended by FLUTE. The port corresponding to BW-6-1 was individually purged and then sampled. The groundwater was obtained by air lifting the water using pressurized nitrogen. Figures included in Appendix C show a depiction of the pumping procedure from the manufacturer. Water was pumped from the tubing by applying the gas pressure to the interface at the static water level in the pump tube. The water was driven down in the pump tube and up through the second check valve to the surface via the sample tube. After all water in the tubes was evacuated, the gas pressure was reduced and the tubing was allowed to refill before the lines were purged again. The water sample was collected directly from the sample tube during the fourth purge sequence.

Once well purging was complete, groundwater samples were collected in two, 40-mL glass vials containing sodium thiosulfate preservative for analysis by EPA Method 504.1. Each sample was labeled, logged under standard chain-of-custody procedures, and placed on ice in a cooler. The sample cooler was shipped to ALS Environmental in Kelso, Washington.

Sampling equipment was decontaminated by brush washing with a phosphate-free detergent solution and rinsed with distilled water. Disposable gloves were worn during sampling and discarded after each sample was collected to lessen the potential of cross-contamination.

Investigative derived waste (IDW) included decontamination water and purge water. The IDW was containerized in a 300-gallon tote for off-site disposal.

3.3 Groundwater Flow Direction

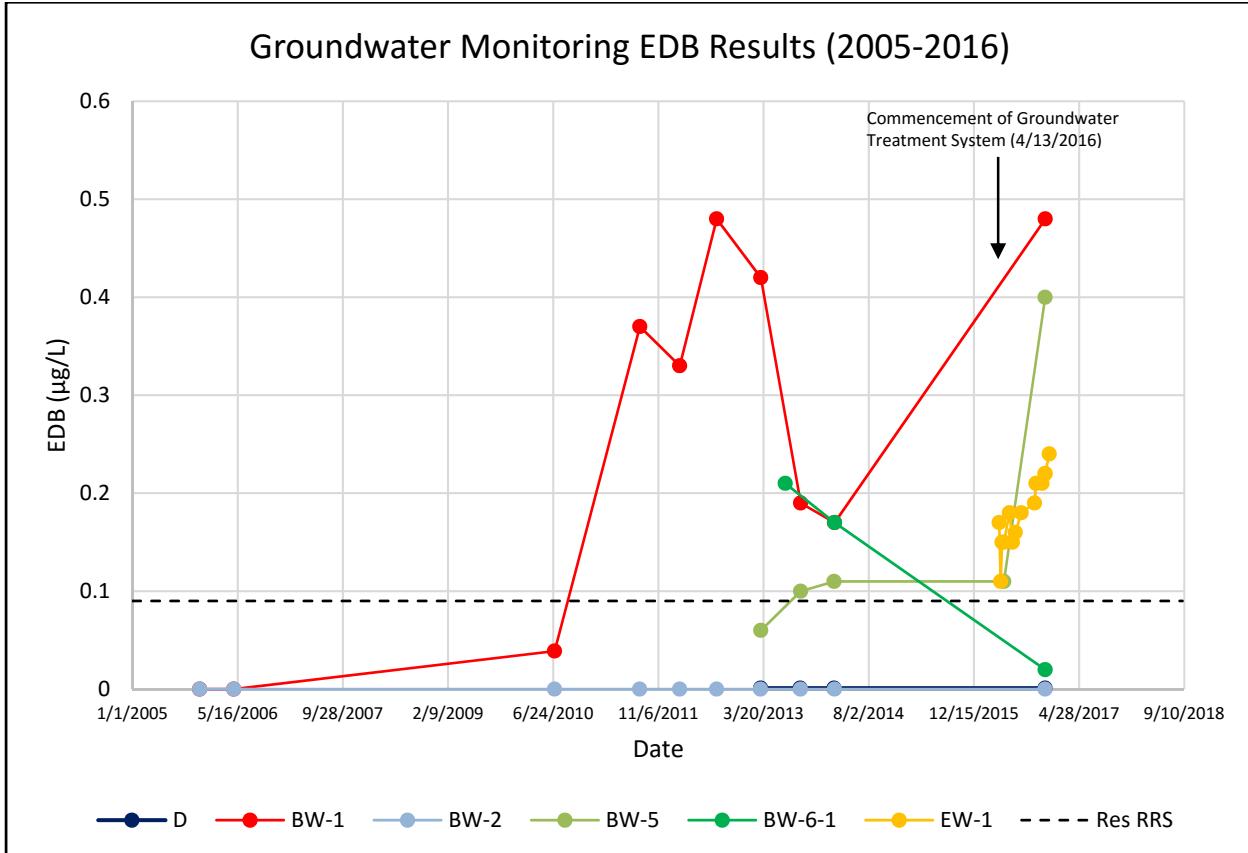
In November 2016, EPS gauged the following wells to determine the groundwater flow direction at the Facility: BW-1, BW-2, BW-3, BW-4, BW-5, and EW-1. EPS was unable to measure the depth to groundwater in BW-6 and well D due to above-ground obstructions related to the groundwater treatment system and water supply system, respectively. Groundwater elevations are summarized on Table 4. Figure 3 is a potentiometric surface map depicting general groundwater flow direction to the southeast.

3.4 Groundwater Sampling Results

Analytical results from both sampling events conducted in 2016 are summarized in the table below. EDB was detected at concentrations exceeding the Residential RRS in water samples collected from BW-1, BW-5, and EW-1. EDB was also detected in BW-6-1 below the Residential RRS. EDB was not detected in samples collected from Well D or BW-2.

Location	Date Sampled	1,2-Dibromoethane ($\mu\text{g/L}$)
BW-1	11/18/2016	0.48
BW-2	11/17/2016	<0.003
BW-5	5/5/2016	0.11
BW-5	11/17/2016	0.40
BW-6-1	11/17/2016	0.02
Well D	11/17/2016	<0.003
EW-1/GACI	11/17/2016	0.22

EDB analytical results for samples collected from wells BW-1, BW-2, BW-5, BW-6-1, Well D, and EW-1 from November 2005 to November 2016 are shown in Table 5. This data is presented below in a time series plot.



Groundwater monitoring will continue per the M&M Plan.

4 REFERENCES

Environmental Planning Specialists, Inc. (EPS), *Fifth Progress Report*. December 2013.

EPS, 2016. *Compliance Status Report*. May.

EPS

TABLES

Table 1. GAC System Log

Date	Cumulative Flow Meter Reading (gal)	Flow Rate (gal/min)	System Pressure (psi)	Note
4/13/2016	Initial	4.5	5	
4/20/2016	24,100	4.9	5	
4/27/2016	70,070	4.5	11	
5/5/2016	122,579	4.5	5	
5/18/2016	205,840	4.5	4	
5/25/2016	251,100	4.5	4	
6/1/2016	295,440	4.5	10	
6/9/2016	346,060	4.5	3	
6/15/2016	384,550	4.5	4	
6/29/2016	472,670	5.1	8	
7/7/2016	523,210	4.5	4	
7/13/2016	561,490	4.5	4.5	
7/21/2016	612,100	4.5	10	
7/27/2016	650,570	4.5	4.5	
8/4/2016	670,580	4.5	11	Breaker Tripped
8/10/2016	709,180	4.5	5	
8/17/2016	755,990	4.6	5	
8/24/2016	799,870	4.6	2	
9/1/2016	851,050	4.2	4	
9/7/2016	889,940	4.5	11	
9/14/2016	934,790	4.6	2	
9/21/2016	980,190	4.5	3	
9/28/2016	1,017,250	4.5	12	
10/5/2016	1,062,460	4.59	2	
10/13/2016	1,113,060	4.5	5	
10/19/2016	1,150,630	4.5	2	
10/27/2016	1,201,140	4.5	11	
11/3/2016	1,246,110	4.4	9	
11/9/2016	1,284,270	4.5	5	
11/16/2016	1,329,110	4.5	4	
11/30/2016	1,416,690	4.6	5	
12/7/2016	1,460,970	4.5	5	
12/14/2016	1,505,410	4.5	5	
12/21/2016	1,550,290	4.5	5	

Table 2. Treatment System Analytical Results

Date	Sample ID	EDB- Influent (ug/L)	EDB - Effluent (ug/L)
Weekly Sampling for One Month			
4/13/2016	16104_GACI	0.17	--
	16104_GACE	--	ND
4/20/2016	16111_GACI	0.11	--
	16111_GACE	--	ND
4/27/2016	16118_GACI	0.15	--
	16118_GACE	--	ND
5/5/2016	16126_GACI	0.15	--
	16126_GACE	--	ND
Biweekly for Two Months			
5/18/2016	16139_GACI	0.19	--
	16139_GACE	--	ND
6/1/2016	16153_GACI	0.18	--
	16153_GACE	--	ND
6/15/2016	16167_GACI	0.15	--
	16167_GACE	--	ND
Monthly for Nine Months			
6/29/2016	16181_GACI	0.16	--
	16181_GACE	--	ND
7/27/2016	16209_GACI	0.18	--
	16209_GACE	--	ND
8/24/2016	16237_GACI	NA*	--
	16237_GACE	--	NA*
9/28/2016	16272_GACI	0.19	--
	16272_GACE	--	ND
10/5/2016	16279 GACI	0.21	--
	16279 GACE	--	ND
11/3/2016	16309 GACI	0.21	--
	16309 GACE	--	ND
11/17/2016	16322-GACI	0.22	--
	16322-GACE	--	ND
12/7/2016	16342 GACI	0.24	--
	16342 GACE	--	ND

* Not detected. Samples were inadvertently shipped to the wrong laboratory.

Table 3. Groundwater Treatment System: EDB Removal

Date Sampled	Result ($\mu\text{g}/\text{L}$)	Avg. Concentration Between Sampling Events* ($\mu\text{g}/\text{L}$)	Flow Meter Reading (gal)	Flow Rate (gpm)	Avg. Flow Rate Between Sampling Events* (gpm)	EDB Removal Rate** (grams/day)	Cumulative Total EDB Removed*** (grams)
4/13/2016	0.17	--	Initial	4.5	--	4.17E-03	Initial
4/20/2016	0.11	0.14	24,100	4.9	4.7	3.59E-03	2.51E-02
4/27/2016	0.15	0.13	70,070	4.5	4.7	3.33E-03	4.84E-02
5/5/2016	0.15	0.15	122,579	4.5	4.5	3.68E-03	7.78E-02
6/1/2016	0.18	0.165	295,440	4.5	4.5	4.05E-03	1.87E-01
6/15/2016	0.15	0.165	384,550	4.5	4.5	4.05E-03	2.44E-01
6/29/2016	0.16	0.155	472,670	5.1	4.8	4.06E-03	3.01E-01
7/27/2016	0.18	0.17	650,570	4.5	4.8	4.45E-03	4.25E-01
9/28/2016	0.19	0.185	1,017,250	4.5	4.5	4.54E-03	7.11E-01
10/5/2016	0.21	0.2	1,062,460	4.6	4.6	4.96E-03	7.46E-01
11/3/2016	0.21	0.21	1,246,110	4.4	4.5	5.15E-03	8.95E-01
12/7/2016	0.24	0.225	1,460,970	4.5	4.5	5.52E-03	1.08E+00

Notes:

* Averages calculated using current and previous Result

$$** \frac{\text{grams EDB removed}}{\text{day}} = \frac{\mu\text{g}}{\text{L}} \times \frac{\text{gal}}{\text{min}} \times \frac{3.785 \text{ L}}{\text{gal}} \times \frac{1440 \text{ min}}{\text{day}} \times \frac{\text{g}}{10^6 \mu\text{g}}$$

Avg. Concentration Avg. Flow Rate

*** Running total using the following equation:

$$\text{grams EDB removed btwn samples} = \frac{\text{grams EDB removed}}{\text{day}} \times (\# \text{days between samples})$$

Table 4. Groundwater Elevation Measurements

Well ID	Date Measured	Depth to Water (ft. bgs)	Top of Casing Elevation (ft. asml)	Groundwater Elevation (ft. asml)
BW-1	11/17/2016	150.85	411.31	260.46
BW-2	11/17/2016	153.42	412.34	258.92
BW-3	11/17/2016	152.9	414.47	261.57
BW-4	11/17/2016	153.71	414.69	260.98
BW-5	11/17/2016	149.3	408.86	259.56
D	11/17/2016	NM	417.51	NM
BW-6-1	11/17/2016	NM	409.47	NM
EW-1	11/17/2016	149.95	410.49	260.54

Notes:

NM = Not Measured

ft. bgs = feet below ground surface

ft. asml = feet above sea mean level

Table 5. Groundwater EDB Analytical Results

		1,2-Dibromoethane ($\mu\text{g/L}$)
Residential RRS		0.09
Location	Date Sampled	
BW-1	11/16/2005	<0.002
BW-1	4/27/2006	<0.0018
BW-1	6/30/2010	0.04
BW-1	8/10/2011	0.37
BW-1	2/15/2012	0.33
BW-1	8/9/2012	0.48
BW-1	3/7/2013	0.42
BW-1	9/12/2013	0.19
BW-1	9/12/2013	0.19
BW-1	2/20/2014	0.17
BW-1	11/18/2016	0.48
BW-2	11/16/2005	<0.0021
BW-2	4/27/2006	<0.0018
BW-2	6/30/2010	<0.003
BW-2	8/9/2011	<0.003
BW-2	2/15/2012	<0.003
BW-2	8/9/2012	<0.003
BW-2	3/5/2013	<0.003
BW-2	9/11/2013	<0.003
BW-2	2/20/2014	<0.003
BW-2	11/17/2016	<0.003
BW-5	3/7/2013	0.06
BW-5	9/12/2013	0.10
BW-5	2/18/2014	0.11
BW-5	5/5/2016	0.11
BW-5	5/5/2016	0.11
BW-5	11/17/2016	0.40
BW-6-1	7/1/2013	0.21
BW-6-1	2/20/2014	0.17
BW-6-1	11/17/2016	0.02
D	3/6/2013	<0.003
D	9/10/2013	<0.003
D	2/18/2014	<0.003
D	11/17/2016	<0.003
EW-1*	4/13/2016	0.17
EW-1*	4/20/2016	0.11
EW-1*	4/27/2016	0.15
EW-1*	5/5/2016	0.15
EW-1*	6/1/2016	0.18
EW-1*	6/15/2016	0.15
EW-1*	6/29/2016	0.16
EW-1*	7/27/2016	0.18

Table 5. Groundwater EDB Analytical Results

		1,2-Dibromoethane ($\mu\text{g/L}$)
Residential RRS		0.09
Location	Date Sampled	
EW-1*	9/28/2016	0.19
EW-1*	10/5/2016	0.21
EW-1*	11/3/2016	0.21
EW-1*	11/17/2016	0.22
EW-1*	12/7/2016	0.24
EW-1*	11/17/2016	0.22

Notes: = exceeds Res RRS

* = Treatment system influent (GACI)

EPS

FIGURES

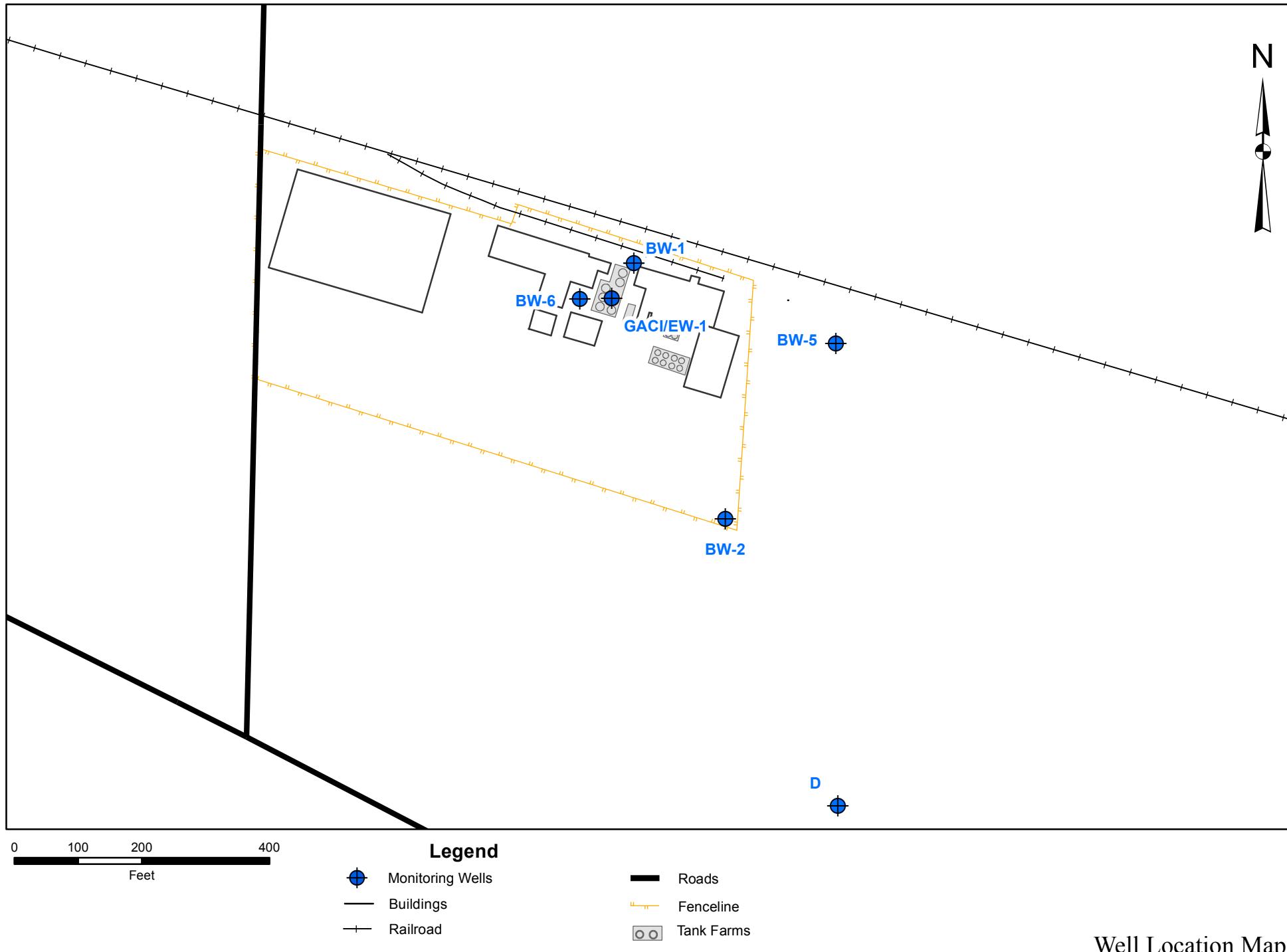


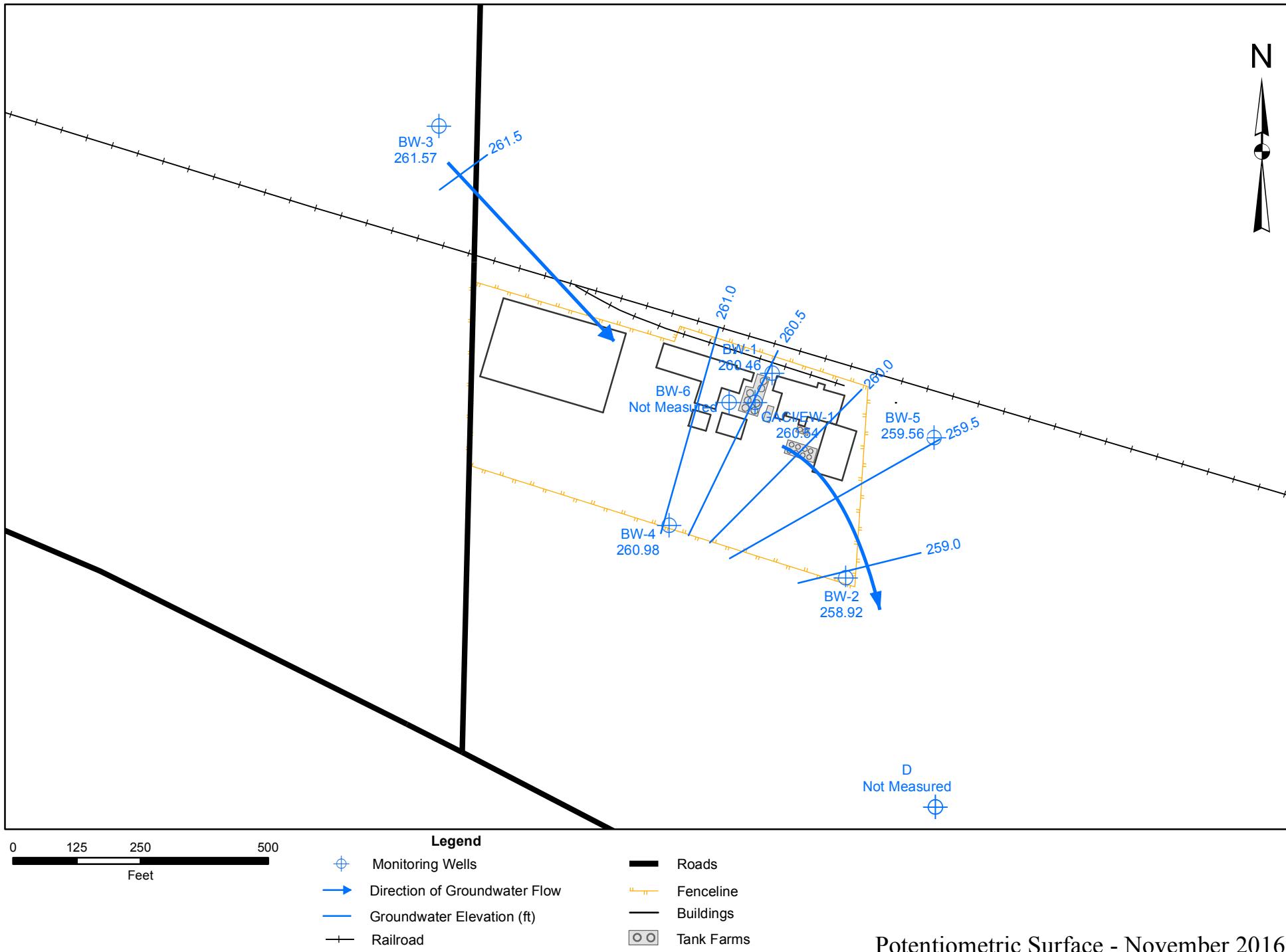
0 250 500 1,000
Feet

Legend

- Drexel Facility
- Drexel Additional Property

Drexel Properties
Figure No.1





APPENDIX A
Laboratory Reports



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

December 19, 2016

Analytical Report for Service Request No: K1614217

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory November 19, 2016
For your reference, these analyses have been assigned our service request number **K1614217**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink, appearing to read "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.alsglobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialists **Service Request No.:** K1614217
Project: Drexel **Date Received:** 11/19/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Nine water samples were received for analysis at ALS Environmental on 11/19/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

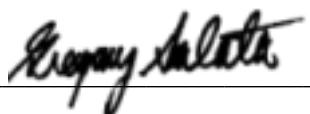
EDB by EPA Method 504.1

Sample Notes and Discussion:

Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Environmental



CHAIN OF CUSTODY

75039

003

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.comSR# K1614217
COC Set 1 of 1
COC#

Page 1 of 1

Project Name: Drexel		Project Number:		NUMBER OF CONTAINERS 504.1 / EDB DBCP 123TCP 14D	Remarks		
Project Manager: Tammy Bellman							
Company: EPS Inc.							
Address: 1050 Creek Pointe Dr., Ste. 550 Atlanta, GA 30338							
Phone #: 404-315-9113		email:					
Sampler Signature: Alex Testoff Brian Goldmark		Sampler Printed Name: Alex Testoff Brian Goldmark					
CLIENT SAMPLE ID	LABID	SAMPLING Date	Time				
Matrix							
1. 16322-GACI		11/17/16	1700	GW	2 X		
2. 16322-GA/C/E		11/17/16	1705	GW	2 X		
3. 16322-BW-6-1		11/17/16	1635	GW	2 X		
4. 16322-BW-1		11/18/16	1145	GW	2 X		
5. 16322-BW-2		11/17/16	1430	GW	2 X		
6. 16322-DUP		11/17/16	1200	GW	2 X		
7. 16322-BW-5		11/17/16	1200	GW	2 X		
8. 16322-Well-D		11/17/16	1016	GW	2 X		
9. T7p Blank				W	2 X		
10.							

Report Requirements

- I. Routine Report: Method Blank, Surrogate, as required
- II. Report Dup., MS, MSD as required
- III. CLP Like Summary (no raw data)
- IV. Data Validation Report
- V. EDD

Invoice Information	
P.O.# _____	Circle which metals are to be analyzed
Bill To: _____	Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
_____	Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
Turnaround Requirements	
_____ 24 hr.	_____ 48 hr.
_____ 5 Day	_____ Standard
Requested Report Date	

Special Instructions/Comments: *Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other (Circle One)

EDB only, Method 504.

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: <i>Alex Testoff</i>					
Printed Name: Alex Testoff					
Firm: EPS Inc.					
Date/Time: 11/18/16 1230	Date/Time: 11/18/16 0910				



PC

bweq

Cooler Receipt and Preservation Form

Client ERS Service Request K16 14217
 Received: 11/19/16 Opened: 11/19/16 By: JL Unloaded: 11/19/16 By: BR

1. Samples were received via? **USPS** **Fed Ex** **UPS** **DHL** **PDX** **Courier** **Hand Delivered**
2. Samples were received in: (circle) **Cooler** **Box** **Envelope** **Other** **NA**
3. Were custody seals on coolers? **NA** **Y** N If yes, how many and where? 2, front
 If present, were custody seals intact? **Y** **N** If present, were they signed and dated? **Y** **N**

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
-0.5	-0.6	1.8	1.7	-0.1			807983140403		

4. Packing material **Inserts** **Baggies** **Bubble Wrap** **Gel Packs** **Wet Ice** **Dry Ice** **Sleeves** **NA** **Y** **N**
5. Were custody papers properly filled out (ink, signed, etc.)? **Y** **NA** **Y** **N**
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.*
 If applicable, tissue samples were received: **Frozen** **Partially Thawed** **Thawed** **NA** **Y** **N**
7. Were all sample labels complete (i.e analysis, preservation, etc.)? **NA** **Y** **N**
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* **NA** **Y** **N**
9. Were appropriate bottles/containers and volumes received for the tests indicated? **NA** **Y** **N**
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* **NA** **Y** **N**
11. Were VOA vials received without headspace? *Indicate in the table below.* **NA** **Y** **N**
12. Was C12/Res negative? **NA** **Y** **N**

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client:
Project:

Environmental Planning Specialists
Drexel

Service Request: K1614217

**Cover Page - Organic Analysis Data Package
EPA Method 504.1**

Sample Name	Lab Code	Date Collected	Date Received
16322-GACI	K1614217-001	11/17/2016	11/19/2016
16322-GACE	K1614217-002	11/17/2016	11/19/2016
16322-BW-6-1	K1614217-003	11/17/2016	11/19/2016
16323-BW-1	K1614217-004	11/18/2016	11/19/2016
16322-BW-2	K1614217-005	11/17/2016	11/19/2016
16322-DUP	K1614217-006	11/17/2016	11/19/2016
16322-BW-5	K1614217-007	11/17/2016	11/19/2016
16322-Well-D	K1614217-008	11/17/2016	11/19/2016
Trip Blank	K1614217-009	11/17/2016	11/19/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016

EPA Method 504.1

Sample Name: 16322-GACI **Units:** ug/L
Lab Code: K1614217-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.22		0.0098	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016

EPA Method 504.1

Sample Name: 16322-GACE **Units:** ug/L
Lab Code: K1614217-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0099	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016

EPA Method 504.1

Sample Name: 16322-BW-6-1 **Units:** ug/L
Lab Code: K1614217-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.020		0.0099	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/18/2016
Date Received: 11/19/2016

EPA Method 504.1

Sample Name: 16323-BW-1 **Units:** ug/L
Lab Code: K1614217-004 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.48		0.0096	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016

EPA Method 504.1

Sample Name: 16322-BW-2 **Units:** ug/L
Lab Code: K1614217-005 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0099	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016

EPA Method 504.1

Sample Name: 16322-DUP **Units:** ug/L
Lab Code: K1614217-006 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0098	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016

EPA Method 504.1

Sample Name: 16322-BW-5 **Units:** ug/L
Lab Code: K1614217-007 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.40		0.0098	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016

EPA Method 504.1

Sample Name: 16322-Well-D **Units:** ug/L
Lab Code: K1614217-008 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0099	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1614217-009 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0099	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1610727-3 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	0.00300	1	11/29/16	11/29/16	KWG1610727	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Extracted: 11/29/2016
Date Analyzed: 11/29/2016

Lab Control Spike/Duplicate Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Extraction Lot: KWG1610727

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			%Rec Limits	RPD	RPD Limit			
	KWG1610727-1			KWG1610727-2								
	Lab Control Spike			Duplicate Lab Control Spike								
Result	Spike Amount	%Rec	Result	Spike Amount	%Rec							
1,2-Dibromoethane (EDB)	0.283	0.250	113	0.263	0.250	105	70-130	7	20			

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Extracted: 11/29/2016
Date Analyzed: 11/29/2016
Time Analyzed: 22:14

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1610727-3	File ID:	J:\GC33\DATA\112916-504\1129000226.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1610727

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
16322-GACI	K1614217-001	J:\GC33\DATA\112916-504\1129000215.D	11/29/16	17:54
16322-GACE	K1614217-002	J:\GC33\DATA\112916-504\1129000216.D	11/29/16	18:18
16322-BW-6-1	K1614217-003	J:\GC33\DATA\112916-504\1129000217.D	11/29/16	18:41
16323-BW-1	K1614217-004	J:\GC33\DATA\112916-504\1129000218.D	11/29/16	19:05
16322-BW-2	K1614217-005	J:\GC33\DATA\112916-504\1129000219.D	11/29/16	19:28
16322-DUP	K1614217-006	J:\GC33\DATA\112916-504\1129000220.D	11/29/16	19:52
16322-BW-5	K1614217-007	J:\GC33\DATA\112916-504\1129000221.D	11/29/16	20:16
16322-Well-D	K1614217-008	J:\GC33\DATA\112916-504\1129000222.D	11/29/16	20:39
Trip Blank	K1614217-009	J:\GC33\DATA\112916-504\1129000223.D	11/29/16	21:03
Lab Control Sample	KWG1610727-1	J:\GC33\DATA\112916-504\1129000224.D	11/29/16	21:27
Duplicate Lab Control Sample	KWG1610727-2	J:\GC33\DATA\112916-504\1129000225.D	11/29/16	21:50

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Extracted: 11/29/2016
Date Analyzed: 11/29/2016
Time Analyzed: 21:27

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1610727-1	File ID:	J:\GC33\DATA\112916-504\1129000224.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1610727

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
16322-GACI	K1614217-001	J:\GC33\DATA\112916-504\1129000215.D	11/29/16	17:54
16322-GACE	K1614217-002	J:\GC33\DATA\112916-504\1129000216.D	11/29/16	18:18
16322-BW-6-1	K1614217-003	J:\GC33\DATA\112916-504\1129000217.D	11/29/16	18:41
16323-BW-1	K1614217-004	J:\GC33\DATA\112916-504\1129000218.D	11/29/16	19:05
16322-BW-2	K1614217-005	J:\GC33\DATA\112916-504\1129000219.D	11/29/16	19:28
16322-DUP	K1614217-006	J:\GC33\DATA\112916-504\1129000220.D	11/29/16	19:52
16322-BW-5	K1614217-007	J:\GC33\DATA\112916-504\1129000221.D	11/29/16	20:16
16322-Well-D	K1614217-008	J:\GC33\DATA\112916-504\1129000222.D	11/29/16	20:39
Trip Blank	K1614217-009	J:\GC33\DATA\112916-504\1129000223.D	11/29/16	21:03
Method Blank	KWG1610727-3	J:\GC33\DATA\112916-504\1129000226.D	11/29/16	22:14

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614217
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D	F	J:\GC33\DATA\101016-504\1010009.D
B	J:\GC33\DATA\101016-504\1010005.D	G	J:\GC33\DATA\101016-504\1010010.D
C	J:\GC33\DATA\101016-504\1010006.D	H	J:\GC33\DATA\101016-504\1010011.D
D	J:\GC33\DATA\101016-504\1010007.D		
E	J:\GC33\DATA\101016-504\1010008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	7.68E+5	B	0.13	8.48E+5	C	0.25	9.56E+5	D	0.63	1.27E+6	E	1.3	1.12E+6
	F	3.8	1.32E+6	G	5.0	1.20E+6	H	10	1.48E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614217
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Result	Q	
1,2-Dibromoethane (EDB)	MS	Quadratic	COD	0.998	≥ 0.99	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1614217
Project: Drexel **Calibration Date:** 10/10/2016
 Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14943
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\DATA\101016-504\1010012.D **Column ID:** RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1120000	1110000	NA	-2	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614217
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D\1010004c.d	F	J:\GC33\DATA\101016-504\1010009.D\1010009c.d
B	J:\GC33\DATA\101016-504\1010005.D\1010005c.d	G	J:\GC33\DATA\101016-504\1010010.D\1010010c.d
C	J:\GC33\DATA\101016-504\1010006.D\1010006c.d	H	J:\GC33\DATA\101016-504\1010011.D\1010011c.d
D	J:\GC33\DATA\101016-504\1010007.D\1010007c.d		
E	J:\GC33\DATA\101016-504\1010008.D\1010008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	8.73E+5	B	0.13	9.71E+5	C	0.25	1.05E+6	D	0.63	1.09E+6	E	1.3	9.01E+5
	F	3.8	9.65E+5	G	5.0	9.21E+5	H	10	9.89E+5						

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614217
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	7.6	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1614217
Project: Drexel **Calibration Date:** 10/10/2016
 Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14943
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\DATA\101016-504\1010012.D\1010012c.d **Column ID:** RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	970000	876000	-10	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1614217
Project: Drexel **Date Analyzed:** 11/29/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1610823
		Units:	ppb
File ID:	J:\GC33\DATA\112916-504\1129000213.D	Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1120000	1250000	NA	10	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614217
Date Analyzed: 11/29/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1610823
		Units:	ppb
File ID:	J:\GC33\DATA\112916-504\1129000213.D\1129000213C.	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	970000	1070000	10	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614217
Date Analyzed: 11/29/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\112916-504\1129000227.D	Analysis Lot:	KWG1610823
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.8	1120000	1520000	NA	17	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614217
Date Analyzed: 11/29/2016

**Continuing Calibration Verification Summary
EPA Method 504.1**

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1610823
		Units:	ppb
File ID:	J:\GC33\DATA\112916-504\1129000227.D\1129000227C.	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.1	970000	999000	3	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614217

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1610823

Instrument ID: GC33

Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
29000213.D	Continuing Calibration Verification	KWG1610823-1	11/29/2016	17:07		11/29/2016	17:23
29000214.D	Instrument Blank	KWG1610823-3	11/29/2016	17:30		11/29/2016	17:47
29000215.D	16322-GACI	K1614217-001	11/29/2016	17:54		11/29/2016	18:11
29000216.D	16322-GACE	K1614217-002	11/29/2016	18:18		11/29/2016	18:34
29000217.D	16322-BW-6-1	K1614217-003	11/29/2016	18:41		11/29/2016	18:58
29000218.D	16323-BW-1	K1614217-004	11/29/2016	19:05		11/29/2016	19:22
29000219.D	16322-BW-2	K1614217-005	11/29/2016	19:28		11/29/2016	19:45
29000220.D	16322-DUP	K1614217-006	11/29/2016	19:52		11/29/2016	20:09
29000221.D	16322-BW-5	K1614217-007	11/29/2016	20:16		11/29/2016	20:32
29000222.D	16322-Well-D	K1614217-008	11/29/2016	20:39		11/29/2016	20:56
29000223.D	Trip Blank	K1614217-009	11/29/2016	21:03		11/29/2016	21:20
29000224.D	Lab Control Sample	KWG1610727-1	11/29/2016	21:27		11/29/2016	21:43
29000225.D	Duplicate Lab Control Sample	KWG1610727-2	11/29/2016	21:50		11/29/2016	22:07
29000226.D	Method Blank	KWG1610727-3	11/29/2016	22:14		11/29/2016	22:31
29000227.D	Continuing Calibration Verification	KWG1610823-2	11/29/2016	22:38		11/29/2016	22:54
29000228.D	Instrument Blank	KWG1610823-4	11/29/2016	23:01		11/29/2016	23:18

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Extracted: 11/29/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1610727
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16322-GACI	K1614217-001	11/17/16	11/19/16	35.650ml	2ml	NA	
16322-GACE	K1614217-002	11/17/16	11/19/16	35.296ml	2ml	NA	
16322-BW-6-1	K1614217-003	11/17/16	11/19/16	35.346ml	2ml	NA	
16323-BW-1	K1614217-004	11/18/16	11/19/16	36.271ml	2ml	NA	
16322-BW-2	K1614217-005	11/17/16	11/19/16	35.021ml	2ml	NA	
16322-DUP	K1614217-006	11/17/16	11/19/16	35.693ml	2ml	NA	
16322-BW-5	K1614217-007	11/17/16	11/19/16	35.491ml	2ml	NA	
16322-Well-D	K1614217-008	11/17/16	11/19/16	35.321ml	2ml	NA	
Trip Blank	K1614217-009	11/17/16	11/19/16	35.338ml	2ml	NA	
Method Blank	KWG1610727-3	NA	NA	36.271ml	2ml	NA	
Lab Control Sample	KWG1610727-1	NA	NA	35.000ml	2ml	NA	
Duplicate Lab Control Sample	KWG1610727-2	NA	NA	35.000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016
Date Extracted: 11/29/2016

EPA Method 504.1

Sample Name:	16322-GACI	Units:	ug/L
Lab Code:	K1614217-001	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0098	0.00300	0.22	0.26	16.7		1	11/29/16

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016
Date Extracted: 11/29/2016

EPA Method 504.1

Sample Name:	16322-BW-6-1	Units:	ug/L
Lab Code:	K1614217-003	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0099	0.00300	0.020	0.020	0.0		1	11/29/16

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/18/2016
Date Received: 11/19/2016
Date Extracted: 11/29/2016

EPA Method 504.1

Sample Name: 16323-BW-1 **Units:** ug/L
Lab Code: K1614217-004 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0096	0.00300	0.48	0.51	6.1		1	11/29/16

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614217
Date Collected: 11/17/2016
Date Received: 11/19/2016
Date Extracted: 11/29/2016

EPA Method 504.1

Sample Name:	16322-BW-5	Units:	ug/L
Lab Code:	K1614217-007	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0098	0.00300	0.40	0.41	2.5		1	11/29/16



Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000215.D
Lab ID: K1614217-001
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 17:54
Date Quantitated: 11/30/2016 08:22
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000215.D\1129000215.C.
Lab ID: K1614217-001
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 17:54
Date Quantitated: 11/30/2016 08:22
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000215.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000215.D\1129000215c.d	Vial:	11
Acq Date:	11/29/2016 17:54	Quant Date:	11/30/2016 08:22
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1614217-001	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	IV	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	11/17/2016	Receive Date: 11/19/2016

Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:	K1614217
Analysis Method:	504.1	Prep Method:	METHOD		
Prep Ref:	1573182	Prep Date:	11/29/2016		

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L	ug/L	
1,2-Dibromoethane (EDB)	3.90 ^{+0.01}	4.03	5883986	3872367m	4.67	3.99	0.26	0.22	0.22
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.650 ml			Dilution:	1.0				
Prep Final Vol:	2 ml			Unit Factor:	1				

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000215.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:54:17 Operator: LM
 Sample : K1614217-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:22:48 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

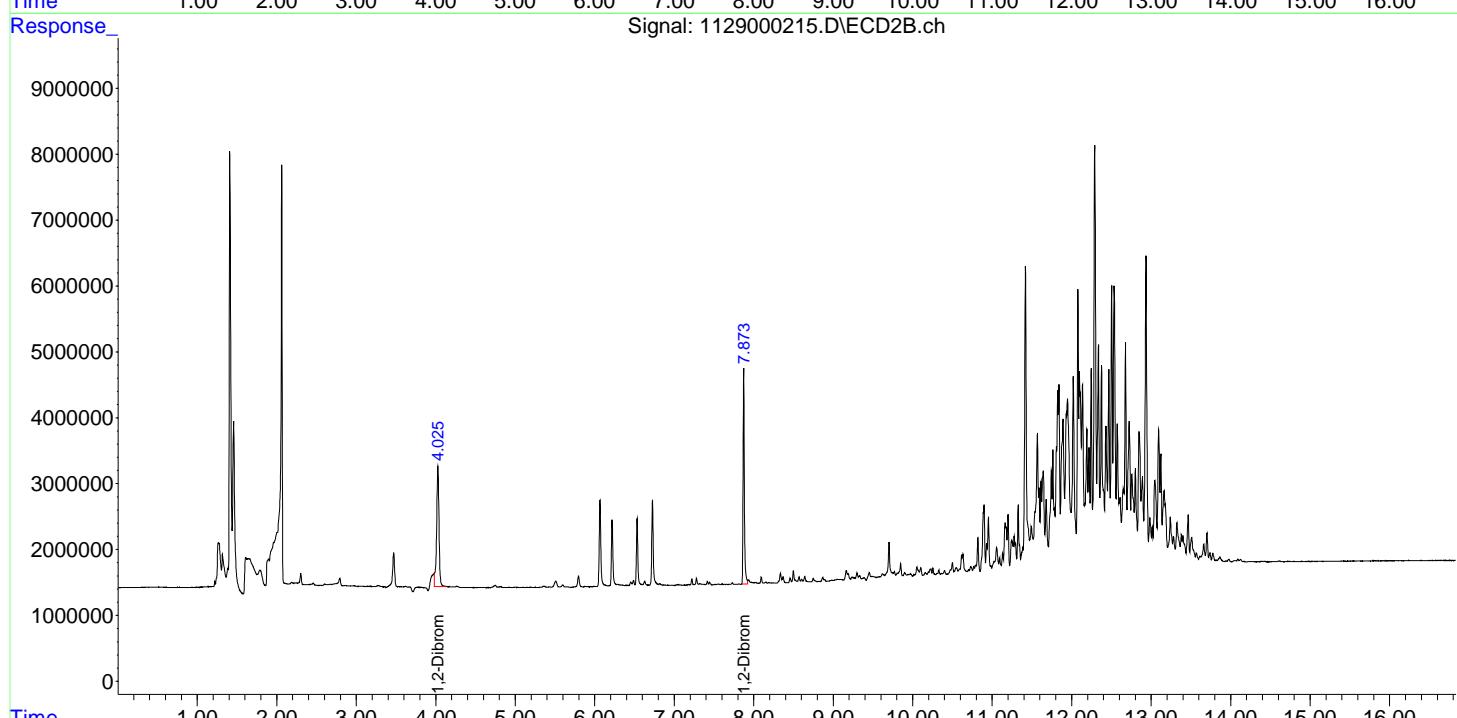
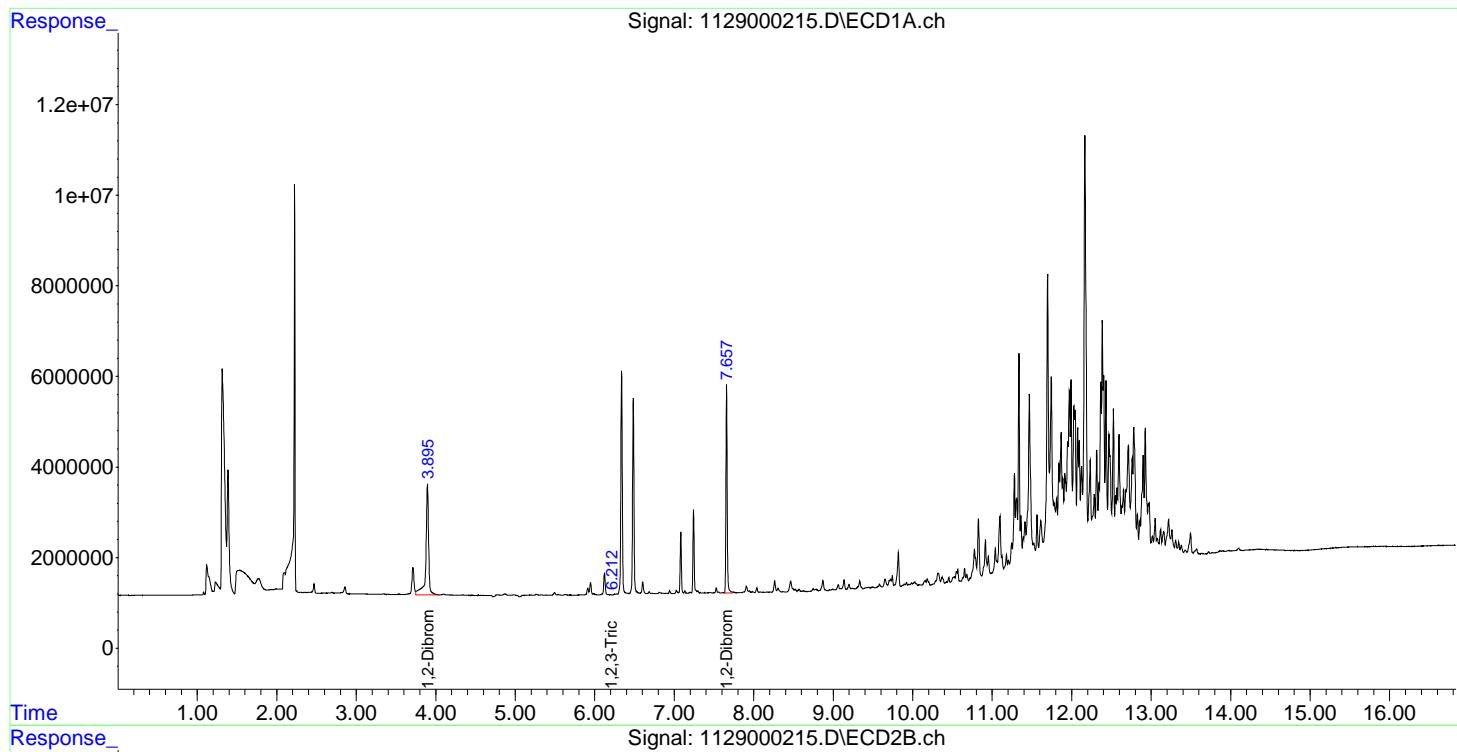
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.895	4.025	5883986	3872367	4.670	3.991m
2) M 1,2,3-Tri...	6.212	0.000	3463	0	0.135	N.D. #
3) M 1,2-Dibro...	7.657	7.873	4999405	3648318	1.737	1.611

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000215.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:54:17 Operator: LM
 Sample : K1614217-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:22:48 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

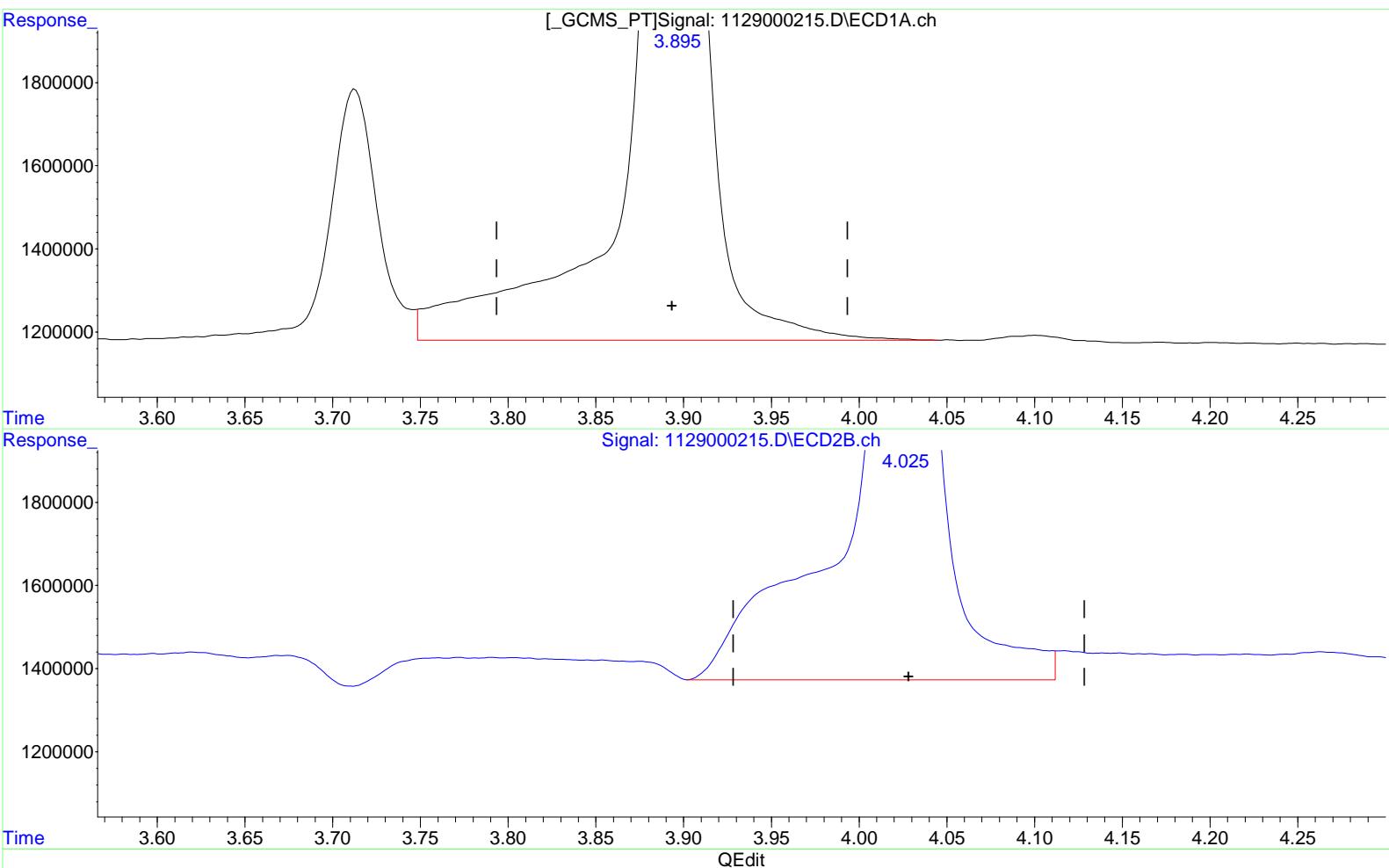
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\112916-504\1129000215.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:54:17 Operator: LM
 Sample : K1614217-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:17:54 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 4.670 ppb

response 5883986

Manual Integration:

Before

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

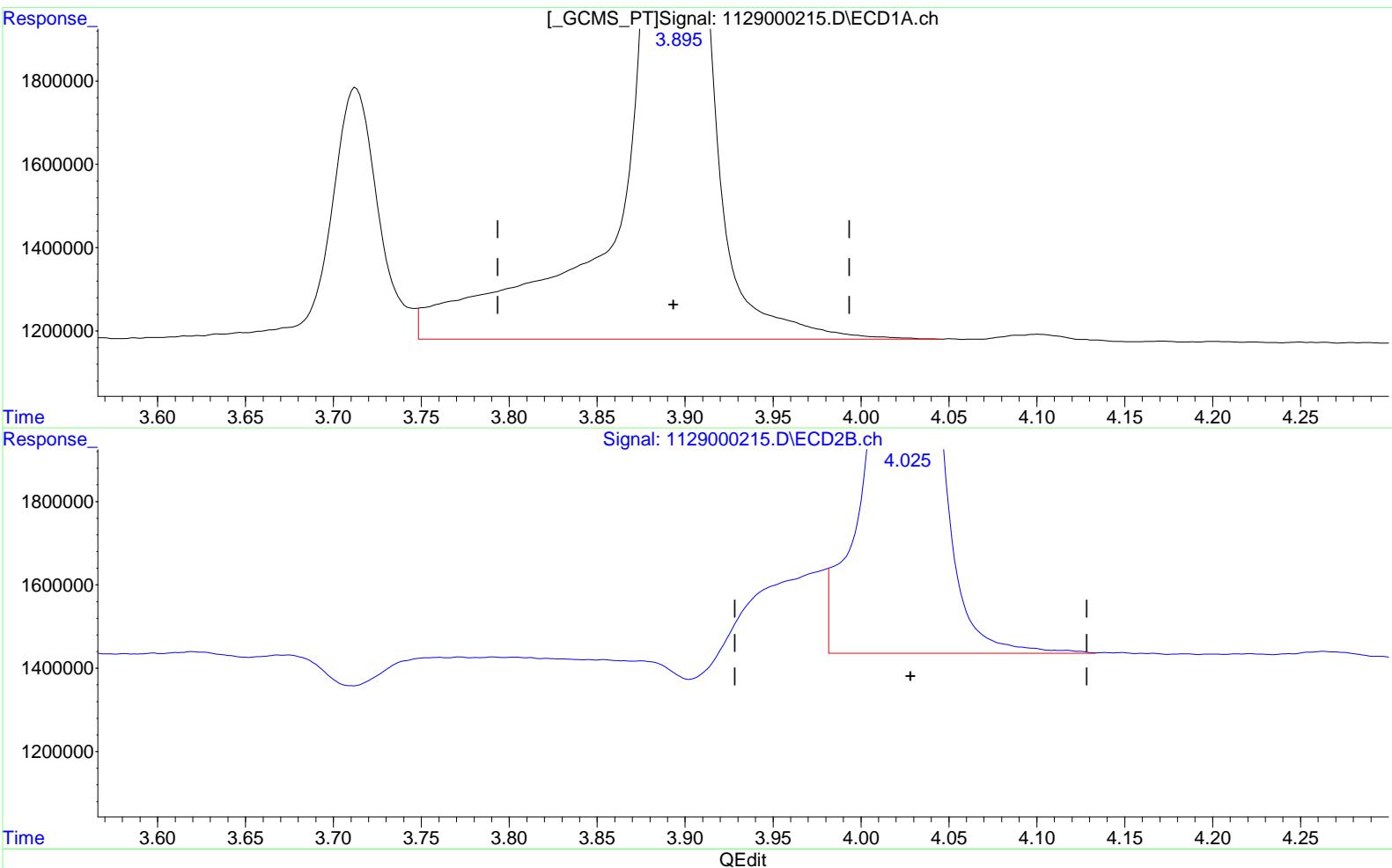
4.025min 5.322 ppb

response 5164317

Data File : J:\GC33\DATA\112916-504\1129000215.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:54:17 Operator: LM
 Sample : K1614217-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:17:54 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 4.670 ppb

response 5883986

Manual Integration:

After

Baseline/Shoulder

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.025min 3.991 ppb m

response 3872367

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000216.D
Lab ID: K1614217-002
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 18:18
Date Quantitated: 11/30/2016 08:18
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000216.D\1129000216C.
Lab ID: K1614217-002
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 18:18
Date Quantitated: 11/30/2016 08:18
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000216.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000216.D\1129000216.c.d	Vial:	12
Acq Date:	11/29/2016 18:18	Quant Date:	11/30/2016 08:18
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1614217-002	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	IV	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	11/17/2016	Receive Date: 11/19/2016

Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:	K1614217
Analysis Method:	504.1	Prep Method:	METHOD		
Prep Ref:	1573183	Prep Date:	11/29/2016		

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96 ^{+0.07}		37589	0d	0.0190	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.296 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000216.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 18:18:01 Operator: LM
 Sample : K1614217-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:18:24 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

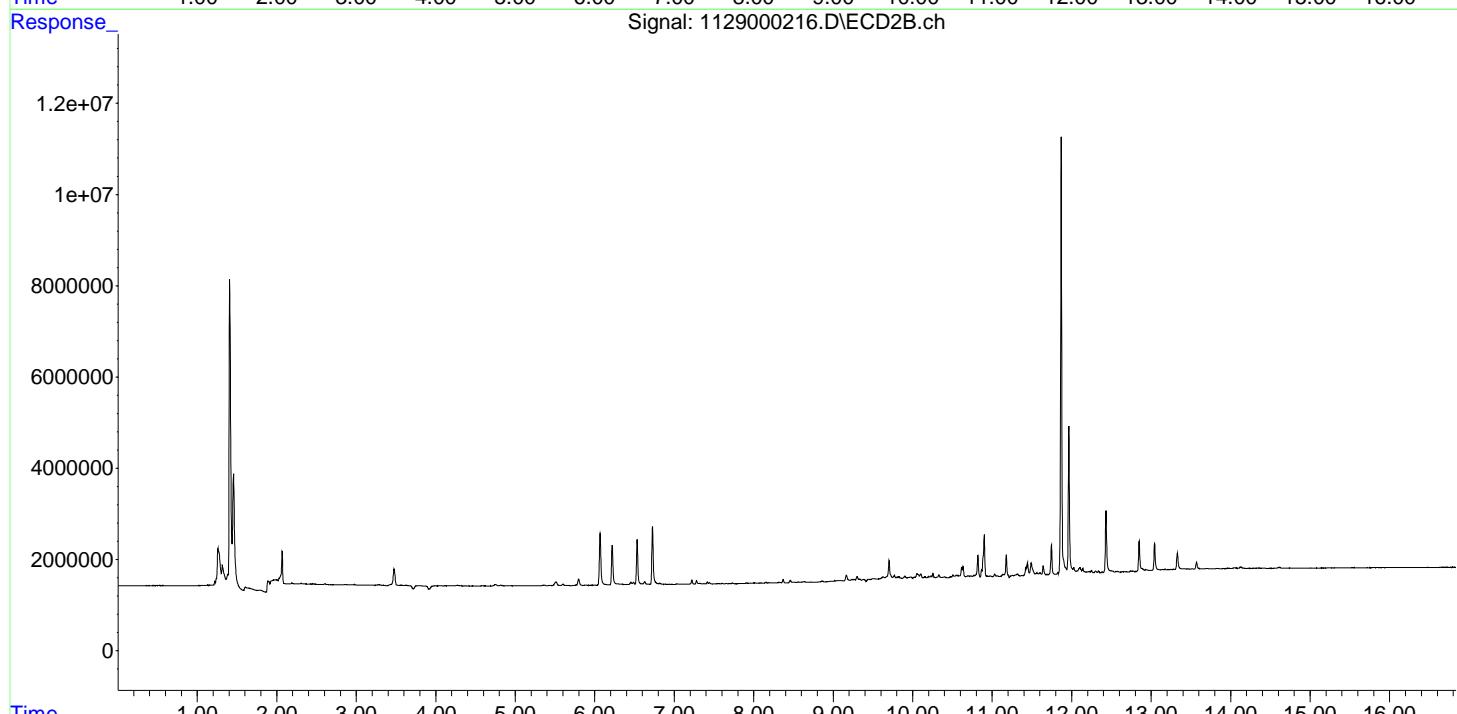
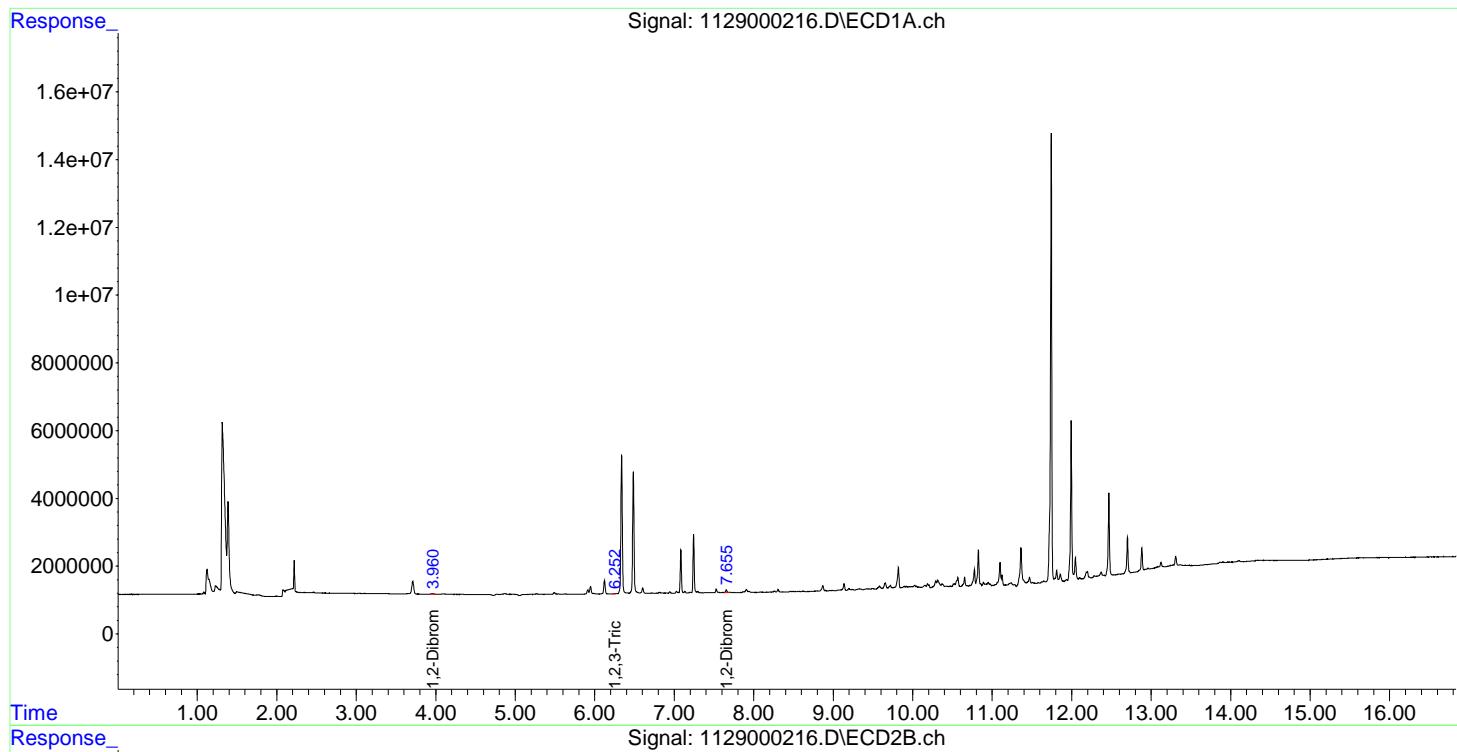
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.960f	0.000	37589	0	0.019	N.D. d#
2) M 1,2,3-Tri...	6.252	0.000	24624	0	0.233	N.D. #
3) M 1,2-Dibro...	7.655	0.000	102849	0	0.036	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000216.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 18:18:01 Operator: LM
 Sample : K1614217-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:18:24 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\112916-504\1129000217.D
Lab ID: K1614217-003
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 18:41
Date Quantitated: 11/30/2016 08:23
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000217.D\1129000217C.
Lab ID: K1614217-003
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 18:41
Date Quantitated: 11/30/2016 08:23
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000217.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000217.D\1129000217.c.d	Vial:	13
Acq Date:	11/29/2016 18:41	Quant Date:	11/30/2016 08:23
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1614217-003	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	11/17/2016
Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1573184	Prep Date:	11/29/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L	ug/L	
1,2-Dibromoethane (EDB)	3.90 ^{+0.01}	4.03	396688m	343260m	0.3510	0.3540	0.020	0.020	0.020
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.346 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000217.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 18:41:38 Operator: LM
 Sample : K1614217-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:23:24 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

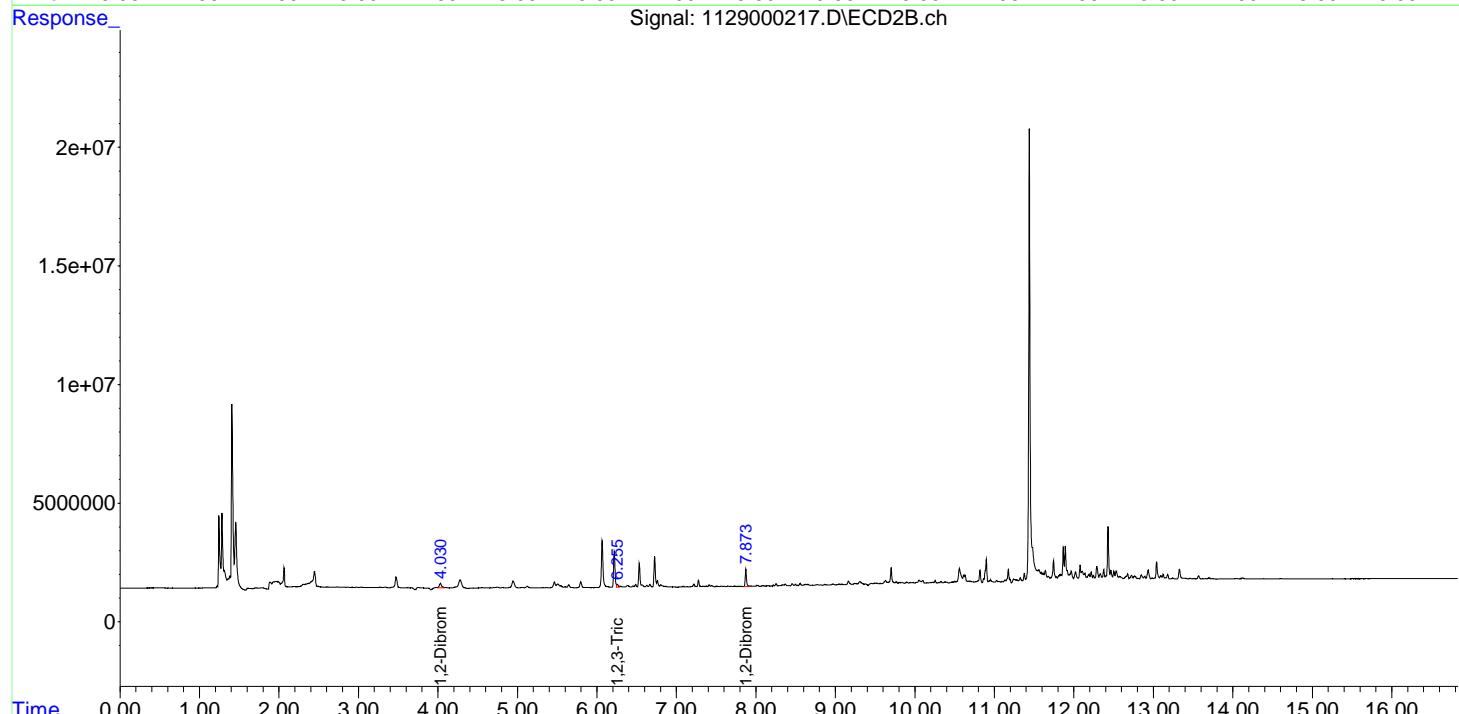
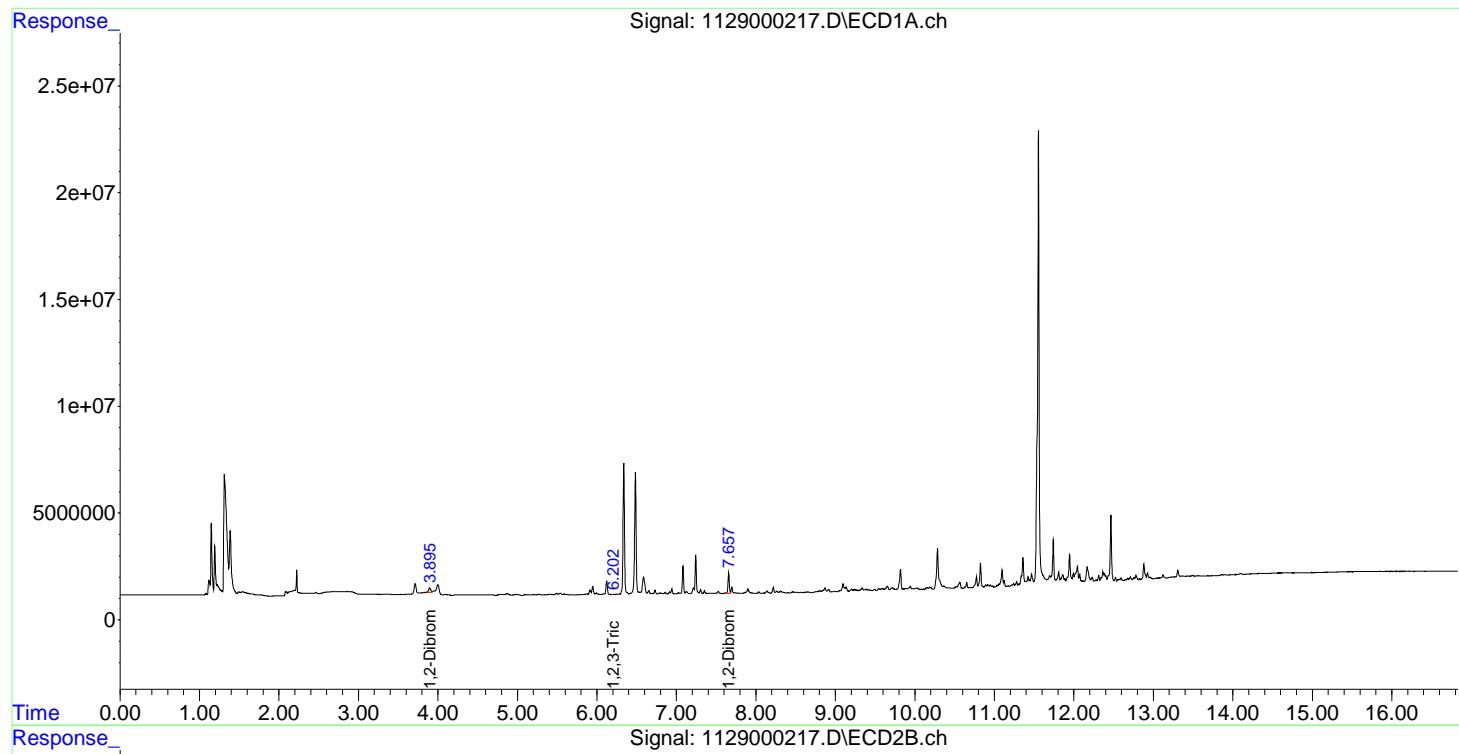
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.895	4.030	396688	343260	0.351m	0.354m
2) M 1,2,3-Tri...	6.202f	6.255f	2436	178706	0.130	0.780 #
3) M 1,2-Dibro...	7.657	7.873	1130412	834280	0.393	0.368

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000217.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 18:41:38 Operator: LM
 Sample : K1614217-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:23:24 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

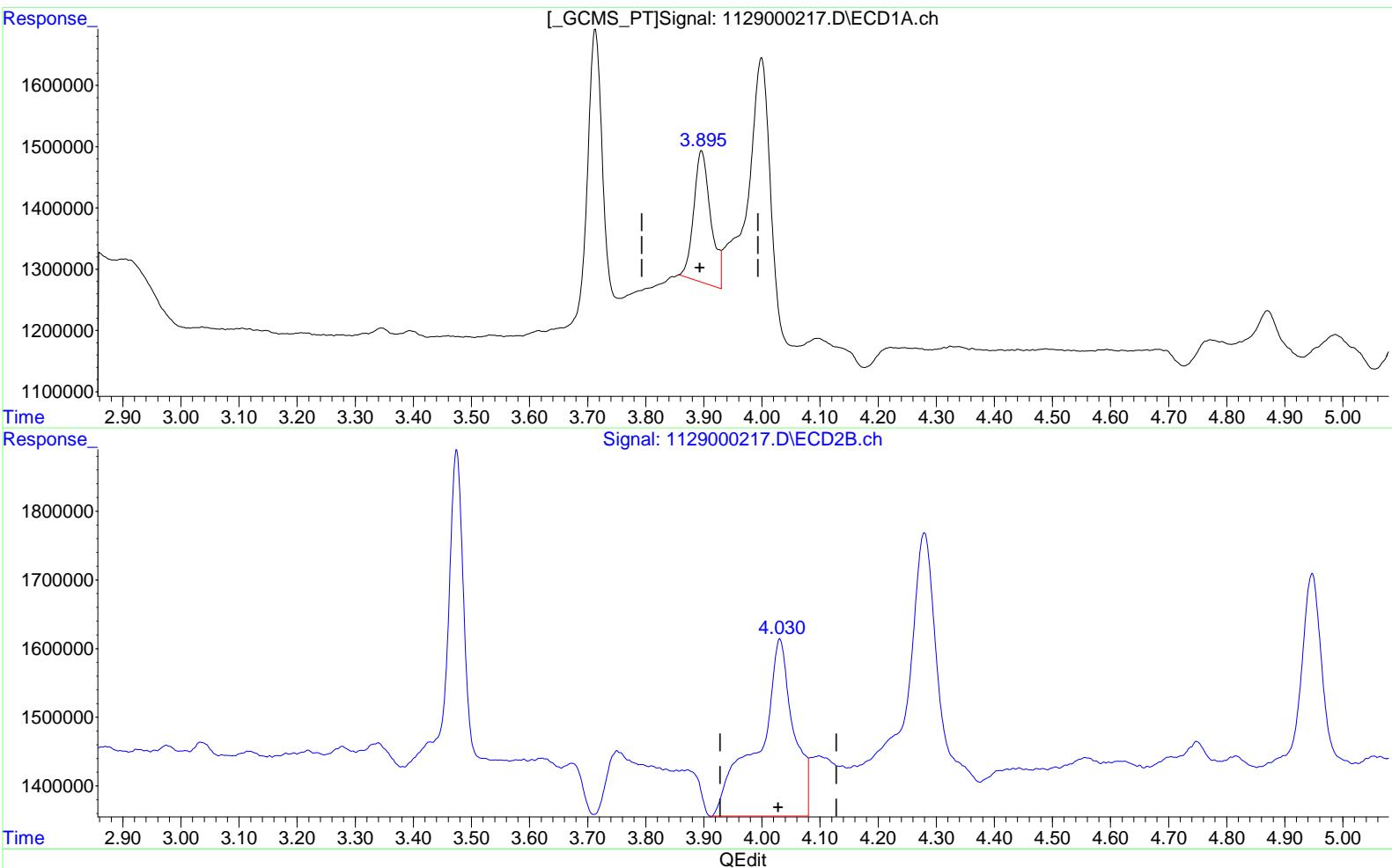
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\112916-504\1129000217.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 18:41:38 Operator: LM
 Sample : K1614217-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:18:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.895min 0.390 ppb
 response 440037

Manual Integration:
 Before
 11/30/16

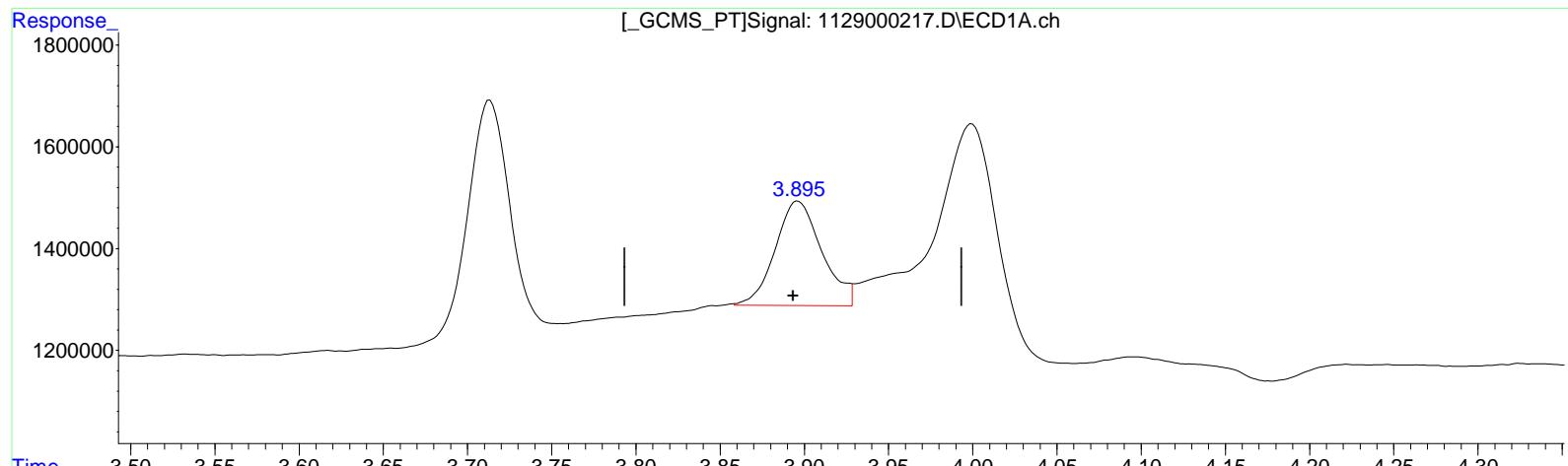
(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.030min 1.124 ppb
 response 1090982

Data File : J:\GC33\DATA\112916-504\1129000217.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 18:41:38 Operator: LM
 Sample : K1614217-003 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:18:32 2016
 Quant Results File: 101116_504.RES

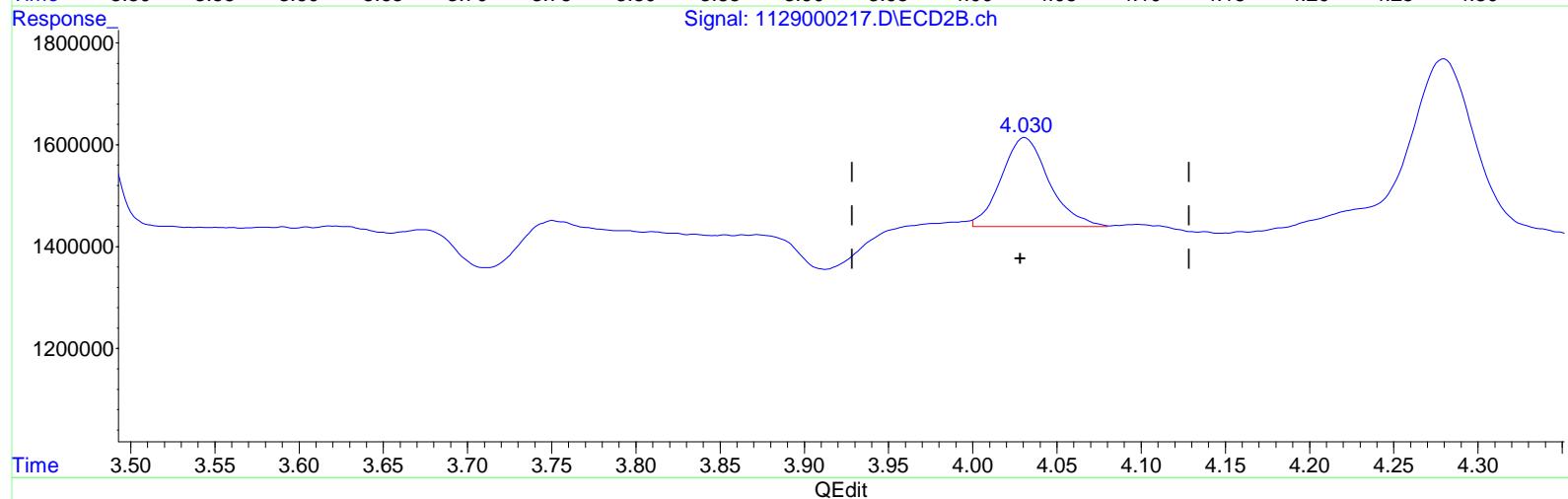
Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

[_GCMS_PT]Signal: 1129000217.D\ECD1A.ch



Signal: 1129000217.D\ECD2B.ch



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.351 ppb m

response 396688

Manual Integration:

After

Baseline/Shoulder

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.030min 0.354 ppb m

response 343260

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000218.D
Lab ID: K1614217-004
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 19:05
Date Quantitated: 11/30/2016 08:21
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000218.D\1129000218C.
Lab ID: K1614217-004
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 19:05
Date Quantitated: 11/30/2016 08:21
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000218.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000218.D\1129000218.c.d	Vial:	14
Acq Date:	11/29/2016 19:05	Quant Date:	11/30/2016 08:21
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1614217-004	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	IV	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	11/18/2016	Receive Date: 11/19/2016

Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:	K1614217
Analysis Method:	504.1	Prep Method:	METHOD		
Prep Ref:	1573185	Prep Date:	11/29/2016		

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89	4.04 ^{+0.01}	12289794m	9052153m	8.67	9.33	0.48	0.51	0.48
The -/+ after Retention Time symbolize the direction of the RT shift									
Prep Amount:	36.271 ml			Dilution:	1.0				
Prep Final Vol:	2 ml			Unit Factor:	1				

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000218.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 19:05:15 Operator: LM
 Sample : K1614217-004 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:21:34 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

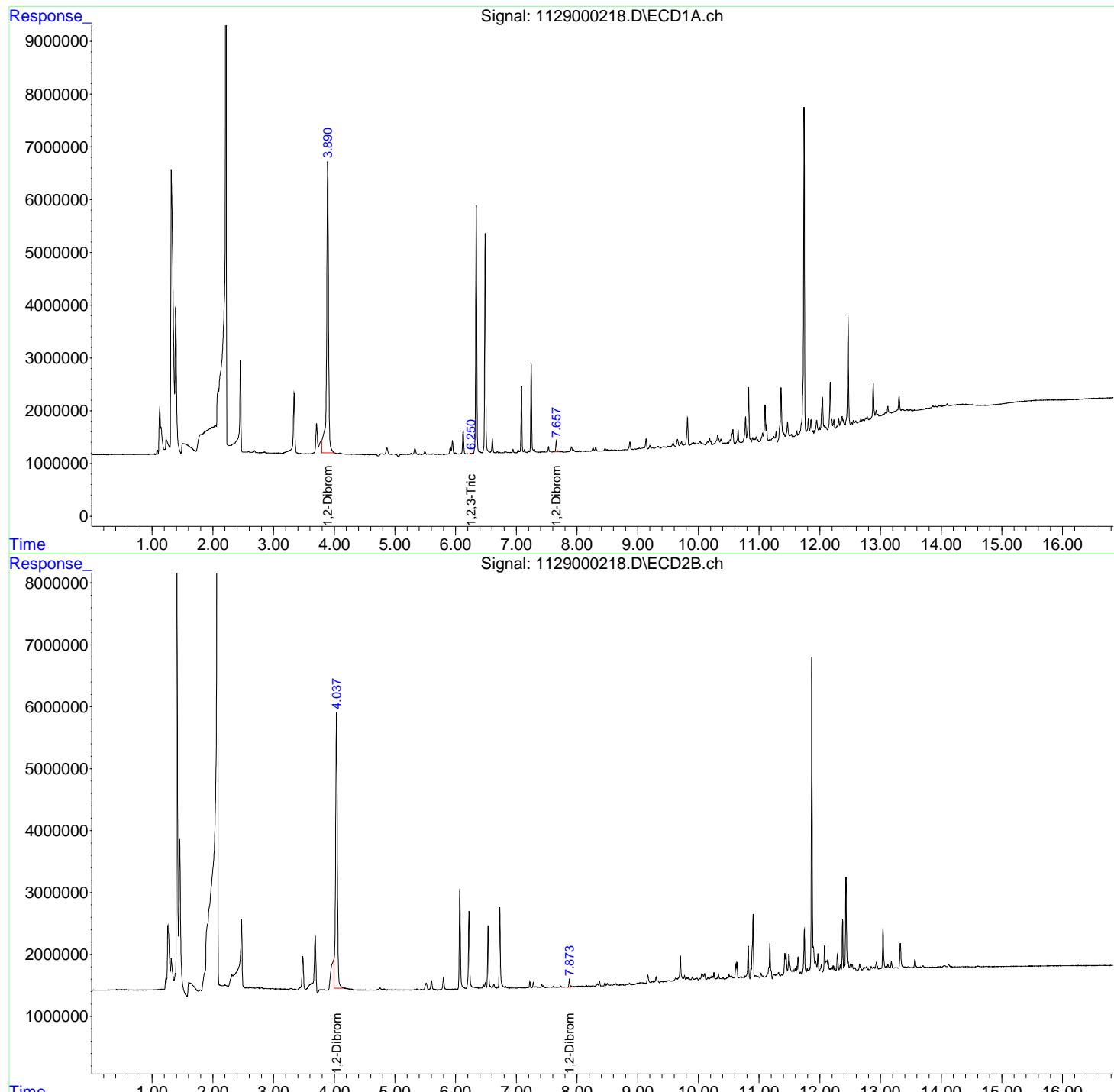
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.890	4.037	12289794	9052153	8.665m	9.329m
2) M 1,2,3-Tri...	6.250	0.000	19926	0	0.211	N.D. #
3) M 1,2-Dibro...	7.657	7.873	238446	135646	0.083	0.060 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000218.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 19:05:15 Operator: LM
 Sample : K1614217-004 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:21:34 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

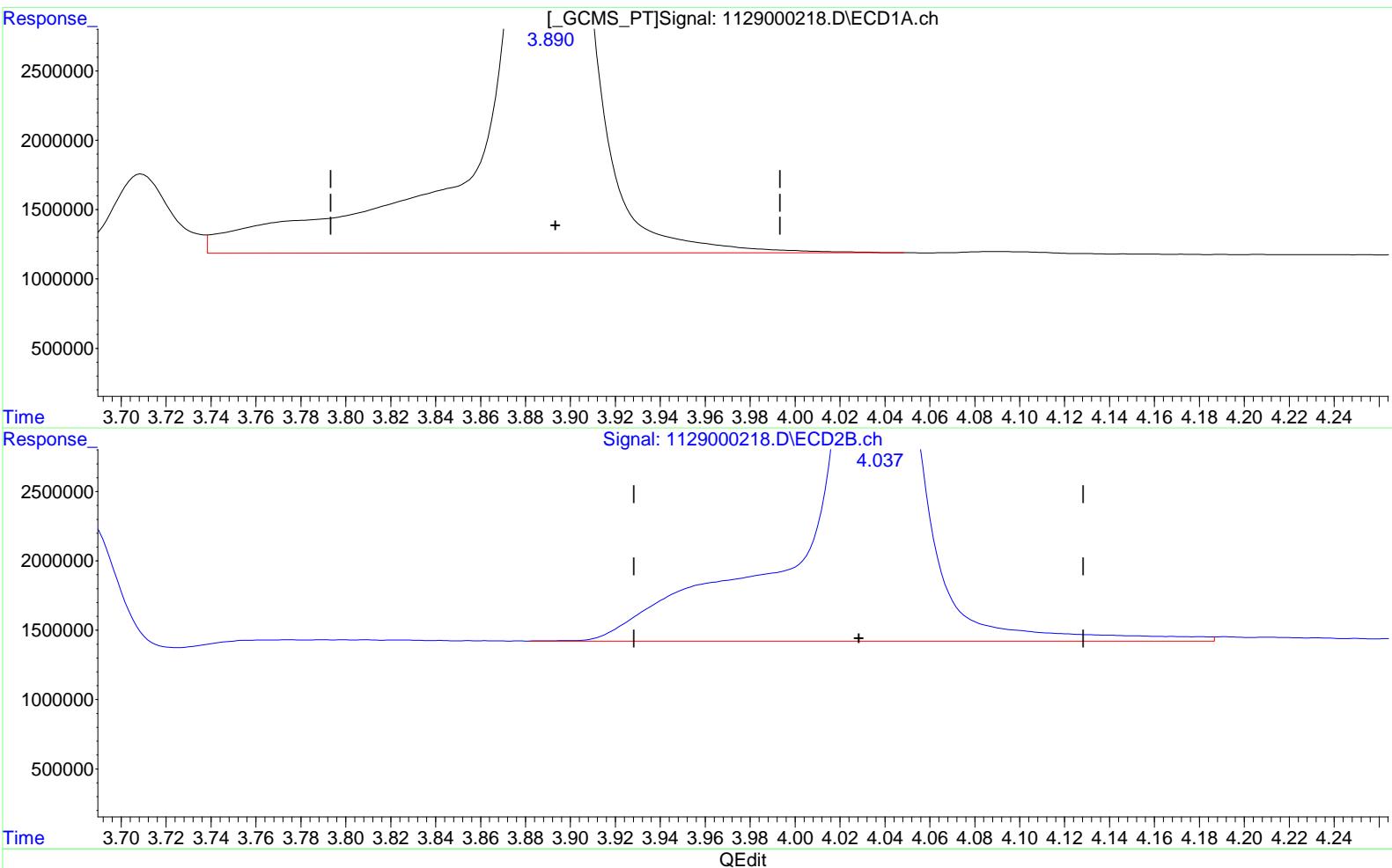
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\112916-504\1129000218.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 19:05:15 Operator: LM
 Sample : K1614217-004 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:18:46 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.890min 9.209 ppb

response 13259371

Manual Integration:

Before

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

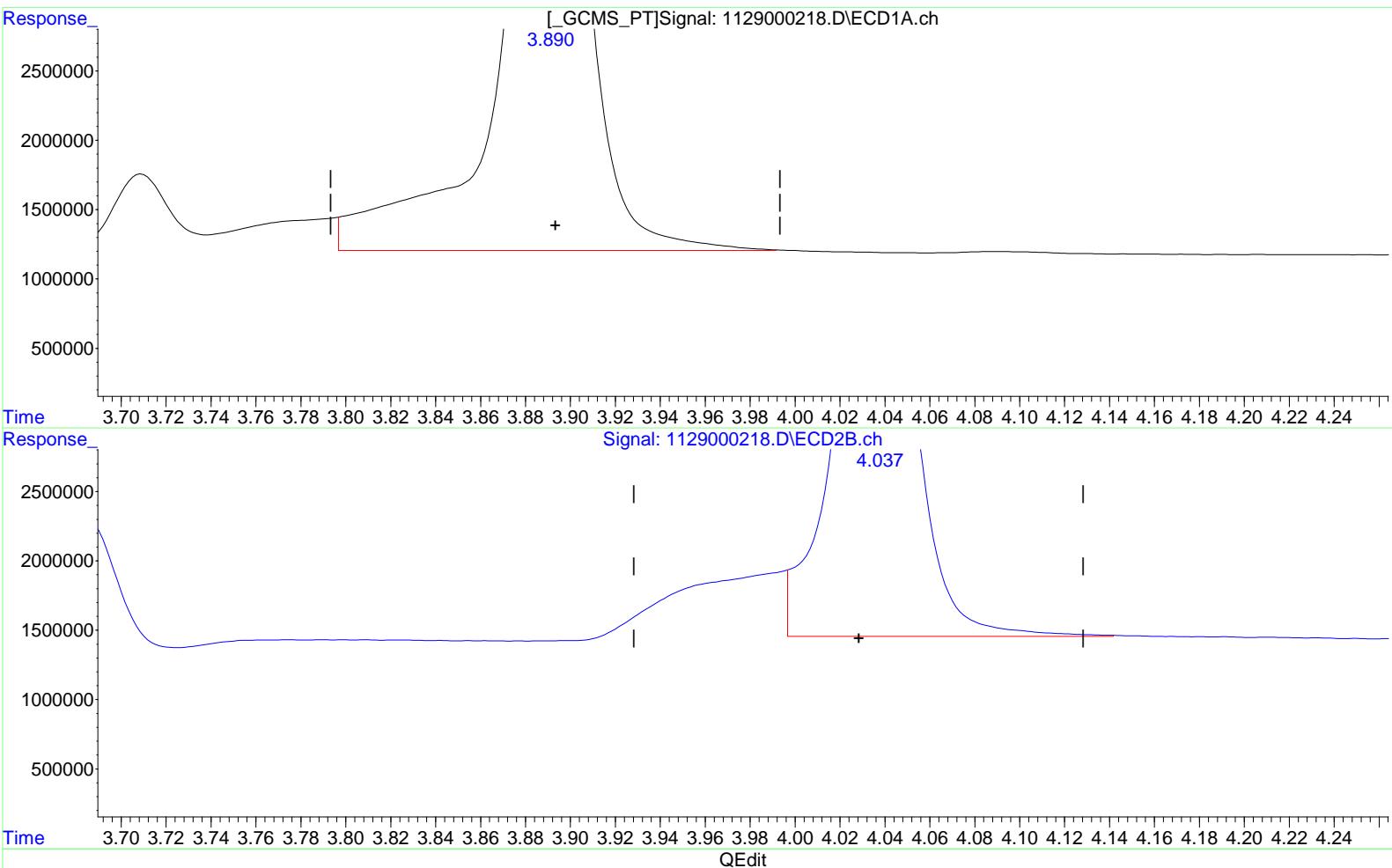
4.037min 11.518 ppb

response 11176571

Data File : J:\GC33\DATA\112916-504\1129000218.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 19:05:15 Operator: LM
 Sample : K1614217-004 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:18:46 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.890min 8.665 ppb m

response 12289794

Manual Integration:

After

Baseline/Shoulder

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.037min 9.329 ppb m

response 9052153

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000219.D
Lab ID: K1614217-005
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 19:28
Date Quantitated: 11/30/2016 08:19
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000219.D\1129000219C.
Lab ID: K1614217-005
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 19:28
Date Quantitated: 11/30/2016 08:19
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000219.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000219.D\1129000219.c.d	Vial:	15
Acq Date:	11/29/2016 19:28	Quant Date:	11/30/2016 08:19
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1614217-005	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	IV	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	11/17/2016	Receive Date: 11/19/2016

Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:	K1614217
Analysis Method:	504.1	Prep Method:	METHOD		
Prep Ref:	1573186	Prep Date:	11/29/2016		

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96 ^{+0.07}		38597	0d	0.0200	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.021 ml			Dilution:	1.0				
Prep Final Vol:	2 ml			Unit Factor:	1				

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000219.D Vial: 15
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 19:28:54 Operator: LM
 Sample : K1614217-005 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:19:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

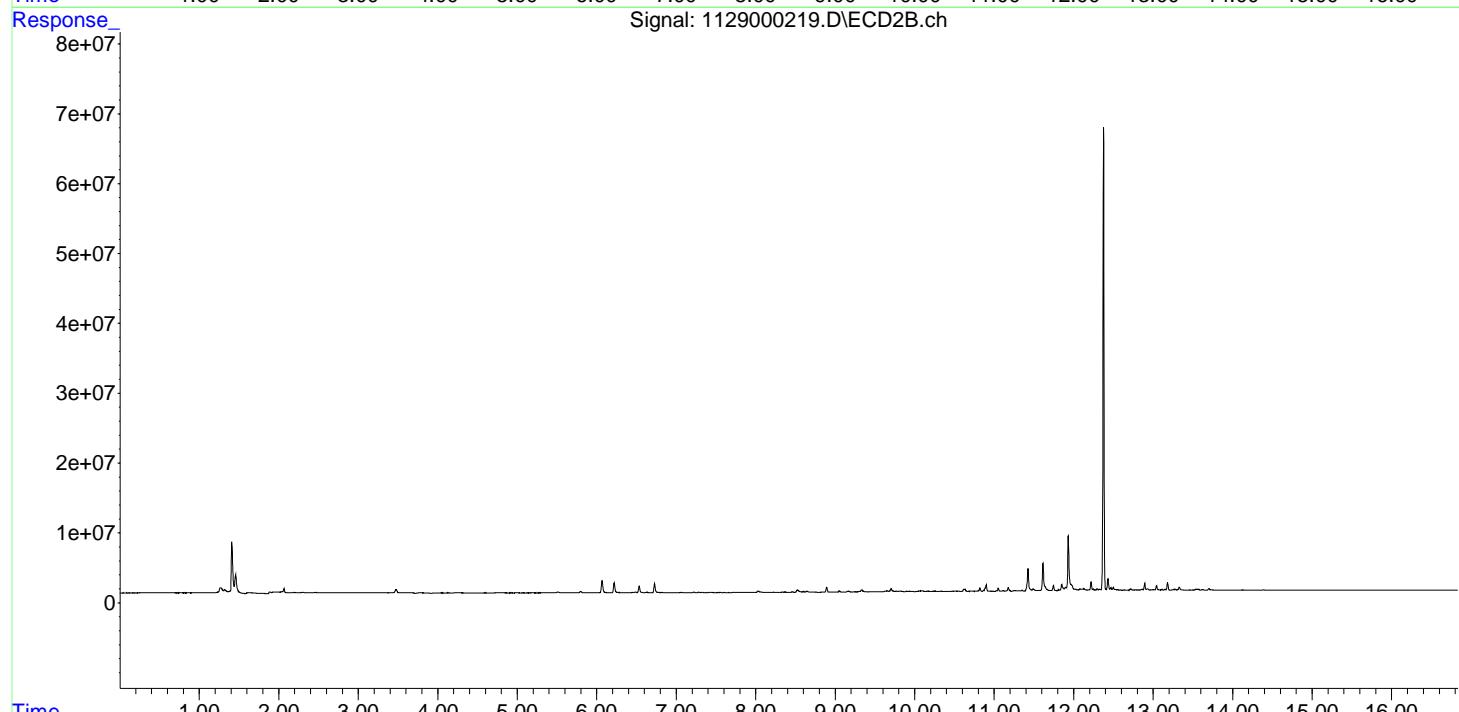
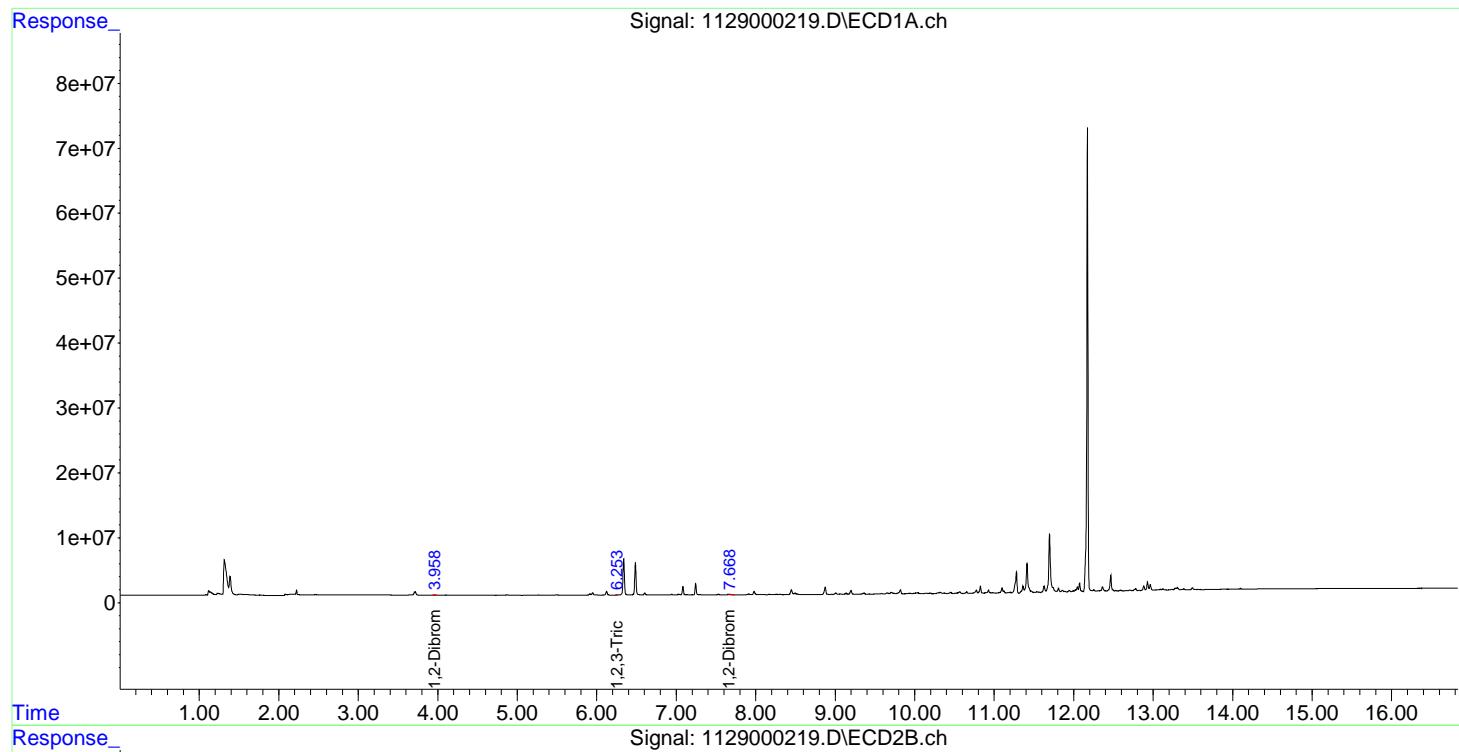
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.958f	0.000	38597	0	0.020	N.D. d#
2) M 1,2,3-Tri...	6.253	0.000	20111	0	0.212	N.D. #
3) M 1,2-Dibro...	7.668	0.000	140868	0	0.049	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000219.D Vial: 15
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 19:28:54 Operator: LM
 Sample : K1614217-005 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:19:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\112916-504\1129000220.D
Lab ID: K1614217-006
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 19:52
Date Quantitated: 11/30/2016 08:23
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000220.D\1129000220.C.
Lab ID: K1614217-006
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 19:52
Date Quantitated: 11/30/2016 08:23
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000220.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000220.D\1129000220.c.d	Vial:	16
Acq Date:	11/29/2016 19:52	Quant Date:	11/30/2016 08:23
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1614217-006	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	IV	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	11/17/2016	Receive Date: 11/19/2016

Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:	K1614217
Analysis Method:	504.1	Prep Method:	METHOD		
Prep Ref:	1573187	Prep Date:	11/29/2016		

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units: ug/L				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			0d	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.693 ml	Dilution:	1.0						
Prep Final Vol:	2 ml	Unit Factor:	1						

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000220.D Vial: 16
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 19:52:29 Operator: LM
 Sample : K1614217-006 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:23:46 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

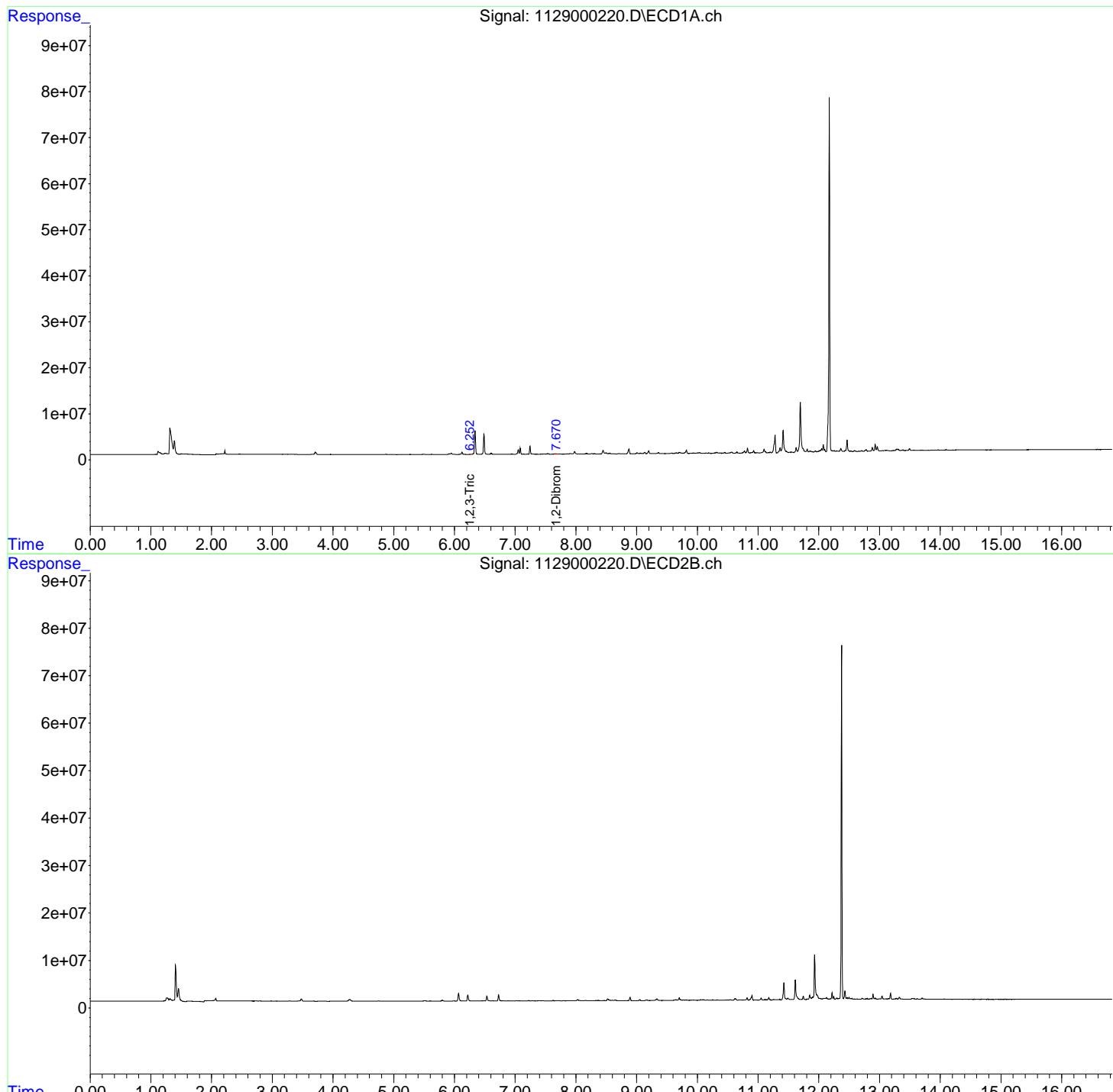
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.252	0.000	28097	0	0.249	N.D. #
3) M 1,2-Dibro...	7.670	0.000	126078	0	0.044	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000220.D Vial: 16
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 19:52:29 Operator: LM
 Sample : K1614217-006 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:23:46 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\112916-504\1129000221.D
Lab ID: K1614217-007
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 20:16
Date Quantitated: 11/30/2016 08:24
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000221.D\1129000221C.
Lab ID: K1614217-007
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 20:16
Date Quantitated: 11/30/2016 08:24
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000221.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000221.D\1129000221.c.d	Vial:	17
Acq Date:	11/29/2016 20:16	Quant Date:	11/30/2016 08:24
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1614217-007	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	IV	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	11/17/2016	Receive Date: 11/19/2016

Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:	K1614217
Analysis Method:	504.1	Prep Method:	METHOD		
Prep Ref:	1573188	Prep Date:	11/29/2016		

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L	ug/L	
1,2-Dibromoethane (EDB)	3.89	4.03	9844409	6821900m	7.23	7.03	0.41	0.40	0.40
The -/+ after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.491 ml			Dilution:	1.0				
Prep Final Vol:	2 ml			Unit Factor:	1				

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000221.D Vial: 17
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 20:16:09 Operator: LM
 Sample : K1614217-007 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:24:15 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

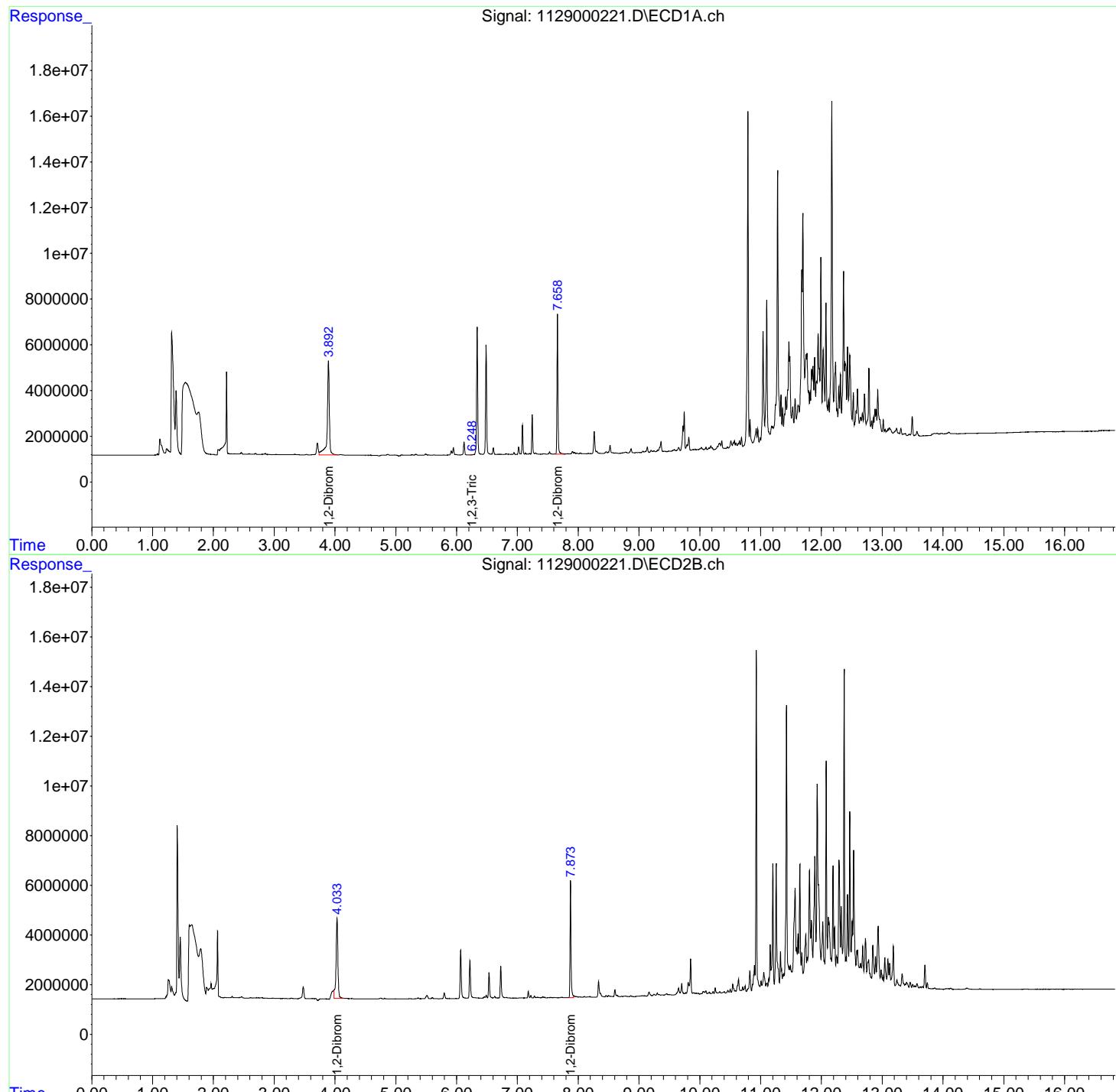
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.892	4.033	9844409	6821900	7.232	7.030m
2) M 1,2,3-Tri...	6.248	0.000	19177	0	0.207	N.D. #
3) M 1,2-Dibro...	7.658	7.873	6734303	5219104	2.339	2.304

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000221.D Vial: 17
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 20:16:09 Operator: LM
 Sample : K1614217-007 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:24:15 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

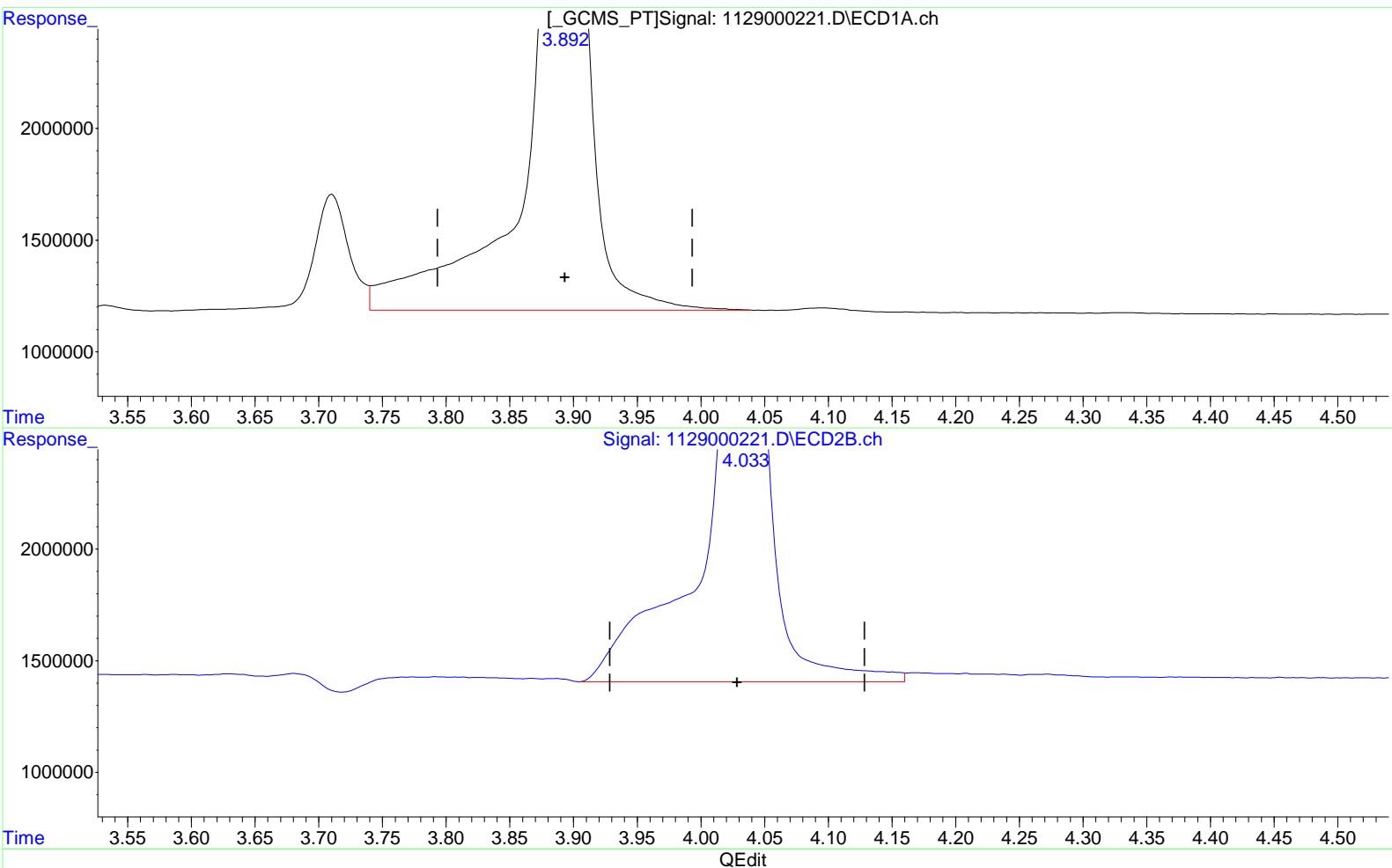
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\112916-504\1129000221.D Vial: 17
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 20:16:09 Operator: LM
 Sample : K1614217-007 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:19:33 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 7.232 ppb

response 9844409

Manual Integration:

Before

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

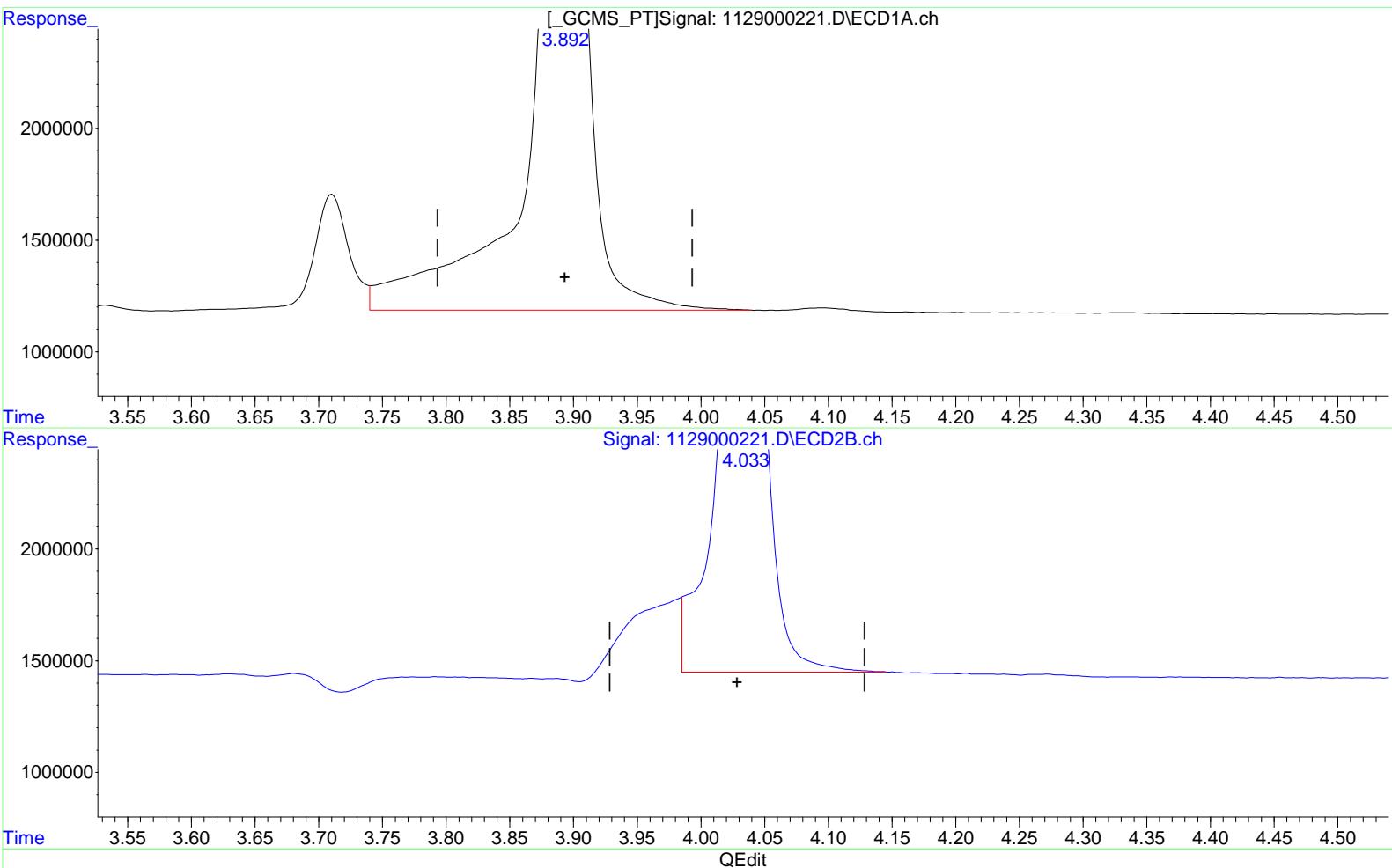
4.033min 8.624 ppb

response 8367977

Data File : J:\GC33\DATA\112916-504\1129000221.D Vial: 17
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 20:16:09 Operator: LM
 Sample : K1614217-007 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:19:33 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 7.232 ppb

response 9844409

Manual Integration:

After

Baseline/Shoulder

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.033min 7.030 ppb m

response 6821900

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000222.D
Lab ID: K1614217-008
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 20:39
Date Quantitated: 11/30/2016 08:20
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000222.D\1129000222.C.
Lab ID: K1614217-008
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 20:39
Date Quantitated: 11/30/2016 08:20
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000222.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000222.D\1129000222.c.d	Vial:	18
Acq Date:	11/29/2016 20:39	Quant Date:	11/30/2016 08:20
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1614217-008	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Instrument:	GC33	Soln Conc. Units:	ppb
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	11/17/2016
Matrix:	WATER	Receive Date:	11/19/2016
Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1573189	Prep Date:	11/29/2016
Report Group:	K1614217		
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.95 ^{+0.06}		33956	0d	0.0160	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.321 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000222.D Vial: 18
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 20:39:45 Operator: LM
 Sample : K1614217-008 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:20:00 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

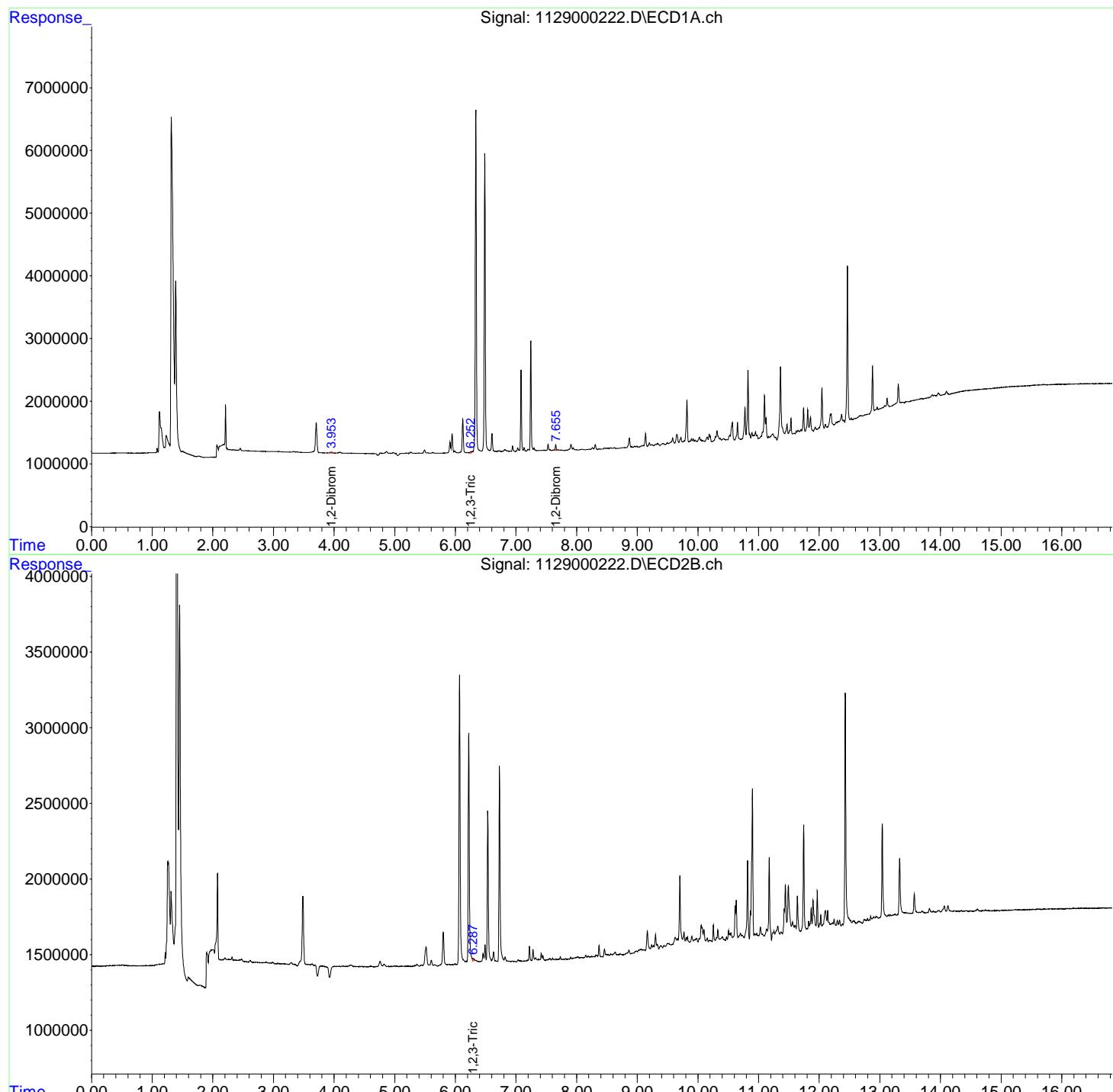
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.953f	0.000	33956	0	0.016	N.D. d#
2) M 1,2,3-Tri...	6.252	6.287	27138	28505	0.244	0.032 #
3) M 1,2-Dibro...	7.655	0.000	102526	0	0.036	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000222.D Vial: 18
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 20:39:45 Operator: LM
 Sample : K1614217-008 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:20:00 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\112916-504\1129000223.D
Lab ID: K1614217-009
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 21:03
Date Quantitated: 11/30/2016 08:24
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000223.D\1129000223.C.
Lab ID: K1614217-009
RunType: SMPL
Matrix: WATER

Date Acquired: 11/29/2016 21:03
Date Quantitated: 11/30/2016 08:24
Batch ID: KWG1610823
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Duplicate Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000223.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000223.D\1129000223c.d	Vial:	19
Acq Date:	11/29/2016 21:03	Quant Date:	11/30/2016 08:24
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1614217-009	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	IV	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	11/17/2016	Receive Date: 11/19/2016

Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:	K1614217
Analysis Method:	504.1	Prep Method:	METHOD		
Prep Ref:	1573181	Prep Date:	11/29/2016		

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units: ug/L				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			0d	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.338 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000223.D Vial: 19
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Nov-2016, 21:03:20 Operator: LM
Sample : K1614217-009 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Nov 30 08:24:35 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

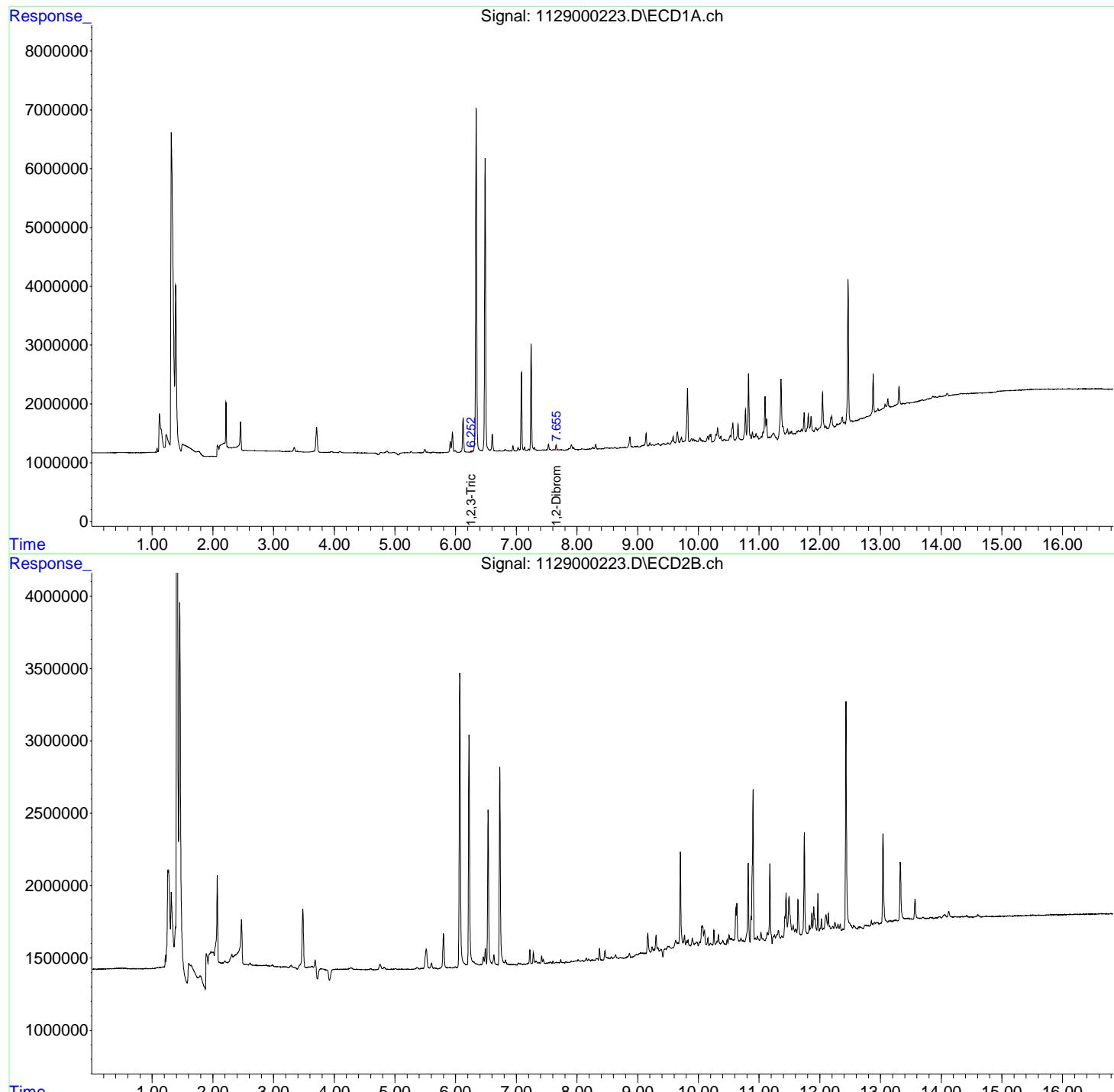
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.252	0.000	28112	0	0.249	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000223.D Vial: 19
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 21:03:20 Operator: LM
 Sample : K1614217-009 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:24:35 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\112916-504\1129000226.D
Lab ID: KWG1610727-3
RunType: MB
Matrix: WATER

Date Acquired: 11/29/2016 22:14
Date Quantitated: 11/30/2016 08:25
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000226.D\1129000226C.
Lab ID: KWG1610727-3
RunType: MB
Matrix: WATER

Date Acquired: 11/29/2016 22:14
Date Quantitated: 11/30/2016 08:25
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000226.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\112916-504\1129000226.D\1129000226.c.d	Vial:	22	
Acq Date:	11/29/2016 22:14	Quant Date:	11/30/2016 08:25	
Run Type:	MB	MethodJoinID:	MJ480	
Lab ID:	KWG1610727-3	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/29/2016	
Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1573192	Prep Date:	11/29/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:		Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.95 ^{+0.06}		40842	0d	0.0220	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane	6.25 ^{+0.02}		32074	0	0.2670	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropan	7.66		94384	0	0.0330	0.0000	0.00360U	0.00360U	0.00360U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.271 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000226.D Vial: 22
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 22:14:22 Operator: LM
 Sample : KWG1610727-3 MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:25:46 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

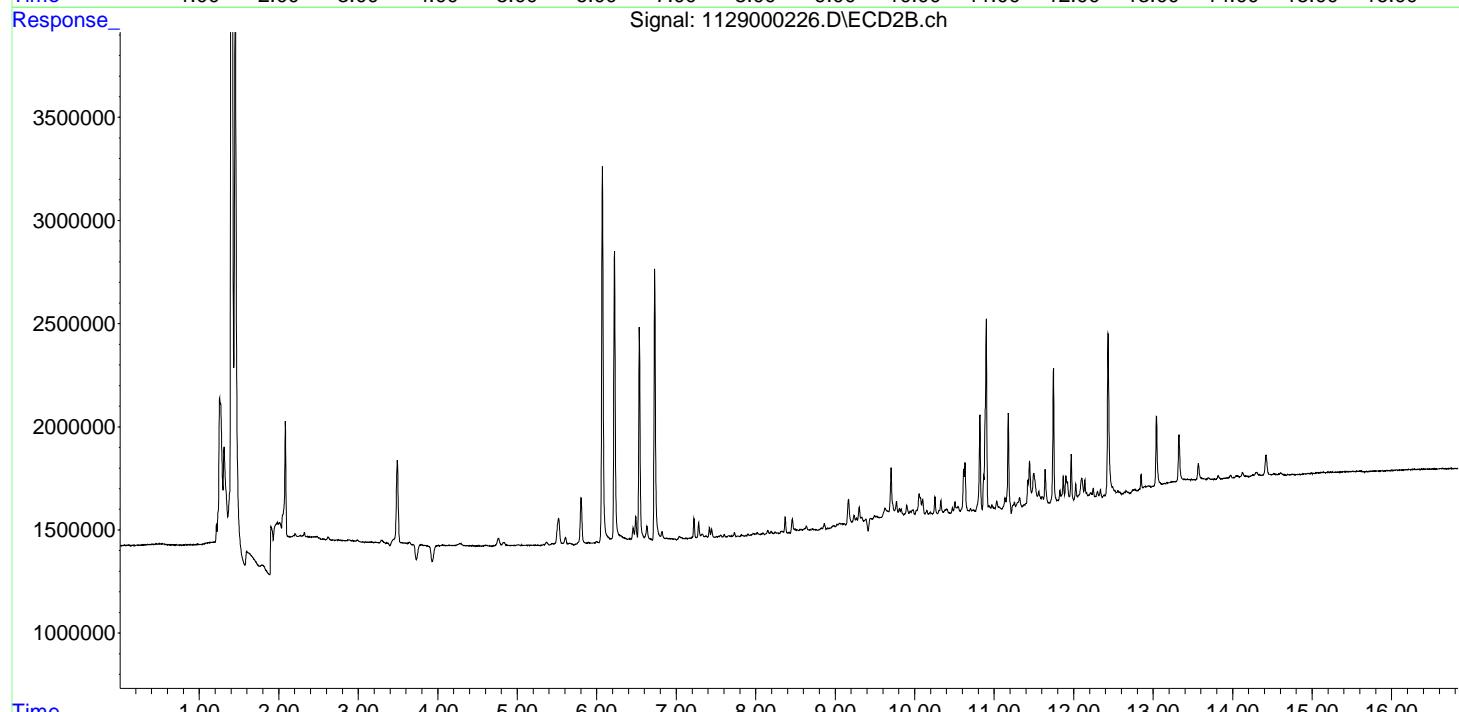
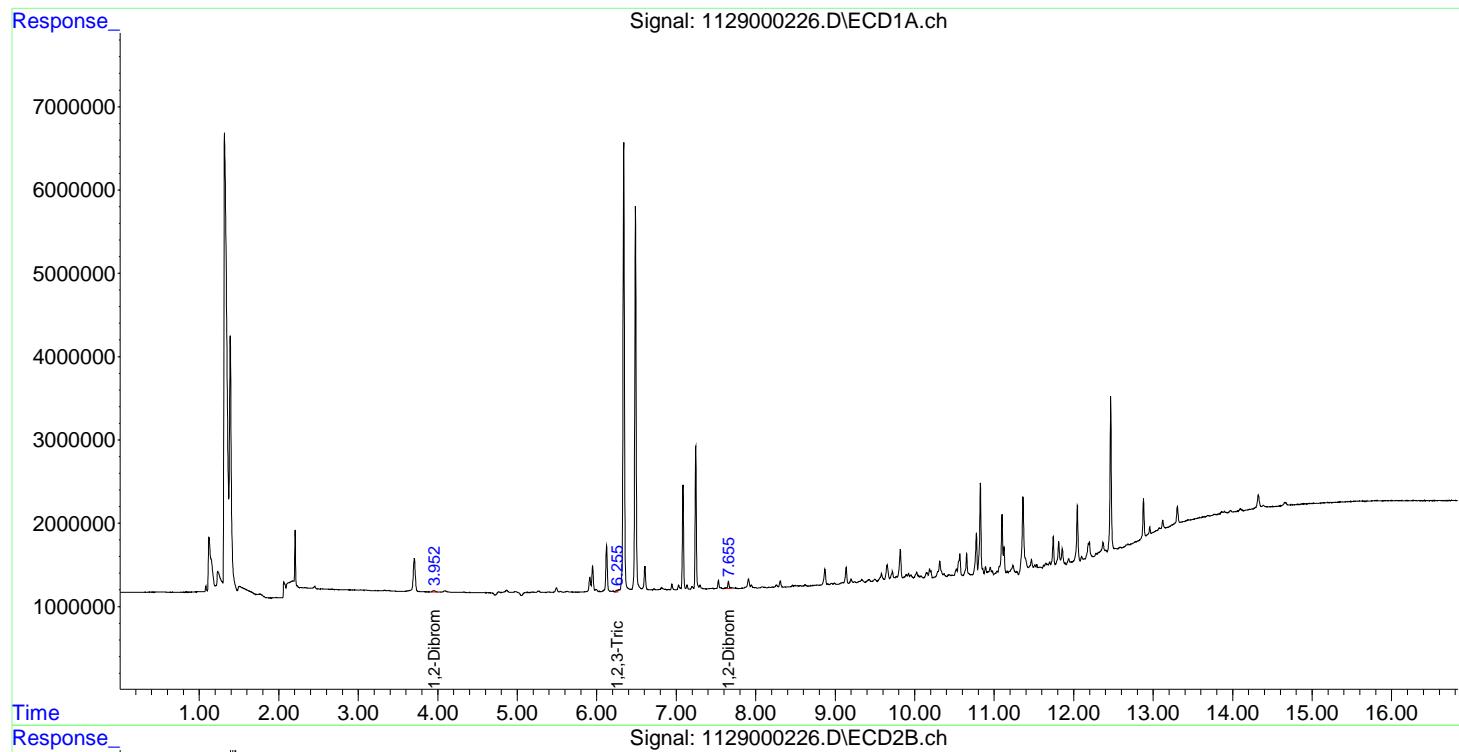
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.952f	0.000	40842	0	0.022	N.D. d#
2) M 1,2,3-Tri...	6.255f	0.000	32074	0	0.267	N.D. #
3) M 1,2-Dibro...	7.655	0.000	94384	0	0.033	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000226.D Vial: 22
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 22:14:22 Operator: LM
 Sample : KWG1610727-3 MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:25:46 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\112916-504\1129000224.D
Lab ID: KWG1610727-1
RunType: LCS
Matrix: WATER

Date Acquired: 11/29/2016 21:27
Date Quantitated: 11/30/2016 08:25
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000224.D\1129000224C.
Lab ID: KWG1610727-1
RunType: LCS
Matrix: WATER

Date Acquired: 11/29/2016 21:27
Date Quantitated: 11/30/2016 08:25
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000224.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\112916-504\1129000224.D\1129000224.c.d	Vial:	20	
Acq Date:	11/29/2016 21:27	Quant Date:	11/30/2016 08:25	
Run Type:	LCS	MethodJoinID:	MJ480	
Lab ID:	KWG1610727-1	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/29/2016	
Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1573190	Prep Date:	11/29/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:				
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Method ID:	MJ480	
			Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89	4.04 ^{+0.01}	6800965	4805275m	5.30	4.95	0.303	0.283	0.283
1,2,3-Trichloropropane	6.23	6.29	994695	983017	4.71	4.78	0.269	0.273	0.269
1,2-Dibromo-3-chloropropan	7.66	7.87	12715105	10312413	4.42	4.55	0.252	0.260	0.252

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000224.D Vial: 20
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 21:27:05 Operator: LM
 Sample : KWG1610727-1 LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:25:00 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

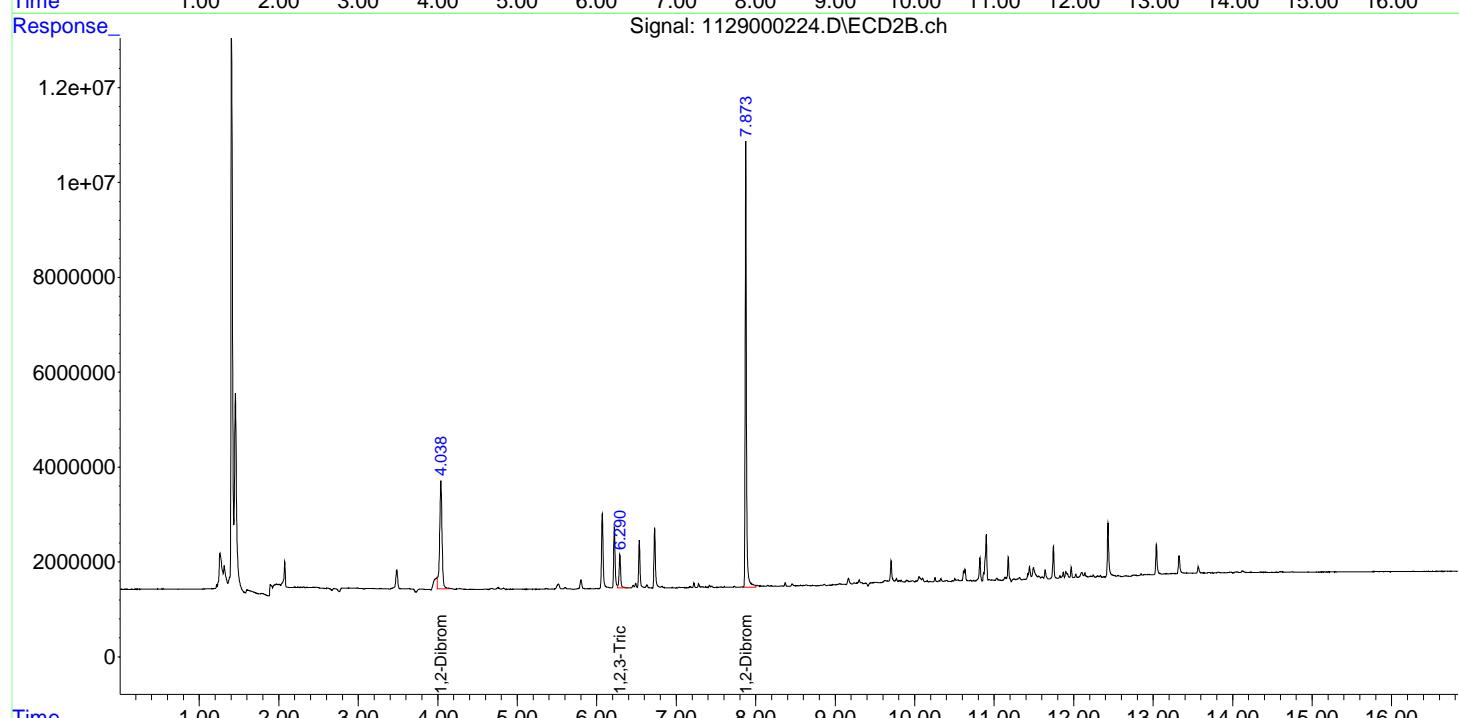
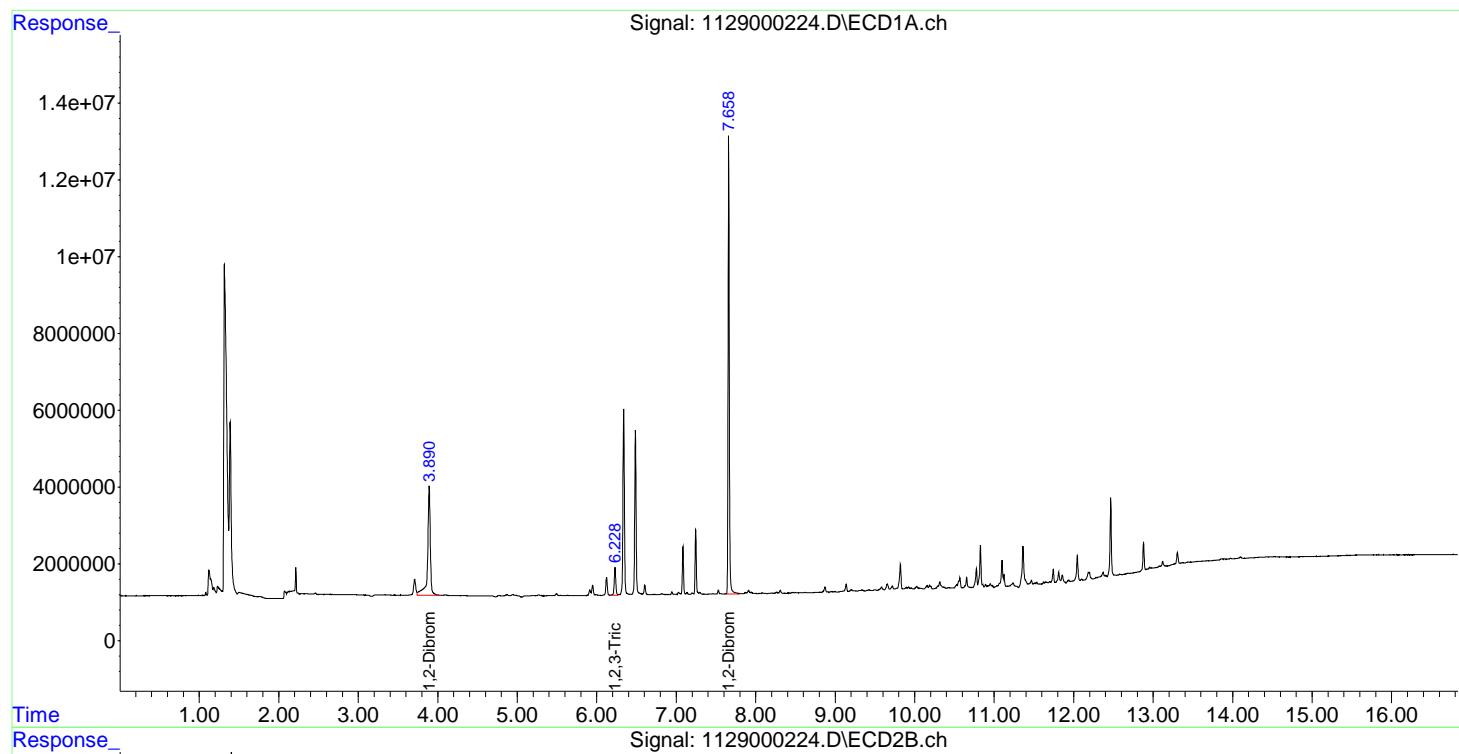
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.890	4.038	6800965	4805275	5.295	4.952m
2) M 1,2,3-Tri...	6.228	6.290	994695	983017	4.708	4.782
3) M 1,2-Dibro...	7.658	7.873	12715105	10312413	4.417	4.553

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000224.D Vial: 20
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 21:27:05 Operator: LM
 Sample : KWG1610727-1 LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:25:00 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

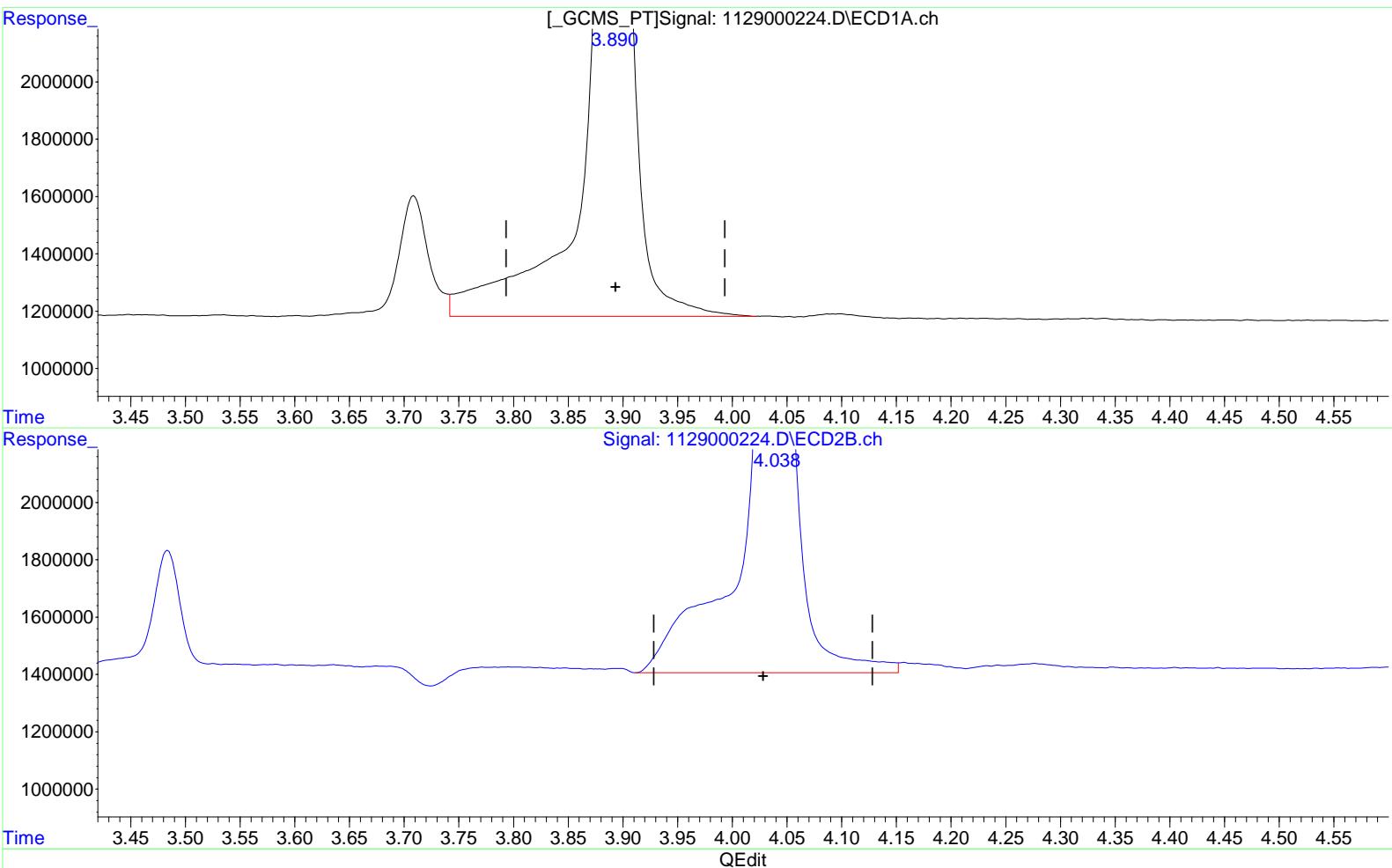
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\112916-504\1129000224.D Vial: 20
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 21:27:05 Operator: LM
 Sample : KWG1610727-1 LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:20:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.890min 5.295 ppb

response 6800965

Manual Integration:

Before

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

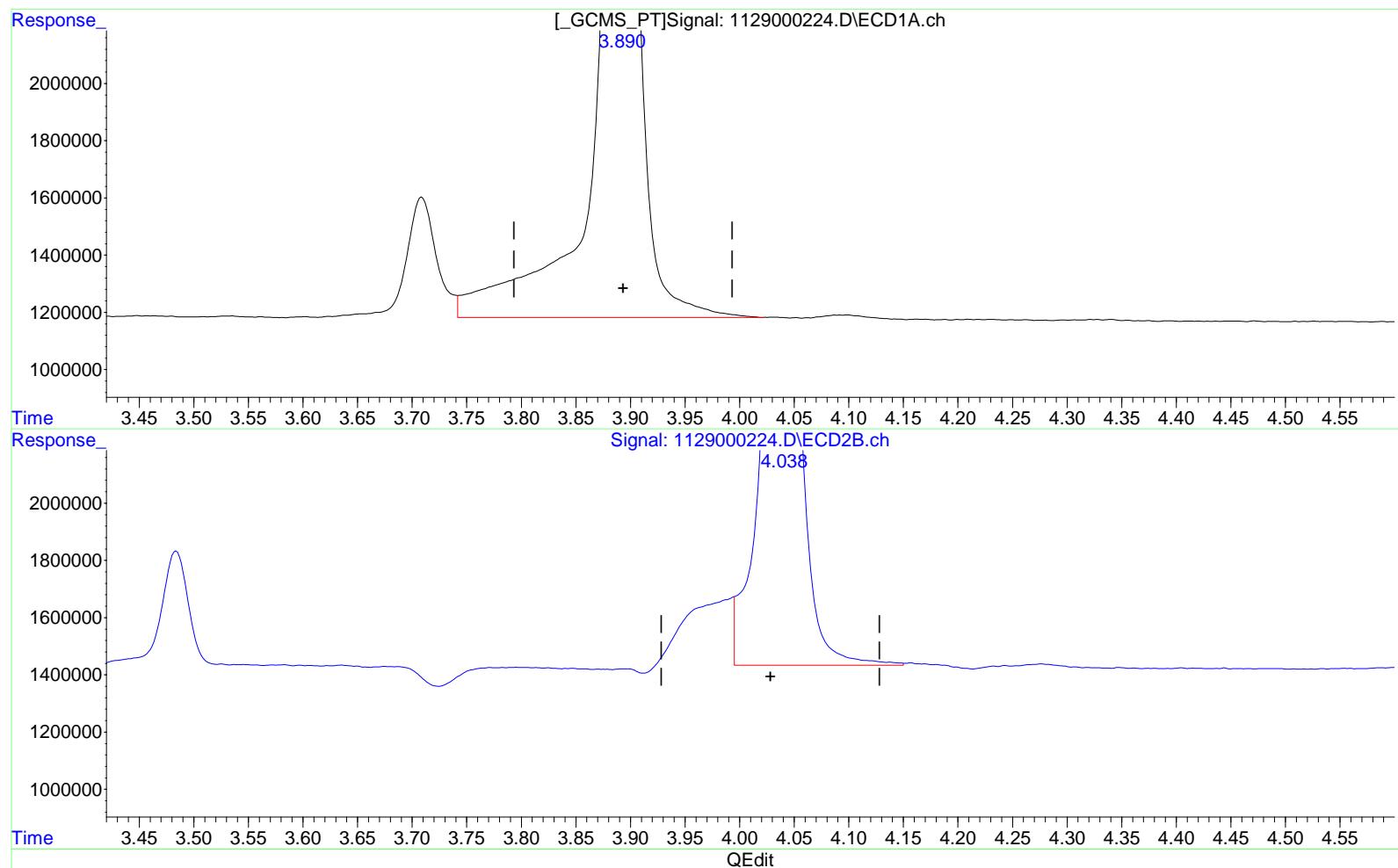
4.038min 6.088 ppb

response 5907544

Data File : J:\GC33\DATA\112916-504\1129000224.D Vial: 20
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 21:27:05 Operator: LM
 Sample : KWG1610727-1 LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:20:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.890min 5.295 ppb

response 6800965

Manual Integration:

After

Baseline/Shoulder

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.038min 4.952 ppb m

response 4805275

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000225.D
Lab ID: KWG1610727-2
RunType: DLCS
Matrix: WATER

Date Acquired: 11/29/2016 21:50
Date Quantitated: 11/30/2016 08:25
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000225.D\1129000225C.
Lab ID: KWG1610727-2
RunType: DLCS
Matrix: WATER

Date Acquired: 11/29/2016 21:50
Date Quantitated: 11/30/2016 08:25
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000225.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\112916-504\1129000225.D\1129000225c.d	Vial:	21	
Acq Date:	11/29/2016 21:50	Quant Date:	11/30/2016 08:25	
Run Type:	DLCS	MethodJoinID:	MJ480	
Lab ID:	KWG1610727-2	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/29/2016	
Analysis Lot:	KWG1610823	Prep Lot:	KWG1610727	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1573191	Prep Date:	11/29/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:	J:\GC33\DATA\112916-504\1129000226.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90 ^{+0.01}	4.03	6879540	4468030m	5.35	4.61	0.306	0.263	0.263
1,2,3-Trichloropropane	6.23	6.29	1040822	924566	4.92	4.49	0.281	0.257	0.257
1,2-Dibromo-3-chloropropan	7.66	7.87	12966966	9701153	4.50	4.28	0.257	0.245	0.245

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000225.D Vial: 21
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 21:50:42 Operator: LM
 Sample : KWG1610727-2 DLCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:25:31 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

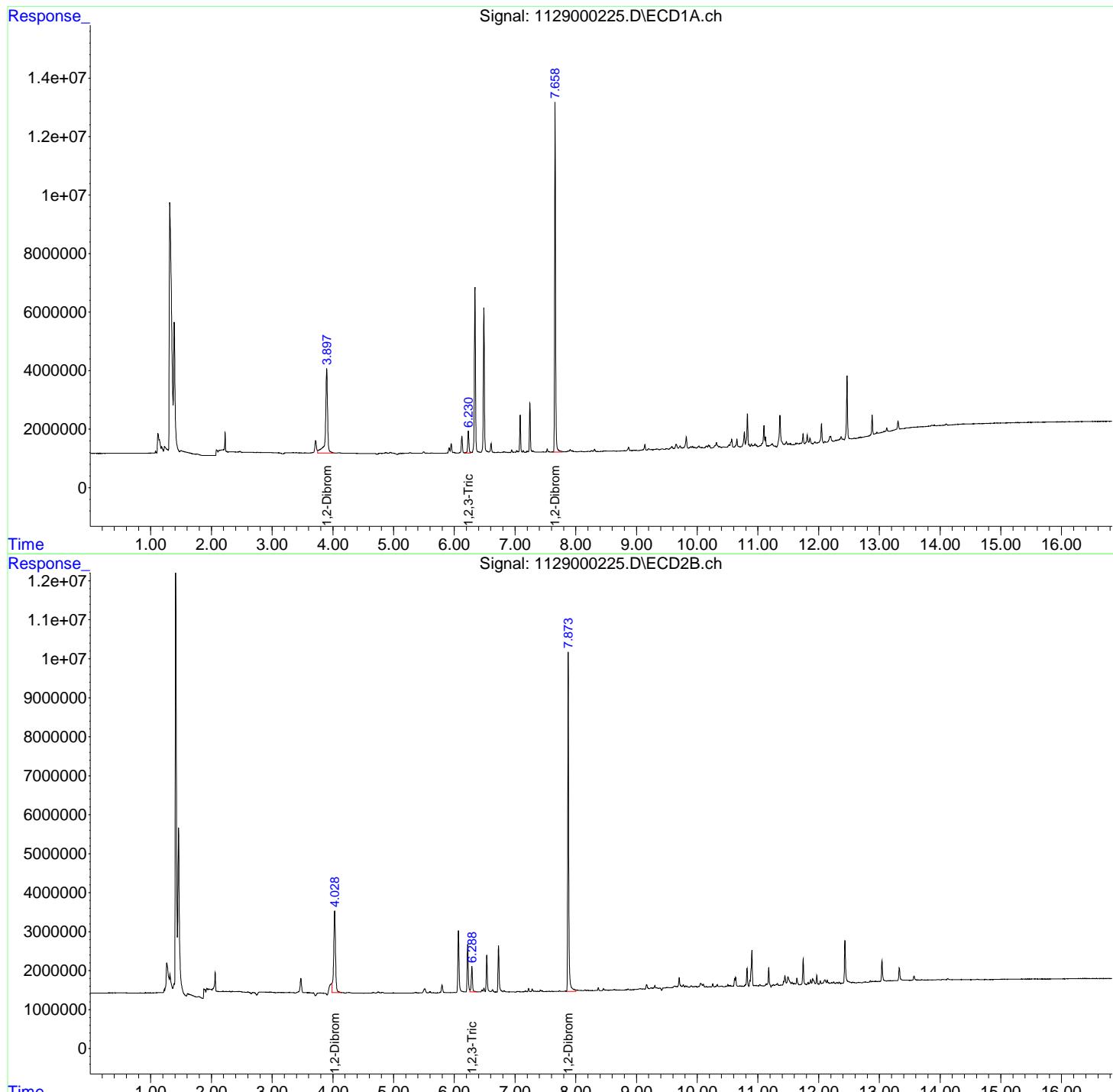
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.897	4.028	6879540	4468030	5.347	4.605m
2) M 1,2,3-Tri...	6.230	6.288	1040822	924566	4.921	4.491
3) M 1,2-Dibro...	7.658	7.873	12966966	9701153	4.504	4.283

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000225.D Vial: 21
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 21:50:42 Operator: LM
 Sample : KWG1610727-2 DLCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:25:31 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

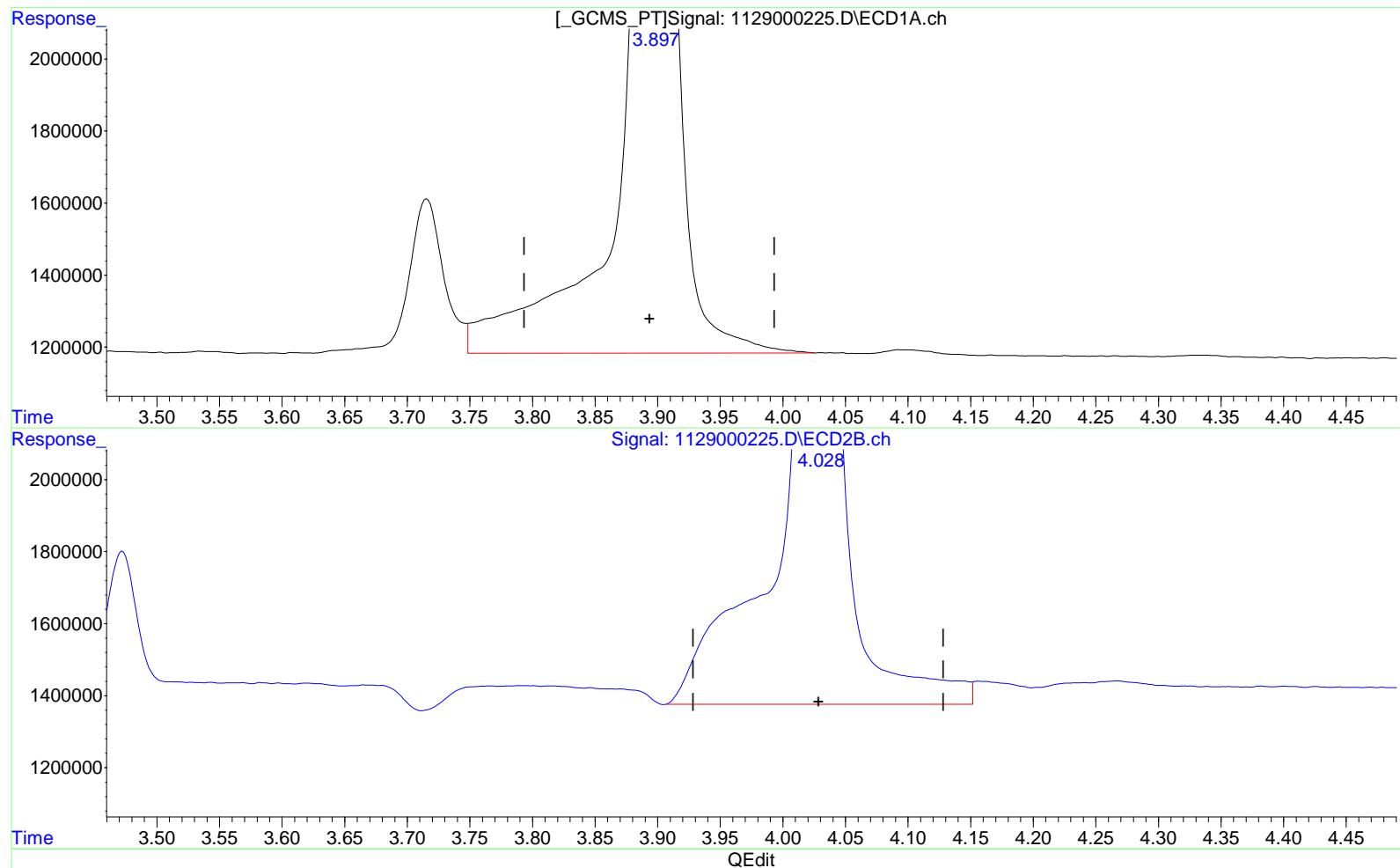
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\112916-504\1129000225.D Vial: 21
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 21:50:42 Operator: LM
 Sample : KWG1610727-2 DLCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:20:31 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.347 ppb

response 6879540

Manual Integration:

Before

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

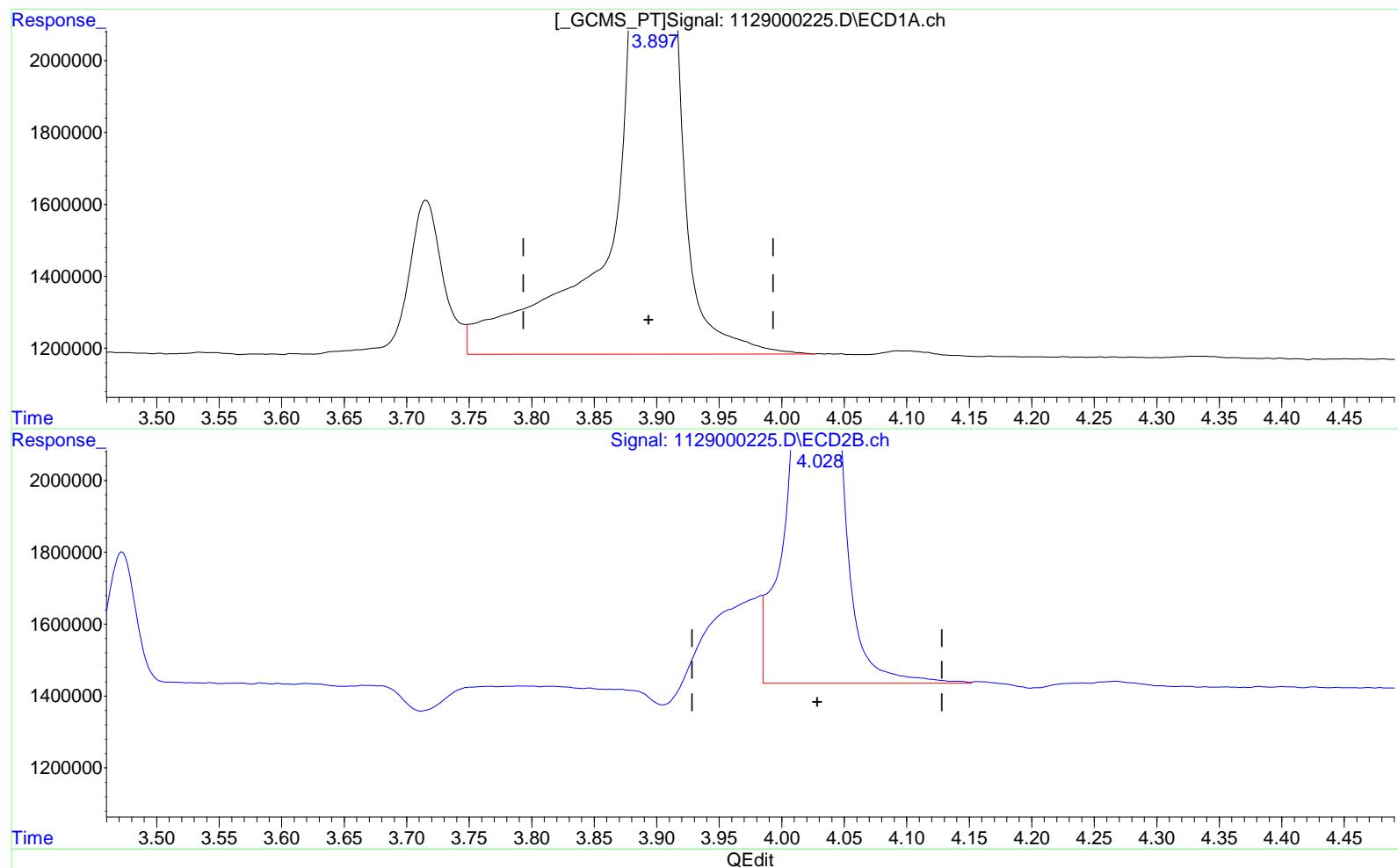
4.028min 6.170 ppb

response 5987092

Data File : J:\GC33\DATA\112916-504\1129000225.D Vial: 21
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 21:50:42 Operator: LM
 Sample : KWG1610727-2 DLCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:20:31 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.347 ppb

response 6879540

Manual Integration:

After

Baseline/Shoulder

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.028min 4.605 ppb m

response 4468030

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000213.D
Lab ID: KWG1610823-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/29/2016 17:07
Date Quantitated: 11/30/2016 08:15
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000213.D\1129000213C.
Lab ID: KWG1610823-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/29/2016 17:07
Date Quantitated: 11/30/2016 08:15
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000213.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000213.D\1129000213c.d	Vial:	6
Acq Date:	11/29/2016 17:07	Quant Date:	11/30/2016 08:15
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1610823-1	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	11/30/2016
Analysis Lot:	KWG1610823	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89	4.03	1563452m	1331888m	1.38	1.37			
1,2,3-Trichloropropane	6.23	6.29	250985	261972	1.28	1.19			
1,2-Dibromo-3-chloropropan	7.66	7.87	3510183	2724692	1.22	1.20			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:07:01 Operator: LM
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:15:48 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

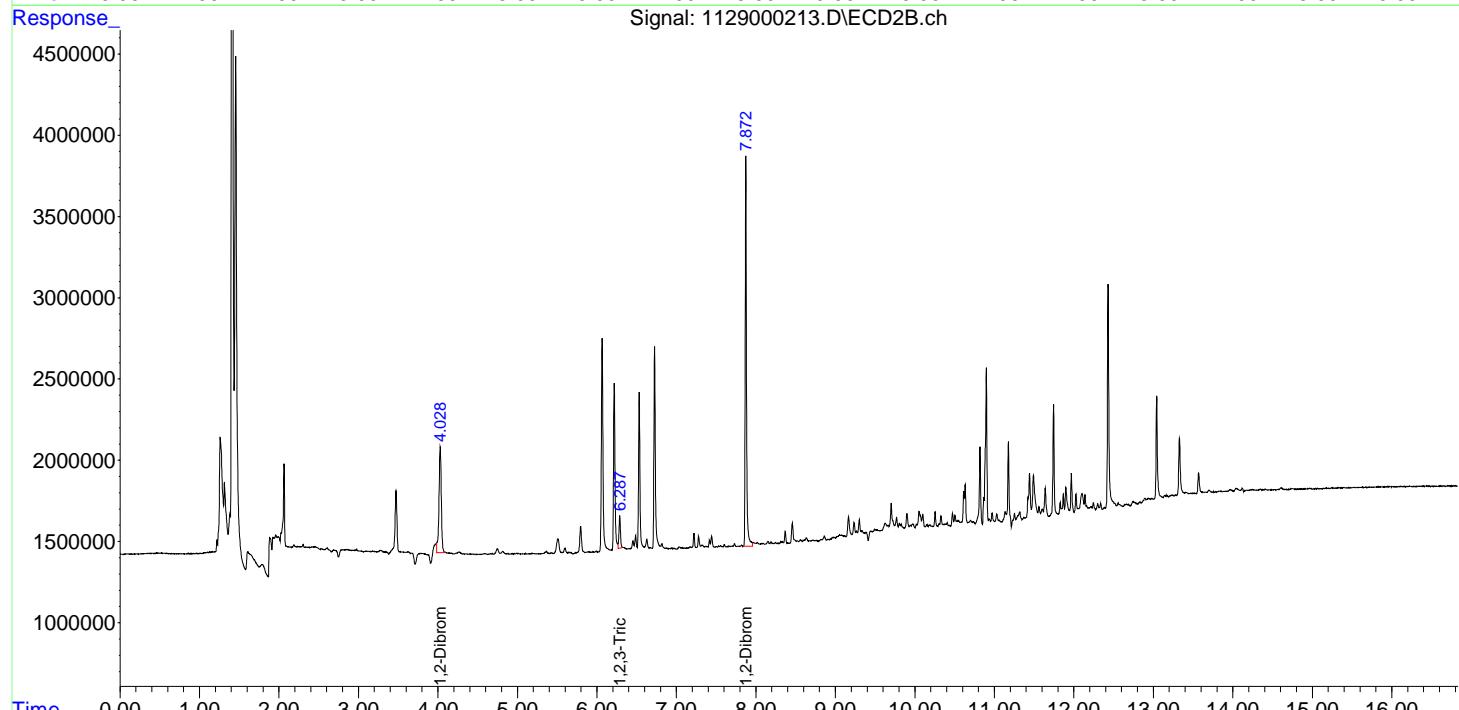
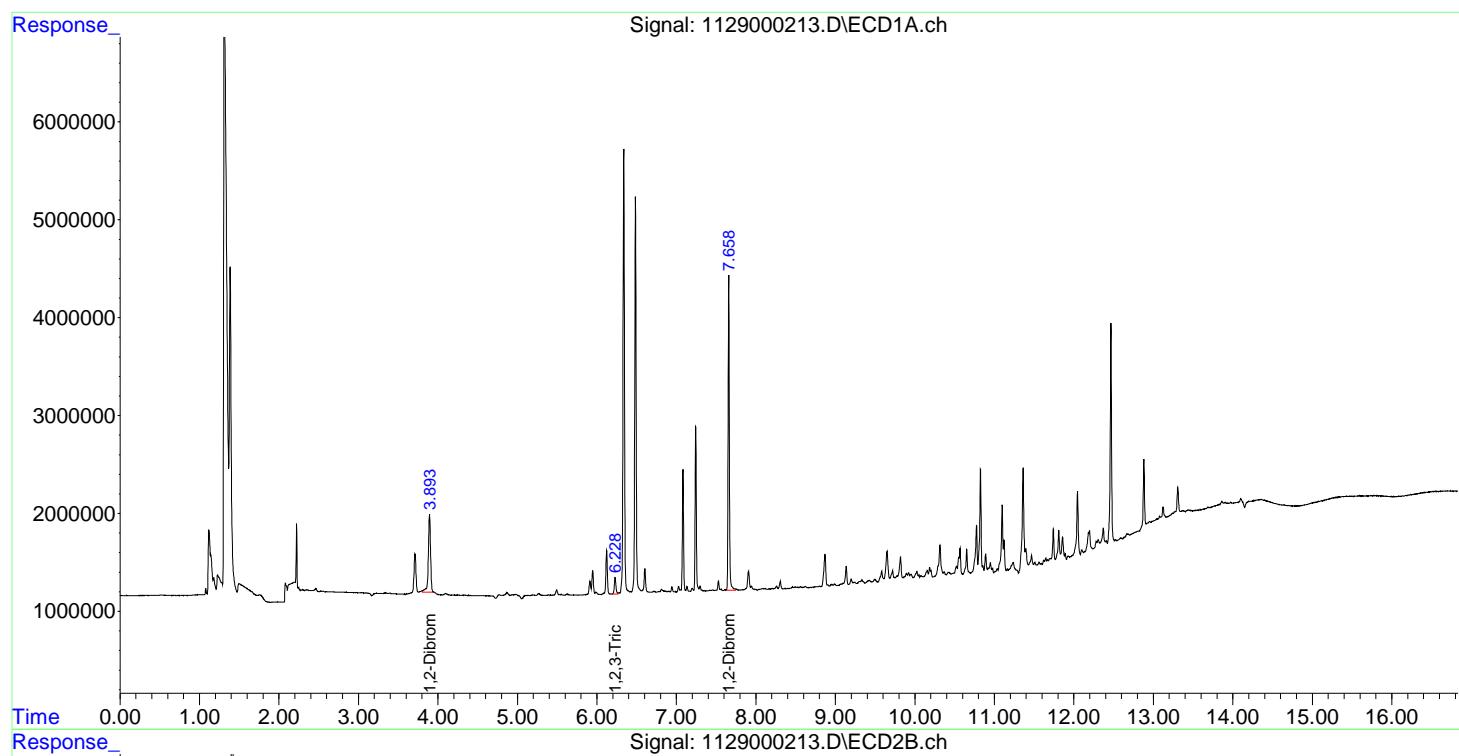
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.893	4.028	1563452	1331888	1.376m	1.373m
2) M 1,2,3-Tri...	6.228	6.287	250985	261972	1.277	1.194
3) M 1,2-Dibro...	7.658	7.872	3510183	2724692	1.219	1.203

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:07:01 Operator: LM
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:15:48 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

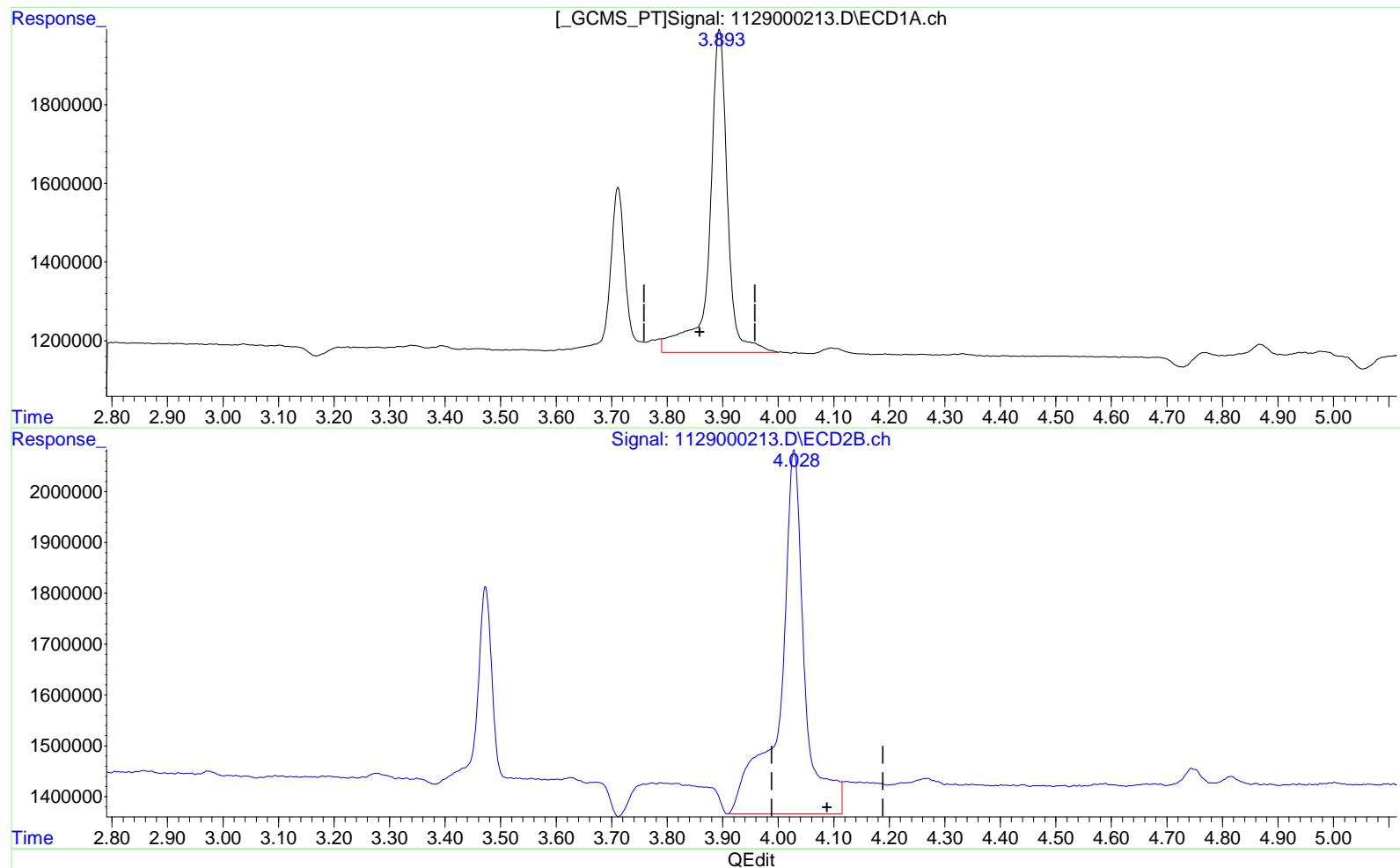
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\112916-504\1129000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:07:01 Operator: LM
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:06:12 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.893min 1.618 ppb
 response 1852018

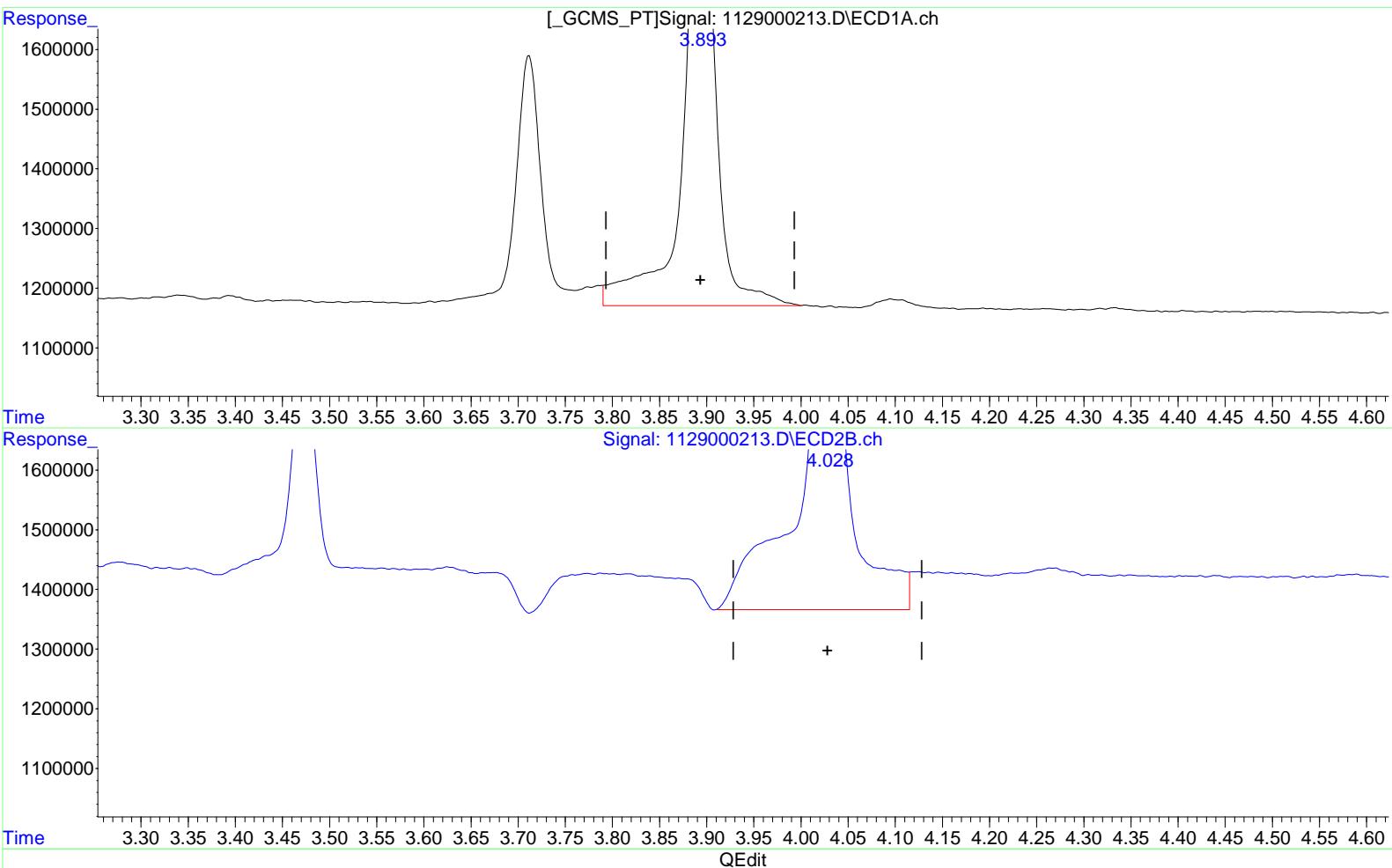
Manual Integration:
 Before
 11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.028min 2.279 ppb
 response 2211179

Data File : J:\GC33\DATA\112916-504\1129000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:07:01 Operator: LM
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:15:13 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.893min 1.618 ppb

response 1852018

Manual Integration:

Before

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

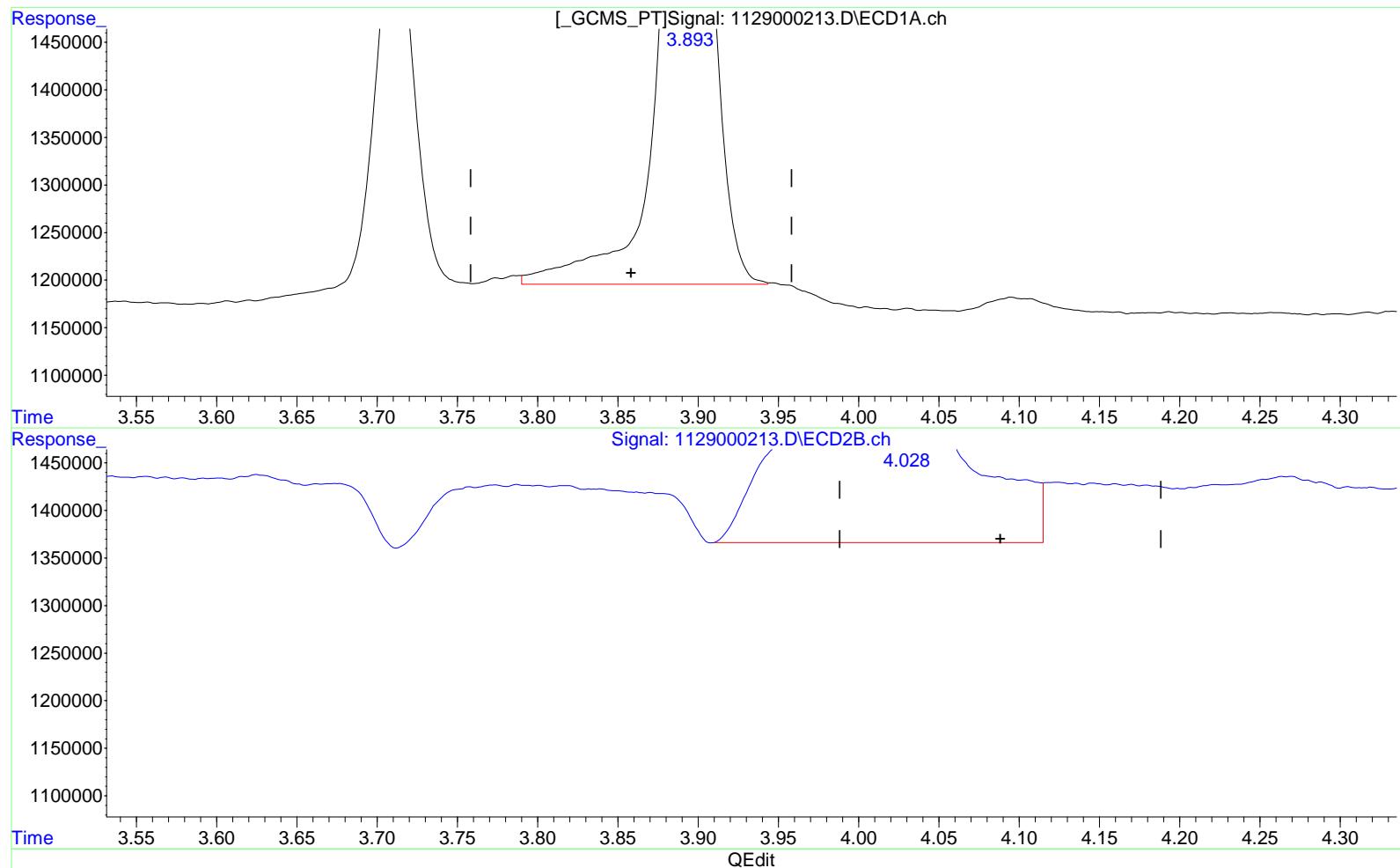
4.028min 2.279 ppb

response 2211179

Data File : J:\GC33\DATA\112916-504\1129000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:07:01 Operator: LM
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:06:12 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.893min 1.388 ppb m
 response 1578449

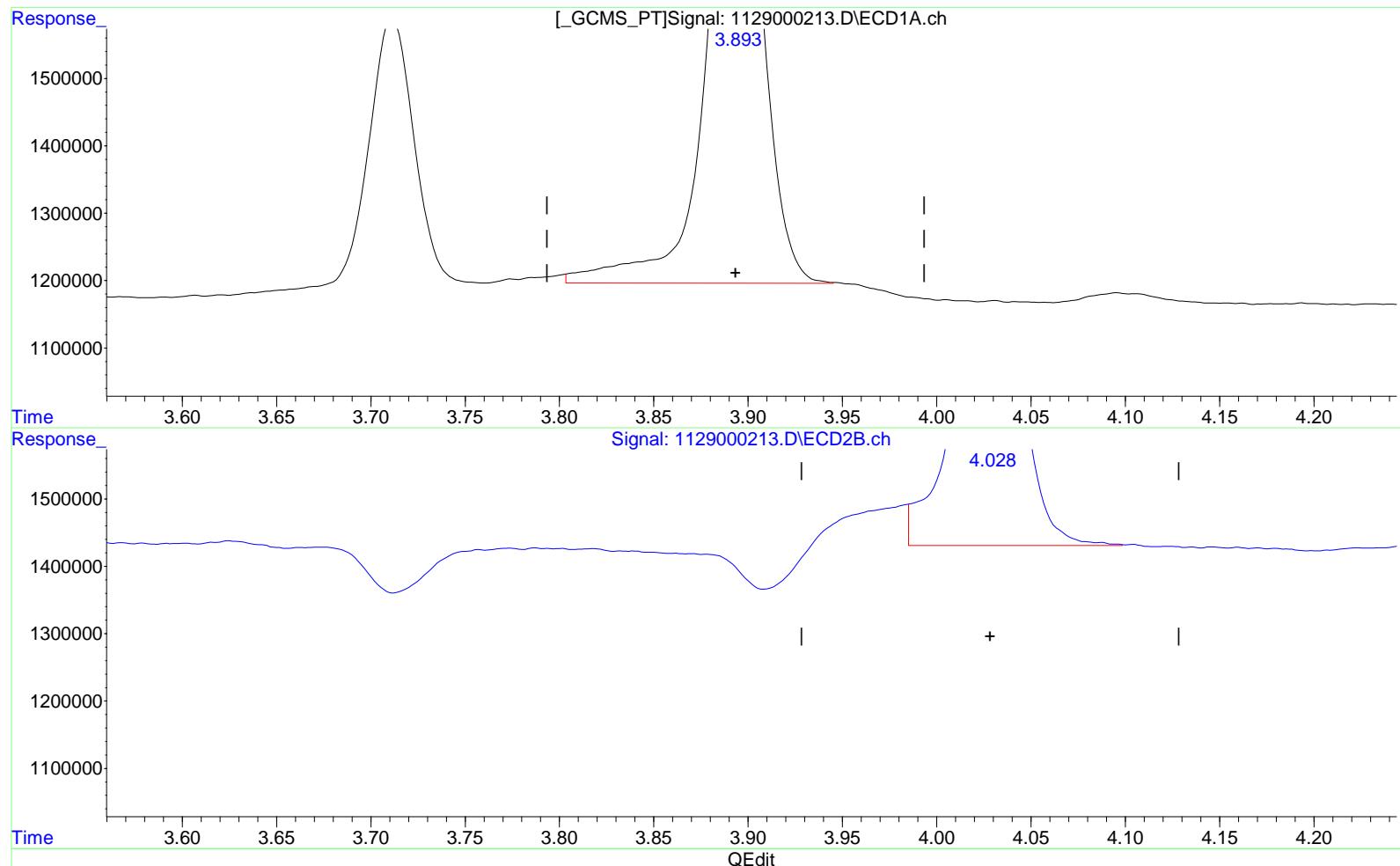
Manual Integration:
 After
 Baseline/Shoulder
 11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.028min 2.279 ppb
 response 2211179

Data File : J:\GC33\DATA\112916-504\1129000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:07:01 Operator: LM
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:15:13 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.893min 1.376 ppb m
 response 1563452

Manual Integration:
 After
 Baseline/Shoulder
 11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.028min 1.373 ppb m
 response 1331888

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000227.D
Lab ID: KWG1610823-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/29/2016 22:38
Date Quantitated: 11/30/2016 08:16
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000227.D\1129000227C.
Lab ID: KWG1610823-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/29/2016 22:38
Date Quantitated: 11/30/2016 08:16
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000227.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000227.D\1129000227.c.d	Vial:	8
Acq Date:	11/29/2016 22:38	Quant Date:	11/30/2016 08:16
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1610823-2	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Soln Conc. Units:	ppb	Matrix:	NOT APPLICABLE
Bottle ID:	Tier:	Receive Date:	11/30/2016
Prod Code:	504.1 EDB DBCP	Collect Date:	
Analysis Lot:	KWG1610823	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.04	7621105	4993705m	5.84	5.15			
1,2,3-Trichloropropane	6.23	6.29	1115351	964607	5.27	4.69			
1,2-Dibromo-3-chloropropano	7.66	7.88	14510870	10932100	5.04	4.83			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000227.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 22:38:09 Operator: LM
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:16:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

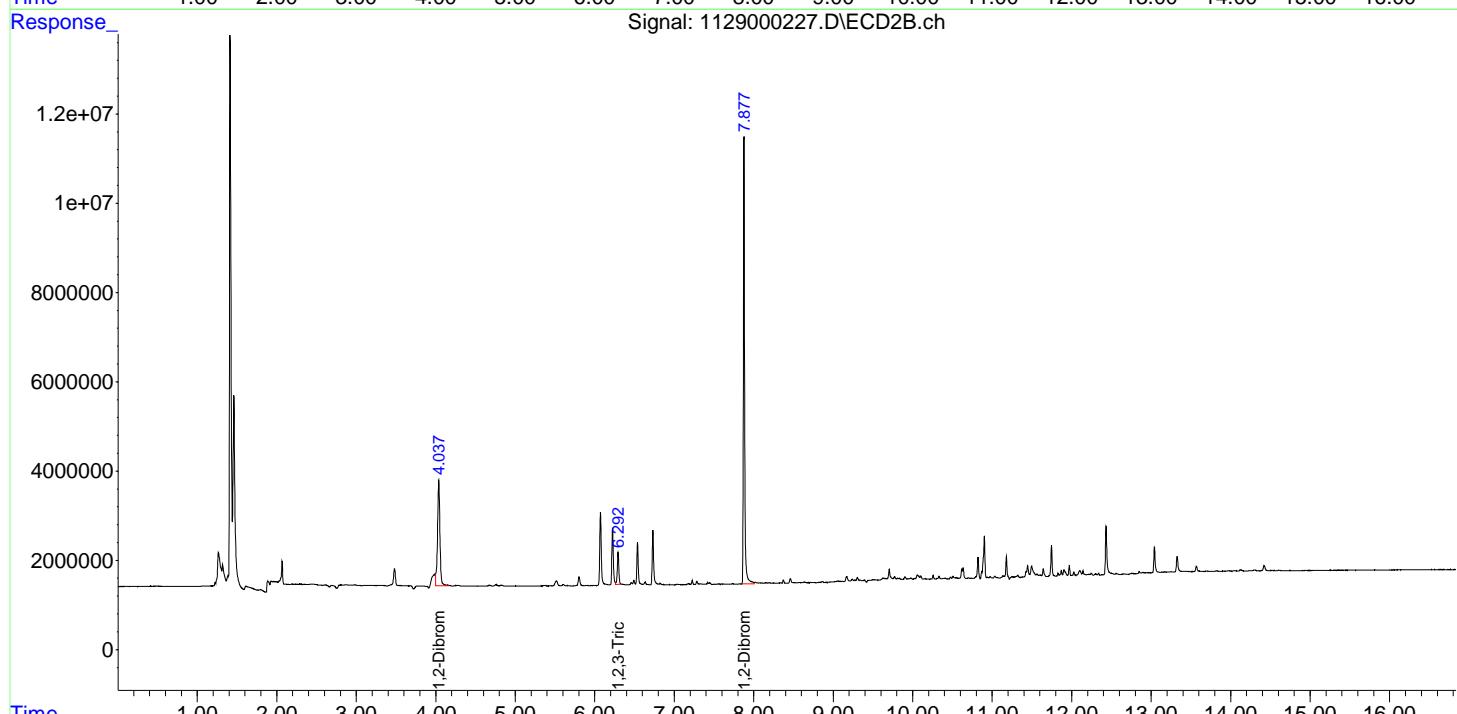
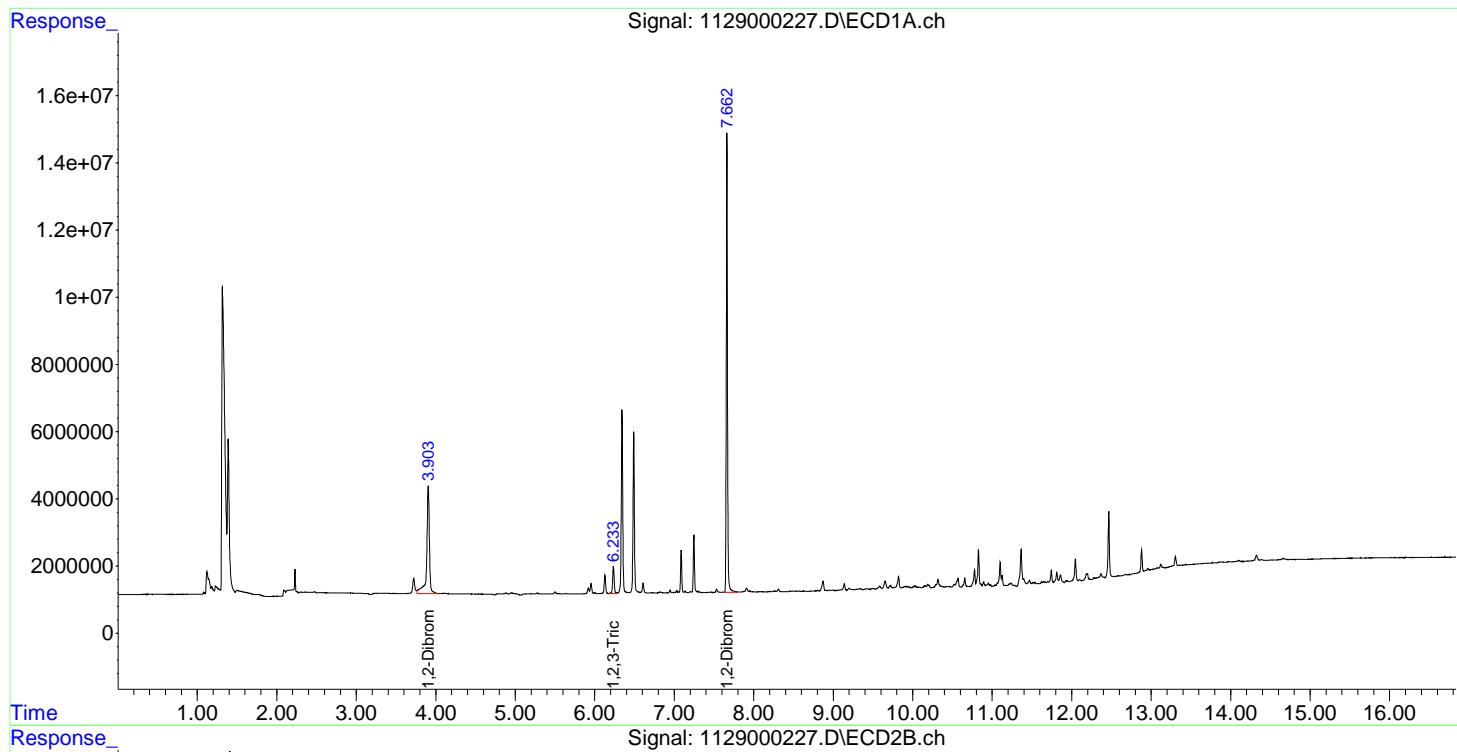
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.903	4.037	7621105	4993705	5.836	5.146m
2) M 1,2,3-Tri...	6.233	6.292	1115351	964607	5.265	4.690
3) M 1,2-Dibro...	7.662	7.877	14510870	10932100	5.040	4.826

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000227.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 22:38:09 Operator: LM
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:16:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

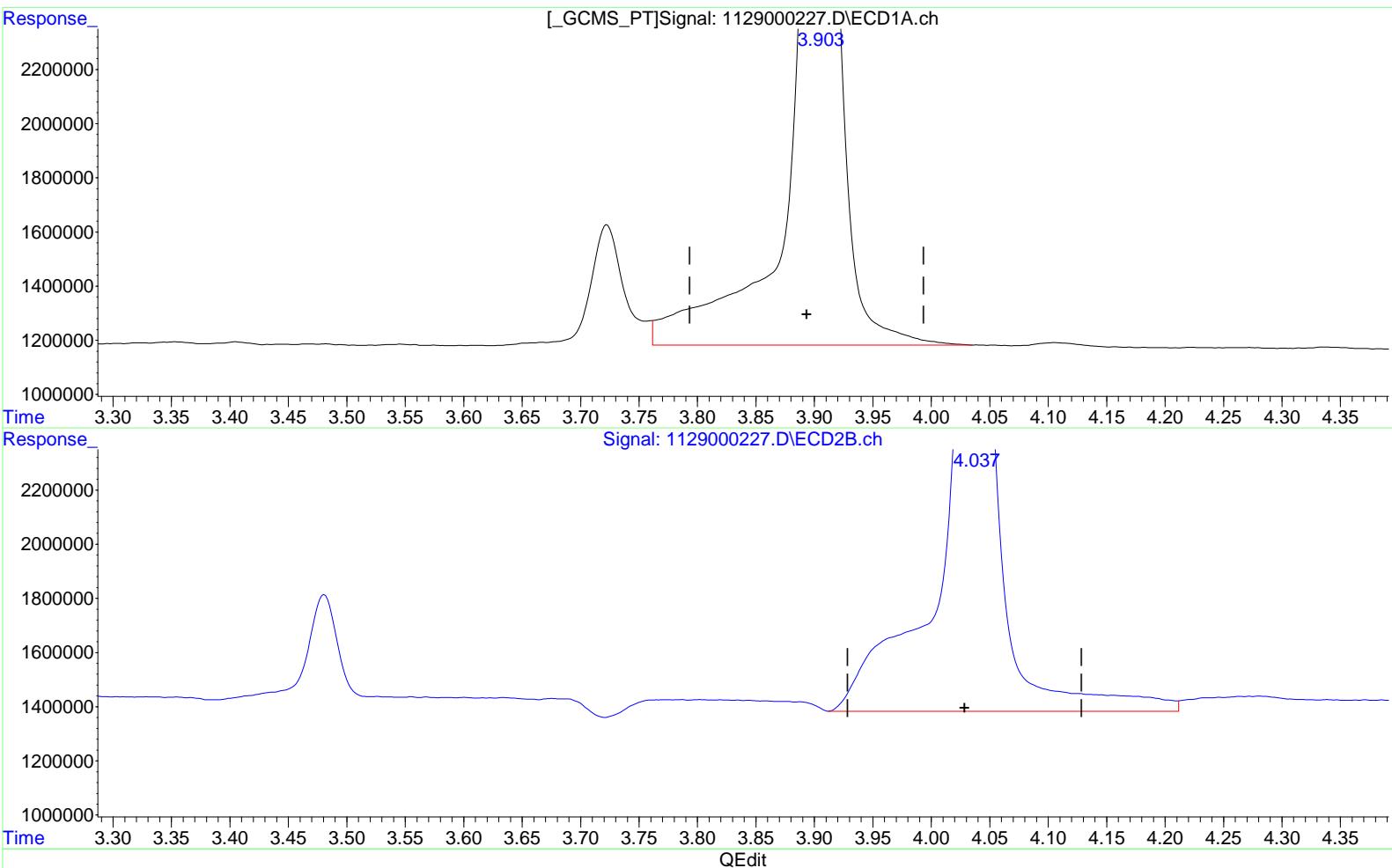
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\112916-504\1129000227.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 22:38:09 Operator: LM
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:16:08 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.903min 5.836 ppb

response 7621105

Manual Integration:

Before

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

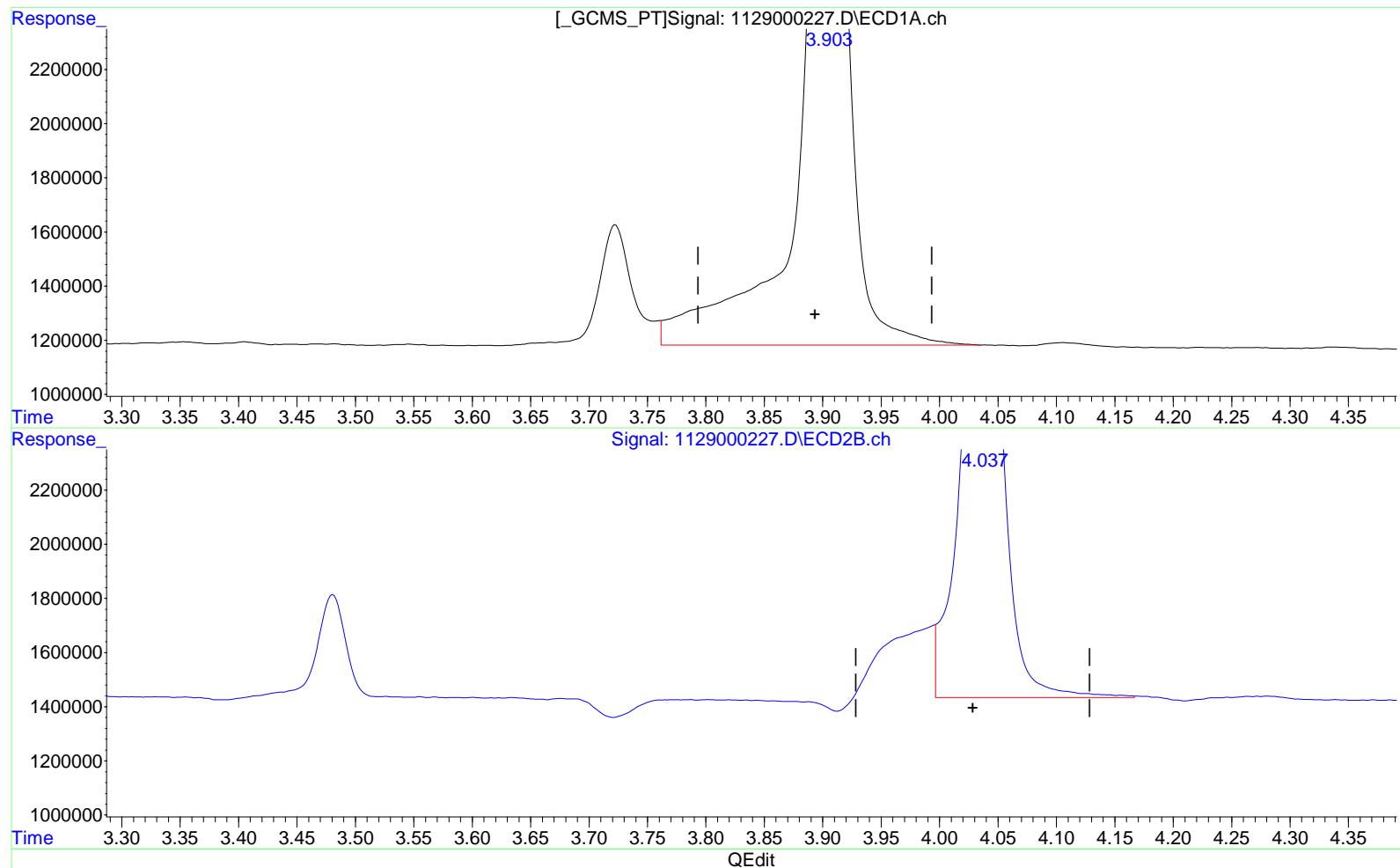
4.037min 6.868 ppb

response 6663861

Data File : J:\GC33\DATA\112916-504\1129000227.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 22:38:09 Operator: LM
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:16:08 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.903min 5.836 ppb

response 7621105

Manual Integration:

After

Baseline/Shoulder

11/30/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.037min 5.146 ppb m

response 4993705

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000214.D
Lab ID: KWG1610823-3
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/29/2016 17:30
Date Quantitated: 11/30/2016 08:22
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000214.D\1129000214C.
Lab ID: KWG1610823-3
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/29/2016 17:30
Date Quantitated: 11/30/2016 08:22
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000214.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000214.D\1129000214.c.d	Vial:	1
Acq Date:	11/29/2016 17:30	Quant Date:	11/30/2016 08:22
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1610823-3	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	11/30/2016
Analysis Lot:	KWG1610823	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			0d	0d	0.0000	0.0000			
1,2,3-Trichloropropane	6.25	6.30	44285	323643	0.3230	1.50			
1,2-Dibromo-3-chloropropan	7.65		105166	0	0.0370	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000214.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:30:40 Operator: LM
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:22:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

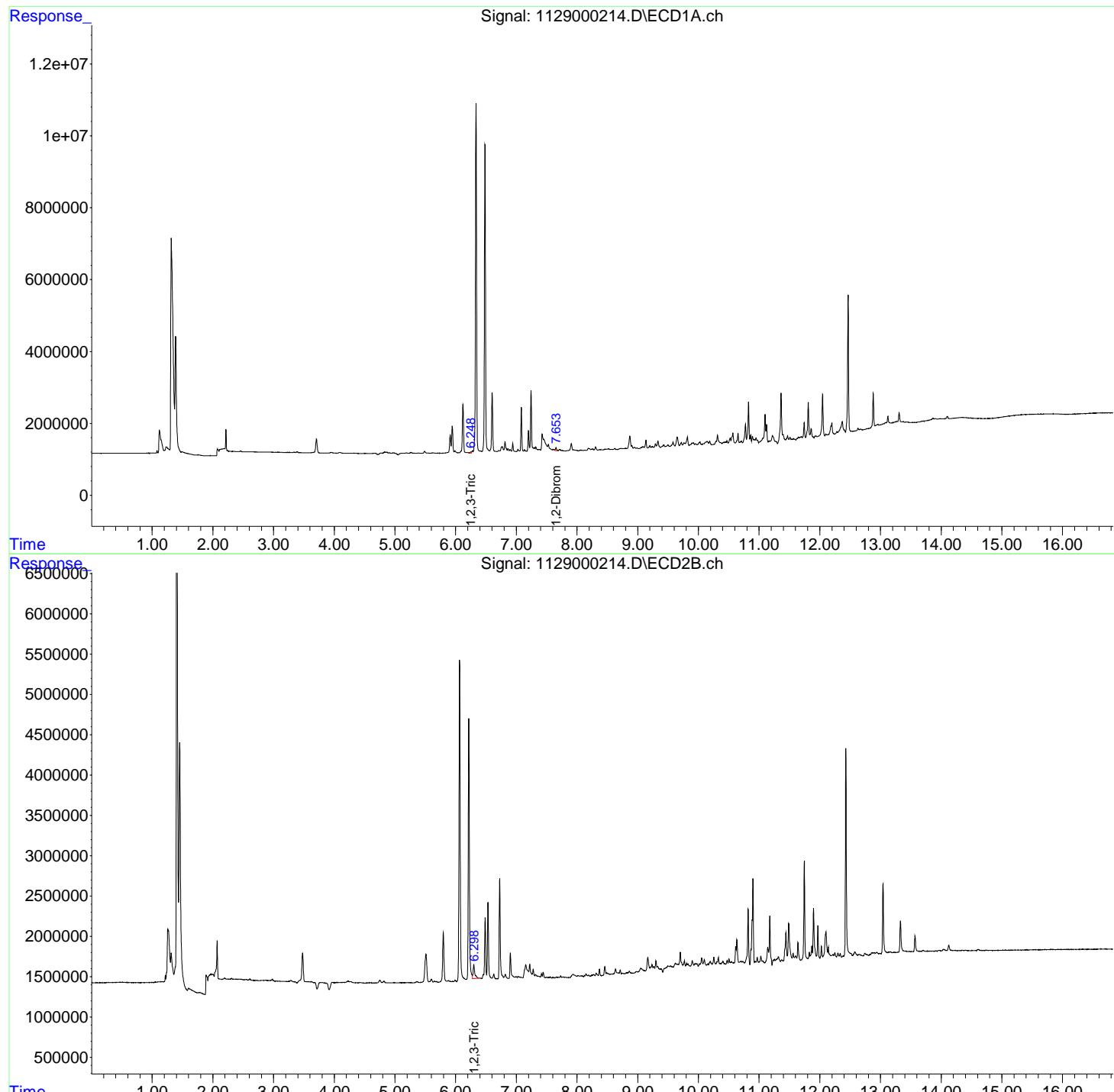
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.248	6.298	44285	323643	0.323	1.501 #
3) M 1,2-Dibro...	7.653	0.000	105166	0	0.037	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000214.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 17:30:40 Operator: LM
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:22:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\112916-504\1129000228.D
Lab ID: KWG1610823-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/29/2016 23:01
Date Quantitated: 11/30/2016 08:26
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\112916-504\1129000228.D\1129000228C.
Lab ID: KWG1610823-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/29/2016 23:01
Date Quantitated: 11/30/2016 08:26
Batch ID: KWG1610823
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\112916-504\1129000228.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\112916-504\1129000228.D\1129000228.c.d	Vial:	1
Acq Date:	11/29/2016 23:01	Quant Date:	11/30/2016 08:26
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1610823-4	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Soln Conc. Units:	ppb	Matrix:	NOT APPLICABLE
Bottle ID:	Tier:	Receive Date:	11/30/2016
Prod Code:	504.1 EDB DBCP	Collect Date:	
Analysis Lot:	KWG1610823	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			0d	0d	0.0000	0.0000			
1,2,3-Trichloropropane	6.25	6.30	42401	341418	0.3150	1.59			
1,2-Dibromo-3-chloropropano	7.66		110635	0	0.0380	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\112916-504\1129000228.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 23:01:47 Operator: LM
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:26:03 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

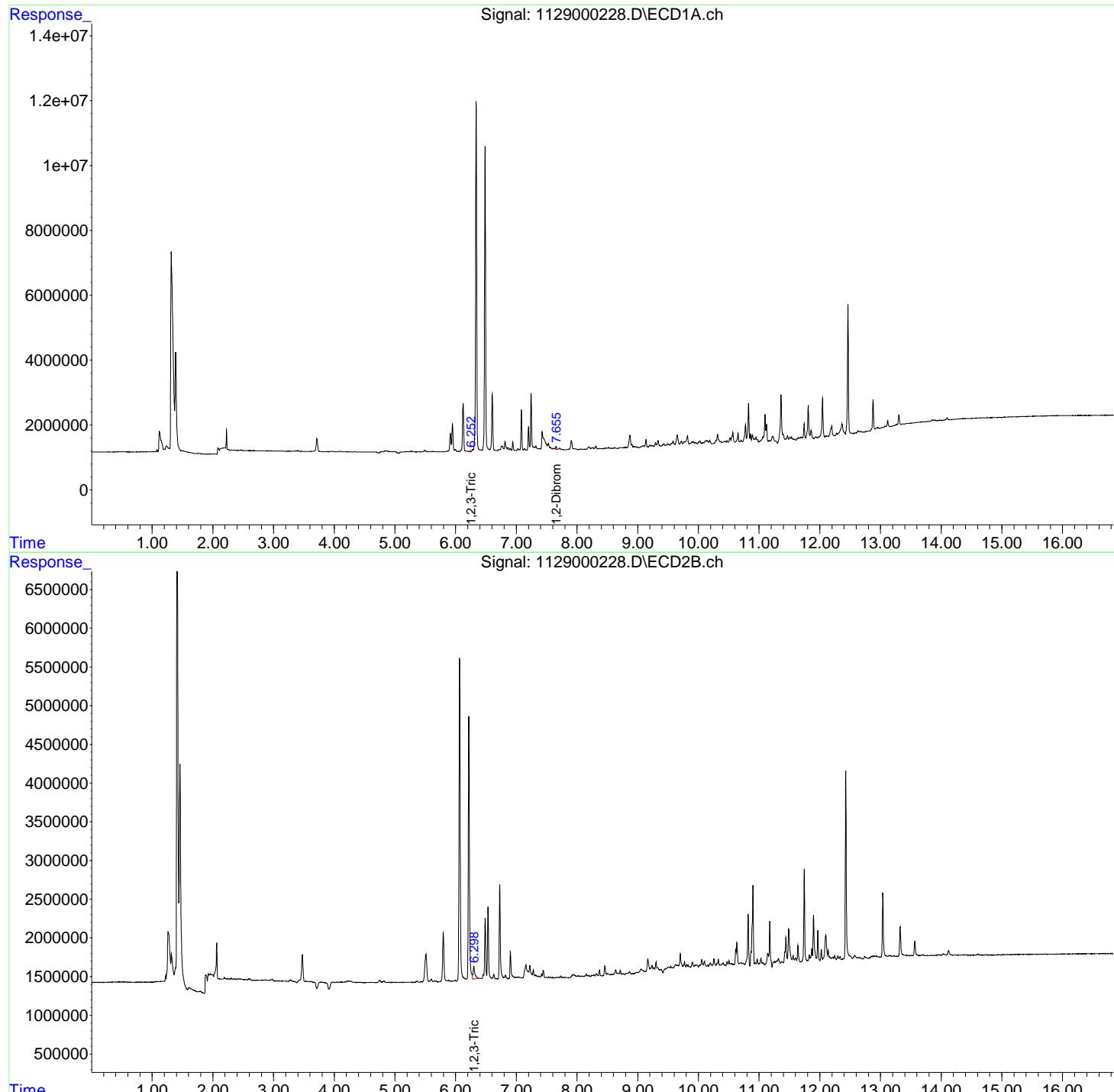
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.252	6.298	42401	341418	0.315	1.589 #
3) M 1,2-Dibro...	7.655	0.000	110635	0	0.038	N.D. #
<hr/>						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\112916-504\1129000228.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 29-Nov-2016, 23:01:47 Operator: LM
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 30 08:26:03 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
No	1	Vial	94	504-1 PRIMER MeOH	1010001	F:01:01
No	2	Vial	95	504-1 PRIMER Hexane	1010002	F:02:01
No	3	Vial	1	504-1 ICAL BLANK	1010003	F:03:01
No	4	Vial	2	504-1 ICAL LV1 101016	1010004	F:04:01
No	5	Vial	3	504-1 ICAL LV2 101016	1010005	F:05:01
No	6	Vial	4	504-1 ICAL LV3 101016	1010006	F:06:01
No	7	Vial	5	504-1 ICAL LV4 101016	1010007	F:07:01
No	8	Vial	6	504-1 ICAL LV5 101016	1010008	F:08:01
No	9	Vial	7	504-1 ICAL LV6 101016	1010009	F:09:01
No	10	Vial	8	504-1 ICAL LV7 101016	1010010	F:10:01
No	11	Vial	9	504-1 ICAL LV8 101016	1010011	F:11:01
No	12	Vial	10	504-1 ICAL ICV 101016	1010012	F:12:01
No	13	Vial	6	504-1 101016 LV5	1010013	F:13:01
No	14	Vial	1	504-1 IB	1010014	F:14:01
No	15	Vial	11	504-1 KWG1609129-5LCS	1010015	F:15:01
No	16	Vial	12	504-1 KWG1609129-6LCS	1010016	F:16:01
No	17	Vial	13	504-1 KWG1609129-7MB	1010017	F:17:01
No	18	Vial	14	504-1 K1612006-001	1010018	F:18:01
No	19	Vial	15	504-1 K1612006-002	1010019	F:19:01
No	20	Vial	16	504-1 K1612006-003	1010020	F:20:01
No	21	Vial	17	504-1 K1612014-001	1010021	F:21:01
No	22	Vial	18	504-1 K1612056-001	1010022	F:22:01
No	23	Vial	19	504-1 K1612056-002	1010023	F:23:01
No	24	Vial	20	504-1 K1612056-003	1010024	F:24:01
No	25	Vial	7	504-1 101016 504 LV6	1010025	F:25:01
No	26	Vial	1	504-1 IB	1010026	F:26:01
No	27	Vial	21	504-1 K1612057-001	1010027	F:27:01
No	28	Vial	22	504-1 K1612057-001MS	1010028	F:28:01

Run#517961
CHL 14943

MS 10/11/14

PRO
Sep

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010003.D Vial: 1
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 15:42:57 Operator: BS
Sample : ICAL BLANK Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:55:18 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	0.000	6.305	0	349661	N.D.	d 1.630
3) M 1,2-Dibro...	7.663	0.000	94406	0	0.033	N.D. d#

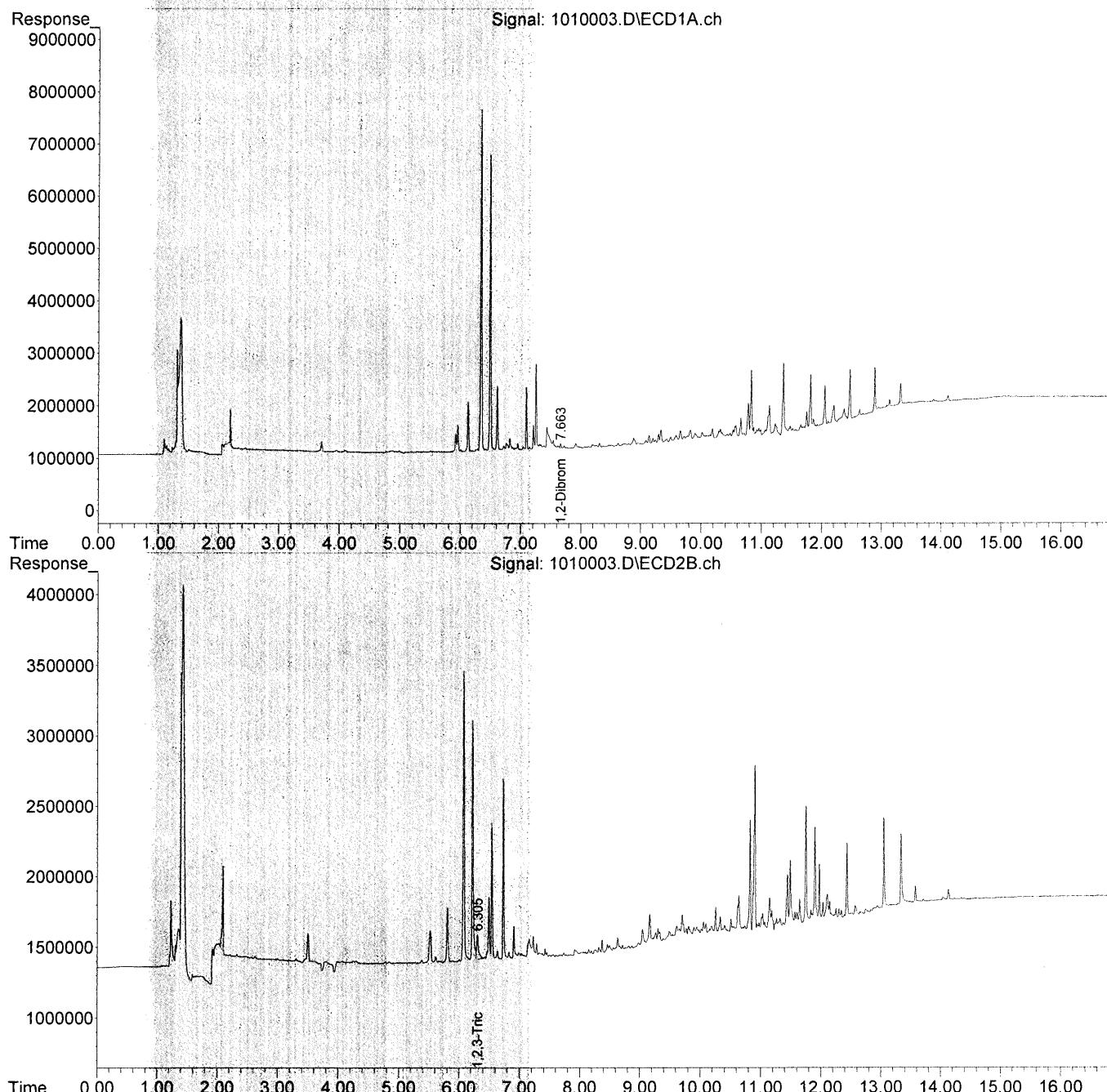
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010003.D Vial: 1
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 15:42:57 Operator: BS
Sample : ICAL BLANK Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:55:18 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:06:36 Operator: BS
Sample : ICAL LV1 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:07:51 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.895	4.060	57594	65501	0.096m	0.047 #

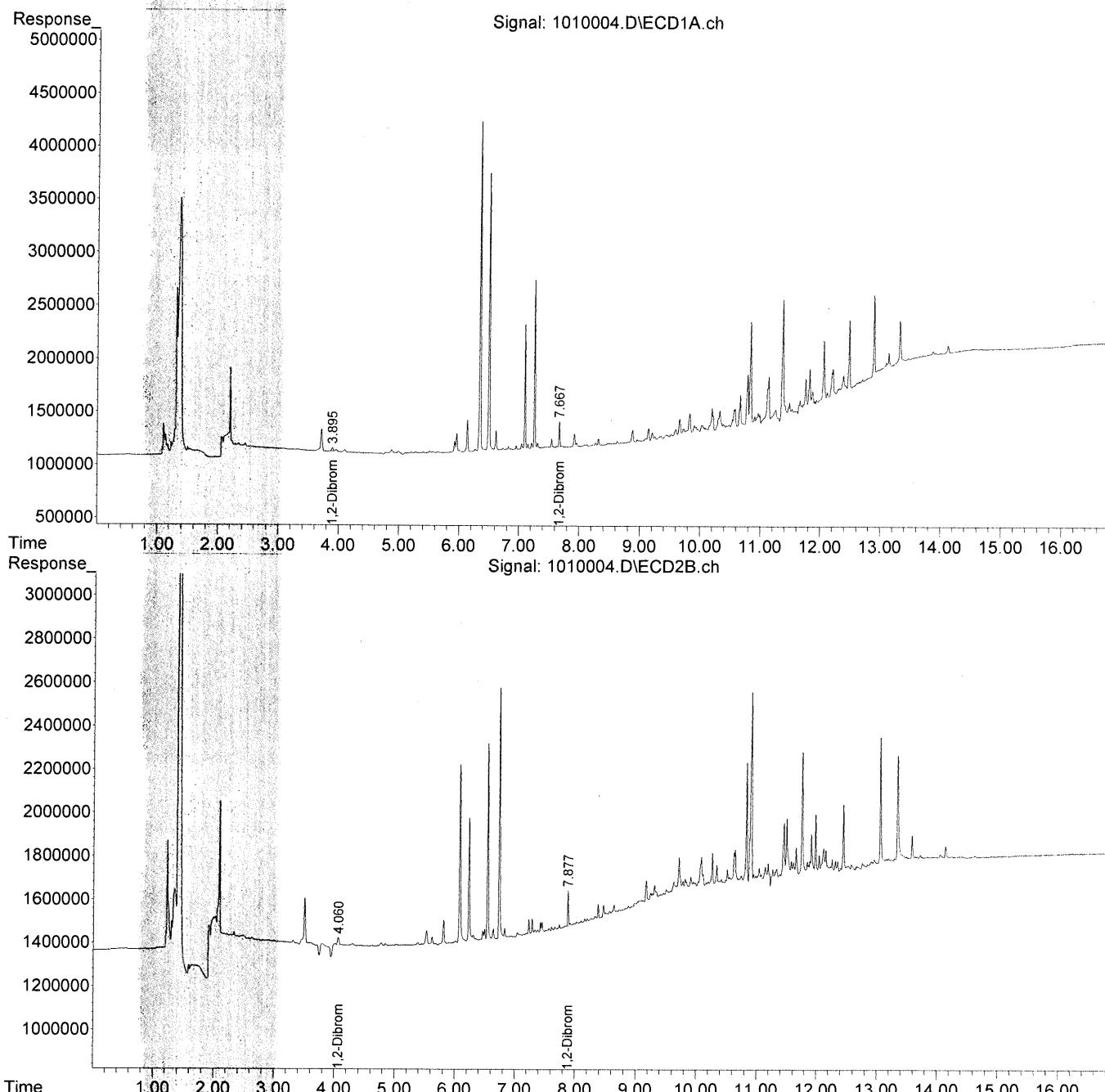
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:06:36 Operator: BS
Sample : ICAL LV1 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:07:51 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

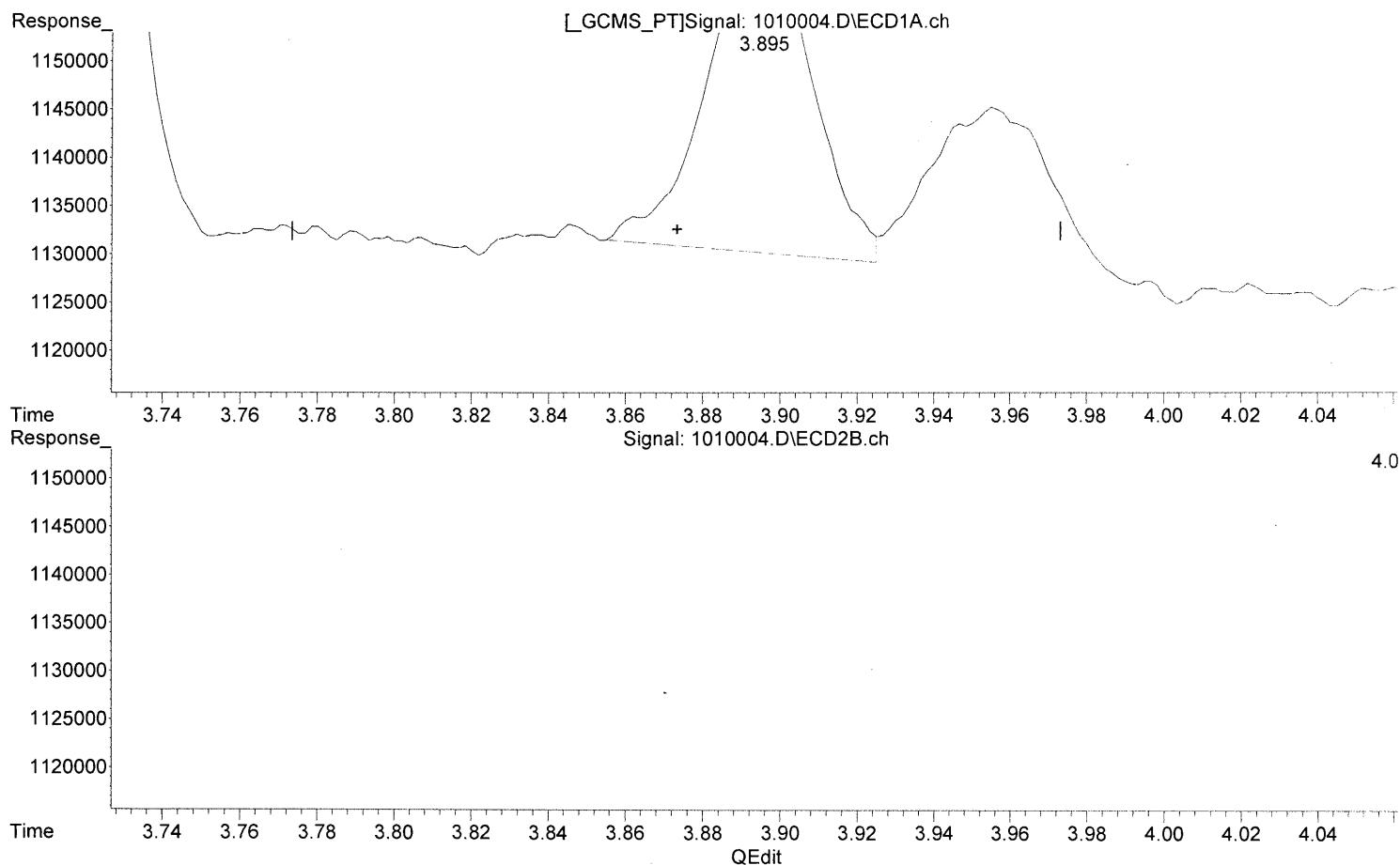


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.100 ppb

response 62200

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.047 ppb

response 65501

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:07:22 2016

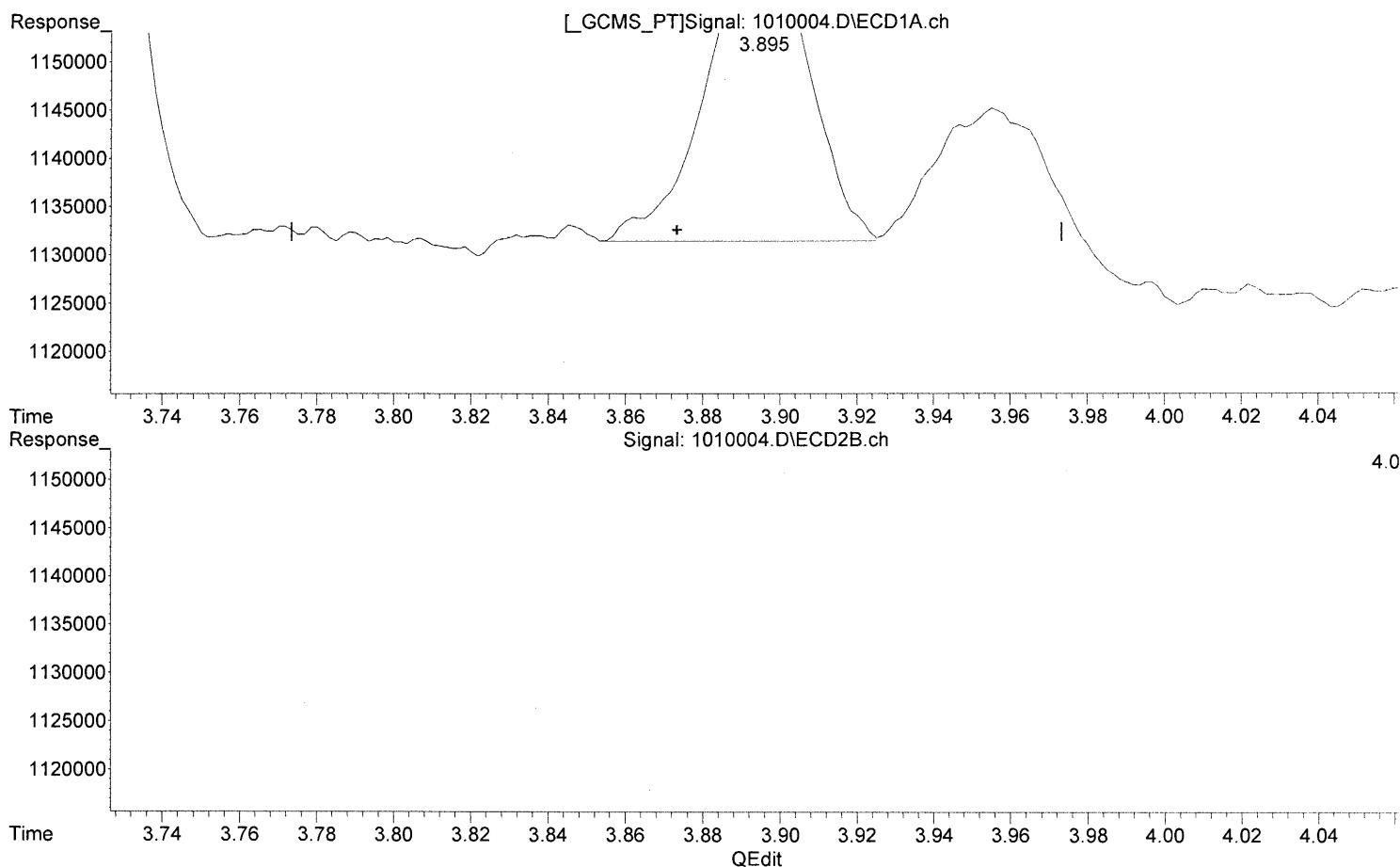
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.096 ppb m

response 57594

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.047 ppb

response 65501



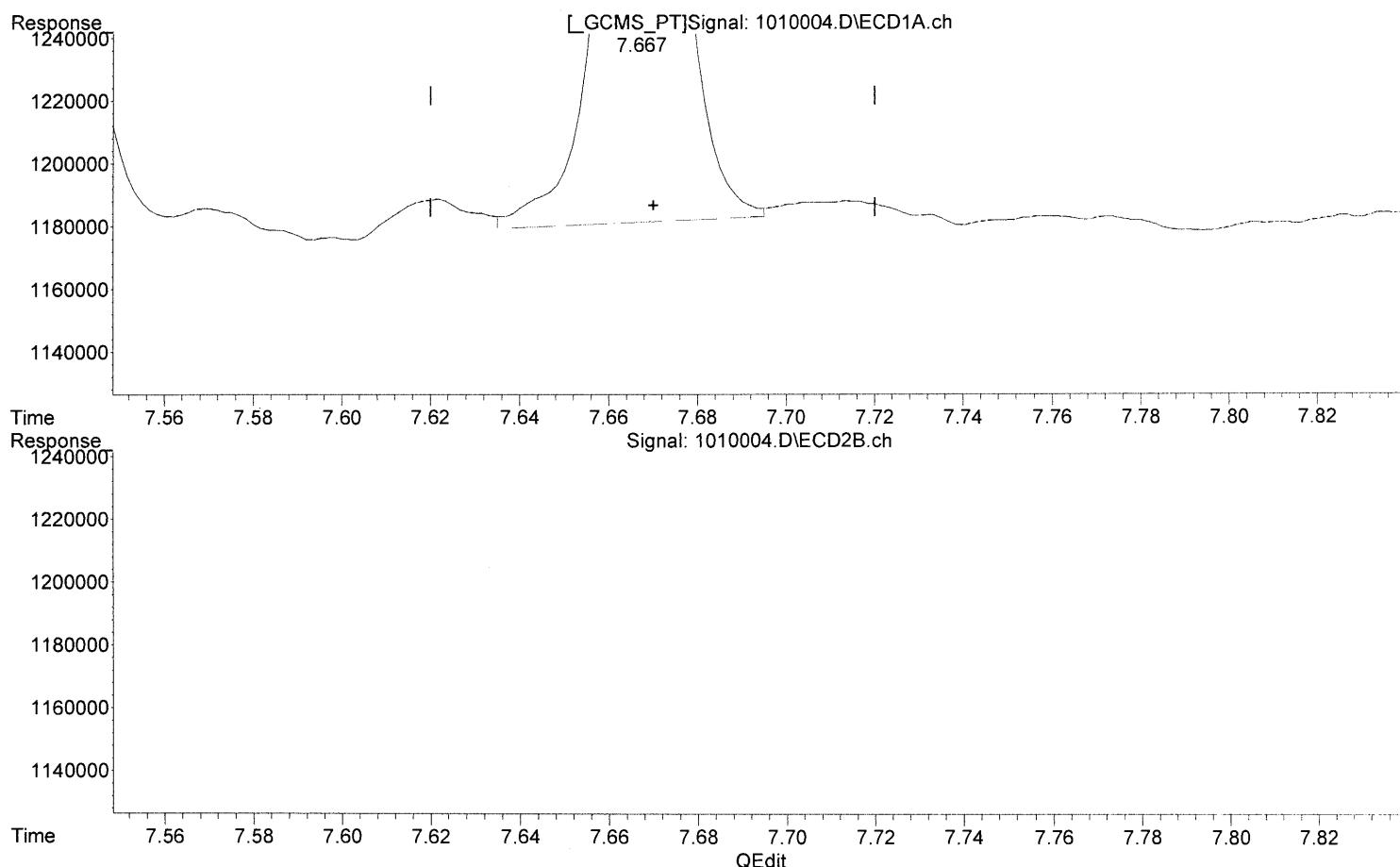
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:07:31 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.667min 0.120 ppb

response 268810

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.052 ppb

response 162902

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:07:46 2016

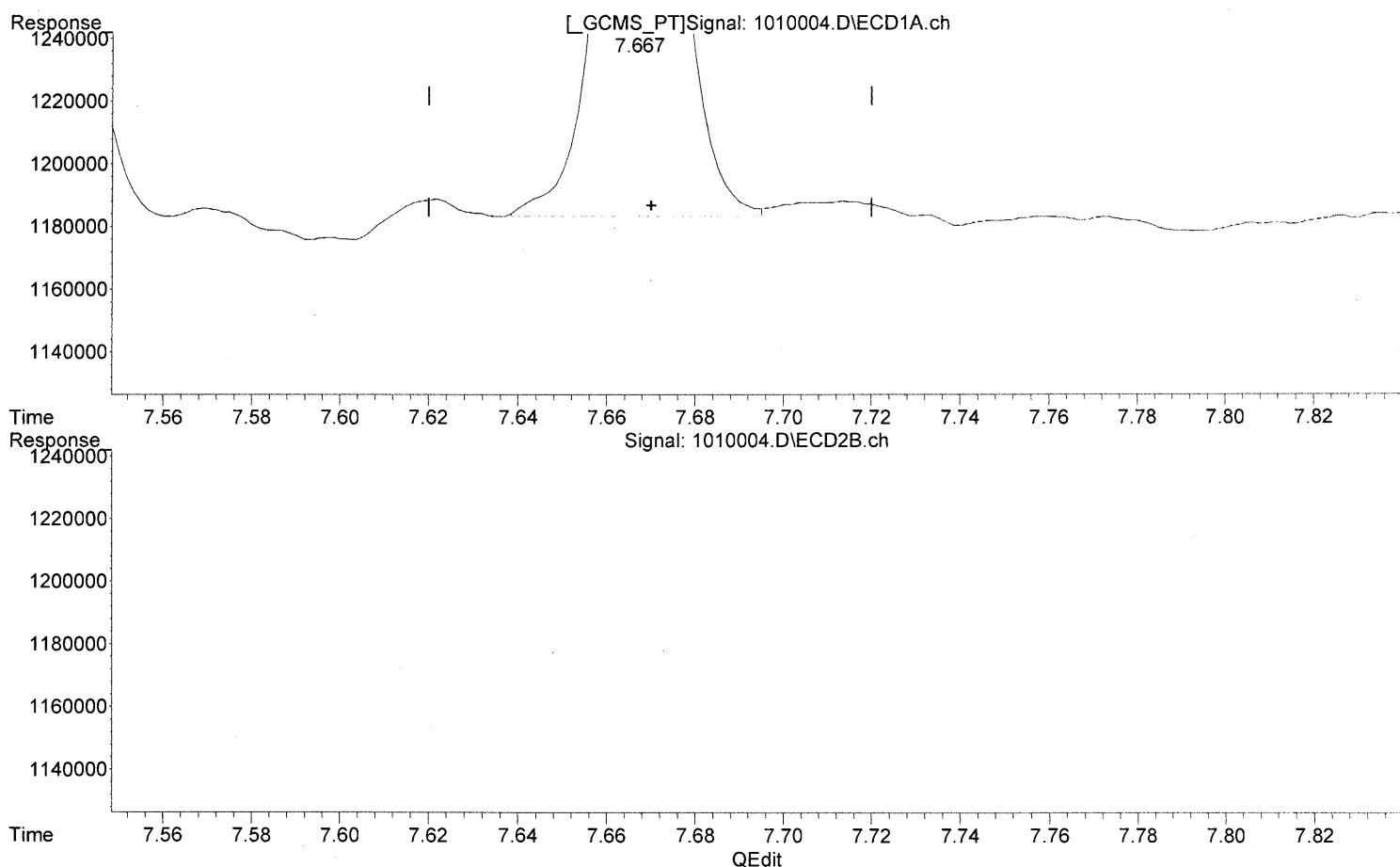
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

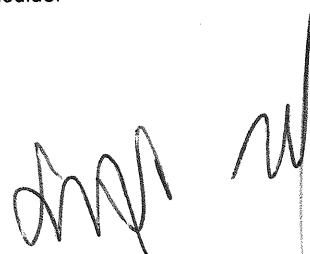
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)
 7.667min 0.116 ppb m
 response 261537

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)
 7.877min 0.052 ppb
 response 162902



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:07:56 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:30:07 Operator: BS
Sample : ICAL LV2 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:11:15 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.895	4.062	106012	121390	0.137m	0.088 #
3) M 1,2-Dibromoethane	7.668	7.877	389497	297791	0.173m	0.095 #

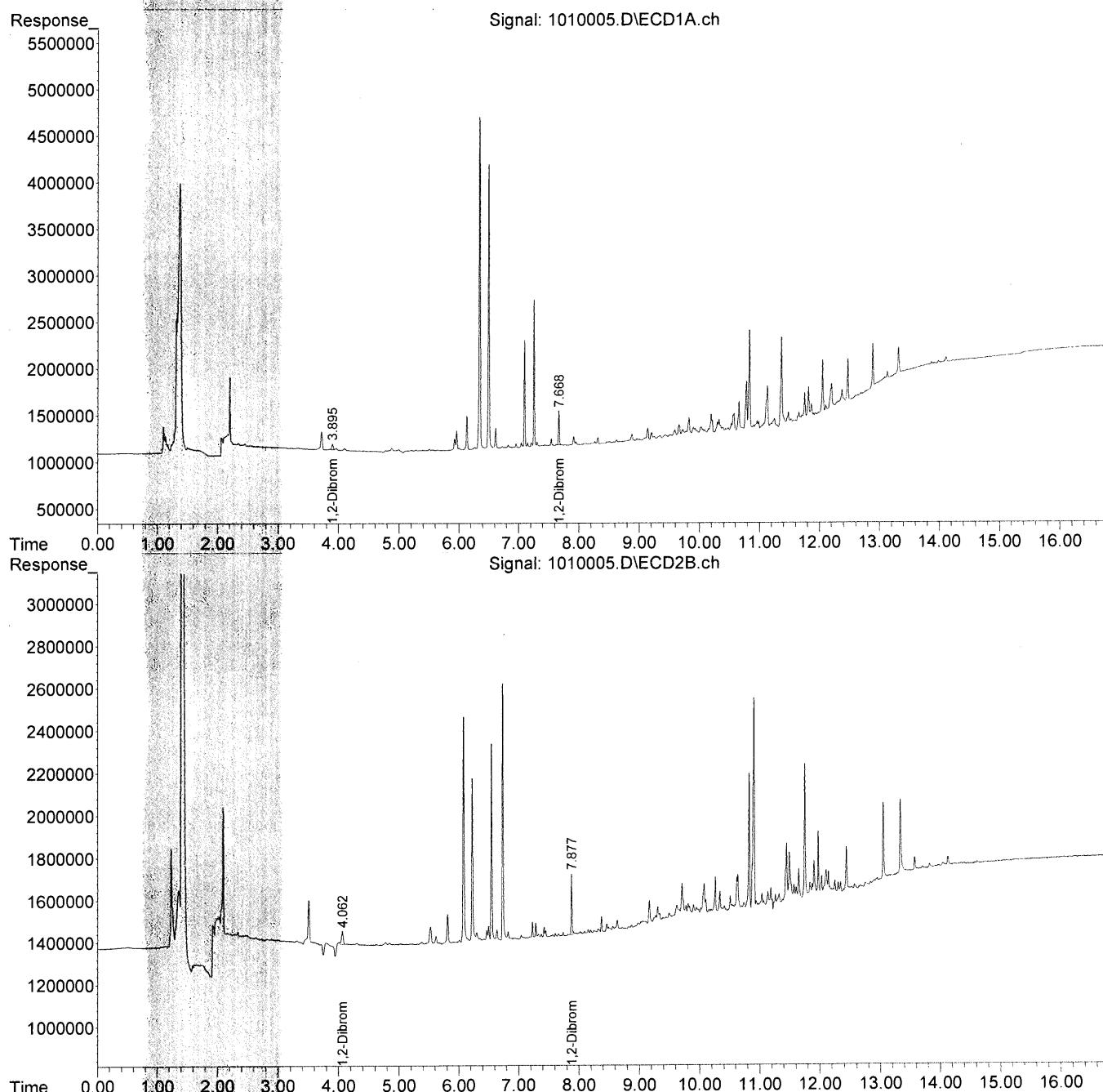
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:30:07 Operator: BS
Sample : ICAL LV2 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:11:15 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

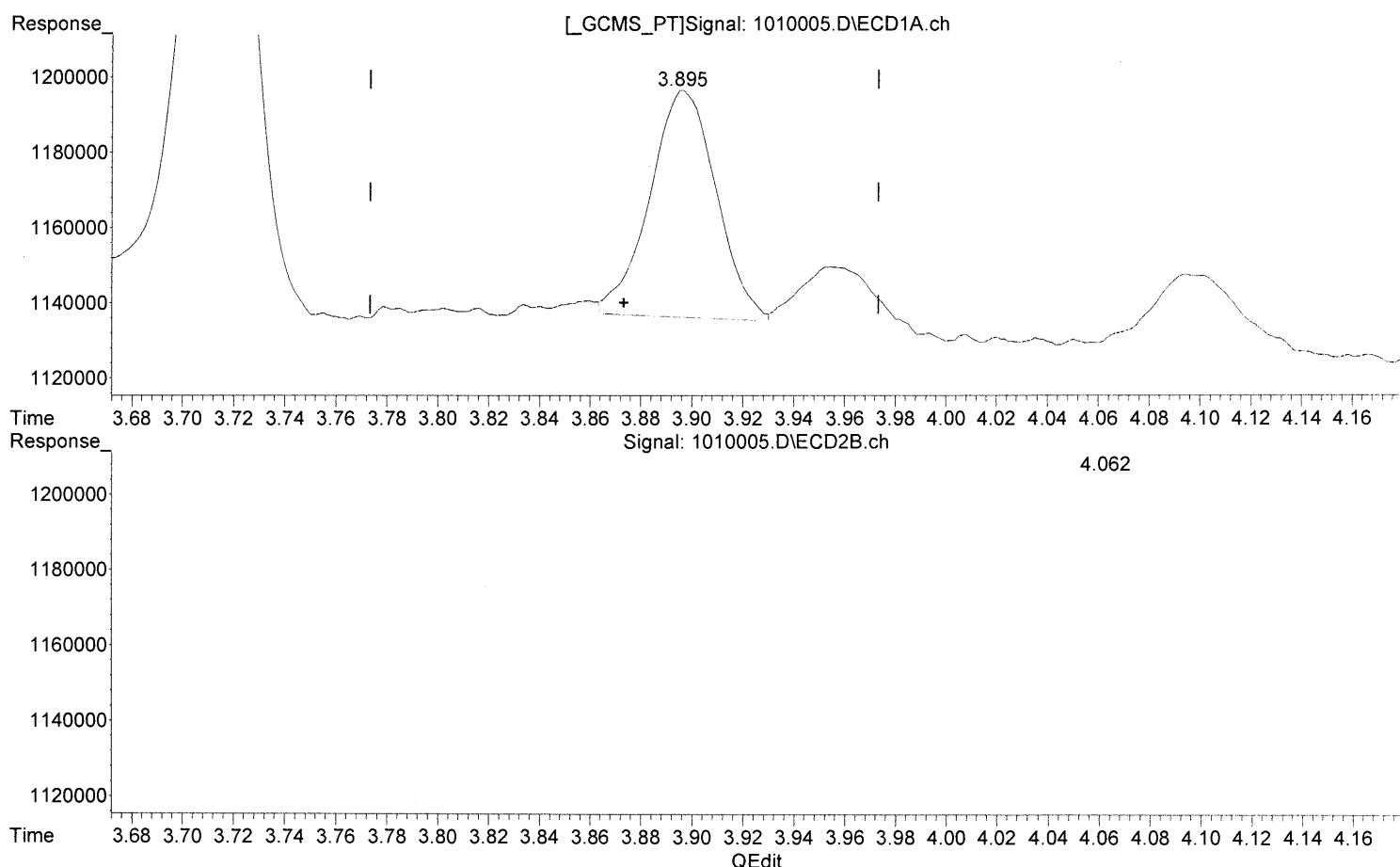


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.139 ppb

response 109098

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 0.088 ppb

response 121390



(+) = Expected Retention Time

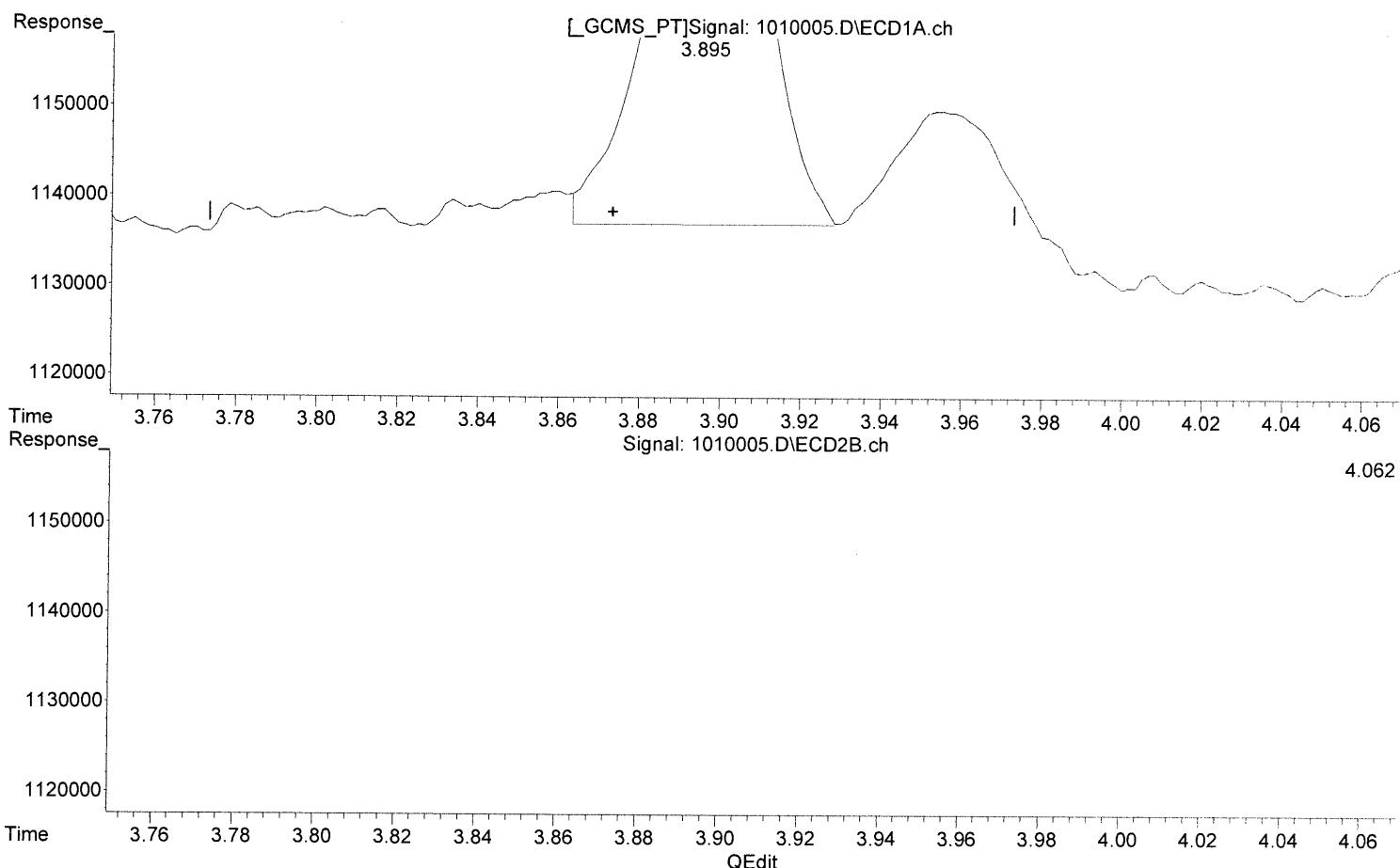
101116_504.M Tue Oct 11 08:08:34 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.137 ppb m

response 106012

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 0.088 ppb

response 121390



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:09:07 2016

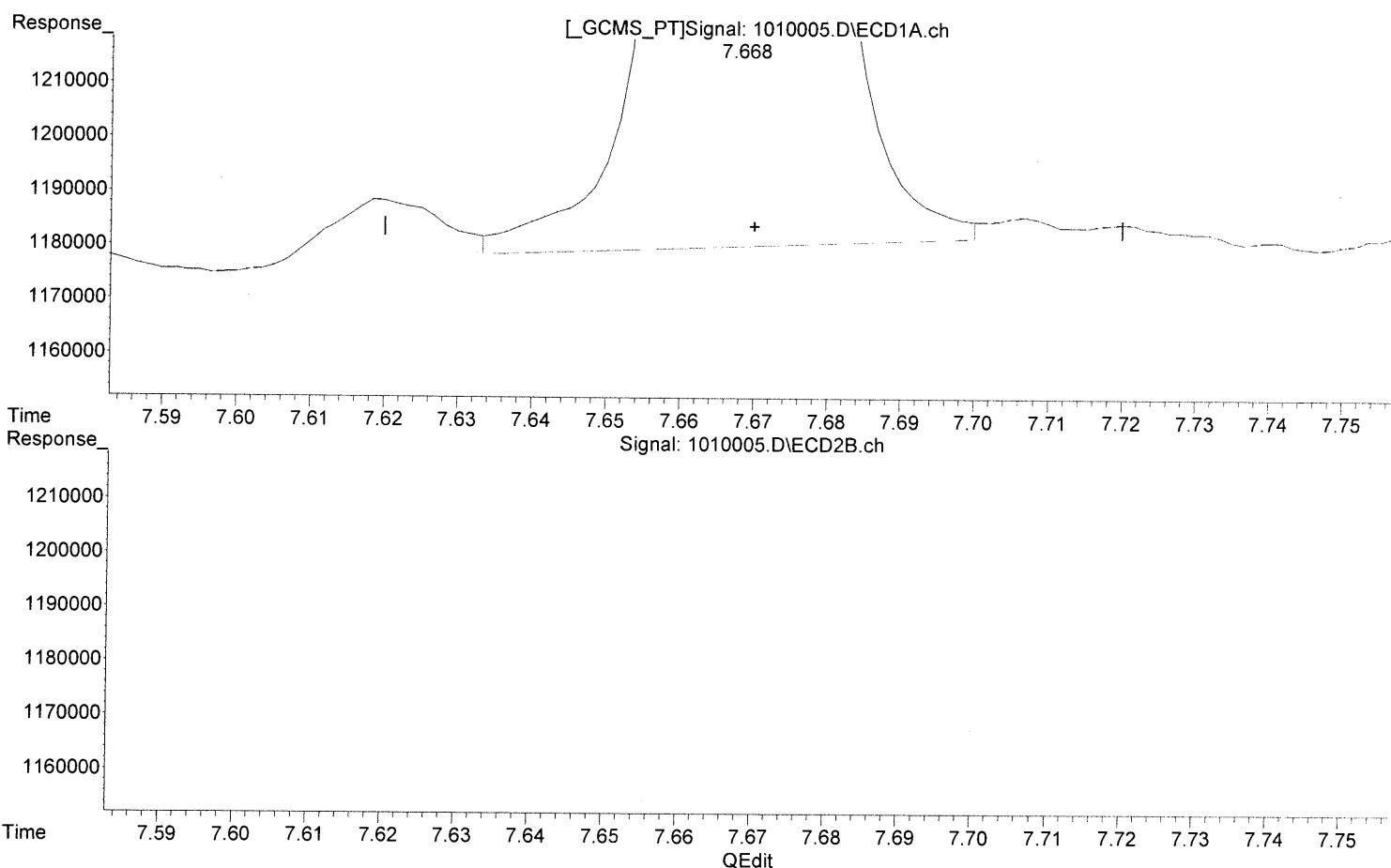
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.668min 0.176 ppb

response 396019

Manual Integration:

Before

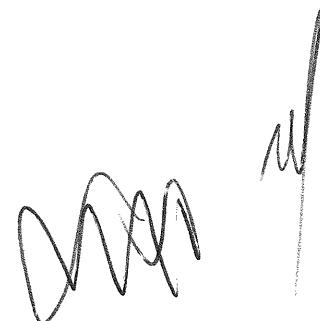
10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.095 ppb

response 297791

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:08 2016



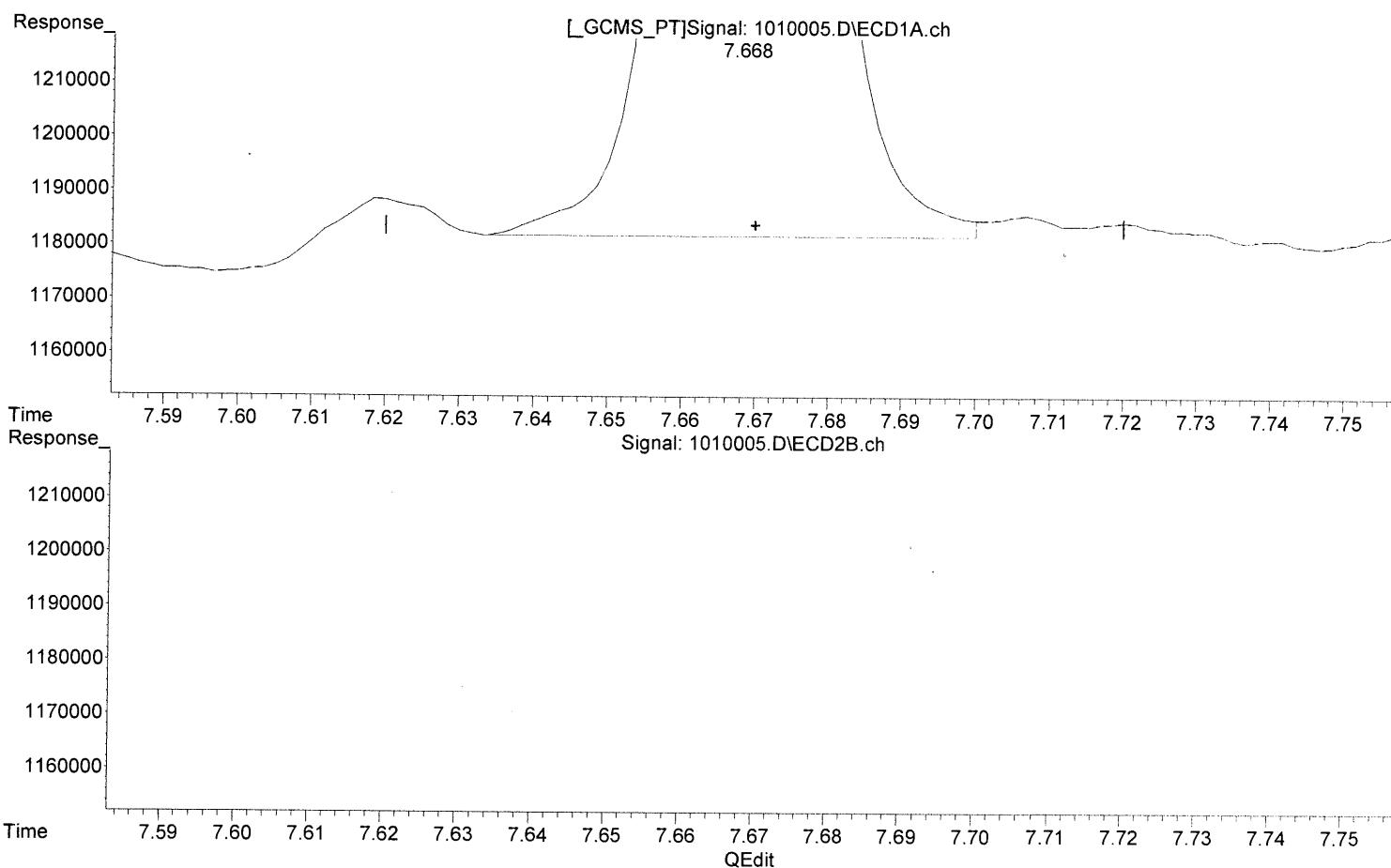
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.668min 0.173 ppb m

response 389497

Manual Integration:

After

Baseline/Shoulder

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.095 ppb

response 297791



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:17 2016

Page: 1

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:53:42 Operator: BS
Sample : ICAL LV3 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:12:35 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromo...	3.885	4.073	239042	262600	0.249m	0.190m
2) M 1,2,3-Tri...	6.240	6.300	33031	73436	0.204	0.123 #
3) M 1,2-Dibromo...	7.670	7.877	701491	613475	0.312m	0.195 #

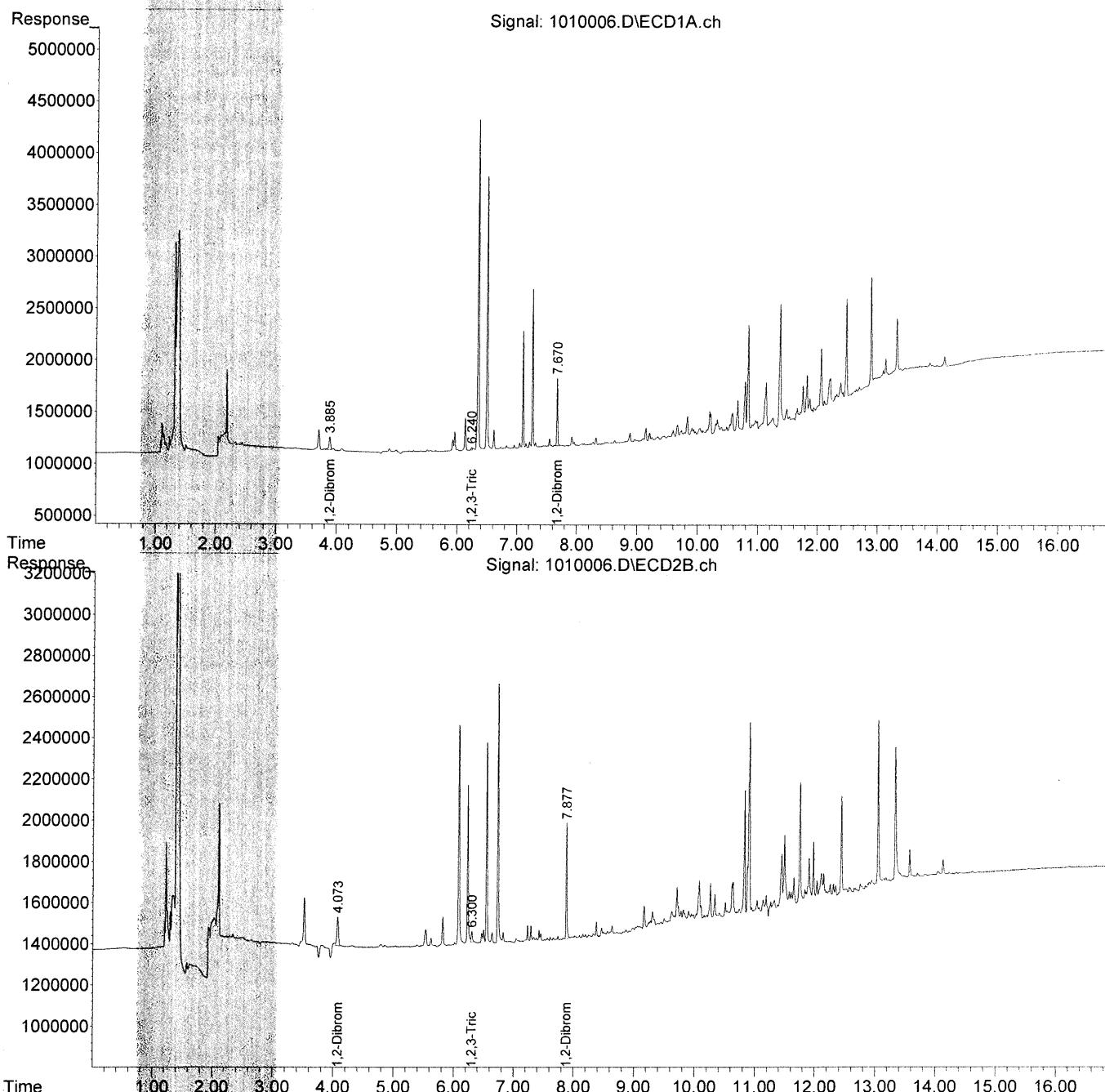
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:53:42 Operator: BS
Sample : ICAL LV3 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:12:35 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

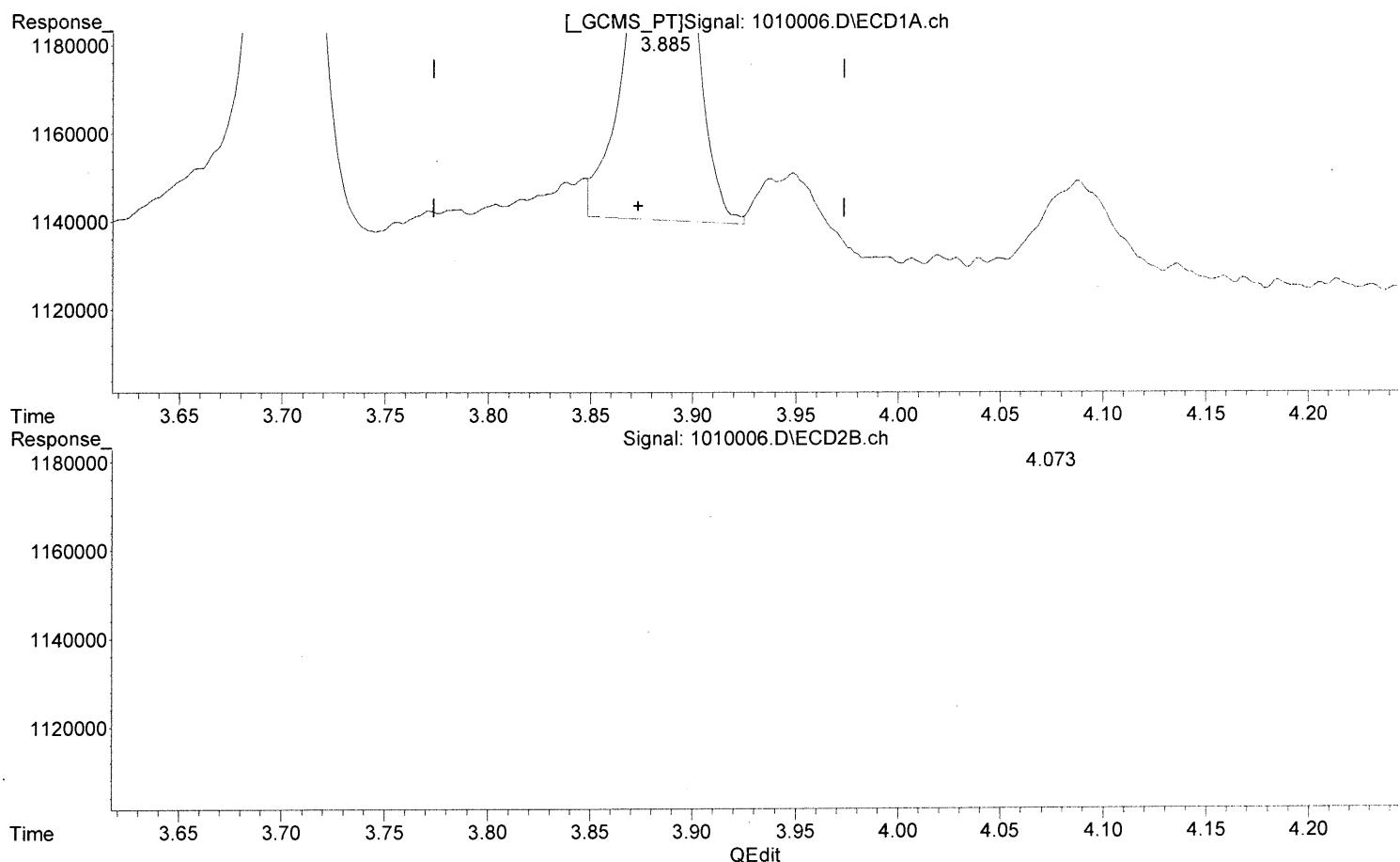


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.238 ppb

response 226147

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:47 2016

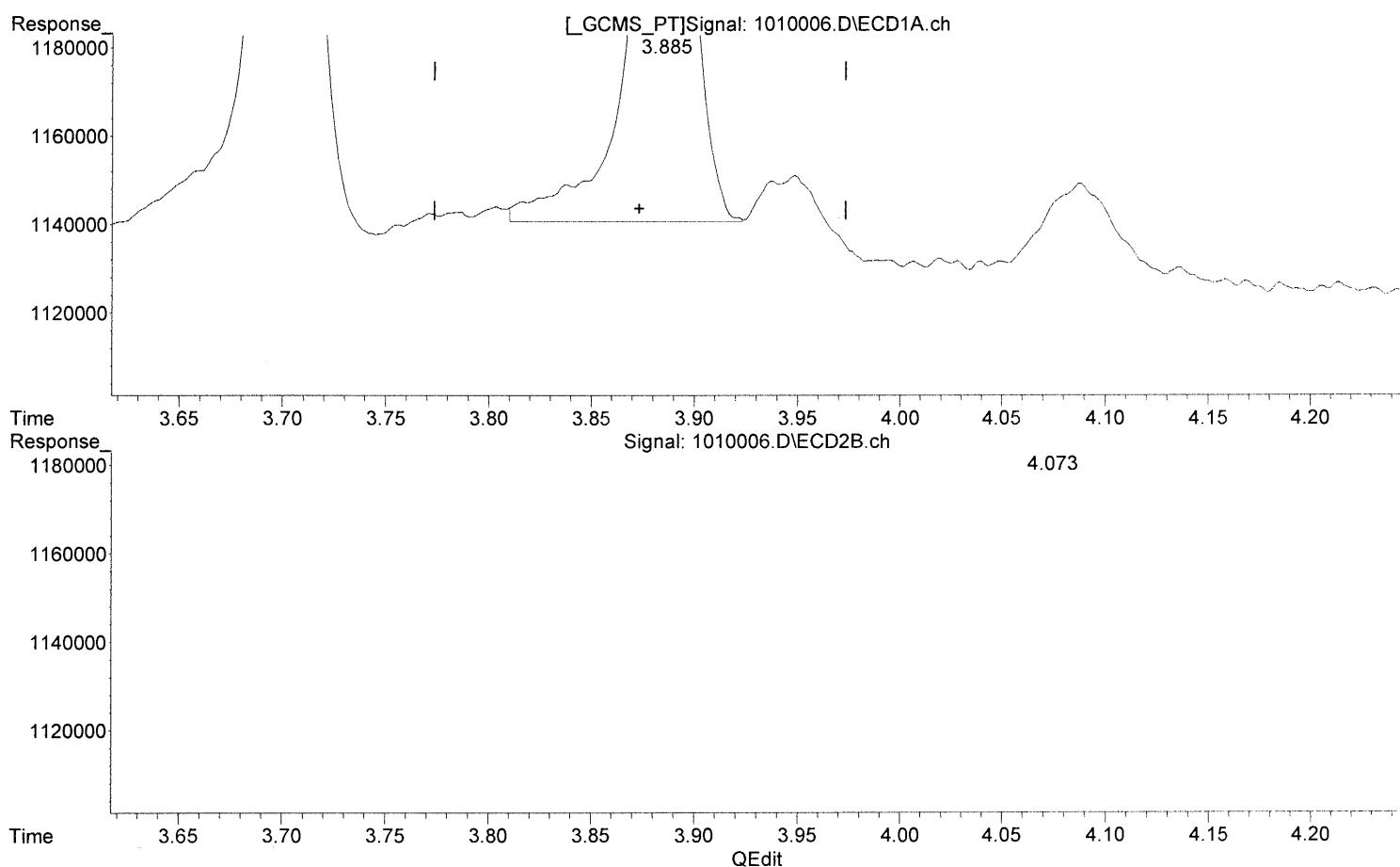
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:55 2016

Page: 1

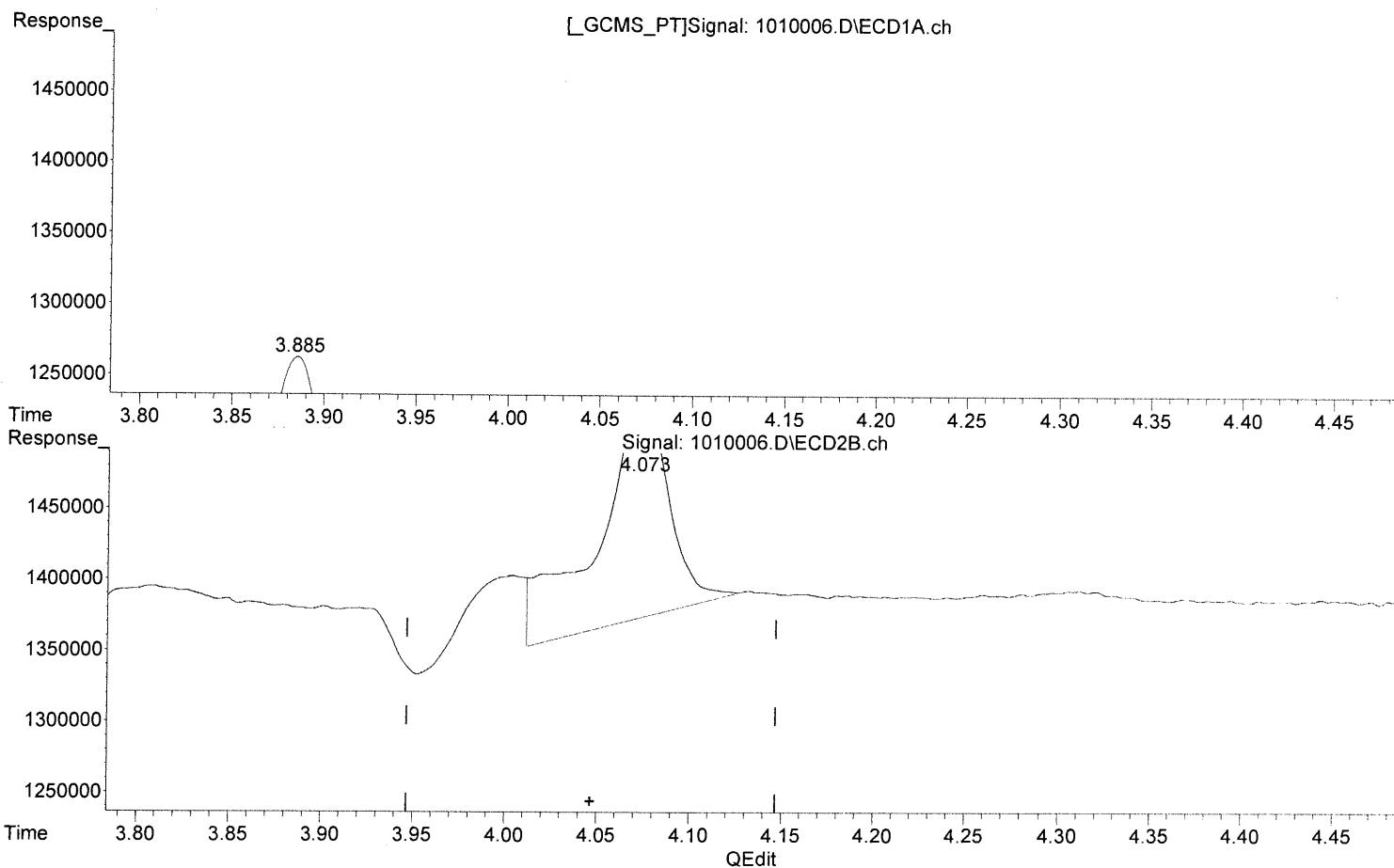


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132



(+) = Expected Retention Time

101116_504.M Tue Oct 11 08:12:02 2016

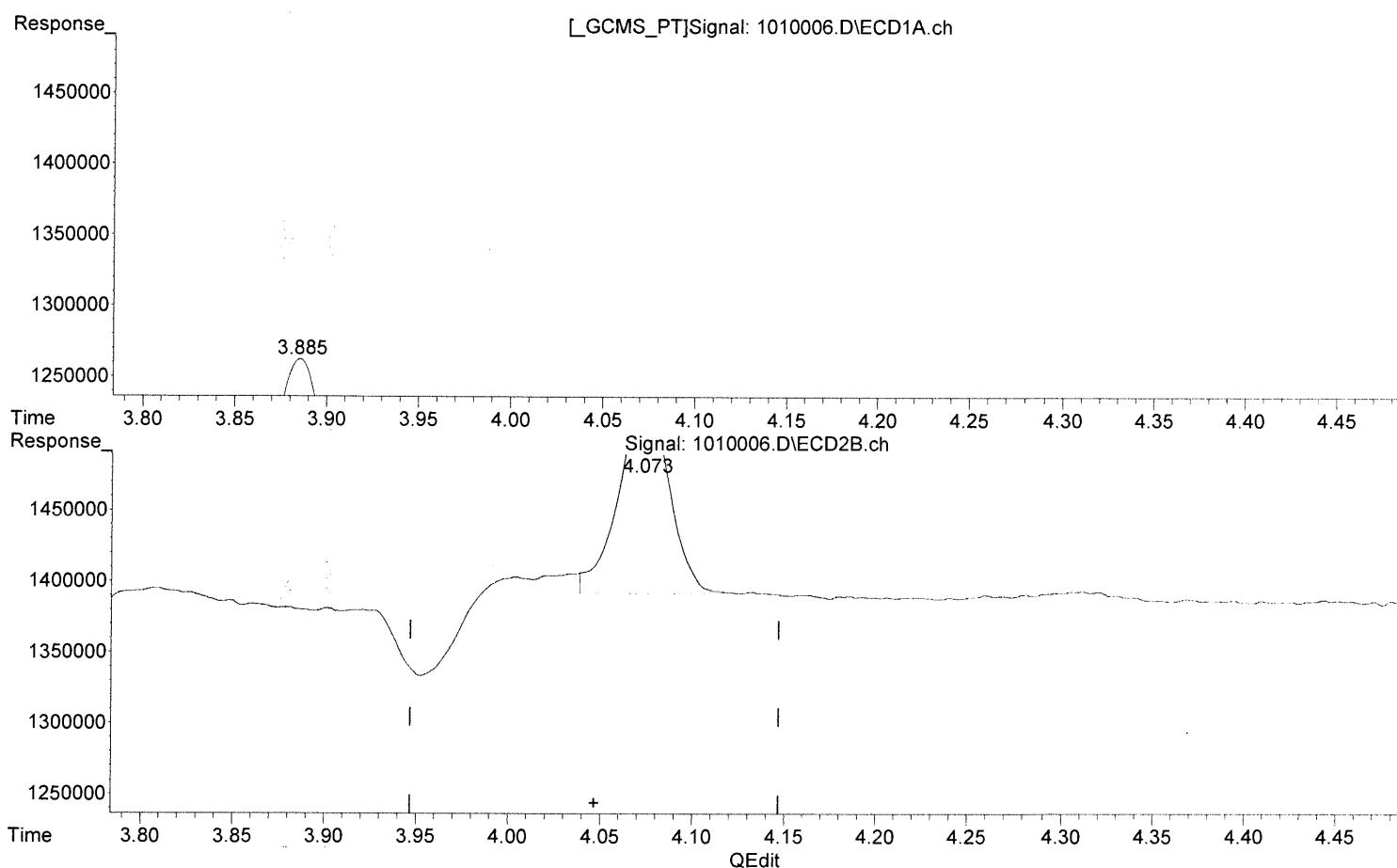
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.190 ppb m

response 262600



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:12 2016

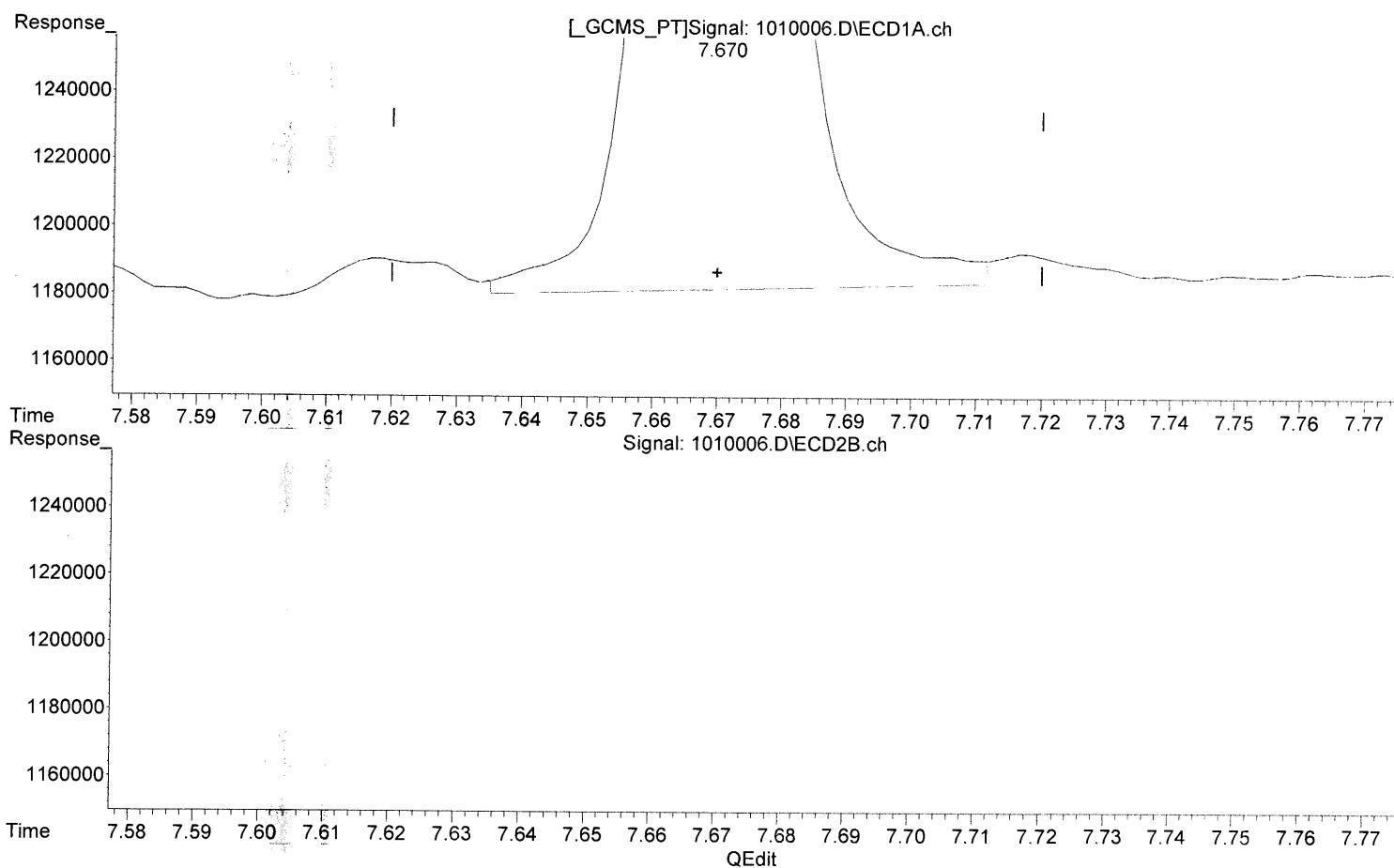
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.670min 0.316 ppb

response 710176

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.195 ppb

response 613475



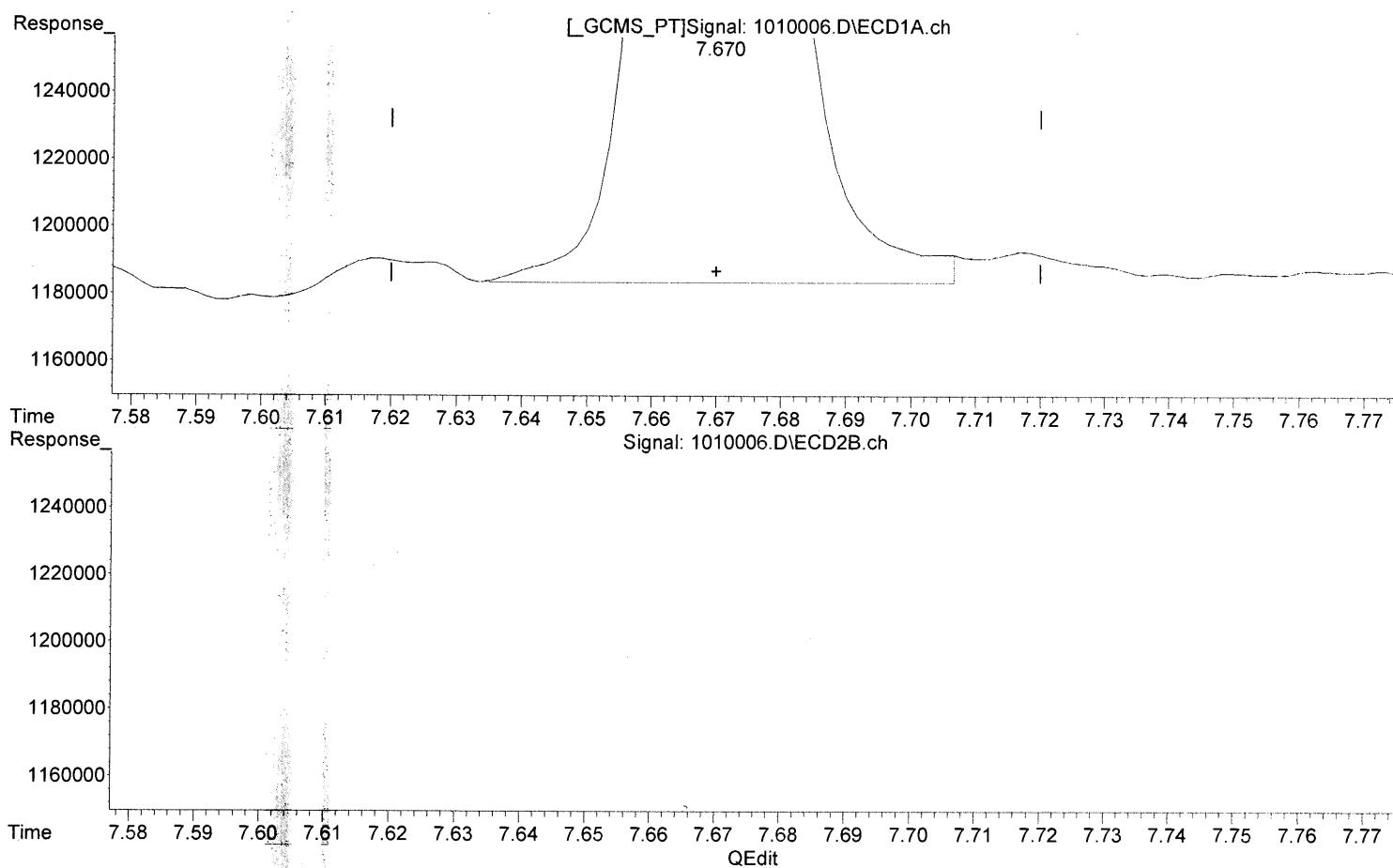
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:12:30 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.670min 0.312 ppb m

response 701491

Manual Integration:

After

Baseline/Shoulder

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.195 ppb

response 613475

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:12:38 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:17:23 Operator: BS
Sample : ICAL LV4 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:13:38 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth: 504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.892	4.065	795089	682200	0.717m	0.494 #
2) M 1,2,3-Triiodopropane	6.240	6.300	138223	157791	0.854m	0.466 #
3) M 1,2-Dibromoethane	7.670	7.877	1755563	1454249	0.781	0.463 #

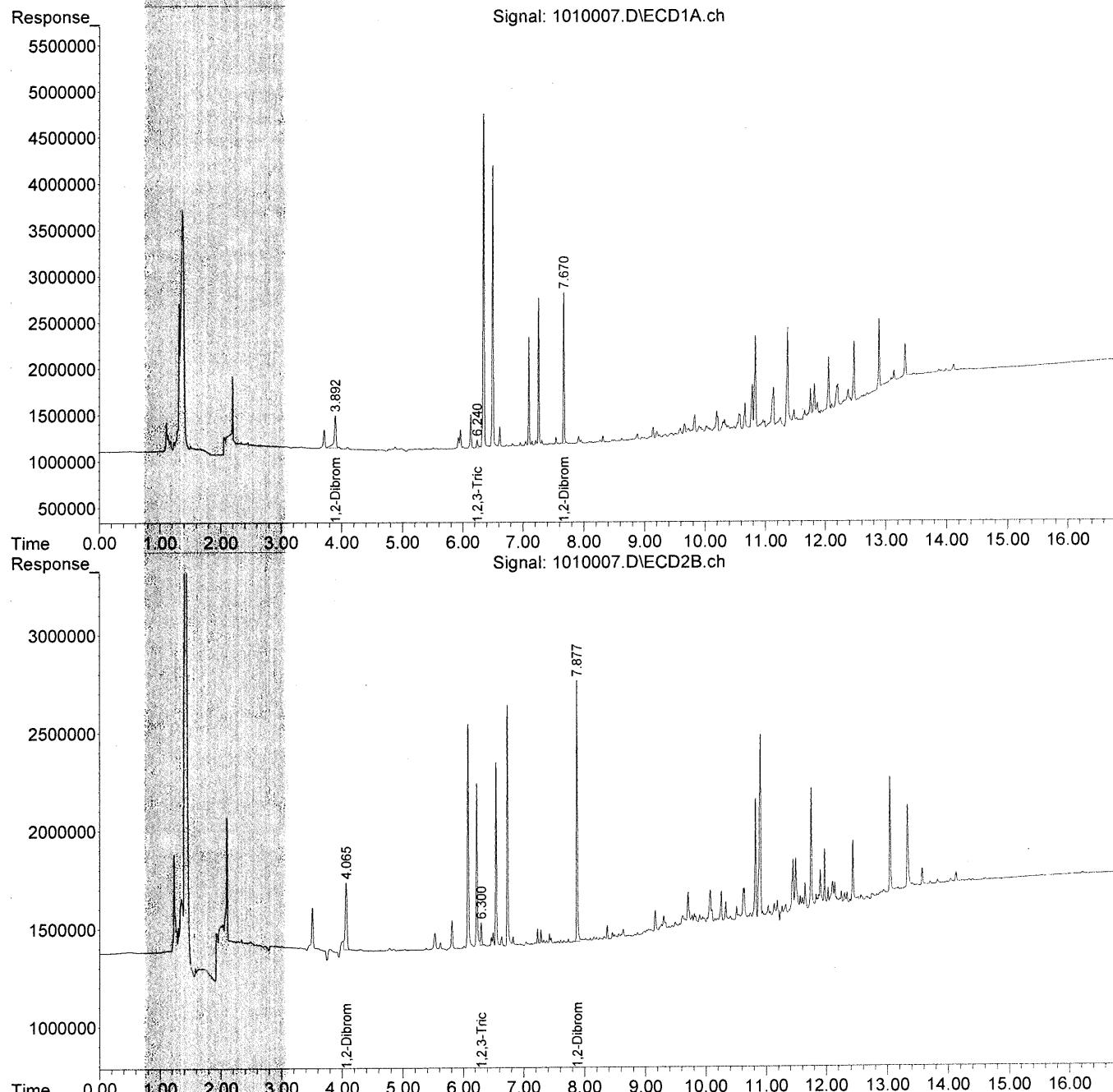
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:17:23 Operator: BS
Sample : ICAL LV4 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:13:38 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

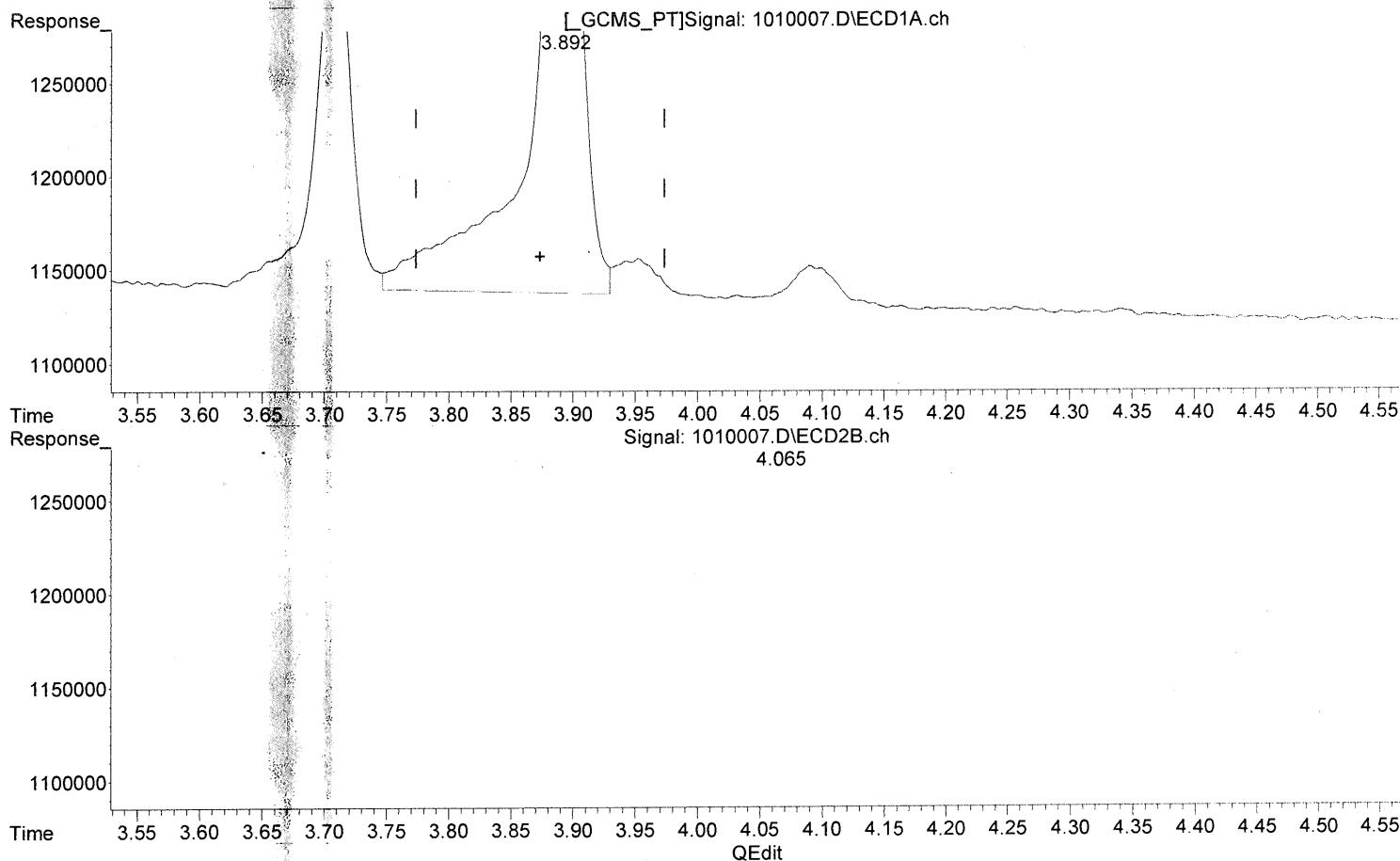


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 0.803 ppb

response 897642

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 0.494 ppb

response 682200

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:13:14 2016

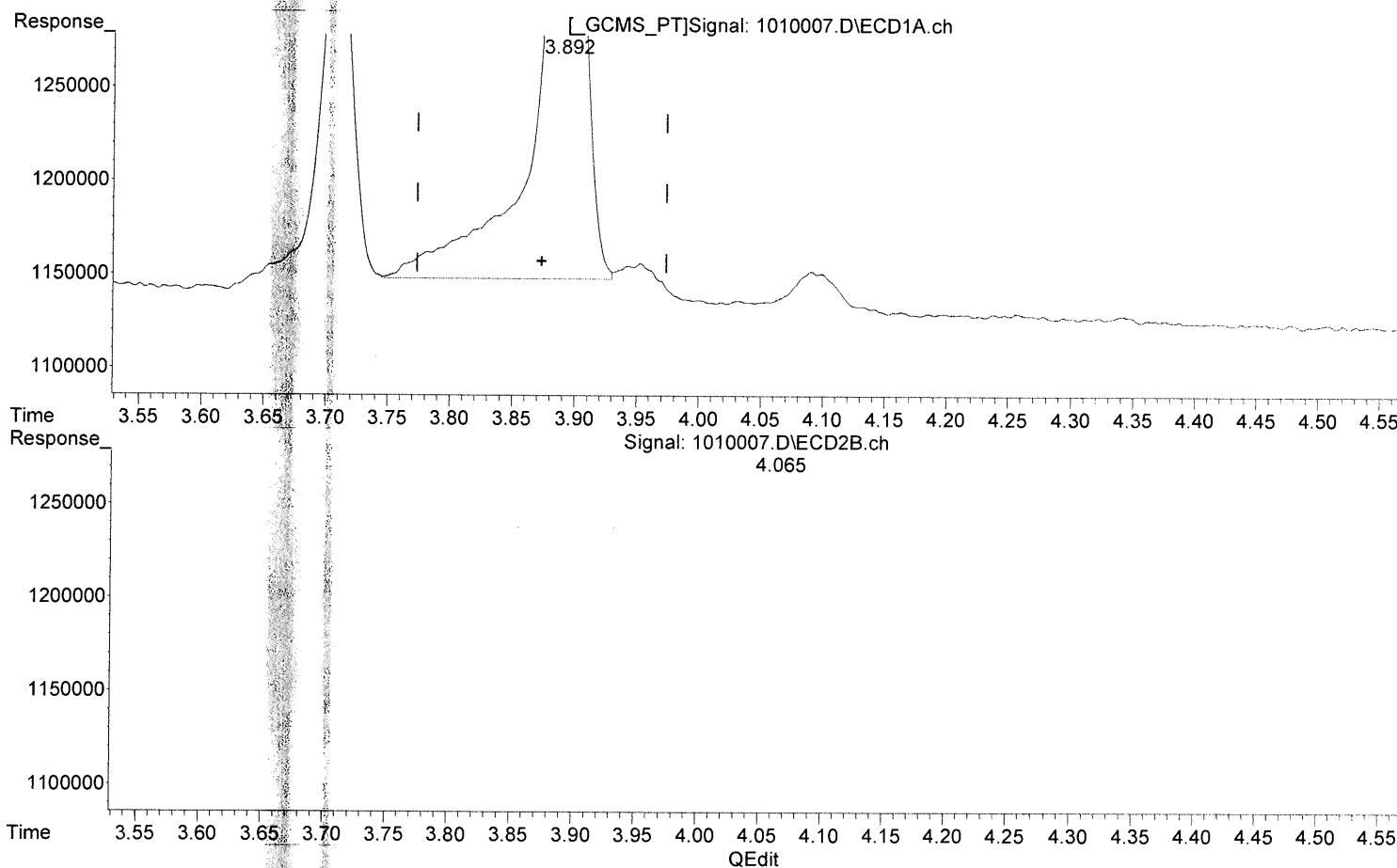
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 0.717 ppb m

response 795089

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 0.494 ppb

response 682200

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:13:21 2016

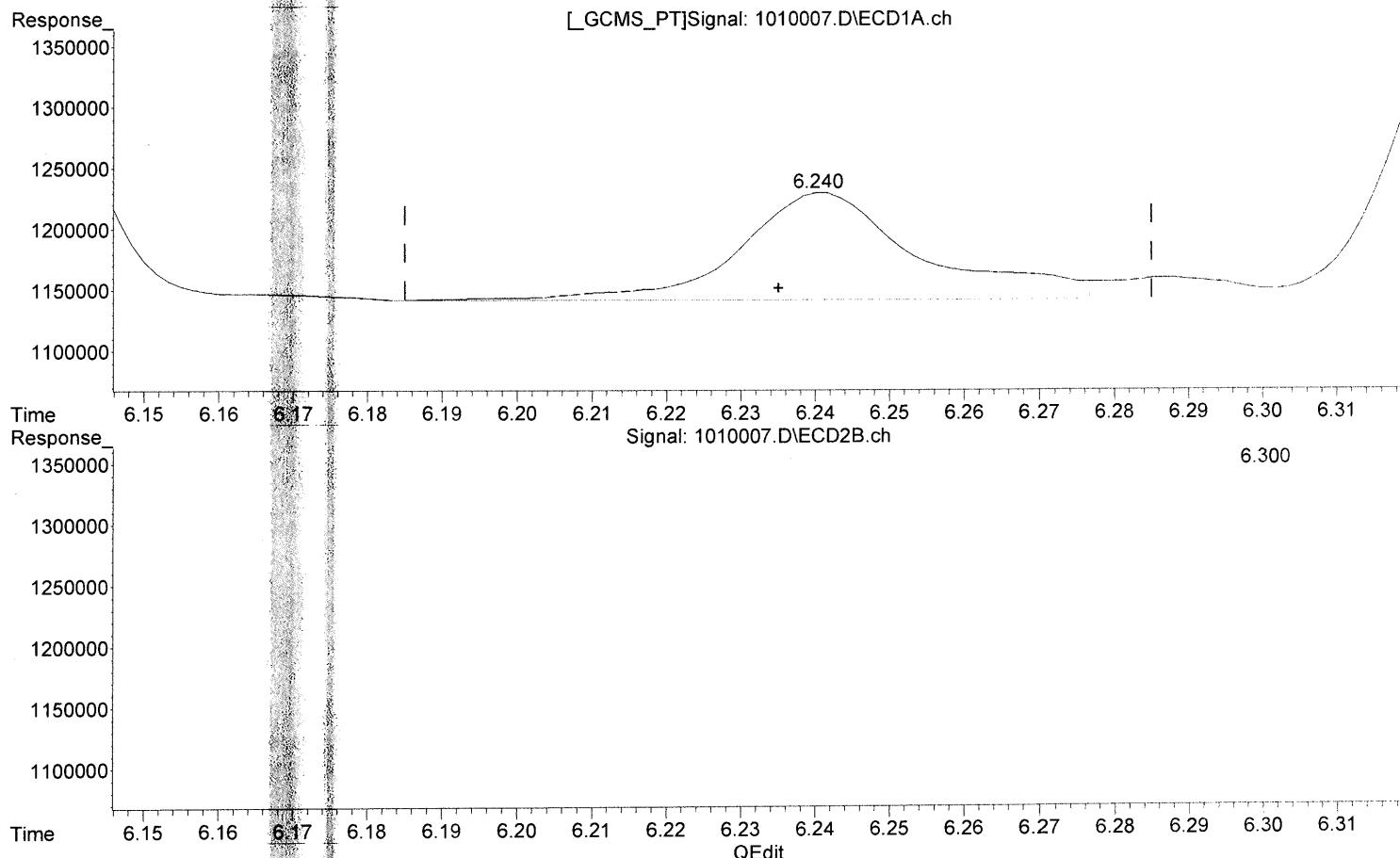
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

Manual Integration:

6.240min 0.921 ppb

Before

response 149093

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.300min 0.466 ppb

response 157791

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:13:31 2016

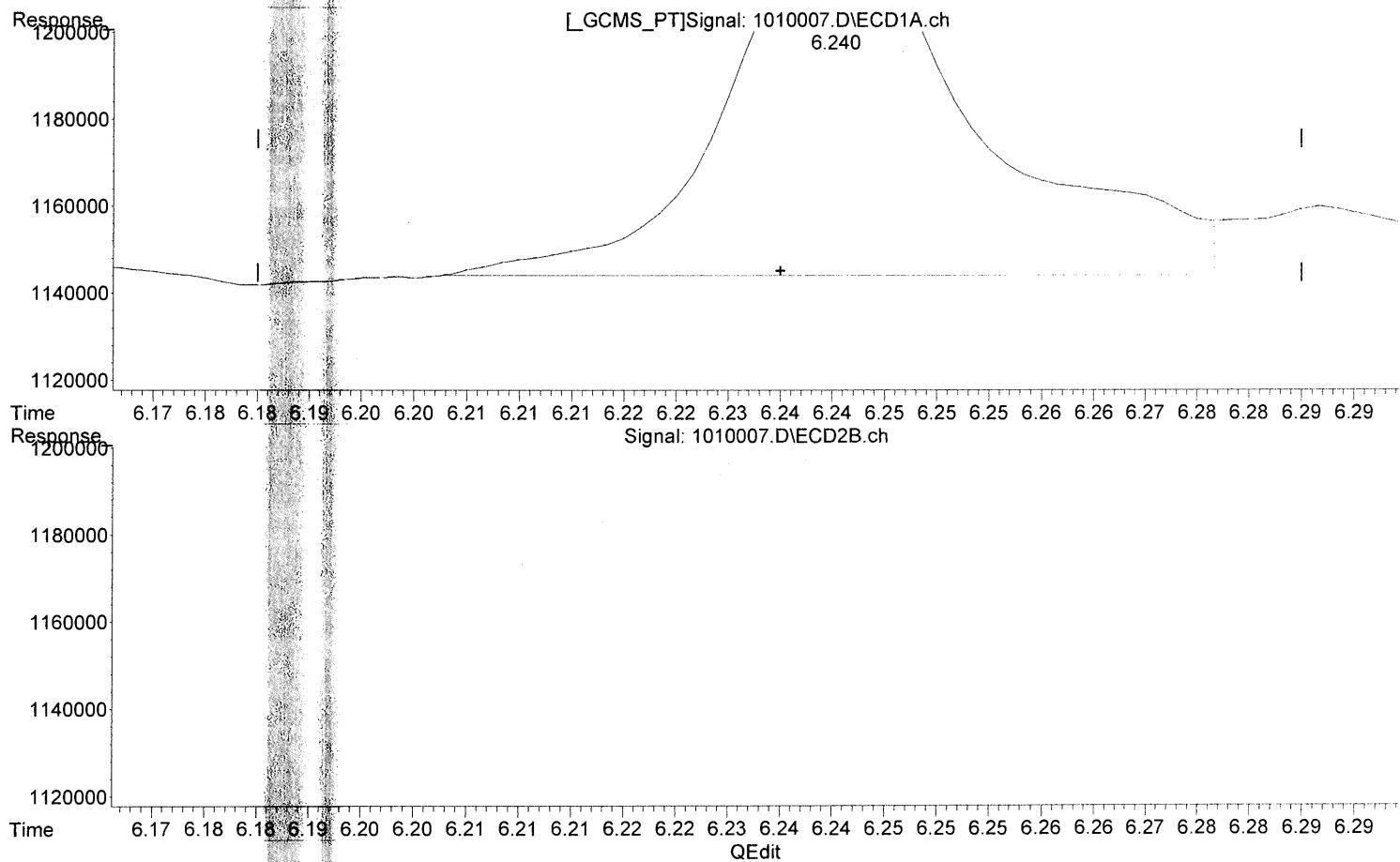
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.240min 0.854 ppb m

response 138223

Manual Integration:

After

Baseline/Shoulder

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.300min 0.466 ppb

response 157791

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:13:41 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:40:57 Operator: BS
Sample : ICAL LV5 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:14:58 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.898	4.060	1401531	1125916	1.228m	0.815m#
2) M 1,2,3-Triiodopropane	6.242	6.298	245184	246237	1.515m	0.822 #
3) M 1,2-Dibromoethane	7.670	7.877	3219717	2577549	1.431	0.820 #
<hr/>						

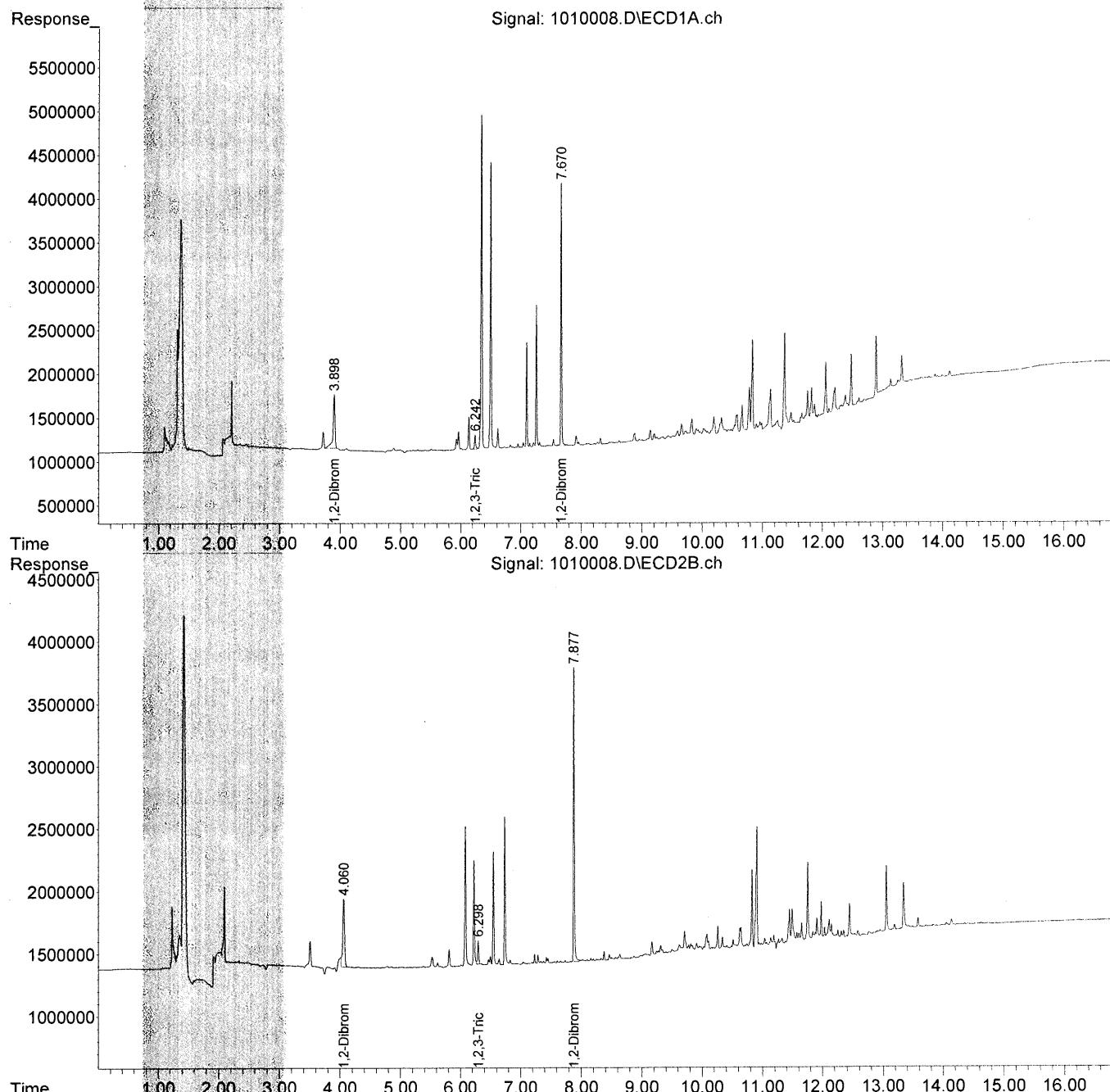
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:40:57 Operator: BS
Sample : ICAL LV5 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:14:58 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via: Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

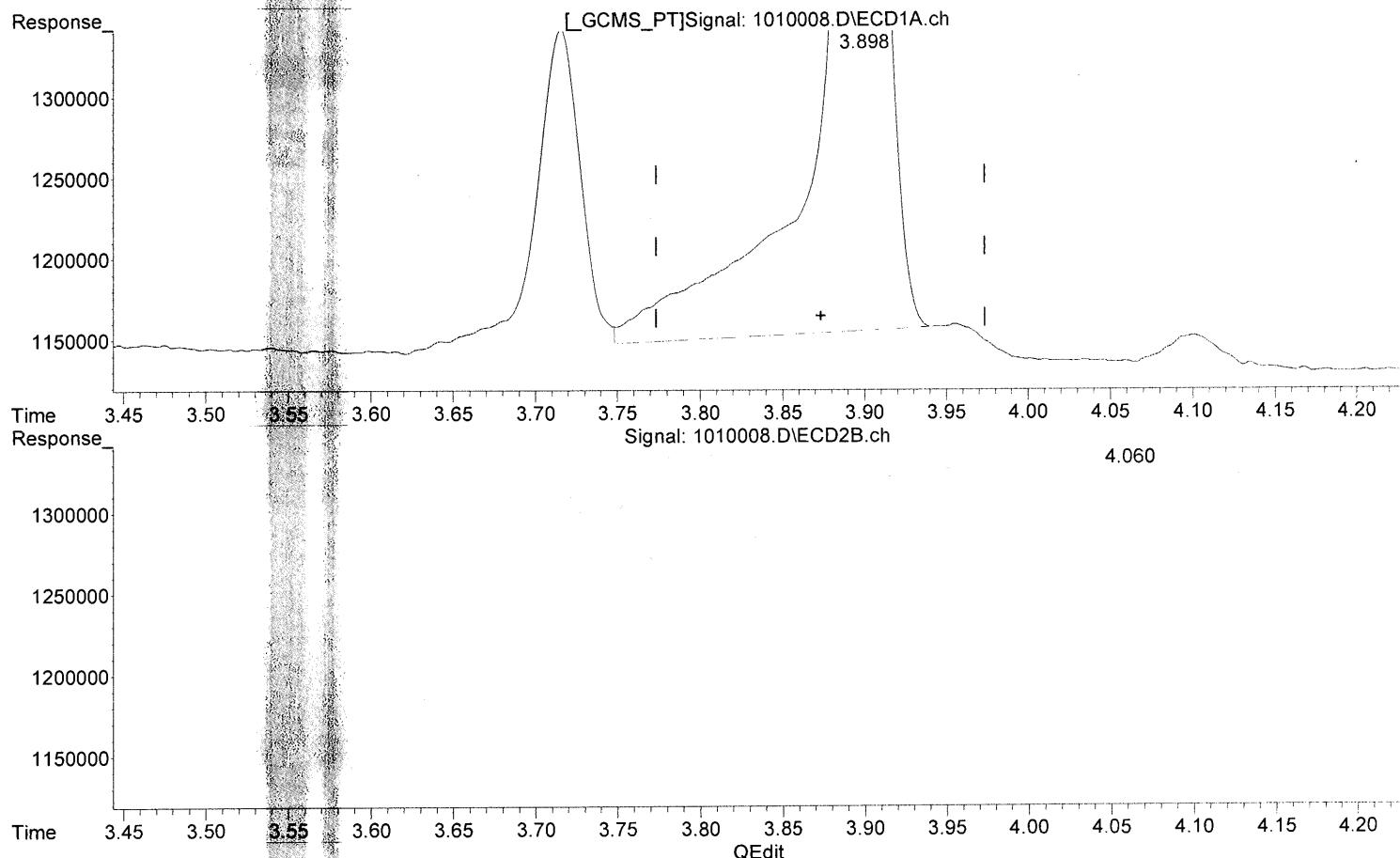


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.266 ppb

response 1446490

Manual Integration:

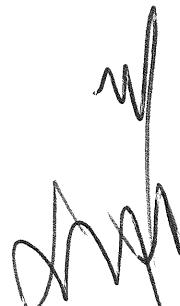
Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:15 2016

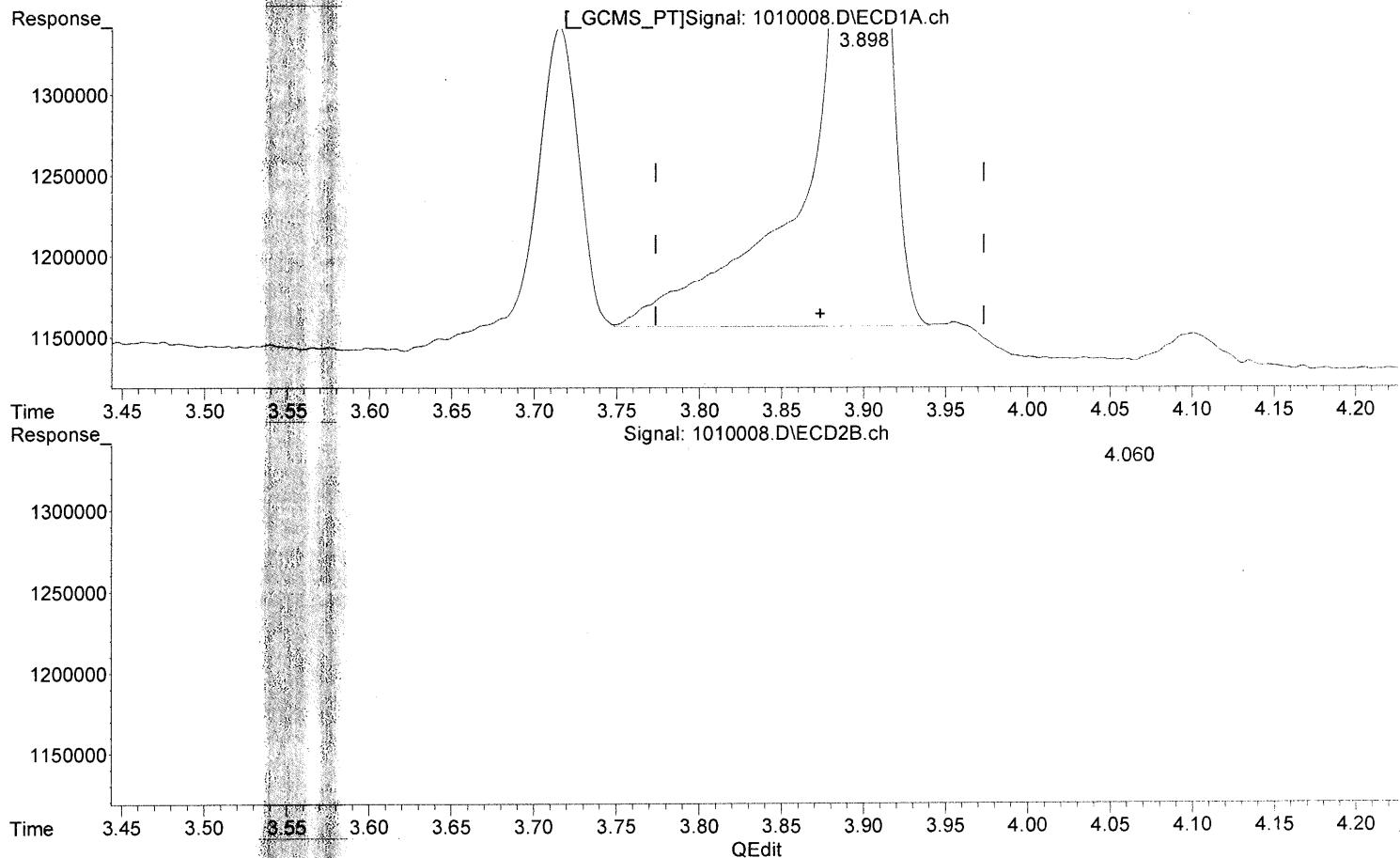
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:14:27 2016

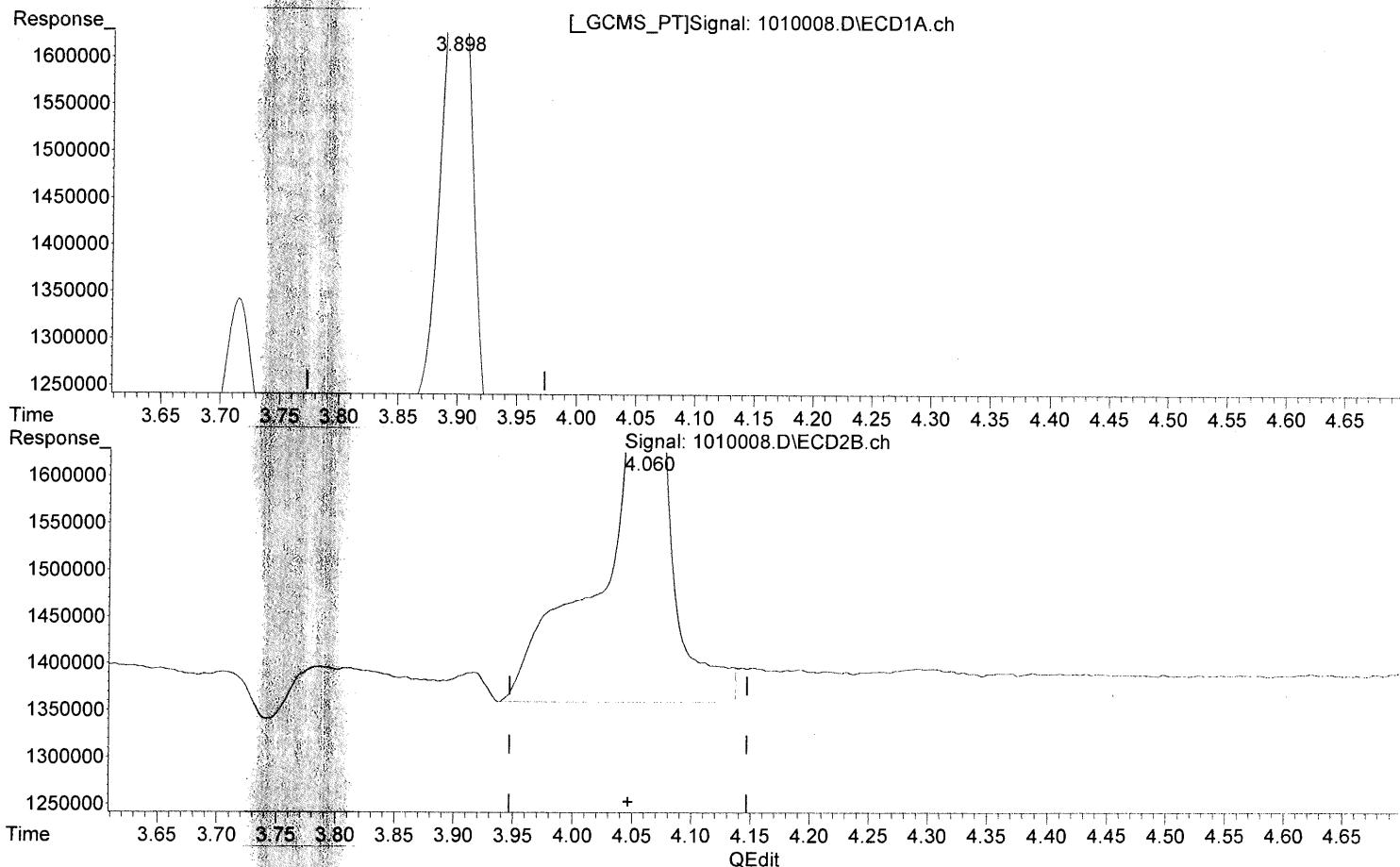
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



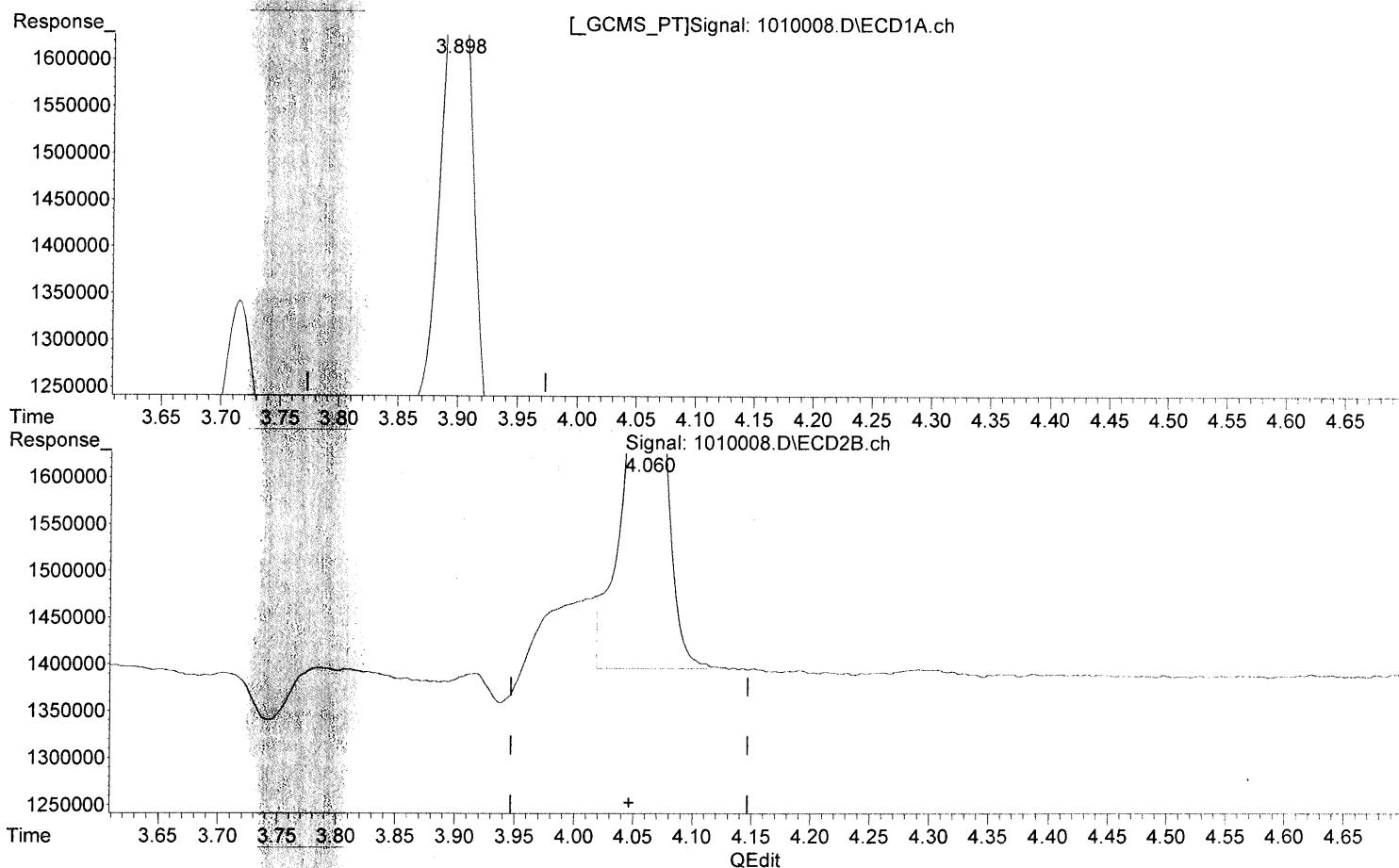
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:32 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LVS 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.815 ppb m

response 1125916



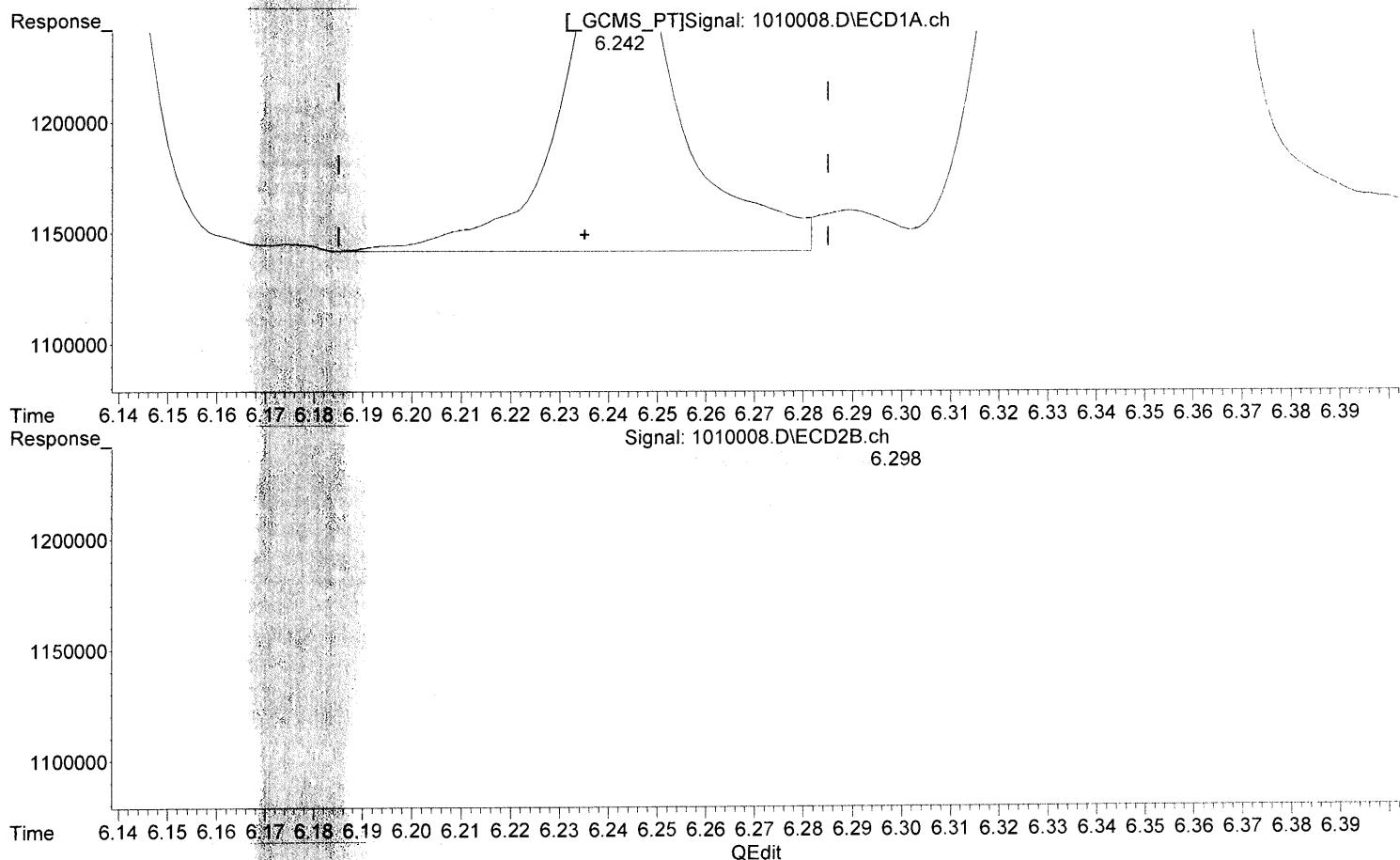
(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:14:43 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

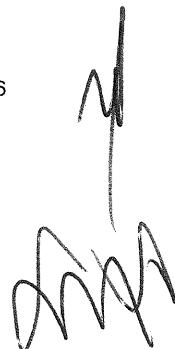
6.242min 1.603 ppb

response 259440

Manual Integration:

Before

10/11/16



(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.822 ppb

response 246237

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:53 2016

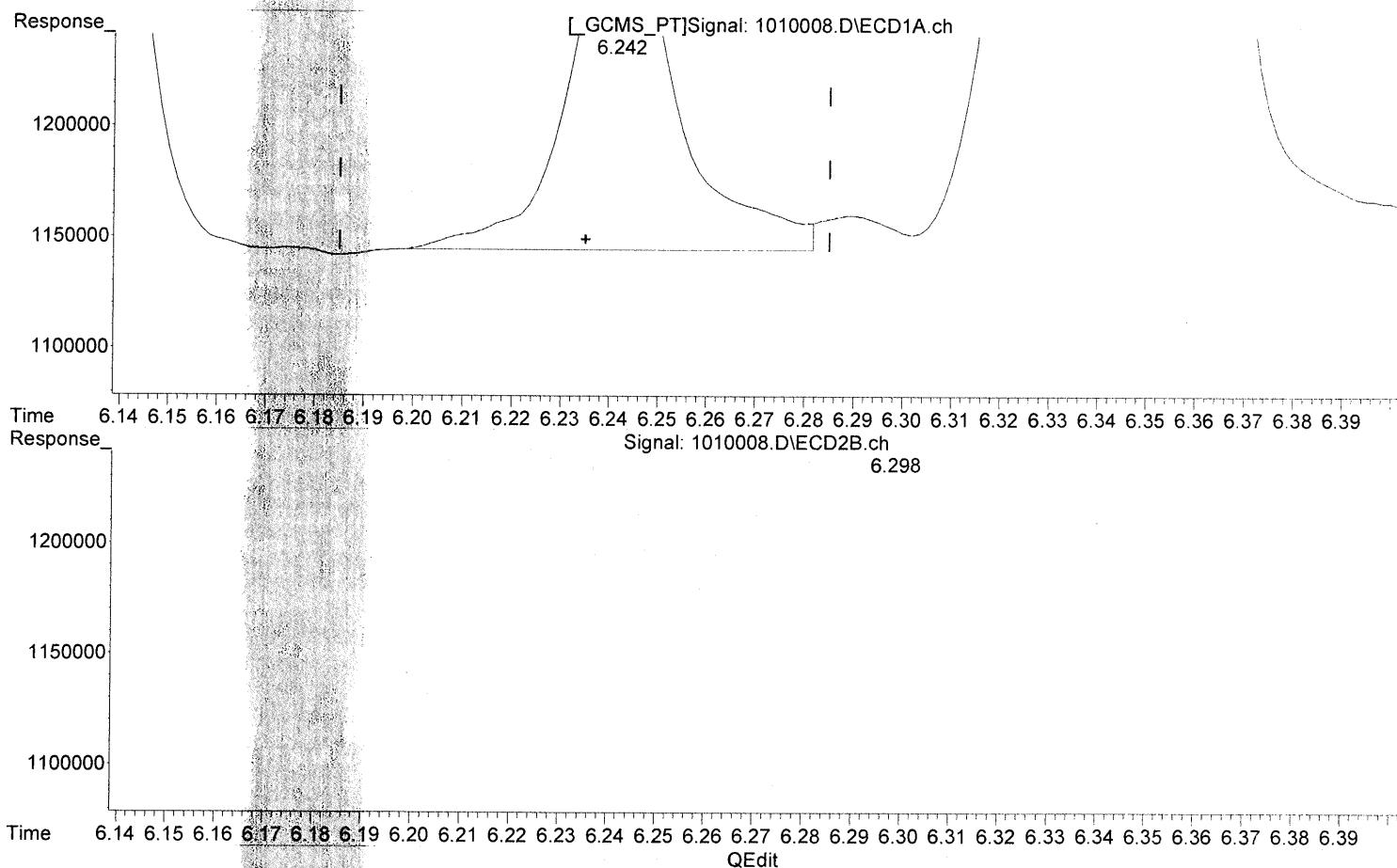
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LVS 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.242min 1.515 ppb m

response 245184

Manual Integration:

After

Baseline/Shoulder

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.822 ppb

response 246237

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:00 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:04:33 Operator: BS
Sample : ICAL LV6 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:15:49 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.897	4.062	4963671	3617450	4.246m	2.618m#
2) M 1,2,3-Tribromoethane	6.240	6.298	804323	798984	4.971	2.980 #
3) M 1,2-Dibromoethane	7.668	7.877	10079049	8377811	4.481	2.665 #

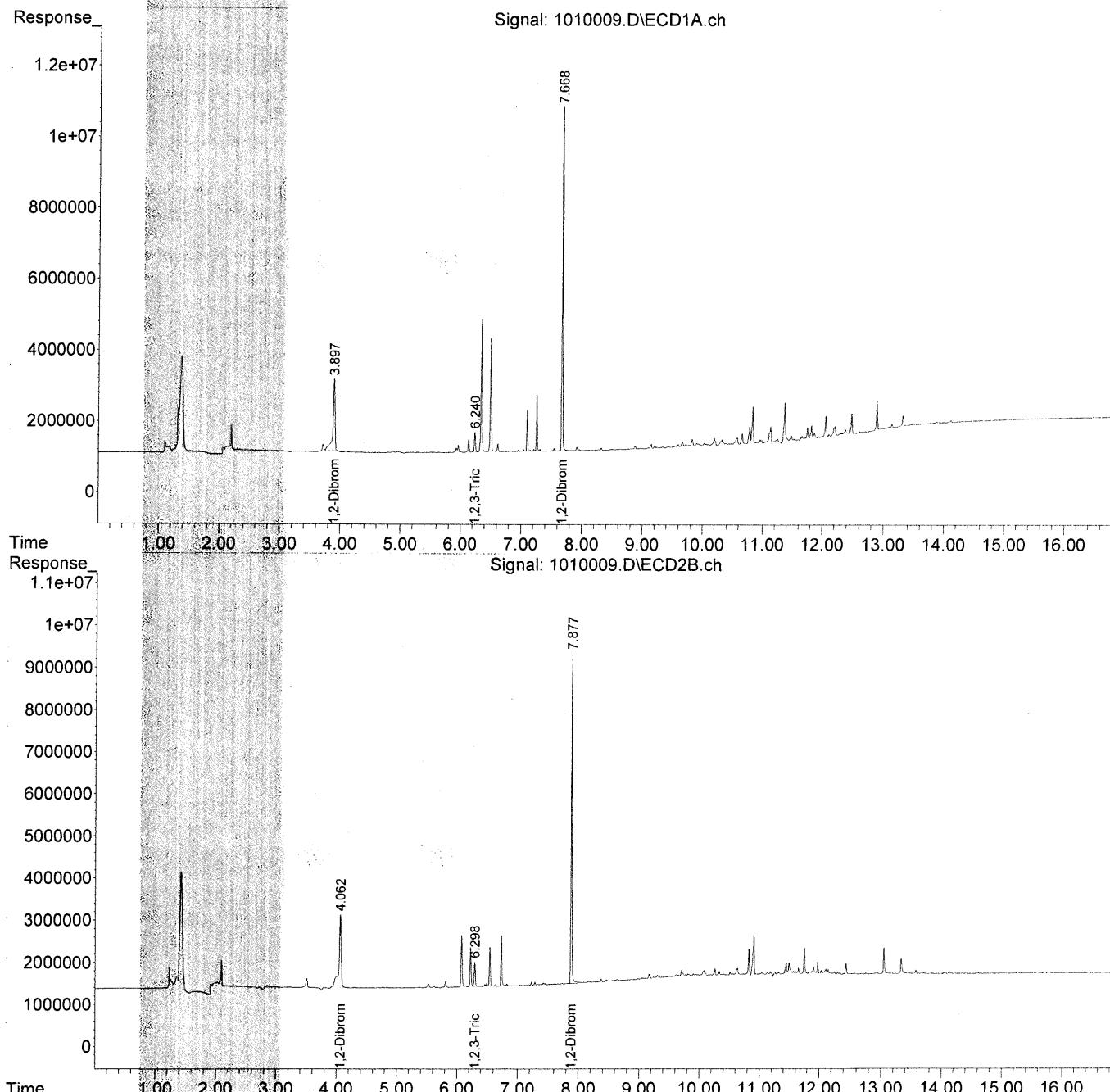
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:04:33 Operator: BS
Sample : ICAL LV6 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:15:49 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m

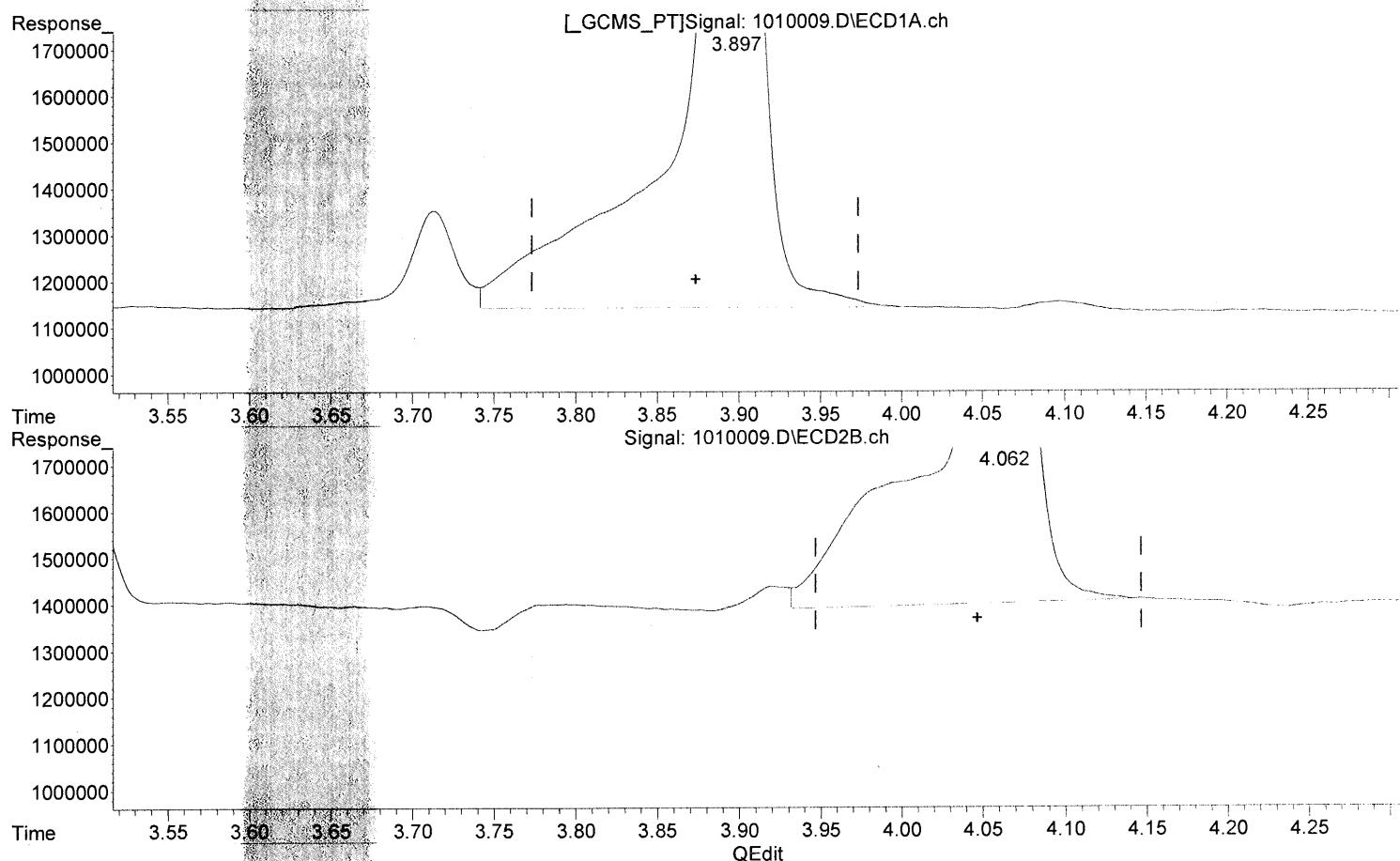


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.696 ppb

response 5492984

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:24 2016

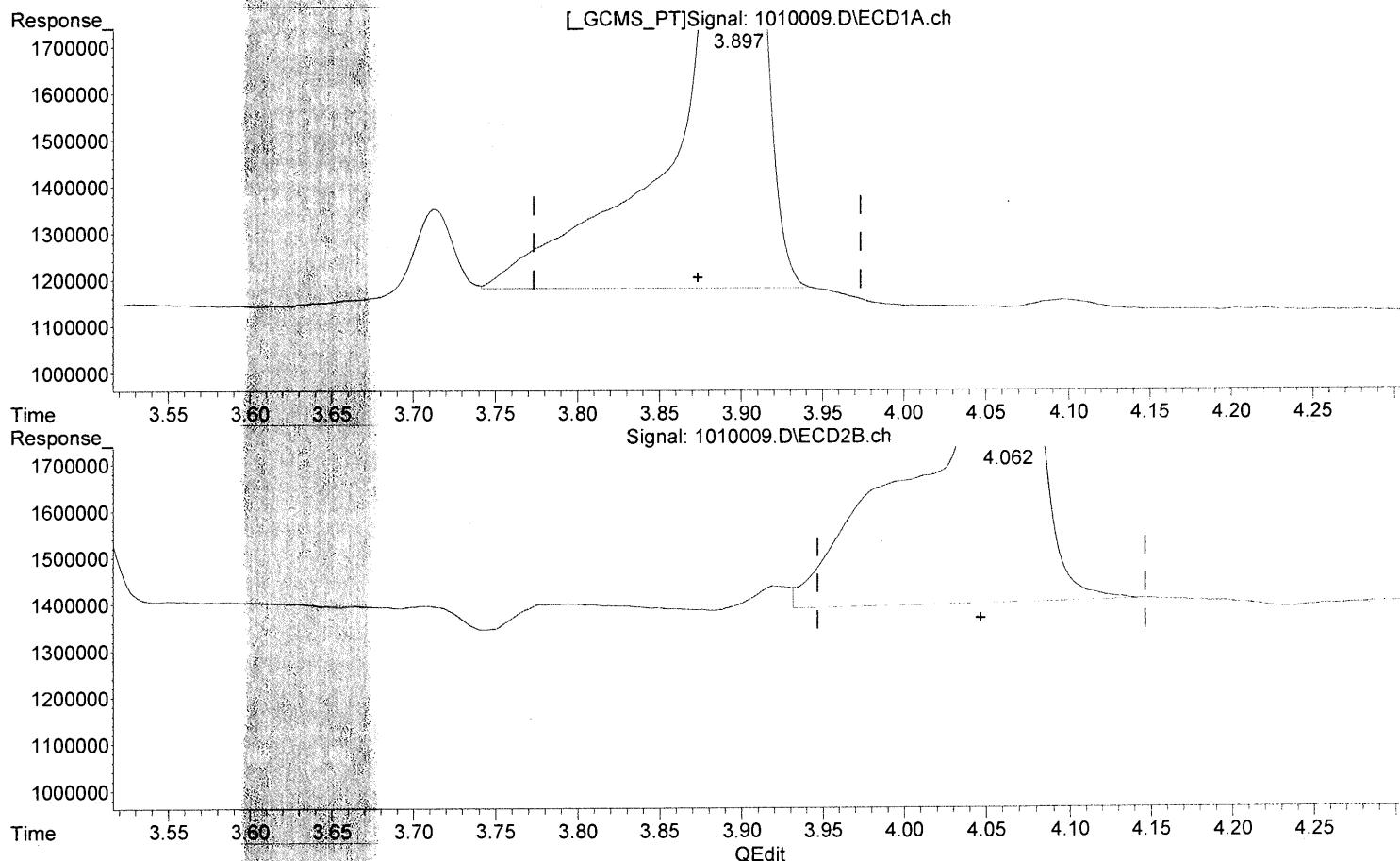
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.897min 4.246 ppb.m
 response 4963671

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.062min 3.428 ppb
 response 4737649



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:30 2016

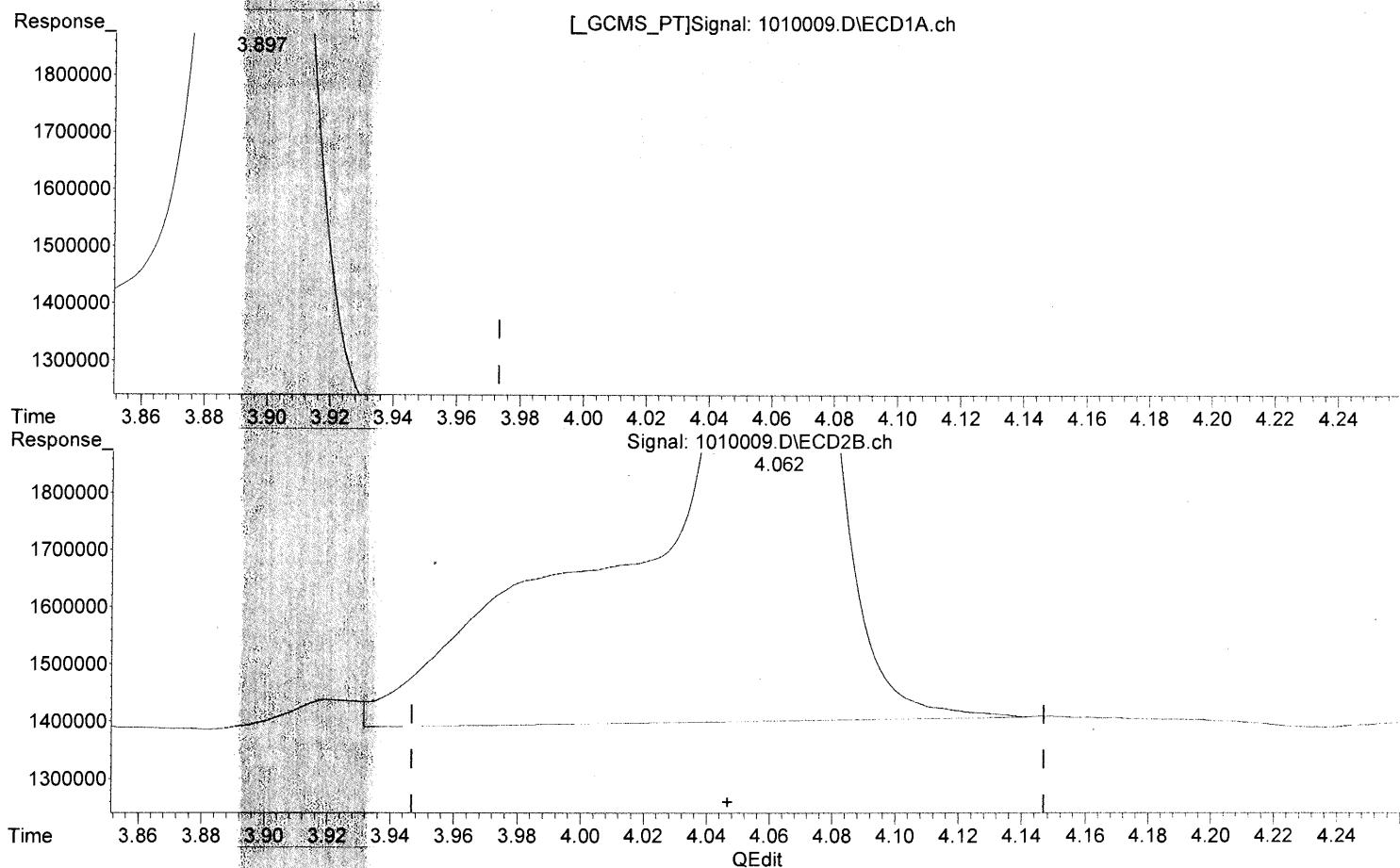
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb m

response 4963671

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:38 2016

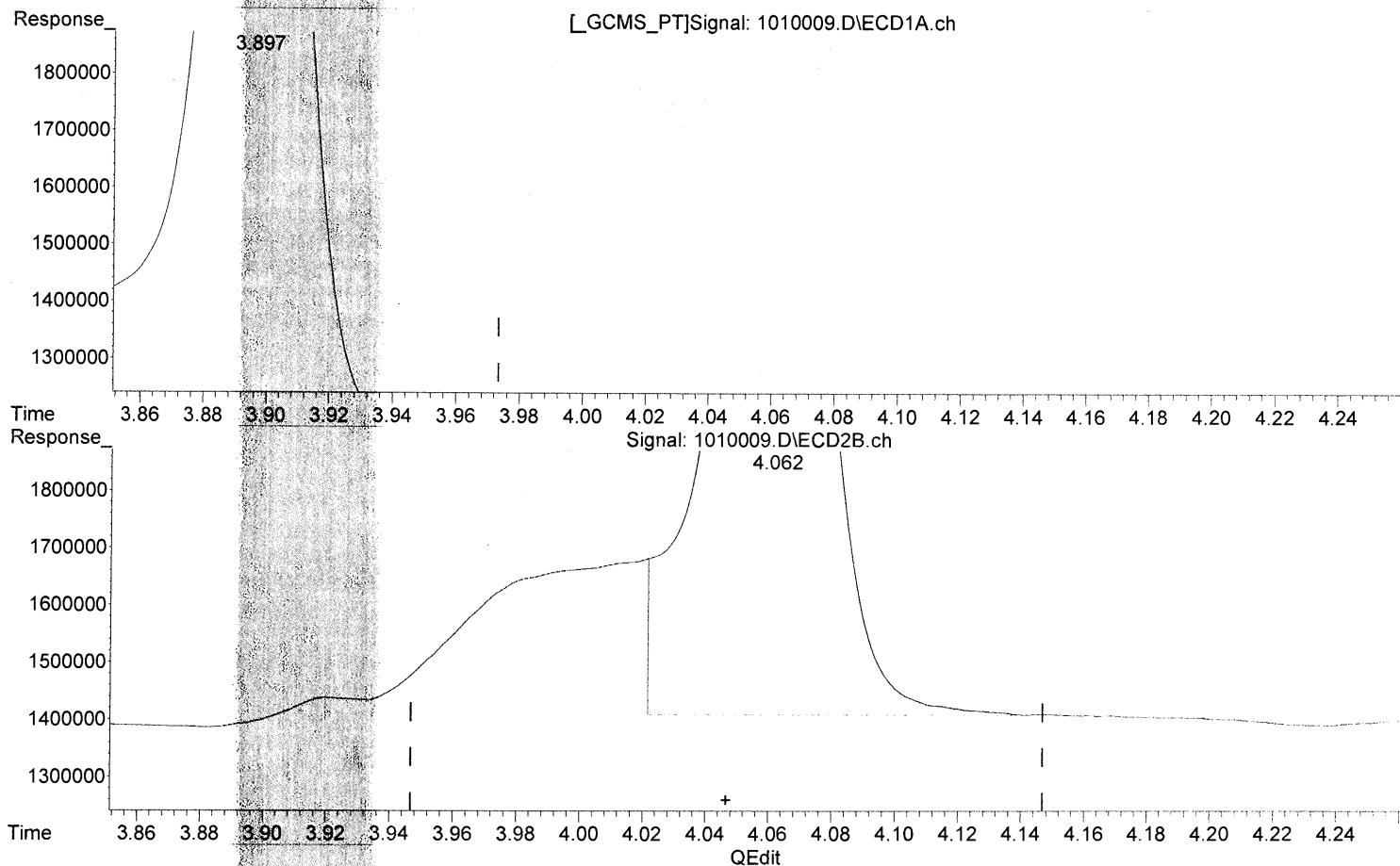
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb m

response 4963671

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 2.618 ppb m

response 3617450



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:52 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:28:17 Operator: BS
Sample : ICAL LV7 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:16:52 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.897	4.063	6005701	4607340	5.133m	3.334m#
2) M 1,2,3-Tri...	6.240	6.298	973722	1023621	6.018	3.827 #
3) M 1,2-Dibro...	7.668	7.875	12908190	10815899	5.739	3.440 #

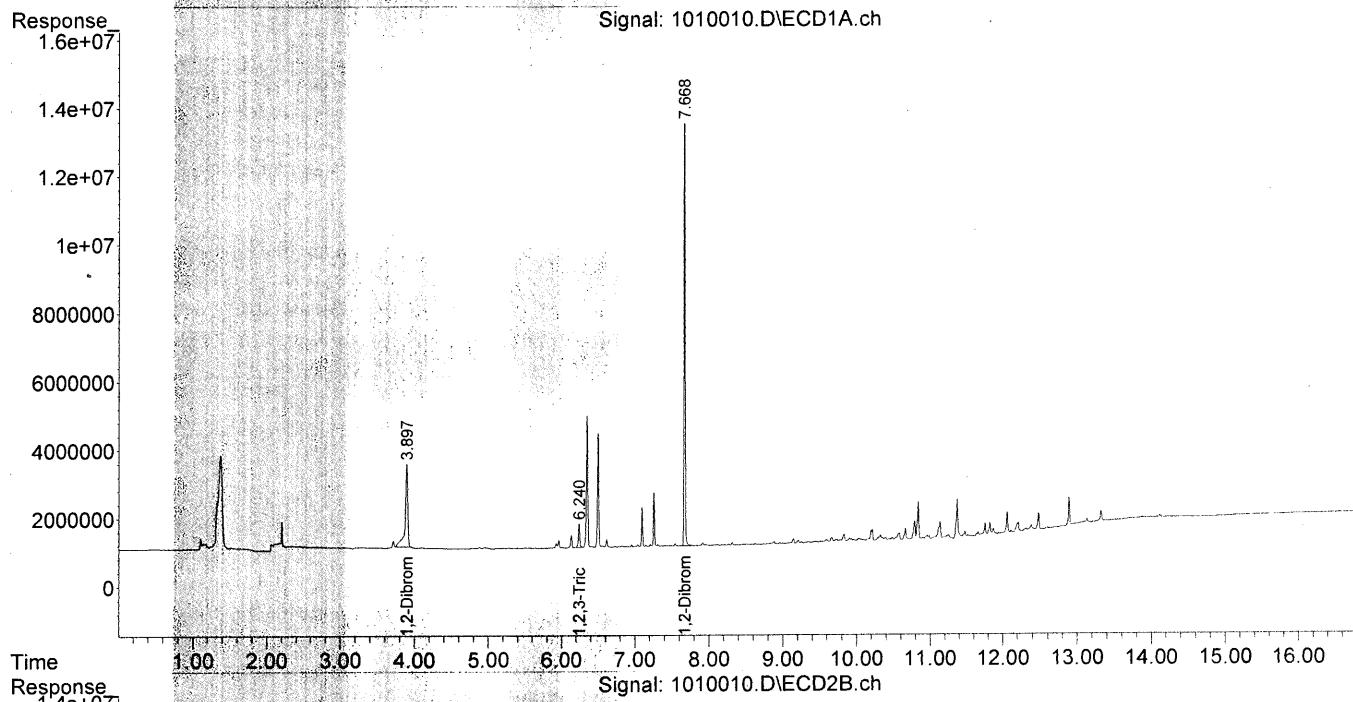
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:28:17 Operator: BS
Sample : ICAL LV7 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:16:52 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

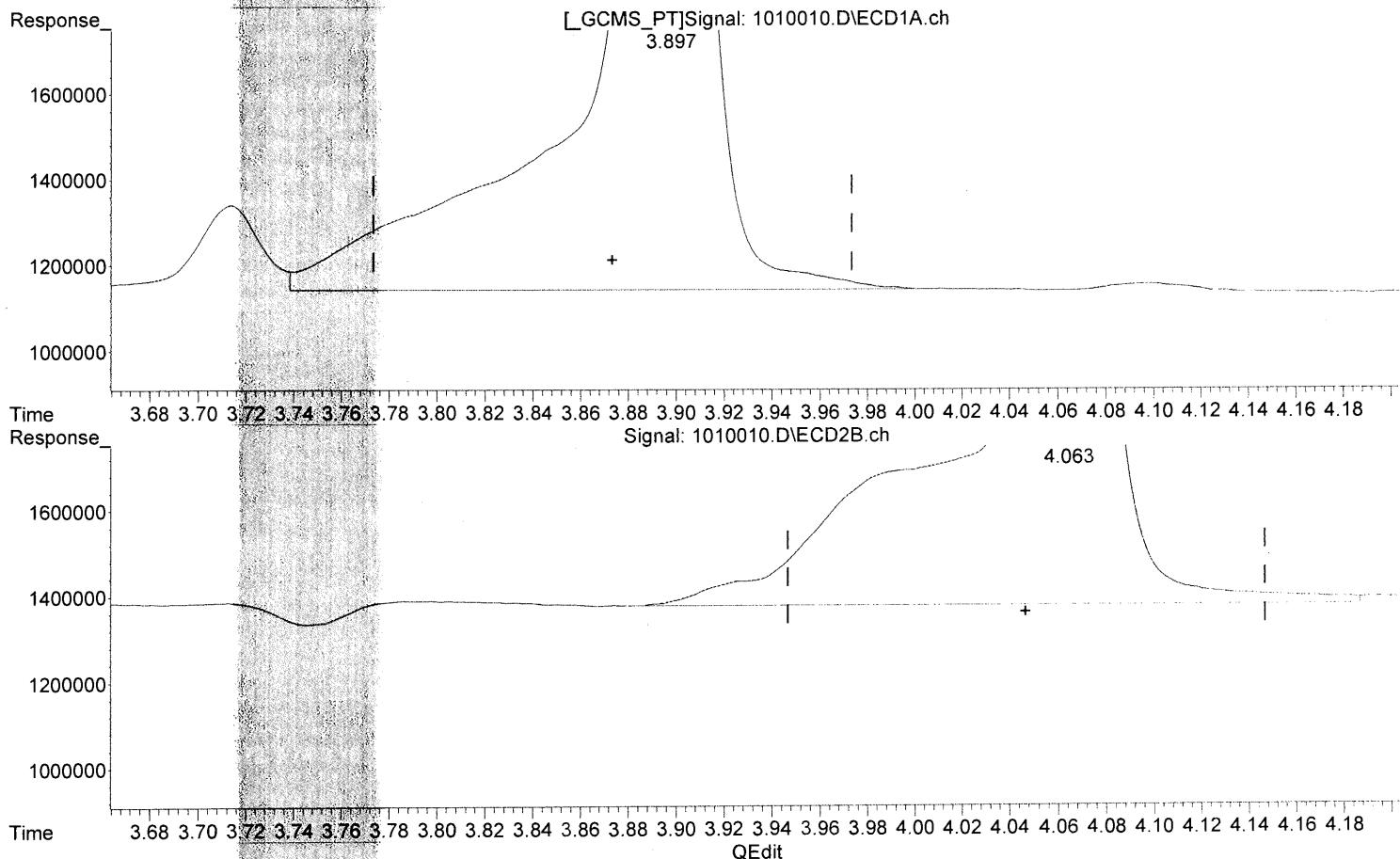


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.593 ppb

response 6545020

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:16:30 2016

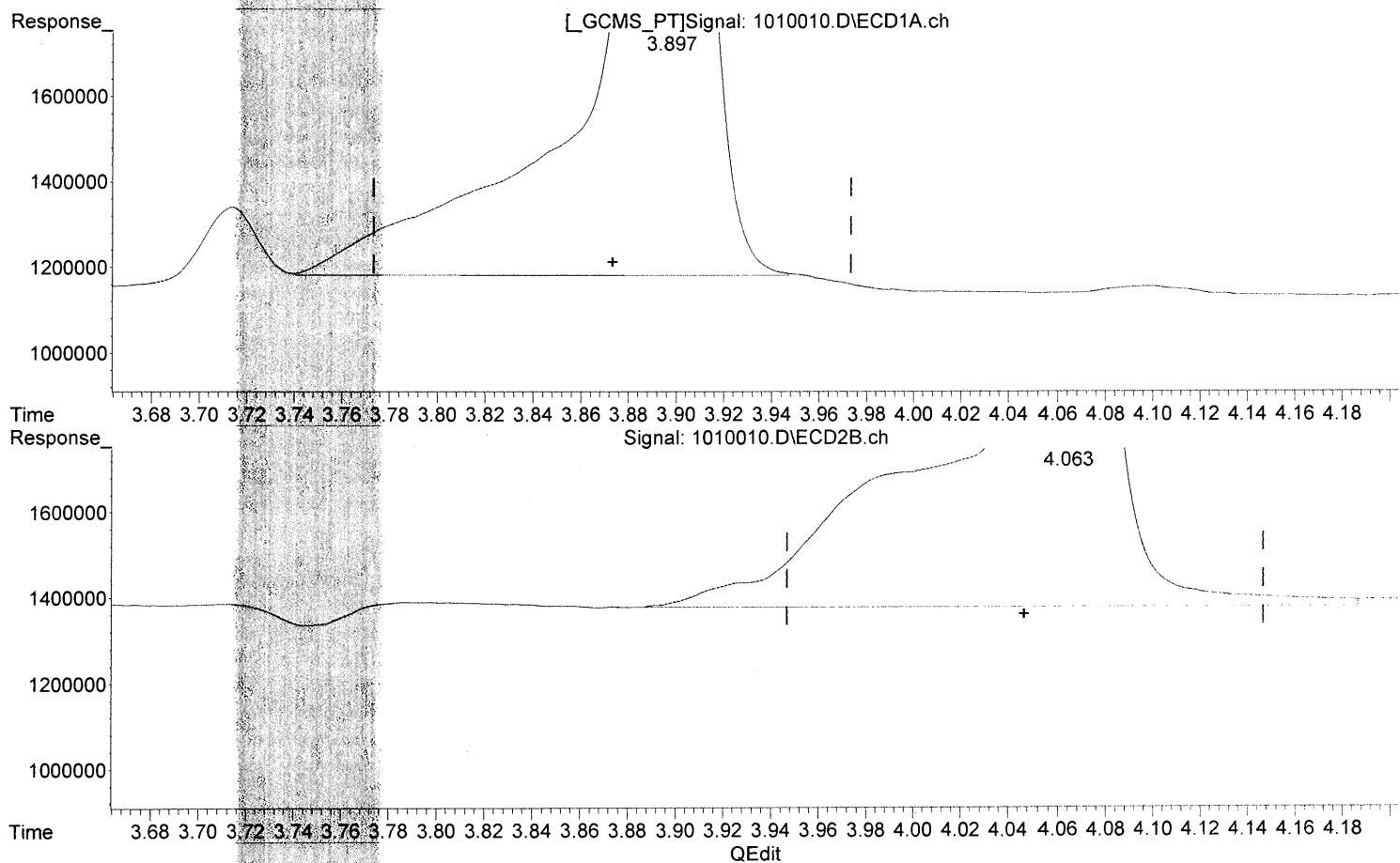
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.133 ppb m

response 6005701

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:16:39 2016

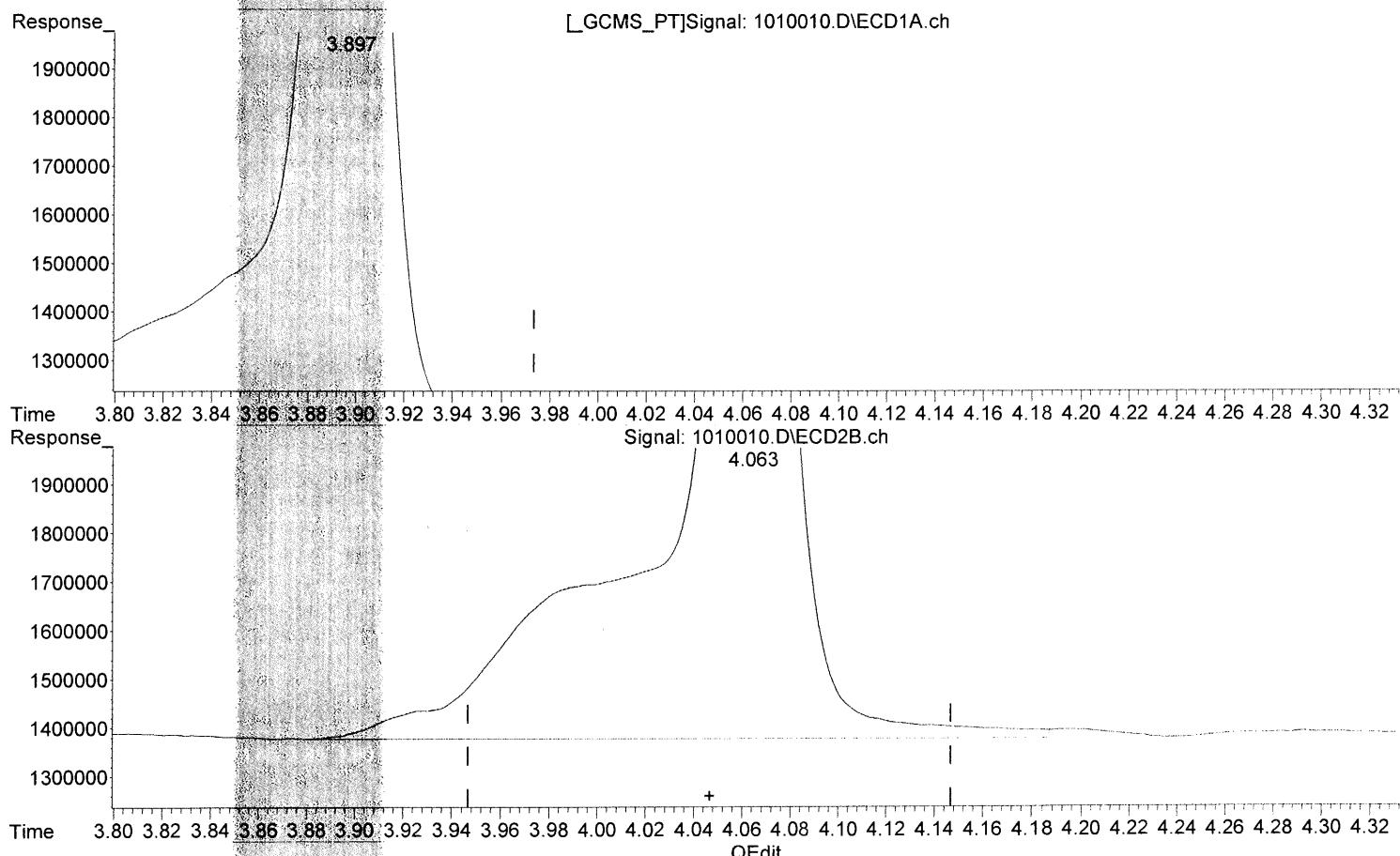
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

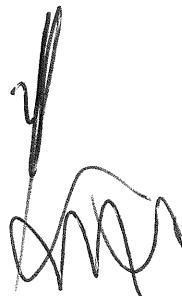
3.897min 5.133 ppb m

response 6005701

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:16:46 2016

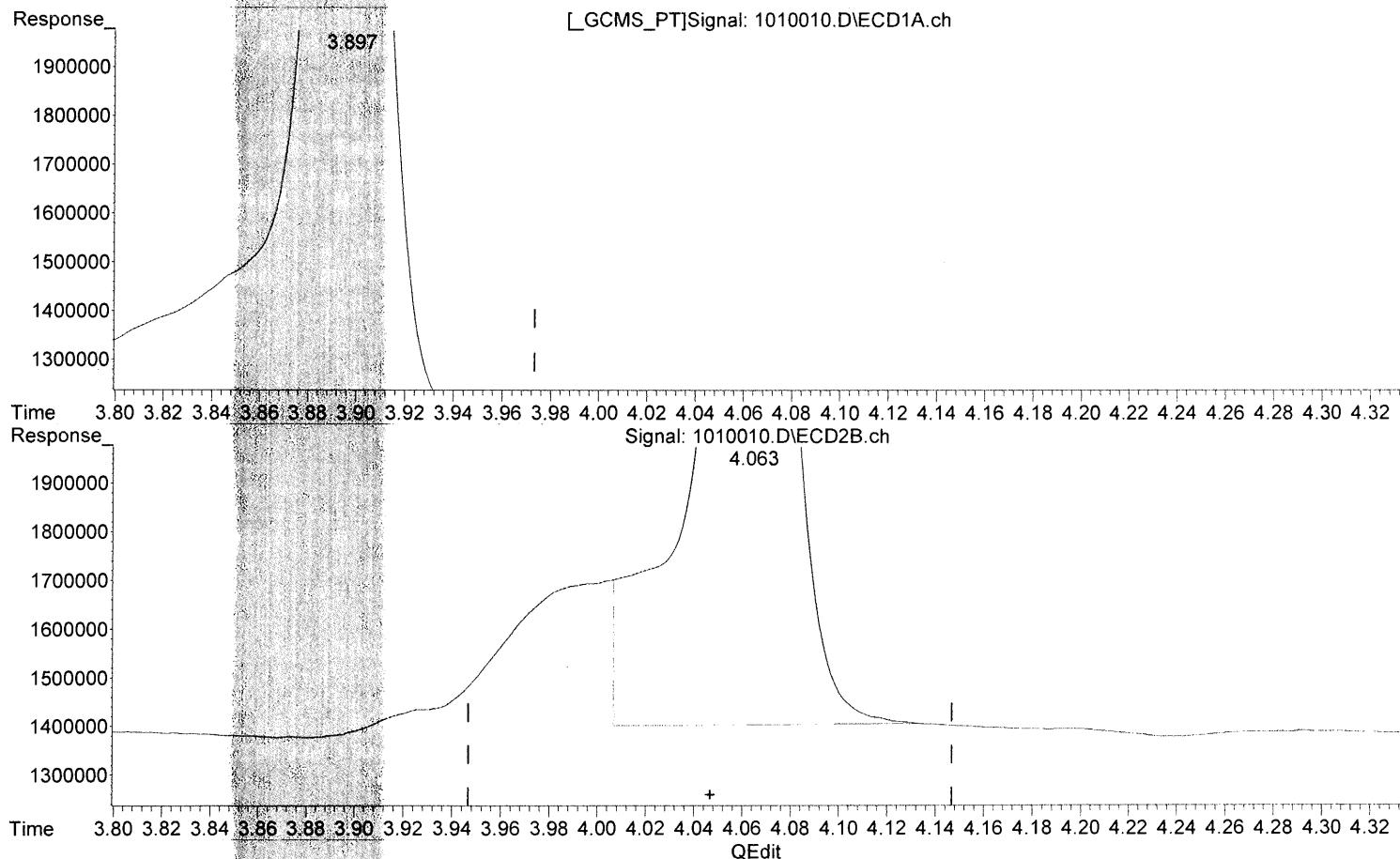
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5,133 ppb m

response 6005701

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 3,334 ppb m

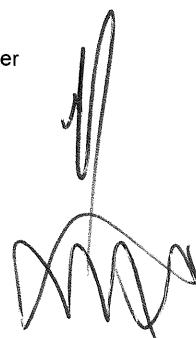
response 4607340

Manual Integration:

After

Baseline/Shoulder

10/11/16



(+) = Expected Retention Time

101116_504.M Tue Oct 11 08:16:56 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:51:51 Operator: BS
Sample : ICAL LV8 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:18:12 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.908	4.068	14751554	9894375	12.661m	7.160m#
2) M 1,2,3-Triiodopropane	6.247	6.303	2175504	2027409	13.445	7.424 #
3) M 1,2-Dibromoethane	7.672	7.880	29684327	23263534	13.197	7.399 #
<hr/>						

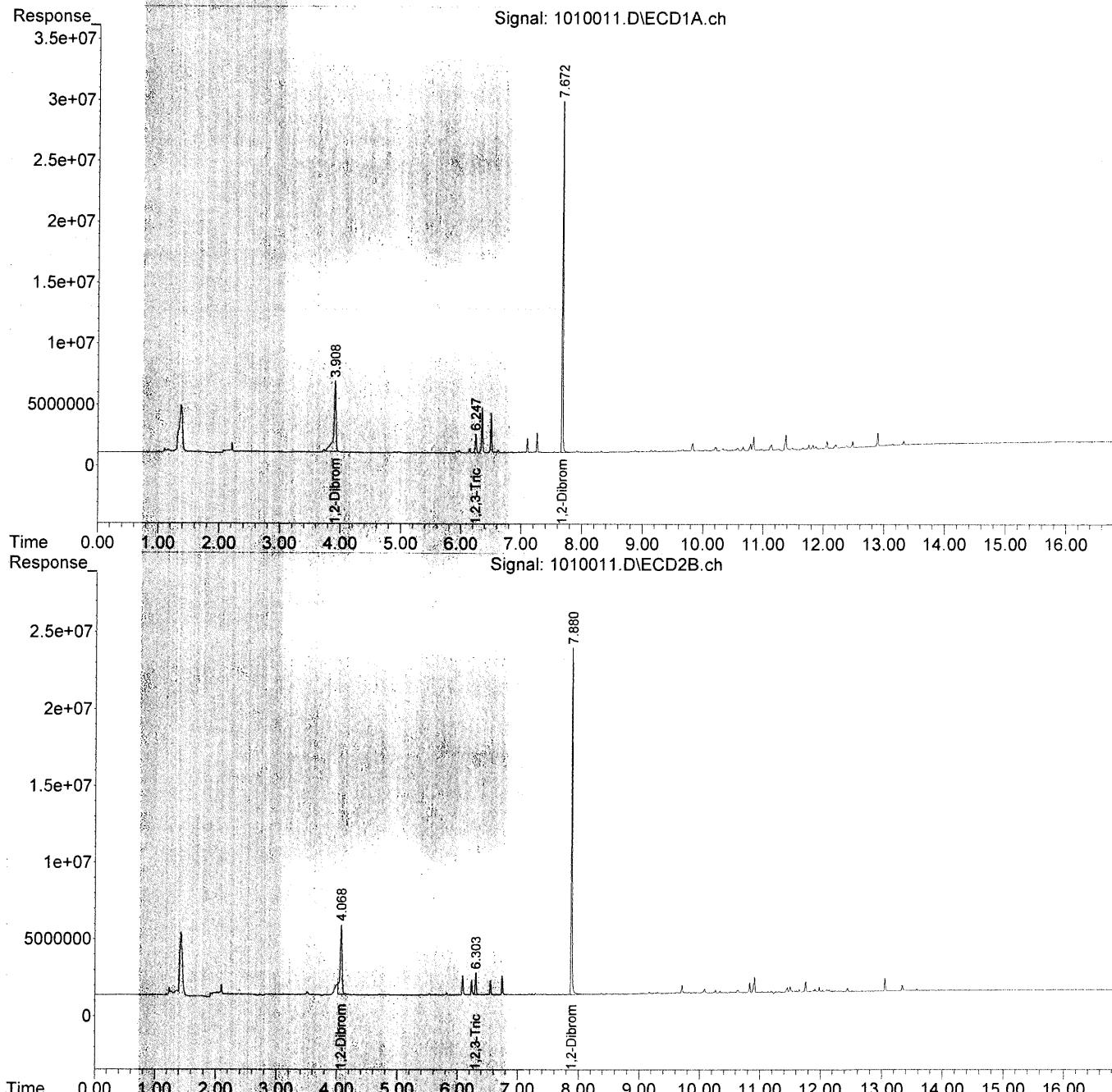
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:51:51 Operator: BS
Sample : ICAL LV8 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:18:12 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CALL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

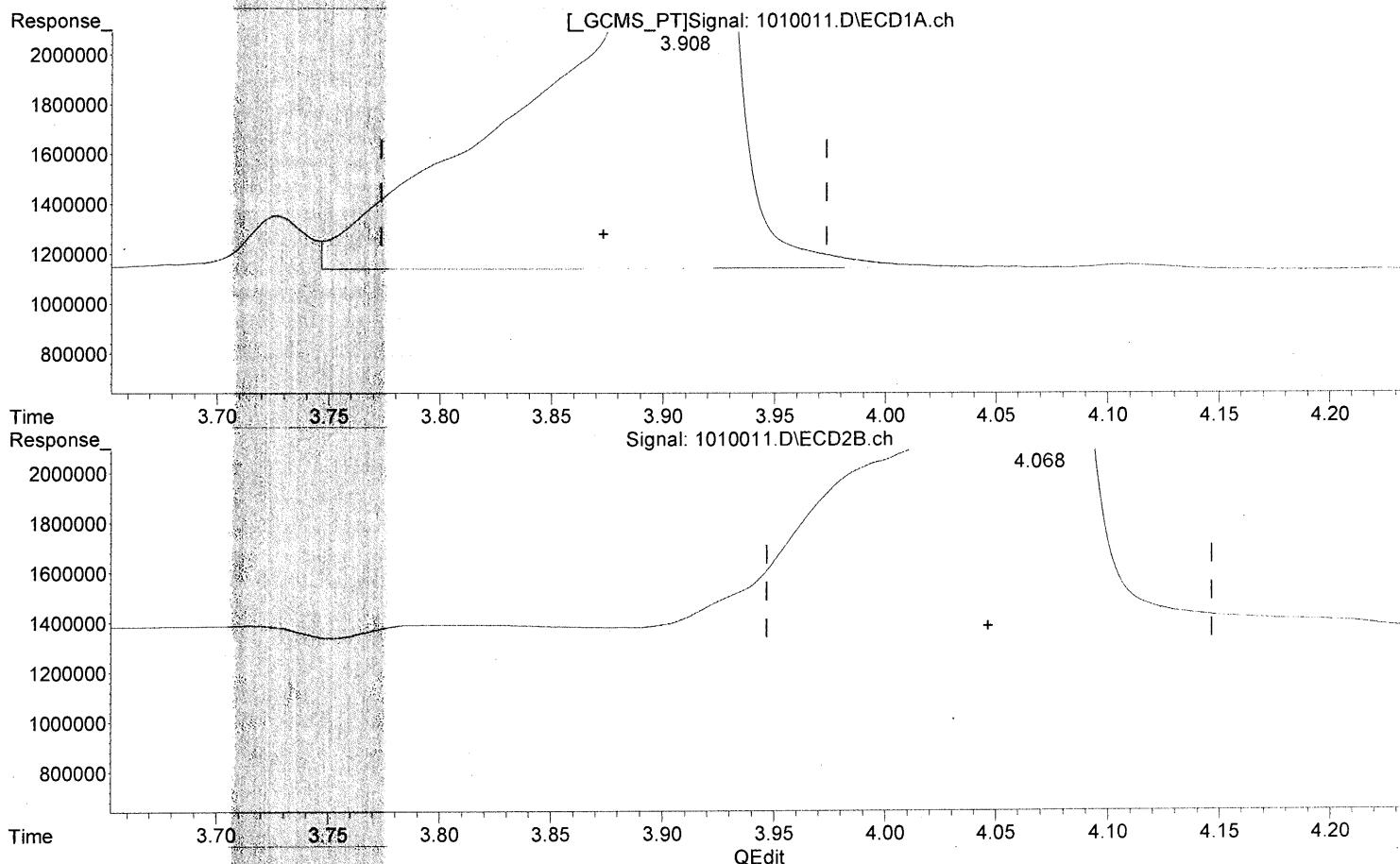


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

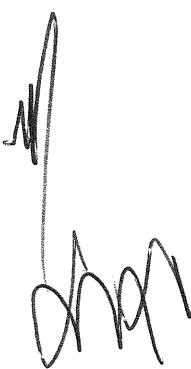
3.908min 13.407 ppb

response 15609023

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:17:43 2016

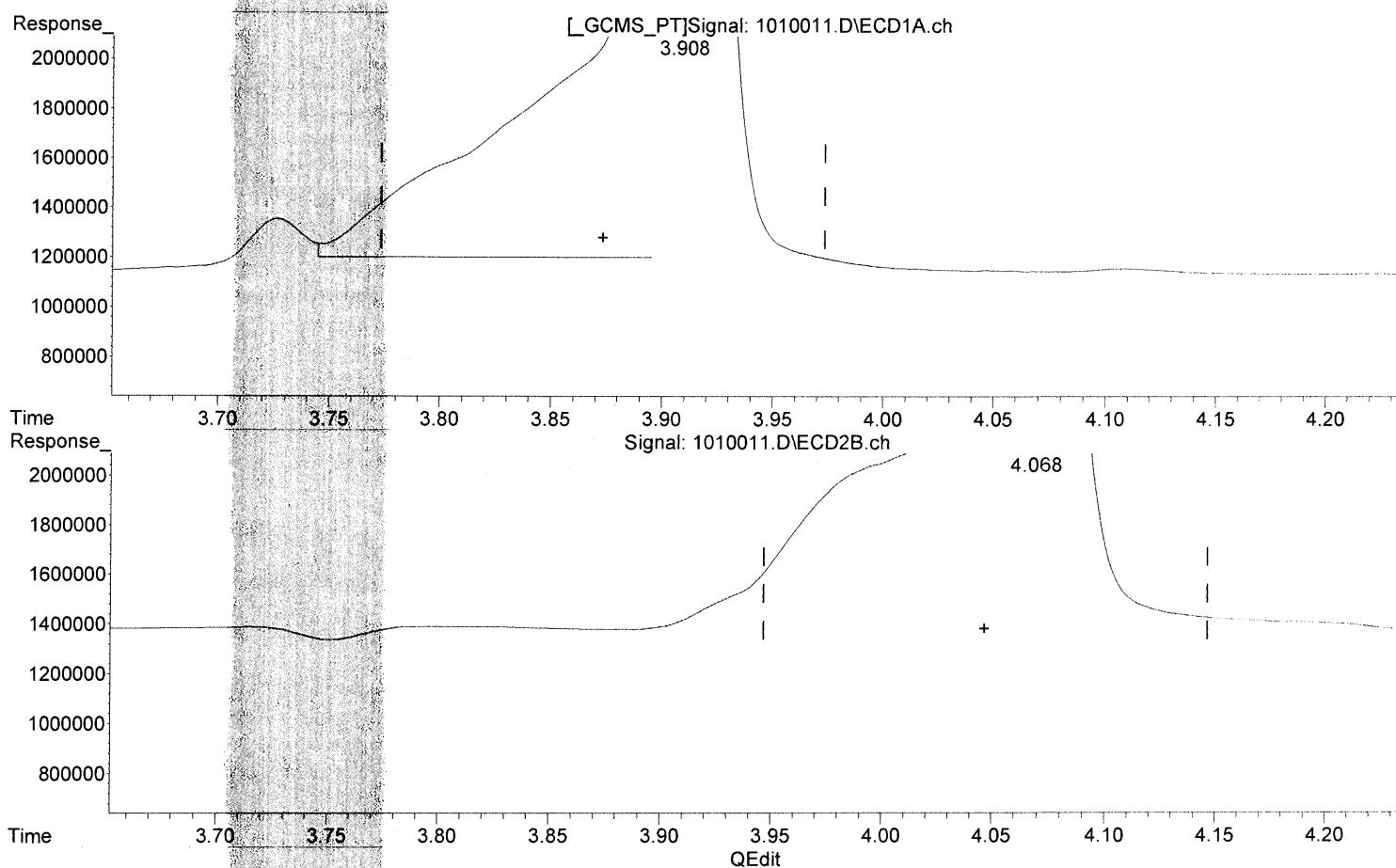
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12,661 ppb m

response 14751554

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:17:58 2016

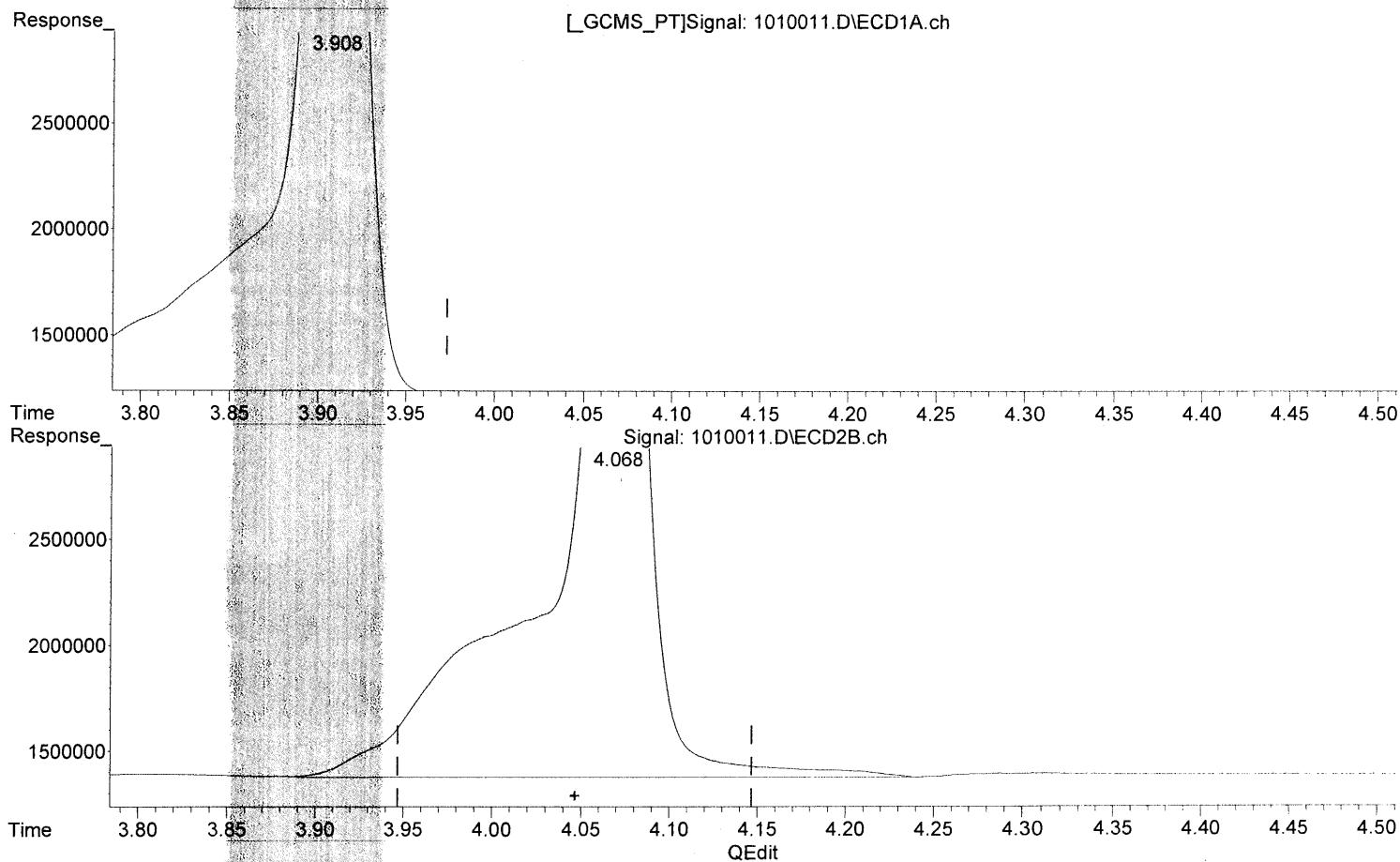
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12.661 ppb m

response 14751554

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:18:08 2016

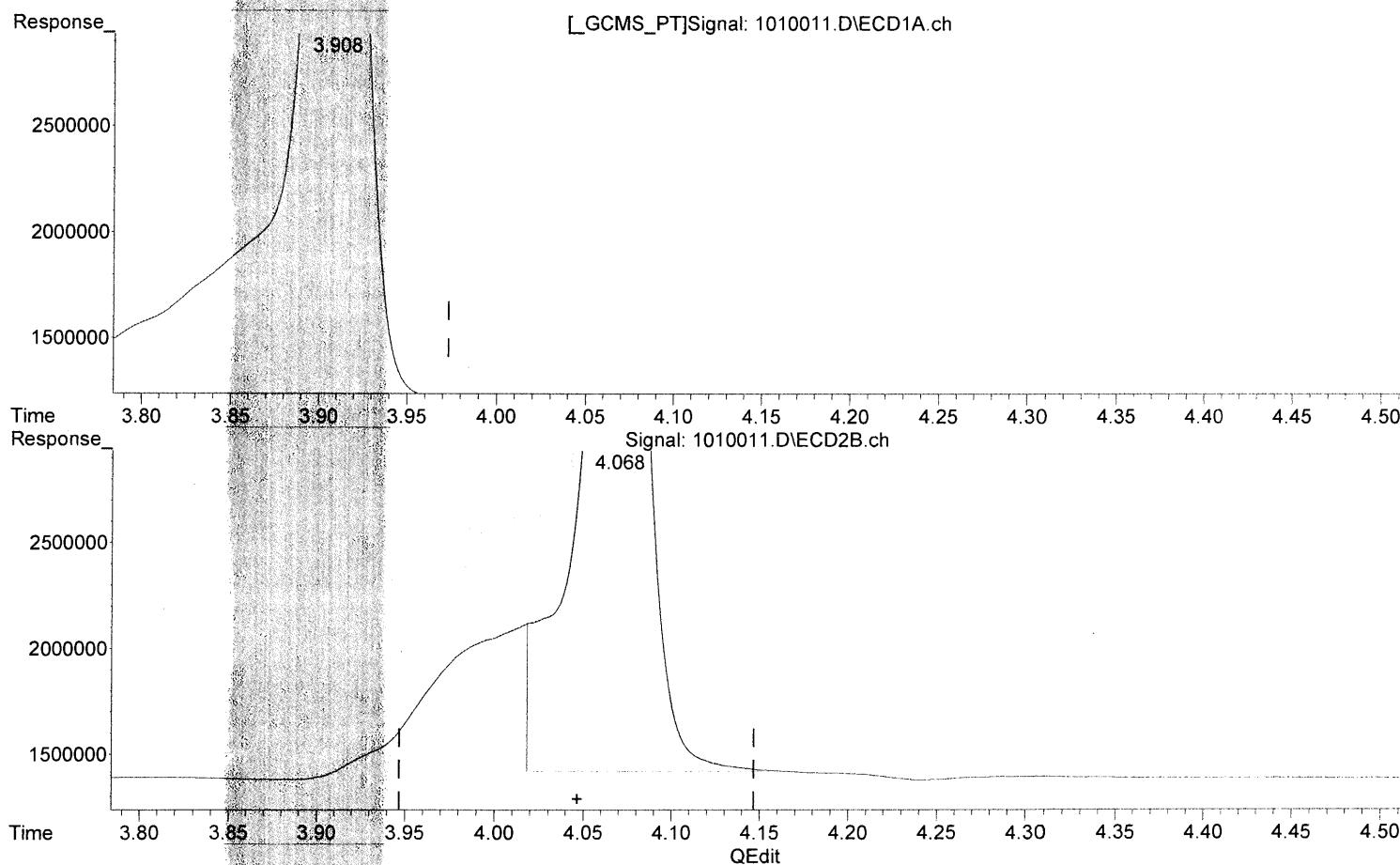
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method: J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12.661 ppb m

response 14751554

Manual Integration:

After

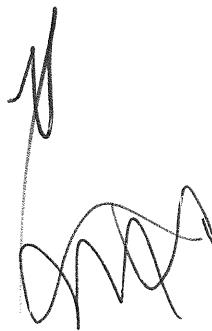
Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 7.160 ppb m

response 9894375



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:18:16 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 19:15:26 Operator: BS
Sample : ICAL ICV 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:41:21 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:19:10 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX^CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.898	4.063	1383314	1094744	1.222m	1.128m
2) M 1,2,3-Triiodopropane	6.243	6.300	227282	242192	1.168	1.096
3) M 1,2-Dibromoethane	7.670	7.878	3199031	2515344	1.111	1.110

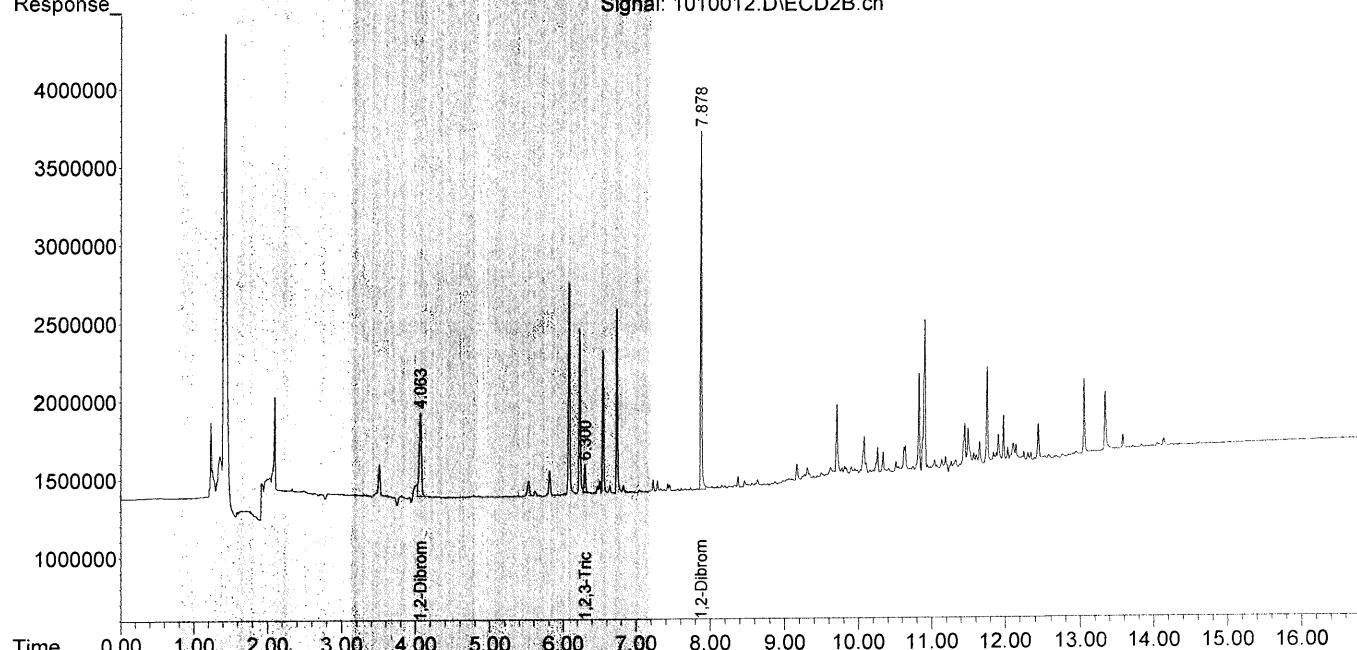
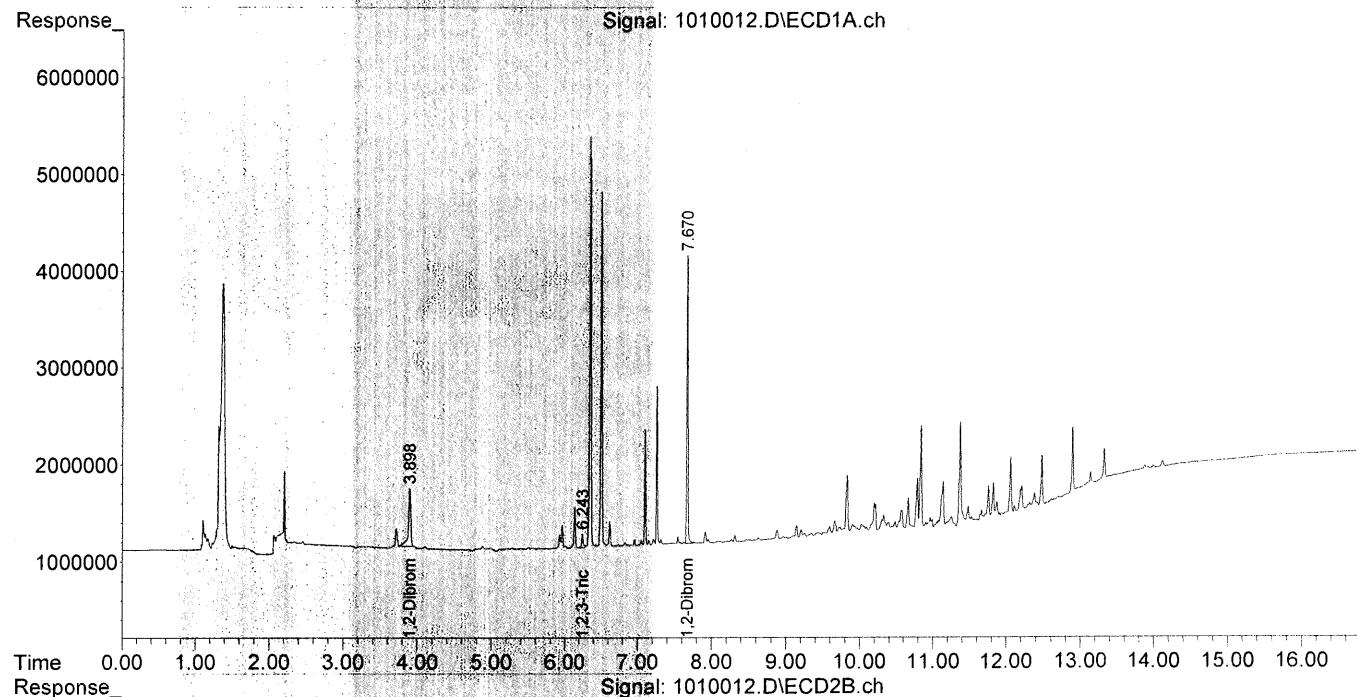
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 19:15:26 Operator: BS
Sample : ICAL ICV 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:41:21 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:19:10 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

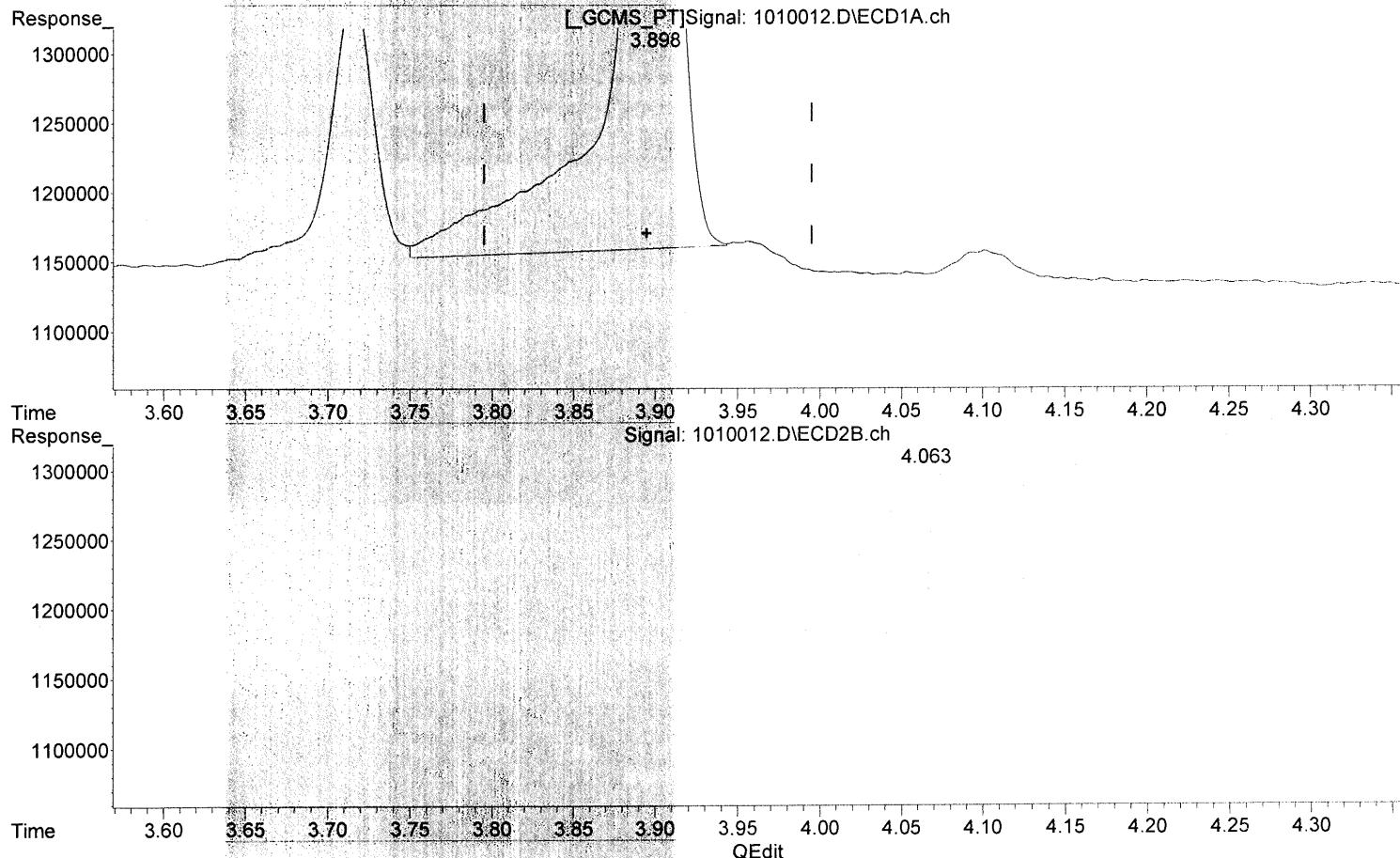


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.253 ppb

response 1419678

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:40:48 2016

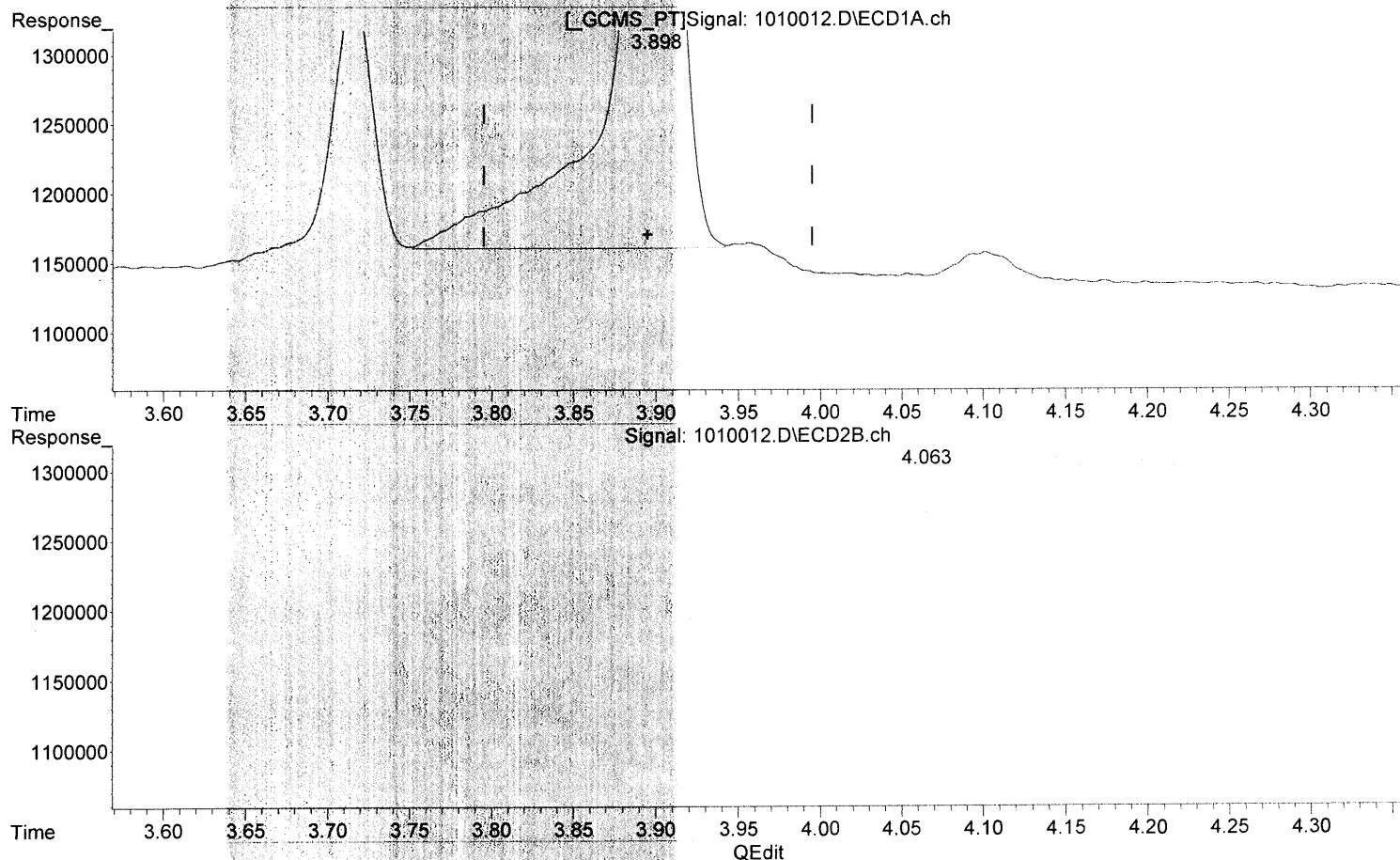
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:41:07 2016

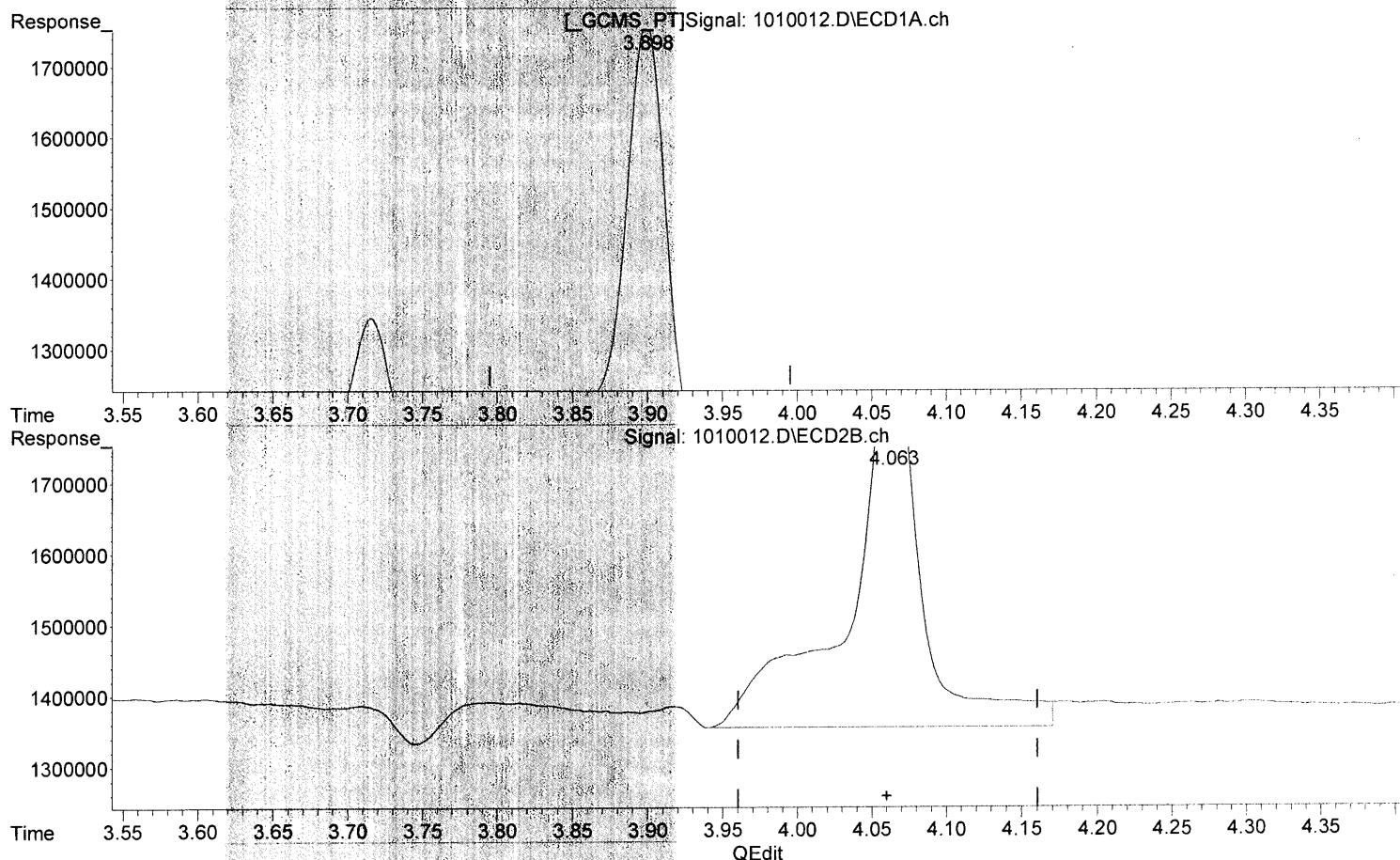
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CALL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

Manual Integration:

Before

10/11/16



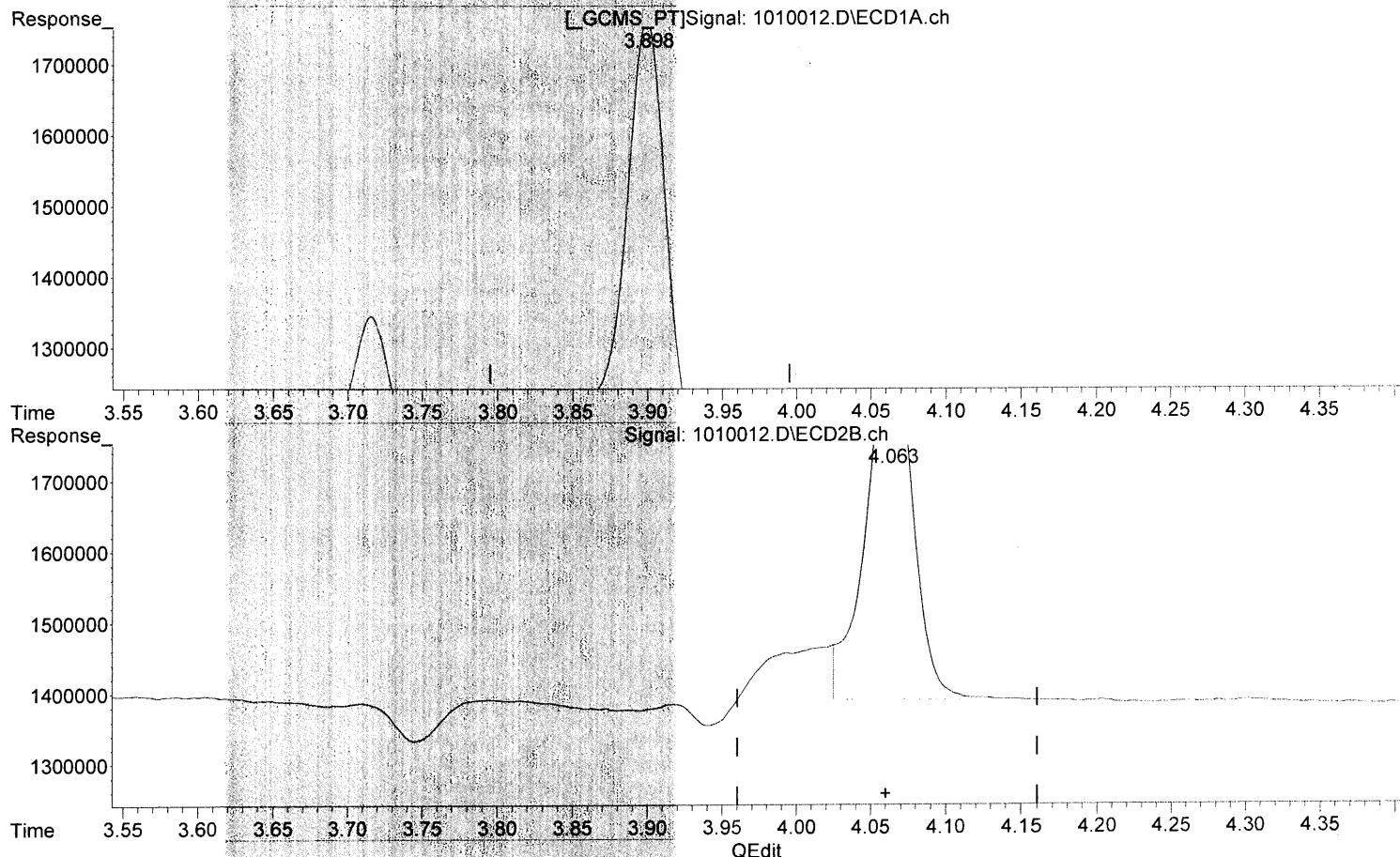
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:41:13 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.128 ppb m

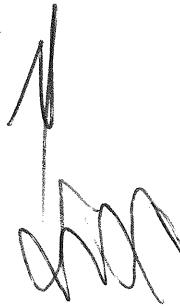
response 1094744

Manual Integration:

After

Baseline/Shoulder

10/11/16



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:41:25 2016

Page: 1

EDB/TCP/DBCP in Water

Serv. Req. IDs:

lca

Method:

EPA 504.1

BATCH ID: kWG1609129

Comments:

Spike Information		Extract Information	
Matrix Spike ID/Conc:	<u>DWST07-91L</u>	<u>50 ppb</u>	Start Date: <u>10/10/16</u>
ICV Spike ID/Conc:	<u>DWST07-91H</u>	<u>50 ppb</u>	End Date: <u>10/10/16</u>
Start / Stop Time:	<u>10:00 13:05</u>		Hexane Lot <u>OP 775</u>
			NaCl Lot # <u>131606</u>
			Balance ID# <u>L-BALANCE-44</u>
Personnel and Bench Sheet Review			
Started By:	<u>LMuresan</u>		Assisted By: <u> </u>
Completed By:	<u>LMuresan</u>		Assisted By: <u> </u>
Bench Sheet Reviewed By/Date Reviewed:	<u> </u> <u>10/11/16</u>		Extracts Examined Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Preparation Information

Group ID:	KWG1610727	Prep Method:	METHOD	Prep Date:	11/29/16 09:00
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1614217-001	16322-GACI	504.1 EDB DBCP 123TCP	WATER	35.650ml	2ml
K1614217-002	16322-GACE	504.1 EDB DBCP 123TCP	WATER	35.296ml	2ml
K1614217-003	16322-BW-6-1	504.1 EDB DBCP 123TCP	WATER	35.346ml	2ml
K1614217-004	16323-BW-1	504.1 EDB DBCP 123TCP	WATER	36.271ml	2ml
K1614217-005	16322-BW-2	504.1 EDB DBCP 123TCP	WATER	35.021ml	2ml
K1614217-006	16322-DUP	504.1 EDB DBCP 123TCP	WATER	35.693ml	2ml
K1614217-007	16322-BW-5	504.1 EDB DBCP 123TCP	WATER	35.491ml	2ml
K1614217-008	16322-Well-D	504.1 EDB DBCP 123TCP	WATER	35.321ml	2ml
K1614217-009	Trip Blank	504.1 EDB DBCP 123TCP	WATER	35.338ml	2ml
KWG1610727-1	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.000ml	2ml
KWG1610727-2	Duplicate Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.000ml	2ml
KWG1610727-3	Method Blank	504.1 EDB DBCP 123TCP	WATER	36.271ml	2ml

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1614217-001	1573182					
K1614217-002	1573183					
K1614217-003	1573184					
K1614217-004	1573185					
K1614217-005	1573186					
K1614217-006	1573187					
K1614217-007	1573188					
K1614217-008	1573189					
K1614217-009	1573181					
KWG1610727-1	1573190					
KWG1610727-2	1573191					
KWG1610727-3	1573192					

Comments:

Started By: LMuresan Assisted By: _____ Training Yes _____ No _____
Completed By: LMuresan Assisted By: _____ Yes _____ No _____
Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: LM	Date: 11-29-16	Extracts Examined Yes _____ No _____
Received By: V	Date: J	

Printed: 11/29/2016 11:49:24

u:\Stealth\Crystal.rpt\prep1.rpt

Preparation Information

EDB/TCP/DBCP in Water

Serv. Req. IDs:

K1616217

Method: EPA 504.1

Lab Code	#	Comments	Wt. of sample and vial(g)	Wt. of vial (g)	Sample Amount (mL)		NaCl added	Final Volume (ml)
K1616217-001	.02		59.124	23.474	35.650	-	7	2
-002	.02		58.226	22.930	35.296	-	7	2
-003	.02	light sediment	58.494	23.148	35.346	-	7	2
-004	.02	faint sediment	59.485	23.214	36.271	-	7	2
-005	.01	light sediment	58.335	23.314	35.021	-	7	2
-006	.02	sediment /algae	58.749	23.056	35.693	-	7	2
-007	.01		58.776	23.285	35.691	-	7	2
-008	.01		58.612	23.291	35.321	-	7	2
-009	.01		58.355	23.017	35.338	-	7	2
KWG1610727-1	LCS		-	-	35.000	175	7	2
-2 ALCS			-	-	35.000	175	7	2
-3 MB			-	-	36.271	-	7	2

BATCH ID: KWG1610727

Comments: _____

276790

Spike Information

Matrix Spike ID/Conc:

DWSTD 07-9HD 50 ppb XP
DWSTD 07-9HD, 50 ppb 1/27/17
_____ 3/13/17

Start / Stop Time:

0900 1145

Extract Information

Start Date: 11-29-16End Date: 11-29-16Hexane Lot # DP775NaCl Lot # 131606Balance ID# K-BAL-29

Personnel and Bench Sheet Review

Started By:

LMuresan

Completed By:

LMuresan

Assisted By:

Assisted By:

Bench Sheet Reviewed By/Date Reviewed:

AM 11/30/09

Extracts Examined

Yes

No

EDB/TCP/DBCP in Water

Serv. Req. IDs:

lcal

Method:

EPA 504.1

BATCH ID: KWG1610727

Comments:

10727 used for CCVs only at relish

<u>Spike Information</u>		<u>Extract Information</u>	
Matrix Spike ID/Conc:	<u>DWSTD 07-94D</u>	50 ppb	XP 1/27/17
ICV Spike ID/Conc:	<u>DWSTD 07-91H</u>	50 ppb	3/13/17
Start / Stop Time:	<u>0900 / 1145</u>		
<u>Personnel and Bench Sheet Review</u>			
Started By:	<u>L Muresanu</u>		
Completed By:	<u>L Muresanu</u>		
Bench Sheet Reviewed By/Date Reviewed:	<u>1/27/17</u>		
<u>Extracts Examined</u>			
Yes No			

Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	1	Vial	94	504-1 PRIMER MeOH	1129000201	F:01:01
No	2	Vial	95	504-1 PRIMER Hexane	1129000202	F:02:01
No	3	Vial	1	504-1 ICAL BLANK	1129000203	F:03:01
No	4	Vial	2	504-1 ICAL LV1 112916	1129000204	F:04:01
No	5	Vial	3	504-1 ICAL LV2 112916	1129000205	F:05:01
No	6	Vial	4	504-1 ICAL LV3 112916	1129000206	F:06:01
No	7	Vial	5	504-1 ICAL LV4 112916	1129000207	F:07:01
No	8	Vial	6	504-1 ICAL LV5 112916	1129000208	F:08:01
No	9	Vial	7	504-1 ICAL LV6 112916	1129000209	F:09:01
No	10	Vial	8	504-1 ICAL LV7 112916	1129000210	F:10:01
No	11	Vial	9	504-1 ICAL LV8 112916	1129000211	F:11:01
No	12	Vial	10	504-1 1CAL ICV 112916	1129000212	F:12:01
No	13	Vial	6	504-1 CCV LV5	1129000213	F:13:01
No	14	Vial	1	504-1 IB	1129000214	F:14:01
No	15	Vial	11	504-1 K1614217-001	1129000215	F:15:01
No	16	Vial	12	504-1 K1614217-002	1129000216	F:16:01
No	17	Vial	13	504-1 K1614217-003	1129000217	F:17:01
No	18	Vial	14	504-1 K1614217-004	1129000218	F:18:01
No	19	Vial	15	504-1 K1614217-005	1129000219	F:19:01
No	20	Vial	16	504-1 K1614217-006	1129000220	F:20:01
No	21	Vial	17	504-1 K1614217-007	1129000221	F:21:01
No	22	Vial	18	504-1 K1614217-008	1129000222	F:22:01
No	23	Vial	19	504-1 K1614217-009	1129000223	F:23:01
No	24	Vial	20	504-1 KWG1610727-1 LCS	1129000224	F:24:01
No	25	Vial	21	504-1 KWG1610727-2 DLCS	1129000225	F:25:01
No	26	Vial	22	504-1 KWG1610727-3 MB	1129000226	F:26:01
No	27	Vial	8	504-1 110716 504 LV7	1129000227	F:27:01
No	28	Vial	1	504-1 IB	1129000228	F:28:01

Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
No	29	none	PARK STILL	1129000229	F:29:01	



ALS Environmental
ALS Group USA, Corp
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Kelso, WA 98626
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www.alsglobal.com

April 19, 2016

Analytical Report for Service Request No: K1603757

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel / Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory April 14, 2016
For your reference, these analyses have been assigned our service request number **K1603757**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink that reads "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

- Acronyms
- Qualifiers
- State Certifications, Accreditations, And Licenses
- Case Narrative
- Chain of Custody
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156--,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA
Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.alsglobal.com or at the accreditation bodies web site.		
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.		



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialist **Service Request No.:** K1603757
Project: Drexel **Date Received:** 04/14/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

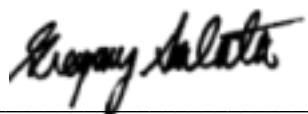
Sample Receipt

Three water samples were received for analysis at ALS Environmental on 04/14/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB by Method 504.1

No anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



(ALS) Environmental

CHAIN OF CUSTODY

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

SR# W1007751

REPORT REQUIREMENTS

INVOICE INFORMATION

P.O. #

Bill To: _____

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

- I. Routine Report: Method Blank, Surrogate, as required

II. Report Dup., MS, MSD as required

III. CLP Like Summary (no raw data)

IV. Data Validation Report

V. EDD

TURNAROUND REQUIREMENTS

24 hr. X 48 hr.

5 day

Standard (15 working days)

_____ Standard (to Working
Provide FAX Results

Provide TAX Results

Requested Report Date

SPECIAL INSTRUCTIONS/COMMENTS:

Sample Shipment contains USDA regulated soil samples (check box if applicable)

Container Supply Number



68935

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
 Signature	 Signature		
4-13-16 1300 Date/Time	4/14/16 0900 Date/Time		
Alex Tostow Printed Name	EPS Inc. Printed Name		
Firm	Firm		



Cooler Receipt and Preservation Form

PC Greg

Client EPS, Inc.

Service Request K16 03757

Received: 4/14/16 Opened: 4/14/16 By: S Unloaded: 4/14/16 By: S

1. Samples were received via? Mail Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? One, front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID <u>NA</u>	Tracking Number <u>808858583191</u>	NA	Filed
-0.2	-0.4	3.3	3.1	-0.2	342				

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? *Indicate in the table below.* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

RUSH

Page _____ of _____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Collected: 04/13/2016
Date Received: 04/14/2016

EPA Method 504.1

Sample Name: 16104-GACI **Units:** ug/L
Lab Code: K1603757-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.17	0.0097	0.00300	1	04/18/16	04/18/16	KWG1602922	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Collected: 04/13/2016
Date Received: 04/14/2016

EPA Method 504.1

Sample Name: 16104-GACE **Units:** ug/L
Lab Code: K1603757-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0096	0.00300	1	04/18/16	04/18/16	KWG1602922	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Collected: 04/13/2016
Date Received: 04/14/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1603757-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0097	0.00300	1	04/18/16	04/19/16	KWG1602922	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1602922-4 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	04/18/16	04/18/16	KWG1602922	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Extracted: 04/18/2016
Date Analyzed: 04/18/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1603428-004	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1602922

Analyte Name	Sample Result	Batch QCMS KWG1602922-1 Matrix Spike			Batch QCDMS KWG1602922-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
1,2-Dibromoethane (EDB)	ND	0.249	0.239	104	0.247	0.240	103	65-135	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Extracted: 04/18/2016
Date Analyzed: 04/18/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1602922

Lab Control Sample
KWG1602922-3
Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec Limits
		Amount	%Rec	
1,2-Dibromoethane (EDB)	0.223	0.250	89	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Extracted: 04/18/2016
Date Analyzed: 04/18/2016
Time Analyzed: 18:45

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1602922-4	File ID:	J:\GC33\DATA\041816-504\0418017.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1602922

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1602922-3	J:\GC33\DATA\041816-504\0418016.D	04/18/16	18:22
Batch QC	K1603428-004	J:\GC33\DATA\041816-504\0418019.D	04/18/16	19:32
Batch QCMS	KWG1602922-1	J:\GC33\DATA\041816-504\0418020.D	04/18/16	19:56
Batch QCDMS	KWG1602922-2	J:\GC33\DATA\041816-504\0418021.D	04/18/16	20:19
16104-GACI	K1603757-001	J:\GC33\DATA\041816-504\0418023.D	04/18/16	21:06
16104-GACE	K1603757-002	J:\GC33\DATA\041816-504\0418024.D	04/18/16	21:30
Trip Blank	K1603757-003	J:\GC33\DATA\041816-504\0418027.D	04/19/16	08:05

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Extracted: 04/18/2016
Date Analyzed: 04/18/2016
Time Analyzed: 18:22

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1602922-3	File ID:	J:\GC33\DATA\041816-504\0418016.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1602922

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1602922-4	J:\GC33\DATA\041816-504\0418017.D	04/18/16	18:45
Batch QC	K1603428-004	J:\GC33\DATA\041816-504\0418019.D	04/18/16	19:32
Batch QCMS	KWG1602922-1	J:\GC33\DATA\041816-504\0418020.D	04/18/16	19:56
Batch QCDMS	KWG1602922-2	J:\GC33\DATA\041816-504\0418021.D	04/18/16	20:19
16104-GACI	K1603757-001	J:\GC33\DATA\041816-504\0418023.D	04/18/16	21:06
16104-GACE	K1603757-002	J:\GC33\DATA\041816-504\0418024.D	04/18/16	21:30
Trip Blank	K1603757-003	J:\GC33\DATA\041816-504\0418027.D	04/19/16	08:05

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D	F	J:\GC33\data\041816-504\0418009.D
B	J:\GC33\data\041816-504\0418005.D	G	J:\GC33\data\041816-504\0418010.D
C	J:\GC33\data\041816-504\0418006.D	H	J:\GC33\data\041816-504\0418011.D
D	J:\GC33\data\041816-504\0418007.D		
E	J:\GC33\data\041816-504\0418008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	9.98E+5	B	0.13	9.33E+5	C	0.25	1.03E+6	D	0.63	1.26E+6	E	1.3	1.32E+6
	F	3.8	1.33E+6	G	5.0	1.19E+6	H	10	1.22E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	13.2		≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14689
Units: ppb

File ID: J:\GC33\data\041816-504\0418012.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1160000	1260000	9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D\0418004c.d	F	J:\GC33\data\041816-504\0418009.D\0418009c.d
B	J:\GC33\data\041816-504\0418005.D\0418005c.d	G	J:\GC33\data\041816-504\0418010.D\0418010c.d
C	J:\GC33\data\041816-504\0418006.D\0418006c.d	H	J:\GC33\data\041816-504\0418011.D\0418011c.d
D	J:\GC33\data\041816-504\0418007.D\0418007c.d		
E	J:\GC33\data\041816-504\0418008.D\0418008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.54E+6	B	0.13	1.34E+6	C	0.25	1.22E+6	D	0.63	1.25E+6	E	1.3	1.20E+6
	F	3.8	1.19E+6	G	5.0	1.18E+6	H	10	1.23E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	9.4	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14689
Units: ppb

File ID: J:\GC33\data\041816-504\0418012.D\0418012c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1270000	1290000	1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Date Analyzed: 04/18/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\041816-504\0418014.D	Analysis Lot:	KWG1602977
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.0	1160000	1230000	6	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Date Analyzed: 04/18/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\041816-504\0418014.D\0418014C.D	Analysis Lot:	KWG1602977
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	3.6	1270000	1210000	-4	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Date Analyzed: 04/19/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\041816-504\0418026.D	Analysis Lot:	KWG1602977
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.5	1160000	1280000	11	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Date Analyzed: 04/19/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\041816-504\0418026.D\0418026C.D	Analysis Lot:	KWG1602977
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.5	1270000	1150000	-9	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Date Analyzed: 04/19/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\041816-504\0418029.D	Analysis Lot:	KWG1602977
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.3	1160000	1230000	6	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757
Date Analyzed: 04/19/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\041816-504\0418029.D\0418029C.D	Analysis Lot:	KWG1602977
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.5	1270000	1150000	-10	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1603757

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1602977

Instrument ID: GC33

Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0418014.D	Continuing Calibration Verification	KWG1602977-1	4/18/2016	17:34		4/18/2016	17:51
\0418015.D	Instrument Blank	KWG1602977-4	4/18/2016	17:58		4/18/2016	18:15
\0418016.D	Lab Control Sample	KWG1602922-3	4/18/2016	18:22		4/18/2016	18:38
\0418017.D	Method Blank	KWG1602922-4	4/18/2016	18:45		4/18/2016	19:02
\0418018.D	ZZZZZZ	ZZZZZZ	4/18/2016	19:09		4/18/2016	19:26
\0418019.D	Batch QC	K1603428-004	4/18/2016	19:32		4/18/2016	19:49
\0418020.D	Batch QCMS	KWG1602922-1	4/18/2016	19:56		4/18/2016	20:13
\0418021.D	Batch QCDMS	KWG1602922-2	4/18/2016	20:19		4/18/2016	20:36
\0418022.D	ZZZZZZ	ZZZZZZ	4/18/2016	20:43		4/18/2016	21:00
\0418023.D	16104-GACI	K1603757-001	4/18/2016	21:06		4/18/2016	21:23
\0418024.D	16104-GACE	K1603757-002	4/18/2016	21:30		4/18/2016	21:47
\0418025.D	Instrument Blank	KWG1602977-5	4/19/2016	07:18		4/19/2016	07:35
\0418026.D	Continuing Calibration Verification	KWG1602977-2	4/19/2016	07:42		4/19/2016	07:59
\0418027.D	Trip Blank	K1603757-003	4/19/2016	08:05		4/19/2016	08:22
\0418028.D	ZZZZZZ	ZZZZZZ	4/19/2016	08:29		4/19/2016	08:46
\0418029.D	Continuing Calibration Verification	KWG1602977-3	4/19/2016	08:53		4/19/2016	09:09
\0418030.D	Instrument Blank	KWG1602977-6	4/19/2016	09:16		4/19/2016	09:33

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Extracted: 04/18/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1602922
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16104-GACI	K1603757-001	04/13/16	04/14/16	36.01ml	2ml	NA	
16104-GACE	K1603757-002	04/13/16	04/14/16	36.18ml	2ml	NA	
Trip Blank	K1603757-003	04/13/16	04/14/16	36.07ml	2ml	NA	
Method Blank	KWG1602922-4	NA	NA	35.00ml	2ml	NA	
Batch QC	K1603428-004	NA	NA	36.25ml	2ml	NA	
Batch QCMS	KWG1602922-1	NA	NA	36.63ml	2ml	NA	
Batch QCDMS	KWG1602922-2	NA	NA	36.43ml	2ml	NA	
Lab Control Sample	KWG1602922-3	NA	NA	35.00ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1603757
Date Collected: 04/13/2016
Date Received: 04/14/2016
Date Extracted: 04/18/2016

EPA Method 504.1

Sample Name: 16104-GACI
Lab Code: K1603757-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0097	0.00300	0.17	0.20	16.2		1	04/18/16



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May 23, 2016

Analytical Report for Service Request No: K1604307

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel / Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory April 27, 2016
For your reference, these analyses have been assigned our service request number **K1604307**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink, appearing to read "Gregory Salata".

for

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

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- Case Narrative
- Chain of Custody
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialists **Service Request No.:** K1604307
Project: Drexel **Date Received:** 04/27/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three water samples were received for analysis at ALS Environmental on 04/27/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB by EPA Method 504.1

Relative Percent Difference Exceptions:

The Relative Percent Difference (RPD) for EDB in the replicate matrix spike analyses of Batch QC was outside control criteria. All spike recoveries in the MS, DMS, and associated Laboratory Control Sample (LCS) were within acceptance limits, indicating the analytical batch was in control. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Approved by



Chain of Custody

ALS Environmental—Kelso Laboratory
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CHAIN OF CUSTODY

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

 SR# IC(160 4307

PROJECT NAME <u>Drexel</u>					NUMBER OF CONTAINERS	PAGE <u>1</u> OF <u>1</u> COC# <u>504.11</u>	
PROJECT NUMBER <u>Drexel</u>							
PROJECT MANAGER <u>Timmerly Bullman</u>							
COMPANY NAME <u>EPS Inc.</u>							
ADDRESS <u>1050 Crown Pointe Pkwy, Ste 550</u>							
CITY/STATE/ZIP <u>Atlanta, GA 30338</u>							
E-MAIL ADDRESS <u>tbullman@envplanning.com</u>							
PHONE # <u>404-315-9113</u> FAX #							
SAMPLER'S SIGNATURE <u>Sherana Walker</u>							
SAMPLE I.D.						REMARKS	
16111 GACI	DATE 4-20-16	TIME 2:20pm	LAB I.D. GW	MATRIX 2			
16111 GACE	4-20-16	2:25pm	GW	2			
Trip Blank	3-16-16		W	2			
REPORT REQUIREMENTS		INVOICE INFORMATION		Circle which metals are to be analyzed:			
<input checked="" type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required		P.O. # _____		Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg			
<input type="checkbox"/> II. Report Dup., MS, MSD as required		Bill To: _____		Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg			
<input type="checkbox"/> III. CLP Like Summary (no raw data)		24 hr. 48 hr.		*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: (CIRCLE ONE)			
<input type="checkbox"/> IV. Data Validation Report		5 day					
<input type="checkbox"/> V. EDD		<input checked="" type="checkbox"/> Standard (15 working days)					
		<input type="checkbox"/> Provide FAX Results		SPECIAL INSTRUCTIONS/COMMENTS:			
		Requested Report Date					
RELINQUISHED BY: <u>Sherana Walker 4-20-16</u> Signature <u>Terrence Walker</u> Printed Name		RECEIVED BY: <u>Les Kennedy</u> Signature <u>ALS INC.</u> Printed Name		RELINQUISHED BY:		RECEIVED BY:	
Date/Time <u>EPS INC.</u>	Date/Time <u>4/27/16 1000</u>	Date/Time <u>ALS</u>	Date/Time	Signature	Date/Time	Signature	Date/Time
Firm	Firm	Firm	Firm	Printed Name	Firm	Printed Name	Firm



PC

Cooler Receipt and Preservation Form

Client EPSService Request K16 04/307Received: 4/27/16 Opened: 4/27/16 By: UU Unloaded: 4/27/16 By: UU

1. Samples were received via? Mail Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? Y N If yes, how many and where? 1 front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
13.6	13.6	/	/	0.0	364	NA	123091060312075004		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
5. Were custody papers properly filled out (ink, signed, etc.)? (melted) NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604307
Date Collected: 04/20/2016
Date Received: 04/27/2016

EPA Method 504.1

Sample Name: 16111 GACI **Units:** ug/L
Lab Code: K1604307-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.11		0.0097	0.00300	1	05/04/16	05/04/16	KWG1603521	

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604307
Date Collected: 04/20/2016
Date Received: 04/27/2016

EPA Method 504.1

Sample Name: 16111 GACE **Units:** ug/L
Lab Code: K1604307-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0097	0.00300	1	05/04/16	05/04/16	KWG1603521	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604307
Date Collected: 04/20/2016
Date Received: 04/27/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1604307-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0097	0.00300	1	05/04/16	05/04/16	KWG1603521	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Drinking water

Service Request: K1604307
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name:	Method Blank	Units:	ug/L
Lab Code:	KWG1603521-4	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1		

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	05/04/16	05/04/16	KWG1603521	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Drinking water

Service Request: K1604307
Date Extracted: 05/04/2016
Date Analyzed: 05/04/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1604520-001	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1603521

Analyte Name	Sample Result	Batch QCMS KWG1603521-1 Matrix Spike			Batch QCDMS KWG1603521-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
1,2-Dibromoethane (EDB)	ND	0.193	0.244	79	0.196	0.244	80	65-135	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Drinking water

Service Request: K1604307
Date Extracted: 05/04/2016
Date Analyzed: 05/04/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Extraction Lot: KWG1603521

Lab Control Sample
KWG1603521-3
Lab Control Spike

Analyte Name	Result	Spike	%Rec	Limits
		Amount	%Rec	
1,2-Dibromoethane (EDB)	0.230	0.250	92	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



ALS Environmental
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May 23, 2016

Analytical Report for Service Request No: K1604397

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel / Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory April 28, 2016
For your reference, these analyses have been assigned our service request number **K1604397**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink, appearing to read "Gregory Salata".

For

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

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- State Certifications, Accreditations, And Licenses
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- Chain of Custody
- EPA Method 504.1

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialists **Service Request No.:** K1604397
Project: Drexel **Date Received:** 04/28/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three water samples were received for analysis at ALS Environmental on 04/28/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB by EPA Method 504.1

Relative Percent Difference Exceptions:

The Relative Percent Difference (RPD) for EDB in the replicate matrix spike analyses of Batch QC was outside control criteria. All spike recoveries in the MS, DMS, and associated Laboratory Control Sample (LCS) were within acceptance limits, indicating the analytical batch was in control. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Approved by





Chain of Custody

ALS Environmental—Kelso Laboratory
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(ALS) Environmental

CHAIN OF CUSTODY

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SR#

K1604B97

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PAGE

OF

- COC#

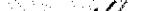
RECEIVED BY: _____ **RElinquished By:** _____

Container Supply Number



68935

RELINQUISHED BY:	
<u>Terrence Walker</u>	4-27-16 2:29pm
Signature	Date/Time
<u>Terrence Walker</u>	<u>EOS Inc.</u>
Printed Name	Firm

RECEIVED BY:	
	4/28/10 0940
Signature	Date/Time
	Firm
Printed Name	

RELINQUISHED BY:

Signature	Date/Time
Printed Name	Firm

RECEIVED BY:



PC _____

Cooler Receipt and Preservation Form

Client

EPS, Inc.

Service Request K16

Received: 4/28/16 Opened: 4/28/16 By: *SJ* Unloaded: 4/28/16 By: *SJ*

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* NA
3. Were custody seals on coolers? NA N If yes, how many and where? *One front*
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Custody Temp	Corrected Custody Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number	NA Filled
3.9	9.8	3.5	5.4	-0.1	333		47620792 4186	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Environmental Planning Specialists **Service Request:** K1604397
Project: Drexel/Drexel

Cover Page - Organic Analysis Data Package
EPA Method 504.1

Sample Name	Lab Code	Date Collected	Date Received
16118-GACI	K1604397-001	04/27/2016	04/28/2016
16118-GACE	K1604397-002	04/27/2016	04/28/2016
Trip Blanks	K1604397-003	04/27/2016	04/28/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604397
Date Collected: 04/27/2016
Date Received: 04/28/2016

EPA Method 504.1

Sample Name: 16118-GACI **Units:** ug/L
Lab Code: K1604397-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.15	0.0097	0.00300	1	05/04/16	05/04/16	KWG1603521	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604397
Date Collected: 04/27/2016
Date Received: 04/28/2016

EPA Method 504.1

Sample Name: 16118-GACE **Units:** ug/L
Lab Code: K1604397-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0096	0.00300	1	05/04/16	05/04/16	KWG1603521	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604397
Date Collected: 04/27/2016
Date Received: 04/28/2016

EPA Method 504.1

Sample Name: Trip Blanks **Units:** ug/L
Lab Code: K1604397-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0097	0.00300	1	05/04/16	05/04/16	KWG1603521	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Drinking water

Service Request: K1604397
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1603521-4 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	05/04/16	05/04/16	KWG1603521	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Drinking water

Service Request: K1604397
Date Extracted: 05/04/2016
Date Analyzed: 05/04/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1604520-001	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1603521

Analyte Name	Sample Result	Batch QCMS KWG1603521-1 Matrix Spike			Batch QCDMS KWG1603521-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
1,2-Dibromoethane (EDB)	ND	0.193	0.244	79	0.196	0.244	80	65-135	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Drinking water

Service Request: K1604397
Date Extracted: 05/04/2016
Date Analyzed: 05/04/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Extraction Lot: KWG1603521

Lab Control Sample
KWG1603521-3
Lab Control Spike

Analyte Name	Result	Spike	%Rec	Limits
		Amount	%Rec	
1,2-Dibromoethane (EDB)	0.230	0.250	92	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Drinking water

Service Request: K1604397
Date Extracted: 05/04/2016
Date Analyzed: 05/04/2016
Time Analyzed: 19:50

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1603521-4	File ID:	J:\GC33\DATA\050416-504\0504016.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1603521

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1603521-3	J:\GC33\DATA\050416-504\0504015.D	05/04/16	19:26
16118-GACI	K1604397-001	J:\GC33\DATA\050416-504\0504020.D	05/04/16	21:24
16118-GACE	K1604397-002	J:\GC33\DATA\050416-504\0504021.D	05/04/16	21:48
Trip Blanks	K1604397-003	J:\GC33\DATA\050416-504\0504022.D	05/04/16	22:11
Batch QC	K1604520-001	J:\GC33\DATA\050416-504\0504023.D	05/04/16	22:35
Batch QCMS	KWG1603521-1	J:\GC33\DATA\050416-504\0504024.D	05/04/16	22:58
Batch QCDMS	KWG1603521-2	J:\GC33\DATA\050416-504\0504025.D	05/04/16	23:22

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Drinking water

Service Request: K1604397
Date Extracted: 05/04/2016
Date Analyzed: 05/04/2016
Time Analyzed: 19:26

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1603521-3	File ID:	J:\GC33\DATA\050416-504\0504015.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1603521

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1603521-4	J:\GC33\DATA\050416-504\0504016.D	05/04/16	19:50
16118-GACI	K1604397-001	J:\GC33\DATA\050416-504\0504020.D	05/04/16	21:24
16118-GACE	K1604397-002	J:\GC33\DATA\050416-504\0504021.D	05/04/16	21:48
Trip Blanks	K1604397-003	J:\GC33\DATA\050416-504\0504022.D	05/04/16	22:11
Batch QC	K1604520-001	J:\GC33\DATA\050416-504\0504023.D	05/04/16	22:35
Batch QCMS	KWG1603521-1	J:\GC33\DATA\050416-504\0504024.D	05/04/16	22:58
Batch QCDMS	KWG1603521-2	J:\GC33\DATA\050416-504\0504025.D	05/04/16	23:22

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D	F	J:\GC33\data\041816-504\0418009.D
B	J:\GC33\data\041816-504\0418005.D	G	J:\GC33\data\041816-504\0418010.D
C	J:\GC33\data\041816-504\0418006.D	H	J:\GC33\data\041816-504\0418011.D
D	J:\GC33\data\041816-504\0418007.D		
E	J:\GC33\data\041816-504\0418008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	9.98E+5	B	0.13	9.33E+5	C	0.25	1.03E+6	D	0.63	1.26E+6	E	1.3	1.32E+6
	F	3.8	1.33E+6	G	5.0	1.19E+6	H	10	1.22E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	13.2		≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14689
Units: ppb

File ID: J:\GC33\data\041816-504\0418012.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1160000	1260000	9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D\0418004c.d	F	J:\GC33\data\041816-504\0418009.D\0418009c.d
B	J:\GC33\data\041816-504\0418005.D\0418005c.d	G	J:\GC33\data\041816-504\0418010.D\0418010c.d
C	J:\GC33\data\041816-504\0418006.D\0418006c.d	H	J:\GC33\data\041816-504\0418011.D\0418011c.d
D	J:\GC33\data\041816-504\0418007.D\0418007c.d		
E	J:\GC33\data\041816-504\0418008.D\0418008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.54E+6	B	0.13	1.34E+6	C	0.25	1.22E+6	D	0.63	1.25E+6	E	1.3	1.20E+6
	F	3.8	1.19E+6	G	5.0	1.18E+6	H	10	1.23E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	9.4		≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14689
Units: ppb

File ID: J:\GC33\data\041816-504\0418012.D\0418012c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1270000	1290000	1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Date Analyzed: 05/04/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\050416-504\0504013.D	Analysis Lot:	KWG1603553
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.3	1160000	1320000	13	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Date Analyzed: 05/04/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\050416-504\0504013.D\0504013C.D	Analysis Lot:	KWG1603553
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	3.4	1270000	1150000	-9	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Date Analyzed: 05/05/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\050416-504\0504027.D	Analysis Lot:	KWG1603553
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.5	1160000	1280000	11	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397
Date Analyzed: 05/05/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\050416-504\0504027.D\0504027C.D	Analysis Lot:	KWG1603553
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.3	1270000	1090000	-14	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604397

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1603553

Instrument ID: GC33

Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0504013.D	Continuing Calibration Verification	KWG1603553-1	5/4/2016	18:39		5/4/2016	18:56
\0504014.D	Instrument Blank	KWG1603553-3	5/4/2016	19:02		5/4/2016	19:19
\0504015.D	Lab Control Sample	KWG1603521-3	5/4/2016	19:26		5/4/2016	19:43
\0504016.D	Method Blank	KWG1603521-4	5/4/2016	19:50		5/4/2016	20:06
\0504017.D	ZZZZZZ	ZZZZZZ	5/4/2016	20:13		5/4/2016	20:30
\0504018.D	ZZZZZZ	ZZZZZZ	5/4/2016	20:37		5/4/2016	20:53
\0504019.D	ZZZZZZ	ZZZZZZ	5/4/2016	21:00		5/4/2016	21:17
\0504020.D	16118-GACI	K1604397-001	5/4/2016	21:24		5/4/2016	21:41
\0504021.D	16118-GACE	K1604397-002	5/4/2016	21:48		5/4/2016	22:04
\0504022.D	Trip Blanks	K1604397-003	5/4/2016	22:11		5/4/2016	22:28
\0504023.D	Batch QC	K1604520-001	5/4/2016	22:35		5/4/2016	22:52
\0504024.D	Batch QCMS	KWG1603521-1	5/4/2016	22:58		5/4/2016	23:15
\0504025.D	Batch QCDMS	KWG1603521-2	5/4/2016	23:22		5/4/2016	23:39
\0504026.D	Instrument Blank	KWG1603553-4	5/4/2016	23:46		5/5/2016	00:02
\0504027.D	Continuing Calibration Verification	KWG1603553-2	5/5/2016	00:09		5/5/2016	00:26
\0504028.D	Instrument Blank	KWG1603553-5	5/5/2016	00:33		5/5/2016	00:49

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604397
Date Extracted: 05/04/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1603521
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16118-GACI	K1604397-001	04/27/16	04/28/16	35.92ml	2ml	NA	
16118-GACE	K1604397-002	04/27/16	04/28/16	36.22ml	2ml	NA	
Trip Blanks	K1604397-003	04/27/16	04/28/16	35.96ml	2ml	NA	
Method Blank	KWG1603521-4	NA	NA	35.00ml	2ml	NA	
Batch QC	K1604520-001	NA	NA	35.42ml	2ml	NA	
Batch QCMS	KWG1603521-1	NA	NA	35.90ml	2ml	NA	
Batch QCDMS	KWG1603521-2	NA	NA	35.87ml	2ml	NA	
Lab Control Sample	KWG1603521-3	NA	NA	35.00ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604397
Date Collected: 04/27/2016
Date Received: 04/28/2016
Date Extracted: 05/04/2016

EPA Method 504.1

Sample Name: 16118-GACI
Lab Code: K1604397-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0097	0.00300	0.15	0.19	23.5		1	05/04/16



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May 13, 2016

Analytical Report for Service Request No: K1604691

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel / Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory May 06, 2016
For your reference, these analyses have been assigned our service request number **K1604691**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink that reads "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

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- Chain of Custody
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialists **Service Request No.:** K1604691
Project: Drexel **Date Received:** 05/06/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

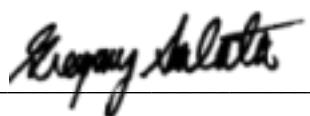
Sample Receipt

Four water samples were received for analysis at ALS Environmental on 05/06/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB by EPA Method 504.1

No other anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



PC _____

Cooler Receipt and Preservation Form

Client EPS

Service Request K16

04691

Received: 5/6/16 Opened: 5/6/16 By: Unloaded: 5/6/16 By:

1. Samples were received via? Mail Fed Ex UPS DHL PDX Courier Hand Delivered

2. Samples were received in: (circle) Cooler Box Envelope Other NA

3. Were custody seals on coolers? NA Y N If yes, how many and where? One, front + NA

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number	NA	Filled
1.8	2.1	1.8	2.1	40.3	352		A521 425 701 2		

4. Packing material: Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____ NA N
5. Were custody papers properly filled out (ink, signed, etc.)? NA N
6. Did all bottles arrive in good condition (unbroken)? Indicate in the table below. NA N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA N
8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA N
11. Were VOA vials received without headspace? Indicate in the table below. NA N
12. Was C12/Res negative? NA N

Sample ID on Bottle	Sample ID on CCC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:

RUSH

Page ____ of ____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Environmental Planning Specialists **Service Request:** K1604691
Project: Drexel/Drexel

Cover Page - Organic Analysis Data Package
EPA Method 504.1

Sample Name	Lab Code	Date Collected	Date Received
16126-GACI	K1604691-001	05/05/2016	05/06/2016
16126-GACE	K1604691-002	05/05/2016	05/06/2016
16126-BW-5	K1604691-003	05/05/2016	05/06/2016
Trip Blank	K1604691-004	05/05/2016	05/06/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Collected: 05/05/2016
Date Received: 05/06/2016

EPA Method 504.1

Sample Name: 16126-GACI **Units:** ug/L
Lab Code: K1604691-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.15	0.0096	0.00300	1	05/11/16	05/11/16	KWG1603738	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Collected: 05/05/2016
Date Received: 05/06/2016

EPA Method 504.1

Sample Name: 16126-GACE **Units:** ug/L
Lab Code: K1604691-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0096	0.00300	1	05/11/16	05/11/16	KWG1603738	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Collected: 05/05/2016
Date Received: 05/06/2016

EPA Method 504.1

Sample Name: 16126-BW-5 **Units:** ug/L
Lab Code: K1604691-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.11	0.0096	0.00300	1	05/11/16	05/11/16	KWG1603738	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Collected: 05/05/2016
Date Received: 05/06/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1604691-004 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0096	0.00300	1	05/11/16	05/11/16	KWG1603738	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1603738-5 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	05/11/16	05/11/16	KWG1603738	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Extracted: 05/11/2016
Date Analyzed: 05/11/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1604528-007	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1603738

Analyte Name	Sample Result	Batch QCMS KWG1603738-1			Batch QCDMS KWG1603738-2			Duplicate Matrix Spike		
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	ND	0.205	0.244	84	0.208	0.243	86	65-135	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Extracted: 05/11/2016
Date Analyzed: 05/11/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L

Basis: NA

Level: Low

Extraction Lot: KWG1603738

Lab Control Sample
KWG1603738-3
Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec
		Amount	Limits	
1,2-Dibromoethane (EDB)	0.204	0.250	82	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Extracted: 05/11/2016
Date Analyzed: 05/11/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L

Basis: NA

Level: Low

Extraction Lot: KWG1603738

Lab Control Sample
KWG1603738-4
Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec
		Amount	Limits	
1,2-Dibromoethane (EDB)	0.219	0.250	88	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Extracted: 05/11/2016
Date Analyzed: 05/11/2016
Time Analyzed: 20:25

Method Blank Summary**EPA Method 504.1**

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1603738-5	File ID:	J:\GC33\DATA\051116-504\0511000017.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1603738

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1603738-3	J:\GC33\DATA\051116-504\0511000015.D	05/11/16	19:37
Lab Control Sample	KWG1603738-4	J:\GC33\DATA\051116-504\0511000016.D	05/11/16	20:01
16126-GACI	K1604691-001	J:\GC33\DATA\051116-504\0511000018.D	05/11/16	20:48
16126-GACE	K1604691-002	J:\GC33\DATA\051116-504\0511000019.D	05/11/16	21:12
16126-BW-5	K1604691-003	J:\GC33\DATA\051116-504\0511000020.D	05/11/16	21:35
Trip Blank	K1604691-004	J:\GC33\DATA\051116-504\0511000021.D	05/11/16	21:59
Batch QC	K1604528-007	J:\GC33\DATA\051116-504\0511000022.D	05/11/16	22:23
Batch QCMS	KWG1603738-1	J:\GC33\DATA\051116-504\0511000023.D	05/11/16	22:46
Batch QCDMS	KWG1603738-2	J:\GC33\DATA\051116-504\0511000024.D	05/11/16	23:10

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Extracted: 05/11/2016
Date Analyzed: 05/11/2016
Time Analyzed: 19:37

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1603738-3	File ID:	J:\GC33\DATA\051116-504\0511000015.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1603738

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1603738-5	J:\GC33\DATA\051116-504\0511000017.D	05/11/16	20:25
16126-GACI	K1604691-001	J:\GC33\DATA\051116-504\0511000018.D	05/11/16	20:48
16126-GACE	K1604691-002	J:\GC33\DATA\051116-504\0511000019.D	05/11/16	21:12
16126-BW-5	K1604691-003	J:\GC33\DATA\051116-504\0511000020.D	05/11/16	21:35
Trip Blank	K1604691-004	J:\GC33\DATA\051116-504\0511000021.D	05/11/16	21:59
Batch QC	K1604528-007	J:\GC33\DATA\051116-504\0511000022.D	05/11/16	22:23
Batch QCMS	KWG1603738-1	J:\GC33\DATA\051116-504\0511000023.D	05/11/16	22:46
Batch QCDMS	KWG1603738-2	J:\GC33\DATA\051116-504\0511000024.D	05/11/16	23:10

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Extracted: 05/11/2016
Date Analyzed: 05/11/2016
Time Analyzed: 20:01

Lab Control Sample Summary
EPA Method 504.1

Sample Name: Lab Control Sample
Lab Code: KWG1603738-4

Instrument ID: GC33
File ID: J:\GC33\DATA\051116-504\0511000016.D

Extraction Method: METHOD
Analysis Method: 504.1

Level: Low
Extraction Lot: KWG1603738

This Lab Control Sample applies to the following analyses:

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D	F	J:\GC33\data\041816-504\0418009.D
B	J:\GC33\data\041816-504\0418005.D	G	J:\GC33\data\041816-504\0418010.D
C	J:\GC33\data\041816-504\0418006.D	H	J:\GC33\data\041816-504\0418011.D
D	J:\GC33\data\041816-504\0418007.D		
E	J:\GC33\data\041816-504\0418008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	9.98E+5	B	0.13	9.33E+5	C	0.25	1.03E+6	D	0.63	1.26E+6	E	1.3	1.32E+6
	F	3.8	1.33E+6	G	5.0	1.19E+6	H	10	1.22E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	13.2	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14689
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\data\041816-504\0418012.D **Column ID:** RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1160000	1260000	9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D\0418004c.d	F	J:\GC33\data\041816-504\0418009.D\0418009c.d
B	J:\GC33\data\041816-504\0418005.D\0418005c.d	G	J:\GC33\data\041816-504\0418010.D\0418010c.d
C	J:\GC33\data\041816-504\0418006.D\0418006c.d	H	J:\GC33\data\041816-504\0418011.D\0418011c.d
D	J:\GC33\data\041816-504\0418007.D\0418007c.d		
E	J:\GC33\data\041816-504\0418008.D\0418008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.54E+6	B	0.13	1.34E+6	C	0.25	1.22E+6	D	0.63	1.25E+6	E	1.3	1.20E+6
	F	3.8	1.19E+6	G	5.0	1.18E+6	H	10	1.23E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	9.4	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14689
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\data\041816-504\0418012.D\0418012c.d **Column ID:** RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1270000	1290000	1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691
Date Analyzed: 05/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\051116-504\0511000013.D	Analysis Lot:	KWG1603775
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1160000	1320000	14	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1604691
Project: Drexel/Drexel **Date Analyzed:** 05/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\051116-504\0511000013.D\0511000013C.	Analysis Lot:	KWG1603775
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1270000	1180000	-7	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691
Date Analyzed: 05/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\051116-504\0511000025.D	Analysis Lot:	KWG1603775
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.4	1160000	1250000	8	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1604691
Project: Drexel/Drexel **Date Analyzed:** 05/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\051116-504\0511000025.D\0511000025C.	Analysis Lot:	KWG1603775
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.5	1270000	1140000	-10	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1603775

Instrument ID: GC33

Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
11000013.D	Continuing Calibration Verification	KWG1603775-1	5/11/2016	18:50		5/11/2016	19:07
11000014.D	Instrument Blank	KWG1603775-6	5/11/2016	19:14		5/11/2016	19:31
11000015.D	Lab Control Sample	KWG1603738-3	5/11/2016	19:37		5/11/2016	19:54
11000016.D	Lab Control Sample	KWG1603738-4	5/11/2016	20:01		5/11/2016	20:18
11000017.D	Method Blank	KWG1603738-5	5/11/2016	20:25		5/11/2016	20:42
11000018.D	16126-GACI	K1604691-001	5/11/2016	20:48		5/11/2016	21:05
11000019.D	16126-GACE	K1604691-002	5/11/2016	21:12		5/11/2016	21:29
11000020.D	16126-BW-5	K1604691-003	5/11/2016	21:35		5/11/2016	21:52
11000021.D	Trip Blank	K1604691-004	5/11/2016	21:59		5/11/2016	22:16
11000022.D	Batch QC	K1604528-007	5/11/2016	22:23		5/11/2016	22:40
11000023.D	Batch QCMS	KWG1603738-1	5/11/2016	22:46		5/11/2016	23:03
11000024.D	Batch QCDMS	KWG1603738-2	5/11/2016	23:10		5/11/2016	23:27
11000025.D	Continuing Calibration Verification	KWG1603775-2	5/11/2016	23:34		5/11/2016	23:50
11000026.D	Instrument Blank	KWG1603775-7	5/11/2016	23:57		5/12/2016	00:14
11000027.D	ZZZZZZ	ZZZZZZ	5/12/2016	00:21		5/12/2016	00:38
11000028.D	ZZZZZZ	ZZZZZZ	5/12/2016	00:44		5/12/2016	01:01
11000029.D	ZZZZZZ	ZZZZZZ	5/12/2016	01:08		5/12/2016	01:25
11000030.D	ZZZZZZ	ZZZZZZ	5/12/2016	01:31		5/12/2016	01:48
11000031.D	ZZZZZZ	ZZZZZZ	5/12/2016	01:55		5/12/2016	02:12
11000032.D	ZZZZZZ	ZZZZZZ	5/12/2016	02:19		5/12/2016	02:36
11000033.D	ZZZZZZ	ZZZZZZ	5/12/2016	02:42		5/12/2016	02:59
11000036.D	Continuing Calibration Verification	KWG1603775-3	5/12/2016	03:53		5/12/2016	04:10
11000037.D	Instrument Blank	KWG1603775-8	5/12/2016	04:17		5/12/2016	04:34
11000040.D	ZZZZZZ	ZZZZZZ	5/12/2016	05:28		5/12/2016	05:45
11000041.D	ZZZZZZ	ZZZZZZ	5/12/2016	05:51		5/12/2016	06:08
11000042.D	ZZZZZZ	ZZZZZZ	5/12/2016	06:15		5/12/2016	06:32
11000043.D	ZZZZZZ	ZZZZZZ	5/12/2016	06:39		5/12/2016	06:55
11000044.D	Continuing Calibration Verification	KWG1603775-4	5/12/2016	07:02		5/12/2016	07:19
11000045.D	Instrument Blank	KWG1603775-9	5/12/2016	07:26		5/12/2016	07:43
11000047.D	ZZZZZZ	ZZZZZZ	5/12/2016	09:39		5/12/2016	09:55
11000048.D	ZZZZZZ	ZZZZZZ	5/12/2016	10:02		5/12/2016	10:19
11000049.D	ZZZZZZ	ZZZZZZ	5/12/2016	10:26		5/12/2016	10:43
11000050.D	ZZZZZZ	ZZZZZZ	5/12/2016	10:49		5/12/2016	11:06
11000051.D	Continuing Calibration Verification	KWG1603775-5	5/12/2016	11:13		5/12/2016	11:30

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel

Service Request: K1604691**Analysis Run Log**
EPA Method 504.1**Analysis Method:** 504.1**Analysis Lot:** KWG1603775**Instrument ID:** GC33**Column:** RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
I1000052.D	Instrument Blank	KWG1603775-10	5/12/2016	11:37		5/12/2016	11:44

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Extracted: 05/11/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1603738
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16126-GACI	K1604691-001	05/05/16	05/06/16	36.26ml	2ml	NA	
16126-GACE	K1604691-002	05/05/16	05/06/16	36.31ml	2ml	NA	
16126-BW-5	K1604691-003	05/05/16	05/06/16	36.29ml	2ml	NA	
Trip Blank	K1604691-004	05/05/16	05/06/16	36.19ml	2ml	NA	
Method Blank	KWG1603738-5	NA	NA	35.00ml	2ml	NA	
Batch QC	K1604528-007	NA	NA	35.55ml	2ml	NA	
Batch QCMS	KWG1603738-1	NA	NA	35.83ml	2ml	NA	
Batch QCDMS	KWG1603738-2	NA	NA	35.94ml	2ml	NA	
Lab Control Sample	KWG1603738-3	NA	NA	35.00ml	2ml	NA	
Lab Control Sample	KWG1603738-4	NA	NA	35.00ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Collected: 05/05/2016
Date Received: 05/06/2016
Date Extracted: 05/11/2016

EPA Method 504.1

Sample Name: 16126-GACI
Lab Code: K1604691-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0096	0.00300	0.15	0.19	23.5		1	05/11/16

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel/Drexel
Sample Matrix: Water

Service Request: K1604691
Date Collected: 05/05/2016
Date Received: 05/06/2016
Date Extracted: 05/11/2016

EPA Method 504.1

Sample Name: 16126-BW-5
Lab Code: K1604691-003
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0096	0.00300	0.11	0.15	30.8		1	05/11/16



ALS Environmental
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June 20, 2016

Analytical Report for Service Request No: K1605592

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory May 25, 2016
For your reference, these analyses have been assigned our service request number **K1605592**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink, appearing to read "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialists **Service Request No.:** K1605592
Project: Drexel **Date Received:** 05/25/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three water samples were received for analysis at ALS Environmental on 05/25/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

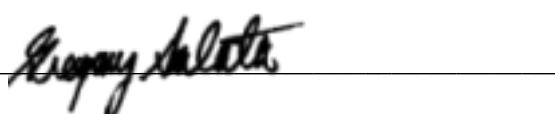
EDB and DBCP by EPA Method 504.1

Sample Notes and Discussion:

Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



(ALS) Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

DATE 5/18/16 PAGE 1 OF 1



PC Greg

Cooler Receipt and Preservation Form

Client EPS Inc.Service Request K1605592Received: 5/25/16 Opened: 5/25/16 By: BP Unloaded: 5/25/16 By: BP

1. Samples were received via? Mail Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA N If yes, how many and where? 1 front
If present, were custody seals intact? N If present, were they signed and dated? N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filled
19.7	19.6	18.7	18.6	-0.1	-323	NA	783119965748		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Environmental Planning Specialists **Service Request:** K1605592
Project: Drexel

Cover Page - Organic Analysis Data Package
EPA Method 504.1

Sample Name	Lab Code	Date Collected	Date Received
16139-GACI	K1605592-001	05/18/2016	05/25/2016
16139-GACE	K1605592-002	05/18/2016	05/25/2016
Trip Blank	K1605592-003	05/18/2016	05/25/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1605592
Date Collected: 05/18/2016
Date Received: 05/25/2016

EPA Method 504.1

Sample Name: 16139-GACI **Units:** ug/L
Lab Code: K1605592-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.19	0.0095	0.00300	1	05/26/16	05/26/16	KWG1604194	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1605592
Date Collected: 05/18/2016
Date Received: 05/25/2016

EPA Method 504.1

Sample Name: 16139-GACE **Units:** ug/L
Lab Code: K1605592-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0097	0.00300	1	05/26/16	05/26/16	KWG1604194	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1605592
Date Collected: 05/18/2016
Date Received: 05/25/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1605592-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0097	0.00300	1	05/26/16	05/26/16	KWG1604194	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1605592
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name:	Method Blank	Units:	ug/L
Lab Code:	KWG1604194-3	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1		

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	05/26/16	05/26/16	KWG1604194	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1605592
Date Extracted: 05/26/2016
Date Analyzed: 05/26/2016

Lab Control Spike/Duplicate Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Extraction Lot: KWG1604194

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			%Rec Limits	RPD	RPD Limit			
	KWG1604194-1			KWG1604194-2								
	Lab Control Spike			Duplicate Lab Control Spike								
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec						
1,2-Dibromoethane (EDB)	0.252	0.250	101	0.242	0.250	97	70-130	4	20			

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1605592
Date Extracted: 05/26/2016
Date Analyzed: 05/26/2016
Time Analyzed: 15:02

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1604194-3	File ID:	J:\GC33\DATA\052616-504\0526007.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1604194

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1604194-1	J:\GC33\DATA\052616-504\0526005.D	05/26/16	14:15
Duplicate Lab Control Sample	KWG1604194-2	J:\GC33\DATA\052616-504\0526006.D	05/26/16	14:38
16139-GACI	K1605592-001	J:\GC33\DATA\052616-504\0526008.D	05/26/16	15:25
16139-GACE	K1605592-002	J:\GC33\DATA\052616-504\0526009.D	05/26/16	15:49
Trip Blank	K1605592-003	J:\GC33\DATA\052616-504\0526010.D	05/26/16	16:12

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1605592
Date Extracted: 05/26/2016
Date Analyzed: 05/26/2016
Time Analyzed: 14:15

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1604194-1	File ID:	J:\GC33\DATA\052616-504\0526005.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1604194

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1604194-3	J:\GC33\DATA\052616-504\0526007.D	05/26/16	15:02
16139-GACI	K1605592-001	J:\GC33\DATA\052616-504\0526008.D	05/26/16	15:25
16139-GACE	K1605592-002	J:\GC33\DATA\052616-504\0526009.D	05/26/16	15:49
Trip Blank	K1605592-003	J:\GC33\DATA\052616-504\0526010.D	05/26/16	16:12

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D	F	J:\GC33\data\041816-504\0418009.D
B	J:\GC33\data\041816-504\0418005.D	G	J:\GC33\data\041816-504\0418010.D
C	J:\GC33\data\041816-504\0418006.D	H	J:\GC33\data\041816-504\0418011.D
D	J:\GC33\data\041816-504\0418007.D		
E	J:\GC33\data\041816-504\0418008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	9.98E+5	B	0.13	9.33E+5	C	0.25	1.03E+6	D	0.63	1.26E+6	E	1.3	1.32E+6
	F	3.8	1.33E+6	G	5.0	1.19E+6	H	10	1.22E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	13.2		≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14689
Units: ppb

File ID: J:\GC33\data\041816-504\0418012.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1160000	1260000	9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D\0418004c.d	F	J:\GC33\data\041816-504\0418009.D\0418009c.d
B	J:\GC33\data\041816-504\0418005.D\0418005c.d	G	J:\GC33\data\041816-504\0418010.D\0418010c.d
C	J:\GC33\data\041816-504\0418006.D\0418006c.d	H	J:\GC33\data\041816-504\0418011.D\0418011c.d
D	J:\GC33\data\041816-504\0418007.D\0418007c.d		
E	J:\GC33\data\041816-504\0418008.D\0418008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.54E+6	B	0.13	1.34E+6	C	0.25	1.22E+6	D	0.63	1.25E+6	E	1.3	1.20E+6
	F	3.8	1.19E+6	G	5.0	1.18E+6	H	10	1.23E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	9.4		≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14689
Units: ppb

File ID: J:\GC33\data\041816-504\0418012.D\0418012c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1270000	1290000	1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Date Analyzed: 05/26/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\052616-504\0526003.D	Analysis Lot:	KWG1604654
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1160000	1240000	7	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Date Analyzed: 05/26/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\052616-504\0526003.D\0526003C.D	Analysis Lot:	KWG1604654
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1270000	1200000	-6	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Date Analyzed: 05/26/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\052616-504\0526011.D	Analysis Lot:	KWG1604654
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.0	1160000	1170000	1	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592
Date Analyzed: 05/26/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\052616-504\0526011.D\0526011C.D	Analysis Lot:	KWG1604654
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.3	1270000	1100000	-14	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1605592

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1604654

Instrument ID: GC33

Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0526003.D	Continuing Calibration Verification	KWG1604654-1	5/26/2016	13:28		5/26/2016	13:44
\0526004.D	Instrument Blank	KWG1604654-3	5/26/2016	13:51		5/26/2016	14:08
\0526005.D	Lab Control Sample	KWG1604194-1	5/26/2016	14:15		5/26/2016	14:32
\0526006.D	Duplicate Lab Control Sample	KWG1604194-2	5/26/2016	14:38		5/26/2016	14:55
\0526007.D	Method Blank	KWG1604194-3	5/26/2016	15:02		5/26/2016	15:19
\0526008.D	16139-GACI	K1605592-001	5/26/2016	15:25		5/26/2016	15:42
\0526009.D	16139-GACE	K1605592-002	5/26/2016	15:49		5/26/2016	16:06
\0526010.D	Trip Blank	K1605592-003	5/26/2016	16:12		5/26/2016	16:29
\0526011.D	Continuing Calibration Verification	KWG1604654-2	5/26/2016	16:36		5/26/2016	16:53
\0526012.D	Instrument Blank	KWG1604654-4	5/26/2016	17:00		5/26/2016	17:16

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1605592
Date Extracted: 05/26/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1604194
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16139-GACI	K1605592-001	05/18/16	05/25/16	36.492ml	2ml	NA	
16139-GACE	K1605592-002	05/18/16	05/25/16	35.846ml	2ml	NA	
Trip Blank	K1605592-003	05/18/16	05/25/16	35.903ml	2ml	NA	
Method Blank	KWG1604194-3	NA	NA	35.000ml	2ml	NA	
Lab Control Sample	KWG1604194-1	NA	NA	35.000ml	2ml	NA	
Duplicate Lab Control Sample	KWG1604194-2	NA	NA	35.000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1605592
Date Collected: 05/18/2016
Date Received: 05/25/2016
Date Extracted: 05/26/2016

EPA Method 504.1

Sample Name: 16139-GACI
Lab Code: K1605592-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0095	0.00300	0.19	0.22	14.6		1	05/26/16



ALS Environmental
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June 30, 2016

Analytical Report for Service Request No: K1606037

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory June 06, 2016
For your reference, these analyses have been assigned our service request number **K1606037**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink that reads "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

- Acronyms
- Qualifiers
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- Chain of Custody
- EPA Method 504.1

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialists **Service Request No.:** K1606037
Project: Drexel **Date Received:** 06/06/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

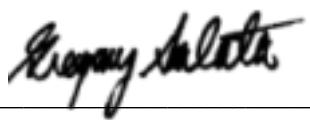
Sample Receipt

Three water samples were received for analysis at ALS Environmental on 06/06/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB by EPA Method 504.1

No anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



(ALS) Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

DATE 6/01/10

PAGE

1 OF 1

RELINQUISHED BY:

Signature
Terrance Walker
Printed Name

Printed Name

Date/Time
EPS Inc.

Firm

RECEIVED BY: *John J. Schlueter* 0940

Signature
Womth
Bridgette

me

RELINQUISHED BY:

Signature _____ Date/Time
Printed Name _____ Firm

RECEIVED BY:

Signature

Date/Time _____



Cooler Receipt and Preservation Form

PC Greg

Client

EPS

Received: 6/6/16 Opened: 6/6/16 By: SP Unloaded: 6/6/16 By: SP

1. Samples were received via? *Mail* *FedEx* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*

2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*

3. Were custody seals on coolers? *NA* *Y* *N* If yes, how many and where? _____

If present, were custody seals intact? *Y* *N* If present, were they signed and dated? *Y* *N*

- | | | | | | | | | |
|---|-----------------|----------------|--------------------|------------------|----------------|----------------|-------------------------------------|-------|
| 4. Packing material: | <i>Zipseals</i> | <i>Baggies</i> | <i>Bubble Wrap</i> | <i>Gel Packs</i> | <i>Wet Ice</i> | <i>Dry Ice</i> | <i>Sleeves</i> | _____ |
| 5. Were custody papers properly filled out (ink, signed, etc.)? | | | | | | NA | <input checked="" type="checkbox"/> | N |
| 6. Did all bottles arrive in good condition (unbroken)? <i>Indicate in the table below.</i> | | | | | | NA | <input checked="" type="checkbox"/> | N |
| 7. Were all sample labels complete (i.e analysis, preservation, etc.)? | | | | | | NA | <input checked="" type="checkbox"/> | N |
| 8. Did all sample labels and tags agree with custody papers? <i>Indicate major discrepancies in the table on page 2.</i> | | | | | | NA | <input checked="" type="checkbox"/> | N |
| 9. Were appropriate bottles/containers and volumes received for the tests indicated? | | | | | | NA | <input checked="" type="checkbox"/> | N |
| 10. Were the pH-preserved bottles (<i>see SMO GEN SOP</i>) received at the appropriate pH? <i>Indicate in the table below</i> | | | | | | NA | <input checked="" type="checkbox"/> | N |
| 11. Were VOA vials received without headspace? <i>Indicate in the table below.</i> | | | | | | NA | <input checked="" type="checkbox"/> | N |
| 12. Was C12/Res negative? | | | | | | NA | <input checked="" type="checkbox"/> | N |

Sample ID on Bottle	Sample ID on COC	Identified by:

Notes, Discrepancies, & Resolutions:



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Environmental Planning Specialists **Service Request:** K1606037
Project: Drexel

Cover Page - Organic Analysis Data Package
EPA Method 504.1

Sample Name	Lab Code	Date Collected	Date Received
16153-GACI	K1606037-001	06/01/2016	06/06/2016
16153-GACE	K1606037-002	06/01/2016	06/06/2016
Trip Blank	K1606037-003	06/01/2016	06/06/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Collected: 06/01/2016
Date Received: 06/06/2016

EPA Method 504.1

Sample Name: 16153-GACI **Units:** ug/L
Lab Code: K1606037-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.18	0.0098	0.00300	1	06/14/16	06/15/16	KWG1604768	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Collected: 06/01/2016
Date Received: 06/06/2016

EPA Method 504.1

Sample Name: 16153-GACE **Units:** ug/L
Lab Code: K1606037-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0097	0.00300	1	06/14/16	06/15/16	KWG1604768	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Collected: 06/01/2016
Date Received: 06/06/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1606037-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0098	0.00300	1	06/14/16	06/15/16	KWG1604768	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1604768-5 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	06/14/16	06/14/16	KWG1604768	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Extracted: 06/14/2016
Date Analyzed: 06/15/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1606269-001	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1604768

Analyte Name	Sample Result	Batch QCMS KWG1604768-1 Matrix Spike			Batch QCDMS KWG1604768-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
1,2-Dibromoethane (EDB)	ND	0.247	0.243	102	0.228	0.233	98	65-135	8	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Extracted: 06/14/2016
Date Analyzed: 06/14/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1604768

Lab Control Sample
KWG1604768-3
Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec Limits
		Amount	%Rec	
1,2-Dibromoethane (EDB)	0.233	0.250	93	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Extracted: 06/14/2016
Date Analyzed: 06/14/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1604768

Lab Control Sample
KWG1604768-4
Lab Control Spike

Analyte Name	Result	Spike	%Rec	Limits
		Amount	%Rec	
1,2-Dibromoethane (EDB)	0.230	0.250	92	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Extracted: 06/14/2016
Date Analyzed: 06/14/2016
Time Analyzed: 23:40

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1604768-5	File ID:	J:\GC33\DATA\061416-504\0614017.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1604768

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1604768-3	J:\GC33\DATA\061416-504\0614015.D	06/14/16	22:52
Lab Control Sample	KWG1604768-4	J:\GC33\DATA\061416-504\0614016.D	06/14/16	23:16
16153-GACI	K1606037-001	J:\GC33\DATA\061416-504\0614019.D	06/15/16	00:27
16153-GACE	K1606037-002	J:\GC33\DATA\061416-504\0614020.D	06/15/16	00:50
Trip Blank	K1606037-003	J:\GC33\DATA\061416-504\0614021.D	06/15/16	01:14
Batch QC	K1606269-001	J:\GC33\DATA\061416-504\0614023.D	06/15/16	02:01
Batch QCMS	KWG1604768-1	J:\GC33\DATA\061416-504\0614024.D	06/15/16	02:25
Batch QCDMS	KWG1604768-2	J:\GC33\DATA\061416-504\0614027.D	06/15/16	03:35

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Extracted: 06/14/2016
Date Analyzed: 06/14/2016
Time Analyzed: 22:52

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1604768-3	File ID:	J:\GC33\DATA\061416-504\0614015.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1604768

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1604768-5	J:\GC33\DATA\061416-504\0614017.D	06/14/16	23:40
16153-GACI	K1606037-001	J:\GC33\DATA\061416-504\0614019.D	06/15/16	00:27
16153-GACE	K1606037-002	J:\GC33\DATA\061416-504\0614020.D	06/15/16	00:50
Trip Blank	K1606037-003	J:\GC33\DATA\061416-504\0614021.D	06/15/16	01:14

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Extracted: 06/14/2016
Date Analyzed: 06/14/2016
Time Analyzed: 23:16

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1604768-4	File ID:	J:\GC33\DATA\061416-504\0614016.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1604768

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QC	K1606269-001	J:\GC33\DATA\061416-504\0614023.D	06/15/16	02:01
Batch QCMS	KWG1604768-1	J:\GC33\DATA\061416-504\0614024.D	06/15/16	02:25
Batch QCDMS	KWG1604768-2	J:\GC33\DATA\061416-504\0614027.D	06/15/16	03:35

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D	F	J:\GC33\data\041816-504\0418009.D
B	J:\GC33\data\041816-504\0418005.D	G	J:\GC33\data\041816-504\0418010.D
C	J:\GC33\data\041816-504\0418006.D	H	J:\GC33\data\041816-504\0418011.D
D	J:\GC33\data\041816-504\0418007.D		
E	J:\GC33\data\041816-504\0418008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	9.98E+5	B	0.13	9.33E+5	C	0.25	1.03E+6	D	0.63	1.26E+6	E	1.3	1.32E+6
	F	3.8	1.33E+6	G	5.0	1.19E+6	H	10	1.22E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	13.2		≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14689
Units: ppb

File ID: J:\GC33\data\041816-504\0418012.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1160000	1260000	9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D\0418004c.d	F	J:\GC33\data\041816-504\0418009.D\0418009c.d
B	J:\GC33\data\041816-504\0418005.D\0418005c.d	G	J:\GC33\data\041816-504\0418010.D\0418010c.d
C	J:\GC33\data\041816-504\0418006.D\0418006c.d	H	J:\GC33\data\041816-504\0418011.D\0418011c.d
D	J:\GC33\data\041816-504\0418007.D\0418007c.d		
E	J:\GC33\data\041816-504\0418008.D\0418008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.54E+6	B	0.13	1.34E+6	C	0.25	1.22E+6	D	0.63	1.25E+6	E	1.3	1.20E+6
	F	3.8	1.19E+6	G	5.0	1.18E+6	H	10	1.23E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	9.4		≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14689
Units: ppb

File ID: J:\GC33\data\041816-504\0418012.D\0418012c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1270000	1290000	1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Date Analyzed: 06/14/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\061416-504\0614013.D	Analysis Lot:	KWG1604781
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1160000	1190000	3	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Date Analyzed: 06/14/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\061416-504\0614013.D\0614013C.D	Analysis Lot:	KWG1604781
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1270000	1190000	-6	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Date Analyzed: 06/15/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\061416-504\0614025.D	Analysis Lot:	KWG1604781
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.1	1160000	1190000	2	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Date Analyzed: 06/15/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\061416-504\0614025.D\0614025C.D	Analysis Lot:	KWG1604781
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.5	1270000	1140000	-10	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Date Analyzed: 06/15/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\061416-504\0614036.D	Analysis Lot:	KWG1604781
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.8	1160000	1120000	-4	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037
Date Analyzed: 06/15/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\061416-504\0614036.D\0614036C.D	Analysis Lot:	KWG1604781
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.6	1270000	1160000	-9	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606037

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1604781
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0614013.D	Continuing Calibration Verification	KWG1604781-1	6/14/2016	22:05		6/14/2016	22:22
\0614014.D	Instrument Blank	KWG1604781-4	6/14/2016	22:29		6/14/2016	22:46
\0614015.D	Lab Control Sample	KWG1604768-3	6/14/2016	22:52		6/14/2016	23:09
\0614016.D	Lab Control Sample	KWG1604768-4	6/14/2016	23:16		6/14/2016	23:33
\0614017.D	Method Blank	KWG1604768-5	6/14/2016	23:40		6/14/2016	23:56
\0614018.D	ZZZZZZ	ZZZZZZ	6/15/2016	00:03		6/15/2016	00:20
\0614019.D	16153-GACI	K1606037-001	6/15/2016	00:27		6/15/2016	00:44
\0614020.D	16153-GACE	K1606037-002	6/15/2016	00:50		6/15/2016	01:07
\0614021.D	Trip Blank	K1606037-003	6/15/2016	01:14		6/15/2016	01:31
\0614022.D	ZZZZZZ	ZZZZZZ	6/15/2016	01:37		6/15/2016	01:54
\0614023.D	Batch QC	K1606269-001	6/15/2016	02:01		6/15/2016	02:18
\0614024.D	Batch QCMS	KWG1604768-1	6/15/2016	02:25		6/15/2016	02:41
\0614025.D	Continuing Calibration Verification	KWG1604781-2	6/15/2016	02:48		6/15/2016	03:05
\0614026.D	Instrument Blank	KWG1604781-5	6/15/2016	03:12		6/15/2016	03:29
\0614027.D	Batch QCDMS	KWG1604768-2	6/15/2016	03:35		6/15/2016	03:52
\0614028.D	ZZZZZZ	ZZZZZZ	6/15/2016	03:59		6/15/2016	04:16
\0614029.D	ZZZZZZ	ZZZZZZ	6/15/2016	04:23		6/15/2016	04:39
\0614030.D	ZZZZZZ	ZZZZZZ	6/15/2016	04:46		6/15/2016	05:03
\0614031.D	ZZZZZZ	ZZZZZZ	6/15/2016	05:10		6/15/2016	05:27
\0614032.D	ZZZZZZ	ZZZZZZ	6/15/2016	05:34		6/15/2016	05:50
\0614033.D	ZZZZZZ	ZZZZZZ	6/15/2016	05:57		6/15/2016	06:14
\0614034.D	ZZZZZZ	ZZZZZZ	6/15/2016	06:21		6/15/2016	06:38
\0614035.D	ZZZZZZ	ZZZZZZ	6/15/2016	06:44		6/15/2016	07:01
\0614036.D	Continuing Calibration Verification	KWG1604781-3	6/15/2016	07:08		6/15/2016	07:25
\0614037.D	Instrument Blank	KWG1604781-6	6/15/2016	07:31		6/15/2016	07:48

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Extracted: 06/14/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1604768
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16153-GACI	K1606037-001	06/01/16	06/06/16	35.60ml	2ml	NA	
16153-GACE	K1606037-002	06/01/16	06/06/16	36.01ml	2ml	NA	
Trip Blank	K1606037-003	06/01/16	06/06/16	35.64ml	2ml	NA	
Method Blank	KWG1604768-5	NA	NA	35.00ml	2ml	NA	
Batch QC	K1606269-001	NA	NA	36.12ml	2ml	NA	
Batch QCMS	KWG1604768-1	NA	NA	35.95ml	2ml	NA	
Batch QCDMS	KWG1604768-2	NA	NA	37.61ml	2ml	NA	
Lab Control Sample	KWG1604768-3	NA	NA	35.00ml	2ml	NA	
Lab Control Sample	KWG1604768-4	NA	NA	35.00ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606037
Date Collected: 06/01/2016
Date Received: 06/06/2016
Date Extracted: 06/14/2016

EPA Method 504.1

Sample Name: 16153-GACI
Lab Code: K1606037-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0098	0.00300	0.18	0.18	0.0		1	06/15/16



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July 12, 2016

Analytical Report for Service Request No: K1606676

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory June 16, 2016
For your reference, these analyses have been assigned our service request number **K1606676**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink that reads "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

- Acronyms
- Qualifiers
- State Certifications, Accreditations, And Licenses
- Case Narrative
- Chain of Custody
- EPA Method 504.1

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialist **Service Request No.:** K1606676
Project: Drexel **Date Received:** 06/16/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three water samples were received for analysis at ALS Environmental on 06/16/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

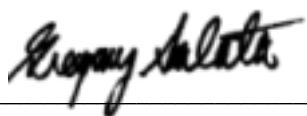
EDB by EPA Method 504.1

Sample Notes and Discussion:

Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



K 1606676 CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

DATE 6/15/16 PAGE 1 OF 1

PROJECT NAME <u>Drexel</u> PROJECT MANAGER <u>Timmerly Bullman</u> COMPANY NAME <u>EPS Inc.</u> ADDRESS <u>1050 Crown Pointe Pkwy Ste. 550</u> <u>Atlanta, GA 30338</u> <u>tbullman@envplanning.com</u> PHONE <u>404-315-9113</u> SAMPLERS SIGNATURE <u>Terrence Walker</u>					ANALYSIS REQUESTED <i>EDB Method 5047</i>		
SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX		NUMBER OF CONTAINERS	
<u>16167-GACT</u>	<u>6-15-16</u>	<u>11:20am</u>		<u>GW(2)</u>	X		
<u>16167-GACE</u>	<u>6-15-16</u>	<u>11:25am</u>		<u>GW(2)</u>	X		
<u>Trip Blank</u>	<u>6-16-16</u>			<u>WL(2)</u>	X		
					REMARKS		
REPORT REQUIREMENTS							
I. Routine Report: Method Blank, Surrogate, as required II. Report Dup., MS, MSD as required III. CLP Like Summary (no raw data) IV. Data Validation Report V. EDD		INVOICE INFORMATION P.O. # _____ Bill To: _____ TURNAROUND REQUIREMENTS 24 hr. <input checked="" type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input type="checkbox"/> Standard (10-15 working days) <input checked="" type="checkbox"/> Provide Verbal Preliminary Results <input type="checkbox"/> Provide FAX preliminary Results <input type="checkbox"/>		Circle which metals are to be analyzed: Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: <input type="checkbox"/> (CIRCLE ONE)			
SPECIAL INSTRUCTIONS/COMMENTS: <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)							
RELINQUISHED BY: <u>Terrence Walker</u> <u>6/15/16 11:45am</u> Signature <u>Terrence Walker</u> <u>EPS Inc.</u> Printed Name Firm		RECEIVED BY: <u>Shawn Smith</u> <u>6/16/16 10:10</u> Signature <u>Shawn Smith</u> <u>ALSKU142</u> Printed Name Firm		RELINQUISHED BY: Signature Date/Time Printed Name Firm		RECEIVED BY: Signature Date/Time Printed Name Firm	



Cooler Receipt and Preservation Form

PC Grey

Client Drexel

Service Request K16

046476

Received: June 16, 16 Opened: 6/16 By: SD Unloaded: 6/16 By: SD

1. Samples were received via? Mail Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 - Front

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected, Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID <u>NA</u>	Tracking Number	NA	Filed
<u>38</u>	<u>40</u>	<u>23</u>	<u>28</u>	<u>+0.3</u>	<u>36.9</u>		<u>7760525745278</u>		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:

Page _____ of _____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Environmental Planning Specialists **Service Request:** K1606676
Project: Drexel

**Cover Page - Organic Analysis Data Package
EPA Method 504.1**

Sample Name	Lab Code	Date Collected	Date Received
16167-GACI	K1606676-001	06/15/2016	06/16/2016
16167-GACE	K1606676-002	06/15/2016	06/16/2016
Trip Blank	K1606676-003	06/15/2016	06/16/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606676
Date Collected: 06/15/2016
Date Received: 06/16/2016

EPA Method 504.1

Sample Name: 16167-GACI **Units:** ug/L
Lab Code: K1606676-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.15 P	0.0097	0.00300	1	06/29/16	06/29/16	KWG1605335	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606676
Date Collected: 06/15/2016
Date Received: 06/16/2016

EPA Method 504.1

Sample Name: 16167-GACE **Units:** ug/L
Lab Code: K1606676-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0097	0.00300	1	06/29/16	06/29/16	KWG1605335	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606676
Date Collected: 06/15/2016
Date Received: 06/16/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1606676-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0098	0.00300	1	06/29/16	06/30/16	KWG1605335	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606676
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1605335-3 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	06/29/16	06/29/16	KWG1605335	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606676
Date Extracted: 06/29/2016
Date Analyzed: 06/29/2016

Lab Control Spike/Duplicate Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Extraction Lot: KWG1605335

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
1,2-Dibromoethane (EDB)	0.195	0.250	78	0.191	0.250	76	70-130	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606676
Date Extracted: 06/29/2016
Date Analyzed: 06/29/2016
Time Analyzed: 22:58

Method Blank Summary**EPA Method 504.1**

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1605335-3	File ID:	J:\GC33\DATA\062916-504\0629017.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1605335

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1605335-1	J:\GC33\DATA\062916-504\0629015.D	06/29/16	22:11
Duplicate Lab Control Sample	KWG1605335-2	J:\GC33\DATA\062916-504\0629016.D	06/29/16	22:35
16167-GACI	K1606676-001	J:\GC33\DATA\062916-504\0629018.D	06/29/16	23:22
16167-GACE	K1606676-002	J:\GC33\DATA\062916-504\0629019.D	06/29/16	23:46
Trip Blank	K1606676-003	J:\GC33\DATA\062916-504\0629020.D	06/30/16	00:09

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606676
Date Extracted: 06/29/2016
Date Analyzed: 06/29/2016
Time Analyzed: 22:11

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1605335-1	File ID:	J:\GC33\DATA\062916-504\0629015.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1605335

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1605335-3	J:\GC33\DATA\062916-504\0629017.D	06/29/16	22:58
16167-GACI	K1606676-001	J:\GC33\DATA\062916-504\0629018.D	06/29/16	23:22
16167-GACE	K1606676-002	J:\GC33\DATA\062916-504\0629019.D	06/29/16	23:46
Trip Blank	K1606676-003	J:\GC33\DATA\062916-504\0629020.D	06/30/16	00:09

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606676
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D	F	J:\GC33\data\041816-504\0418009.D
B	J:\GC33\data\041816-504\0418005.D	G	J:\GC33\data\041816-504\0418010.D
C	J:\GC33\data\041816-504\0418006.D	H	J:\GC33\data\041816-504\0418011.D
D	J:\GC33\data\041816-504\0418007.D		
E	J:\GC33\data\041816-504\0418008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	9.98E+5	B	0.13	9.33E+5	C	0.25	1.03E+6	D	0.63	1.26E+6	E	1.3	1.32E+6
	F	3.8	1.33E+6	G	5.0	1.19E+6	H	10	1.22E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606676
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	13.2	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606676
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14689
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\data\041816-504\0418012.D **Column ID:** RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1160000	1260000	9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606676
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D\0418004c.d	F	J:\GC33\data\041816-504\0418009.D\0418009c.d
B	J:\GC33\data\041816-504\0418005.D\0418005c.d	G	J:\GC33\data\041816-504\0418010.D\0418010c.d
C	J:\GC33\data\041816-504\0418006.D\0418006c.d	H	J:\GC33\data\041816-504\0418011.D\0418011c.d
D	J:\GC33\data\041816-504\0418007.D\0418007c.d		
E	J:\GC33\data\041816-504\0418008.D\0418008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.54E+6	B	0.13	1.34E+6	C	0.25	1.22E+6	D	0.63	1.25E+6	E	1.3	1.20E+6
	F	3.8	1.19E+6	G	5.0	1.18E+6	H	10	1.23E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606676
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	9.4	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606676
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14689
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\data\041816-504\0418012.D\0418012c.d **Column ID:** RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1270000	1290000	1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists **Service Request:** K1606676
Project: Drexel **Date Analyzed:** 06/29/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\062916-504\0629013.D	Analysis Lot:	KWG1605402
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1160000	1240000	7	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1606676
Project: Drexel **Date Analyzed:** 06/29/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\062916-504\0629013.D\0629013C.D	Analysis Lot:	KWG1605402
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	0.95	1270000	965000	-24	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists **Service Request:** K1606676
Project: Drexel **Date Analyzed:** 06/30/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\062916-504\0629021.D	Analysis Lot:	KWG1605402
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.9	1160000	1360000	17	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1606676
Project: Drexel **Date Analyzed:** 06/30/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\062916-504\0629021.D\0629021C.D	Analysis Lot:	KWG1605402
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	3.6	1270000	913000	-28	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1606676

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1605402
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0629013.D	Continuing Calibration Verification	KWG1605402-1	6/29/2016	21:24		6/29/2016	21:41
\0629014.D	Instrument Blank	KWG1605402-3	6/29/2016	21:48		6/29/2016	22:04
\0629015.D	Lab Control Sample	KWG1605335-1	6/29/2016	22:11		6/29/2016	22:28
\0629016.D	Duplicate Lab Control Sample	KWG1605335-2	6/29/2016	22:35		6/29/2016	22:52
\0629017.D	Method Blank	KWG1605335-3	6/29/2016	22:58		6/29/2016	23:15
\0629018.D	16167-GACI	K1606676-001	6/29/2016	23:22		6/29/2016	23:39
\0629019.D	16167-GACE	K1606676-002	6/29/2016	23:46		6/30/2016	00:02
\0629020.D	Trip Blank	K1606676-003	6/30/2016	00:09		6/30/2016	00:26
\0629021.D	Continuing Calibration Verification	KWG1605402-2	6/30/2016	00:33		6/30/2016	00:49
\0629022.D	Instrument Blank	KWG1605402-4	6/30/2016	00:56		6/30/2016	01:13

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606676
Date Extracted: 06/29/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1605335
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16167-GACI	K1606676-001	06/15/16	06/16/16	35.903ml	2ml	NA	
16167-GACE	K1606676-002	06/15/16	06/16/16	35.938ml	2ml	NA	
Trip Blank	K1606676-003	06/15/16	06/16/16	35.388ml	2ml	NA	
Method Blank	KWG1605335-3	NA	NA	35.000ml	2ml	NA	
Lab Control Sample	KWG1605335-1	NA	NA	35.000ml	2ml	NA	
Duplicate Lab Control Sample	KWG1605335-2	NA	NA	35.000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1606676
Date Collected: 06/15/2016
Date Received: 06/16/2016
Date Extracted: 06/29/2016

EPA Method 504.1

Sample Name: 16167-GACI
Lab Code: K1606676-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0097	0.00300	0.15	0.23	42.1	P	1	06/29/16



ALS Environmental
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July 28, 2016

Analytical Report for Service Request No: K1607278

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory June 30, 2016
For your reference, these analyses have been assigned our service request number **K1607278**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink, appearing to read "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

- Acronyms
- Qualifiers
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- Chain of Custody
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialist **Service Request No.:** K1607278
Project: Drexel **Date Received:** 06/30/16
Sample Matrix: Ground Water and Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three samples were received for analysis at ALS Environmental on 06/30/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

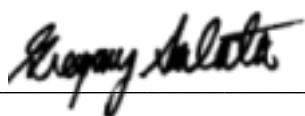
EDB by EPA Method 504.1

Sample Notes and Discussion:

Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



(ALS) Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

DATE 6/29/16

PAGE

OF

PC *Sieg*

Cooler Receipt and Preservation Form

Client DrexelService Request K16 07278Received: June 30, 16 Opened: 6/30 By: CD Unloaded: 6/30 By: CD

1. Samples were received via? Mail Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? 2
- If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected, Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
10.8	10.7	11.9	11.8	-C.1	3551	(NA)	77L0LP333344005		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? *Indicate in the table below.* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
110151-GACI	2.40ml	✓								
110151-GACE	2.40ml	✓								
Trip Blank	2.40ml	✓								

Notes, Discrepancies, & Resolutions:

*Ice jugs melted = samples out
at temp. P.C. notified*



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Environmental Planning Specialists **Service Request:** K1607278
Project: Drexel

Cover Page - Organic Analysis Data Package
EPA Method 504.1

Sample Name	Lab Code	Date Collected	Date Received
16181-GACI	K1607278-001	06/29/2016	06/30/2016
16181-GACE	K1607278-002	06/29/2016	06/30/2016
Trip Blank	K1607278-003	06/29/2016	06/30/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1607278
Date Collected: 06/29/2016
Date Received: 06/30/2016

EPA Method 504.1

Sample Name: 16181-GACI **Units:** ug/L
Lab Code: K1607278-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.16	0.0096	0.00300	1	07/12/16	07/12/16	KWG1605723	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1607278
Date Collected: 06/29/2016
Date Received: 06/30/2016

EPA Method 504.1

Sample Name: 16181-GACE **Units:** ug/L
Lab Code: K1607278-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0096	0.00300	1	07/12/16	07/12/16	KWG1605723	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1607278
Date Collected: 06/29/2016
Date Received: 06/30/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1607278-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0097	0.00300	1	07/12/16	07/12/16	KWG1605723	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1607278
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1605723-3 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	07/12/16	07/12/16	KWG1605723	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1607278
Date Extracted: 07/12/2016
Date Analyzed: 07/12/2016

Lab Control Spike/Duplicate Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Extraction Lot: KWG1605723

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
1,2-Dibromoethane (EDB)	0.213	0.250	85	0.210	0.250	84	70-130	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1607278
Date Extracted: 07/12/2016
Date Analyzed: 07/12/2016
Time Analyzed: 19:27

Method Blank Summary**EPA Method 504.1**

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1605723-3	File ID:	J:\GC33\DATA\071216-504\0712017.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1605723

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1605723-1	J:\GC33\DATA\071216-504\0712015.D	07/12/16	18:40
Duplicate Lab Control Sample	KWG1605723-2	J:\GC33\DATA\071216-504\0712016.D	07/12/16	19:03
16181-GACI	K1607278-001	J:\GC33\DATA\071216-504\0712018.D	07/12/16	19:50
16181-GACE	K1607278-002	J:\GC33\DATA\071216-504\0712019.D	07/12/16	20:14
Trip Blank	K1607278-003	J:\GC33\DATA\071216-504\0712020.D	07/12/16	20:37

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1607278
Date Extracted: 07/12/2016
Date Analyzed: 07/12/2016
Time Analyzed: 18:40

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1605723-1	File ID:	J:\GC33\DATA\071216-504\0712015.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1605723

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1605723-3	J:\GC33\DATA\071216-504\0712017.D	07/12/16	19:27
16181-GACI	K1607278-001	J:\GC33\DATA\071216-504\0712018.D	07/12/16	19:50
16181-GACE	K1607278-002	J:\GC33\DATA\071216-504\0712019.D	07/12/16	20:14
Trip Blank	K1607278-003	J:\GC33\DATA\071216-504\0712020.D	07/12/16	20:37

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1607278
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D	F	J:\GC33\data\041816-504\0418009.D
B	J:\GC33\data\041816-504\0418005.D	G	J:\GC33\data\041816-504\0418010.D
C	J:\GC33\data\041816-504\0418006.D	H	J:\GC33\data\041816-504\0418011.D
D	J:\GC33\data\041816-504\0418007.D		
E	J:\GC33\data\041816-504\0418008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	9.98E+5	B	0.13	9.33E+5	C	0.25	1.03E+6	D	0.63	1.26E+6	E	1.3	1.32E+6
	F	3.8	1.33E+6	G	5.0	1.19E+6	H	10	1.22E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1607278
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	13.2	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1607278
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14689
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\data\041816-504\0418012.D **Column ID:** RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1160000	1260000	9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1607278
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\data\041816-504\0418004.D\0418004c.d	F	J:\GC33\data\041816-504\0418009.D\0418009c.d
B	J:\GC33\data\041816-504\0418005.D\0418005c.d	G	J:\GC33\data\041816-504\0418010.D\0418010c.d
C	J:\GC33\data\041816-504\0418006.D\0418006c.d	H	J:\GC33\data\041816-504\0418011.D\0418011c.d
D	J:\GC33\data\041816-504\0418007.D\0418007c.d		
E	J:\GC33\data\041816-504\0418008.D\0418008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.54E+6	B	0.13	1.34E+6	C	0.25	1.22E+6	D	0.63	1.25E+6	E	1.3	1.20E+6
	F	3.8	1.19E+6	G	5.0	1.18E+6	H	10	1.23E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1607278
Calibration Date: 04/18/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14689
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	9.4	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1607278
Calibration Date: 04/18/2016
Date Analyzed: 04/18/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14689
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\data\041816-504\0418012.D\0418012c.d **Column ID:** RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1270000	1290000	1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists **Service Request:** K1607278
Project: Drexel **Date Analyzed:** 07/12/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\071216-504\0712013.D	Analysis Lot:	KWG1605761
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.0	1160000	948000	-18	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists **Service Request:** K1607278
Project: Drexel **Date Analyzed:** 07/12/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
		Analysis Lot:	KWG1605761
		Units:	ppb
File ID:	J:\GC33\DATA\071216-504\0712013.D\0712013C.D	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1270000	1330000	5	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists **Service Request:** K1607278
Project: Drexel **Date Analyzed:** 07/12/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
File ID:	J:\GC33\DATA\071216-504\0712021.D	Analysis Lot:	KWG1605761
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.2	1160000	976000	-16	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1607278
Project: Drexel **Date Analyzed:** 07/12/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	04/18/2016
Analysis Method:	504.1	Calibration ID:	CAL14689
		Analysis Lot:	KWG1605761
		Units:	ppb
File ID:	J:\GC33\DATA\071216-504\0712021.D\0712021C.D	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.8	1270000	1220000	-4	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1607278

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1605761
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0712013.D	Continuing Calibration Verification	KWG1605761-1	7/12/2016	17:52		7/12/2016	18:09
\0712014.D	Instrument Blank	KWG1605761-3	7/12/2016	18:16		7/12/2016	18:33
\0712015.D	Lab Control Sample	KWG1605723-1	7/12/2016	18:40		7/12/2016	18:56
\0712016.D	Duplicate Lab Control Sample	KWG1605723-2	7/12/2016	19:03		7/12/2016	19:20
\0712017.D	Method Blank	KWG1605723-3	7/12/2016	19:27		7/12/2016	19:44
\0712018.D	16181-GACI	K1607278-001	7/12/2016	19:50		7/12/2016	20:07
\0712019.D	16181-GACE	K1607278-002	7/12/2016	20:14		7/12/2016	20:31
\0712020.D	Trip Blank	K1607278-003	7/12/2016	20:37		7/12/2016	20:54
\0712021.D	Continuing Calibration Verification	KWG1605761-2	7/12/2016	21:01		7/12/2016	21:18
\0712022.D	Instrument Blank	KWG1605761-4	7/12/2016	21:24		7/12/2016	21:41

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1607278
Date Extracted: 07/12/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1605723
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16181-GACI	K1607278-001	06/29/16	06/30/16	36.32ml	2ml	NA	
16181-GACE	K1607278-002	06/29/16	06/30/16	36.12ml	2ml	NA	
Trip Blank	K1607278-003	06/29/16	06/30/16	36.09ml	2ml	NA	
Method Blank	KWG1605723-3	NA	NA	35.00ml	2ml	NA	
Lab Control Sample	KWG1605723-1	NA	NA	35.00ml	2ml	NA	
Duplicate Lab Control Sample	KWG1605723-2	NA	NA	35.00ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1607278
Date Collected: 06/29/2016
Date Received: 06/30/2016
Date Extracted: 07/12/2016

EPA Method 504.1

Sample Name: 16181-GACI
Lab Code: K1607278-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0096	0.00300	0.16	0.19	17.1		1	07/12/16



ALS Environmental
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www.alsglobal.com

August 31, 2016

Analytical Report for Service Request No: K1608549

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory July 28, 2016
For your reference, these analyses have been assigned our service request number **K1608549**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink, appearing to read "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialist **Service Request No.:** K1608549
Project: Drexel **Date Received:** 07/28/16
Sample Matrix: Water

Case Narrative

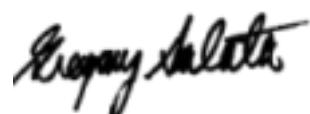
All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three water samples were received for analysis at ALS Environmental on 07/28/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB by EPA Method 504.1

No anomalies associated with the analysis of these samples were observed.



Approved by _____



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



(ALS) Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

DATE 7/27/16 PAGE 1 OF 1

RELINQUISHED BY: <u>Terrance Walker</u> Signature Printed Name	7/27/16 @ 1:20pm Date/Time Firm	RECEIVED BY: <u>B</u> Signature Printed Name	7/28/16 0930 Date/Time ALS Firm	RELINQUISHED BY: Signature Printed Name	Date/Time Firm	RECEIVED BY: Signature Printed Name	Date/Time Firm
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PC Greg

Cooler Receipt and Preservation Form

Client Drexel

Service Request K16

08549

Received: 7/28/16 Opened: 7/28/16 By: UU Unloaded: 7/28/16 By: UU

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 front
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filled
5.4	5.3	5.9	5.8	-0.1	323	NA	7768 5296 2120		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
 5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
 6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N
 If applicable, tissue samples were received: Frozen Partially Thawed Thawed
 7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
 8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
 9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
 10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
 11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
 12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Environmental Planning Specialists **Service Request:** K1608549
Project: Drexel

Cover Page - Organic Analysis Data Package
EPA Method 504.1

Sample Name	Lab Code	Date Collected	Date Received
16209GACI	K1608549-001	07/27/2016	07/28/2016
16209GACE	K1608549-002	07/27/2016	07/28/2016
Trip Blank	K1608549-003	07/27/2016	07/28/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Collected: 07/27/2016
Date Received: 07/28/2016

EPA Method 504.1

Sample Name: 16209GACI **Units:** ug/L
Lab Code: K1608549-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.18 P	0.0098	0.00300	1	08/02/16	08/05/16	KWG1606497	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Collected: 07/27/2016
Date Received: 07/28/2016

EPA Method 504.1

Sample Name: 16209GACE **Units:** ug/L
Lab Code: K1608549-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0098	0.00300	1	08/02/16	08/05/16	KWG1606497	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Collected: 07/27/2016
Date Received: 07/28/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1608549-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0096	0.00300	1	08/02/16	08/05/16	KWG1606497	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1606497-5 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	08/02/16	08/04/16	KWG1606497	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1608549
Date Extracted: 08/02/2016
Date Analyzed: 08/05/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1608534-008	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1606497

Analyte Name	Sample Result	Batch QCMS KWG1606497-1 Matrix Spike			Batch QCDMS KWG1606497-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
1,2-Dibromoethane (EDB)	0.33	0.537	0.240	88	0.529	0.249	82	65-135	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Extracted: 08/02/2016
Date Analyzed: 08/04/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1606497

Lab Control Sample
KWG1606497-3
Lab Control Spike

Analyte Name	Result	Spike	%Rec	Limits
		Amount	%Rec	
1,2-Dibromoethane (EDB)	0.262	0.250	105	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Extracted: 08/02/2016
Date Analyzed: 08/04/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Extraction Lot: KWG1606497

Lab Control Sample
KWG1606497-4
Lab Control Spike

Analyte Name	Result	Spike	%Rec	Limits
		Amount	%Rec	
1,2-Dibromoethane (EDB)	0.262	0.250	105	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Extracted: 08/02/2016
Date Analyzed: 08/04/2016
Time Analyzed: 17:22

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1606497-5	File ID:	J:\GC33\DATA\080416-504\0804117.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1606497

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1606497-3	J:\GC33\DATA\080416-504\0804115.D	08/04/16	16:35
Lab Control Sample	KWG1606497-4	J:\GC33\DATA\080416-504\0804116.D	08/04/16	16:58
Batch QC	K1608534-008	J:\GC33\DATA\080516-504\0805005.D	08/05/16	08:34
Batch QCMS	KWG1606497-1	J:\GC33\DATA\080516-504\0805006.D	08/05/16	08:58
Batch QCDMS	KWG1606497-2	J:\GC33\DATA\080516-504\0805007.D	08/05/16	09:21
16209GACI	K1608549-001	J:\GC33\DATA\080516-504\0805019.D	08/05/16	14:05
16209GACE	K1608549-002	J:\GC33\DATA\080516-504\0805020.D	08/05/16	14:29
Trip Blank	K1608549-003	J:\GC33\DATA\080516-504\0805021.D	08/05/16	14:52

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Extracted: 08/02/2016
Date Analyzed: 08/04/2016
Time Analyzed: 16:35

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1606497-3	File ID:	J:\GC33\DATA\080416-504\0804115.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1606497

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1606497-5	J:\GC33\DATA\080416-504\0804117.D	08/04/16	17:22
Batch QC	K1608534-008	J:\GC33\DATA\080516-504\0805005.D	08/05/16	08:34
Batch QCMS	KWG1606497-1	J:\GC33\DATA\080516-504\0805006.D	08/05/16	08:58
Batch QCDMS	KWG1606497-2	J:\GC33\DATA\080516-504\0805007.D	08/05/16	09:21
16209GACI	K1608549-001	J:\GC33\DATA\080516-504\0805019.D	08/05/16	14:05
16209GACE	K1608549-002	J:\GC33\DATA\080516-504\0805020.D	08/05/16	14:29
Trip Blank	K1608549-003	J:\GC33\DATA\080516-504\0805021.D	08/05/16	14:52

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Extracted: 08/02/2016
Date Analyzed: 08/04/2016
Time Analyzed: 16:58

Lab Control Sample Summary
EPA Method 504.1

Sample Name: Lab Control Sample
Lab Code: KWG1606497-4
Extraction Method: METHOD
Analysis Method: 504.1

Instrument ID: GC33
File ID: J:\GC33\DATA\080416-504\0804116.D
Level: Low
Extraction Lot: KWG1606497

This Lab Control Sample applies to the following analyses:

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Calibration Date: 08/04/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14853
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\080416-504\0804104.D	F	J:\GC33\DATA\080416-504\0804109.D
B	J:\GC33\DATA\080416-504\0804105.D	G	J:\GC33\DATA\080416-504\0804110.D
C	J:\GC33\DATA\080416-504\0804106.D	H	J:\GC33\DATA\080416-504\0804111.D
D	J:\GC33\DATA\080416-504\0804107.D		
E	J:\GC33\DATA\080416-504\0804108.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	8.12E+5	B	0.13	9.41E+5	C	0.25	8.28E+5	D	0.63	1.15E+6	E	1.3	1.01E+6
	F	3.8	1.22E+6	G	5.0	1.32E+6	H	10	1.35E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Calibration Date: 08/04/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14853
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	Linear	R2	0.995		≥ 0.99	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Calibration Date: 08/04/2016
Date Analyzed: 08/04/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14853
Units: ppb

File ID: J:\GC33\DATA\080416-504\0804112.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1080000	1340000	NA	6	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Calibration Date: 08/04/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14853
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\080416-504\0804104.D\0804104.c.d	F	J:\GC33\DATA\080416-504\0804109.D\0804109.c.d
B	J:\GC33\DATA\080416-504\0804105.D\0804105.c.d	G	J:\GC33\DATA\080416-504\0804110.D\0804110.c.d
C	J:\GC33\DATA\080416-504\0804106.D\0804106.c.d	H	J:\GC33\DATA\080416-504\0804111.D\0804111.c.d
D	J:\GC33\DATA\080416-504\0804107.D\0804107.c.d		
E	J:\GC33\DATA\080416-504\0804108.D\0804108.c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.20E+6	B	0.13	1.13E+6	C	0.25	9.61E+5	D	0.63	1.29E+6	E	1.3	1.04E+6
	F	3.8	1.16E+6	G	5.0	1.16E+6	H	10	1.20E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Calibration Date: 08/04/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14853
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Result	Q	
1,2-Dibromoethane (EDB)	MS	Linear	R2	0.998	≥ 0.99	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1608549
Project: Drexel **Calibration Date:** 08/04/2016
 Date Analyzed: 08/04/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14853
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\DATA\080416-504\0804112.D\0804112c.d **Column ID:** RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1140000	1280000	NA	9	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/04/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080416-504\0804113.D	Analysis Lot:	KWG1606683
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	1080000	1100000	NA	-12	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/04/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080416-504\0804113.D\0804113C.D	Analysis Lot:	KWG1606683
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	1140000	1030000	NA	-12	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/04/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080416-504\0804125.D	Analysis Lot:	KWG1606683
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	3.6	1080000	1250000	NA	-3	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/04/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080416-504\0804125.D\0804125C.D	Analysis Lot:	KWG1606683
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	3.8	1140000	1180000	NA	0	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/05/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080516-504\0805003.D	Analysis Lot:	KWG1606694
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	3.5	1080000	1200000	NA	-7	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/05/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080516-504\0805003.D\0805003C.D	Analysis Lot:	KWG1606694
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.5	1140000	1400000	NA	19	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/05/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080516-504\0805015.D	Analysis Lot:	KWG1606694
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	3.4	1080000	1160000	NA	-10	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/05/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080516-504\0805015.D\0805015C.D	Analysis Lot:	KWG1606694
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.6	1140000	1440000	NA	22	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/05/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080516-504\0805027.D	Analysis Lot:	KWG1606694
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	3.6	1080000	1260000	NA	-3	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549
Date Analyzed: 08/05/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	08/04/2016
Analysis Method:	504.1	Calibration ID:	CAL14853
File ID:	J:\GC33\DATA\080516-504\0805027.D\0805027C.D	Analysis Lot:	KWG1606694
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.3	1140000	1360000	NA	16	± 30	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1606683

Instrument ID: GC33

Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0804113.D	Continuing Calibration Verification	KWG1606683-1	8/4/2016	15:47		8/4/2016	16:04
\0804114.D	Instrument Blank	KWG1606683-2	8/4/2016	16:11		8/4/2016	16:28
\0804115.D	Lab Control Sample	KWG1606497-3	8/4/2016	16:35		8/4/2016	16:51
\0804116.D	Lab Control Sample	KWG1606497-4	8/4/2016	16:58		8/4/2016	17:15
\0804117.D	Method Blank	KWG1606497-5	8/4/2016	17:22		8/4/2016	17:39
\0804118.D	ZZZZZZ	ZZZZZZ	8/4/2016	17:46		8/4/2016	18:02
\0804120.D	ZZZZZZ	ZZZZZZ	8/4/2016	18:33		8/4/2016	18:50
\0804121.D	ZZZZZZ	ZZZZZZ	8/4/2016	18:57		8/4/2016	19:13
\0804122.D	ZZZZZZ	ZZZZZZ	8/4/2016	19:20		8/4/2016	19:37
\0804123.D	ZZZZZZ	ZZZZZZ	8/4/2016	19:44		8/4/2016	20:01
\0804124.D	ZZZZZZ	ZZZZZZ	8/4/2016	20:07		8/4/2016	20:24
\0804125.D	Continuing Calibration Verification	KWG1606683-3	8/4/2016	20:31		8/4/2016	20:48

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1608549

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1606694

Instrument ID: GC33

Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0805003.D	Continuing Calibration Verification	KWG1606694-1	8/5/2016	07:47		8/5/2016	08:04
\0805004.D	Instrument Blank	KWG1606694-2	8/5/2016	08:11		8/5/2016	08:27
\0805005.D	Batch QC	K1608534-008	8/5/2016	08:34		8/5/2016	08:51
\0805006.D	Batch QCMS	KWG1606497-1	8/5/2016	08:58		8/5/2016	09:15
\0805007.D	Batch QCDMS	KWG1606497-2	8/5/2016	09:21		8/5/2016	09:38
\0805008.D	ZZZZZZ	ZZZZZZ	8/5/2016	09:45		8/5/2016	10:02
\0805009.D	ZZZZZZ	ZZZZZZ	8/5/2016	10:09		8/5/2016	10:25
\0805010.D	ZZZZZZ	ZZZZZZ	8/5/2016	10:32		8/5/2016	10:49
\0805012.D	ZZZZZZ	ZZZZZZ	8/5/2016	11:19		8/5/2016	11:36
\0805015.D	Continuing Calibration Verification	KWG1606694-3	8/5/2016	12:30		8/5/2016	12:47
\0805016.D	Instrument Blank	KWG1606694-4	8/5/2016	12:54		8/5/2016	13:11
\0805017.D	ZZZZZZ	ZZZZZZ	8/5/2016	13:18		8/5/2016	13:34
\0805018.D	ZZZZZZ	ZZZZZZ	8/5/2016	13:41		8/5/2016	13:58
\0805019.D	16209GACI	K1608549-001	8/5/2016	14:05		8/5/2016	14:22
\0805020.D	16209GACE	K1608549-002	8/5/2016	14:29		8/5/2016	14:45
\0805021.D	Trip Blank	K1608549-003	8/5/2016	14:52		8/5/2016	15:09
\0805023.D	ZZZZZZ	ZZZZZZ	8/5/2016	15:39		8/5/2016	15:56
\0805024.D	ZZZZZZ	ZZZZZZ	8/5/2016	16:03		8/5/2016	16:20
\0805025.D	ZZZZZZ	ZZZZZZ	8/5/2016	16:27		8/5/2016	16:43
\0805026.D	ZZZZZZ	ZZZZZZ	8/5/2016	16:50		8/5/2016	17:07
\0805027.D	Continuing Calibration Verification	KWG1606694-5	8/5/2016	17:14		8/5/2016	17:31
\0805028.D	Instrument Blank	KWG1606694-6	8/5/2016	17:37		8/5/2016	17:54

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Extracted: 08/02/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1606497
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16209GACI	K1608549-001	07/27/16	07/28/16	35.662ml	2ml	NA	
16209GACE	K1608549-002	07/27/16	07/28/16	35.472ml	2ml	NA	
Trip Blank	K1608549-003	07/27/16	07/28/16	36.171ml	2ml	NA	
Method Blank	KWG1606497-5	NA	NA	35.000ml	2ml	NA	
Batch QC	K1608534-008	NA	NA	35.729ml	2ml	NA	
Batch QCMS	KWG1606497-1	NA	NA	36.477ml	2ml	NA	
Batch QCDMS	KWG1606497-2	NA	NA	35.144ml	2ml	NA	
Lab Control Sample	KWG1606497-3	NA	NA	35.000ml	2ml	NA	
Lab Control Sample	KWG1606497-4	NA	NA	35.000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1608549
Date Collected: 07/27/2016
Date Received: 07/28/2016
Date Extracted: 08/02/2016

EPA Method 504.1

Sample Name: 16209GACI
Lab Code: K1608549-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0098	0.00300	0.18	0.27	40.0	P	1	08/05/16



Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Exception Report

Data File: J:\GC33\DATA\080516-504\0805019.D
Lab ID: K1608549-001
RunType: SMPL
Matrix: WATER

Date Acquired: 08/05/2016 14:05
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805019.D\0805019C.D
Lab ID: K1608549-001
RunType: SMPL
Matrix: WATER

Date Acquired: 08/05/2016 14:05
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805019.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805019.D\0805019c.d	Vial:	35
Acq Date:	08/05/2016 14:05	Quant Date:	08/05/2016 15:55
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1608549-001	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	07/27/2016
Analysis Lot:	KWG1606694	Prep Lot:	KWG1606497
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1538513	Prep Date:	08/02/2016
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\080416-504\0804117.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L	ug/L	
1,2-Dibromoethane (EDB)	4.30 ^{-0.02}	4.16 ^{+0.01}	4047815	5552476m	3.14	4.73	0.18	0.27	0.18
The -/+ after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.662 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805019.D Vial: 35
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 14:05:23 Operator: BS
 Sample : K1608549-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:32 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M

Quant Title : 080416_504.M MJ480 CAL

QLast Update : Fri Aug 05 15:24:32 2016

Response via : Initial Calibration

DataAcq Meth:504-1.M

Volume Inj. : 5 uL

Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2

Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

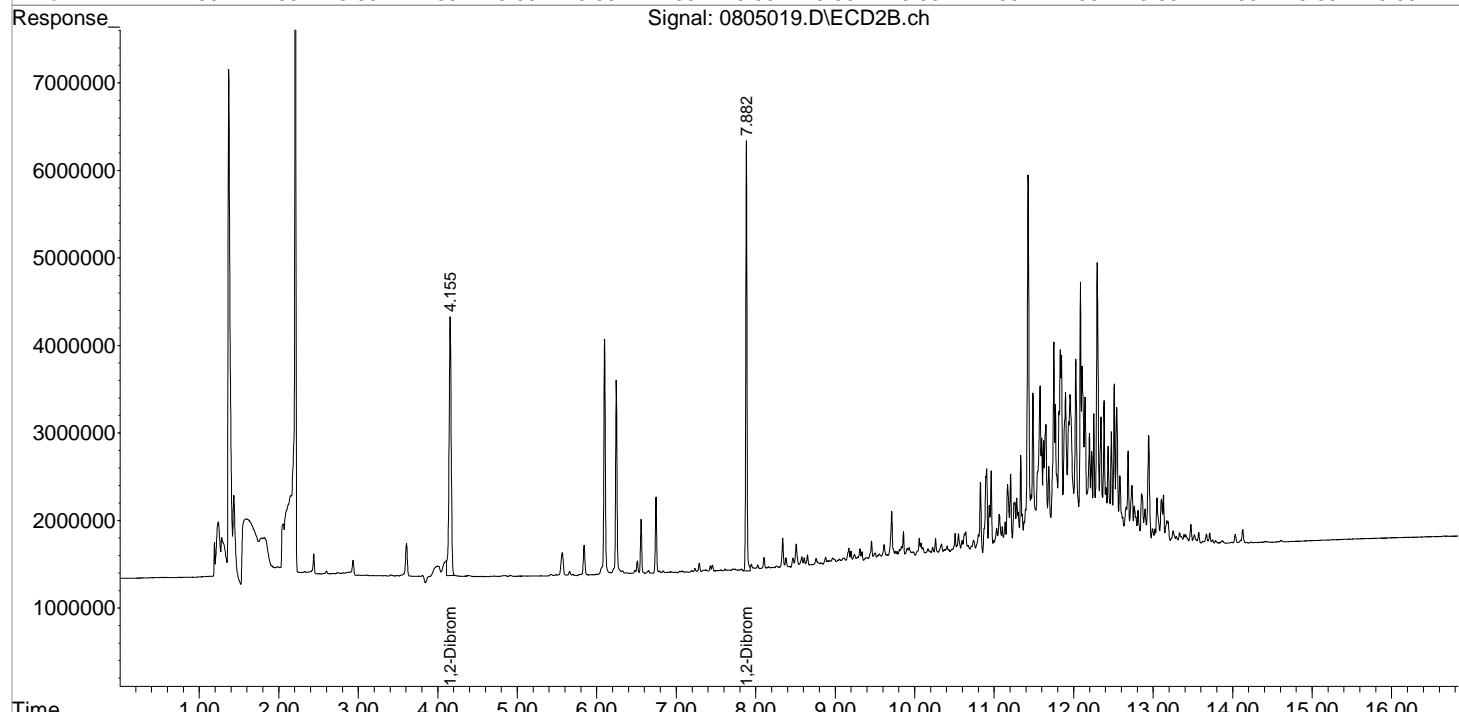
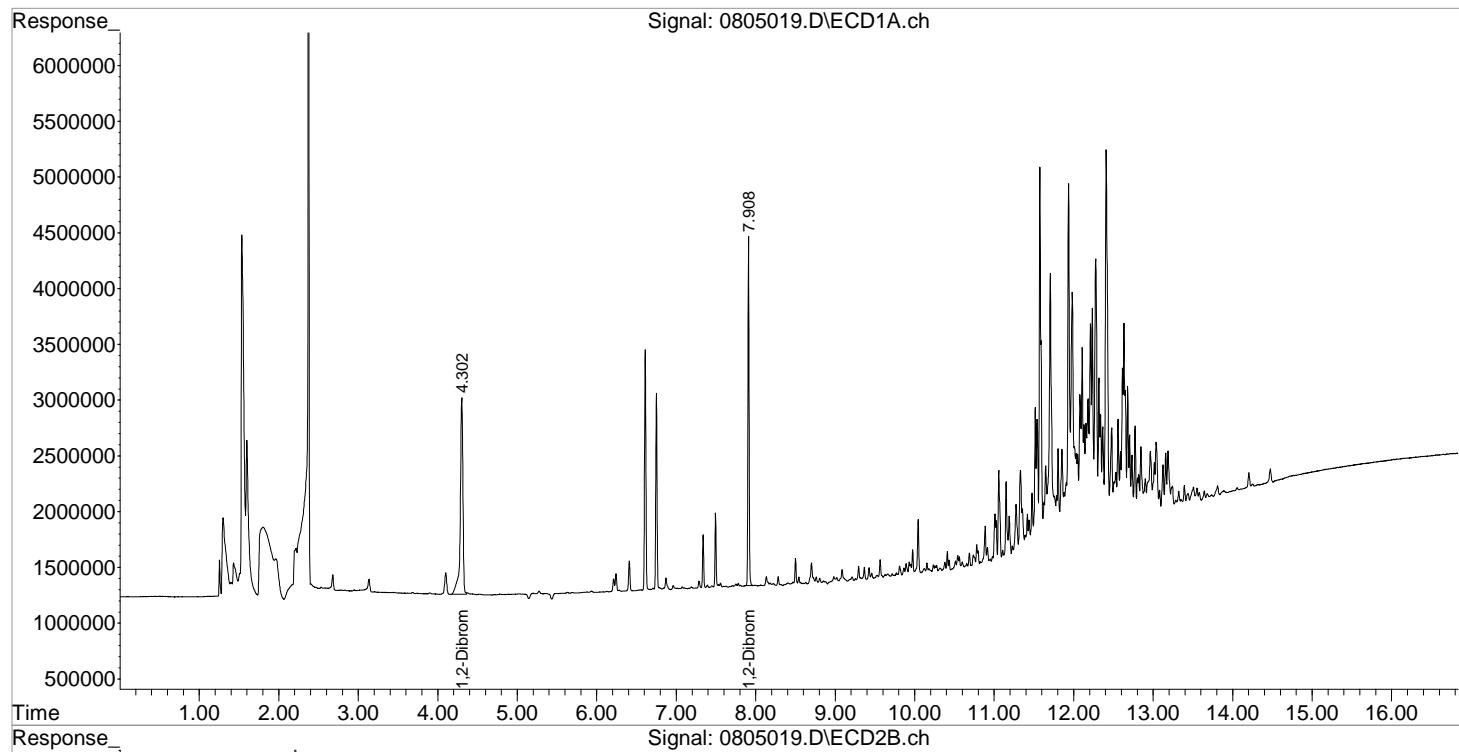
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.302	4.155	4047815	5552476	3.143	4.728m#
3) M 1,2-Dibro...	7.908	7.882	3191666	5225261	1.335	1.844 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805019.D Vial: 35
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 14:05:23 Operator: BS
 Sample : K1608549-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:32 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

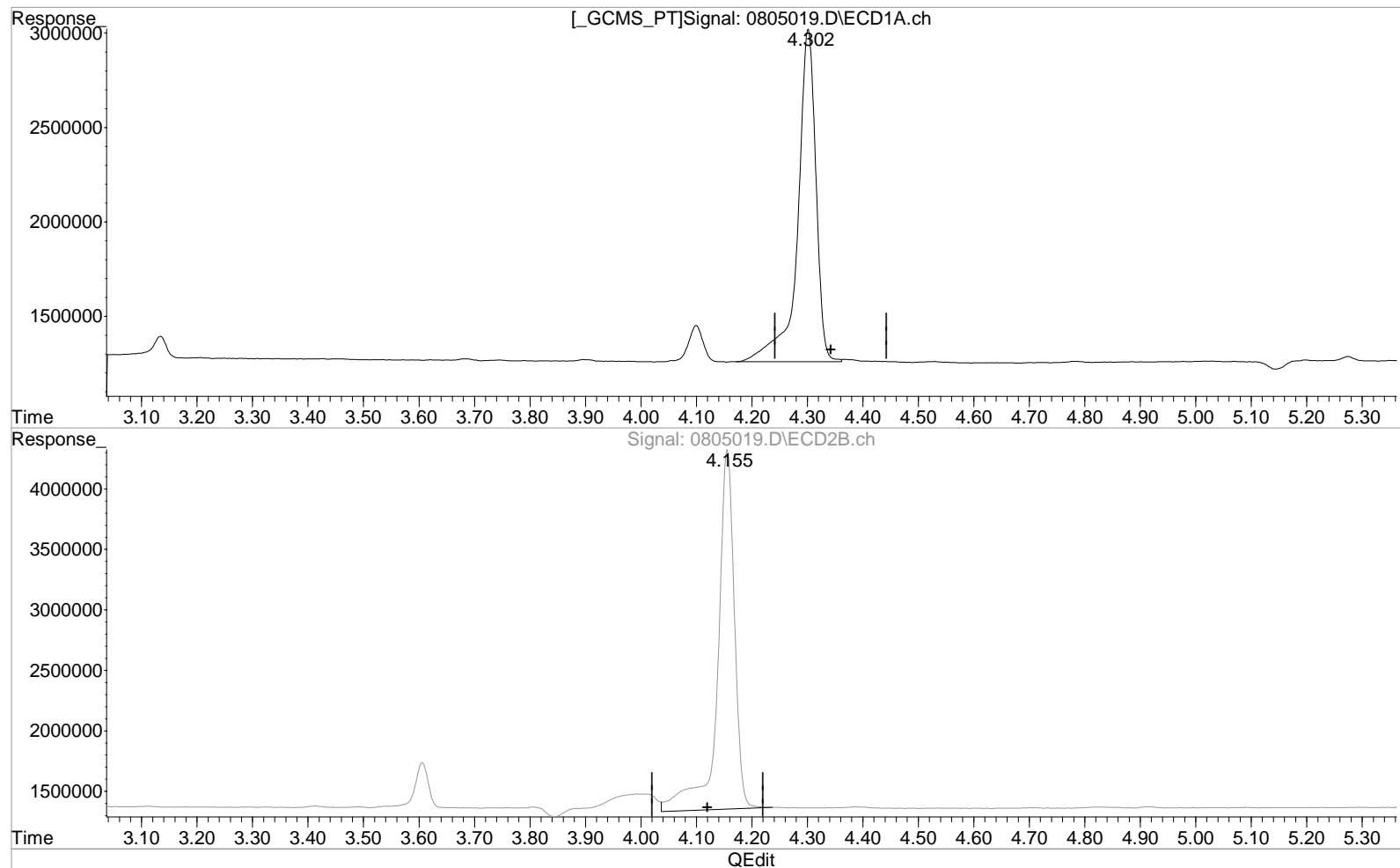
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080516-504\0805019.D Vial: 35
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 14:05:23 Operator: BS
 Sample : K1608549-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:51:08 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.302min 3.143 ppb

response 4047815

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.155min 5.387 ppb

response 6327582

Quantitation Report (Qedit)

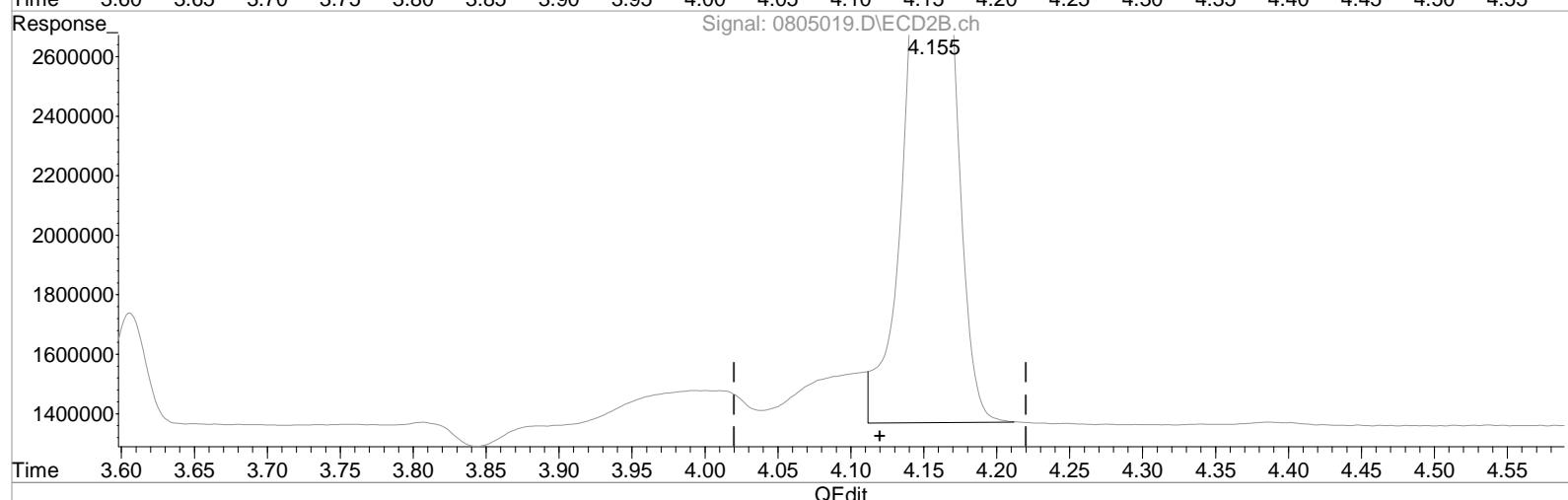
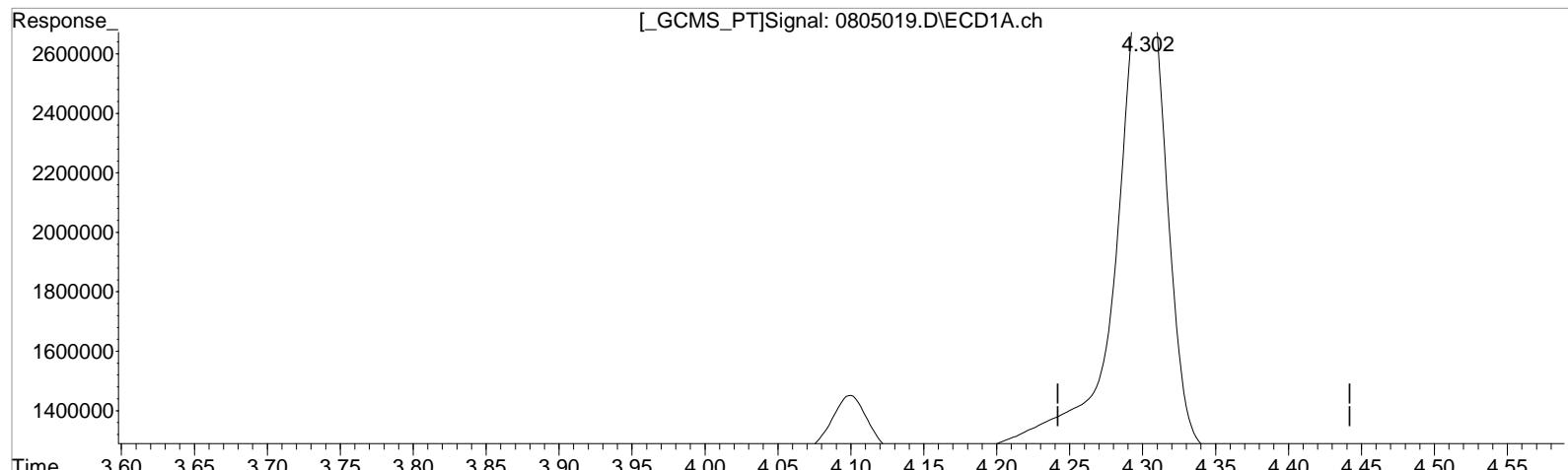
1st *TS* 08/08/16
 2nd *JEP* 08/17/16

Data File : J:\GC33\DATA\080516-504\0805019.D Vial: 35
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 14:05:23 Operator: BS
 Sample : K1608549-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:51:08 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

[GCMS_PT]Signal: 0805019.D\ECD1A.ch



(1) 1,2-Dibromoethane (EDB) (M)

4.302min 3.143 ppb

response 4047815

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.155min 4.728 ppb m

response 5552476

Exception Report

Data File: J:\GC33\DATA\080516-504\0805020.D
Lab ID: K1608549-002
RunType: SMPL
Matrix: WATER

Date Acquired: 08/05/2016 14:29
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805020.D\0805020C.D
Lab ID: K1608549-002
RunType: SMPL
Matrix: WATER

Date Acquired: 08/05/2016 14:29
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805020.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805020.D\0805020c.d	Vial:	36
Acq Date:	08/05/2016 14:29	Quant Date:	08/05/2016 15:55
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1608549-002	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	07/27/2016
Analysis Lot:	KWG1606694	Prep Lot:	KWG1606497
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1538514	Prep Date:	08/02/2016
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\080416-504\0804117.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units: ug/L				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			0d	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.472 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805020.D Vial: 36
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 14:29:05 Operator: BS
 Sample : K1608549-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:44 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

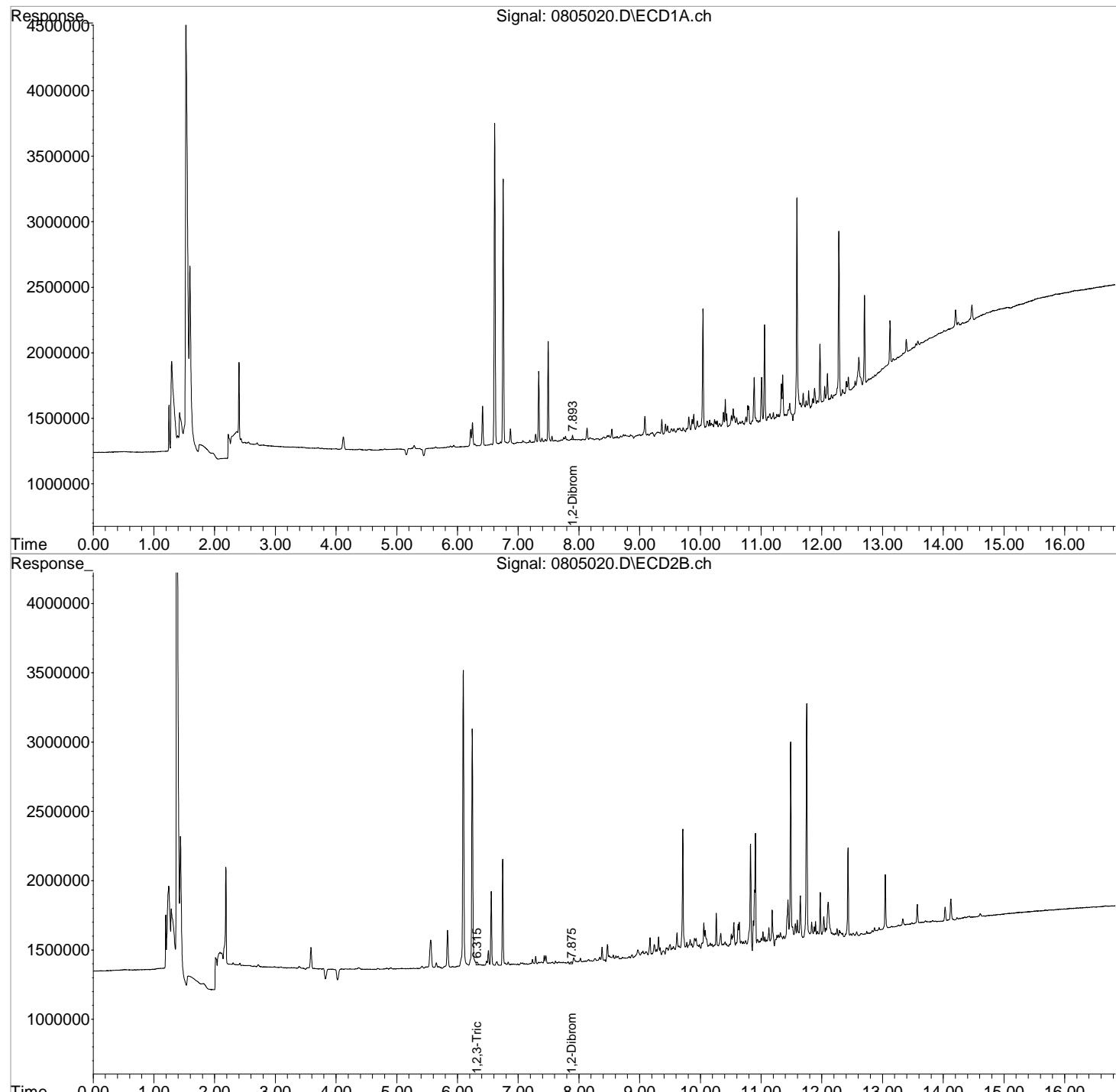
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.542	6.315	2955	34162	N.D.	0.139
3) M 1,2-Dibro...	7.893	7.875	33502	29691	0.006	0.022 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805020.D Vial: 36
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 14:29:05 Operator: BS
 Sample : K1608549-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:44 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\080516-504\0805021.D
Lab ID: K1608549-003
RunType: SMPL
Matrix: WATER

Date Acquired: 08/05/2016 14:52
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805021.D\0805021C.D
Lab ID: K1608549-003
RunType: SMPL
Matrix: WATER

Date Acquired: 08/05/2016 14:52
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805021.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805021.D\0805021c.d	Vial:	37
Acq Date:	08/05/2016 14:52	Quant Date:	08/05/2016 15:55
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1608549-003	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	07/27/2016
Analysis Lot:	KWG1606694	Prep Lot:	KWG1606497
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1538512	Prep Date:	08/02/2016
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\080416-504\0804117.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units: ug/L				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			0d	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
							The +/- after Retention Time symbolize the direction of the RT shift		
Prep Amount:	36.171 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805021.D Vial: 37
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 14:52:41 Operator: BS
 Sample : K1608549-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:53 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

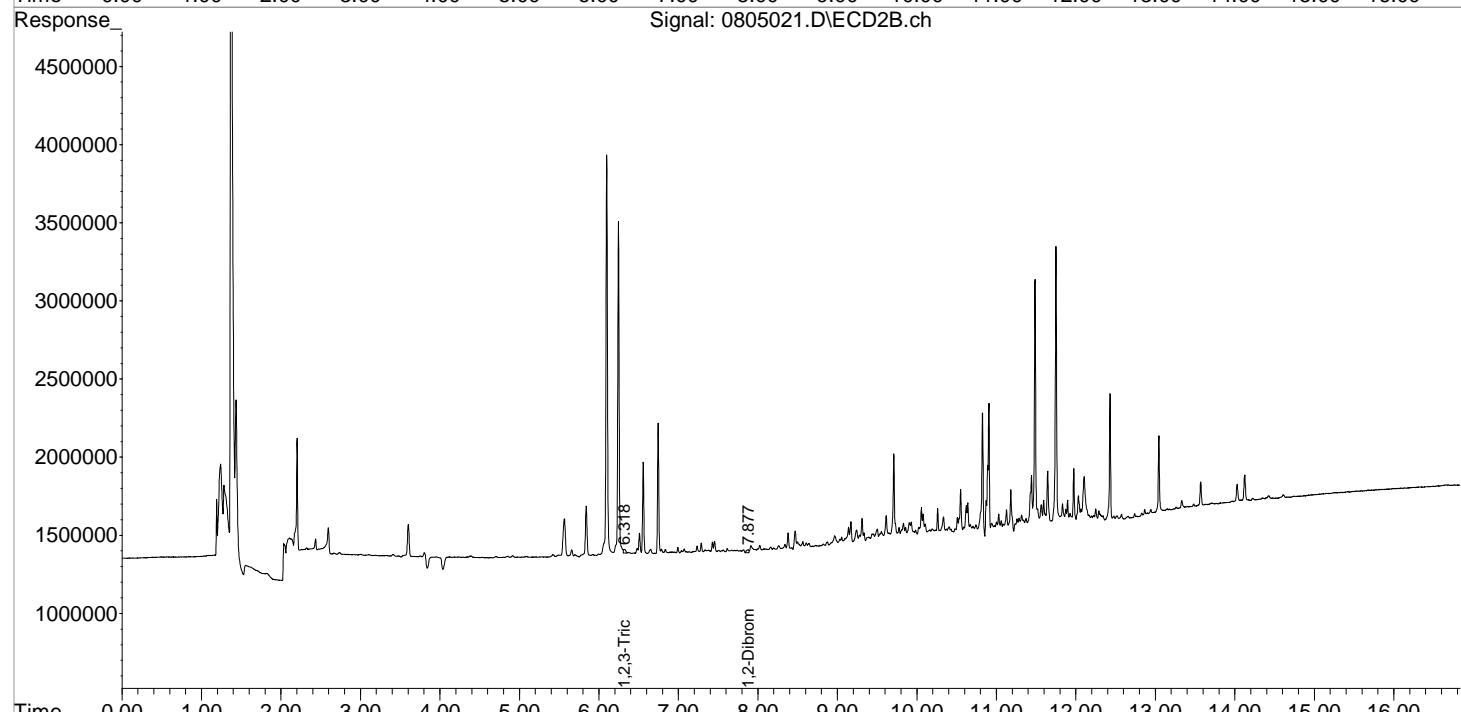
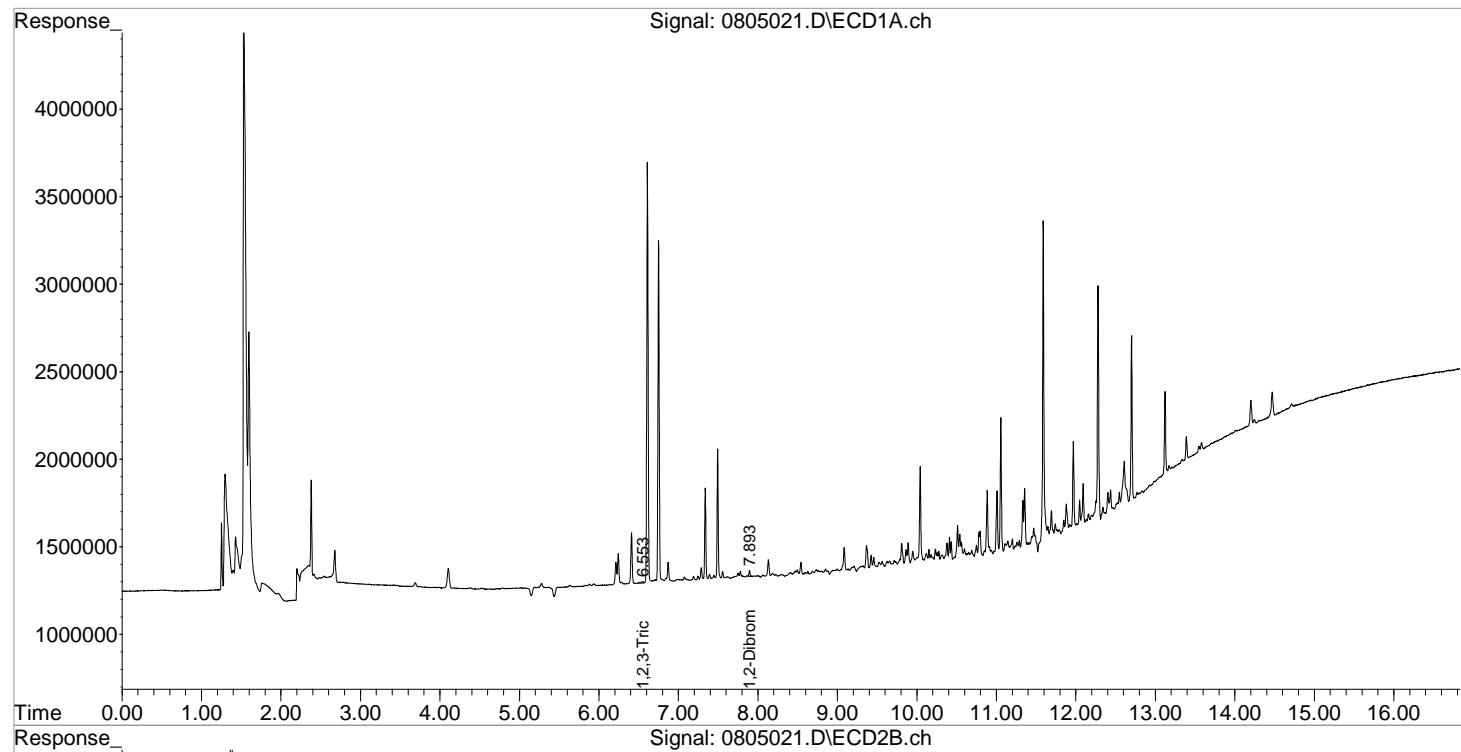
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.553	6.318	13147	46748	0.043	0.191 #
3) M 1,2-Dibro...	7.893	7.877	32053	40154	0.005	0.026 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805021.D Vial: 37
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 14:52:41 Operator: BS
 Sample : K1608549-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:53 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\080416-504\0804117.D
Lab ID: KWG1606497-5
RunType: MB
Matrix: WATER

Date Acquired: 08/04/2016 17:22
Date Quantitated: 08/05/2016 15:36
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080416-504\0804117.D\0804117C.D
Lab ID: KWG1606497-5
RunType: MB
Matrix: WATER

Date Acquired: 08/04/2016 17:22
Date Quantitated: 08/05/2016 15:36
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080416-504\0804117.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\080416-504\0804117.D\0804117c.d	Vial:	15	
Acq Date:	08/04/2016 17:22	Quant Date:	08/05/2016 15:36	
Run Type:	MB	MethodJoinID:	MJ1388	
Lab ID:	KWG1606497-5	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/02/2016	
Analysis Lot:	KWG1606683	Prep Lot:	KWG1606497	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1538519	Prep Date:	08/02/2016	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853	
Title:		Method ID:	MJ1388	
MB Ref:		Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			0	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane	6.55 ^{+0.01}		6188	0	0.0070	0.0000	0.037U	0.037U	0.037U
1,2-Dibromo-3-chloropropan	7.90 ^{-0.01}	7.92 ^{+0.03}	21720	78964	0.0010	0.0400	0.00360U	0.00360U	0.00360U

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount:	35.000 ml	Dilution:	1.0
Prep Final Vol:	2 ml	Unit Factor:	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080416-504\0804117.D Vial: 15
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 17:22:28 Operator: BS
 Sample : KWG1606497-5MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:36:06 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

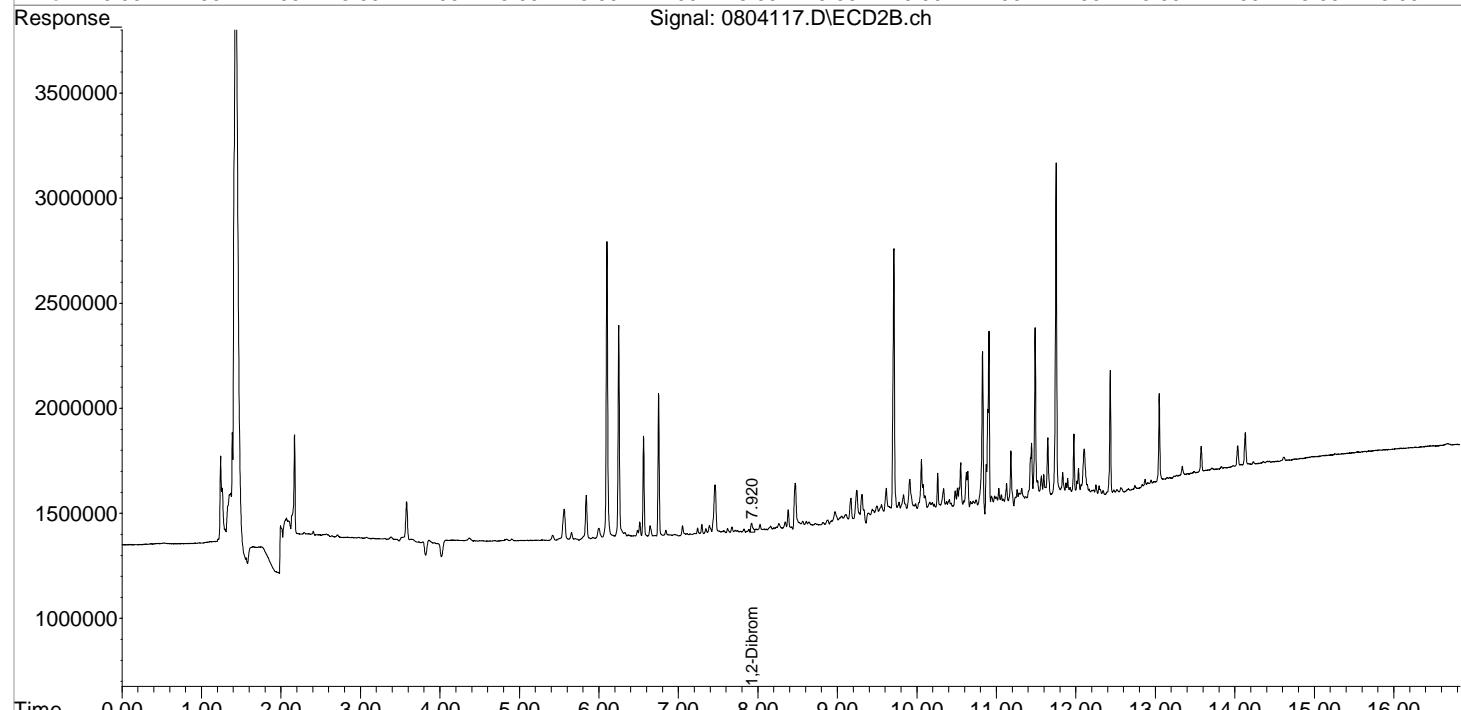
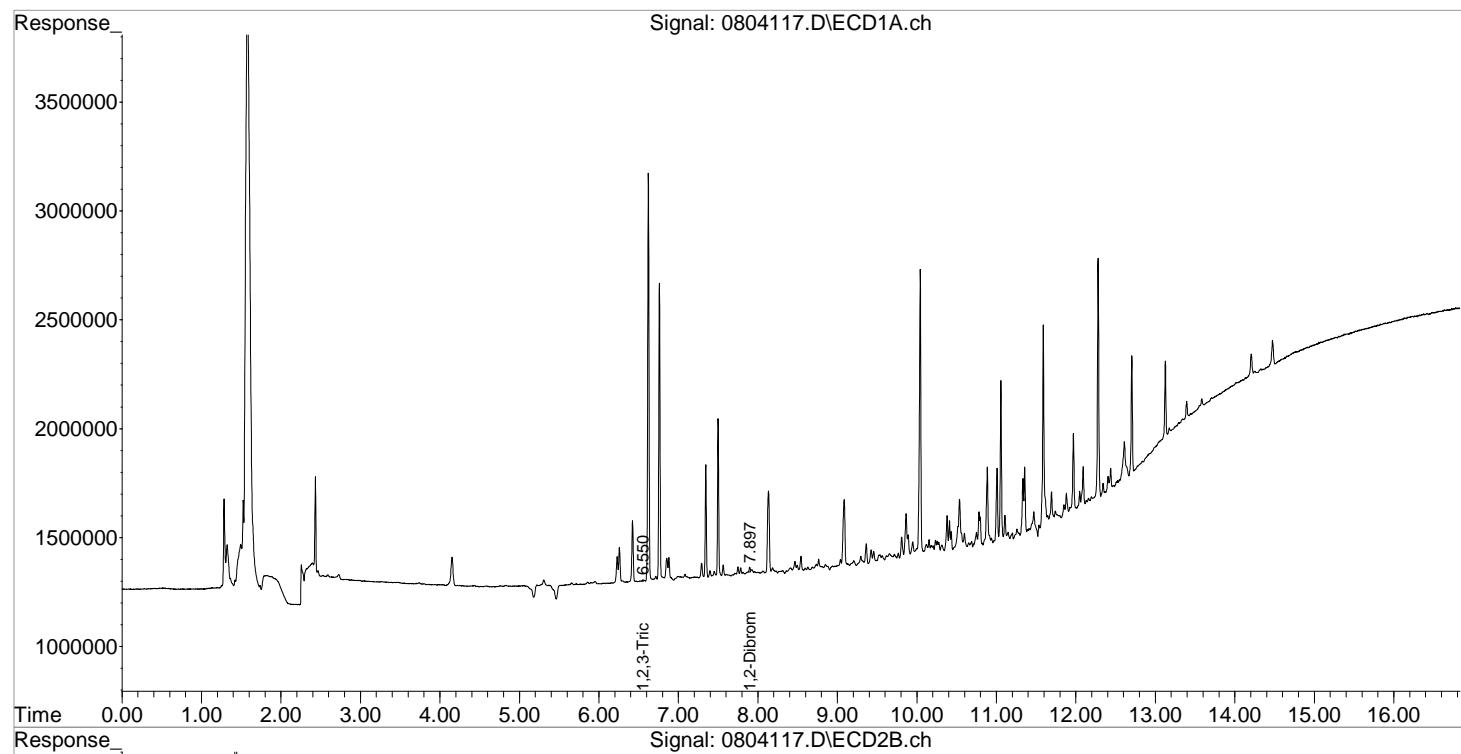
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.550	0.000	6188	0	0.007	N.D. #
3) M 1,2-Dibro...	7.897	7.920f	21720	78964	0.001	0.040 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080416-504\0804117.D Vial: 15
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 17:22:28 Operator: BS
 Sample : KWG1606497-5MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:36:06 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\080516-504\0805005.D
Lab ID: K1608534-008
RunType: SMPL
Matrix: GROUND WATER

Date Acquired: 08/05/2016 08:34
Date Quantitated: 08/05/2016 15:50
Batch ID: KWG1606694
Analysis Method: 504.1
ListJoinID: LJ14875

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805005.D\0805005C.D
Lab ID: K1608534-008
RunType: SMPL
Matrix: GROUND WATER

Date Acquired: 08/05/2016 08:34
Date Quantitated: 08/05/2016 15:50
Batch ID: KWG1606694
Analysis Method: 504.1
ListJoinID: LJ14875

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805005.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805005.D\0805005.c.d	Vial:	23
Acq Date:	08/05/2016 08:34	Quant Date:	08/05/2016 15:50
Run Type:	SMPL	ListJoinID:	LJ14875
Lab ID:	K1608534-008	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	07/25/2016
Analysis Lot:	KWG1606694	Prep Lot:	KWG1606497
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1538503	Prep Date:	08/02/2016
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:	EPA Method 504.1	Report List ID:	LJ14875
MB Ref:	J:\GC33\DATA\080416-504\0804117.D	Method ID:	MJ1388
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L	ug/L	
1,2-Dibromoethane (EDB)	4.31 ^{-0.01}	4.16 ^{+0.02}	7542785	9890696	5.81	8.42	0.33	0.47	0.33
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.729 ml			Dilution:	1.0				
Prep Final Vol:	2 ml			Unit Factor:	1				

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805005.D Vial: 23
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:34:46 Operator: BS
 Sample : K1608534-008 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:40 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

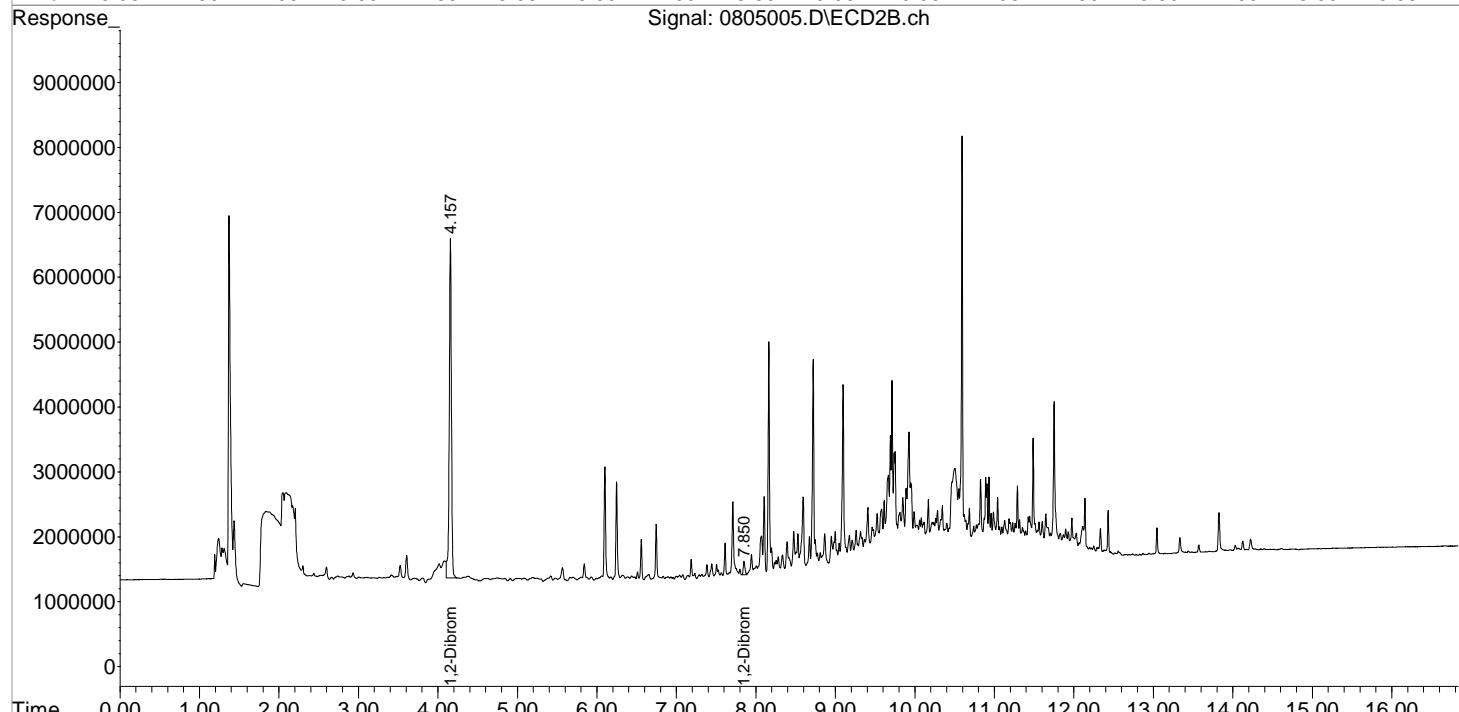
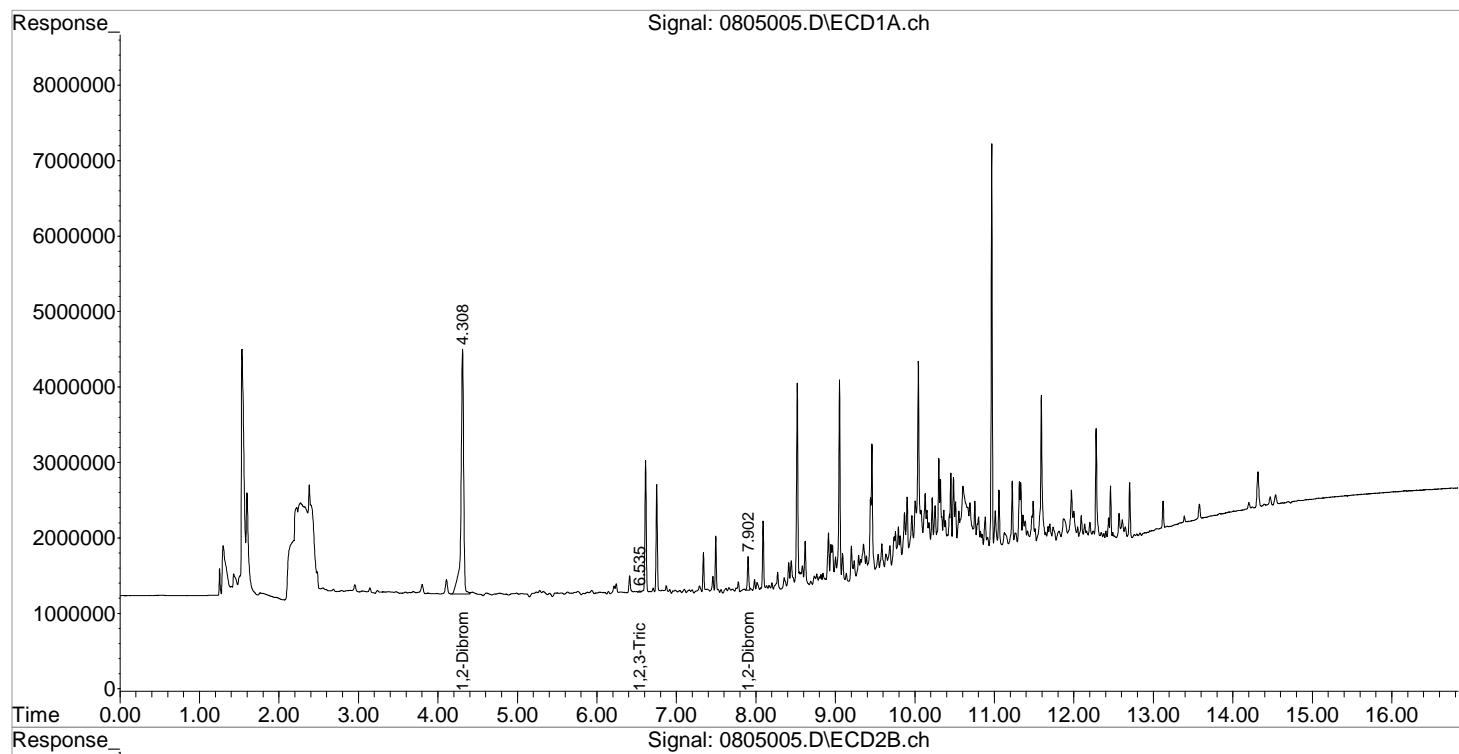
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.308	4.157	7542785	9890696	5.814	8.416 #
2) M 1,2,3-Triiodopropane	6.535	0.000	24653	0	0.103	N.D. #
3) M 1,2-Dibromoethane	7.902	7.850f	518374	311273	0.210	0.121 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805005.D Vial: 23
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:34:46 Operator: BS
 Sample : K1608534-008 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:40 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\080516-504\0805006.D
Lab ID: KWG1606497-1 -- K1608534-008MS
RunType: MS
Matrix: WATER

Date Acquired: 08/05/2016 08:58
Date Quantitated: 08/05/2016 15:53
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805006.D\0805006C.D
Lab ID: KWG1606497-1 -- K1608534-008MS
RunType: MS
Matrix: WATER

Date Acquired: 08/05/2016 08:58
Date Quantitated: 08/05/2016 15:53
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA		X
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	1,2-Dibromoethane (EDB)	13.66	NA	10	RO

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805006.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\080516-504\0805006.D\0805006c.d	Vial:	24	
Acq Date:	08/05/2016 08:58	Quant Date:	08/05/2016 15:53	
Run Type:	MS	MethodJoinID:	MJ1388	
Lab ID:	KWG1606497-1 -- K1608534-008MS	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/02/2016	
Analysis Lot:	KWG1606694	Prep Lot:	KWG1606497	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1538515	Prep Date:	08/02/2016	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853	
Title:		Method ID:	MJ1388	
MB Ref:	J:\GC33\DATA\080416-504\0804117.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.34 ^{+0.02}	4.17 ^{+0.03}	12747887	16062269m	9.79	13.66	0.537	0.749E	0.537
1,2,3-Trichloropropane	6.54 ^{+0.02}	6.33 ^{+0.01}	802090	1288961	4.18	5.34	0.229	0.293	0.229
1,2-Dibromo-3-chloropropan	7.92 ^{+0.01}	7.89 ^{+0.01}	9556828	12866699	4.02	4.52	0.220	0.248	0.220

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.477 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805006.D Vial: 24
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:58:20 Operator: BS
 Sample : K1608534-008MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:53:05 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

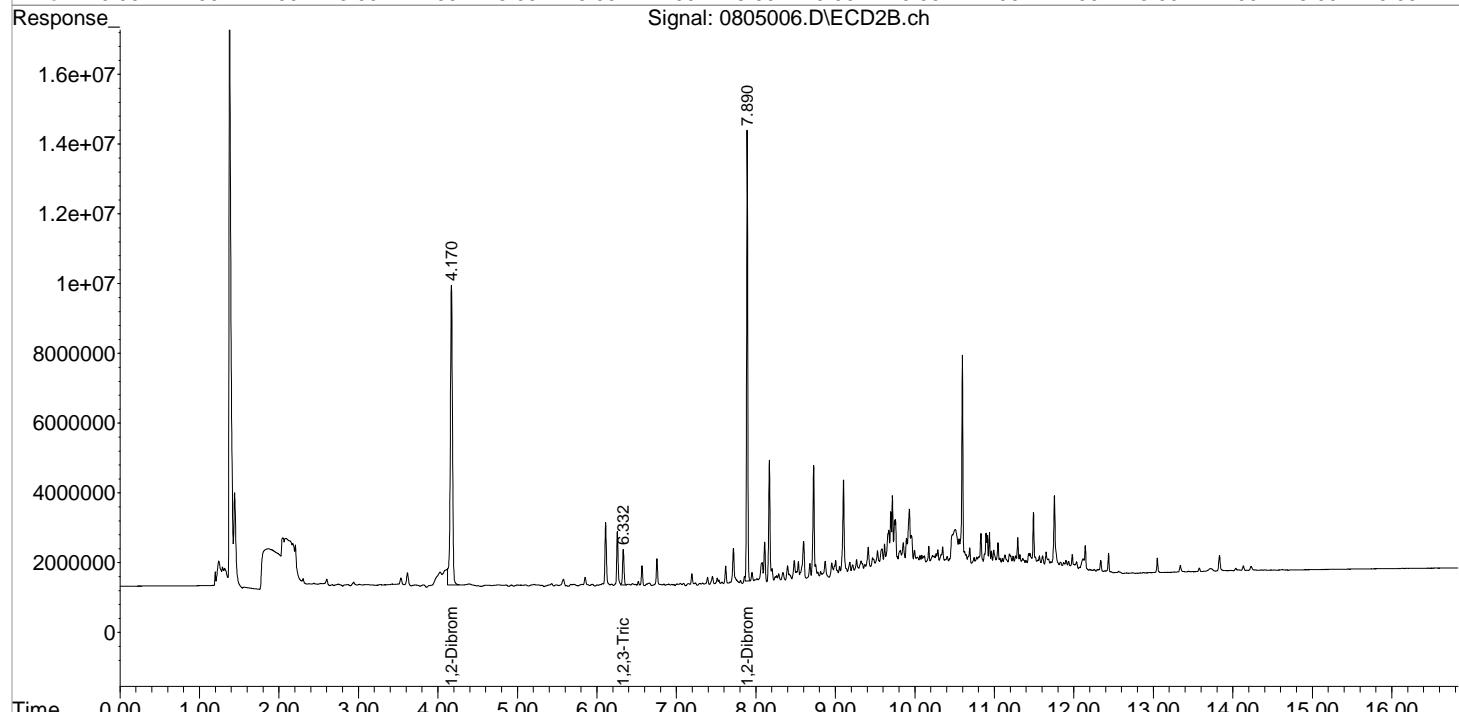
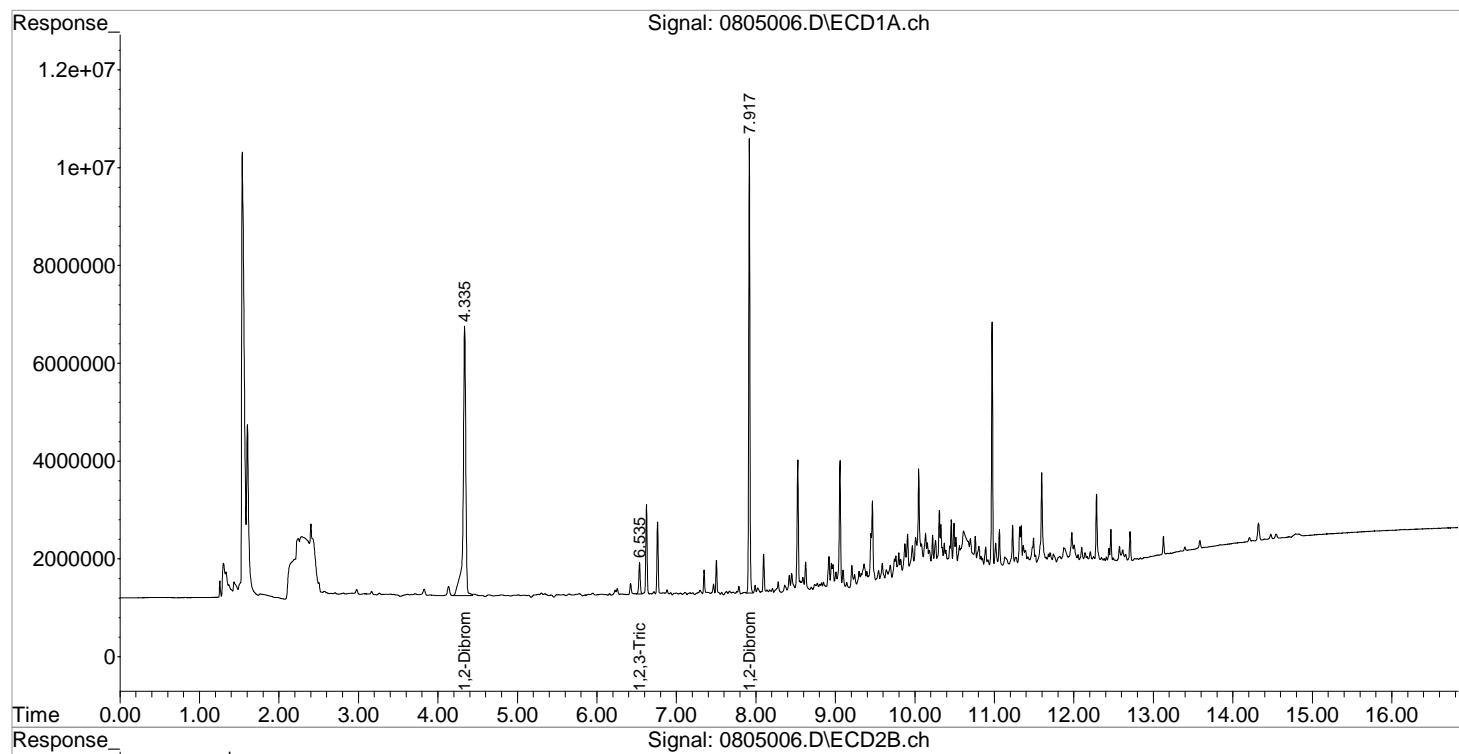
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.335	4.170	12747887	16062269	9.792	13.662m#
2) M 1,2,3-Triiodopropane	6.535	6.332	802090	1288961	4.176	5.339 #
3) M 1,2-Dibromoethane	7.917	7.890	9556828	12866699	4.015	4.524

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805006.D Vial: 24
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:58:20 Operator: BS
 Sample : K1608534-008MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:53:05 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

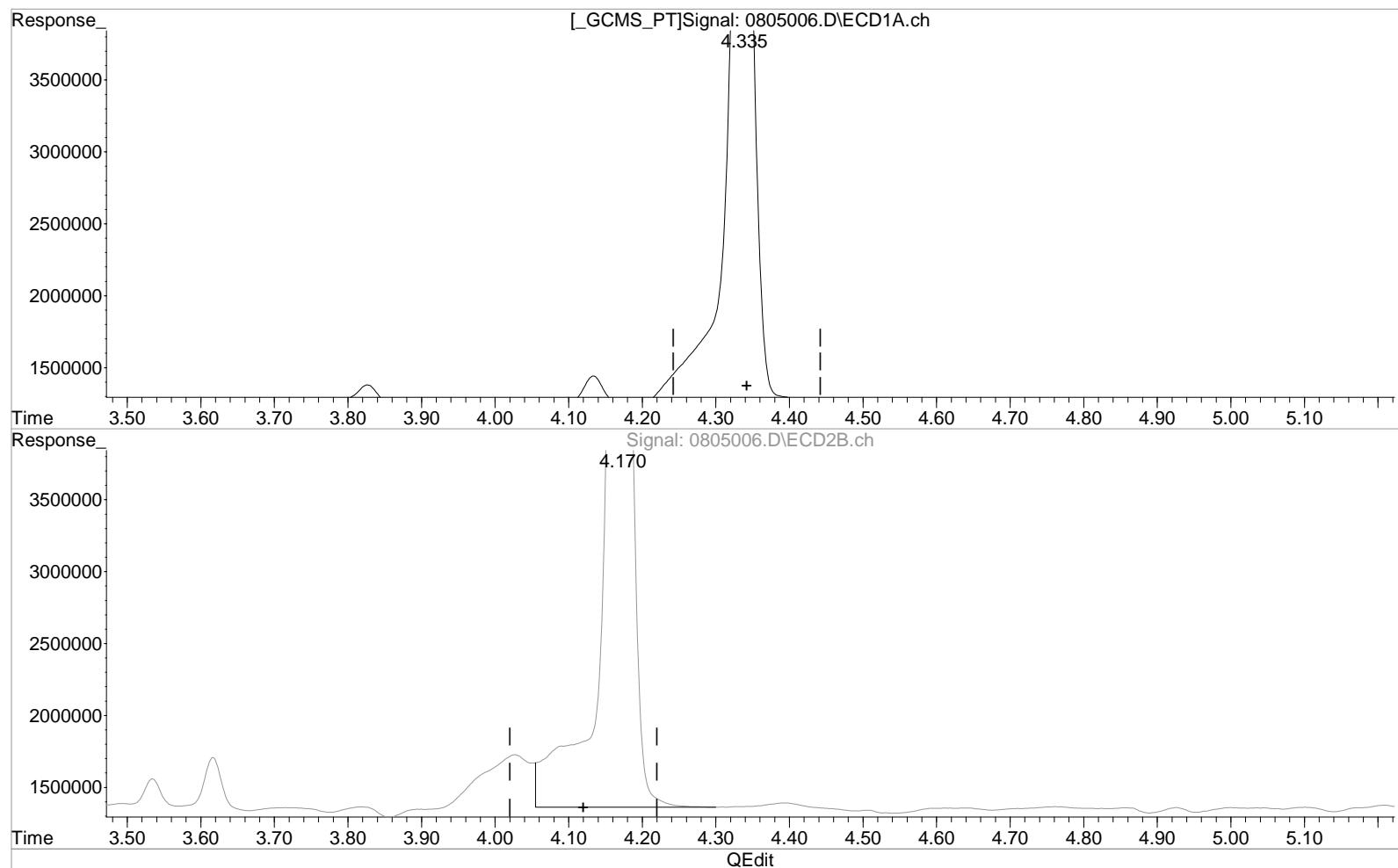
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080516-504\0805006.D Vial: 24
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:58:20 Operator: BS
 Sample : K1608534-008MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:42 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.335min 9.792 ppb

response 12747887

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

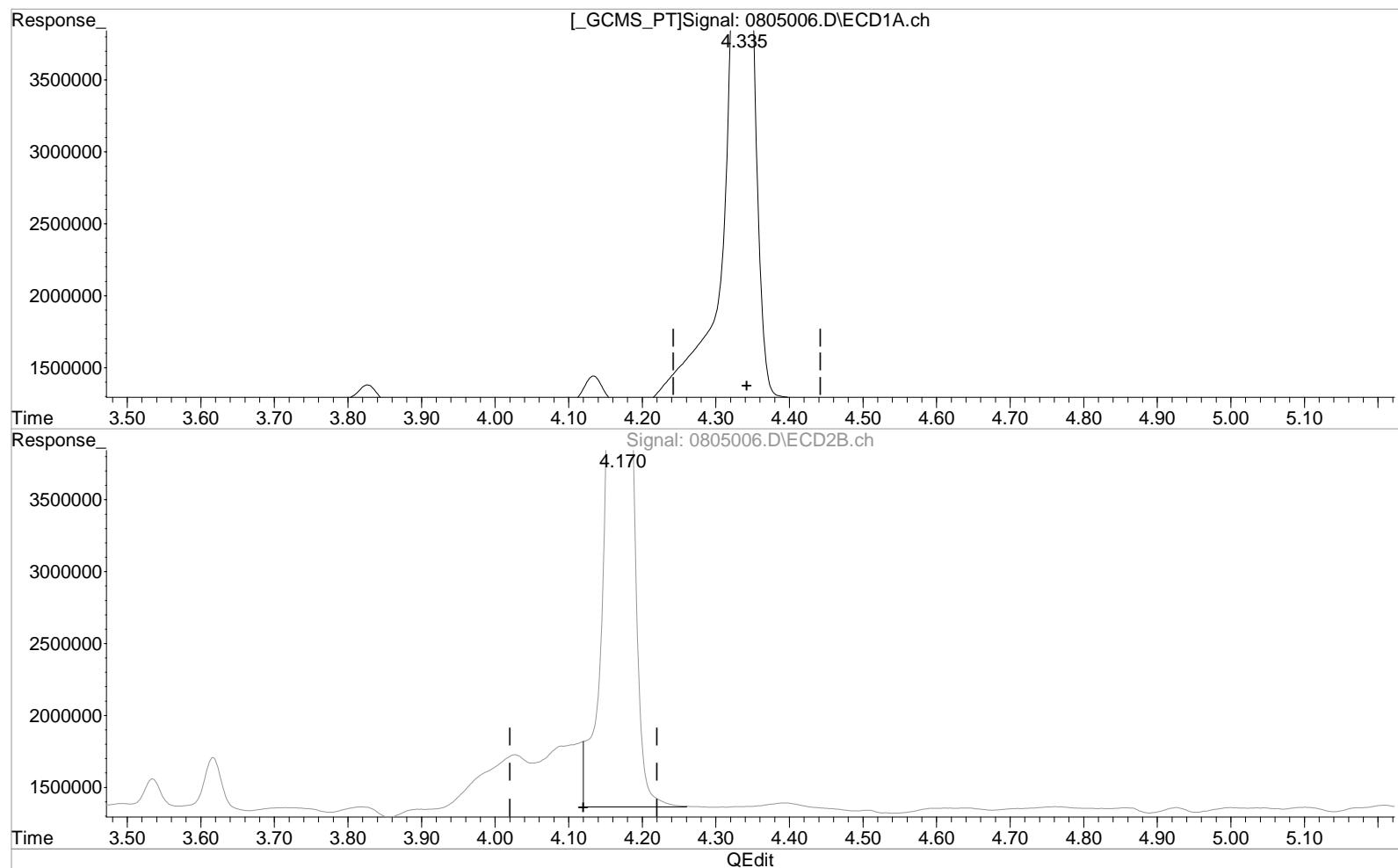
4.170min 15.009 ppb

response 17646332

Data File : J:\GC33\DATA\080516-504\0805006.D Vial: 24
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:58:20 Operator: BS
 Sample : K1608534-008MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:42 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.335min 9.792 ppb

response 12747887

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.170min 13.662 ppb m

response 16062269

Exception Report

Data File: J:\GC33\DATA\080516-504\0805007.D
Lab ID: KWG1606497-2 -- K1608534-008DMS
RunType: DMS
Matrix: WATER

Date Acquired: 08/05/2016 09:21
Date Quantitated: 08/05/2016 15:50
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805007.D\0805007C.D
Lab ID: KWG1606497-2 -- K1608534-008DMS
RunType: DMS
Matrix: WATER

Date Acquired: 08/05/2016 09:21
Date Quantitated: 08/05/2016 15:50
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA		X
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	1,2-Dibromoethane (EDB)	13.83	NA	10	RO

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805007.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805007.D\0805007c.d	Vial:	25
Acq Date:	08/05/2016 09:21	Quant Date:	08/05/2016 15:50
Run Type:	DMS	MethodJoinID:	MJ1388
Lab ID:	KWG1606497-2 -- K1608534-008DMS	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/02/2016

Analysis Lot:	KWG1606694	Prep Lot:	KWG1606497	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1538516	Prep Date:	08/02/2016	

Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:			
MB Ref:	J:\GC33\DATA\080416-504\0804117.D	Method ID:	MJ1388
		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.32	4.15 ^{+0.01}	12109389	16265056	9.30	13.83	0.529	0.787E	0.529
1,2,3-Trichloropropane	6.53 ^{+0.01}	6.32	781731	1290880	4.07	5.35	0.232	0.304	0.232
1,2-Dibromo-3-chloropropan	7.91	7.88	9072991	13187639	3.81	4.64	0.217	0.264	0.217

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.144 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805007.D Vial: 25
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 09:21:55 Operator: BS
 Sample : K1608534-008DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:44 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M

Quant Title : 080416_504.M MJ480 CAL

QLast Update : Fri Aug 05 15:24:32 2016

Response via : Initial Calibration

DataAcq Meth:504-1.M

Volume Inj. : 5 uL

Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2

Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

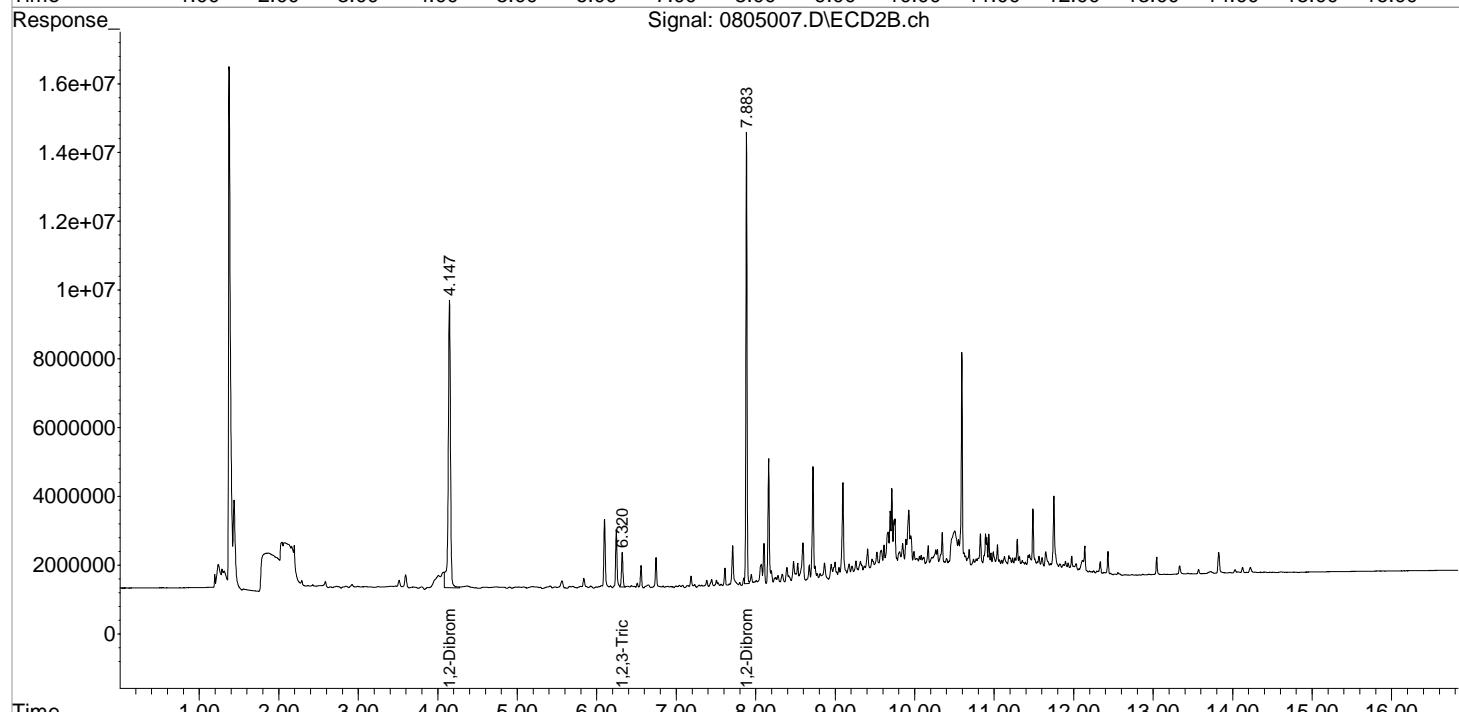
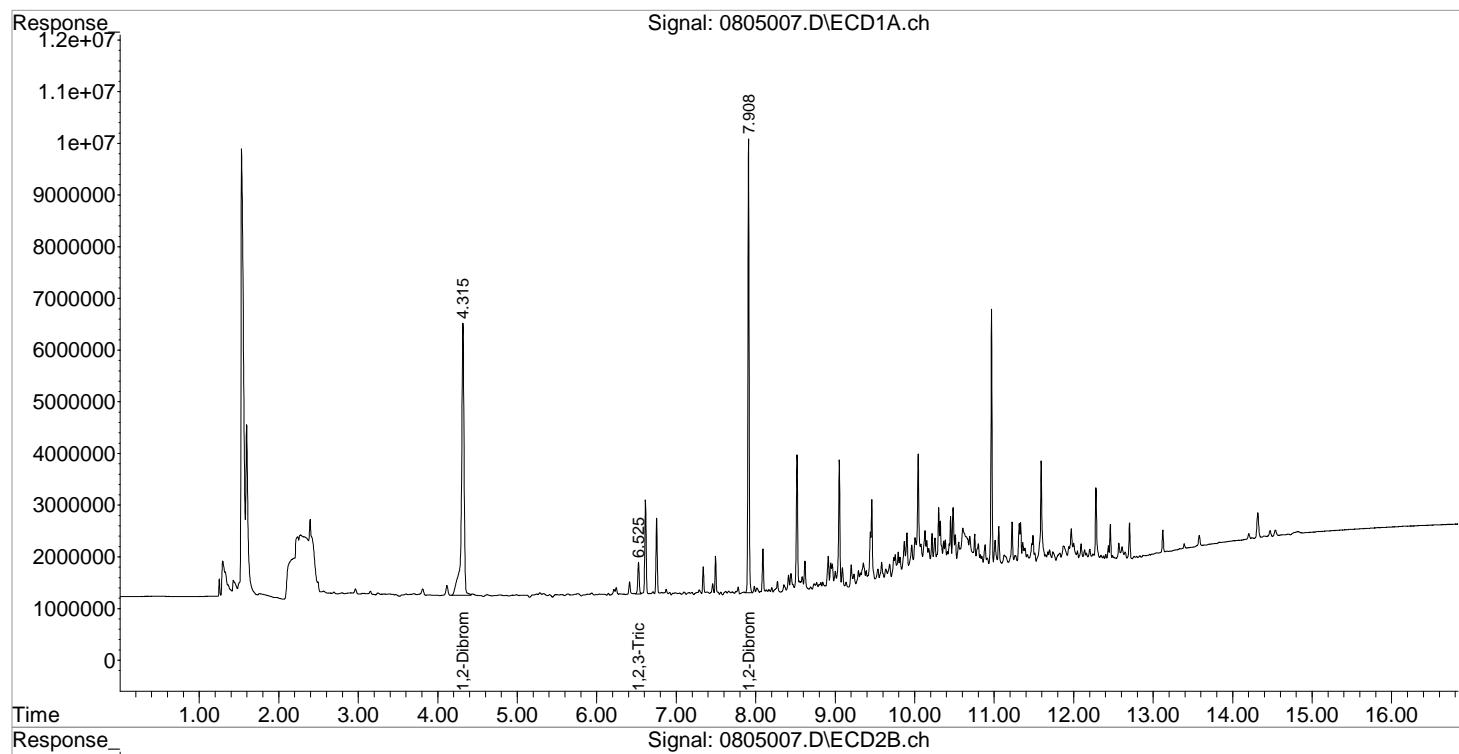
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.315	4.147	12109389	16265056	9.304	13.834 #
2) M 1,2,3-Triiodopropane	6.525	6.320	781731	1290880	4.069	5.347 #
3) M 1,2-Dibromoethane	7.908	7.883	9072991	13187639	3.812	4.637

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805007.D Vial: 25
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 09:21:55 Operator: BS
 Sample : K1608534-008DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:44 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\080416-504\0804115.D
Lab ID: KWG1606497-3
RunType: LCS
Matrix: WATER

Date Acquired: 08/04/2016 16:35
Date Quantitated: 08/05/2016 15:35
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080416-504\0804115.D\0804115C.D
Lab ID: KWG1606497-3
RunType: LCS
Matrix: WATER

Date Acquired: 08/04/2016 16:35
Date Quantitated: 08/05/2016 15:35
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080416-504\0804115.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\080416-504\0804115.D\0804115c.d	Vial:	13	
Acq Date:	08/04/2016 16:35	Quant Date:	08/05/2016 15:35	
Run Type:	LCS	MethodJoinID:	MJ1388	
Lab ID:	KWG1606497-3	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/02/2016	
Analysis Lot:	KWG1606683	Prep Lot:	KWG1606497	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1538517	Prep Date:	08/02/2016	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853	
Title:		Method ID:	MJ1388	
MB Ref:	J:\GC33\DATA\080416-504\0804117.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.35 ^{-0.01}	4.14 ^{+0.01}	5966964	5377543m	4.61	4.58	0.263	0.262	0.262
1,2,3-Trichloropropane	6.53 ^{-0.01}	6.32	873051	1247805	4.55	5.17	0.260	0.295	0.260
1,2-Dibromo-3-chloropropan	7.91	7.88 ^{-0.01}	10336197	12866663	4.34	4.52	0.248	0.259	0.248

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080416-504\0804115.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:35:07 Operator: BS
 Sample : KWG1606497-3LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:35:41 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

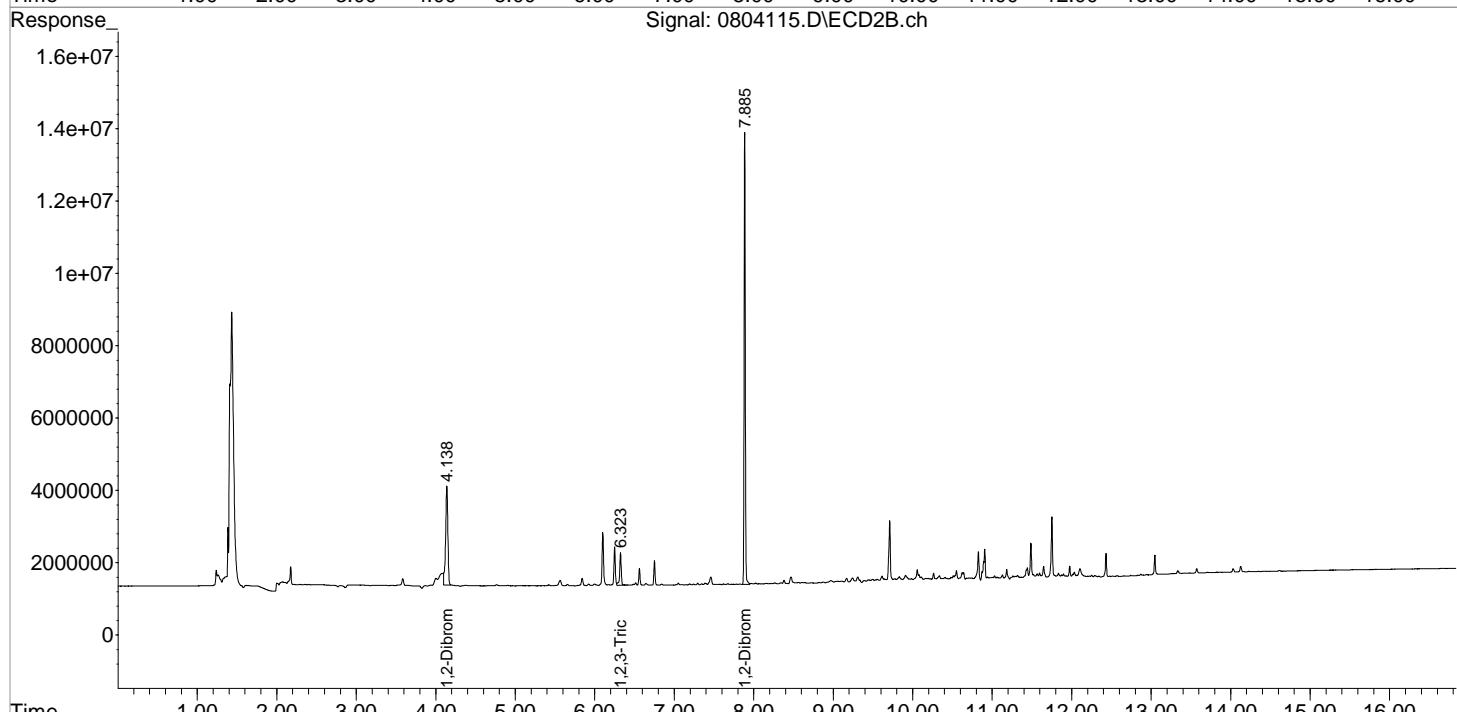
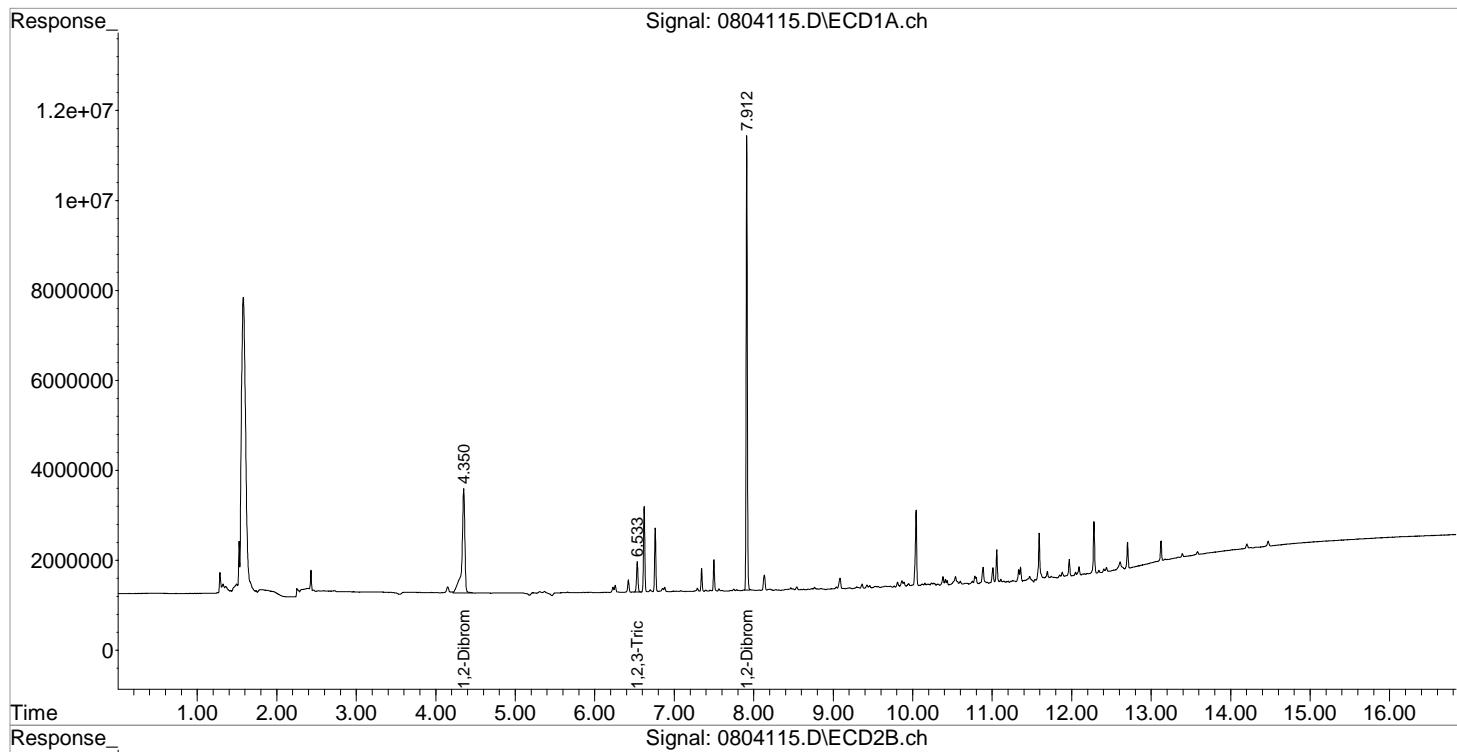
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.350	4.138	5966964	5377543	4.610	4.580m
2) M 1,2,3-Triiodopropane	6.533	6.323	873051	1247805	4.547	5.169
3) M 1,2-Dibromoethane	7.912	7.885	10336197	12866663	4.344	4.524

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080416-504\0804115.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:35:07 Operator: BS
 Sample : KWG1606497-3LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:35:41 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

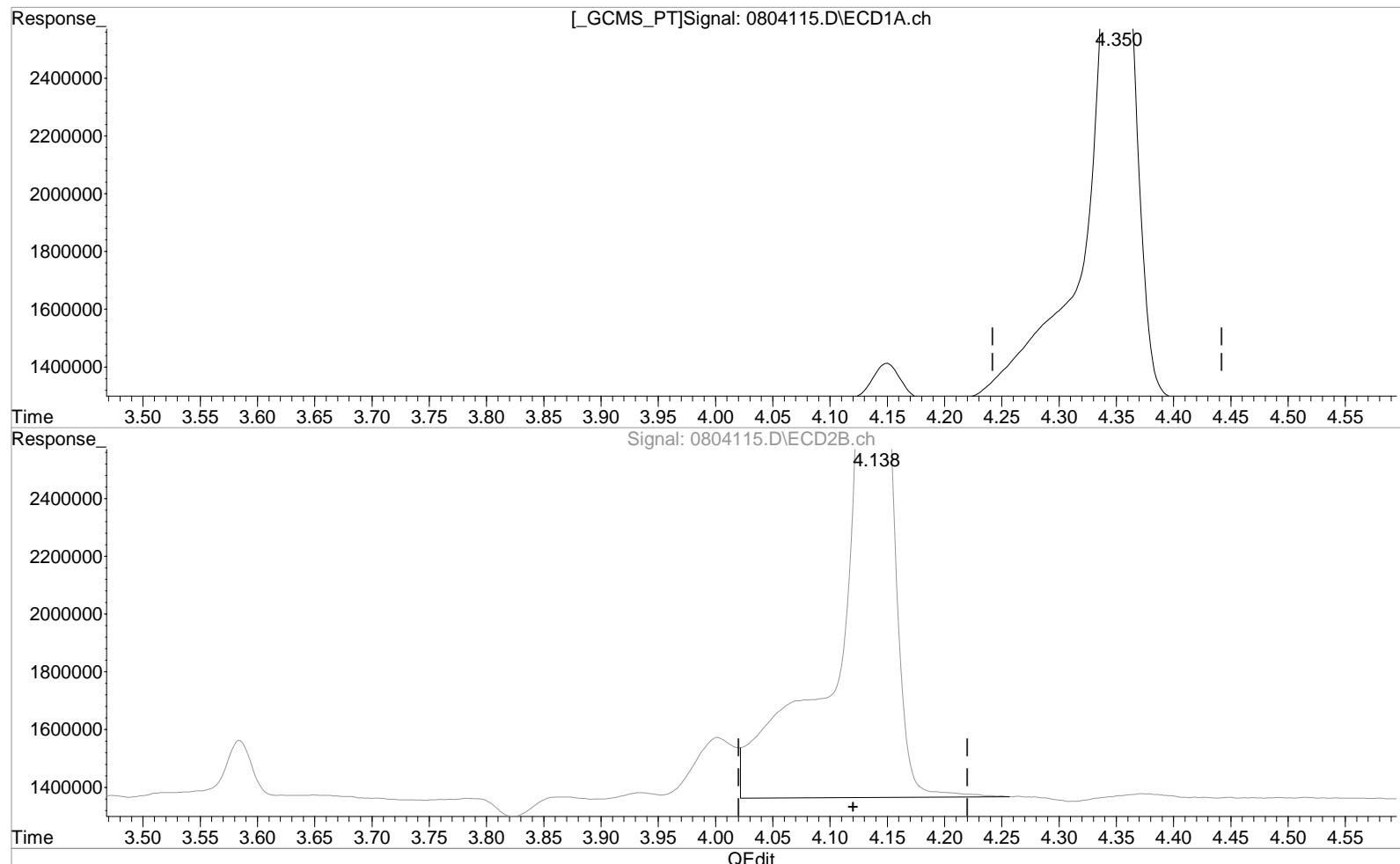
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080416-504\0804115.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:35:07 Operator: BS
 Sample : KWG1606497-3LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:29:56 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.350min 4.610 ppb

response 5966964

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.138min 5.794 ppb

response 6805728

Quantitation Report (Qedit)

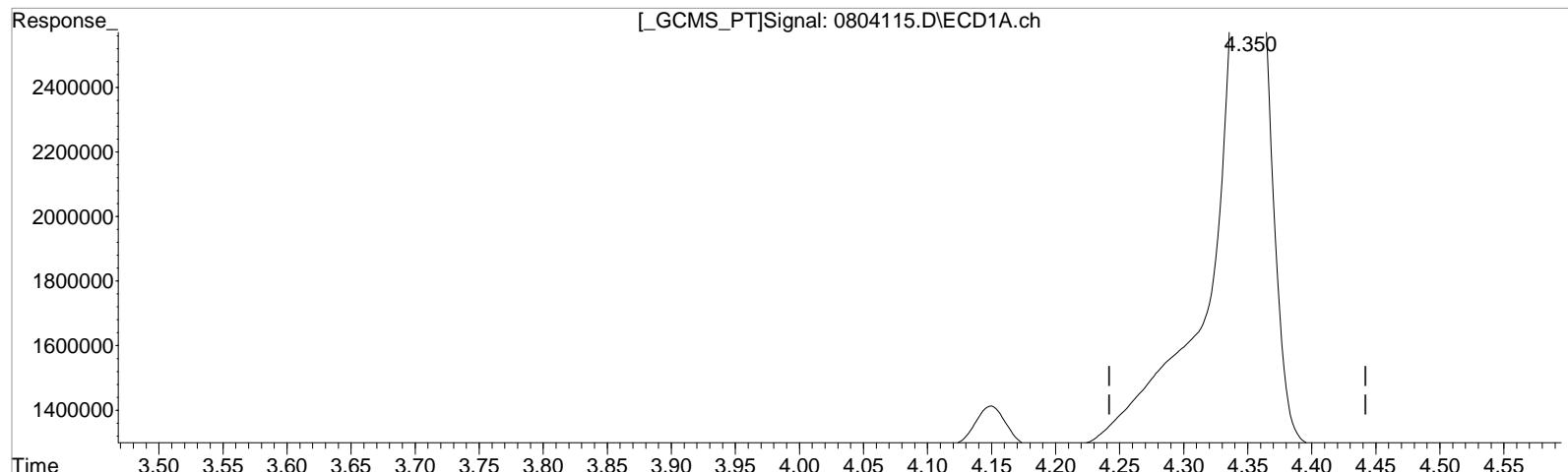
1st *TS* 08/05/16
 2nd *JEP* 08/17/16

Data File : J:\GC33\DATA\080416-504\0804115.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:35:07 Operator: BS
 Sample : KWG1606497-3LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:29:56 2016
 Quant Results File: 080416_504.RES

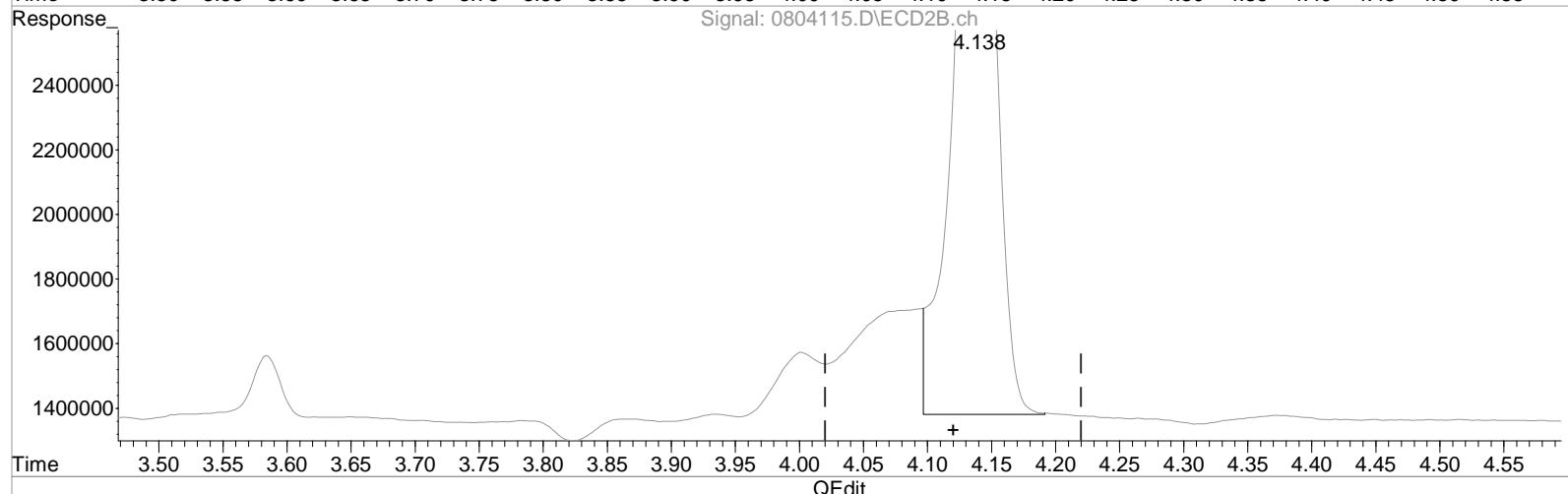
Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

[GCMS_PT]Signal: 0804115.D\ECD1A.ch



Signal: 0804115.D\ECD2B.ch



(1) 1,2-Dibromoethane (EDB) (M)

4.350min 4.610 ppb

response 5966964

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.138min 4.580 ppb m

response 5377543

Exception Report

Data File: J:\GC33\DATA\080416-504\0804116.D
Lab ID: KWG1606497-4
RunType: LCS
Matrix: WATER

Date Acquired: 08/04/2016 16:58
Date Quantitated: 08/05/2016 15:35
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080416-504\0804116.D\0804116C.D
Lab ID: KWG1606497-4
RunType: LCS
Matrix: WATER

Date Acquired: 08/04/2016 16:58
Date Quantitated: 08/05/2016 15:35
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080416-504\0804116.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\080416-504\0804116.D\0804116c.d	Vial:	14	
Acq Date:	08/04/2016 16:58	Quant Date:	08/05/2016 15:35	
Run Type:	LCS	MethodJoinID:	MJ1388	
Lab ID:	KWG1606497-4	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/02/2016	
Analysis Lot:	KWG1606683	Prep Lot:	KWG1606497	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1538518	Prep Date:	08/02/2016	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853	
Title:		Method ID:	MJ1388	
MB Ref:	J:\GC33\DATA\080416-504\0804117.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.35 ^{-0.01}	4.13	6048745	5387437m	4.67	4.59	0.267	0.262	0.262
1,2,3-Trichloropropane	6.54	6.32	885437	1149845	4.61	4.76	0.264	0.272	0.264
1,2-Dibromo-3-chloropropan	7.91	7.89	10392622	12302283	4.37	4.33	0.250	0.247	0.247

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount:	35.000 ml	Dilution:	1.0
Prep Final Vol:	2 ml	Unit Factor:	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080416-504\0804116.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:58:47 Operator: BS
 Sample : KWG1606497-4LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:35:55 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M

Quant Title : 080416_504.M MJ480 CAL

QLast Update : Fri Aug 05 15:24:32 2016

Response via : Initial Calibration

DataAcq Meth:504-1.M

Volume Inj. : 5 uL

Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2

Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

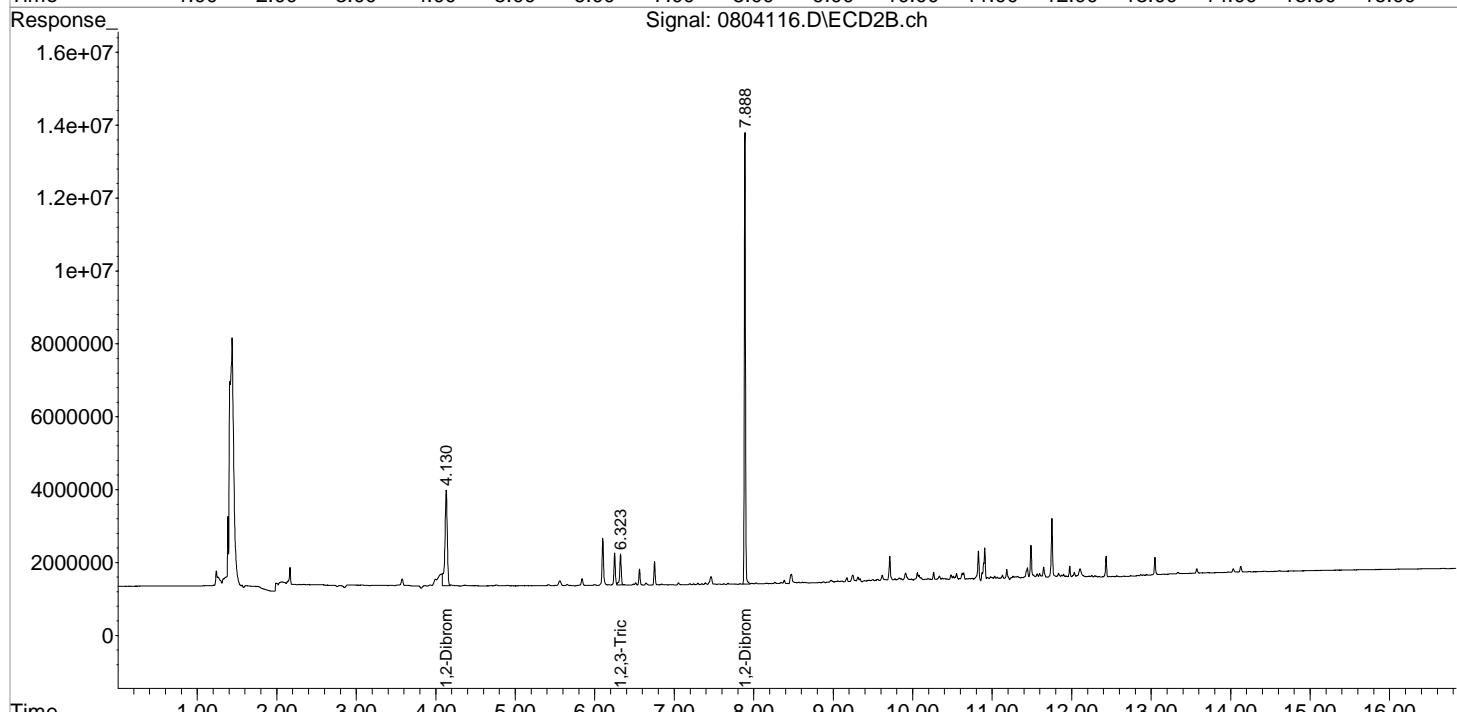
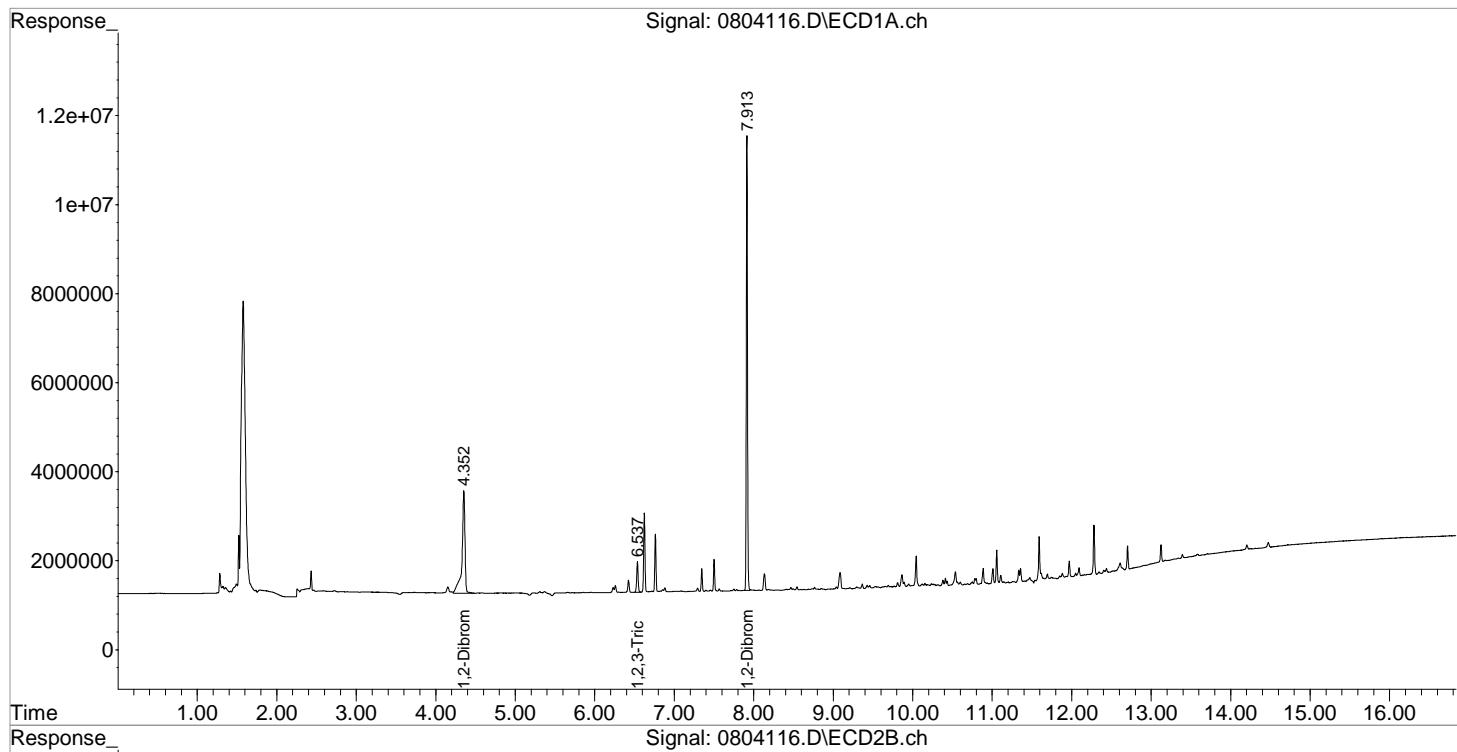
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.352	4.130	6048745	5387437	4.673	4.588m
2) M 1,2,3-Triiodopropane	6.537	6.323	885437	1149845	4.612	4.763
3) M 1,2-Dibromoethane	7.913	7.888	10392622	12302283	4.367	4.326

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080416-504\0804116.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:58:47 Operator: BS
 Sample : KWG1606497-4LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:35:55 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

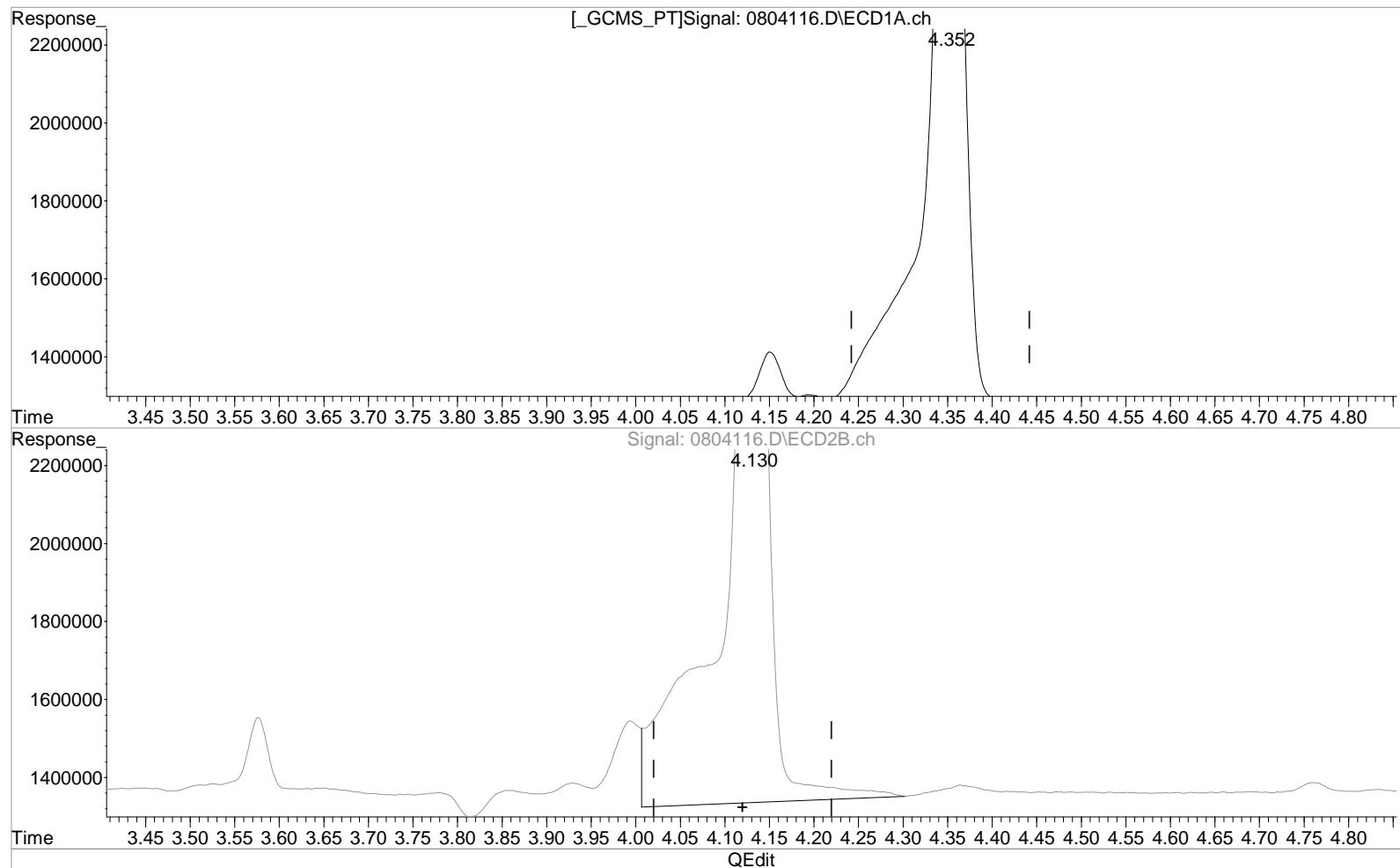
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080416-504\0804116.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:58:47 Operator: BS
 Sample : KWG1606497-4LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:29:58 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.352min 4.673 ppb

response 6048745

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

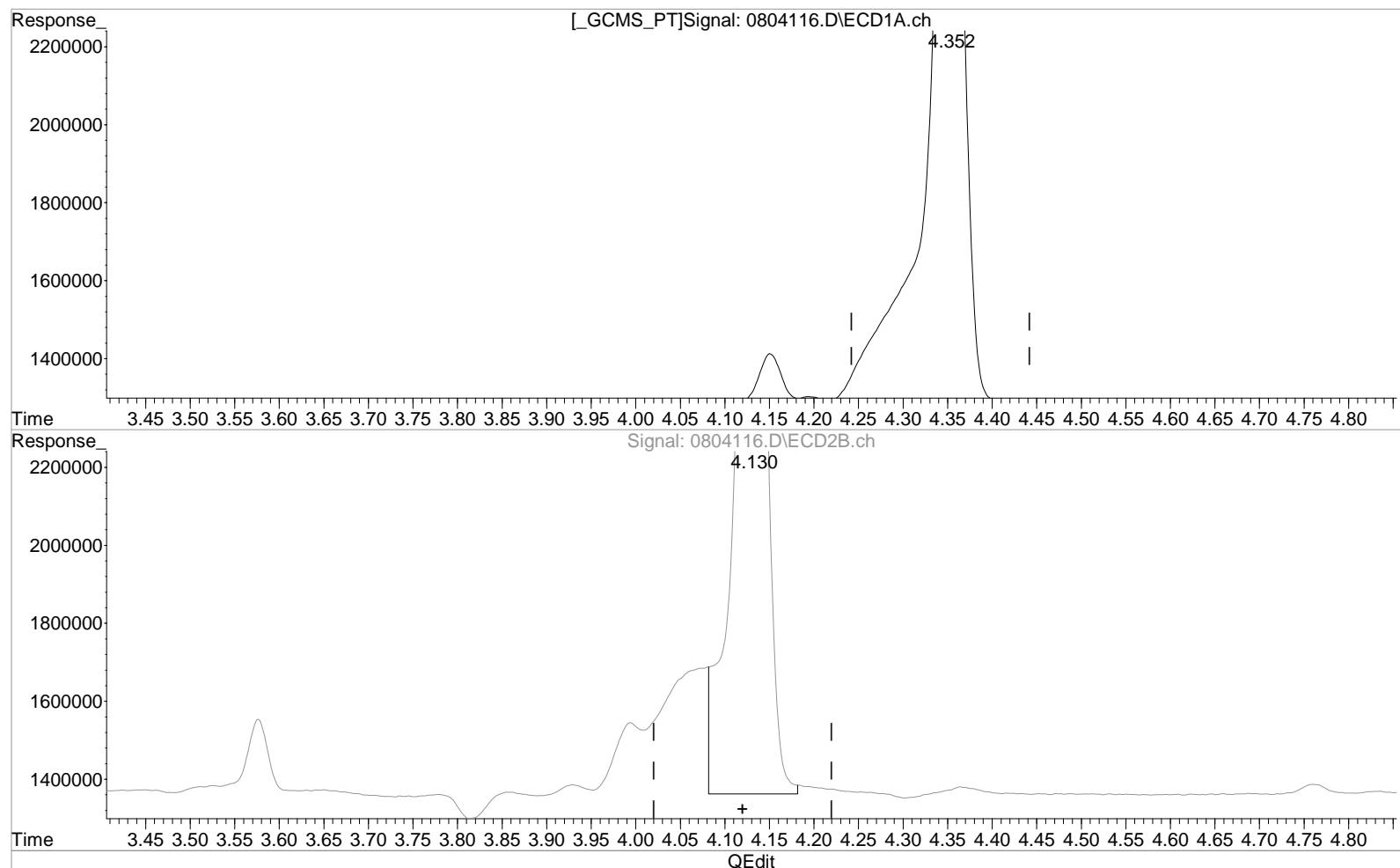
4.130min 6.001 ppb

response 7050317

Data File : J:\GC33\DATA\080416-504\0804116.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:58:47 Operator: BS
 Sample : KWG1606497-4LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:29:58 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.352min 4.673 ppb

response 6048745

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.130min 4.588 ppb m

response 5387437

Exception Report

Data File: J:\GC33\DATA\080416-504\0804113.D
Lab ID: KWG1606683-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/04/2016 15:47
Date Quantitated: 08/05/2016 15:35
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080416-504\0804113.D\0804113C.D
Lab ID: KWG1606683-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/04/2016 15:47
Date Quantitated: 08/05/2016 15:35
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080416-504\0804113.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080416-504\0804113.D\0804113c.d	Vial:	8
Acq Date:	08/04/2016 15:47	Quant Date:	08/05/2016 15:35
Run Type:	CCV	MethodJoinID:	MJ1388
Lab ID:	KWG1606683-1	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
		Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/05/2016
Analysis Lot:	KWG1606683	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:		ug/L		Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.36	4.13	1375458	1282985m	1.10	1.10			
1,2,3-Trichloropropane	6.54	6.32	220853	290016	1.13	1.20			
1,2-Dibromo-3-chloropropano	7.91	7.89	2602357	2883606	1.09	1.02			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080416-504\0804113.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:47:50 Operator: BS
 Sample : 080216 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:35:18 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M

Quant Title : 080416_504.M MJ480 CAL

QLast Update : Fri Aug 05 15:24:32 2016

Response via : Initial Calibration

DataAcq Meth:504-1.M

Volume Inj. : 5 uL

Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2

Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

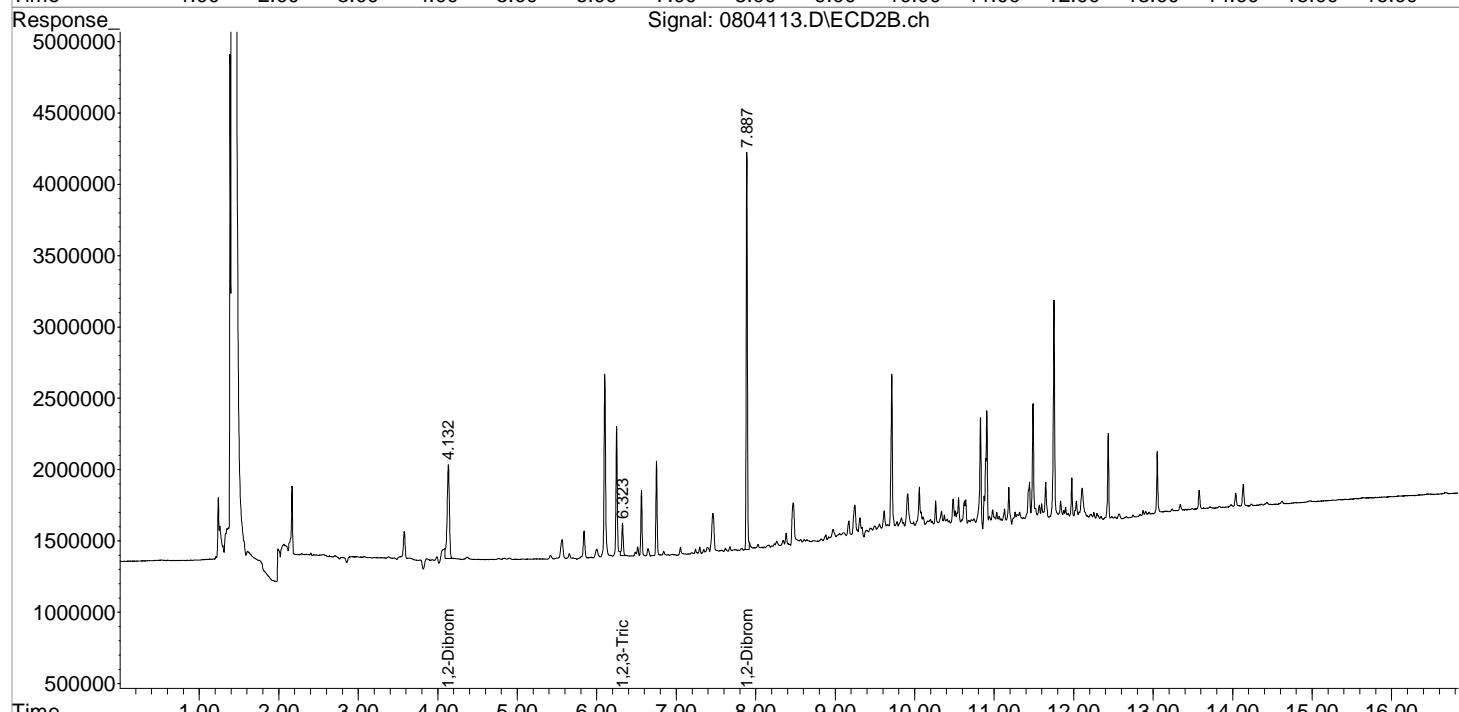
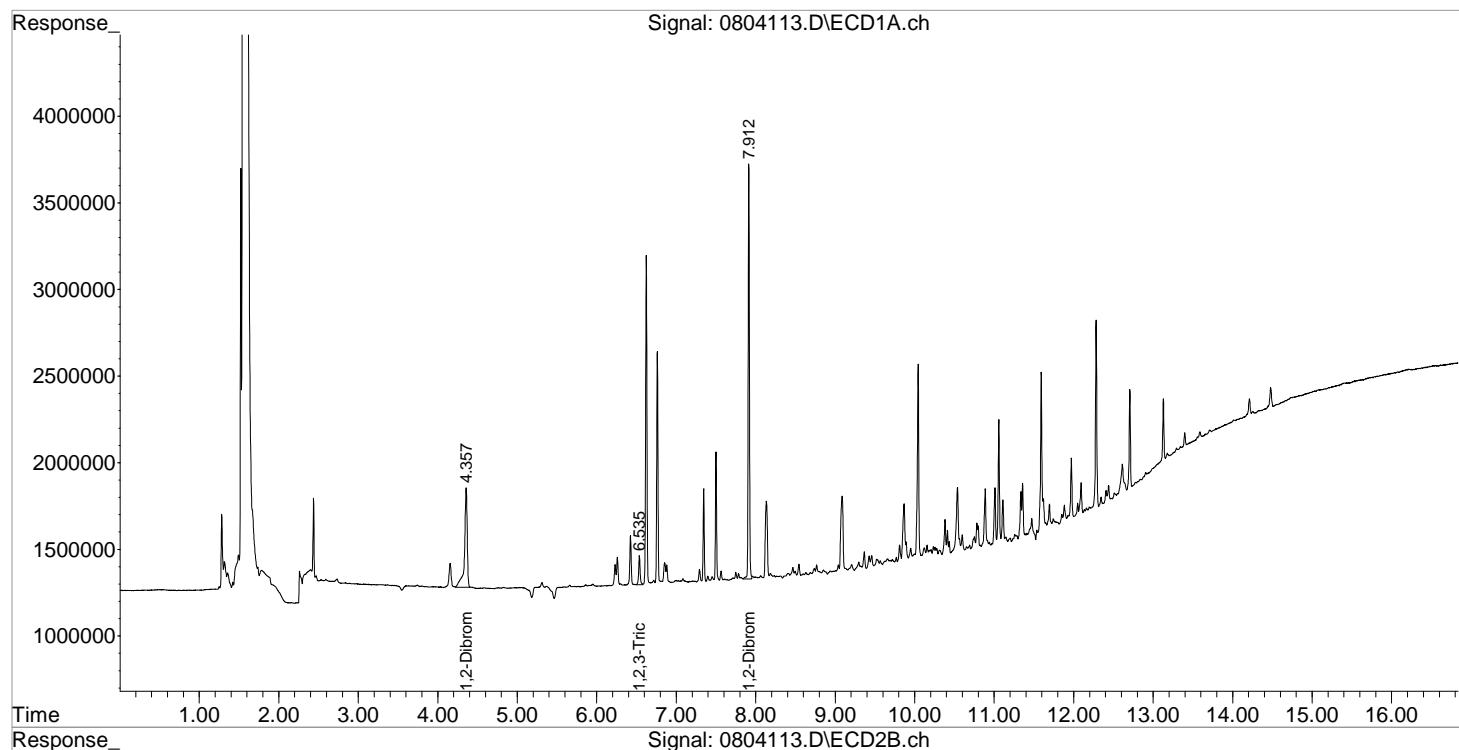
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.357	4.132	1375458	1282985	1.101	1.099m
2) M 1,2,3-Tribromoethane	6.535	6.323	220853	290016	1.131	1.199
3) M 1,2-Dibromoethane	7.912	7.887	2602357	2883606	1.087	1.023

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080416-504\0804113.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:47:50 Operator: BS
 Sample : 080216 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:35:18 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



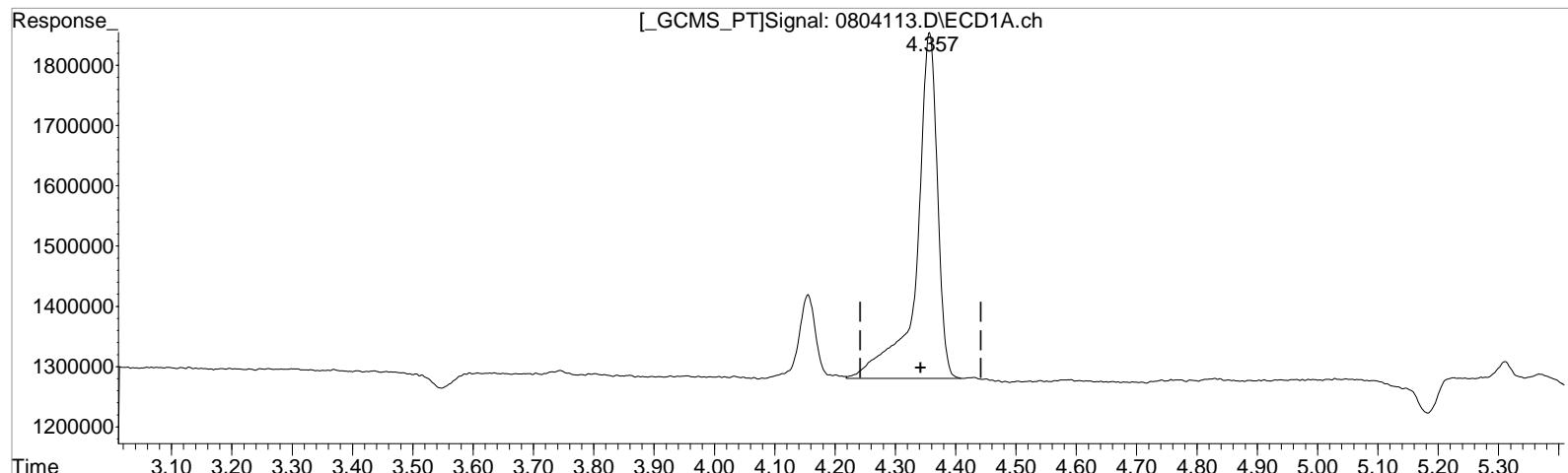
Data File : J:\GC33\DATA\080416-504\0804113.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:47:50 Operator: BS
 Sample : 080216 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:29:52 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

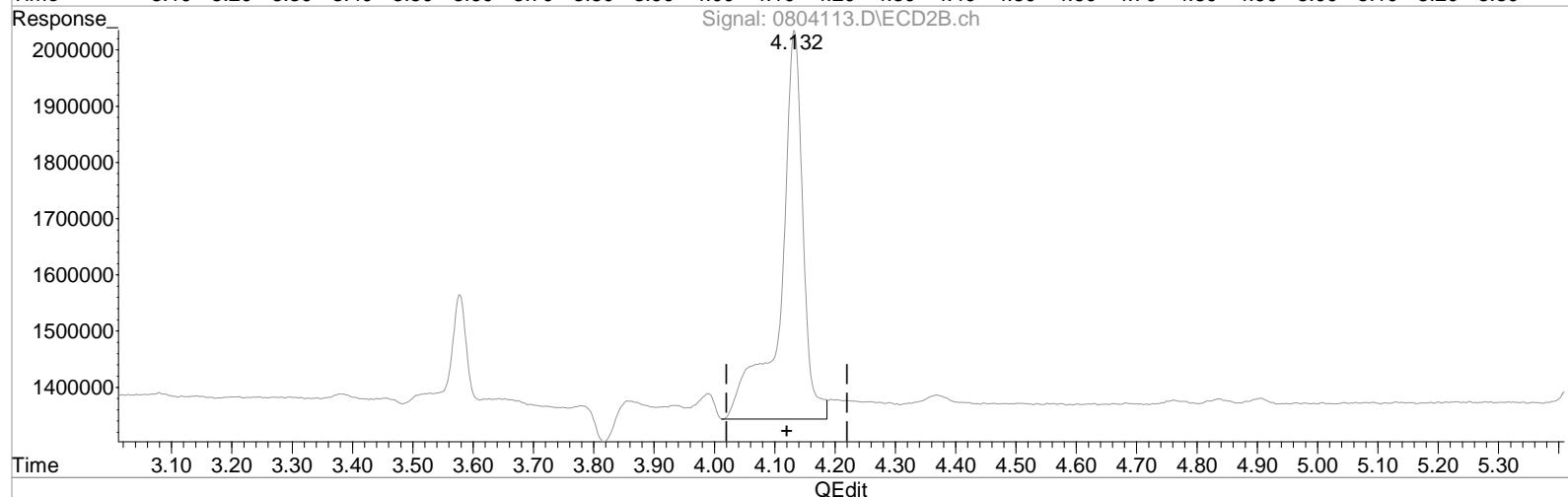
[GCMS_PT]Signal: 0804113.D\ECD1A.ch

4.357



Signal: 0804113.D\ECD2B.ch

4.132



(1) 1,2-Dibromoethane (EDB) (M)

4.357min 1.101 ppb

response 1375458

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.132min 1.531 ppb

response 1790805

Quantitation Report (Qedit)

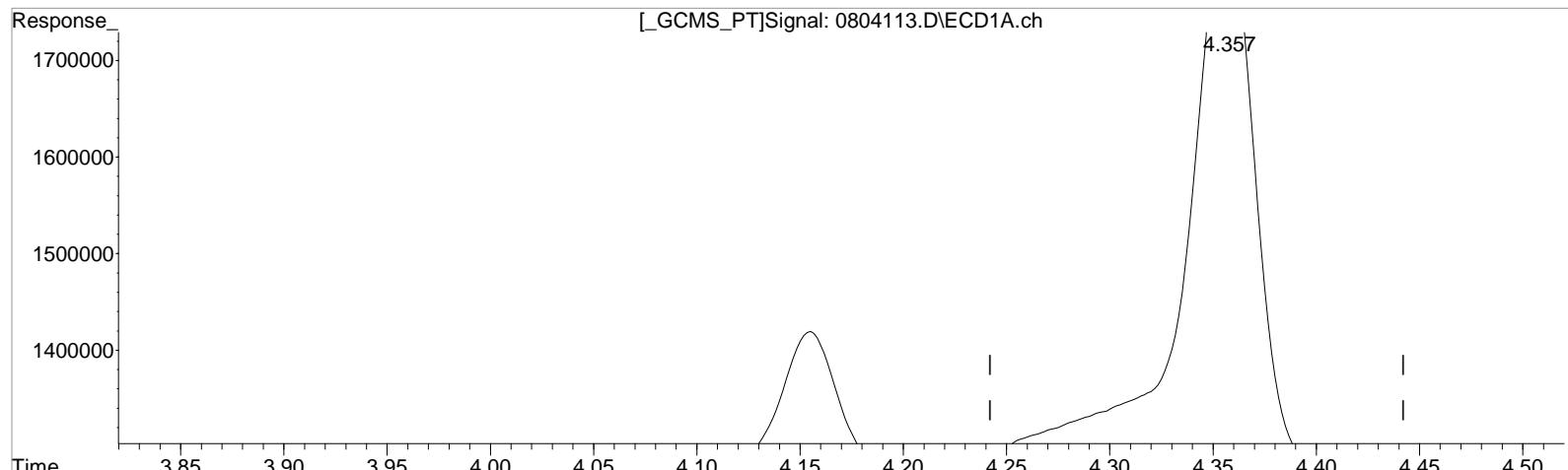
1st *TS* 08/05/16
 2nd *JEP* 08/17/16

Data File : J:\GC33\DATA\080416-504\0804113.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:47:50 Operator: BS
 Sample : 080216 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:29:52 2016
 Quant Results File: 080416_504.RES

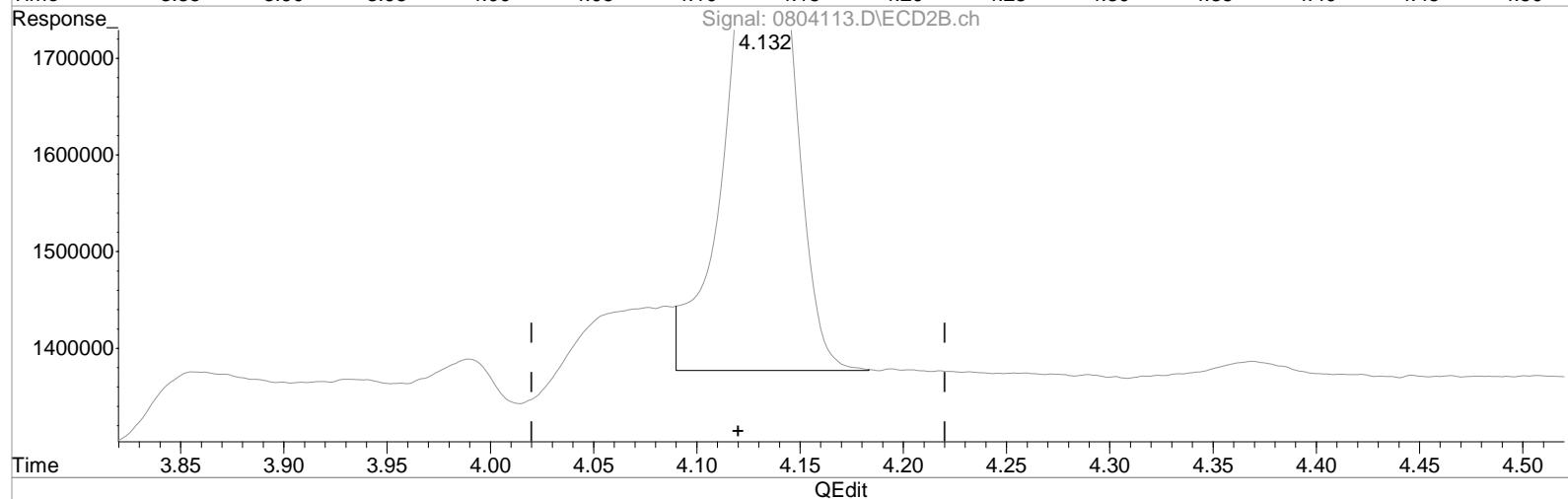
Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

[GCMS_PT]Signal: 0804113.D\ECD1A.ch



Signal: 0804113.D\ECD2B.ch



(1) 1,2-Dibromoethane (EDB) (M)

4.357min 1.101 ppb

response 1375458

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.132min 1.099 ppb m

response 1282985

Exception Report

Data File: J:\GC33\DATA\080416-504\0804125.D
Lab ID: KWG1606683-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/04/2016 20:31
Date Quantitated: 08/05/2016 15:38
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080416-504\0804125.D\0804125C.D
Lab ID: KWG1606683-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/04/2016 20:31
Date Quantitated: 08/05/2016 15:38
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080416-504\0804125.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080416-504\0804125.D\0804125.c.d	Vial:	9
Acq Date:	08/04/2016 20:31	Quant Date:	08/05/2016 15:38
Run Type:	CCV	MethodJoinID:	MJ1388
Lab ID:	KWG1606683-3	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/05/2016
Analysis Lot:	KWG1606683	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.35	4.13	4696237	4415773m	3.64	3.76			
1,2,3-Trichloropropane	6.54	6.33	736478	1012327	3.83	4.19			
1,2-Dibromo-3-chloropropan	7.91	7.89	8714307	10436957	3.66	3.67			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080416-504\0804125.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 20:31:24 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:38:35 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M

Quant Title : 080416_504.M MJ480 CAL

QLast Update : Fri Aug 05 15:24:32 2016

Response via : Initial Calibration

DataAcq Meth:504-1.M

Volume Inj. : 5 uL

Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2

Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

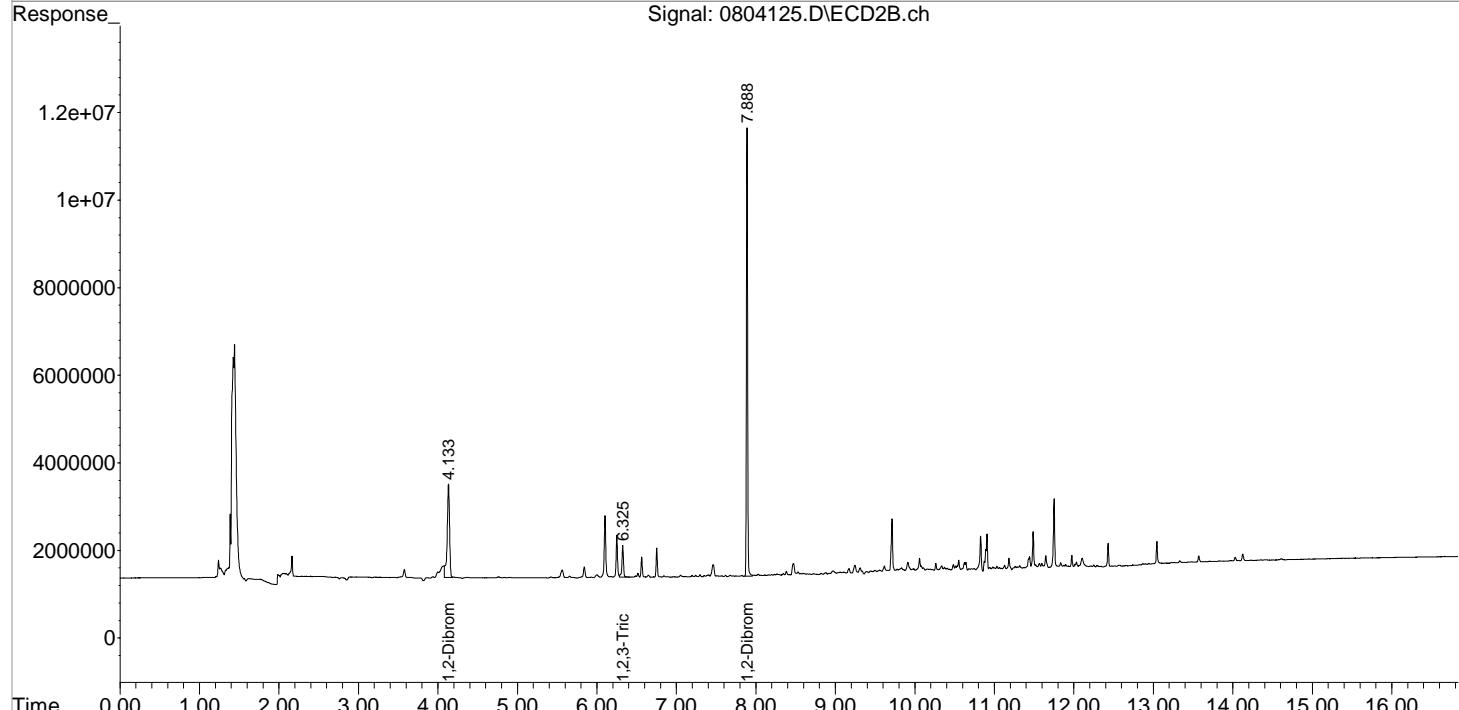
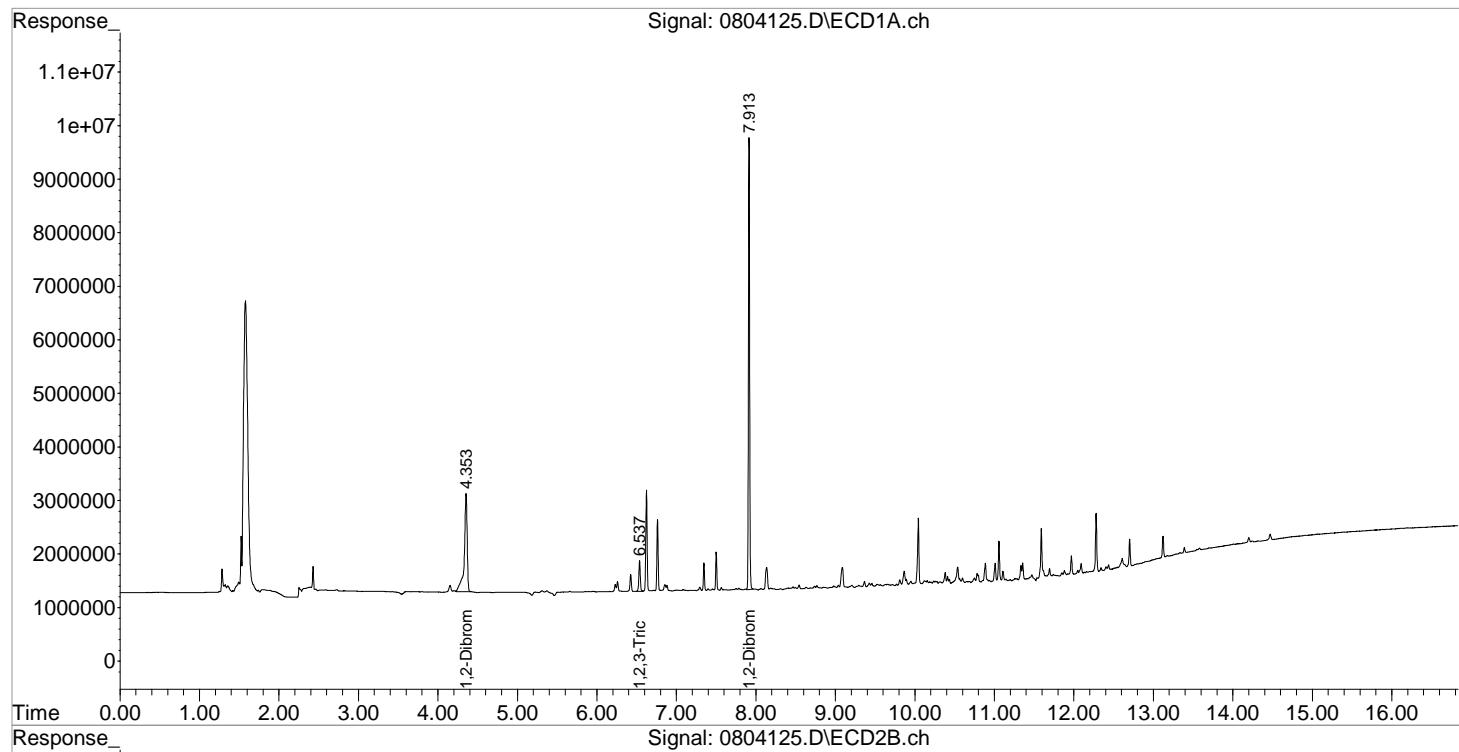
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.353	4.133	4696237	4415773	3.639	3.762m
2) M 1,2,3-Triiodopropane	6.537	6.325	736478	1012327	3.832	4.193
3) M 1,2-Dibromoethane	7.913	7.888	8714307	10436957	3.661	3.672

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080416-504\0804125.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 20:31:24 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:38:35 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

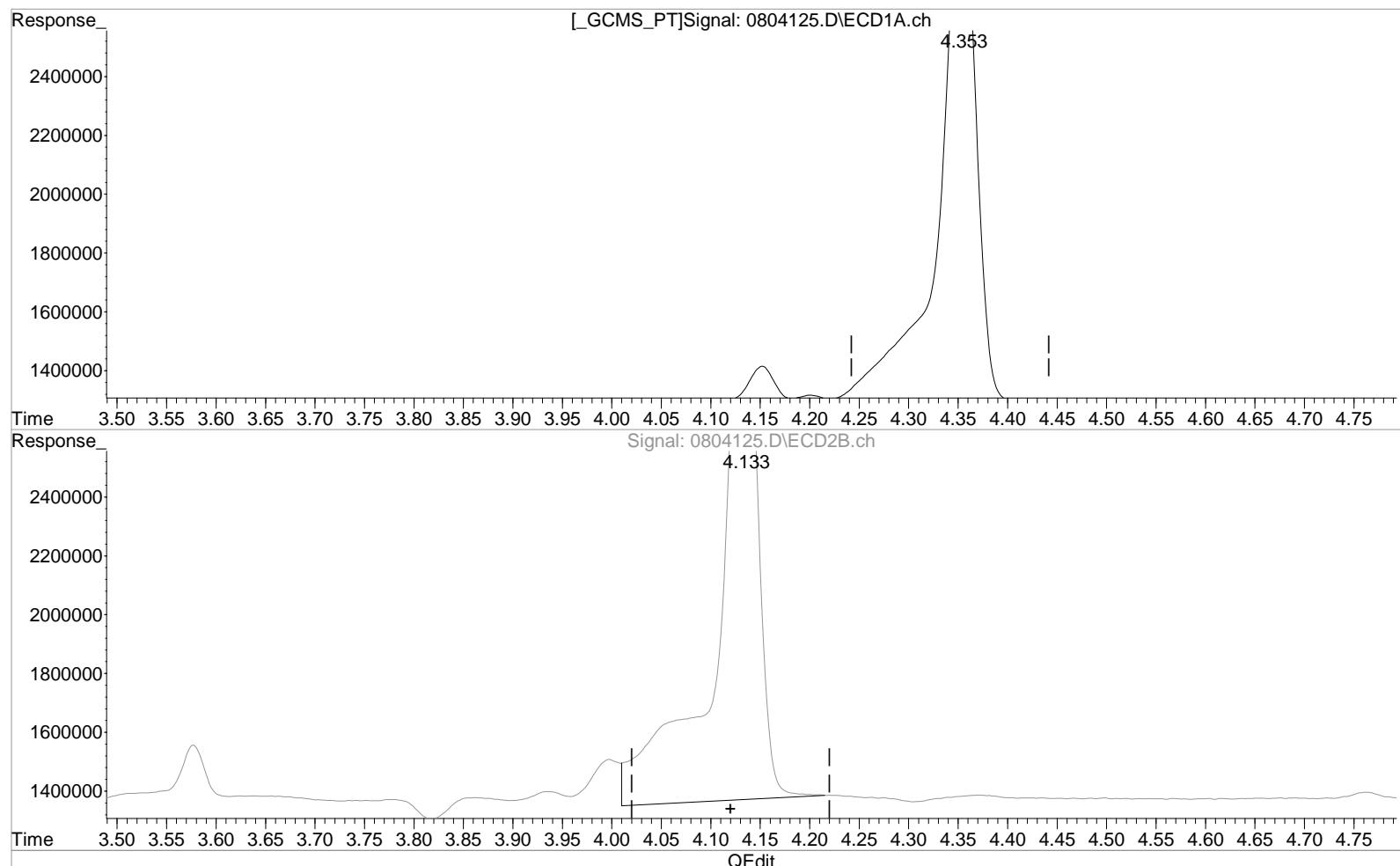
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080416-504\0804125.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 20:31:24 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:30:16 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.353min 3.639 ppb

response 4696237

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

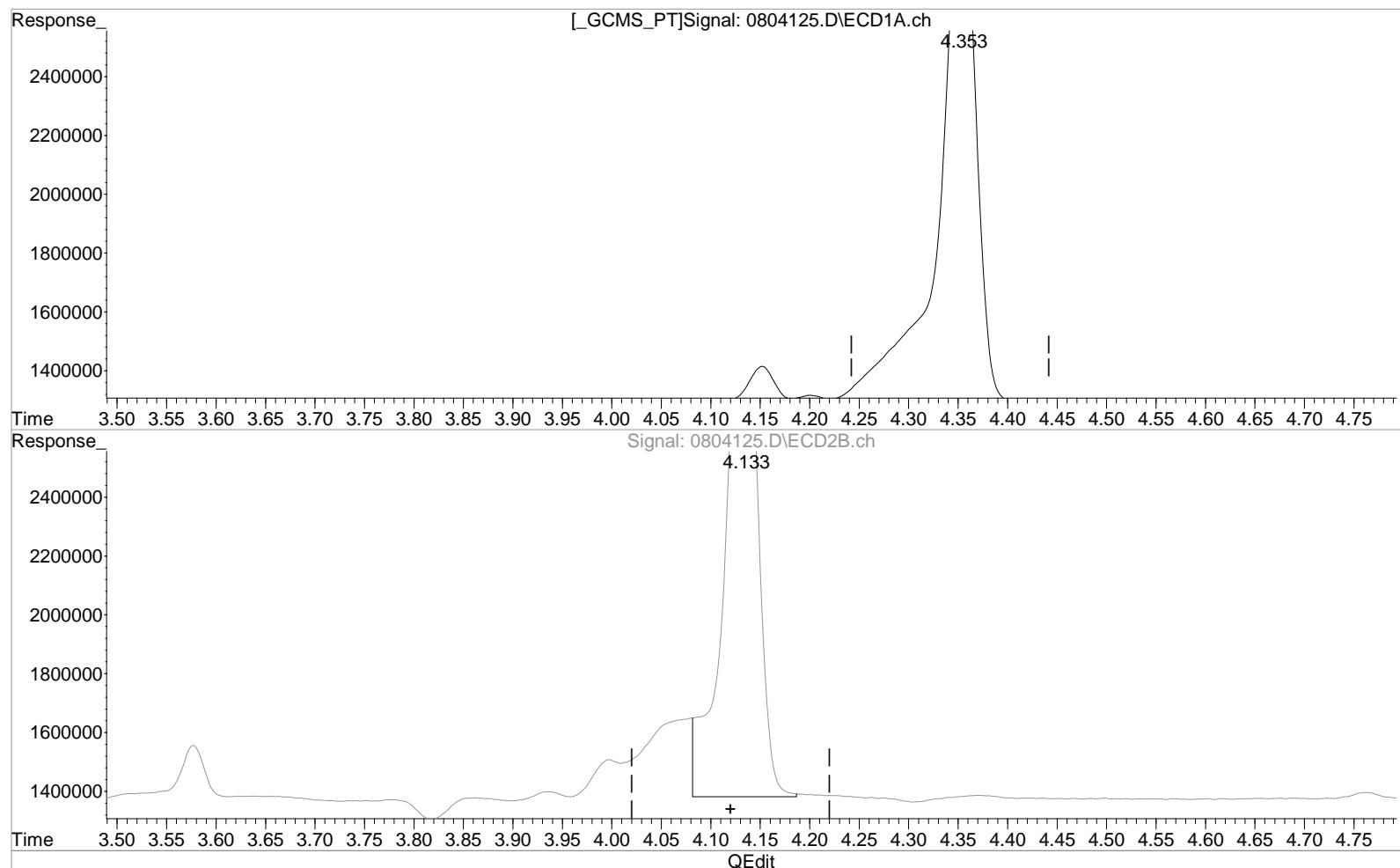
4.133min 4.672 ppb

response 5485877

Data File : J:\GC33\DATA\080416-504\0804125.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 20:31:24 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:30:16 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.353min 3.639 ppb

response 4696237

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.133min 3.762 ppb m

response 4415773

Exception Report

Data File: J:\GC33\DATA\080516-504\0805003.D
Lab ID: KWG1606694-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 07:47
Date Quantitated: 08/05/2016 15:52
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805003.D\0805003C.D
Lab ID: KWG1606694-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 07:47
Date Quantitated: 08/05/2016 15:52
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805003.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805003.D\0805003.c.d	Vial:	9
Acq Date:	08/05/2016 07:47	Quant Date:	08/05/2016 15:52
Run Type:	CCV	MethodJoinID:	MJ1388
Lab ID:	KWG1606694-1	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/08/2016
Analysis Lot:	KWG1606694	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.32	4.14	4507444	5252859m	3.50	4.47			
1,2,3-Trichloropropane	6.52	6.32	706083	1100051	3.67	4.56			
1,2-Dibromo-3-chloropropan	7.91	7.88	8644350	11850524	3.63	4.17			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805003.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 07:47:28 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:52:04 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M

Quant Title : 080416_504.M MJ480 CAL

QLast Update : Fri Aug 05 15:24:32 2016

Response via : Initial Calibration

DataAcq Meth:504-1.M

Volume Inj. : 5 uL

Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2

Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

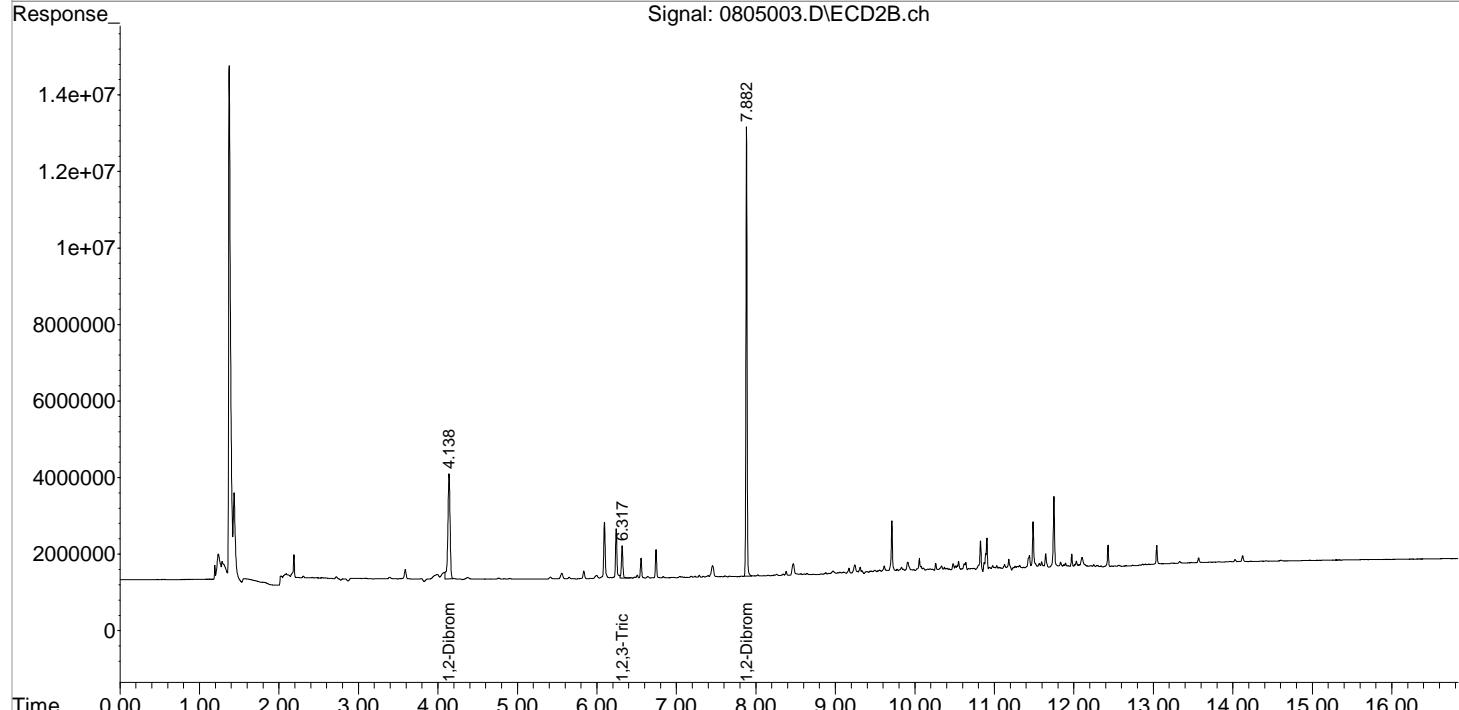
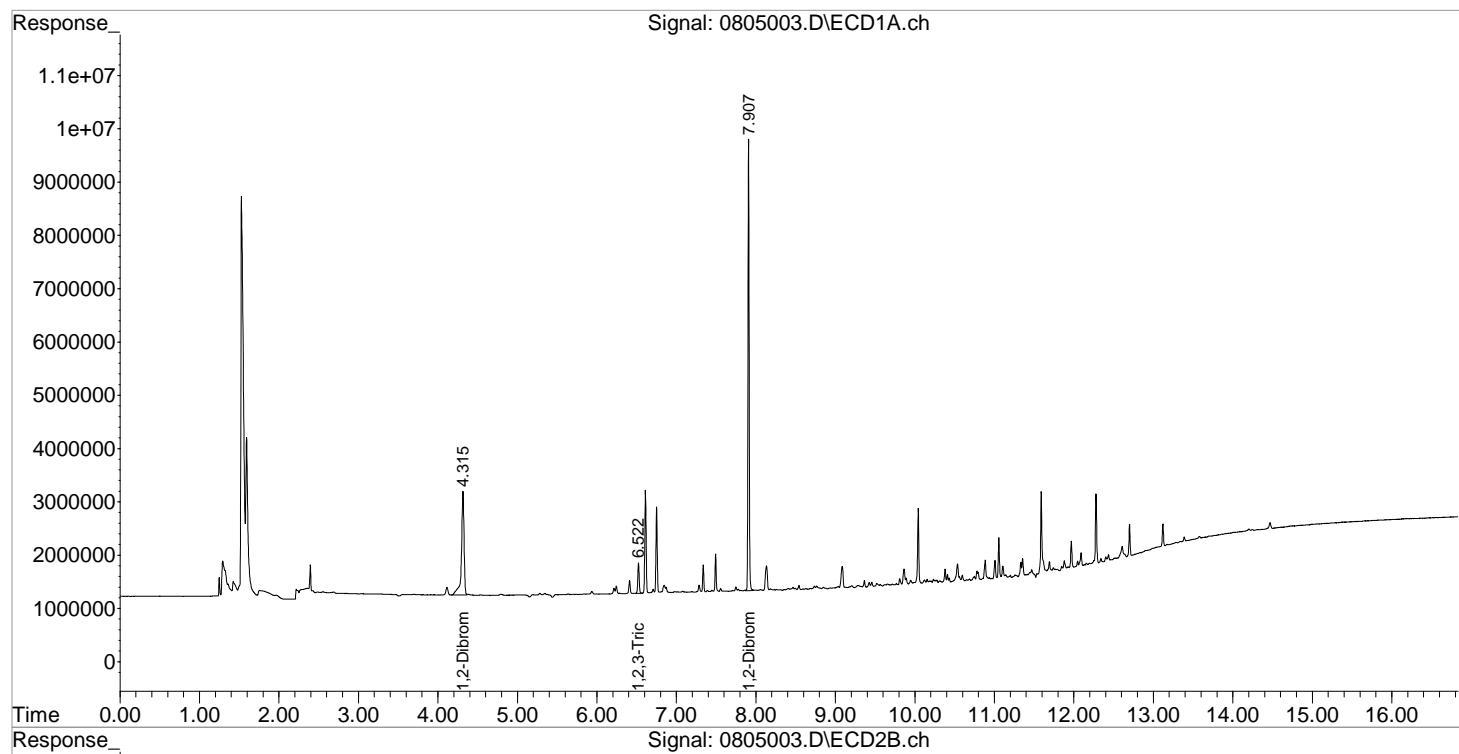
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.315	4.138	4507444	5252859	3.495	4.474m#
2) M 1,2,3-Triiodopropane	6.522	6.317	706083	1100051	3.673	4.556
3) M 1,2-Dibromoethane	7.907	7.882	8644350	11850524	3.631	4.168

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805003.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 07:47:28 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:52:04 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

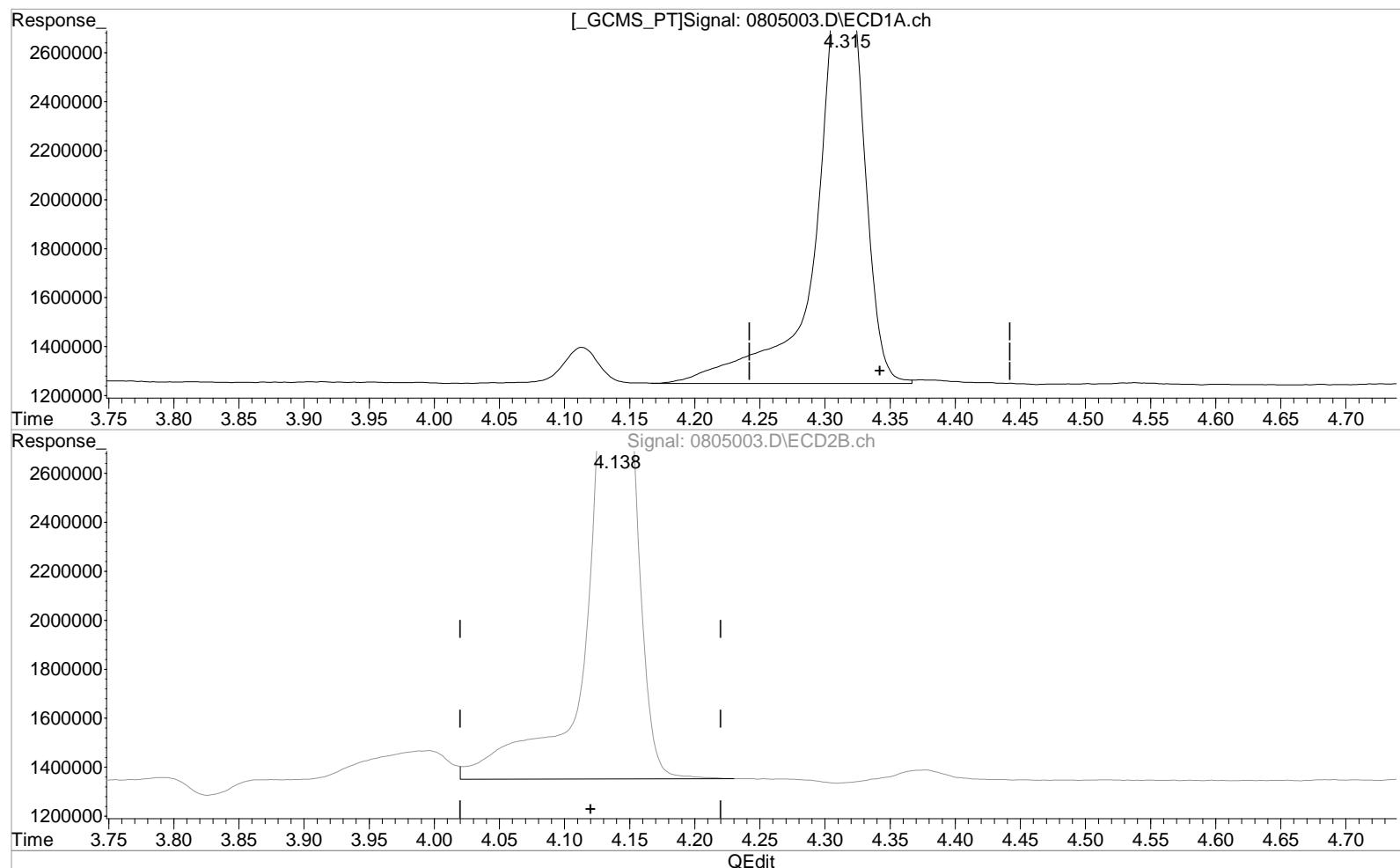
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080516-504\0805003.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 07:47:28 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:36 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.315min 3.495 ppb

response 4507444

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

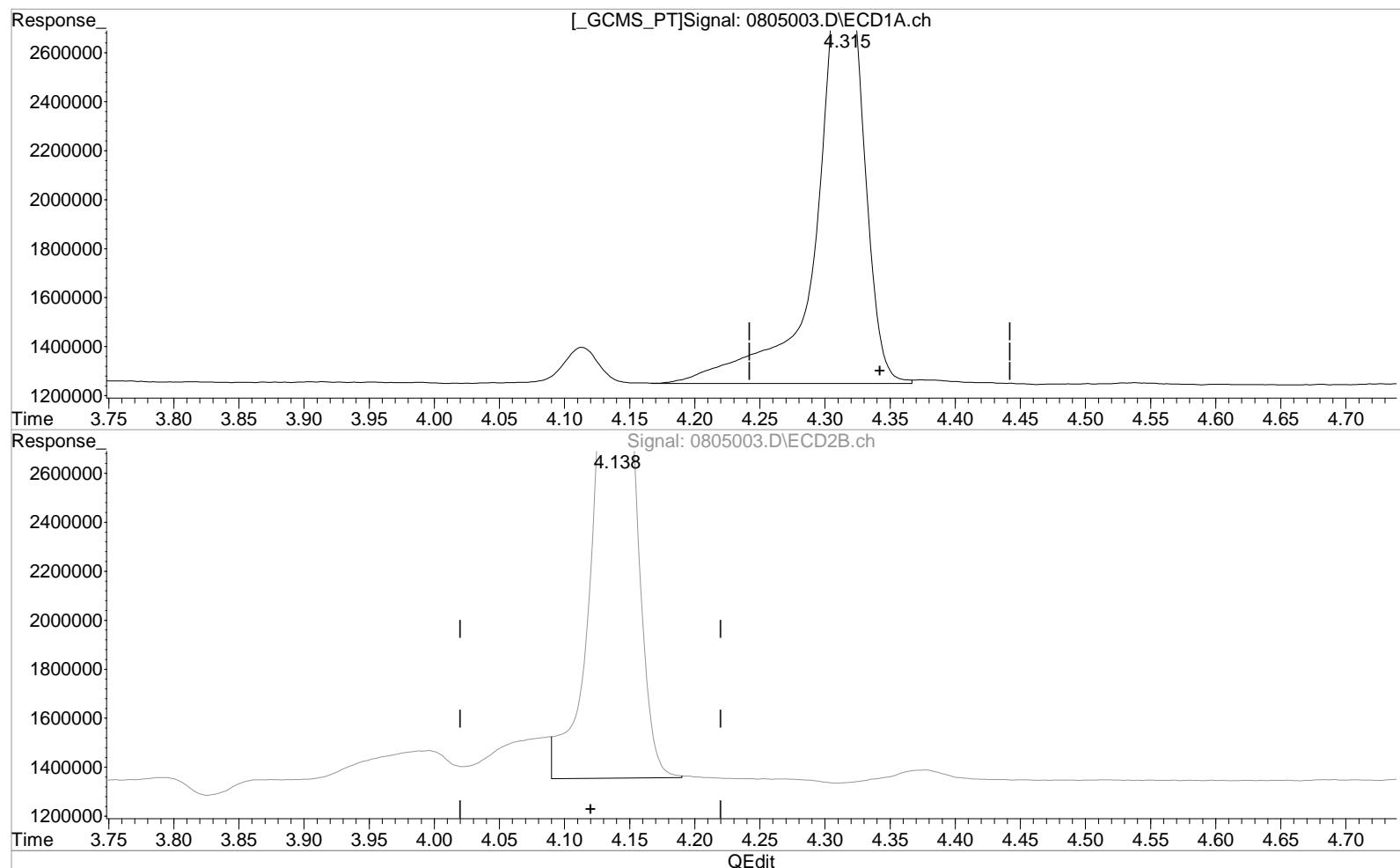
4.138min 4.945 ppb

response 5807163

Data File : J:\GC33\DATA\080516-504\0805003.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 07:47:28 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:36 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.315min 3.495 ppb

response 4507444

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.138min 4.474 ppb m

response 5252859

Exception Report

Data File: J:\GC33\DATA\080516-504\0805015.D
Lab ID: KWG1606694-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 12:30
Date Quantitated: 08/05/2016 15:54
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805015.D\0805015C.D
Lab ID: KWG1606694-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 12:30
Date Quantitated: 08/05/2016 15:54
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805015.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805015.D\0805015c.d	Vial:	9
Acq Date:	08/05/2016 12:30	Quant Date:	08/05/2016 15:54
Run Type:	CCV	MethodJoinID:	MJ1388
Lab ID:	KWG1606694-3	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/08/2016
Analysis Lot:	KWG1606694	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.32	4.15	4363898	5392729m	3.39	4.59			
1,2,3-Trichloropropane	6.52	6.32	685552	1130987	3.57	4.68			
1,2-Dibromo-3-chloropropan	7.91	7.88	8330583	12713669	3.50	4.47			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805015.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:30:50 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:54:45 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M

Quant Title : 080416_504.M MJ480 CAL

QLast Update : Fri Aug 05 15:24:32 2016

Response via : Initial Calibration

DataAcq Meth:504-1.M

Volume Inj. : 5 uL

Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2

Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

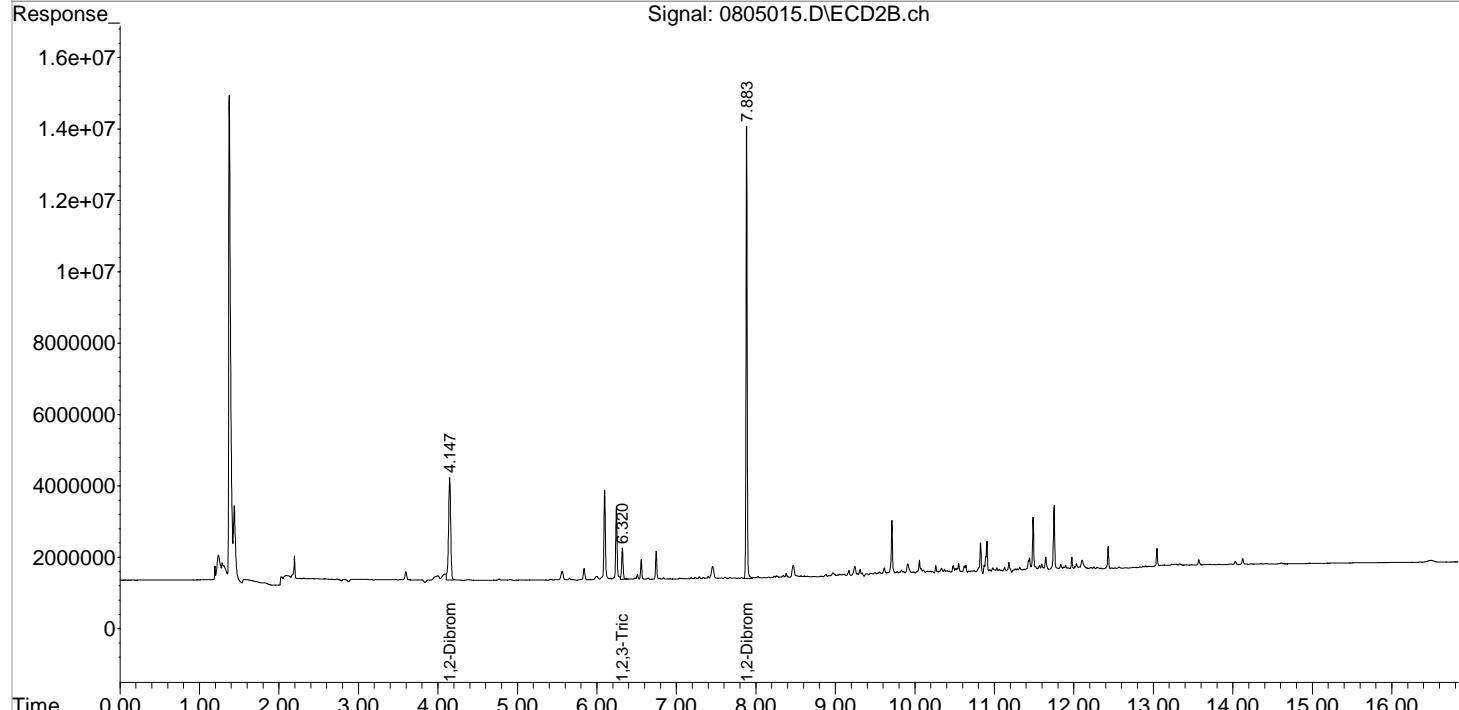
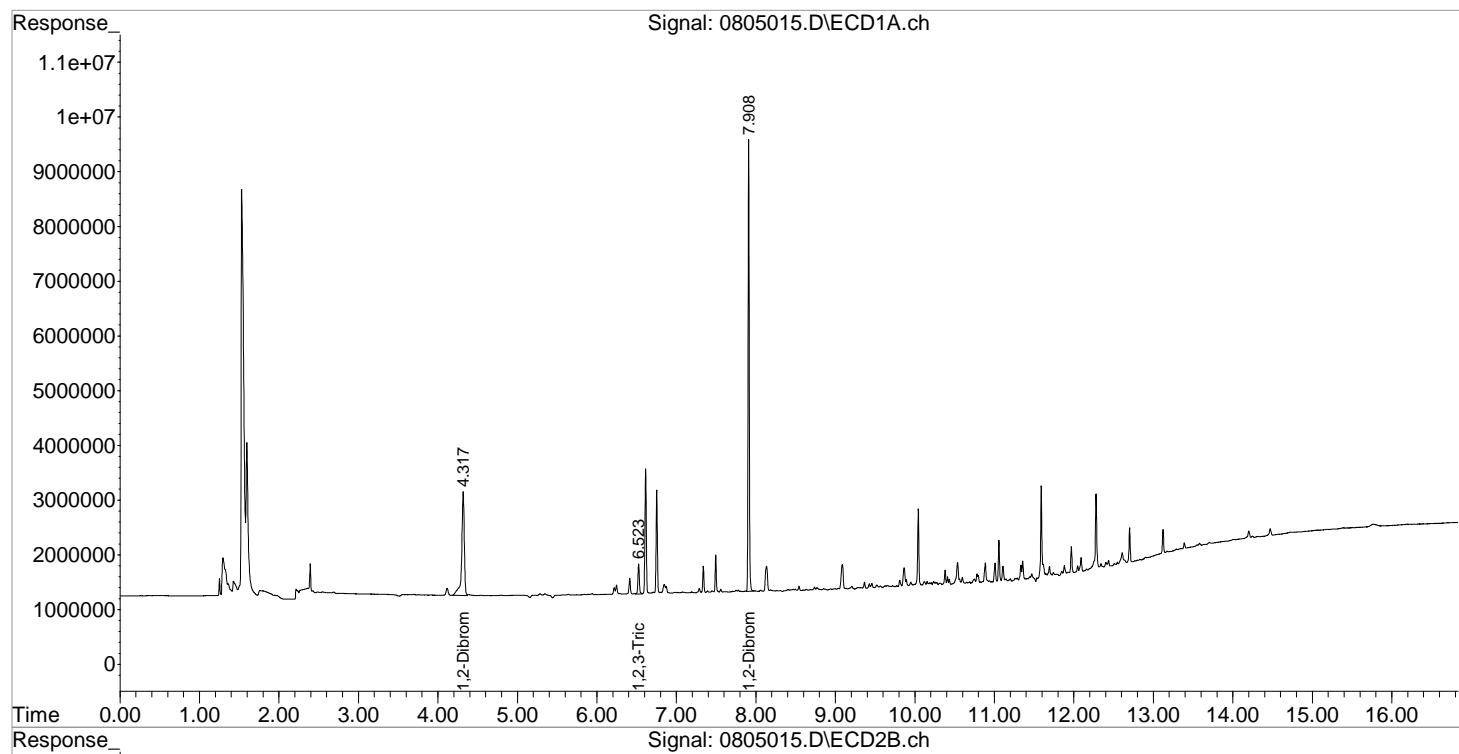
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.317	4.147	4363898	5392729	3.385	4.592m#
2) M 1,2,3-Triiodopropane	6.523	6.320	685552	1130987	3.565	4.684 #
3) M 1,2-Dibromoethane	7.908	7.883	8330583	12713669	3.499	4.470 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805015.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:30:50 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:54:45 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

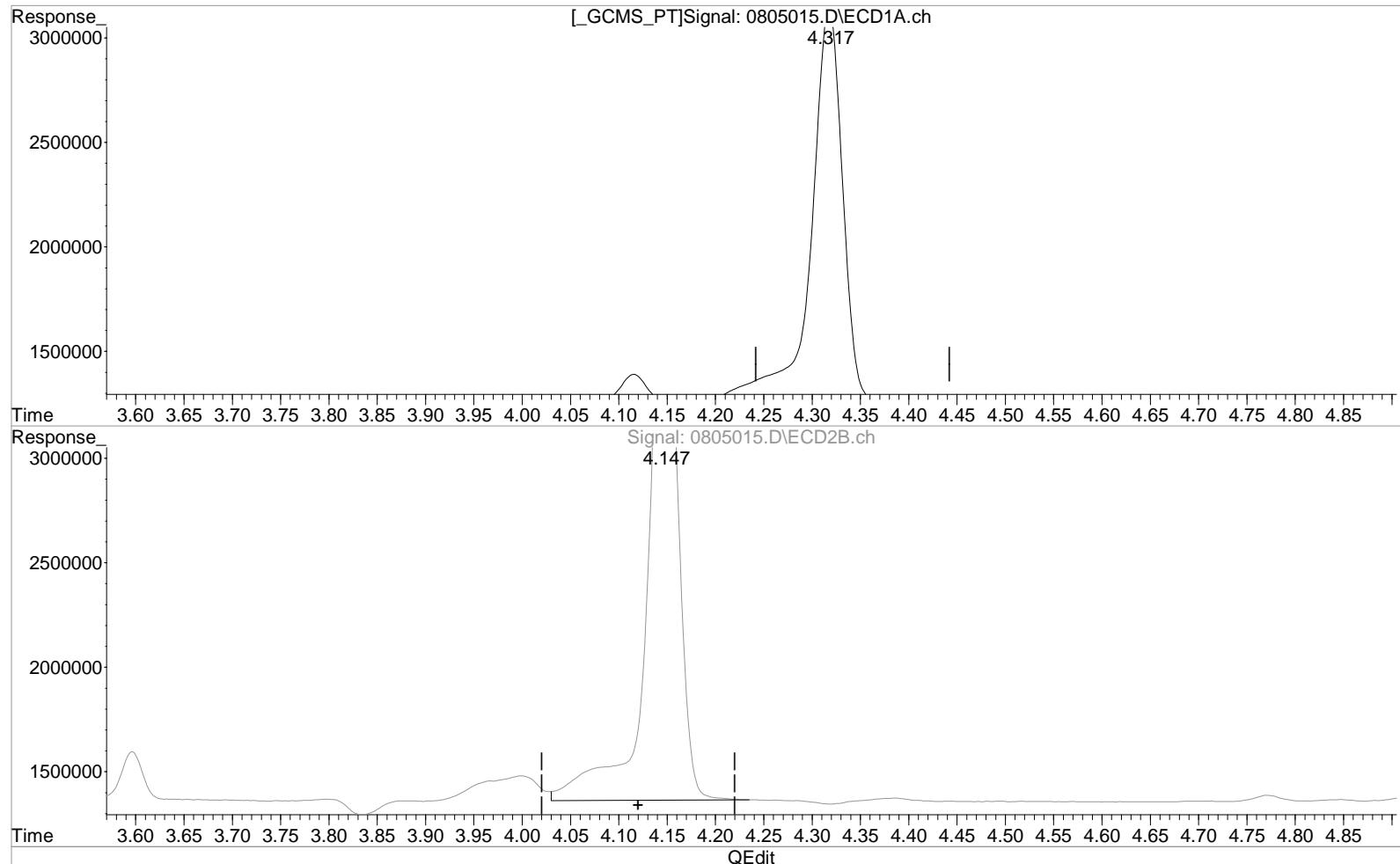
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080516-504\0805015.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:30:50 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:51:00 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.317min 3.385 ppb

response 4363898

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

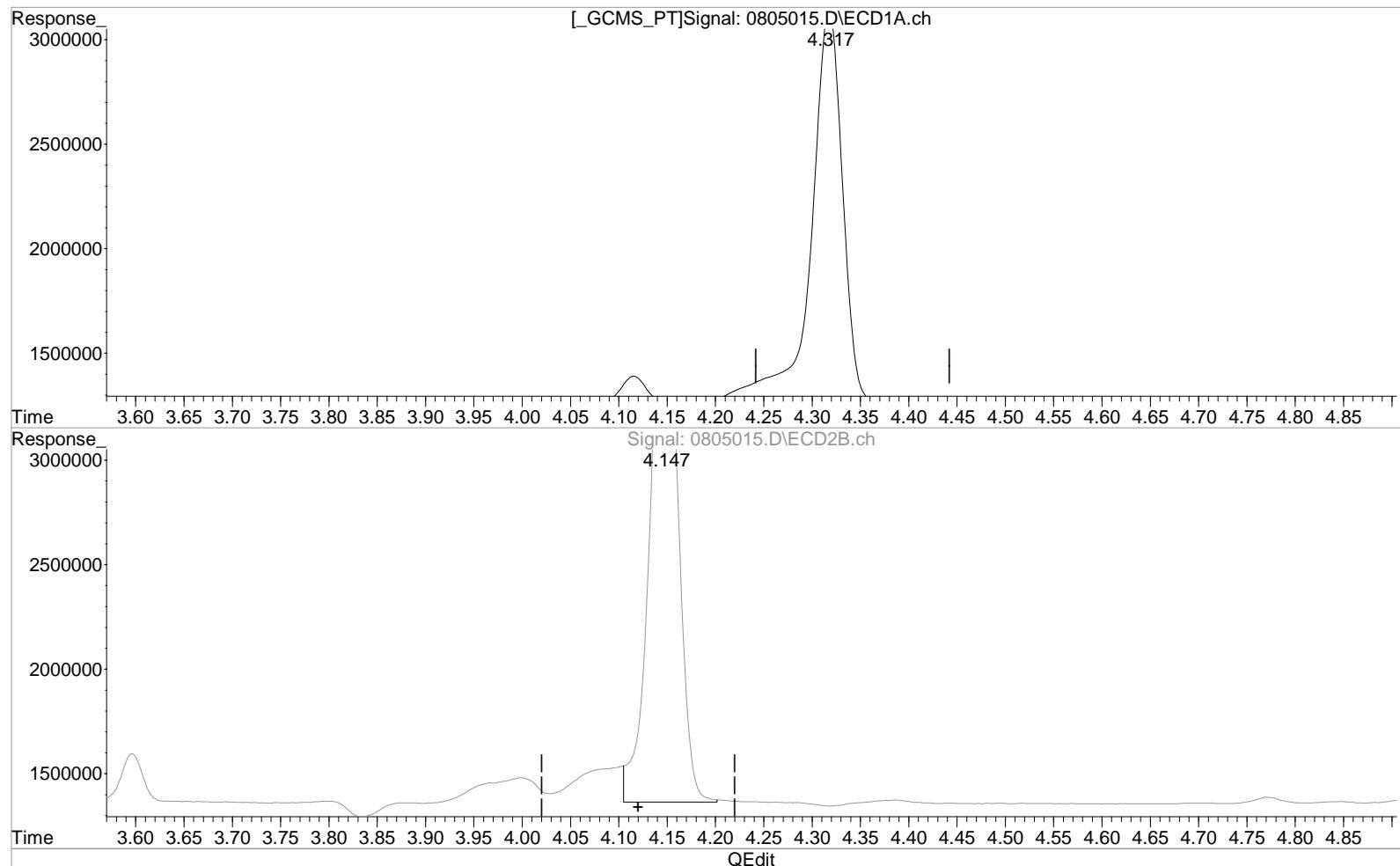
4.147min 5.084 ppb

response 5971150

Data File : J:\GC33\DATA\080516-504\0805015.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:30:50 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:51:00 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.317min 3.385 ppb

response 4363898

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.147min 4.592 ppb m

response 5392729

Exception Report

Data File: J:\GC33\DATA\080516-504\0805027.D
Lab ID: KWG1606694-5
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 17:14
Date Quantitated: 08/08/2016 06:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805027.D\0805027C.D
Lab ID: KWG1606694-5
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 17:14
Date Quantitated: 08/08/2016 06:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805027.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805027.D\0805027c.d	Vial:	9
Acq Date:	08/05/2016 17:14	Quant Date:	08/08/2016 06:55
Run Type:	CCV	MethodJoinID:	MJ1388
Lab ID:	KWG1606694-5	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/08/2016
Analysis Lot:	KWG1606694	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.33	4.13	4707174	5096515m	3.65	4.34			
1,2,3-Trichloropropane	6.52	6.32	748312	1077123	3.89	4.46			
1,2-Dibromo-3-chloropropan	7.91	7.88	9146222	12070119	3.84	4.25			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805027.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 17:14:18 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 08 06:55:05 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M

Quant Title : 080416_504.M MJ480 CAL

QLast Update : Fri Aug 05 15:24:32 2016

Response via : Initial Calibration

DataAcq Meth:504-1.M

Volume Inj. : 5 uL

Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2

Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

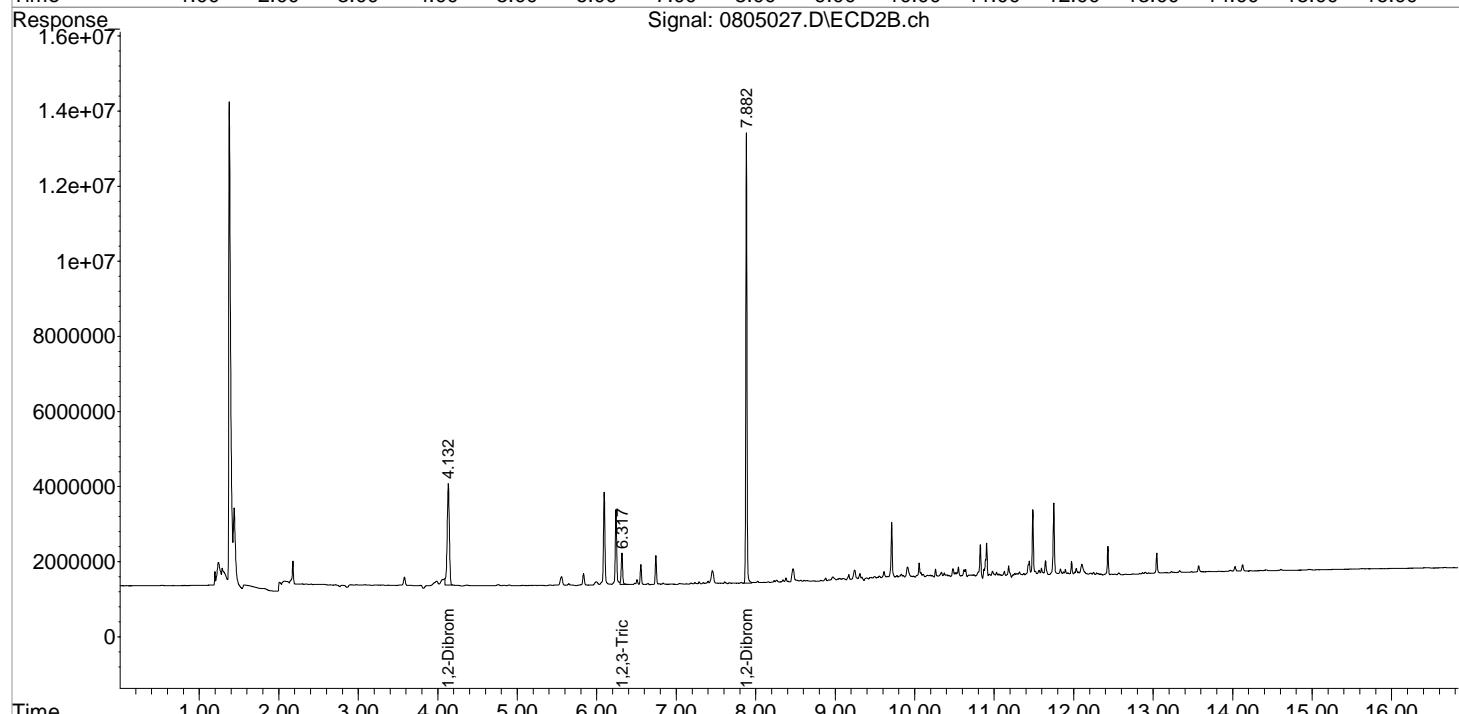
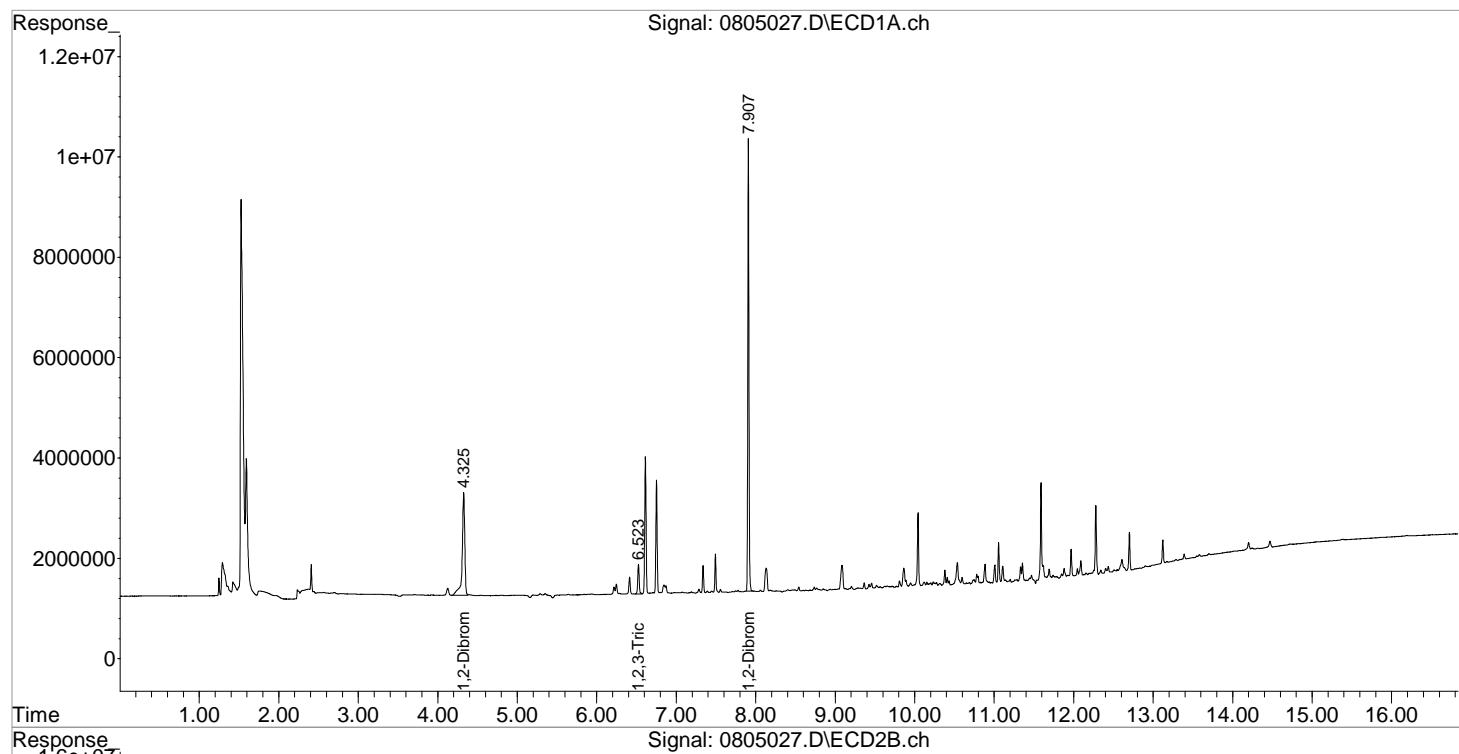
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.325	4.132	4707174	5096515	3.647	4.341m
2) M 1,2,3-Triiodopropane	6.523	6.317	748312	1077123	3.894	4.461
3) M 1,2-Dibromoethane	7.907	7.882	9146222	12070119	3.843	4.245

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805027.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 17:14:18 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 08 06:55:05 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

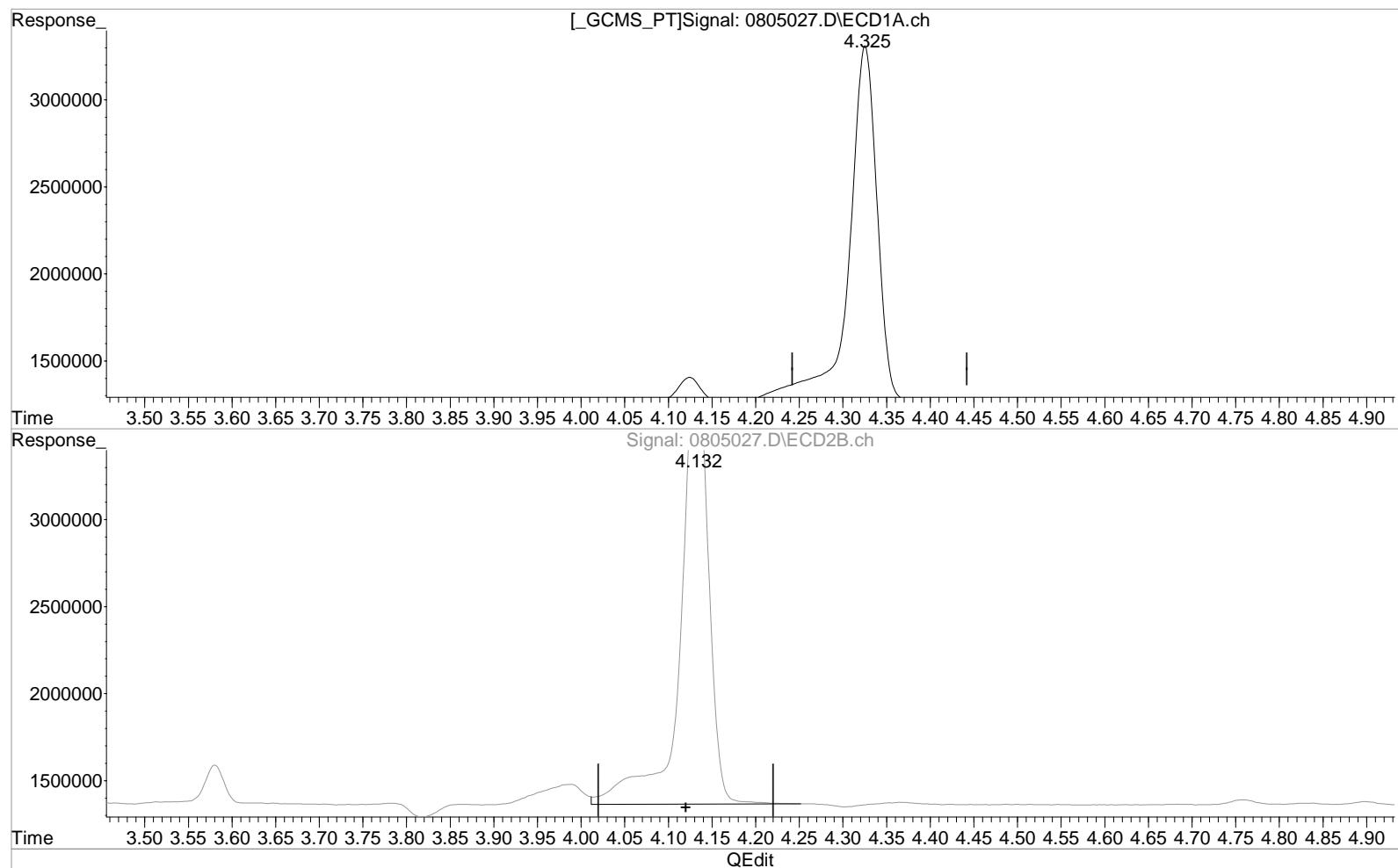
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080516-504\0805027.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 17:14:18 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 08 06:54:46 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.325min 3.647 ppb

response 4707174

Manual Integration:

Before

08/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

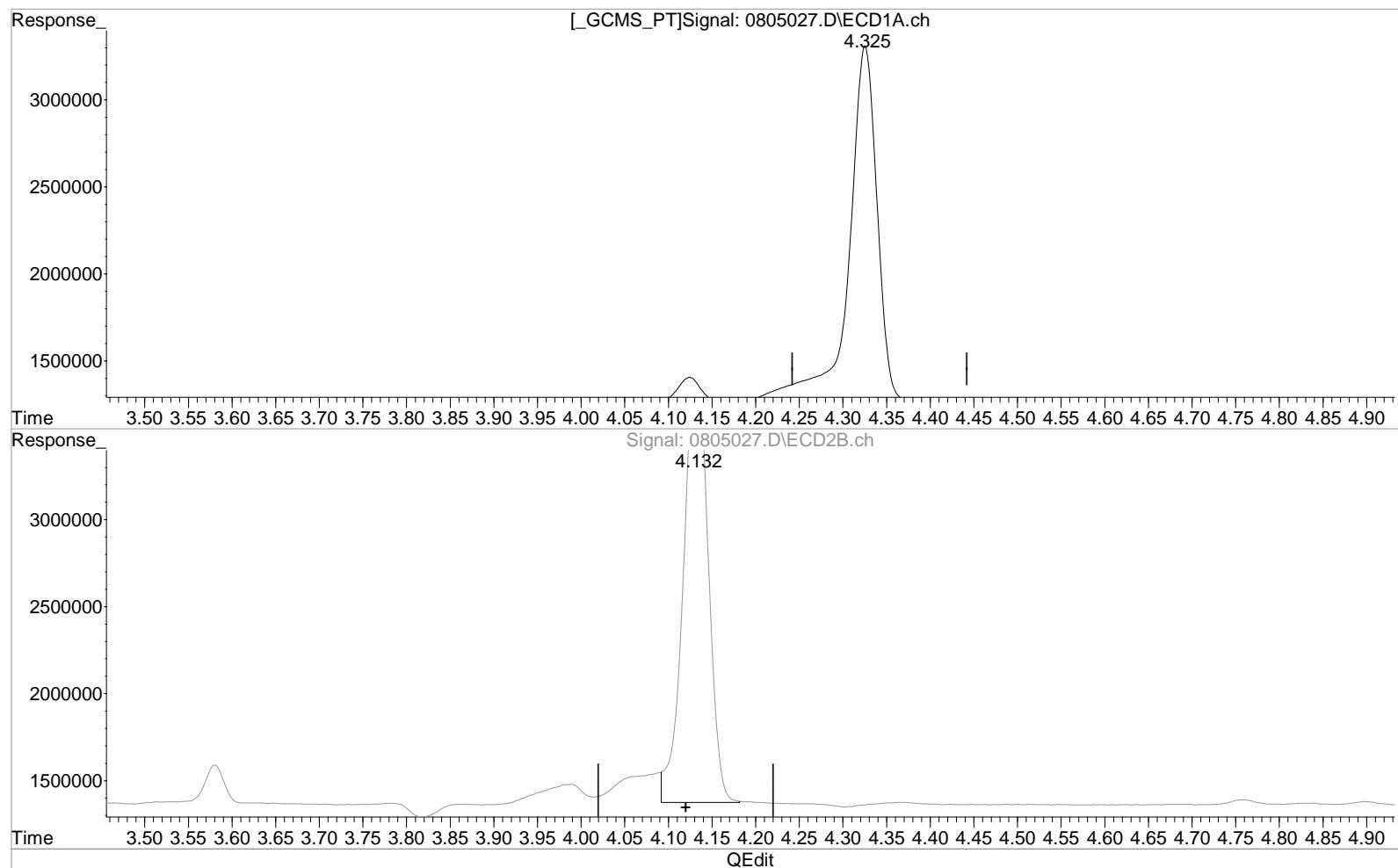
4.132min 4.926 ppb

response 5785630

Data File : J:\GC33\DATA\080516-504\0805027.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 17:14:18 Operator: BS
 Sample : 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 08 06:54:46 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.325min 3.647 ppb

response 4707174

Manual Integration:

After

Baseline/Shoulder

08/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.132min 4.341 ppb m

response 5096515

Exception Report

Data File: J:\GC33\DATA\080416-504\0804114.D
Lab ID: KWG1606683-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/04/2016 16:11
Date Quantitated: 08/05/2016 15:29
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080416-504\0804114.D\0804114C.D
Lab ID: KWG1606683-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/04/2016 16:11
Date Quantitated: 08/05/2016 15:29
Batch ID: KWG1606683
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080416-504\0804114.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080416-504\0804114.D\0804114c.d	Vial:	3
Acq Date:	08/04/2016 16:11	Quant Date:	08/05/2016 15:29
Run Type:	IB	MethodJoinID:	MJ1388
Lab ID:	KWG1606683-2	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Soln Conc. Units:	ppb	Matrix:	NOT APPLICABLE
Bottle ID:		Tier:	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/05/2016
Analysis Lot:	KWG1606683	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.34	4.06	44717	469436	0.0840	0.4070			
1,2,3-Trichloropropane	6.52	6.33	15560	400584	0.0560	1.66			
1,2-Dibromo-3-chloropropano	7.93		21843	0	0.0010	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080416-504\0804114.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:11:31 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:29:54 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

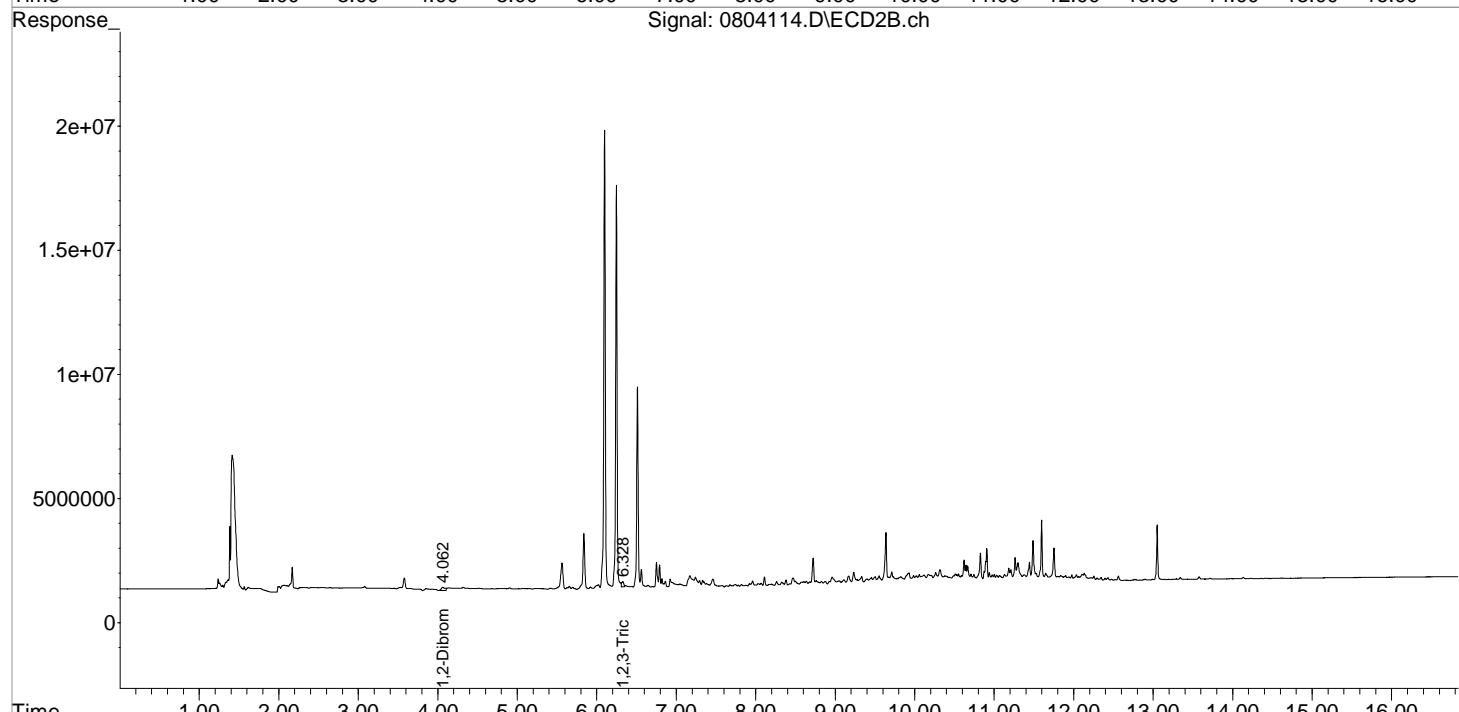
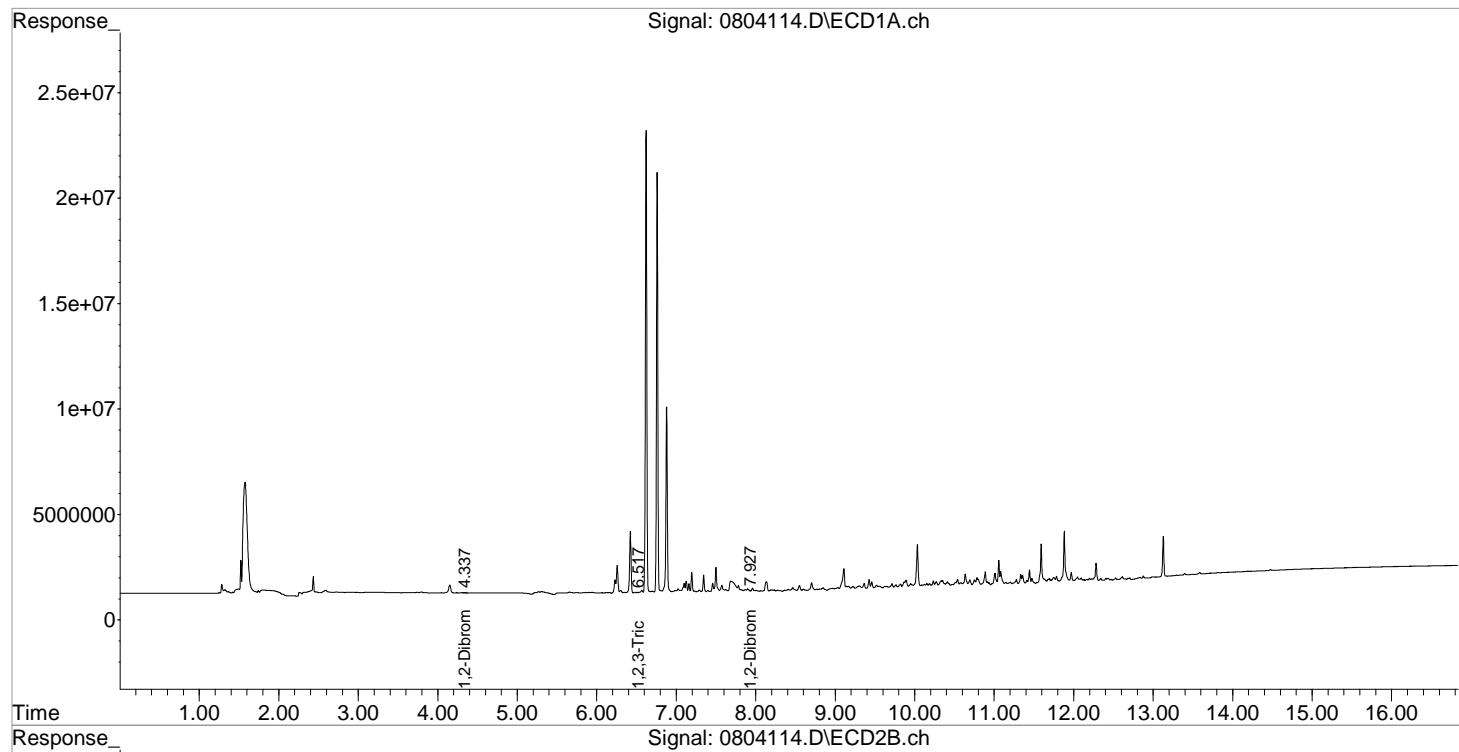
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.337	4.062f	44717	469436	0.084	0.407 #
2) M 1,2,3-Tri...	6.517	6.328	15560	400584	0.056	1.657 #
3) M 1,2-Dibro...	7.927	0.000	21843	0	0.001	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080416-504\0804114.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 16:11:31 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:29:54 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\080516-504\0805004.D
Lab ID: KWG1606694-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 08:11
Date Quantitated: 08/05/2016 15:50
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805004.D\0805004C.D
Lab ID: KWG1606694-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 08:11
Date Quantitated: 08/05/2016 15:50
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805004.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805004.D\0805004.c.d	Vial:	3
Acq Date:	08/05/2016 08:11	Quant Date:	08/05/2016 15:50
Run Type:	IB	MethodJoinID:	MJ1388
Lab ID:	KWG1606694-2	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/08/2016
Analysis Lot:	KWG1606694	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.31	4.07	51002	461609	0.0890	0.4010			
1,2,3-Trichloropropane	6.56	6.33	133156	305619	0.6720	1.26			
1,2-Dibromo-3-chloropropano	7.93		21343	0	0.0010	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805004.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:11:10 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:38 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

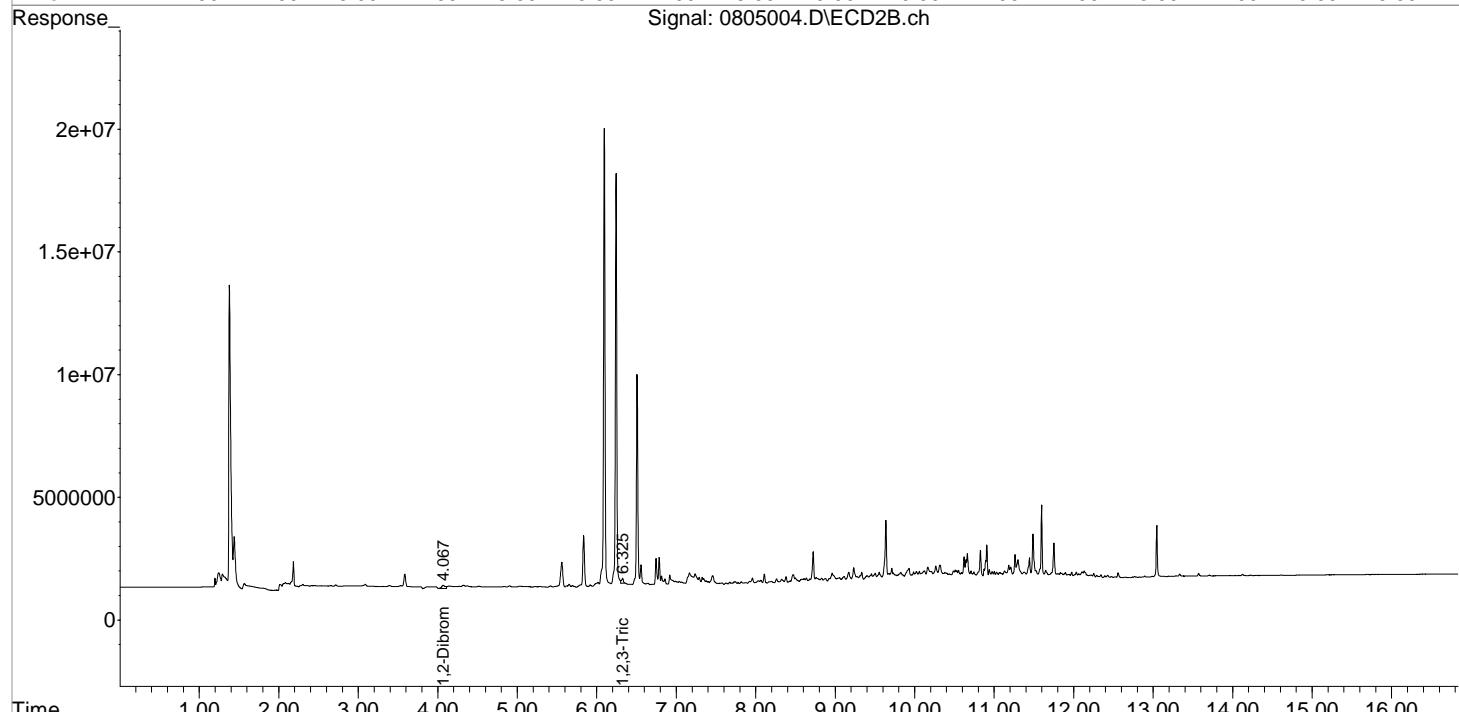
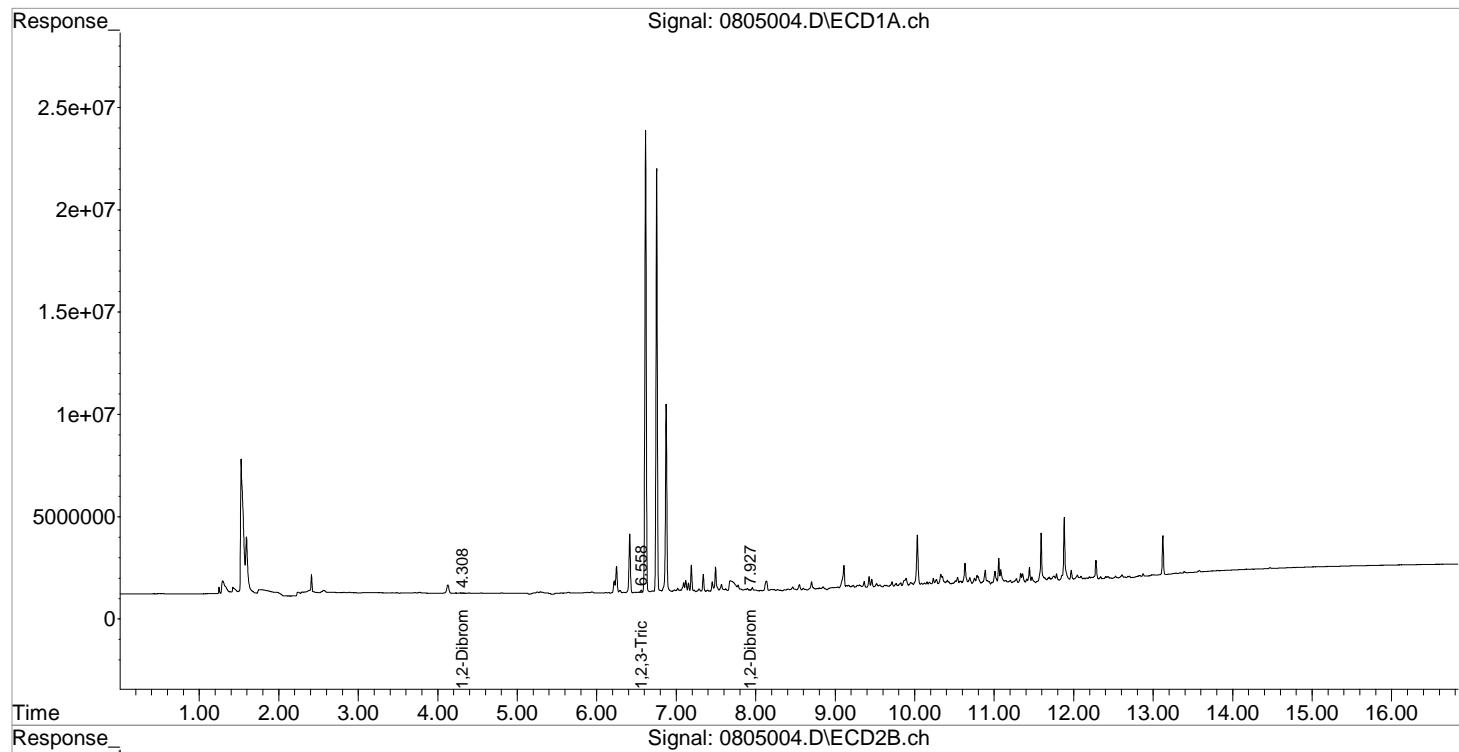
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.308	4.067f	51002	461609	0.089	0.401 #
2) M 1,2,3-Tri...	6.558	6.325	133156	305619	0.672	1.264 #
3) M 1,2-Dibro...	7.927	0.000	21343	0	0.001	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805004.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:11:10 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:38 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\080516-504\0805004.D
Lab ID: KWG1606694-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 08:11
Date Quantitated: 08/05/2016 15:50
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805004.D\0805004C.D
Lab ID: KWG1606694-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 08:11
Date Quantitated: 08/05/2016 15:50
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805004.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805004.D\0805004.c.d	Vial:	3
Acq Date:	08/05/2016 08:11	Quant Date:	08/05/2016 15:50
Run Type:	IB	MethodJoinID:	MJ1388
Lab ID:	KWG1606694-2	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Soln Conc. Units:	ppb	Matrix:	NOT APPLICABLE
Bottle ID:	Tier:	Receive Date:	08/08/2016
Prod Code:	504.1 EDB DBCP	Collect Date:	
Analysis Lot:	KWG1606694	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.31	4.07	51002	461609	0.0890	0.4010			
1,2,3-Trichloropropane	6.56	6.33	133156	305619	0.6720	1.26			
1,2-Dibromo-3-chloropropano	7.93		21343	0	0.0010	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805004.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:11:10 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:38 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

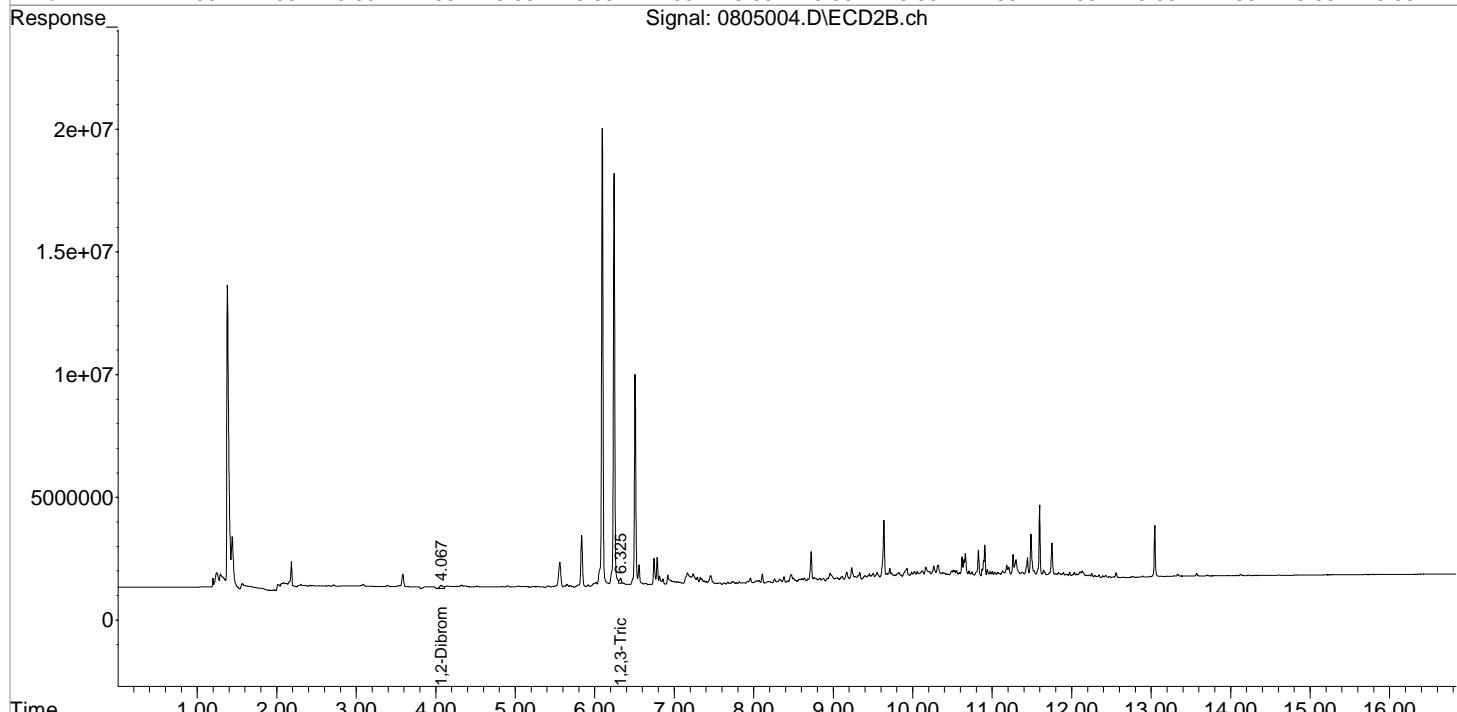
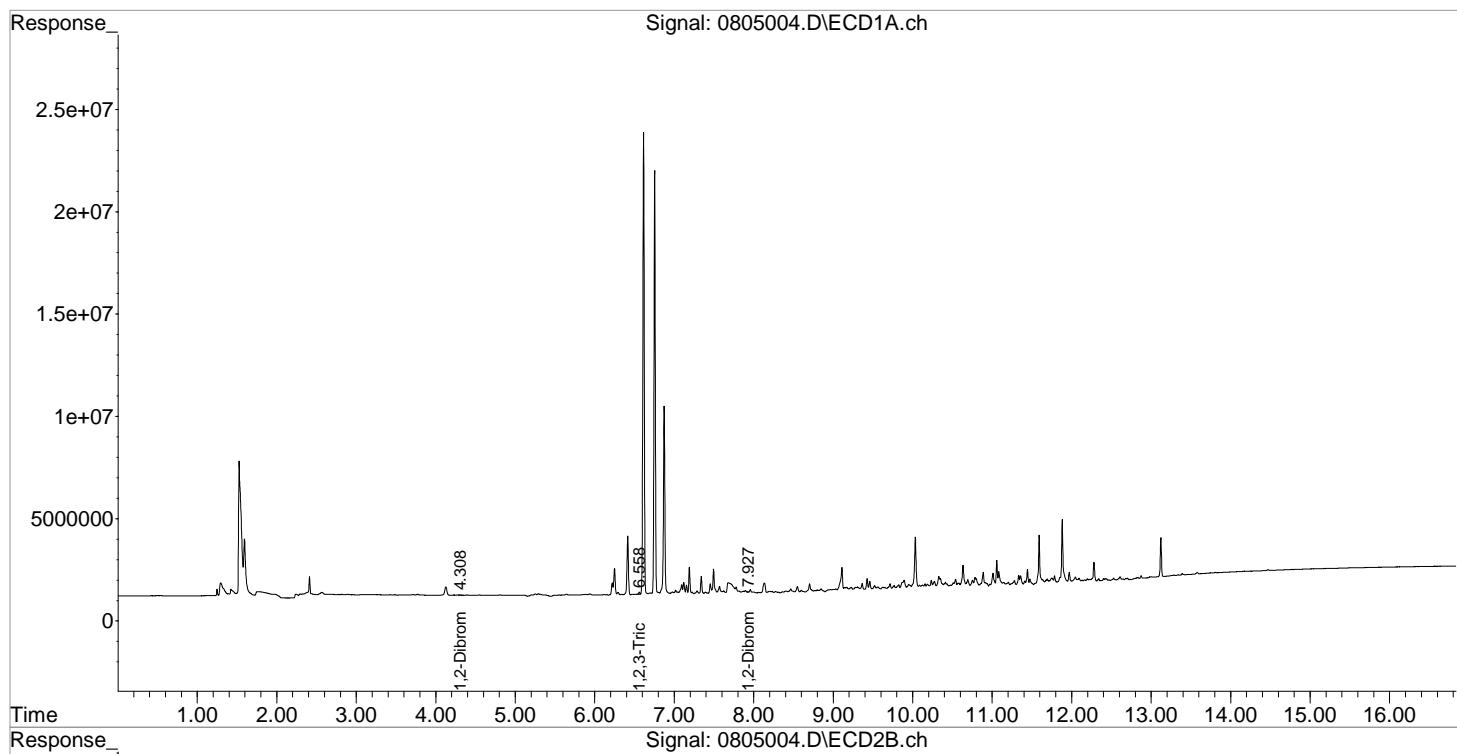
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.308	4.067f	51002	461609	0.089	0.401 #
2) M 1,2,3-Tri...	6.558	6.325	133156	305619	0.672	1.264 #
3) M 1,2-Dibro...	7.927	0.000	21343	0	0.001	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805004.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 08:11:10 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:50:38 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\080516-504\0805016.D
Lab ID: KWG1606694-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 12:54
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805016.D\0805016C.D
Lab ID: KWG1606694-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 12:54
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805016.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805016.D\0805016c.d	Vial:	3
Acq Date:	08/05/2016 12:54	Quant Date:	08/05/2016 15:55
Run Type:	IB	MethodJoinID:	MJ1388
Lab ID:	KWG1606694-4	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/08/2016
Analysis Lot:	KWG1606694	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.37	4.09	50991	217334m	0.0890	0.1930			
1,2,3-Trichloropropane	6.56	6.33	145804	582905	0.7380	2.41			
1,2-Dibromo-3-chloropropano	7.92		56504	0	0.0150	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805016.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:54:25 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:00 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

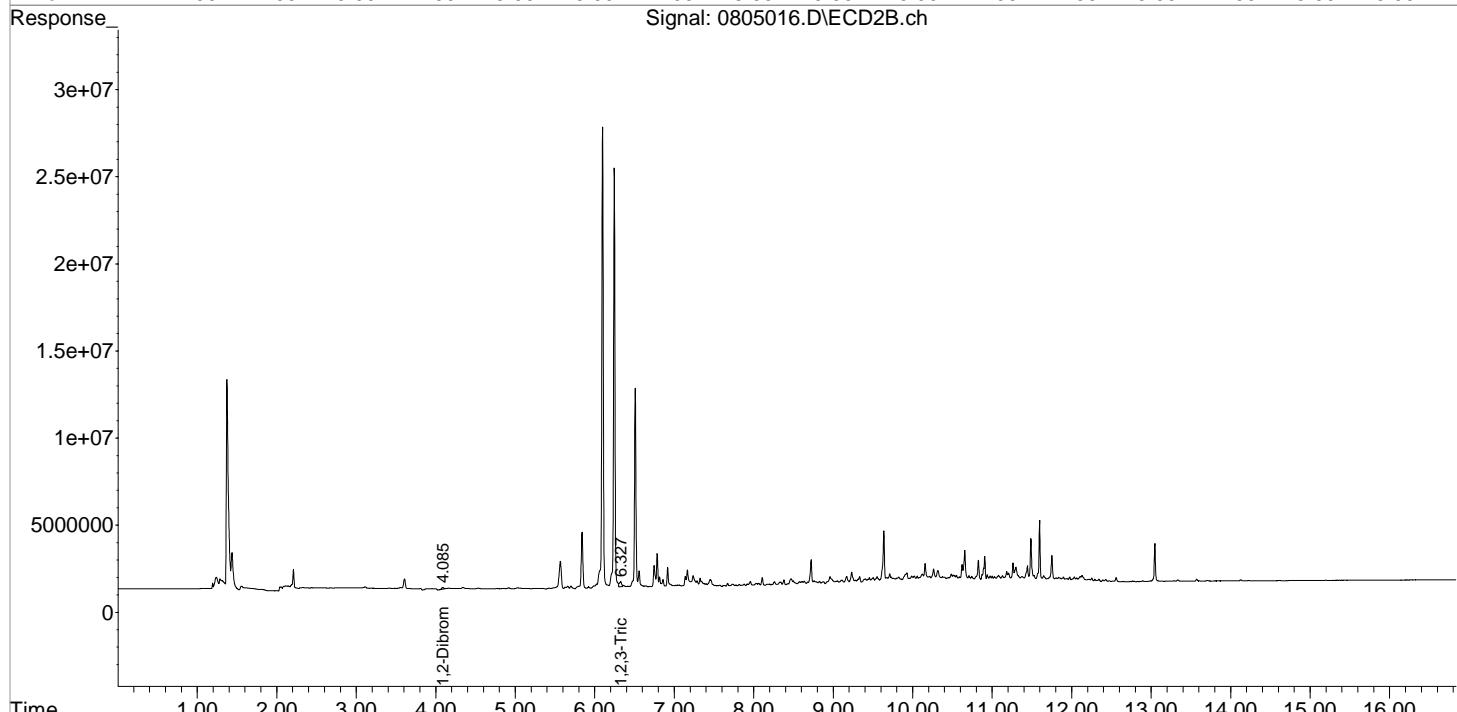
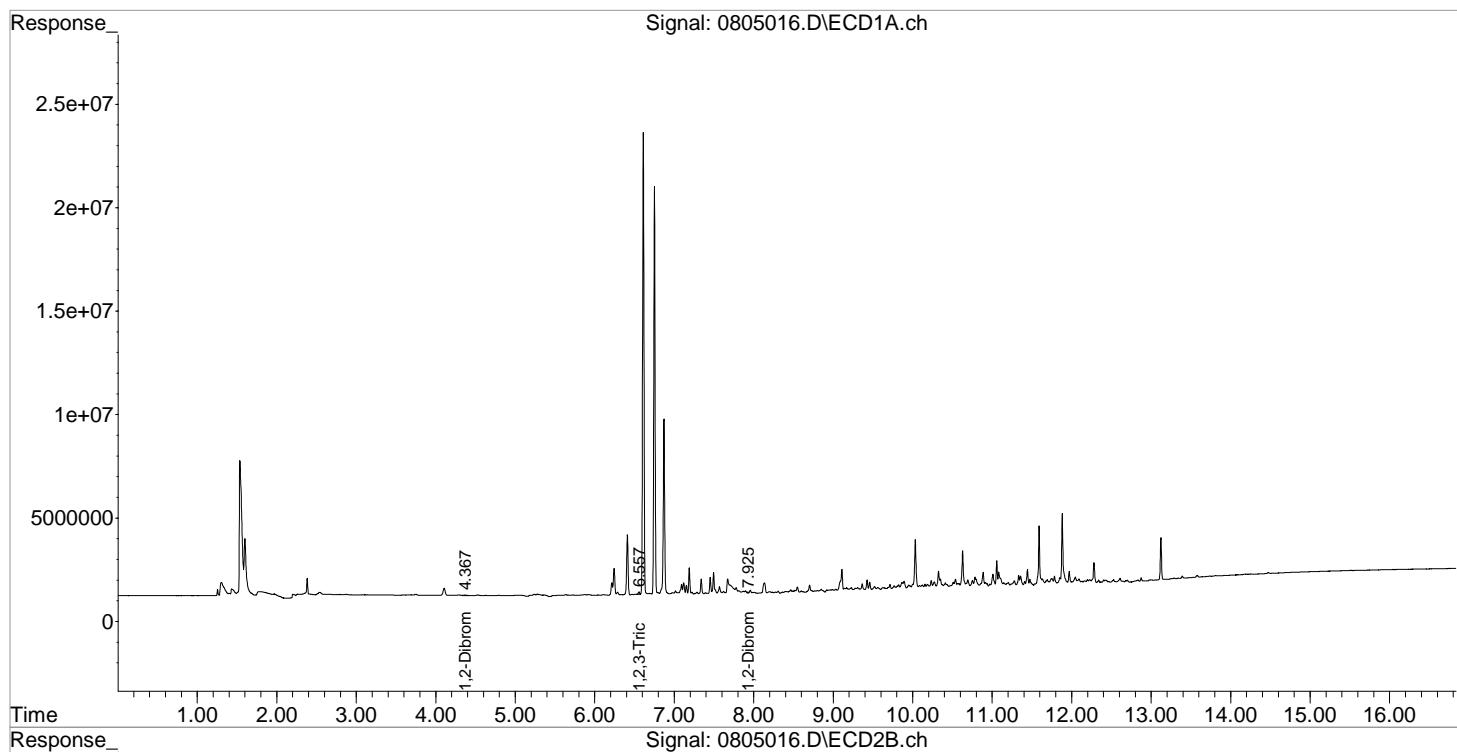
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.367	4.085	50991	217334	0.089	0.193m#
2) M 1,2,3-Triiodopropane	6.557	6.327	145804	582905	0.738	2.413 #
3) M 1,2-Dibromoethane	7.925	0.000	56504	0	0.015	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805016.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:54:25 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:00 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

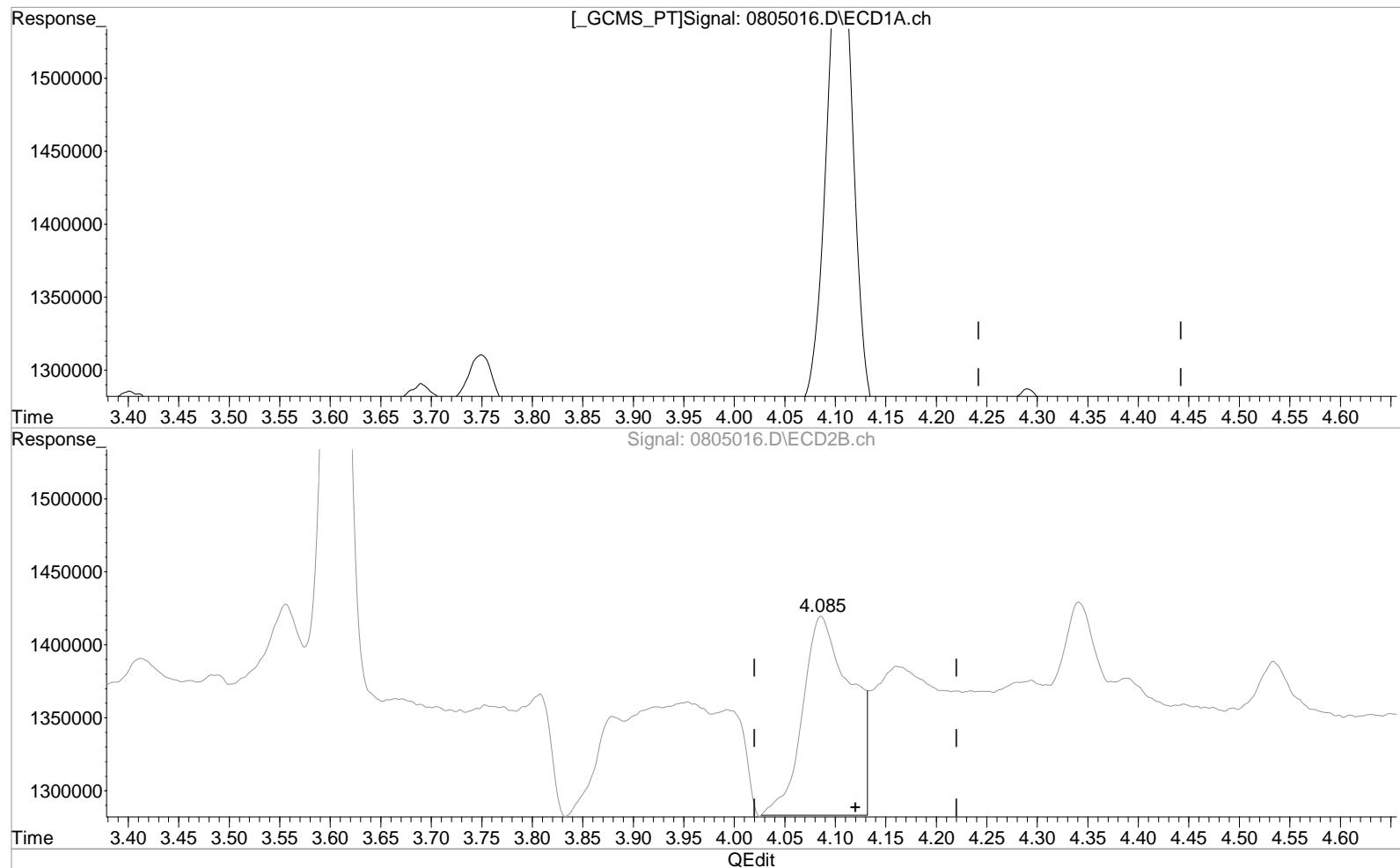
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080516-504\0805016.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:54:25 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:51:02 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.367min 0.089 ppb

response 50991

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

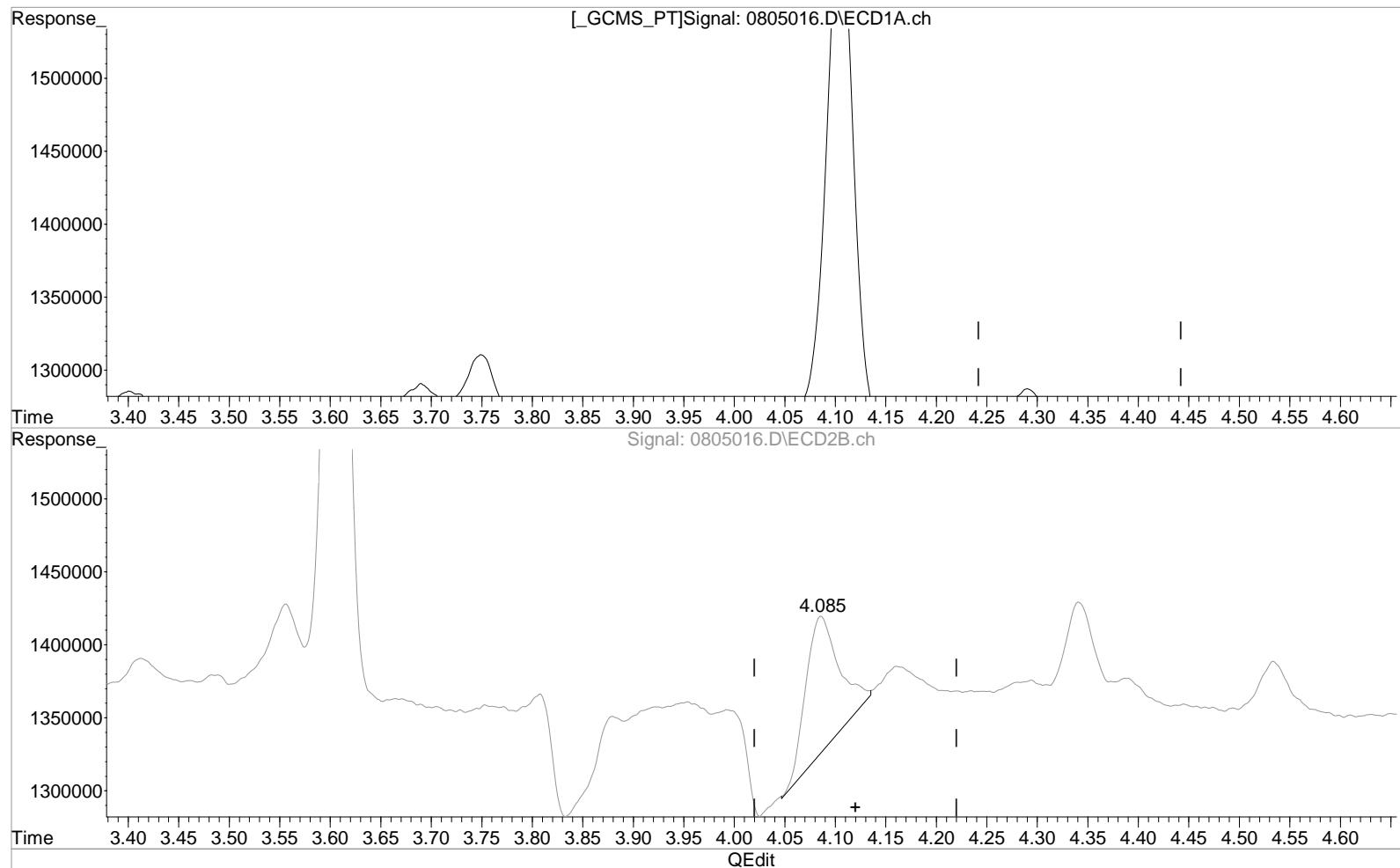
4.085min 0.398 ppb

response 457941

Data File : J:\GC33\DATA\080516-504\0805016.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:54:25 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:51:02 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.367min 0.089 ppb

response 50991

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.085min 0.193 ppb m

response 217334

Exception Report

Data File: J:\GC33\DATA\080516-504\0805016.D
Lab ID: KWG1606694-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 12:54
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805016.D\0805016C.D
Lab ID: KWG1606694-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 12:54
Date Quantitated: 08/05/2016 15:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805016.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805016.D\0805016c.d	Vial:	3
Acq Date:	08/05/2016 12:54	Quant Date:	08/05/2016 15:55
Run Type:	IB	MethodJoinID:	MJ1388
Lab ID:	KWG1606694-4	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 08/08/2016
Analysis Lot:	KWG1606694	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.37	4.09	50991	217334m	0.0890	0.1930			
1,2,3-Trichloropropane	6.56	6.33	145804	582905	0.7380	2.41			
1,2-Dibromo-3-chloropropan	7.92		56504	0	0.0150	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805016.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:54:25 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:00 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

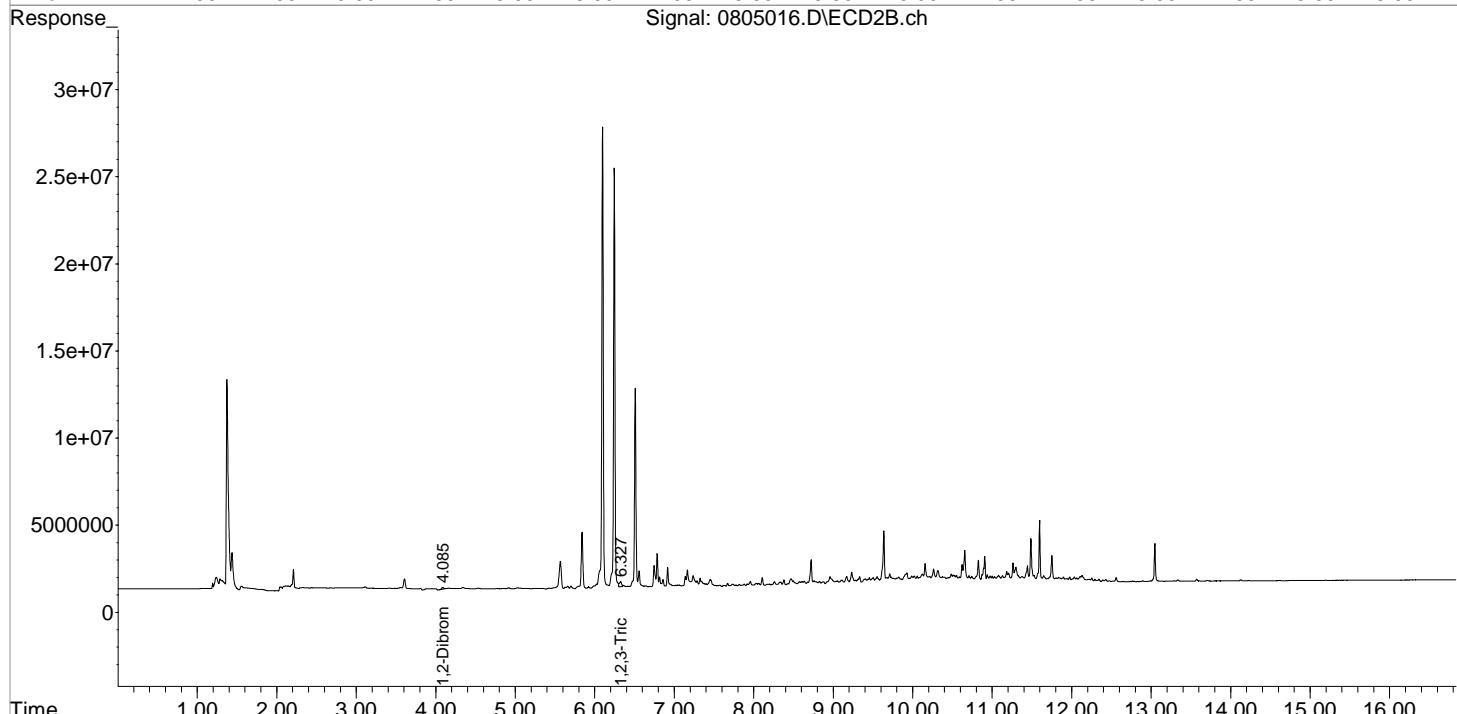
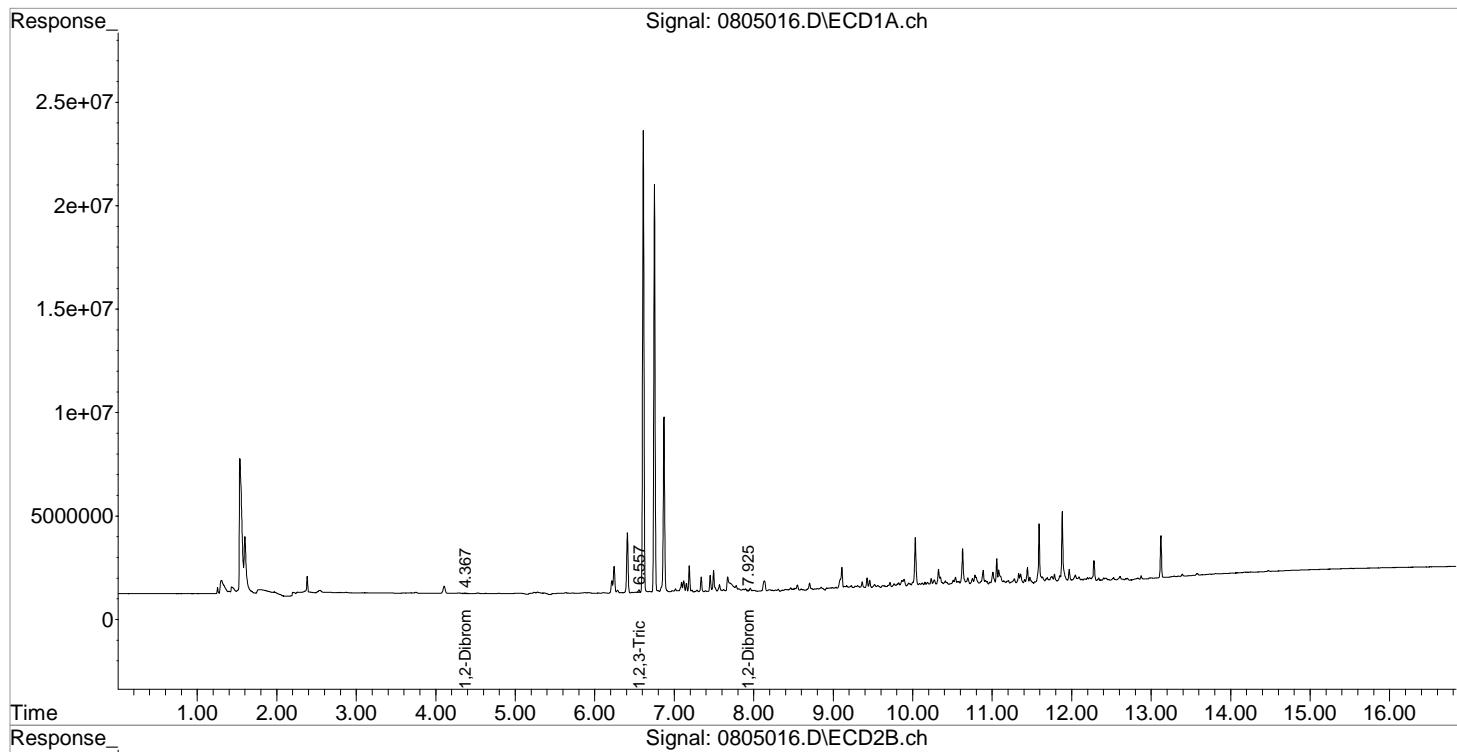
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.367	4.085	50991	217334	0.089	0.193m#
2) M 1,2,3-Triiodopropane	6.557	6.327	145804	582905	0.738	2.413 #
3) M 1,2-Dibromoethane	7.925	0.000	56504	0	0.015	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805016.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:54:25 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:55:00 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

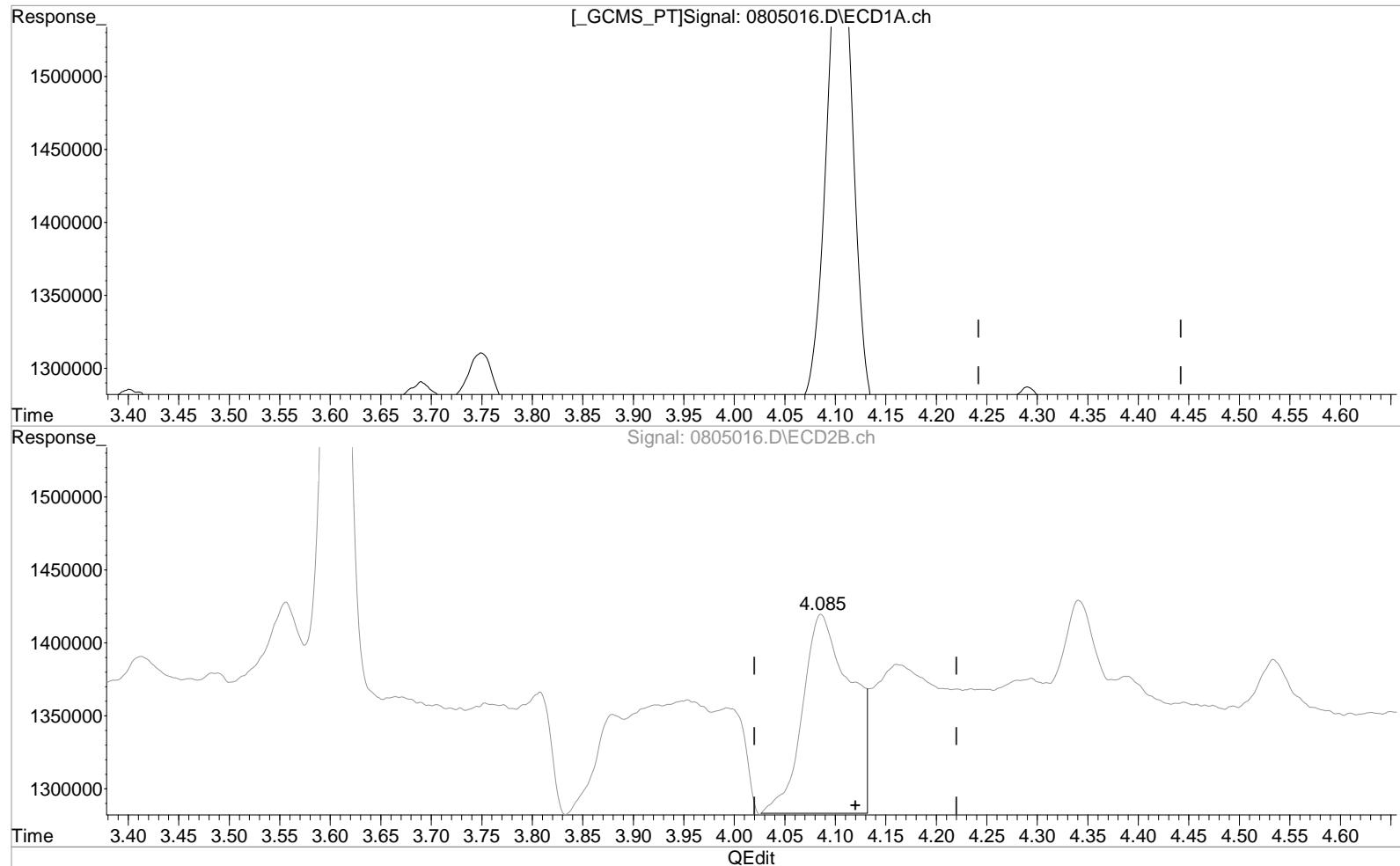
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\080516-504\0805016.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:54:25 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:51:02 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.367min 0.089 ppb

response 50991

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

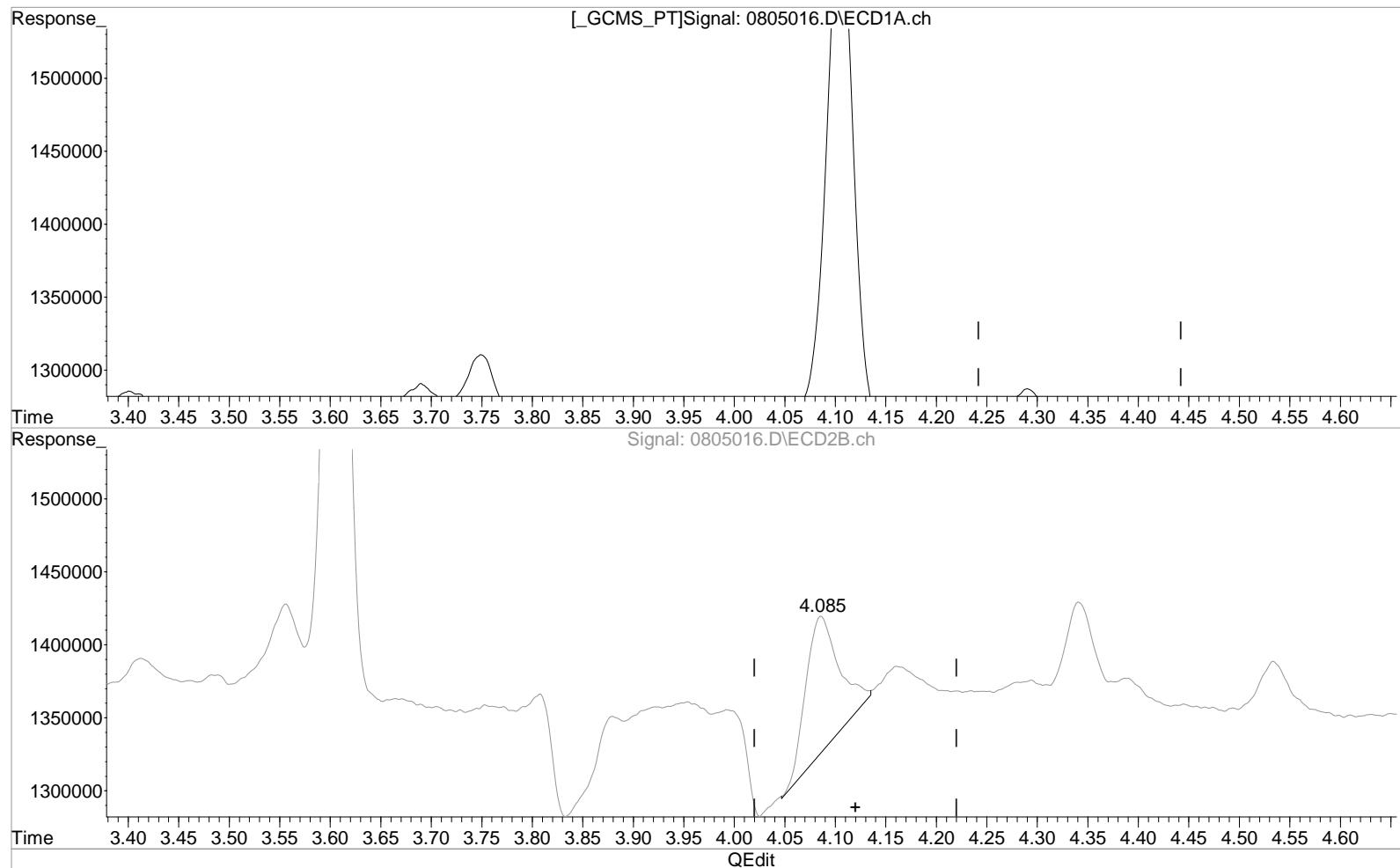
4.085min 0.398 ppb

response 457941

Data File : J:\GC33\DATA\080516-504\0805016.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 12:54:25 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:51:02 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.367min 0.089 ppb

response 50991

Manual Integration:

After

Baseline/Shoulder

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.085min 0.193 ppb m

response 217334

Exception Report

Data File: J:\GC33\DATA\080516-504\0805028.D
Lab ID: KWG1606694-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 17:37
Date Quantitated: 08/08/2016 06:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805028.D\0805028C.D
Lab ID: KWG1606694-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 17:37
Date Quantitated: 08/08/2016 06:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805028.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805028.D\0805028c.d	Vial:	3
Acq Date:	08/05/2016 17:37	Quant Date:	08/08/2016 06:55
Run Type:	IB	MethodJoinID:	MJ1388
Lab ID:	KWG1606694-6	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Soln Conc. Units:	ppb	Matrix:	NOT APPLICABLE
Bottle ID:	Tier:	Receive Date:	08/08/2016
Prod Code:	504.1 EDB DBCP	Collect Date:	
Analysis Lot:	KWG1606694	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.37	4.07	54631	477718	0.0920	0.4140			
1,2,3-Trichloropropane	6.55	6.32	173097	557634	0.8810	2.31			
1,2-Dibromo-3-chloropropano	7.92		25477	0	0.0020	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805028.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 17:37:53 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 08 06:55:13 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

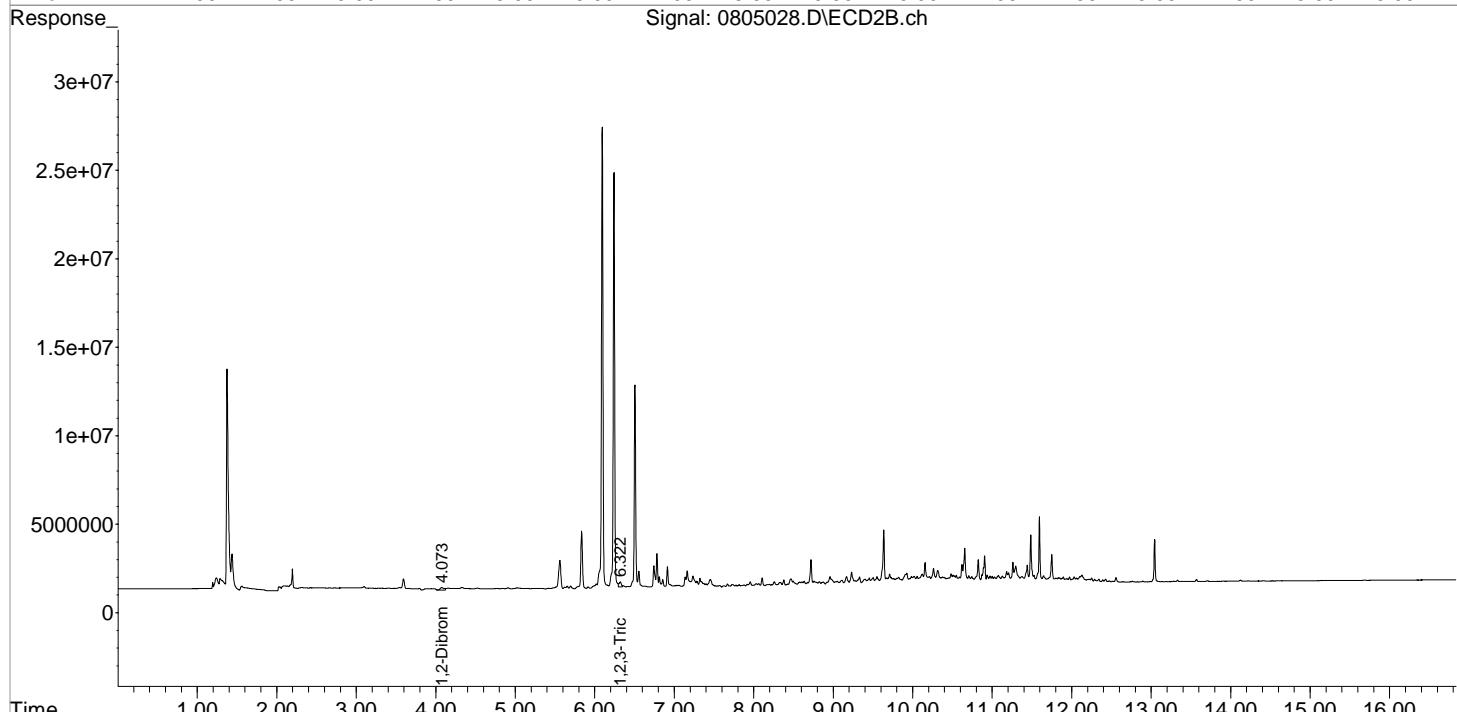
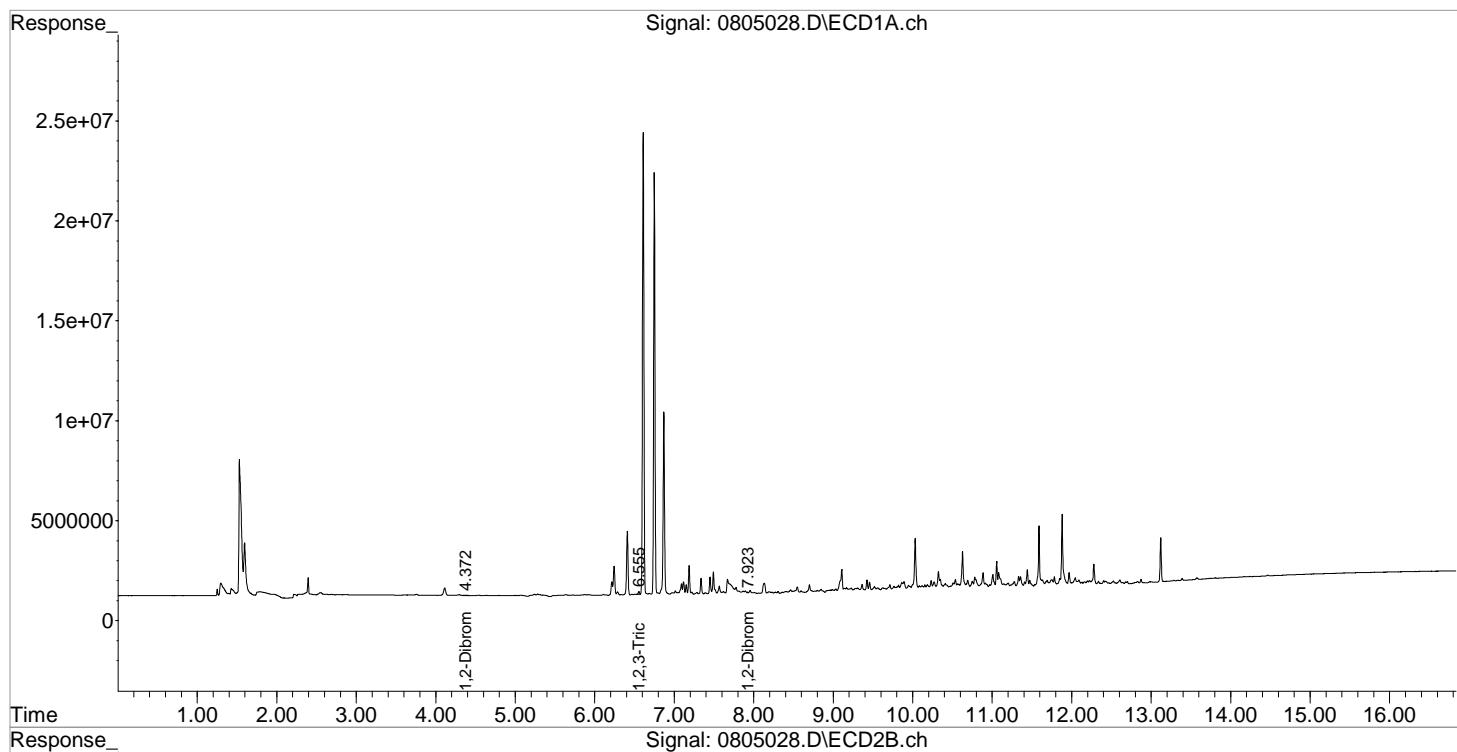
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.372	4.073	54631	477718	0.092	0.414 #
2) M 1,2,3-Triiodopropane	6.555	6.322	173097	557634	0.881	2.308 #
3) M 1,2-Dibromoethane	7.923	0.000	25477	0	0.002	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805028.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 17:37:53 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 08 06:55:13 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\080516-504\0805028.D
Lab ID: KWG1606694-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 17:37
Date Quantitated: 08/08/2016 06:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\080516-504\0805028.D\0805028C.D
Lab ID: KWG1606694-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/05/2016 17:37
Date Quantitated: 08/08/2016 06:55
Batch ID: KWG1606694
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\080516-504\0805028.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\080516-504\0805028.D\0805028c.d	Vial:	3
Acq Date:	08/05/2016 17:37	Quant Date:	08/08/2016 06:55
Run Type:	IB	MethodJoinID:	MJ1388
Lab ID:	KWG1606694-6	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Soln Conc. Units:	ppb	Matrix:	NOT APPLICABLE
Bottle ID:	Tier:	Receive Date:	08/08/2016
Prod Code:	504.1 EDB DBCP	Collect Date:	
Analysis Lot:	KWG1606694	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\080416_504.M	Calibration ID:	CAL14853
Title:		Method ID:	MJ1388
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	4.37	4.07	54631	477718	0.0920	0.4140			
1,2,3-Trichloropropane	6.55	6.32	173097	557634	0.8810	2.31			
1,2-Dibromo-3-chloropropano	7.92		25477	0	0.0020	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\080516-504\0805028.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 17:37:53 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 08 06:55:13 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

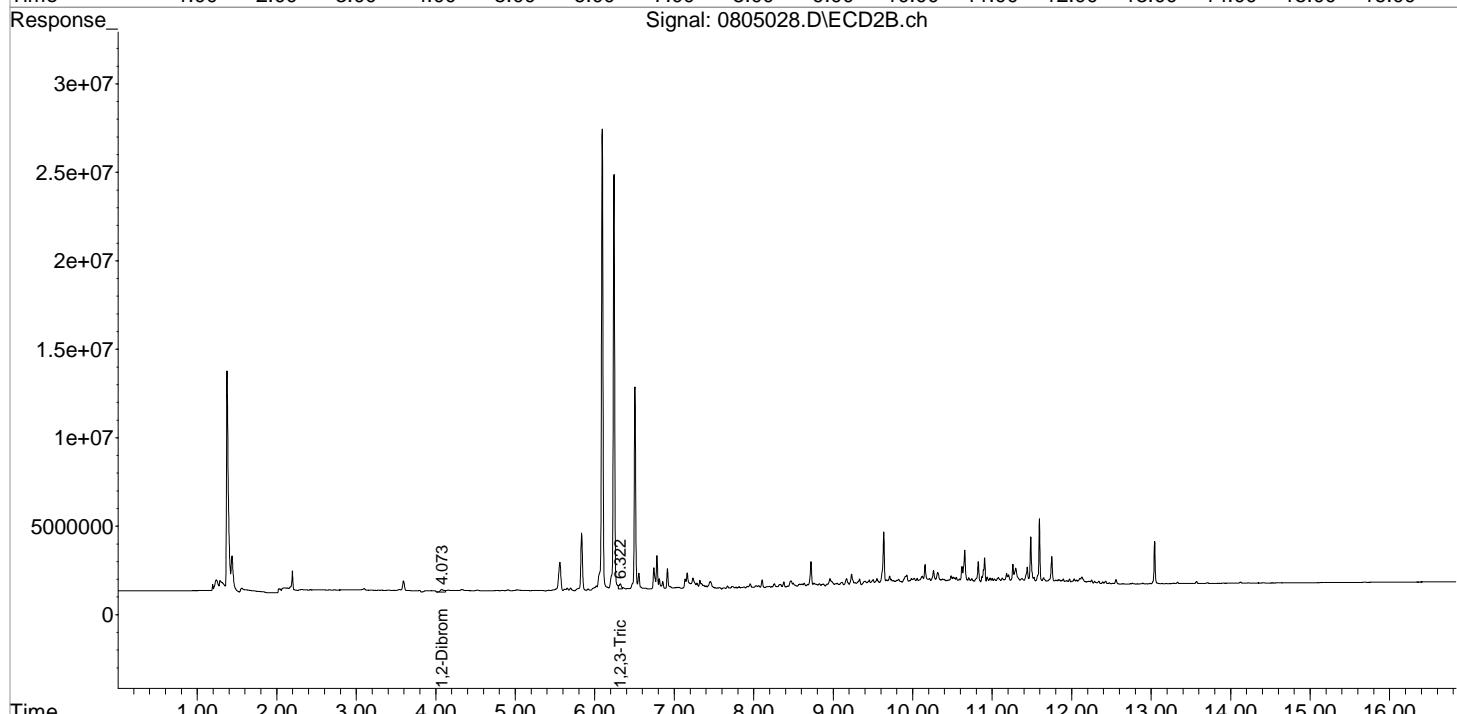
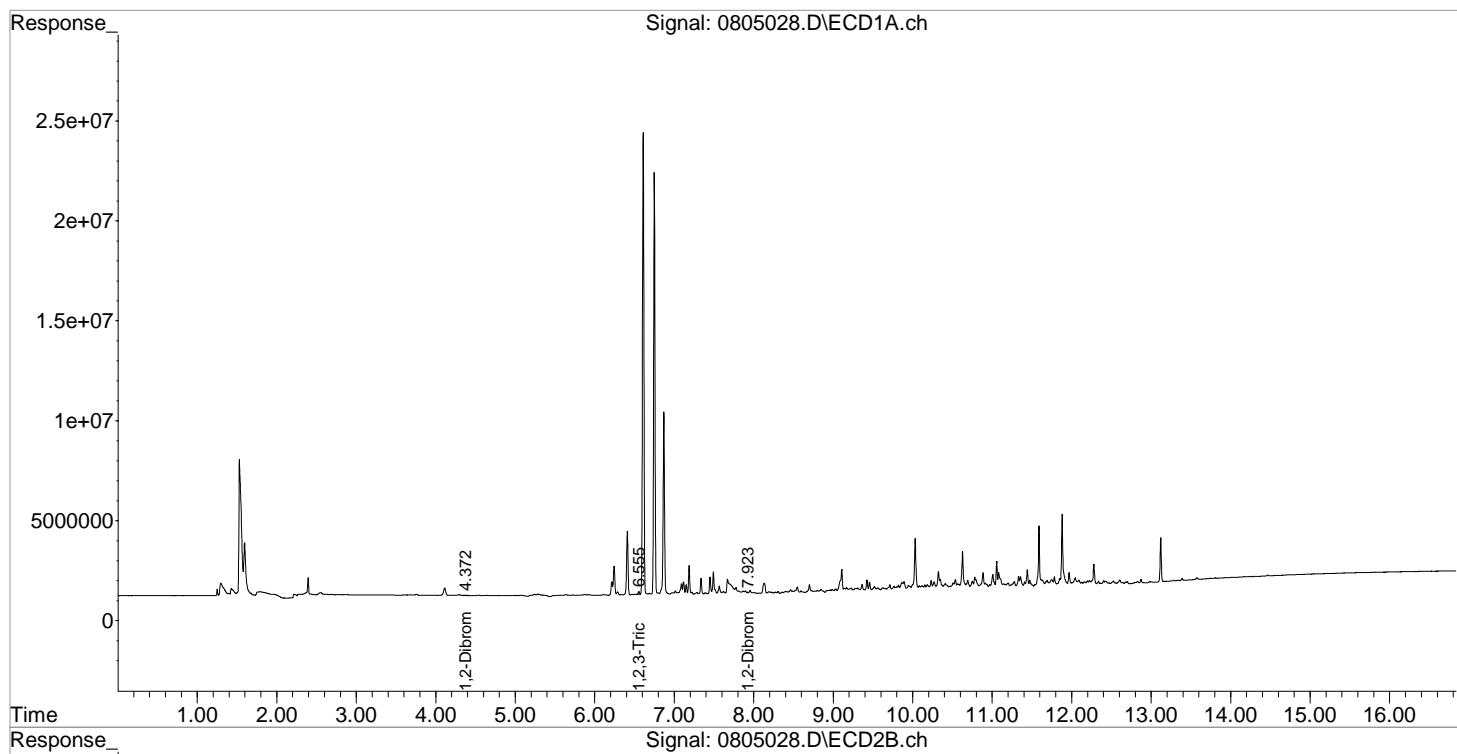
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.372	4.073	54631	477718	0.092	0.414 #
2) M 1,2,3-Triiodopropane	6.555	6.322	173097	557634	0.881	2.308 #
3) M 1,2-Dibromoethane	7.923	0.000	25477	0	0.002	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\080516-504\0805028.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 05-Aug-2016, 17:37:53 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 08 06:55:13 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	1	Vial 1	504-1 PRIMER MeOH	0804001	101	F:01:01
No	2	Vial 2	504-1 PRIMER Hexane	0804002	102	F:02:01
No	3	Vial 3	504-1 ICAL BLANK	0804003	103	F:03:01
No	4	Vial 4	504-1 080216 504 LV1	0804004	104	F:04:01
No	5	Vial 5	504-1 080216 504 LV2	0804005	105	F:05:01
No	6	Vial 6	504-1 080216 504 LV3	0804006	106	F:06:01
No	7	Vial 7	504-1 080216 504 LV4	0804007	107	F:07:01
No	8	Vial 8	504-1 080216 504 LV5	0804008	108	F:08:01
No	9	Vial 9	504-1 080216 504 LV6	0804009	109	F:09:01
No	10	Vial 10	504-1 080216 504 LV7	0804010	110	F:10:01
No	11	Vial 11	504-1 080216 504 LV8	0804011	111	F:11:01
No	12	Vial 12	504-1 080216 504 ICV	0804012	112	F:12:01
No	13	Vial 8	504-1 080216 504 LV5	0804013		F:13:01
No	14	Vial 3	504-1 IB	0804014		F:14:01
No	15	Vial 13	504-1 KWG1606497-3LCS	0804015		F:15:01
No	16	Vial 14	504-1 KWG1606497-4LCS	0804016		F:16:01
No	17	Vial 15	504-1 KWG1606497-5MB	0804017		F:17:01
No	18	Vial 16	504-1 K1608534-001	0804018		F:18:01
No	19	Vial 17	504-1 K1608534-002	0804019		F:19:01
No	20	Vial 18	504-1 K1608534-003	0804020		F:20:01
No	21	Vial 19	504-1 K1608534-004	0804021		F:21:01
No	22	Vial 20	504-1 K1608534-005	0804022		F:22:01
No	23	Vial 21	504-1 K1608534-006	0804023		F:23:01
No	24	Vial 22	504-1 K1608534-007	0804024		F:24:01
No	25	Vial 9	504-1 504 LV6	0804025		F:25:01
No	26	Vial 3	504-1 IB	0804026		F:26:01
No	27	Vial 23	504-1 K1608534-008	0804027		F:27:01
No	28	Vial 24	504-1 K1608534-008MS	0804028		F:28:01

CAL: 14853
RUN: 508163

processed
separately

NR run stopped

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804103.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 11:51:51 Operator: BS
 Sample : ICAL BLANK Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:33:14 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.335	4.125	22468	99079	0.067	0.093m#
2) M 1,2,3-Tri...	6.517	6.328	19794	140155	0.078	0.578m#

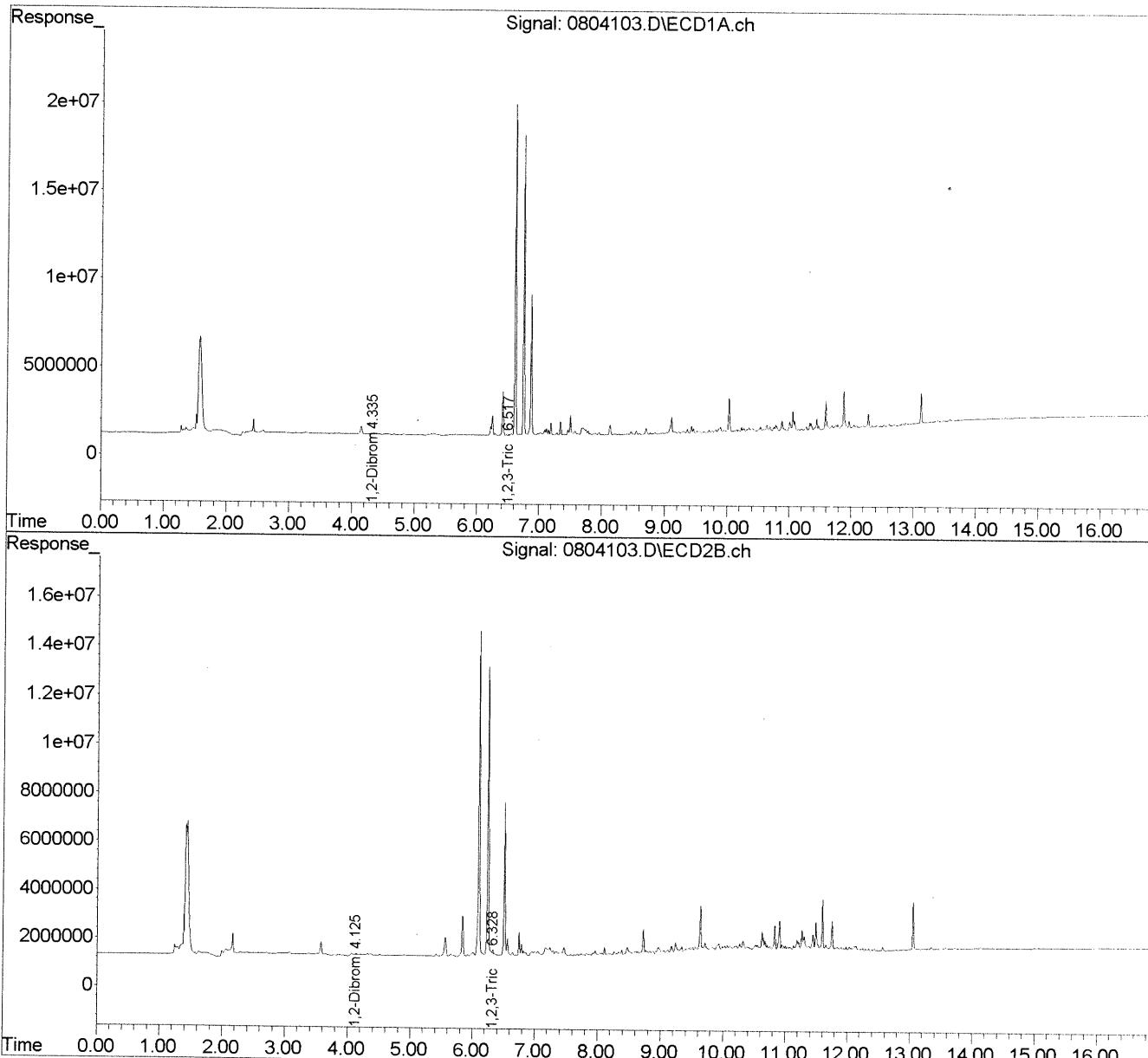
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804103.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 11:51:51 Operator: BS
 Sample : ICAL BLANK Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:33:14 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

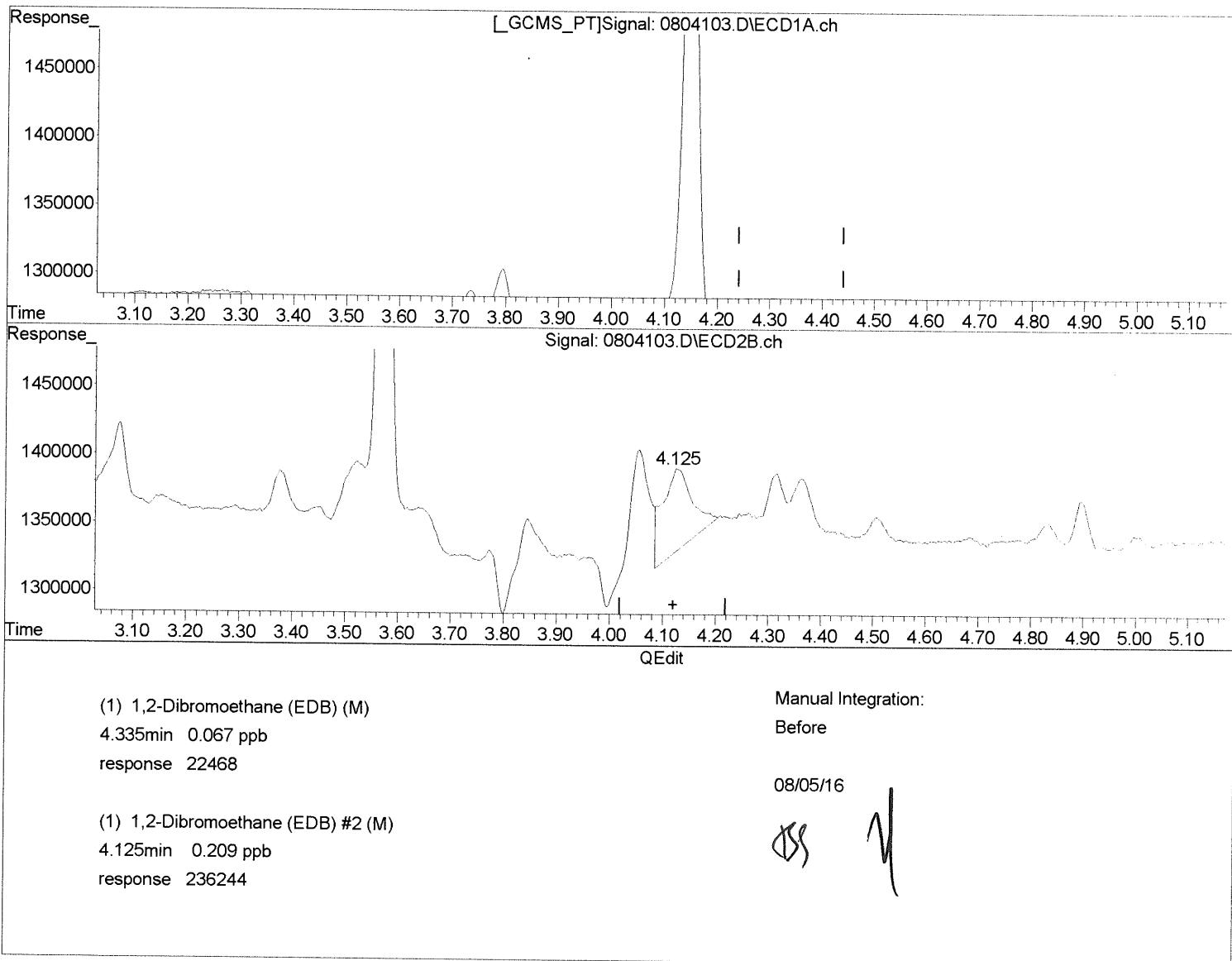


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804103.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 11:51:51 Operator: BS
 Sample : ICAL BLANK Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:32:31 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



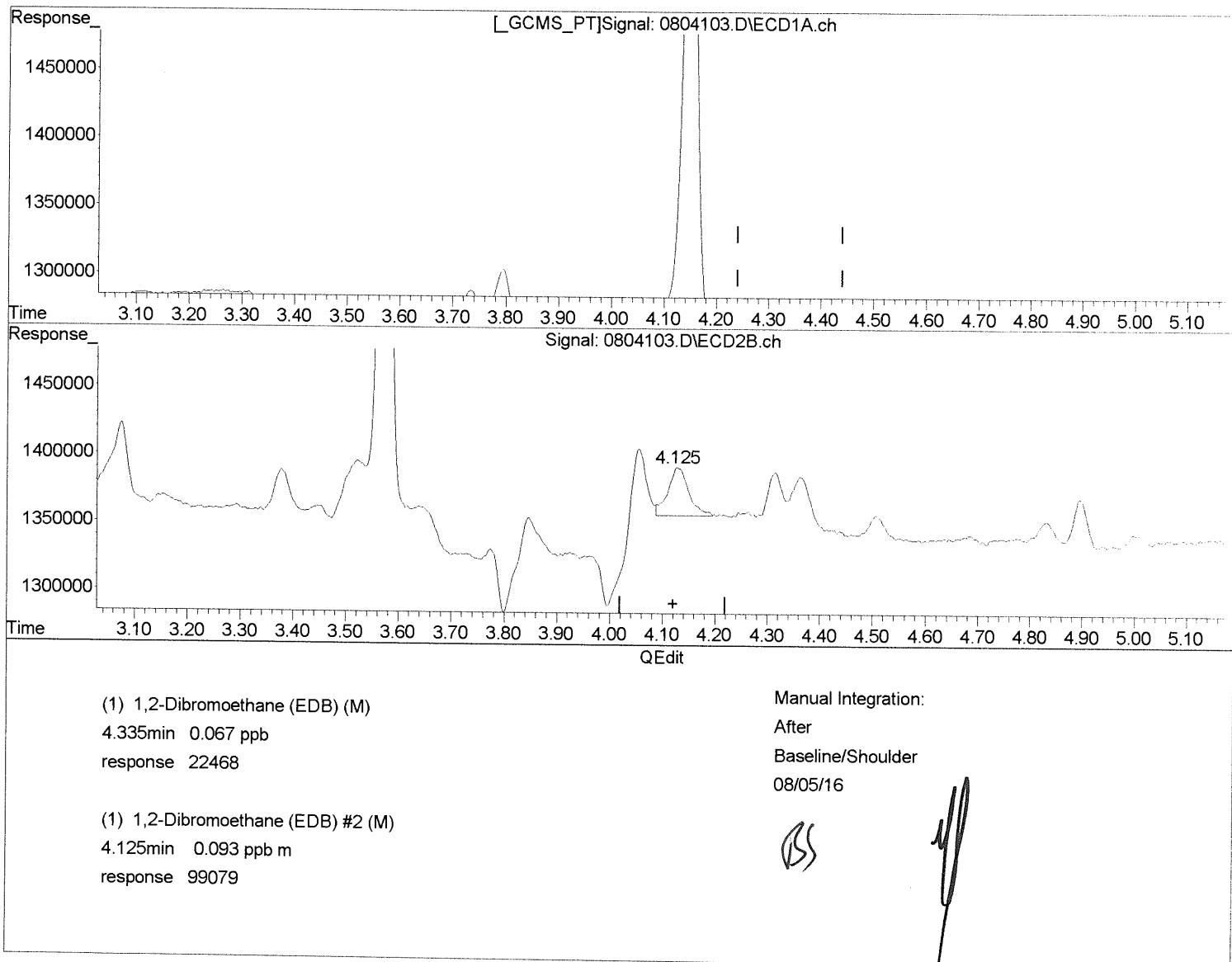
(+) = Expected Retention Time
 080416_504.M Fri Aug 05 15:32:40 2016

Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804103.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 11:51:51 Operator: BS
 Sample : ICAL BLANK Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:32:31 2016
 Quant Results File: 080416_504.RES
 Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



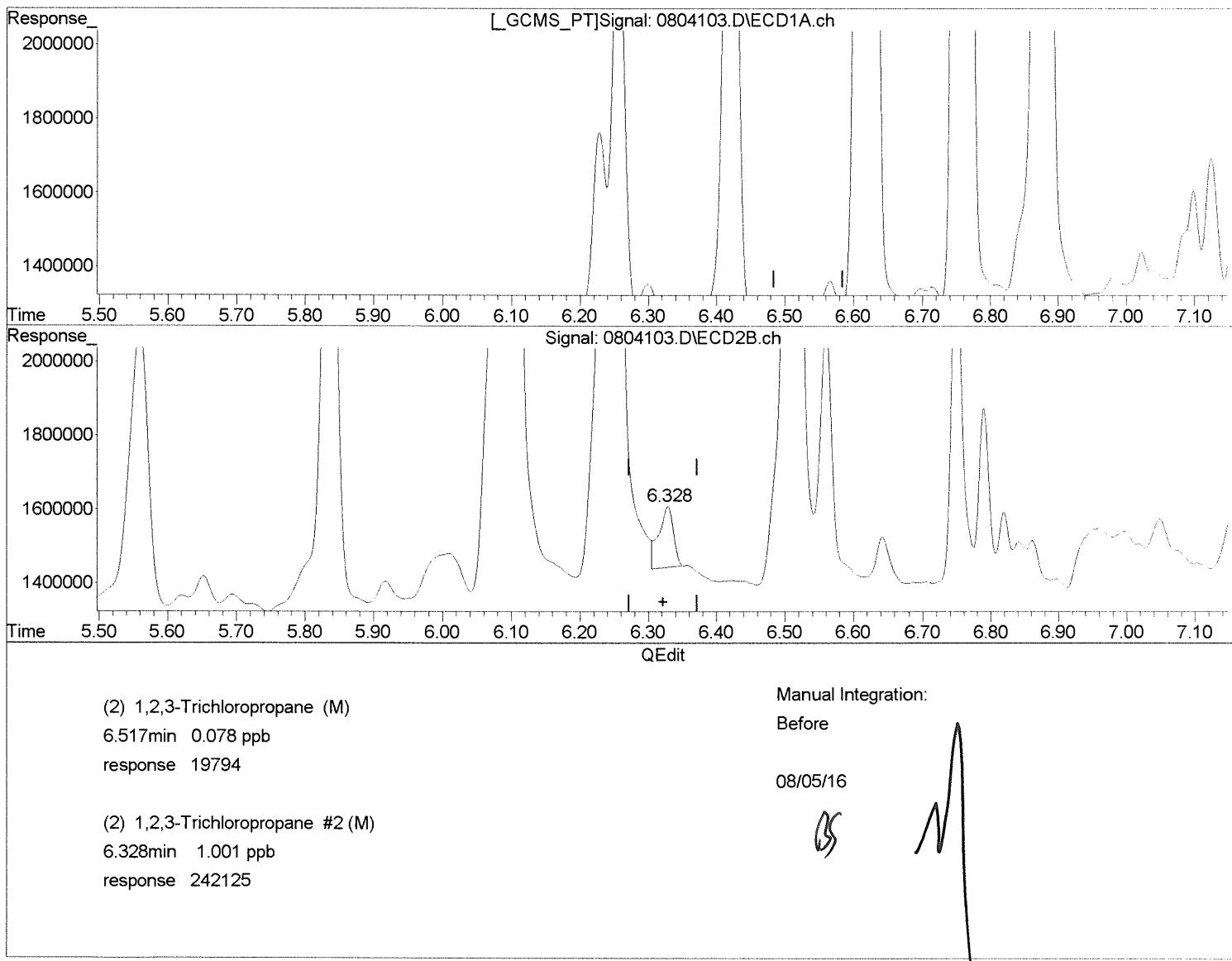
(+) = Expected Retention Time
 080416_504.M Fri Aug 05 15:32:47 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804103.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 11:51:51 Operator: BS
 Sample : ICAL BLANK Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:32:31 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
080416_504.M Fri Aug 05 15:32:58 2016

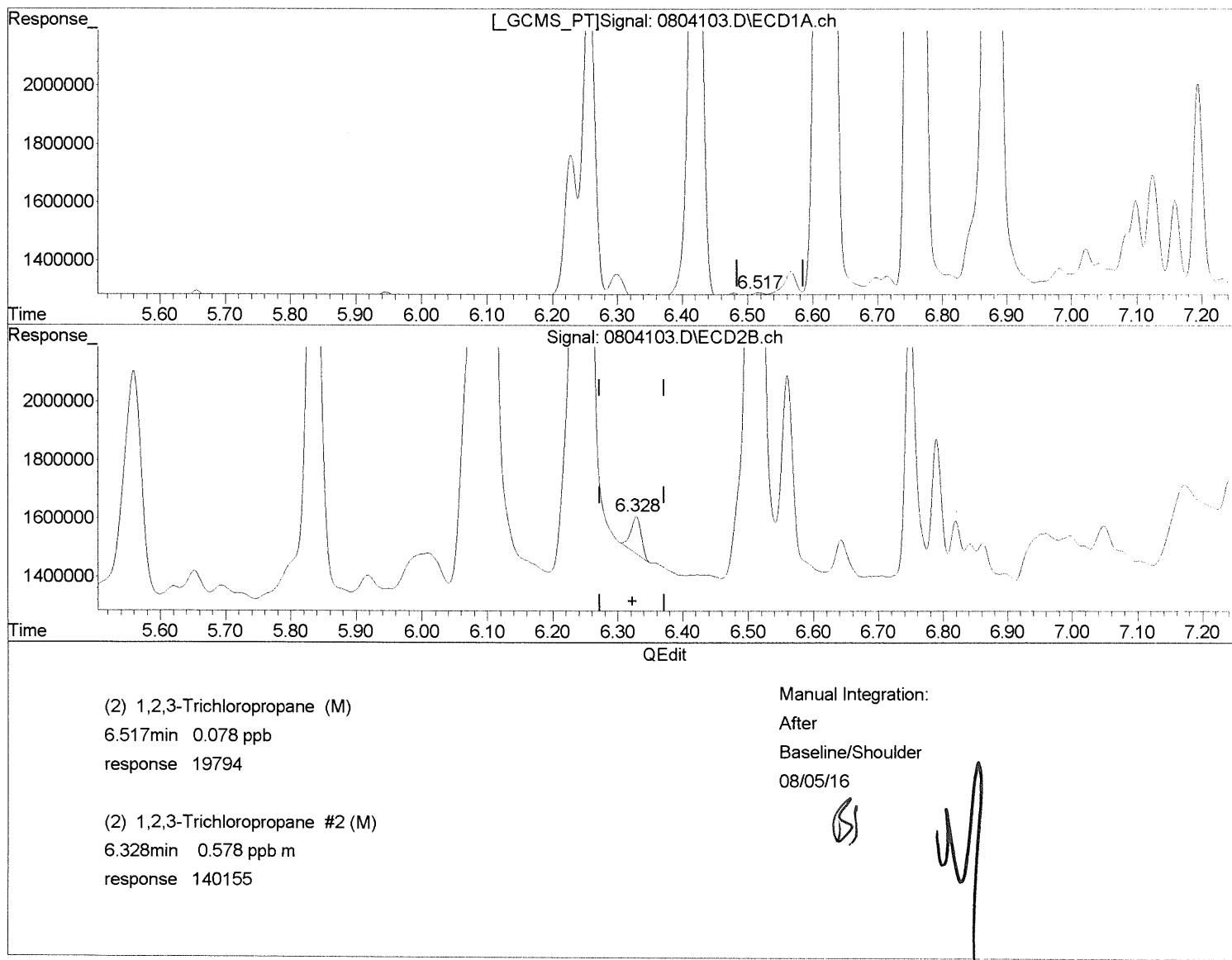
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804103.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 11:51:51 Operator: BS
 Sample : ICAL BLANK Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:32:31 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
 080416_504.M Fri Aug 05 15:33:05 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804104.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 12:15:24 Operator: BS
Sample : 080216 504 LV1 Inst : GCI
Misc : Multipllr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:51:27 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Fri Aug 05 14:50:39 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
<hr/>							
Target Compounds							
1) M 1,2-Dibro...	4.358	4.135	60901	89735	0.037	0.067	#
3) M 1,2-Dibro...	7.913	7.888	227670	224887	0.066	0.080	

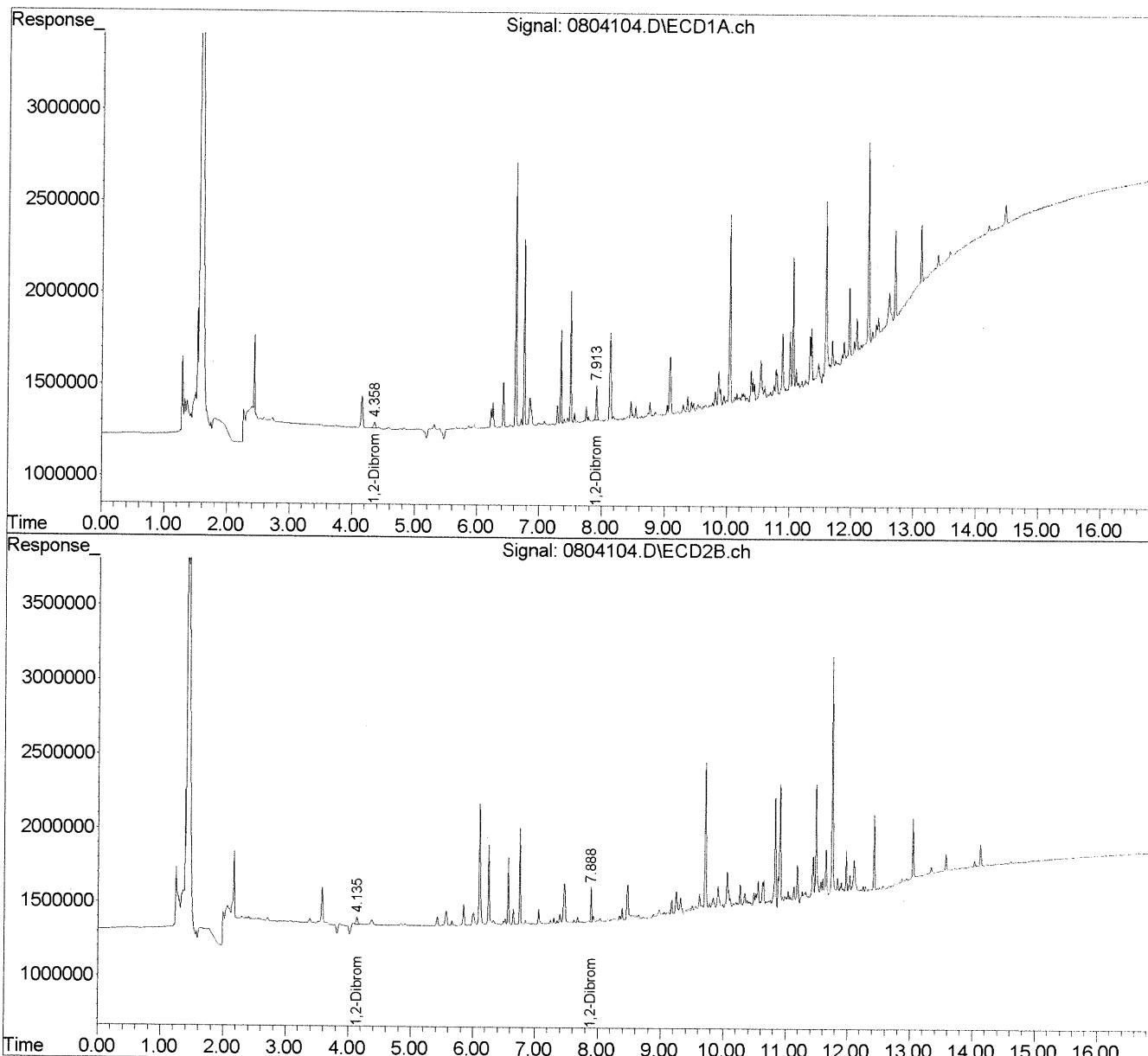
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804104.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 12:15:24 Operator: BS
Sample : 080216 504 LV1 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:51:27 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Fri Aug 05 14:50:39 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804105.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 12:39:08 Operator: BS
 Sample : 080216 504 LV2 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:51 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.358	4.133	117660	141548	0.072	0.106 #
2) M 1,2,3-Tri...	6.538	6.325	34285	34225	0.127	0.141m
3) M 1,2-Dibro...	7.913	7.888	347401	363659	0.101	0.129 #

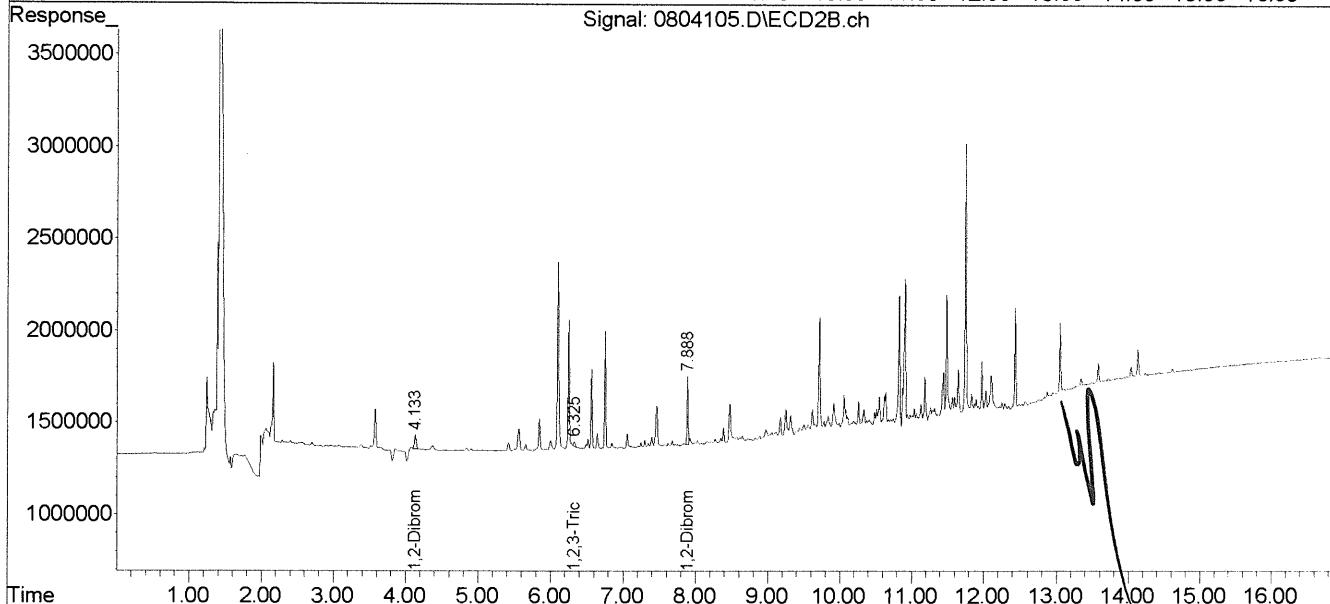
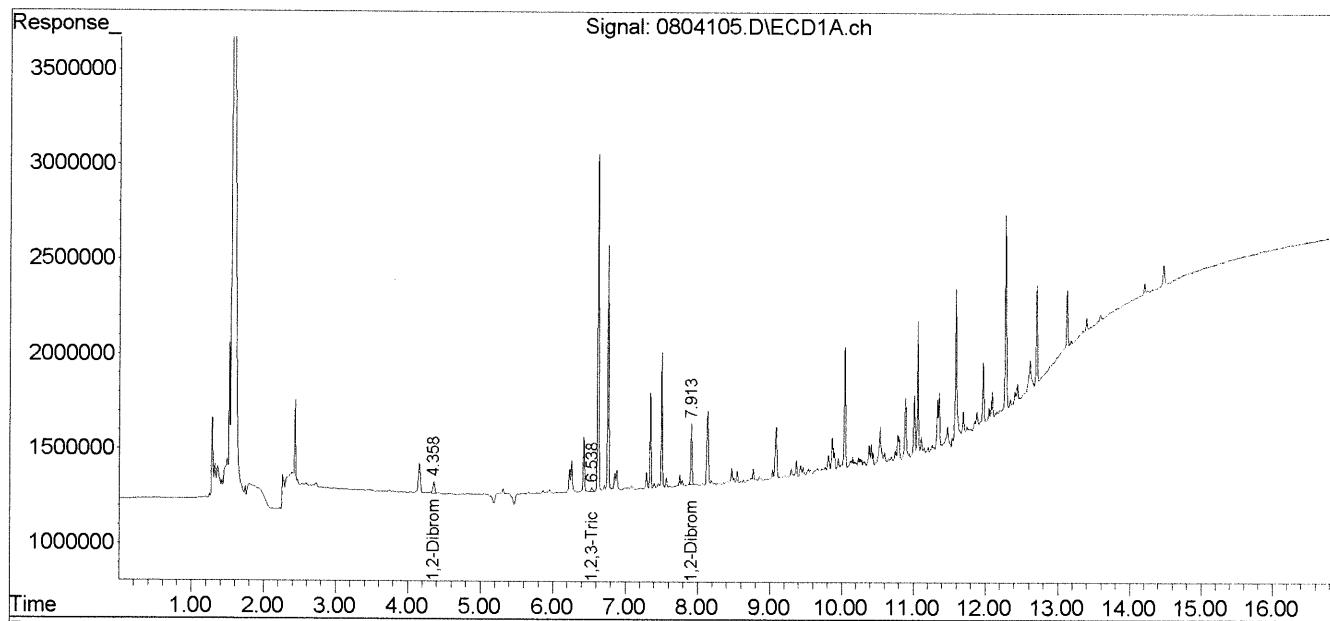
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804105.D Vial: 5
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 12:39:08 Operator: BS
Sample : 080216 504 LV2 Inst : GCI
Misc : Multipllr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:51:51 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Thu Jul 28 12:21:16 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

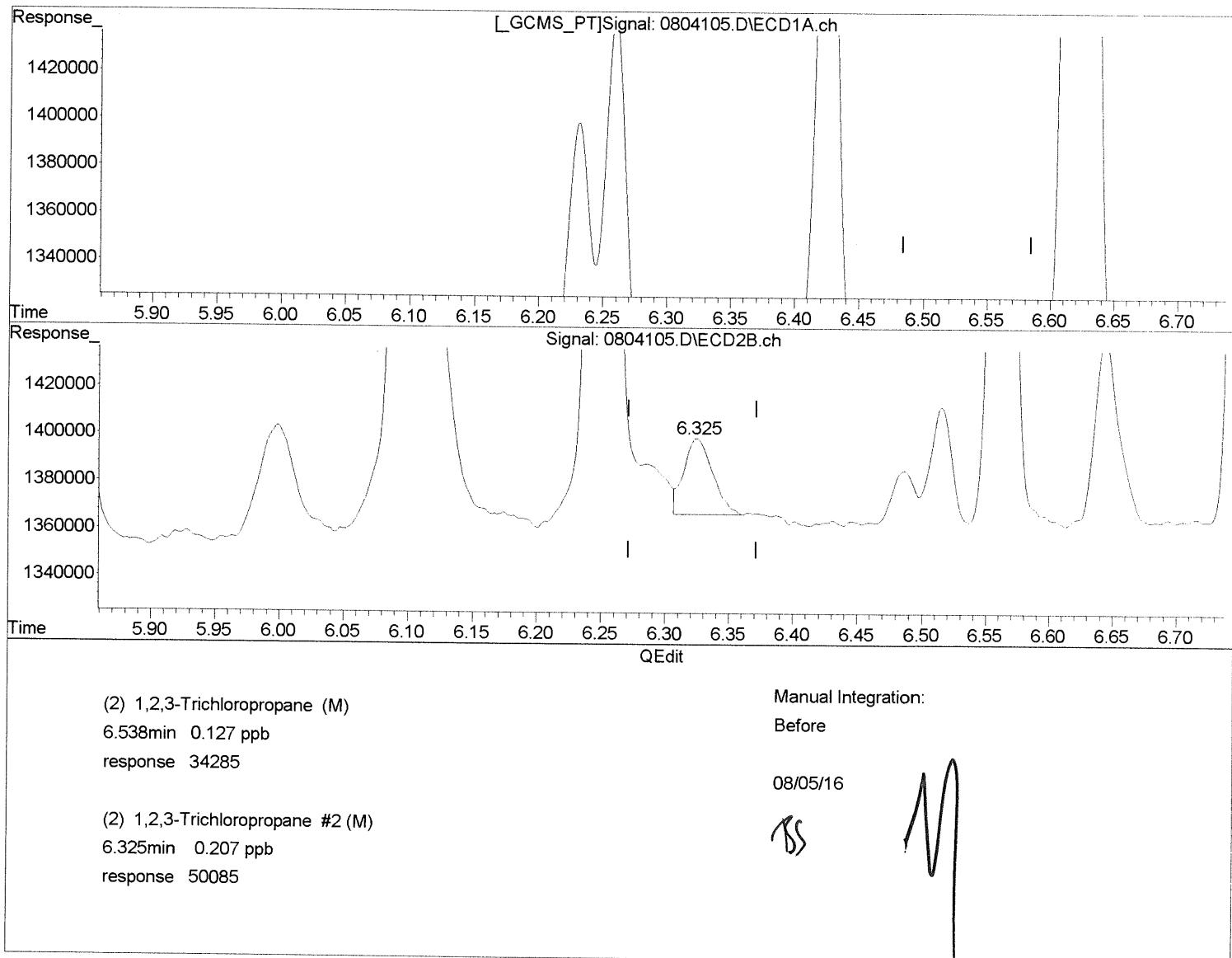


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804105.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 12:39:08
 Sample : 080216 504 LV2 Operator: BS
 Misc : Inst : GCI
 Integration File signal 1: rteint.p Multiplr: 1.00
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:50:55 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



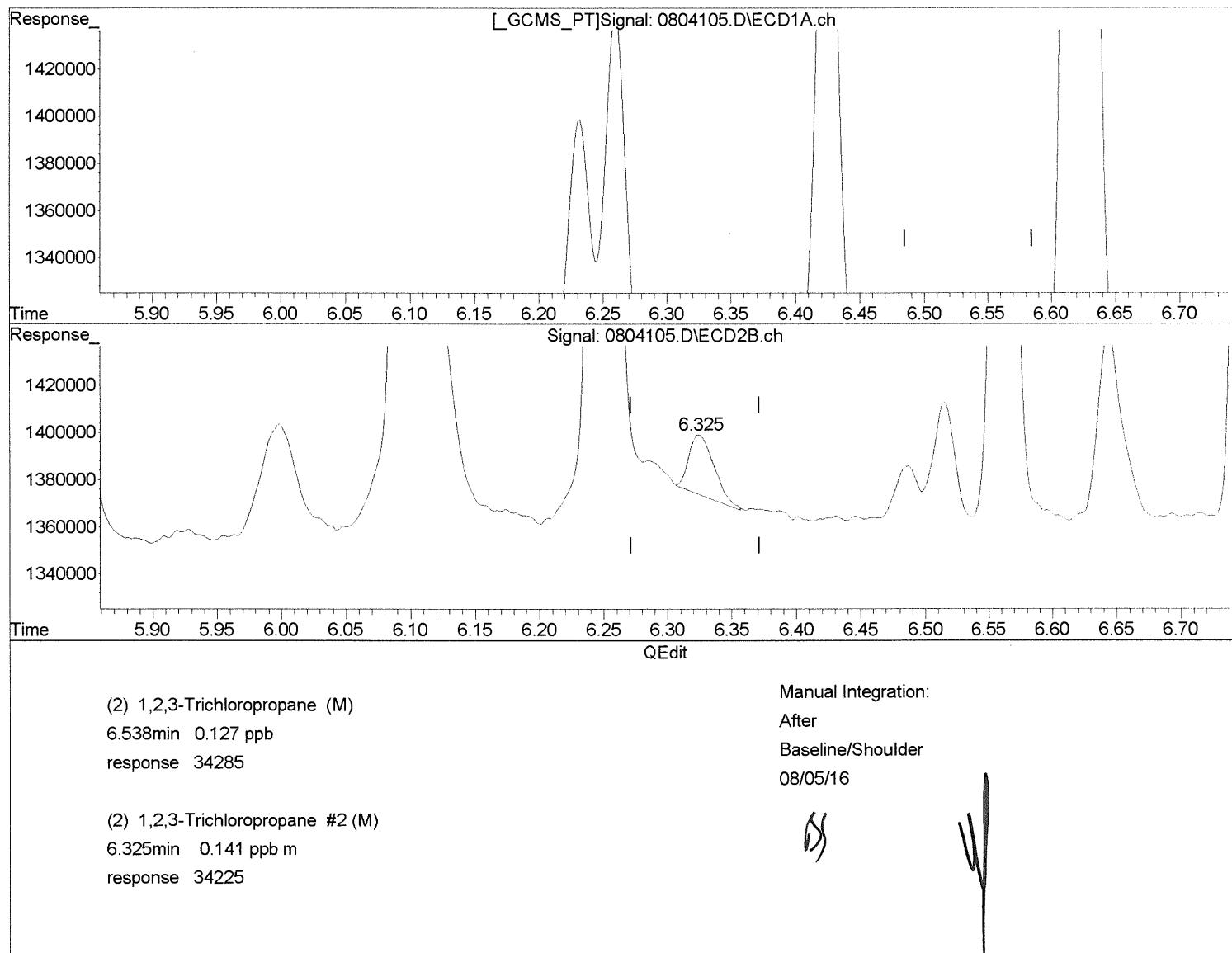
(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:51:47 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804105.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 12:39:08 Operator: BS
 Sample : 080216 504 LV2 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:50:55 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



080416_504.M Fri Aug 05 14:51:52 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804106.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 13:02:44 Operator: BS
 Sample : 080216 504 LV3 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:52:09 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.355	4.133	207095	240326	0.127	0.180 #
2) M 1,2,3-Tri...	6.538	6.325	41533	46114	0.154	0.191m
3) M 1,2-Dibro...	7.915	7.890	513078	547165	0.149	0.195 #
<hr/>						

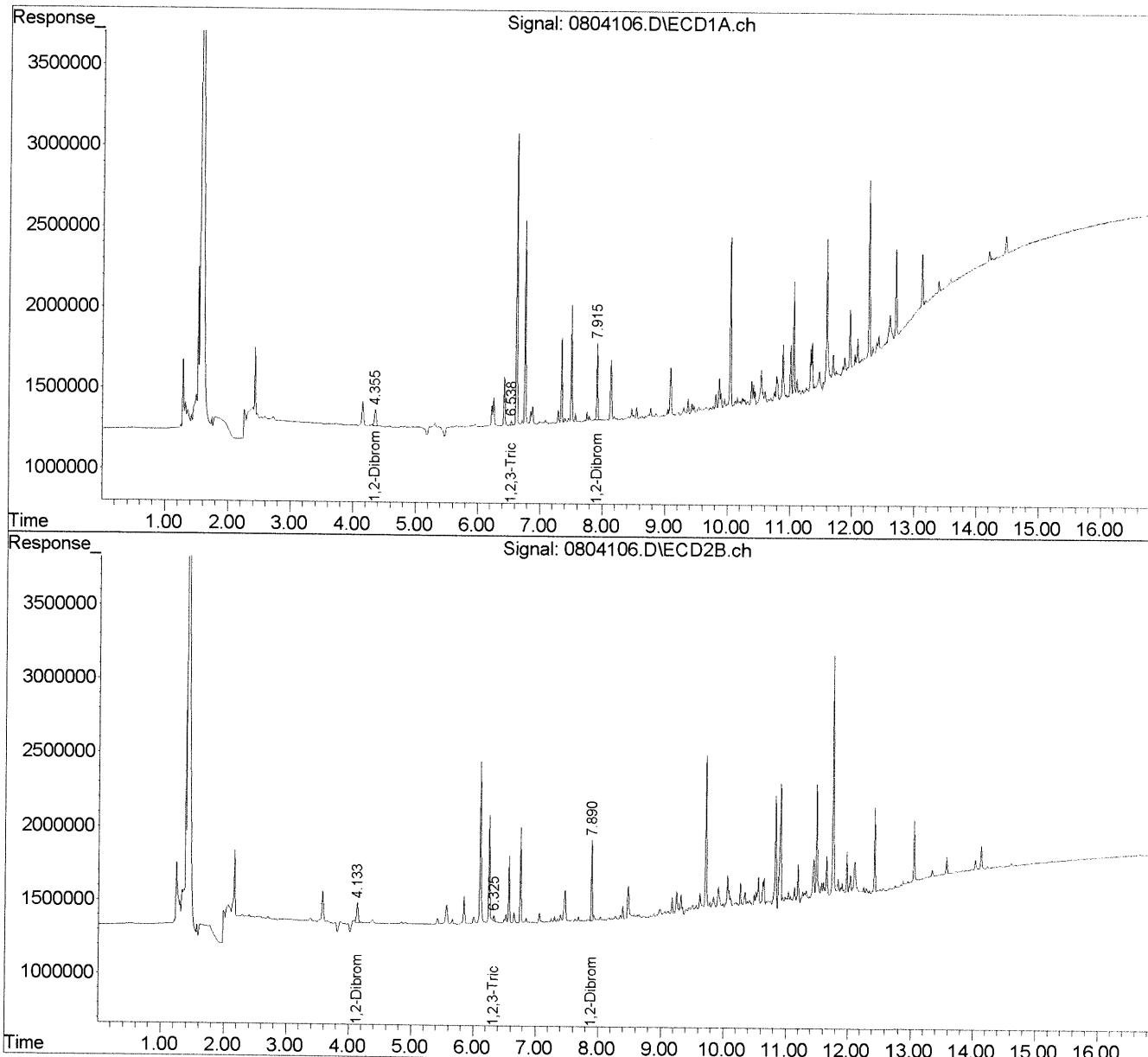
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804106.D Vial: 6
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 13:02:44 Operator: BS
Sample : 080216 504 LV3 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:52:09 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Thu Jul 28 12:21:16 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

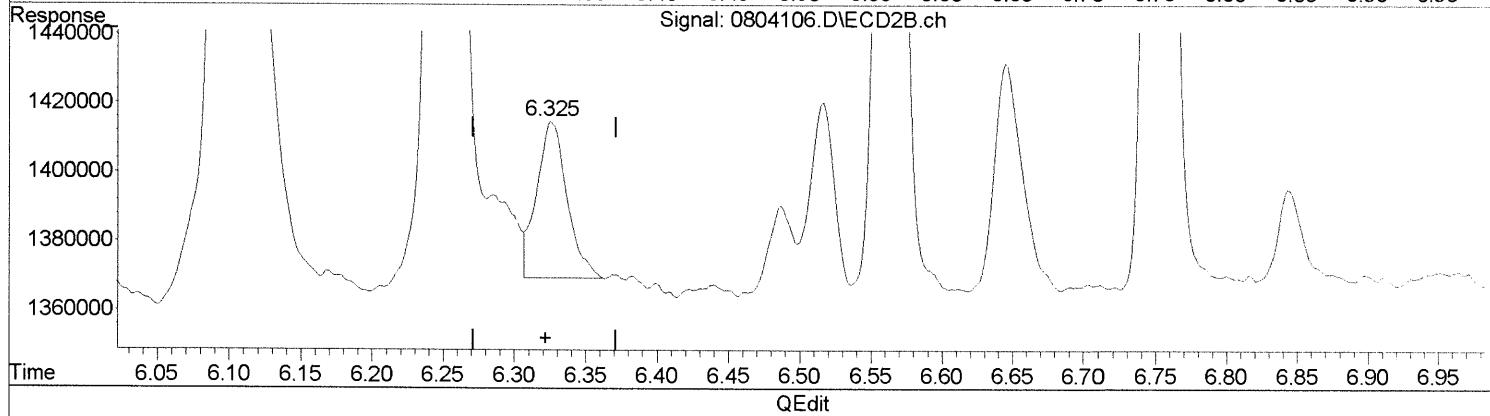
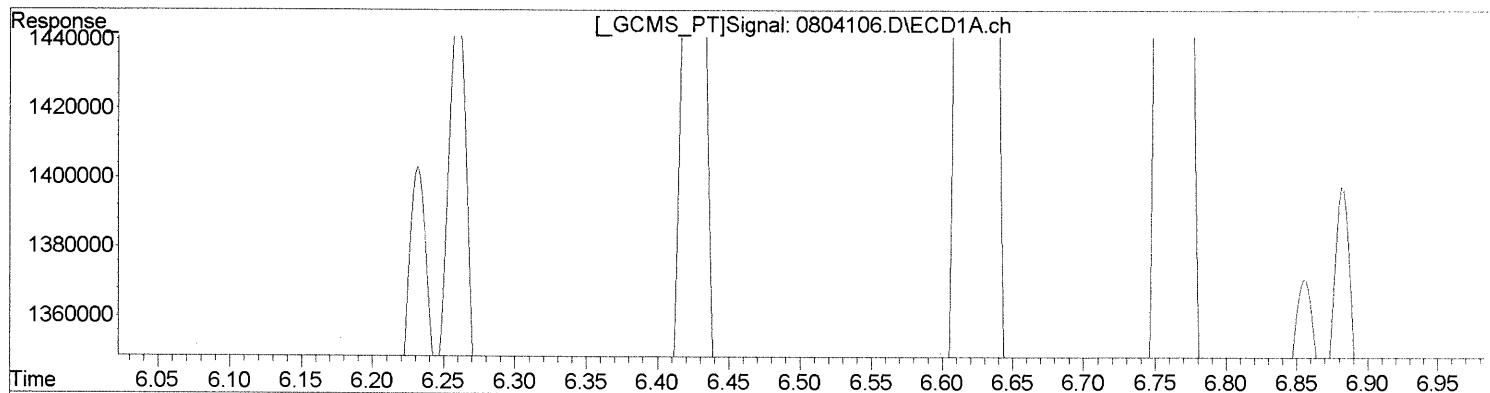


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804106.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 13:02:44 Operator: BS
 Sample : 080216 504 LV3 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:50:57 2016
 Quant Results File: 080416_504.RES

 Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
 6.538min 0.154 ppb
 response 41533

Manual Integration:
 Before

08/05/16

(2) 1,2,3-Trichloropropane #2 (M)
 6.325min 0.275 ppb
 response 66505

B

M

(+) = Expected Retention Time
 080416_504.M Fri Aug 05 14:52:04 2016

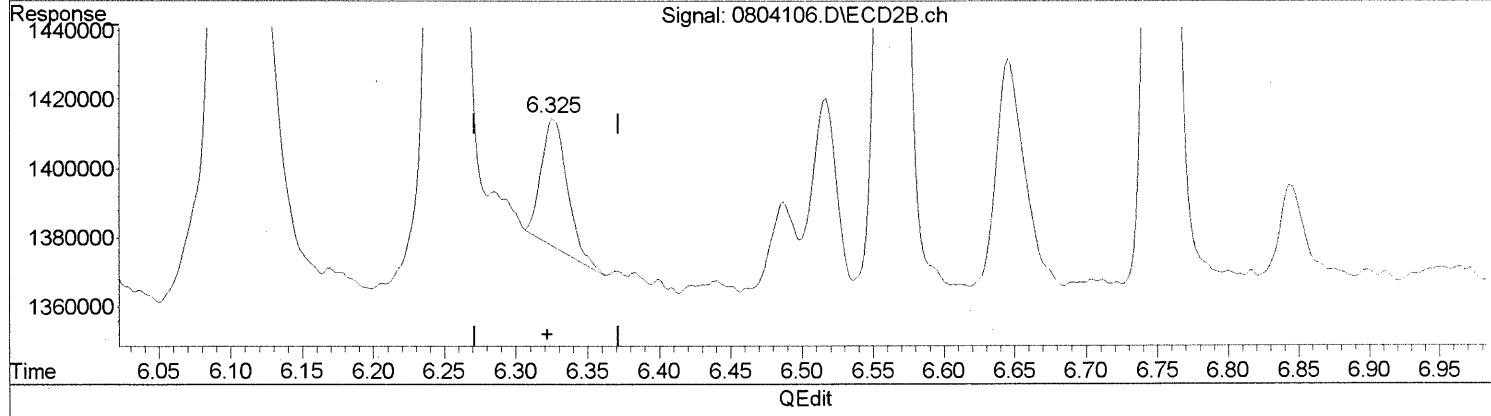
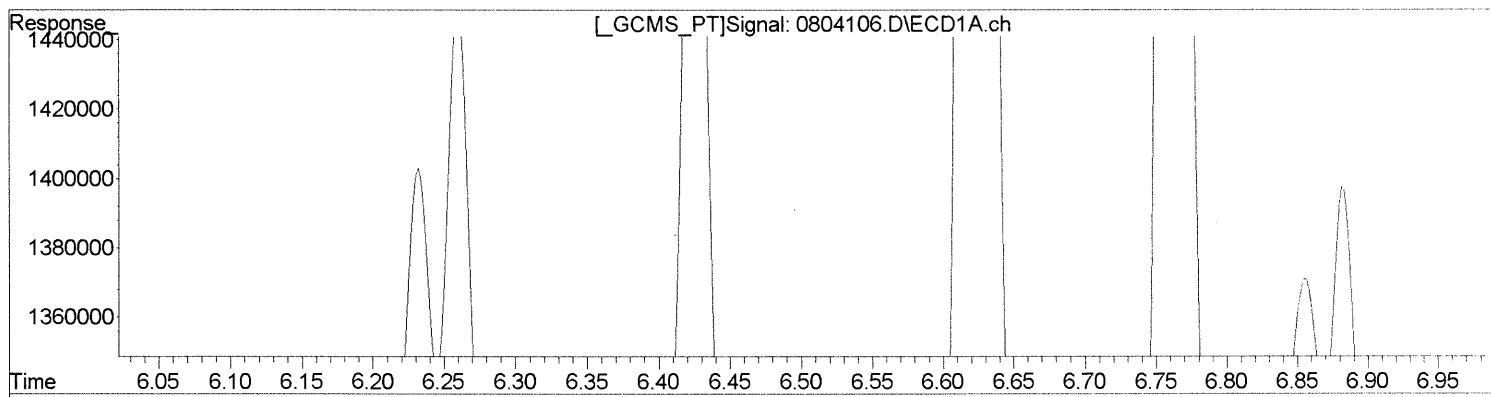
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804106.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 13:02:44 Operator: BS
 Sample : 080216 504 LV3 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:50:57 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
6.538min 0.154 ppb
response 41533

Manual Integration:
After
Baseline/Shoulder
08/05/16

(2) 1,2,3-Trichloropropane #2 (M)
6.325min 0.191 ppb m
response 46114

(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:52:10 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804107.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 13:26:22 Operator: BS
 Sample : 080216 504 LV4 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:53:10 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.348	4.125	716949	804117	0.440m	0.601m#
2) M 1,2,3-Tri...	6.535	6.322	138413	179617	0.512	0.742 #
3) M 1,2-Dibro...	7.913	7.887	1613427	1816248	0.468	0.646 #
<hr/>						

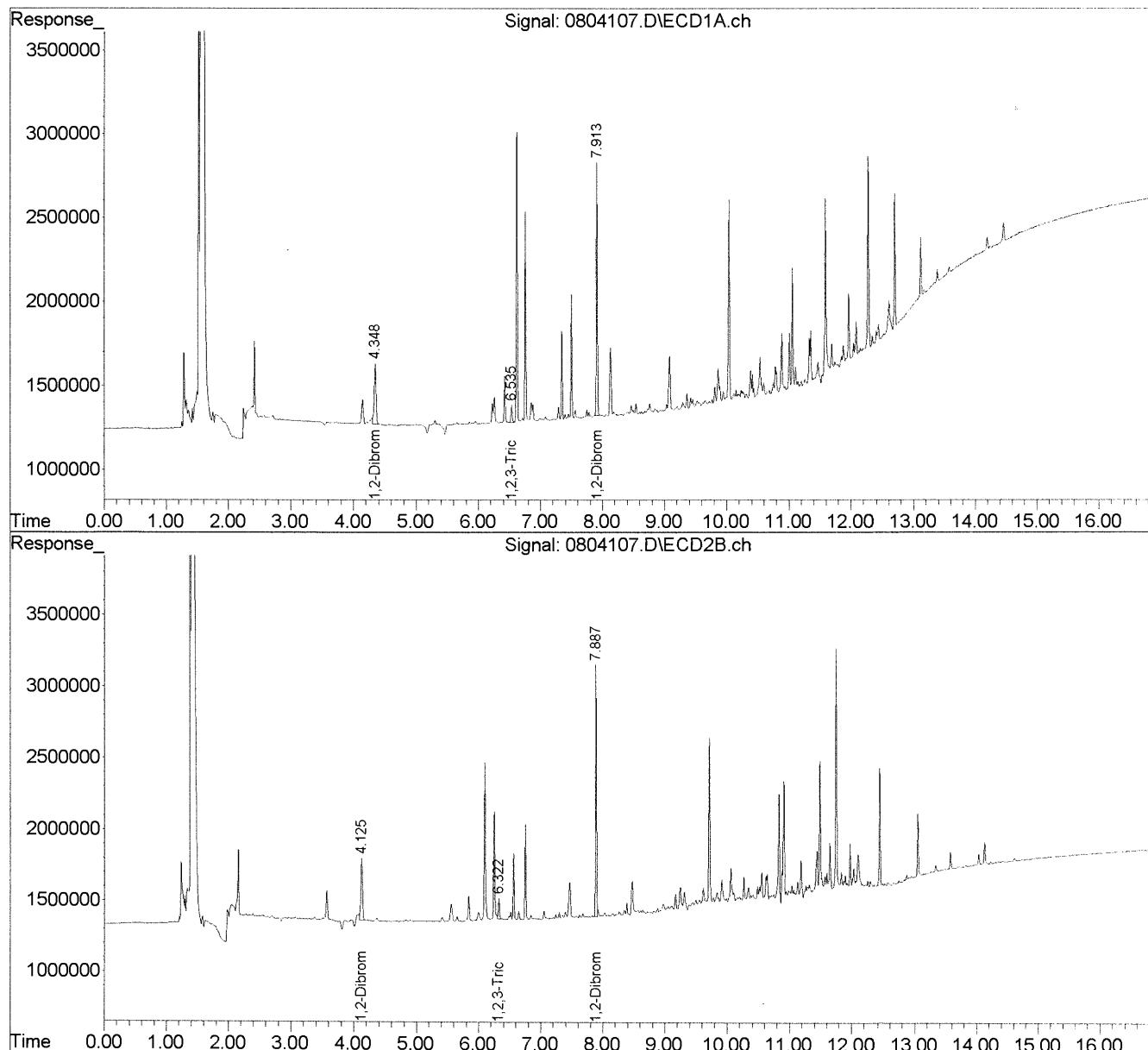
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804107.D Vial: 7
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 13:26:22 Operator: BS
Sample : 080216 504 LV4 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:53:10 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Thu Jul 28 12:21:16 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

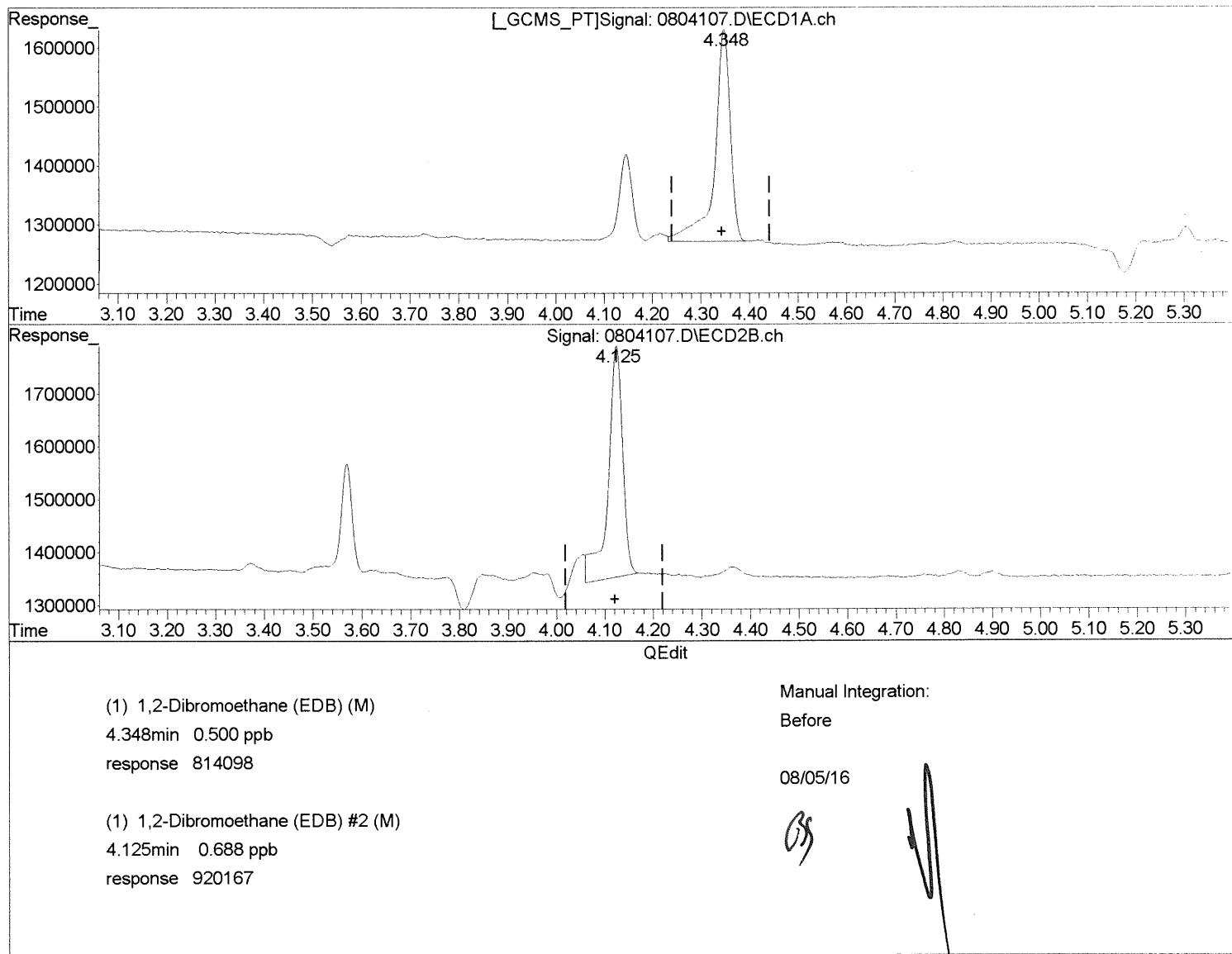


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804107.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 13:26:22 Operator: BS
 Sample : 080216 504 LV4 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:50:59 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:52:18 2016

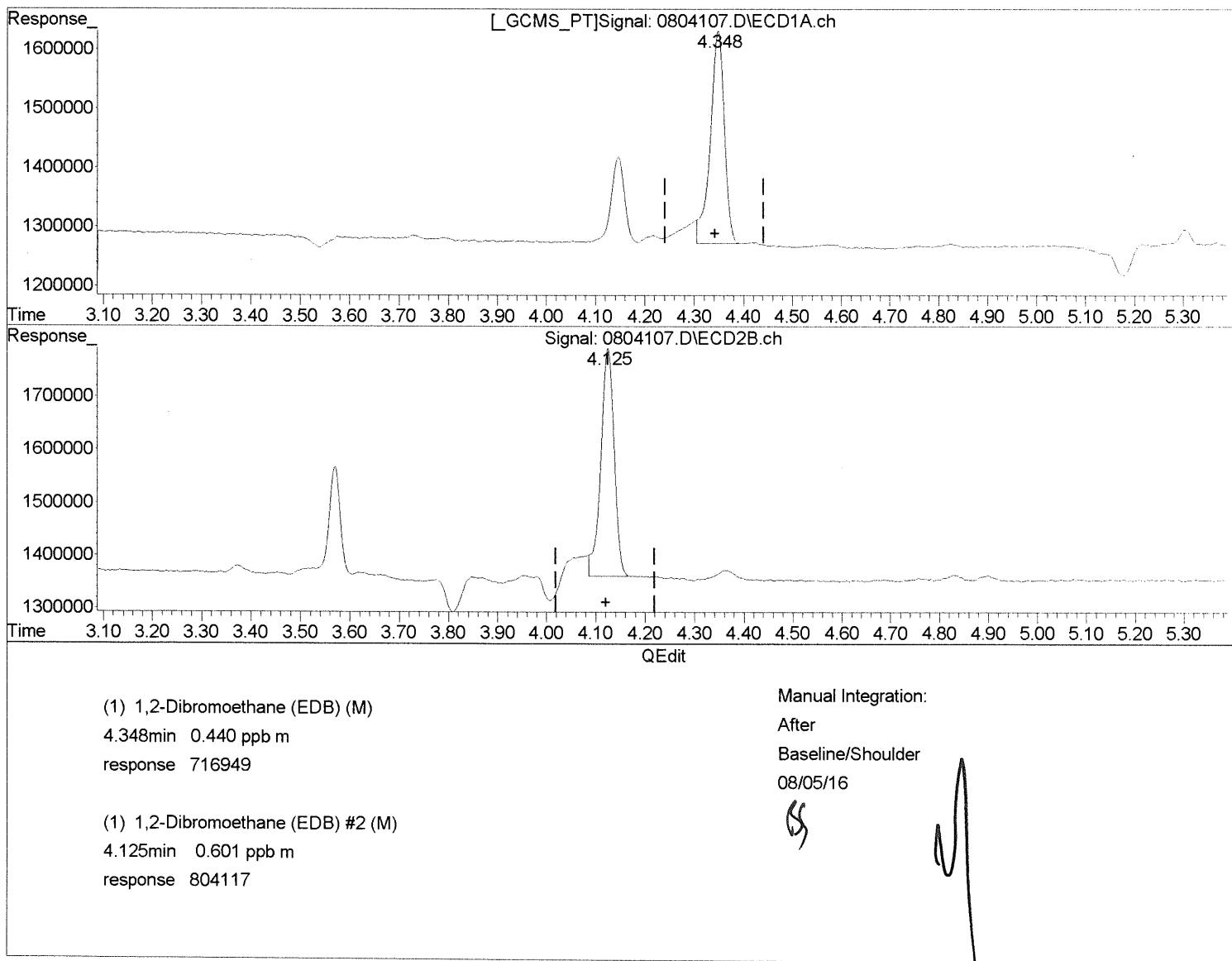
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804107.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 13:26:22 Operator: BS
 Sample : 080216 504 LV4 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:50:59 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:53:15 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804108.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 13:50:04 Operator: BS
 Sample : 080216 504 LV5 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:53:39 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.342	4.120	1257933	1296452	0.773	0.969m#
2) M 1,2,3-Triiodopropane	6.535	6.322	207723	276411	0.769	1.142 #
3) M 1,2-Dibromoethane	7.915	7.890	2499983	2873709	0.725	1.022 #

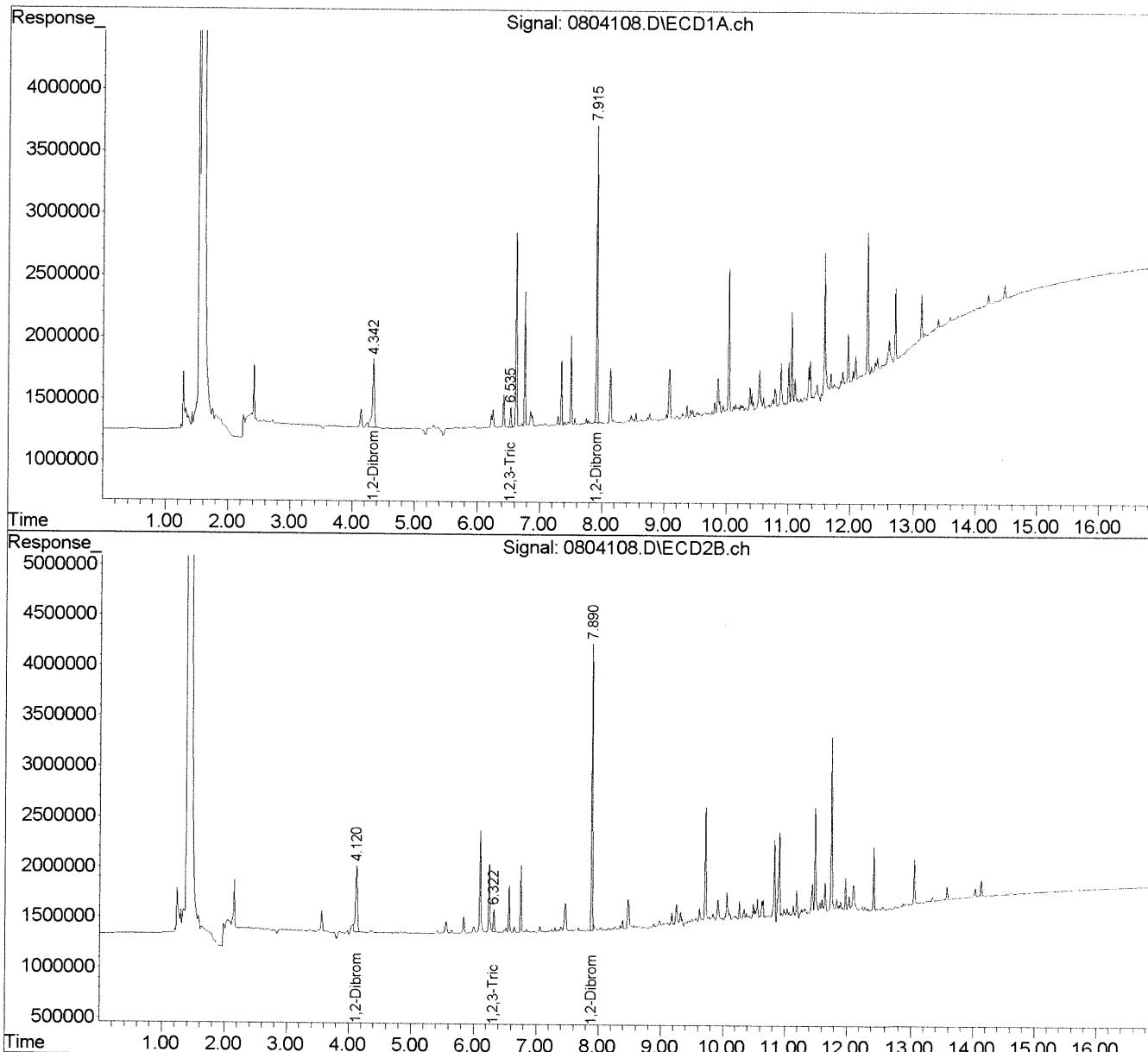
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804108.D Vial: 8
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 13:50:04 Operator: BS
Sample : 080216 504 LV5 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:53:39 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Thu Jul 28 12:21:16 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

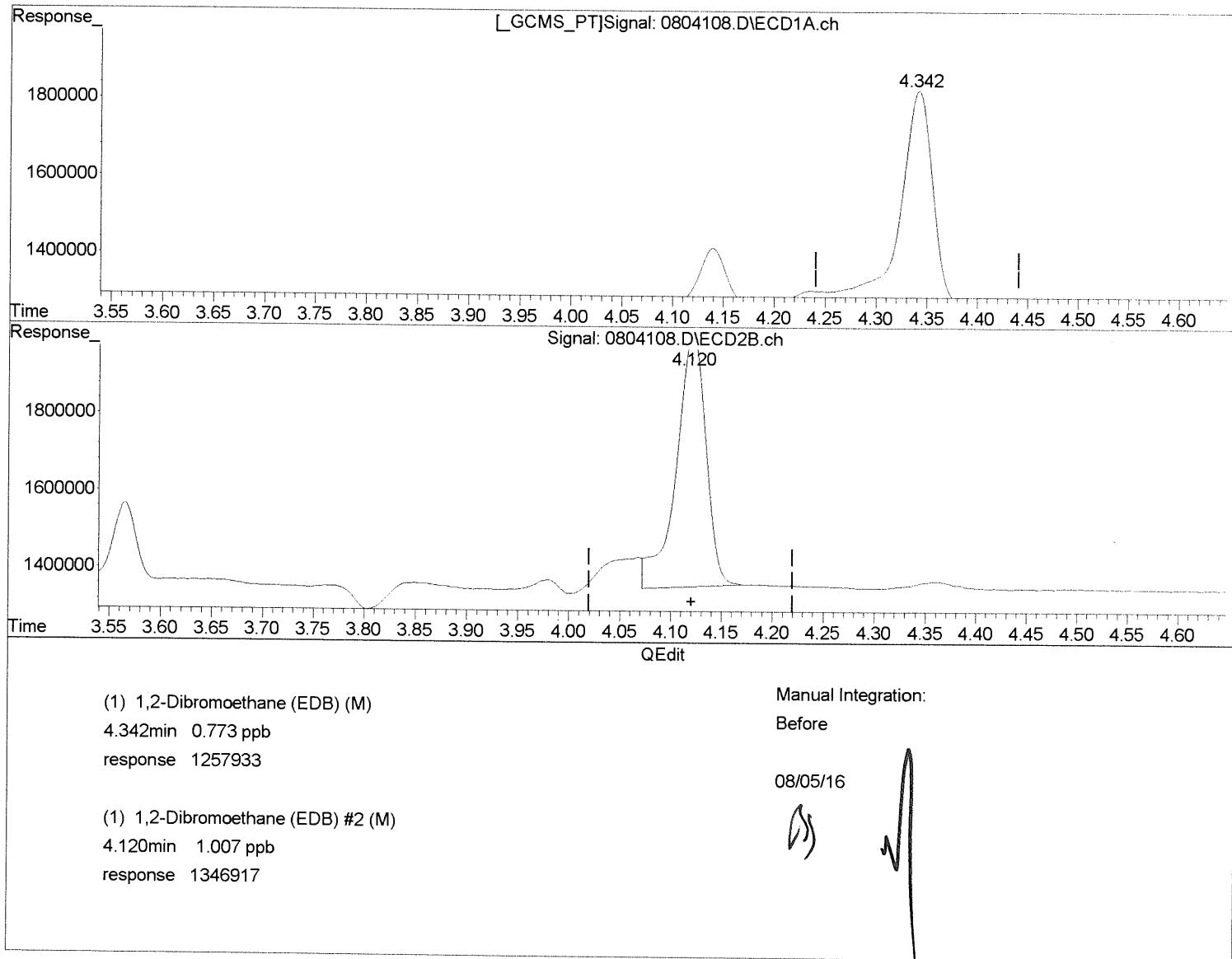


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804108.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 13:50:04 Operator: BS
 Sample : 080216 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:01 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



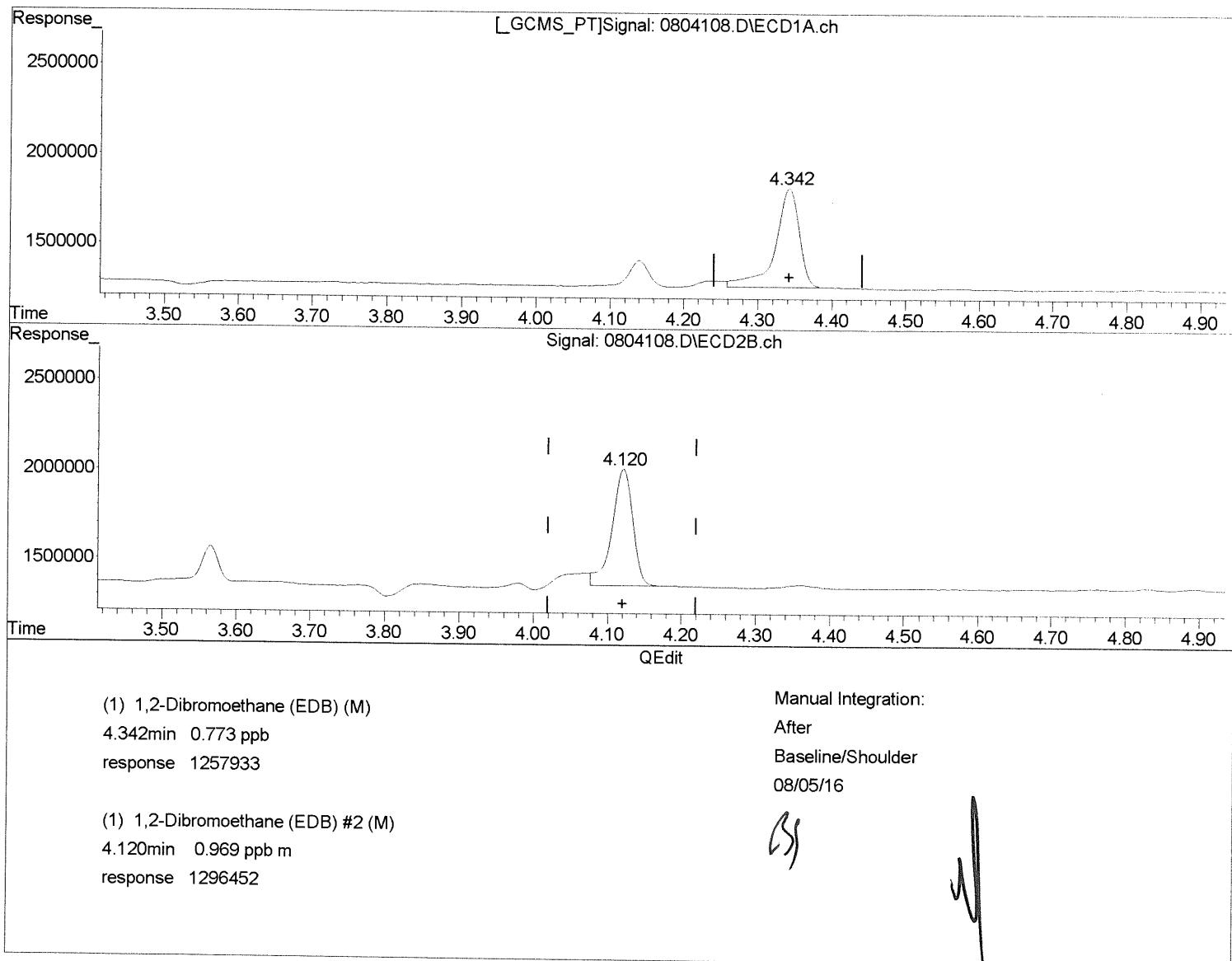
(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:53:33 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804108.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 13:50:04
 Sample : 080216 504 LV5 Operator: BS
 Misc : Inst : GCI
 Integration File signal 1: rteint.p Multiplr: 1.00
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:01 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
 080416_504.M Fri Aug 05 14:53:43 2016

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804109.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 14:13:36 Operator: BS
 Sample : 080216 504 LV6 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:54:18 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	4.340	4.122	4564643	4341656	2.804	3.246m
2) M 1,2,3-Triiodopropane	6.533	6.322	732871	933029	2.712	3.855m#
3) M 1,2-Dibromoethane	7.913	7.888	8645113	10486037	2.506	3.729 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

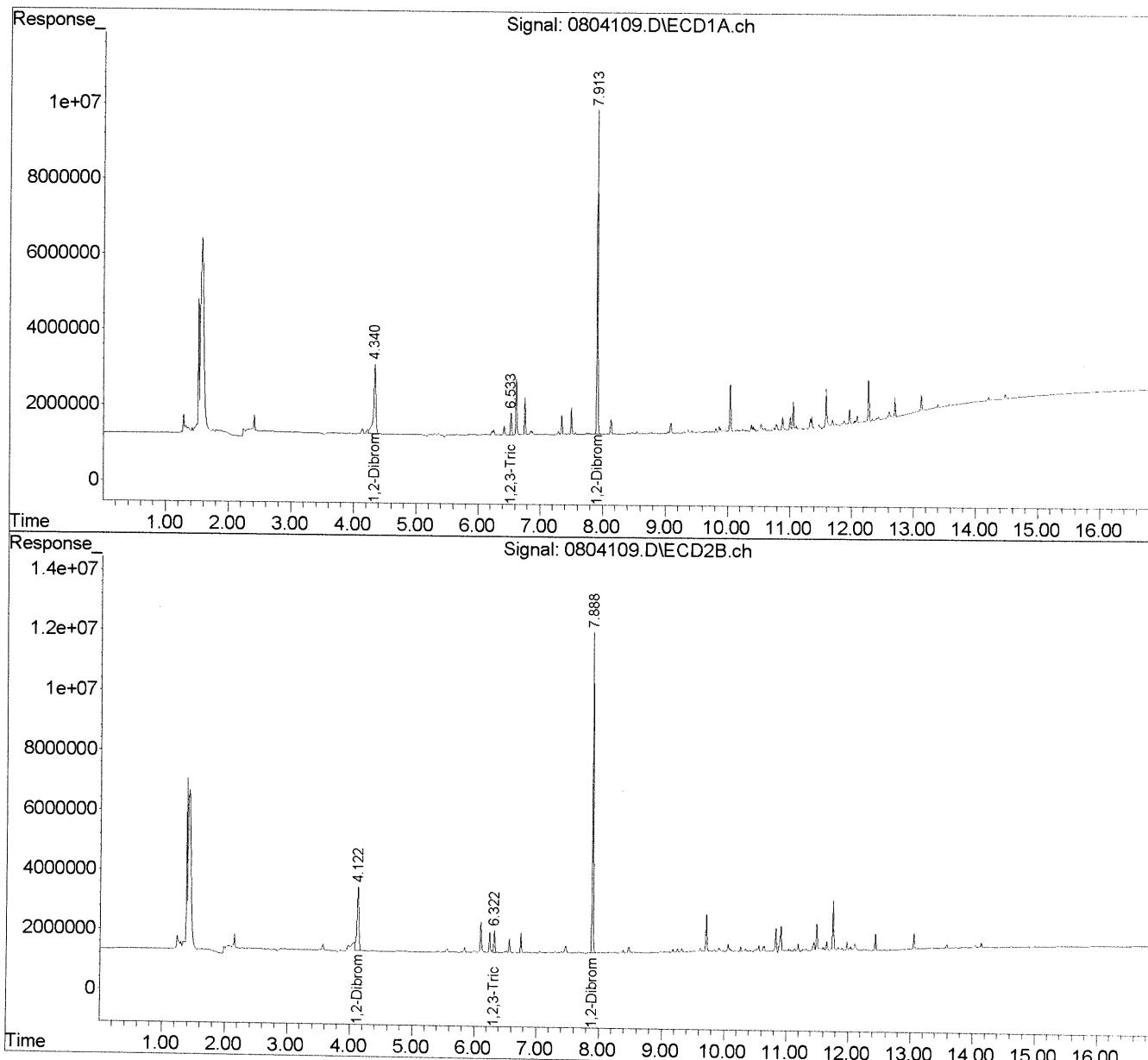
BS
8/5/16

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804109.D Vial: 9
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 14:13:36 Operator: BS
Sample : 080216 504 LV6 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:54:18 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Thu Jul 28 12:21:16 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

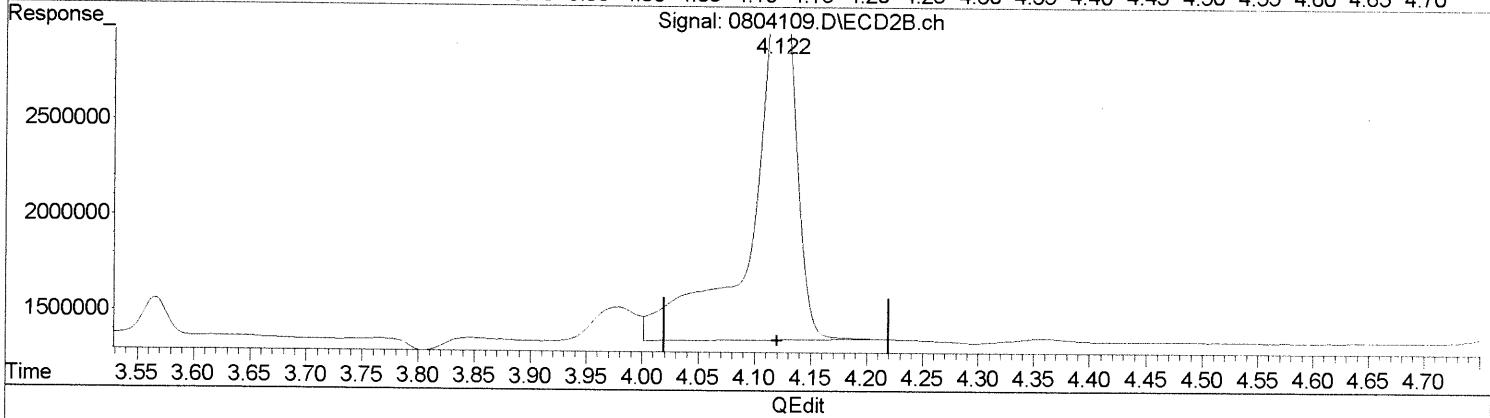
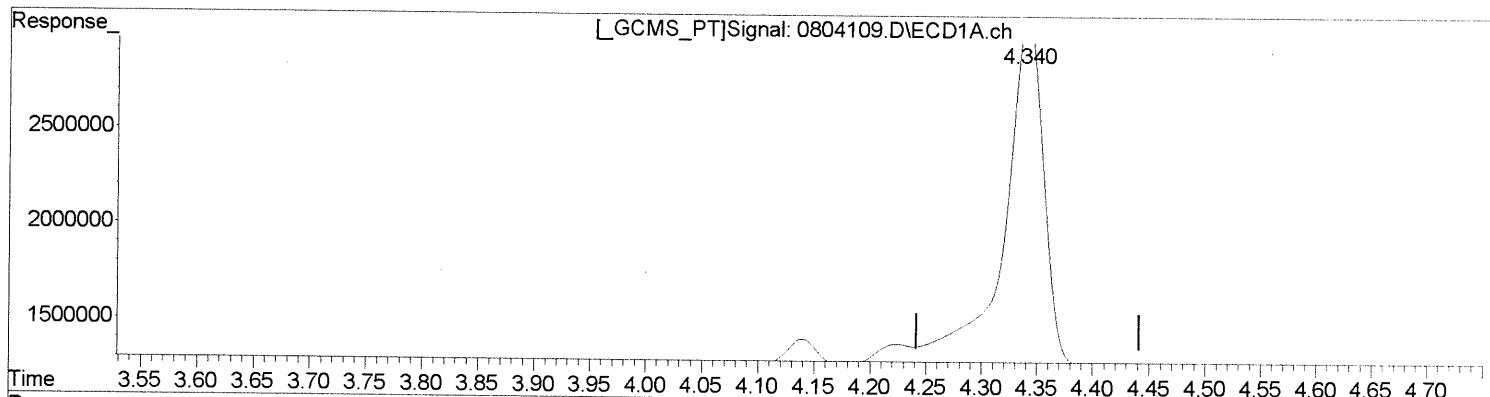


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804109.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 14:13:36 Operator: BS
 Sample : 080216 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:03 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.340min 2.804 ppb

response 4564643

Manual Integration:

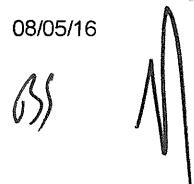
Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.122min 4.021 ppb

response 5378026



(+) = Expected Retention Time
 080416_504.M Fri Aug 05 14:53:58 2016

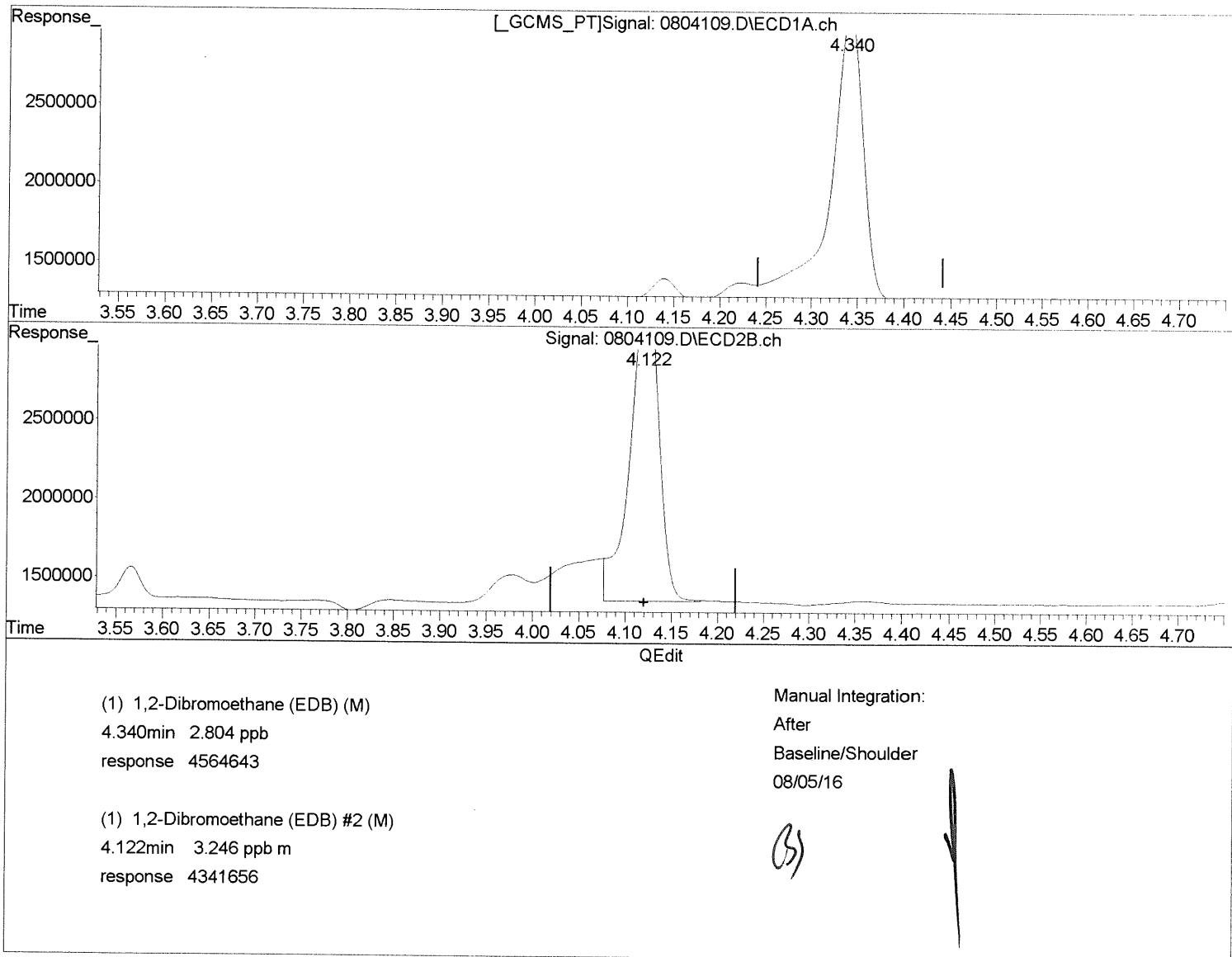
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804109.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 14:13:36 Operator: BS
 Sample : 080216 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:03 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



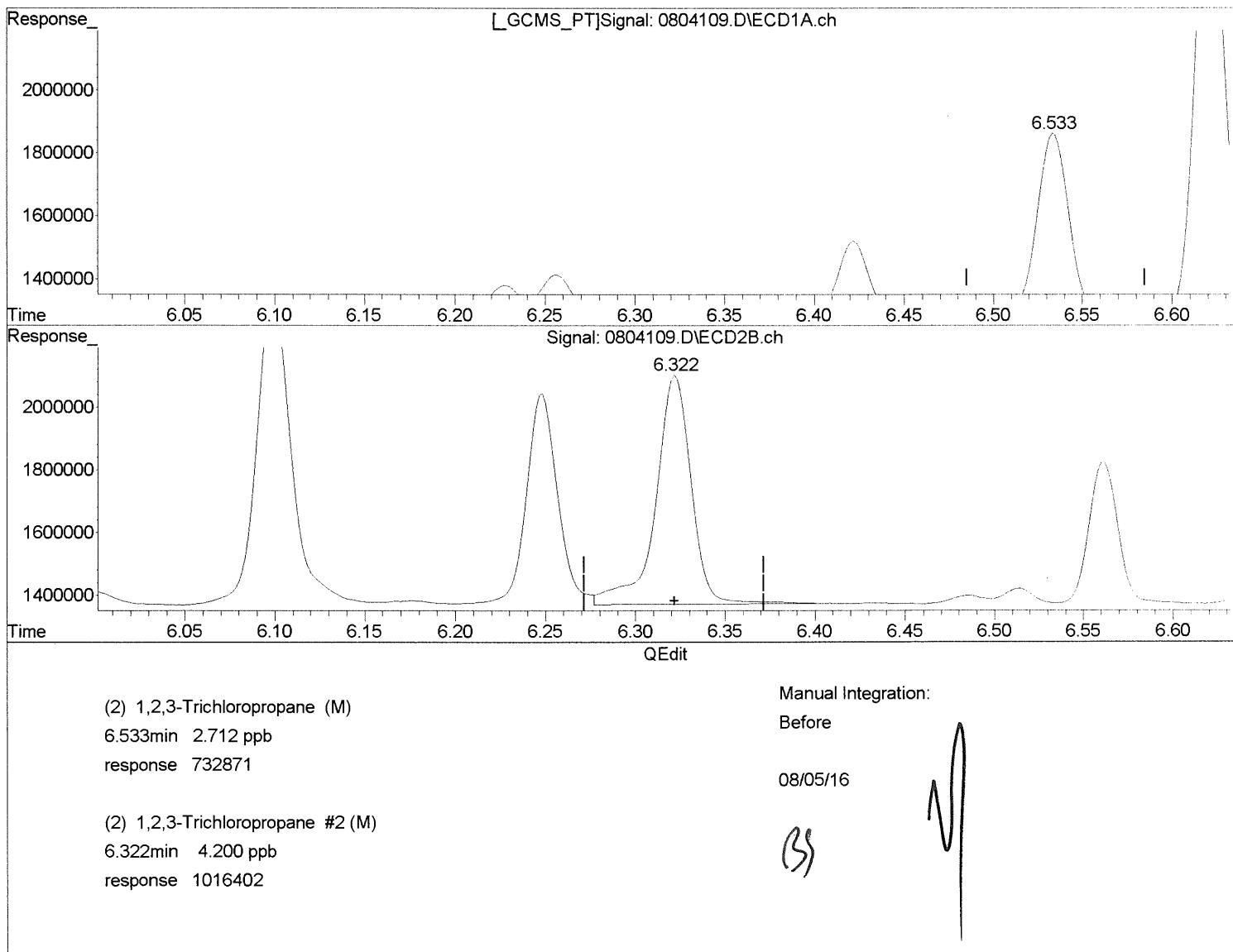
(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:54:06 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804109.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 14:13:36 Operator: BS
 Sample : 080216 504 LV6 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:03 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:54:13 2016

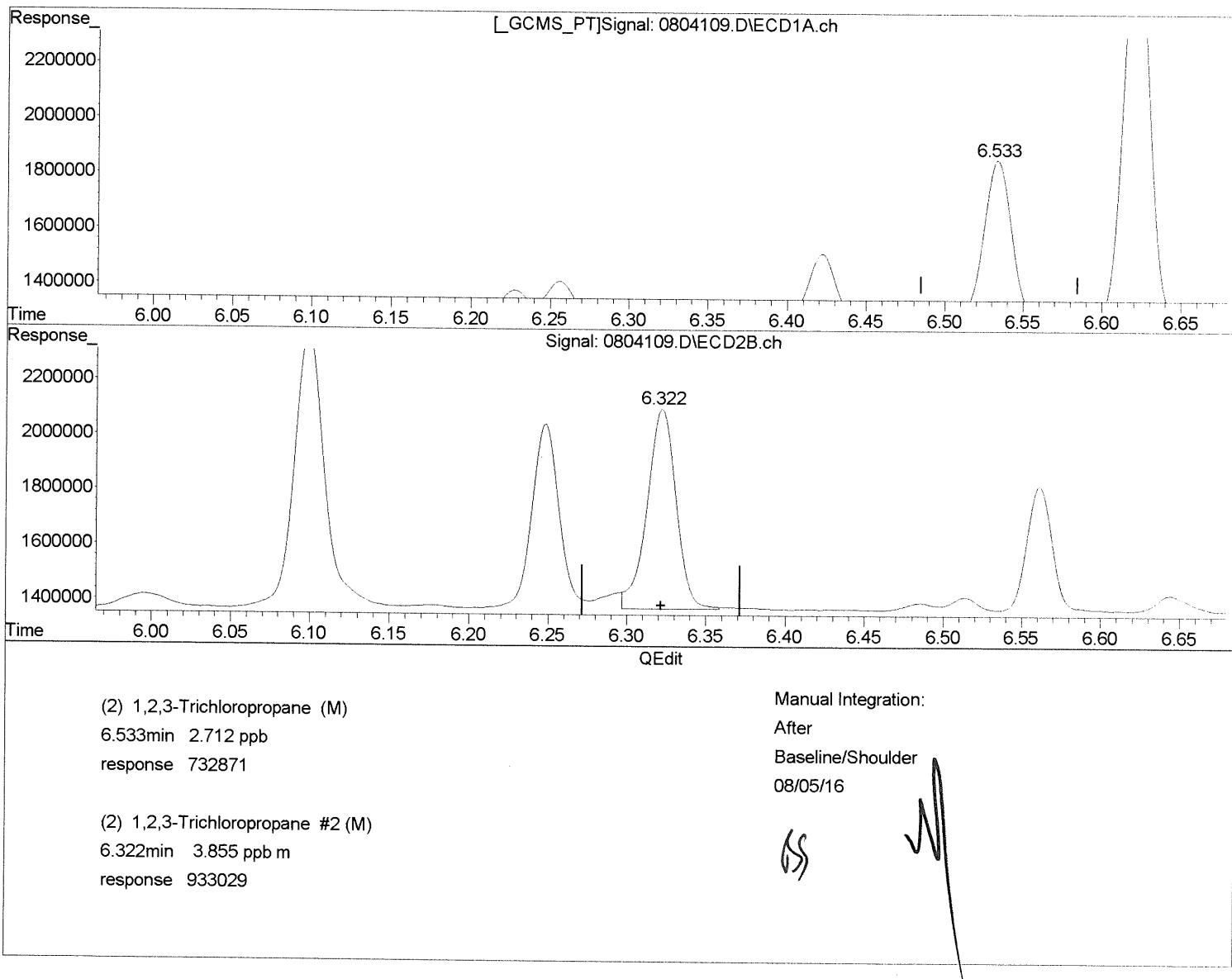
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804109.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 14:13:36 Operator: BS
 Sample : 080216 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:03 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:54:23 2016

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804110.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 14:37:10 Operator: BS
Sample : 080216 504 LV7 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:55:04 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Thu Jul 28 12:21:16 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.350	4.127	6585720	5818479	4.045	4.350m
2) M 1,2,3-Tri...	6.535	6.322	979505	1235594	3.625	5.106m#
3) M 1,2-Dibro...	7.913	7.888	11751395	13895871	3.406	4.942 #

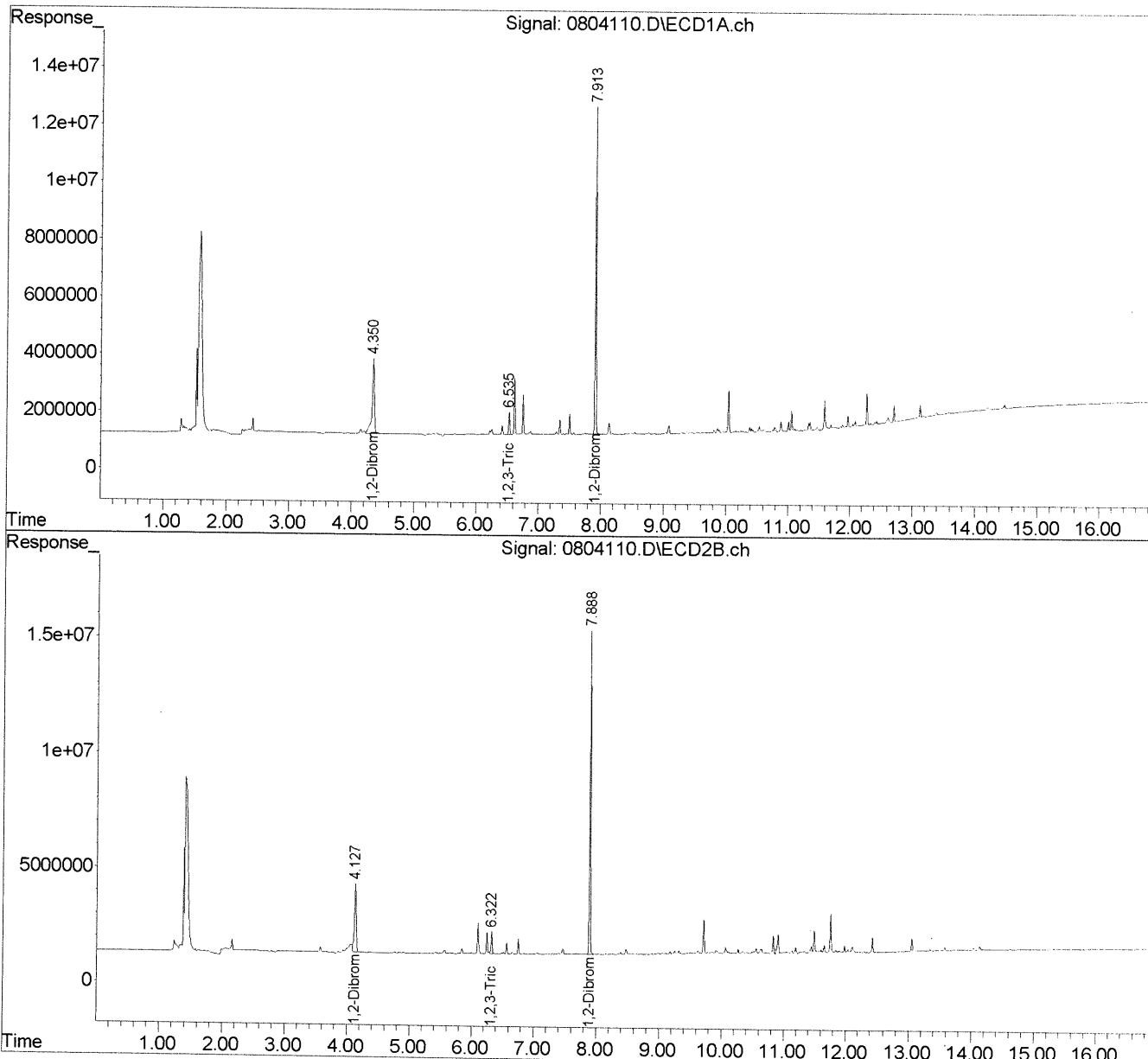
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804110.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 14:37:10 Operator: BS
Sample : 080216 504 LV7 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:55:04 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Thu Jul 28 12:21:16 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

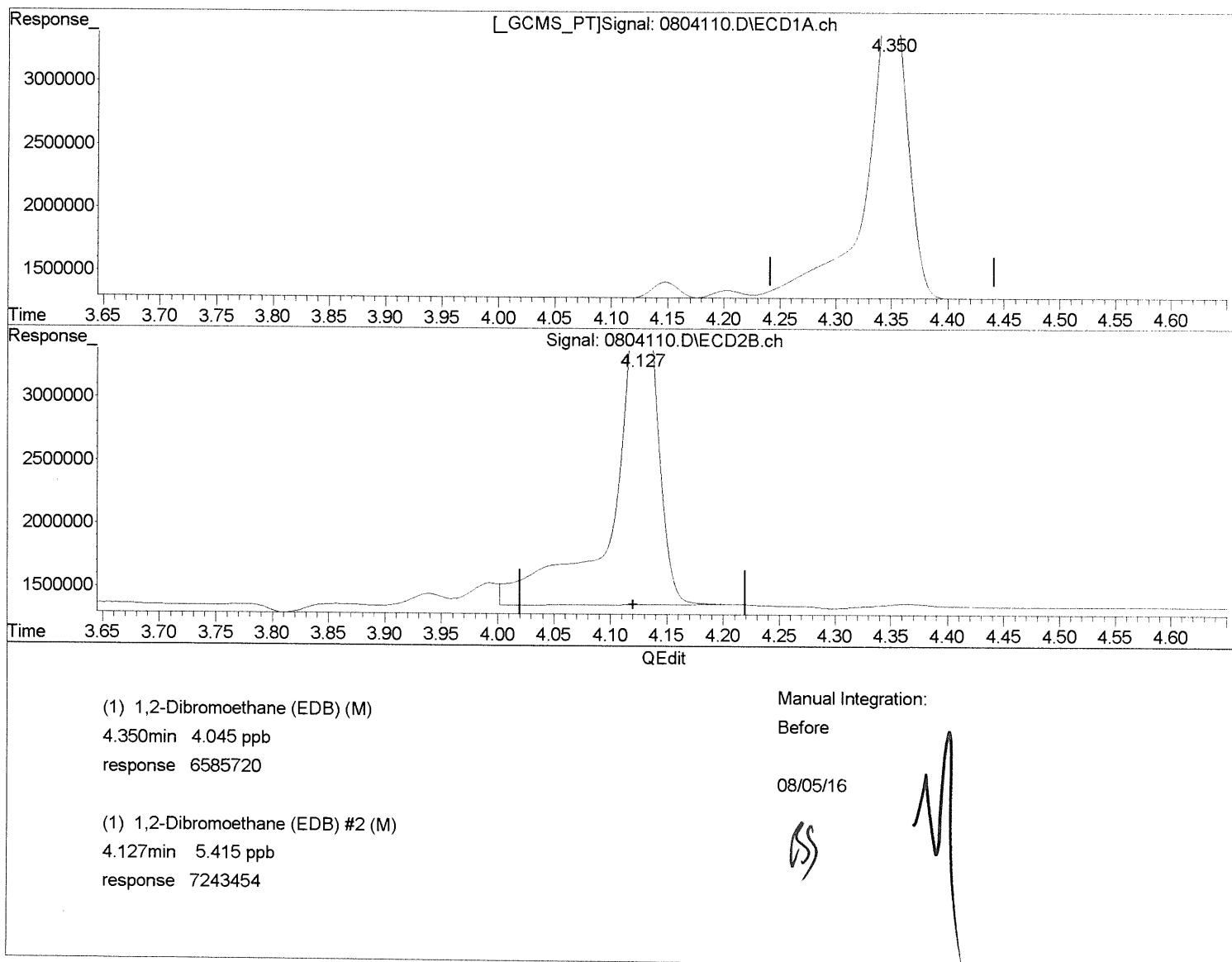


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804110.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 14:37:10 Operator: BS
 Sample : 080216 504 LV7 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:05 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:54:49 2016

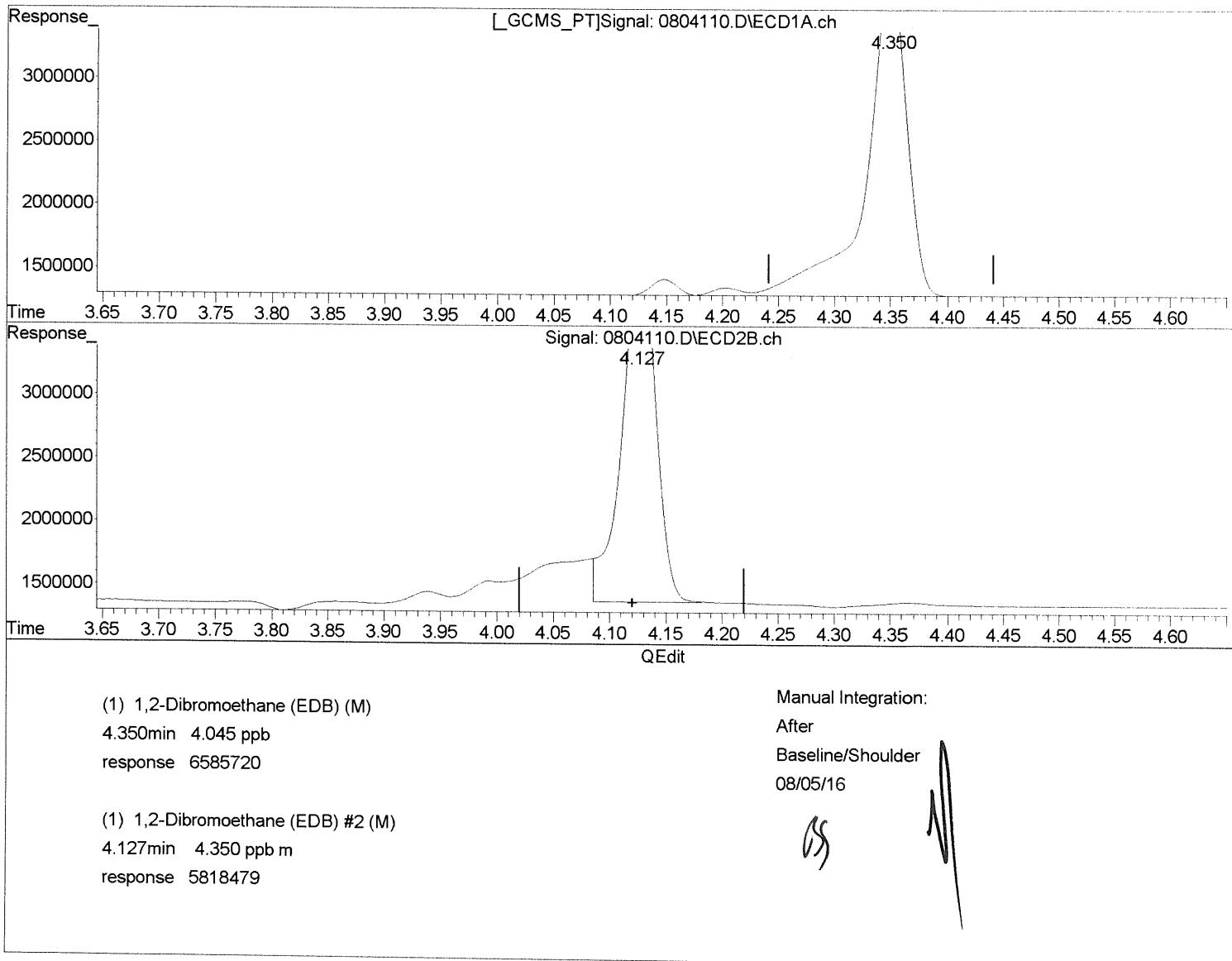
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804110.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 14:37:10 Operator: BS
 Sample : 080216 504 LV7 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:05 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
 080416_504.M Fri Aug 05 14:54:57 2016

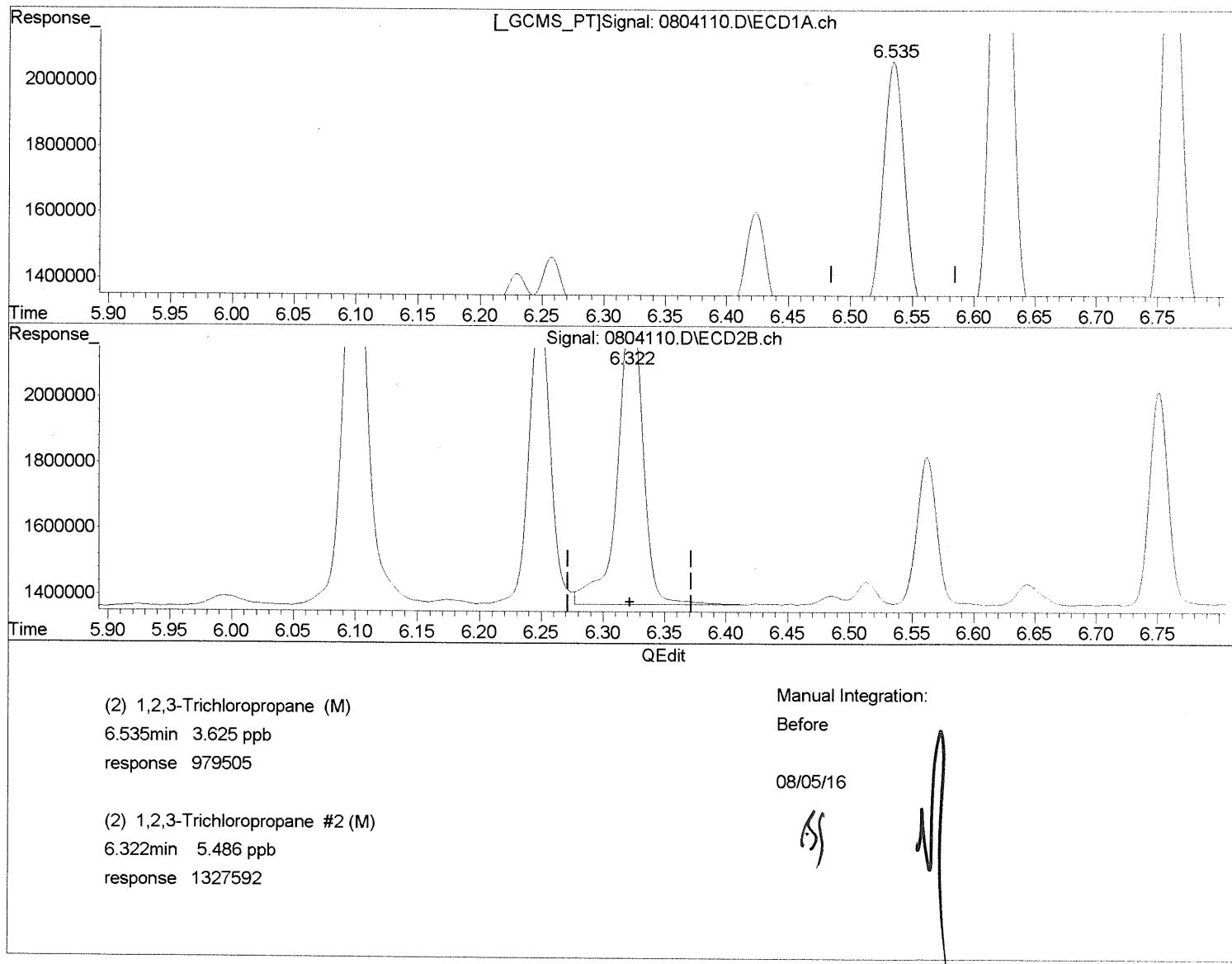
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804110.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 14:37:10 Operator: BS
Sample : 080216 504 LV7 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:51:05 2016
Quant Results File: 080416 504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Thu Jul 28 12:21:16 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
080416 504.M Fri Aug 05 14:55:01 2016

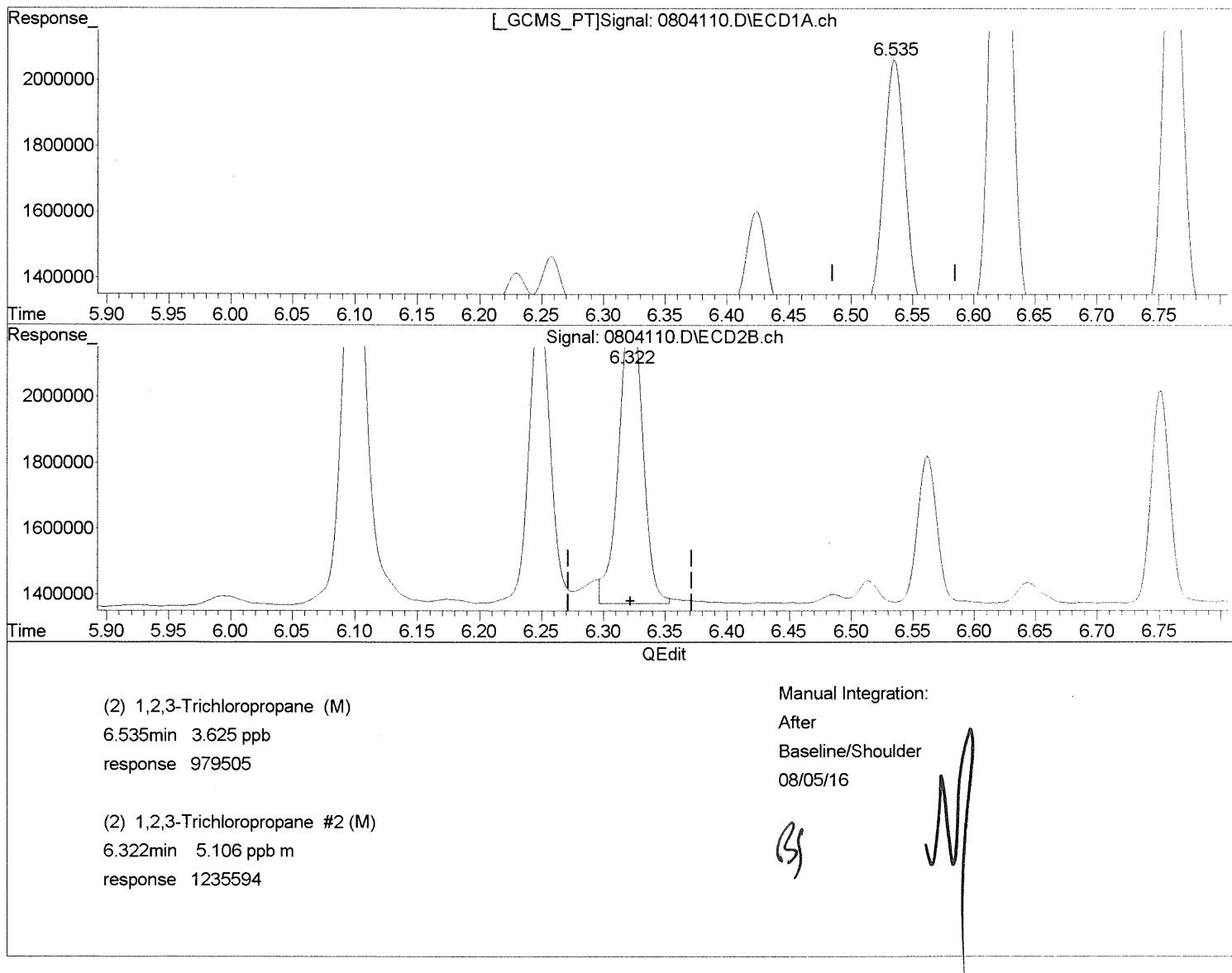
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804110.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 14:37:10 Operator: BS
 Sample : 080216 504 LV7 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:05 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804111.D vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:00:46 Operator: BS
 Sample : 080216 504 LV8 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:55:31 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
Target Compounds							
1)	M 1,2-Dibro...	4.347	4.127	13543768	11981789	8.319	8.958m
2)	M 1,2,3-Tri...	6.535	6.323	1909218	2366860	7.066	9.780m#
3)	M 1,2-Dibro...	7.913	7.888	24615346	29615570	7.134	10.533 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.



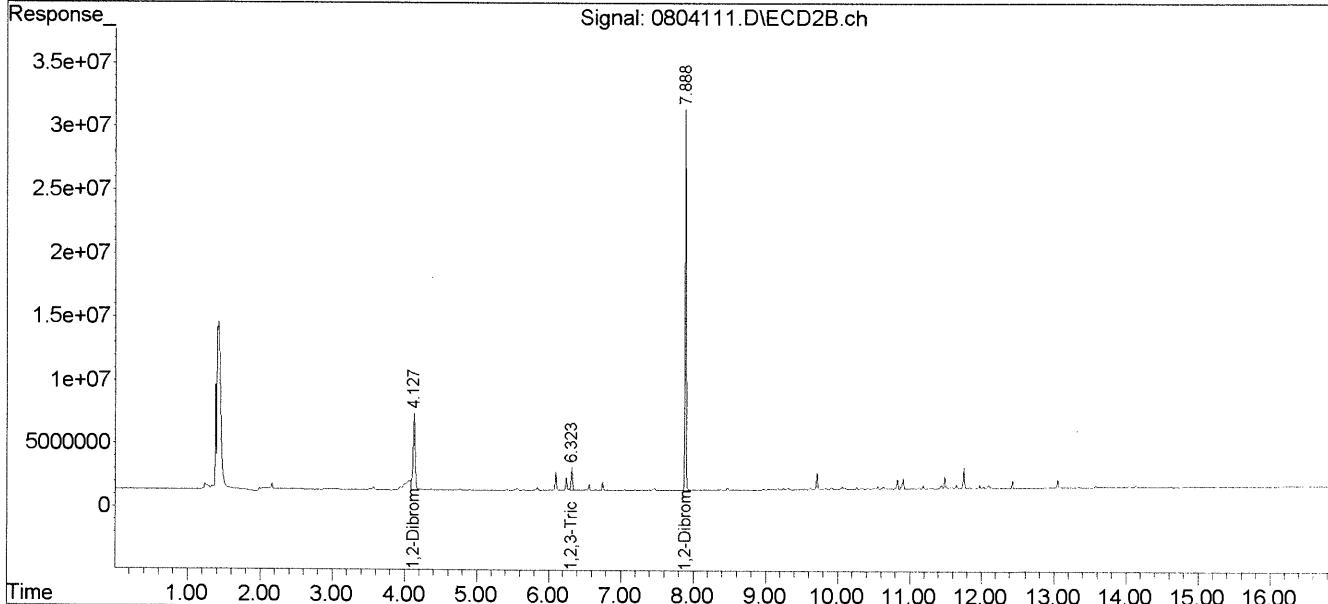
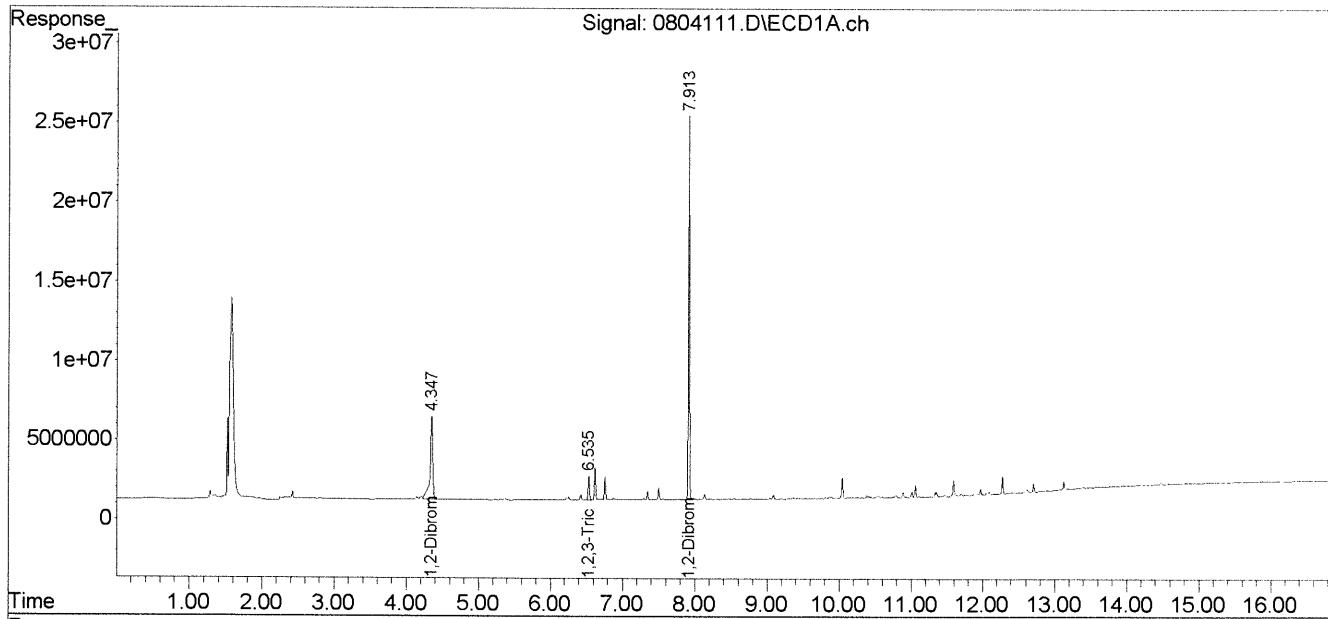
BS 8/5/16

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804111.D Vial: 11
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 15:00:46 Operator: BS
Sample : 080216 504 LV8 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 14:55:31 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Thu Jul 28 12:21:16 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

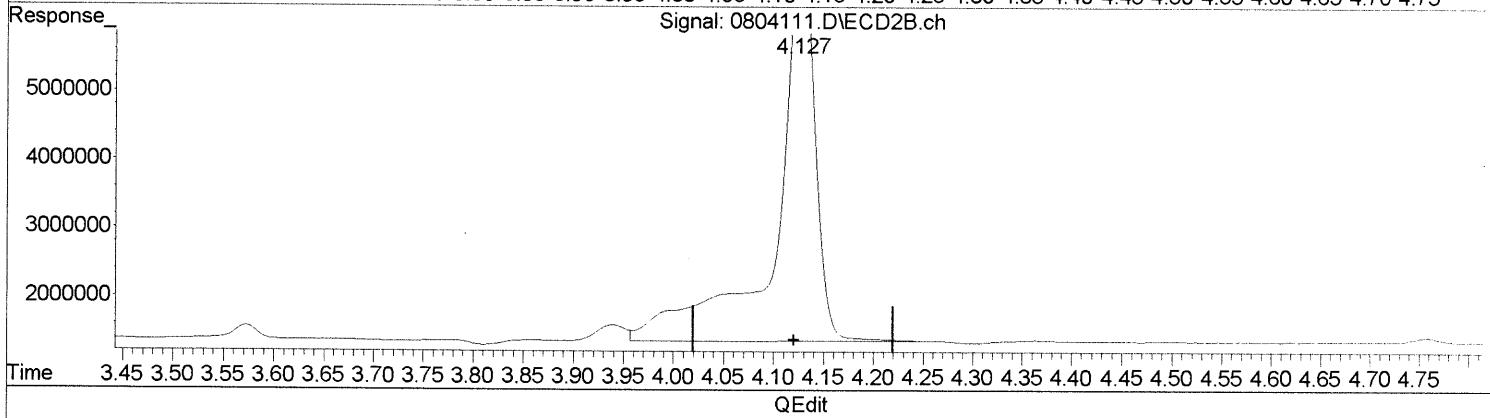
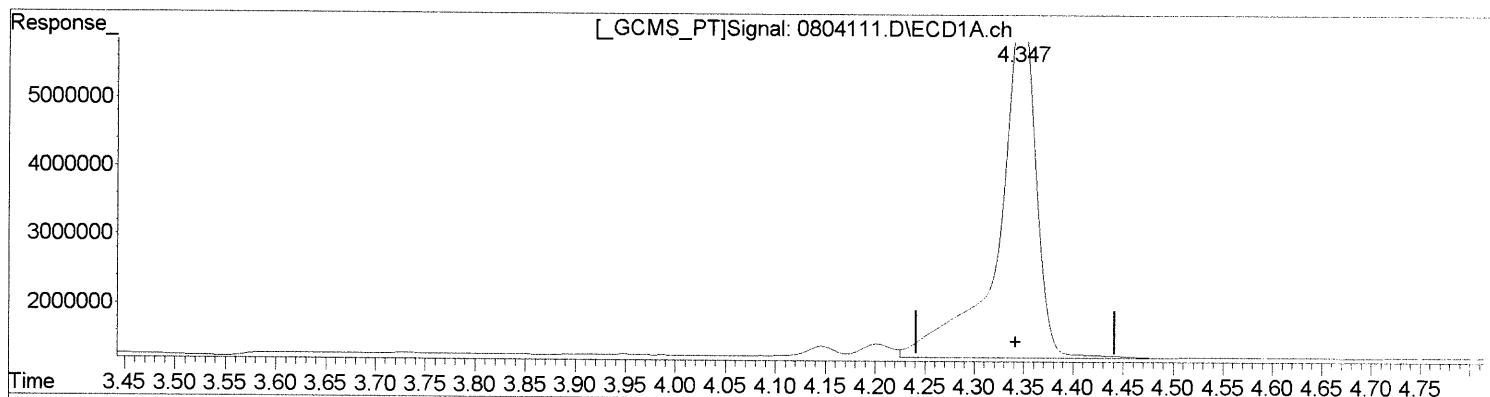


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804111.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:00:46 Operator: BS
 Sample : 080216 504 LV8 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:07 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.347min 8.319 ppb

response 13543768

Manual Integration:

Before

08/05/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.127min 11.846 ppb

response 15845514



(+) = Expected Retention Time
 080416_504.M Fri Aug 05 14:55:17 2016

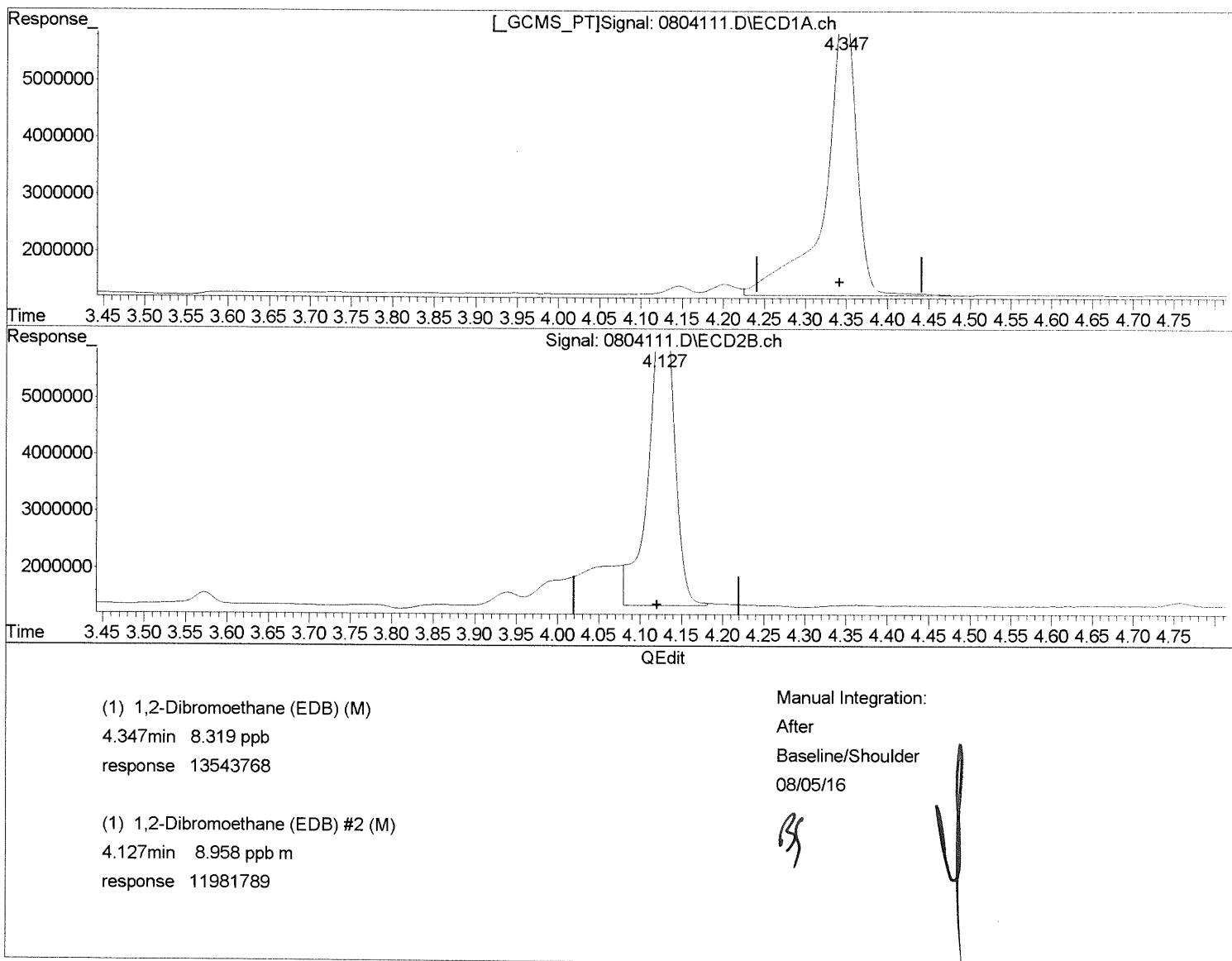
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804111.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:00:46 Operator: BS
 Sample : 080216 504 LV8 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:07 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



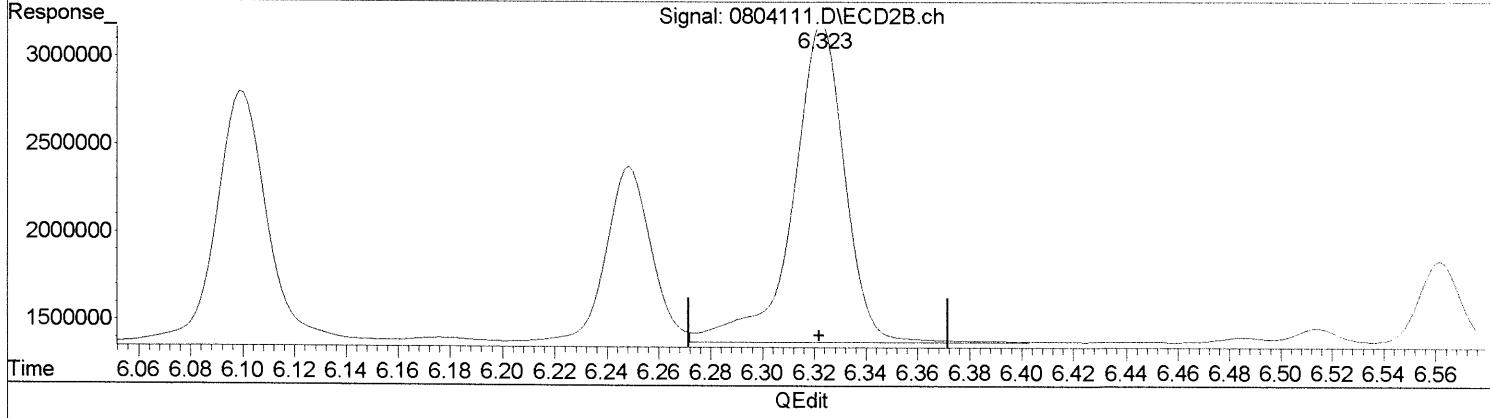
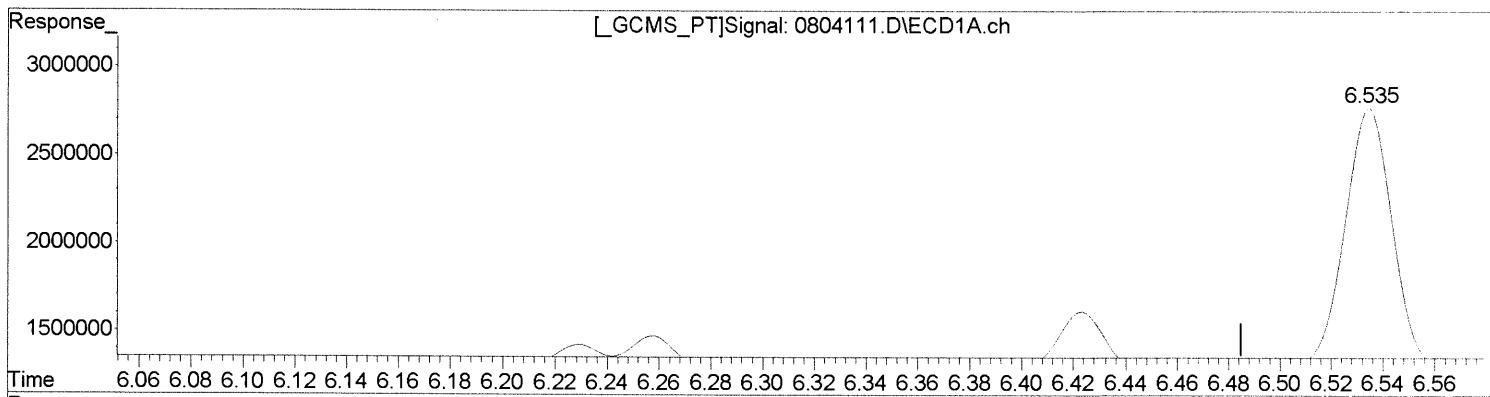
(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:55:23 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804111.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:00:46 Operator: BS
 Sample : 080216 504 LV8 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:07 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(2) 1,2,3-Trichloropropane (M)

6.535min 7.066 ppb

response 1909218

(2) 1,2,3-Trichloropropane #2 (M)

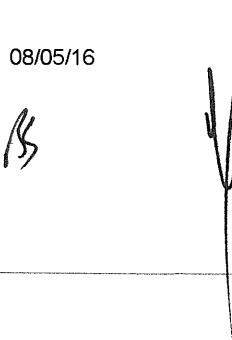
6.323min 10.460 ppb

response 2531462

Manual Integration:

Before

08/05/16



(+) = Expected Retention Time
 080416_504.M Fri Aug 05 14:55:28 2016

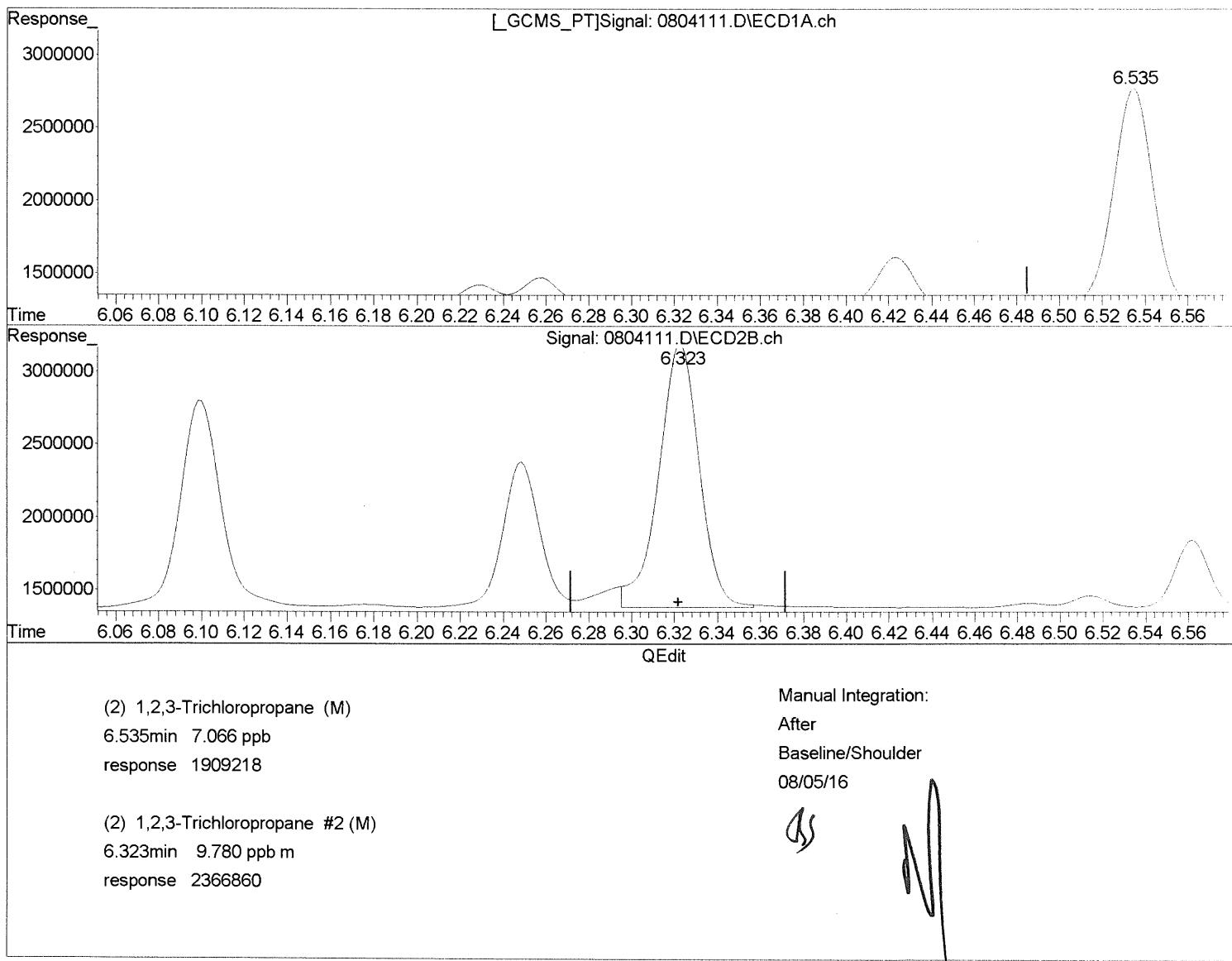
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804111.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:00:46 Operator: BS
 Sample : 080216 504 LV8 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 14:51:07 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Thu Jul 28 12:21:16 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
080416_504.M Fri Aug 05 14:55:32 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804112.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:24:19 Operator: BS
 Sample : 080216 504 ICV Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:25:02 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	4.333	4.120	1670606	1600352	1.327	1.369m
2) M 1,2,3-Tri...	6.533	6.322	249236	328261	1.280	1.358
3) M 1,2-Dibro...	7.915	7.888	3057710	3534274	1.279	1.251
<hr/>						

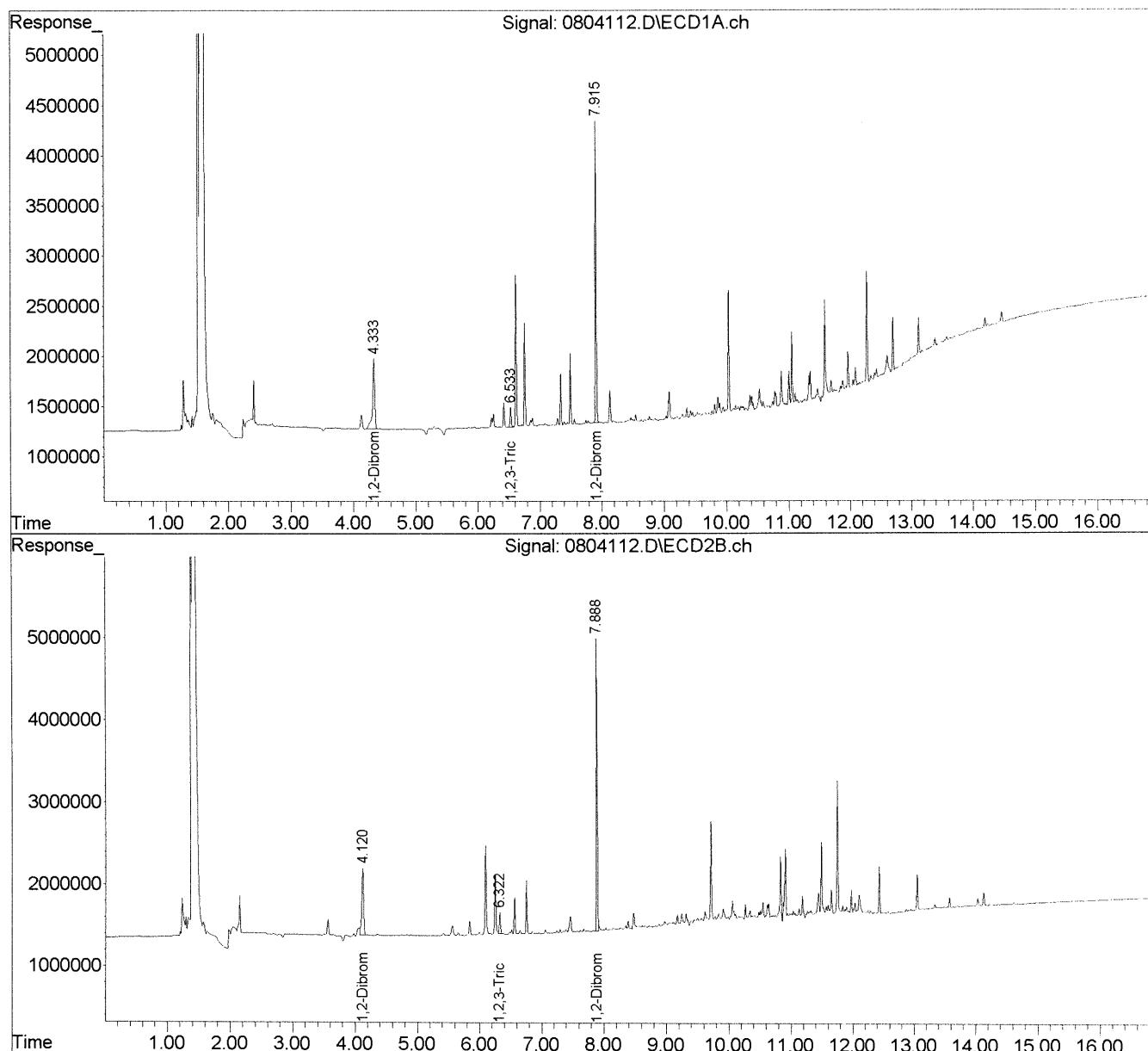
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\080416-504\0804112.D Vial: 12
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 04-Aug-2016, 15:24:19 Operator: BS
Sample : 080216 504 ICV Inst : GCI
Misc : Multipllr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Aug 05 15:25:02 2016
Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
Quant Title : 080416_504.M MJ480 CAL
QLast Update : Fri Aug 05 15:24:32 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

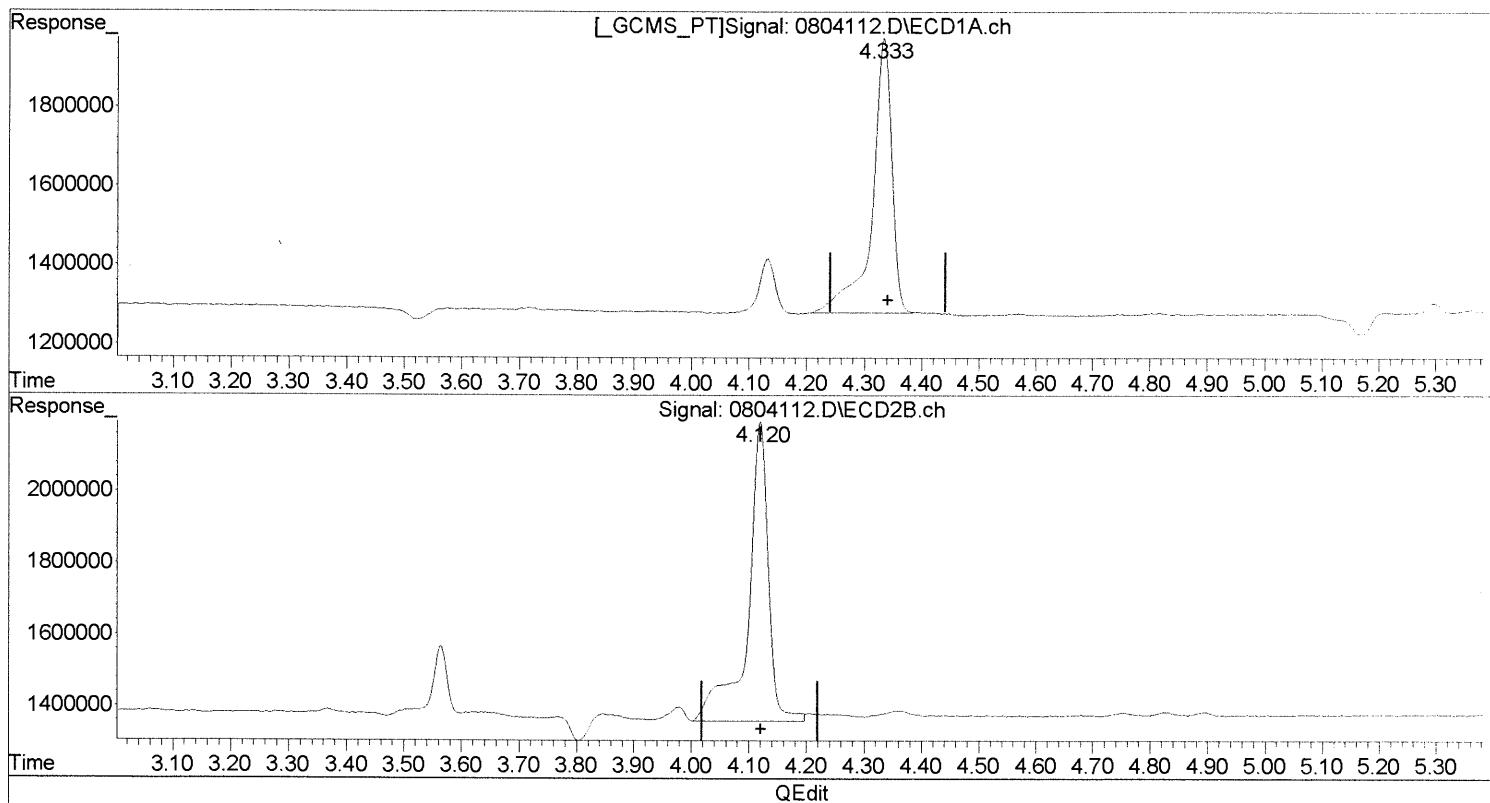


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804112.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:24:19 Operator: BS
 Sample : 080216 504 ICV Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:24:47 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.333min 1.327 ppb

response 1670606

Manual Integration:

Before

08/05/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.120min 1.780 ppb

response 2083649

(+) = Expected Retention Time
080416_504.M Fri Aug 05 15:24:57 2016

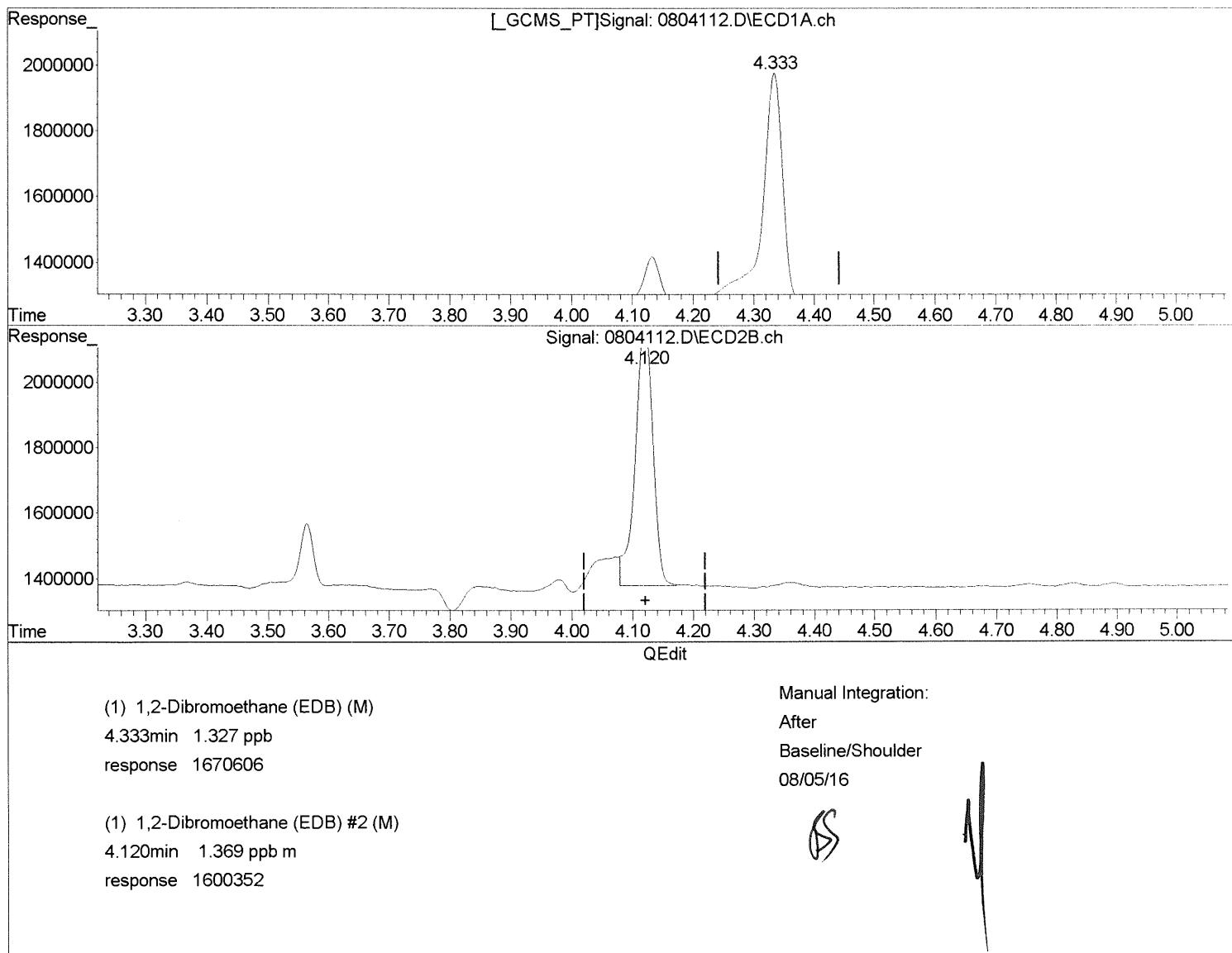
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\080416-504\0804112.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 04-Aug-2016, 15:24:19 Operator: BS
 Sample : 080216 504 ICV Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Aug 05 15:24:47 2016
 Quant Results File: 080416_504.RES

Quant Method : J:\GC33\Methods\080416_504.M
 Quant Title : 080416_504.M MJ480 CAL
 QLast Update : Fri Aug 05 15:24:32 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
080416_504.M Fri Aug 05 15:25:05 2016

Page: 1

EDB/TCP/DBCP in Water

Serv. Req. IDs:

lcal

Method:

EPA 504.1

BATCH ID: KWG1606497

Comments:

<u>Spike Information</u>		<u>Extract Information</u>	
Matrix Spike ID/Conc:	<u>DWST007-87C</u>	<u>50 ppb</u>	Start Date: <u>8/2/16</u>
ICV Spike ID/Conc:	<u>DWST007-88A</u>	<u>50 ppb</u>	End Date: <u>8/2/16</u>
Start / Stop Time:	<u>0950</u>	<u>1430</u>	Hexane Lot <u>DP 775</u>
			NaCl Lot # <u>0000100599</u>
			Balance ID# <u>N/A</u>
<u>Personnel and Bench Sheet Review</u>			
Started By:	<u>L Muresan</u>	Assisted By:	<u> </u>
Completed By:	<u>L Muresan</u>	Assisted By:	<u> </u>
Bench Sheet Reviewed By/Date Reviewed:	<u>BS</u>	<u>8/18/16</u>	<u>Extracts Examined</u> <input checked="" type="radio"/> Yes <input type="radio"/> No

Preparation Information

Group ID:	KWG1606497	Prep Method:	METHOD	Prep Date:	08/02/16 09:50
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1608534-001	16FWOU352WG	504.1 EDB DBCP	GROUND	35.399ml	2ml
K1608534-002	16FWOU353WG	504.1 EDB DBCP	GROUND	35.629ml	2ml
K1608534-003	16FWOU355WG	504.1 EDB DBCP	GROUND	36.090ml	2ml
K1608534-004	16FWOU356WG	504.1 EDB DBCP	GROUND	35.399ml	2ml
K1608534-005	16FWOU357WG	504.1 EDB DBCP	GROUND	35.682ml	2ml
K1608534-006	16FWOU358WG	504.1 EDB DBCP	GROUND	35.950ml	2ml
K1608534-007	16FWOU359WG	504.1 EDB DBCP	GROUND	35.792ml	2ml
K1608534-008	16FWOU360WG	504.1 EDB DBCP	GROUND	35.729ml	2ml
K1608534-009	16FWOU361WG	504.1 EDB DBCP	GROUND	35.438ml	2ml
K1608534-010	16FWOU362WG	504.1 EDB DBCP	GROUND	35.618ml	2ml
K1608534-011	16FWOU363WG	504.1 EDB DBCP	GROUND	35.994ml	2ml
K1608534-012	16FWOU364WG	504.1 EDB DBCP	GROUND	35.854ml	2ml
K1608534-013	16FWOU365WG	504.1 EDB DBCP	GROUND	35.636ml	2ml
K1608534-014	16FWOU374WG	504.1 EDB DBCP	GROUND	35.668ml	2ml
K1608534-015	16FWOU375WG	504.1 EDB DBCP	GROUND	35.894ml	2ml
K1608534-016	16FWOU376WQ	504.1 EDB DBCP	GROUND	34.915ml	2ml
K1608534-017	16FWOU377WQ	504.1 EDB DBCP	GROUND	36.145ml	2ml
K1608549-001	16209GACI	504.1 EDB DBCP 123TCP	WATER	35.662ml	2ml
K1608549-002	16209GACE	504.1 EDB DBCP 123TCP	WATER	35.472ml	2ml
K1608549-003	Trip Blank	504.1 EDB DBCP 123TCP	WATER	36.171ml	2ml
KWG1606497-1	Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.477ml	2ml
KWG1606497-2	Duplicate Matrix Spike	504.1 EDB DBCP 123TCP	WATER	35.144ml	2ml
KWG1606497-3	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.000ml	2ml
KWG1606497-4	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.000ml	2ml
KWG1606497-5	Method Blank	504.1 EDB DBCP 123TCP	WATER	35.000ml	2ml

Lab Code	Parent Lab Code	Comments
KWG1606497-1	K1608534-008	
KWG1606497-2	K1608534-008	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
----------	---------------	-----------------------	--------------	-------------------	--------------	---------

Comments: _____

Started By: LMuresan Assisted By: _____ Training Yes _____ No _____

Completed By: LMuresan Assisted By: _____ Yes _____ No _____

Reviewed By: BS Date: 8/18/16 Storage: _____

Relinquished By:	LMuresan	Date:	8/2/16	Extracts Examined
Received By:	BS for LP	Date:	8/2/16	Yes No

Group ID:	KWG1606497	Prep Method:	METHOD	Prep Date:	08/02/16 09:50
Department:	Semivoa GC				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1608534-001	1538496					
K1608534-002	1538497					
K1608534-003	1538498					
K1608534-004	1538499					
K1608534-005	1538500					
K1608534-006	1538501					
K1608534-007	1538502					
K1608534-008	1538503					
K1608534-009	1538504					
K1608534-010	1538505					
K1608534-011	1538506					
K1608534-012	1538507					
K1608534-013	1538508					
K1608534-014	1538509					
K1608534-015	1538510					
K1608534-016	1538511					
K1608534-017	1538495					
K1608549-001	1538513					
K1608549-002	1538514					
K1608549-003	1538512					
KWG1606497-1	1538515					
KWG1606497-2	1538516					
KWG1606497-3	1538517					
KWG1606497-4	1538518					
KWG1606497-5	1538519					

Comments: _____

Started By:	LMuresan	Assisted By:	_____	Training Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Completed By:	LMuresan	Assisted By:	_____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Reviewed By:	_____	Date:	_____	Storage: _____

Chain of Custody

Relinquished By:	LMuresan	Date:	8/2/16	Extracts Examined
Received By:	_____	Date:	_____	Yes No

EDB/TCP/DBCP in Water

Serv. Req. IDs:

K1608534, BS49

Method: EPA 504.1

Lab Code	Comments	Wt. of sample and vial(g)	Wt. of vial (g)	Sample Amount (mL)	Spike Vol.	NaCl added	Final Volume (ml)
K1608534-1	.02 light sediment	58.477	23.138	35.399	—	7	2
K1608534-2	.03	59.129	23.500	35.629	—	7	2
K1608534-3	.02 organic sediment	59.634	23.544	36.090	—	7	2
K1608534-4	.02	58.670	23.271	35.399	—	7	2
K1608534-5	.02 organic sediment	59.164	23.482	35.682	—	7	2
K1608534-6	.03 — 11 —	59.036	23.086	35.950	—	7	2
K1608534-7	.02 sandy sediment	59.195	23.403	35.792	—	7	2
K1608534-8	.02 light sediment	58.529	22.800	35.729	—	7	2
K1608534-9	.02 heavy sediment	58.871	23.433	35.438	—	7	2
K1608534-10	.04 light sediment	59.149	23.531	35.618	—	7	2
K1608534-11	.03 organic sediment	59.205	23.211	35.994	—	7	2
K1608534-12	.03 light sediment	59.049	23.195	35.854	—	7	2
K1608534-13	.02 — 11 —	58.823	23.187	35.636	—	7	2
K1608534-14	.04 sand	58.984	23.316	35.668	—	7	2

BATCH ID: KWG1606497

Comments: _____

267689

Spike Information

Matrix Spike ID/Conc:

DWST007-87C 50ppb

XP

ICV Spike ID/Conc:

DWST007-88A 50ppb

1/27/17

Start / Stop Time:

09:50 1/14/10

Extract Information

Start Date:

8/2/16

End Date:

8/2/16

Hexane Lot #

DP775

NaCl Lot #

0000100599

Balance ID#

K-BALANCE-29

Personnel and Bench Sheet Review

Started By:

Completed By:

L MuresanL Muresan

Assisted By:

Assisted By:

Bench Sheet Reviewed By/Date Reviewed:

BS 8/8/16

Extracts Examined

Yes

No

EDB/TCP/DBCP in Water

Serv. Req. IDs:

KR608534, 8549

Method: EPA 504.1

BATCH ID: kWG1606497

Comments:

① EE CM 8/2/16

Personnel and Bench Sheet Review

Started By:

L Muresan

Completed By:

L Muresan

Assisted By:

Assisted By:

Bench Sheet Reviewed By/Date Reviewed:

TSG 8/8/11

Extracts Examined

Yes No

SVG Dilution Log

Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	1	Vial 1	504-1 PRIMER MeOH	0805001	F:01:01	
No	2	Vial 2	504-1 PRIMER Hexane	0805002	F:02:01	
No	3	Vial 9	504-1 504 LV6	0805003	F:03:01	
No	4	Vial 3	504-1 IB	0805004	F:04:01	CAL:1485
No	5	Vial 23	504-1 K1608534-008	0805005	F:05:01	RUN: 568778
No	6	Vial 24	504-1 K1608534-008MS	0805006	F:06:01	KWL1606694
No	7	Vial 25	504-1 K1608534-008DMS	0805007	F:07:01	
No	8	Vial 26	504-1 K1608534-009	0805008	F:08:01	
No	9	Vial 27	504-1 K1608534-010	0805009	F:09:01	
No	10	Vial 28	504-1 K1608534-011	0805010	F:10:01	
No	11	Vial 29	504-1 K1608534-012	0805011	F:11:01	
No	12	Vial 30	504-1 K1608534-013	0805012	F:12:01	
No	13	Vial 31	504-1 K1608534-014	0805013	F:13:01	
No	14	Vial 32	504-1 K1608534-015	0805014	F:14:01	
No	15	Vial 9	504-1 504 LV6	0805015	F:15:01	
No	16	Vial 3	504-1 IB	0805016	F:16:01	
No	17	Vial 33	504-1 K1608534-016	0805017	F:17:01	
No	18	Vial 34	504-1 K1608534-017	0805018	F:18:01	
No	19	Vial 35	504-1 K1608549-001	0805019	F:19:01	
No	20	Vial 36	504-1 K1608549-002	0805020	F:20:01	
No	21	Vial 37	504-1 K1608549-003	0805021	F:21:01	
No	22	Vial 38	504-1 K1608534-002@20X	0805022	F:22:01	
No	23	Vial 39	504-1 K1608534-012@500X	0805023	F:23:01	
No	24	Vial 40	504-1 K1608534-014@500X	0805024	F:24:01	
No	25	Vial 41	504-1 K1608534-015@10X	0805025	F:25:01	
No	26	Vial 42	504-1 K1608534-002@40X	0805026	F:26:01	
No	27	Vial 9	504-1 504 LV6	0805027	F:27:01	
No	28	Vial 3	504-1 IB	0805028	F:28:01	

Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
---	---	---	---	---	---	---
No	29	none	PARK STILL	0805029		F:29:01

Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
No	1	Vial 1	504-1 PRIMER MeOH	0804001 0804101	F:01:01	* 8/17/14
No	2	Vial 2	504-1 PRIMER Hexane	0804002	102 F:02:01	
No	3	Vial 3	504-1 ICAL BLANK	0804003	103 F:03:01	CAL: 14853
No	4	Vial 4	504-1 080216 504 LV1	0804004	104 F:04:01	RUN: 508163
No	5	Vial 5	504-1 080216 504 LV2	0804005	105 F:05:01	
No	6	Vial 6	504-1 080216 504 LV3	0804006	106 F:06:01	Processed superately
No	7	Vial 7	504-1 080216 504 LV4	0804007	107 F:07:01	
No	8	Vial 8	504-1 080216 504 LV5	0804008	108 F:08:01	
No	9	Vial 9	504-1 080216 504 LV6	0804009	109 F:09:01	
No	10	Vial 10	504-1 080216 504 LV7	0804010	110 F:10:01	
No	11	Vial 11	504-1 080216 504 LV8	0804011	111 F:11:01	
No	12	Vial 12	504-1 080216 504 ICV	0804012	112 F:12:01	
No	13	Vial 8	504-1 080216 504 LV5	0804013 0804113	F:13:01	
No	14	Vial 3	504-1 IB	0804014	114 F:14:01	
No	15	Vial 13	504-1 KWG1606497-3LCS	0804015	115 F:15:01	
No	16	Vial 14	504-1 KWG1606497-4LCS	0804016	116 F:16:01	
No	17	Vial 15	504-1 KWG1606497-5MB	0804017	117 F:17:01	
No	18	Vial 16	504-1 K1608534-001	0804018	118 F:18:01	
No	19	Vial 17	504-1 K1608534-002	0804019	119 F:19:01	
No	20	Vial 18	504-1 K1608534-003	0804020	120 F:20:01	
No	21	Vial 19	504-1 K1608534-004	0804021	(2) F:21:01	
No	22	Vial 20	504-1 K1608534-005	0804022	122 F:22:01	
No	23	Vial 21	504-1 K1608534-006	0804023	123 F:23:01	
No	24	Vial 22	504-1 K1608534-007	0804024	124 F:24:01	
No	25	Vial 9	504-1 504 LV6	0804025	125 F:25:01	
No	26	Vial 3	504-1 IB	0804026	F:26:01	
No	27	Vial 23	504-1 K1608534-008	0804027	F:27:01	
No	28	Vial 24	504-1 K1608534-008MS	0804028	F:28:01	NR run stopped

Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	29	Vial 25	504-1 K1608534-008DMS	0804029	F:29:01	Run stopped
No	30	Vial 26	504-1 K1608534-009	0804030	F:30:01	
No	31	Vial 27	504-1 K1608534-010	0804031	F:31:01	
No	32	Vial 28	504-1 K1608534-011	0804032	F:32:01	
No	33	Vial 29	504-1 K1608534-012	0804033	F:33:01	
No	34	Vial 30	504-1 K1608534-013	0804034	F:34:01	
No	35	Vial 31	504-1 K1608534-014	0804035	F:35:01	
No	36	Vial 32	504-1 K1608534-015	0804036	F:36:01	
No	37	Vial 9	504-1 504 LV6	0804037	F:37:01	
No	38	Vial 3	504-1 IB	0804038	F:38:01	
No	39	Vial 33	504-1 K1608534-016	0804039	F:39:01	
No	40	Vial 34	504-1 K1608534-017	0804040	F:40:01	
No	41	Vial 35	504-1 K1608549-001	0804041	F:41:01	
No	42	Vial 36	504-1 K1608549-002	0804042	F:42:01	
No	43	Vial 37	504-1 K1608549-003	0804043	F:43:01	
No	44	Vial 9	504-1 504 LV6	0804044	F:44:01	
No	45	Vial 3	504-1 IB	0804045	F:45:01	
No	46	none	PARK STILL	0804046	F:46:01	



ALS Environmental
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October 12, 2016

Analytical Report for Service Request No: K1612006

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory October 06, 2016
For your reference, these analyses have been assigned our service request number **K1612006**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink that reads "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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 - EPA Method 504.1

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.alsglobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialist **Service Request No.:** K1612006
Project: Drexel **Date Received:** 10/06/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

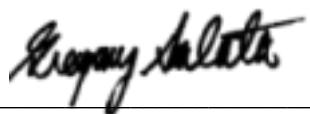
Sample Receipt

Three water samples were received for analysis at ALS Environmental on 10/06/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB by EPA Method 504.1

No anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



(ALS) Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

K1612006

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

DATE 10/05/16 PAGE 1 OF 1

RELINQUISHED BY:

Terrance Wilber 10/05/16 @ 12:00pm

Signature W. W. Borchert Date/Time 8:30 AM

Lesson 11

E 12

Printed Name

Firm

RECEIVED BY:

Carrie RECEIVED

Signature

Printed Name

Signature

Date

Signature
Terrence

५०

Printed Name

Firm

RELINQUISHED BY:

RECEIVED BY:

Signature

Date/Time

Point LM

• 100

Printed Name

firm



PC Greg

Cooler Receipt and Preservation Form

Client

EPS inc.

Service Request K16 12006

Received: 10-6-16 Opened: 10-6-16 By: Ed Unloaded: 10-6-16 By: EG

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
 2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* *NA*
 3. Were custody seals on coolers? *NA* *Y* *N* If yes, how many and where? *1 front*

If present, were custody seals intact? *Y* *N* If present, were they signed and dated? *Y* *N*

Raw Cooler Temp	Corrected, Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
0-3-01	5-7	5-3	-0-4	369		NA	7773 9647 6700		

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
 5. Were custody papers properly filled out (ink, signed, etc.)? *NA* *Y* *N*
 6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* *NA* *Y* *N*
 7. Were all sample labels complete (i.e analysis, preservation, etc.)? *NA* *Y* *N*
 8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* *NA* *Y* *N*
 9. Were appropriate bottles/containers and volumes received for the tests indicated? *NA* *Y* *N*
 10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* *NA* *Y* *N*
 11. Were VOA vials received without headspace? *Indicate in the table below.* *NA* *Y* *N*
 12. Was C12/Res negative? *NA* *Y* *N*

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

RUSH

Page ____ of ____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Environmental Planning Specialists **Service Request:** K1612006
Project: Drexel

Cover Page - Organic Analysis Data Package
EPA Method 504.1

Sample Name	Lab Code	Date Collected	Date Received
16279-GACI	K1612006-001	10/05/2016	10/06/2016
16279-GACE	K1612006-002	10/05/2016	10/06/2016
Trip Blank	K1612006-003	10/05/2016	10/06/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Collected: 10/05/2016
Date Received: 10/06/2016

EPA Method 504.1

Sample Name: 16279-GACI **Units:** ug/L
Lab Code: K1612006-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.21	0.0098	0.00300	1	10/10/16	10/10/16	KWG1609129	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Collected: 10/05/2016
Date Received: 10/06/2016

EPA Method 504.1

Sample Name: 16279-GACE **Units:** ug/L
Lab Code: K1612006-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0098	0.00300	1	10/10/16	10/10/16	KWG1609129	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Collected: 10/05/2016
Date Received: 10/06/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1612006-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0098	0.00300	1	10/10/16	10/10/16	KWG1609129	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1609129-7 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0095	0.00300	1	10/10/16	10/10/16	KWG1609129	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Extracted: 10/10/2016
Date Analyzed: 10/11/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1612058-002	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1609129

Analyte Name	Sample Result	Batch QCMS KWG1609129-3 Matrix Spike			Batch QCDMS KWG1609129-4 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
1,2-Dibromoethane (EDB)	ND	0.259	0.241	107	0.246	0.242	102	65-135	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Extraction Lot: KWG1609129

Lab Control Sample
KWG1609129-5
Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec
		Amount	%Rec	Limits
1,2-Dibromoethane (EDB)	0.238	0.250	95	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1609129

Lab Control Sample
KWG1609129-6
Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec Limits
		Amount	%Rec	
1,2-Dibromoethane (EDB)	0.235	0.250	94	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016
Time Analyzed: 21:13

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1609129-7	File ID:	J:\GC33\DATA\101016-504\1010017.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1609129

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1609129-5	J:\GC33\DATA\101016-504\1010015.D	10/10/16	20:26
Lab Control Sample	KWG1609129-6	J:\GC33\DATA\101016-504\1010016.D	10/10/16	20:50
16279-GACI	K1612006-001	J:\GC33\DATA\101016-504\1010018.D	10/10/16	21:37
16279-GACE	K1612006-002	J:\GC33\DATA\101016-504\1010019.D	10/10/16	22:00
Trip Blank	K1612006-003	J:\GC33\DATA\101016-504\1010020.D	10/10/16	22:24
Batch QC	K1612058-002	J:\GC33\DATA\101016-504\1010031.D	10/11/16	02:44
Batch QCMS	KWG1609129-3	J:\GC33\DATA\101016-504\1010032.D	10/11/16	03:07
Batch QCDMS	KWG1609129-4	J:\GC33\DATA\101016-504\1010033.D	10/11/16	03:31

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016
Time Analyzed: 20:26

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1609129-5	File ID:	J:\GC33\DATA\101016-504\1010015.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1609129

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1609129-7	J:\GC33\DATA\101016-504\1010017.D	10/10/16	21:13
16279-GACI	K1612006-001	J:\GC33\DATA\101016-504\1010018.D	10/10/16	21:37
16279-GACE	K1612006-002	J:\GC33\DATA\101016-504\1010019.D	10/10/16	22:00
Trip Blank	K1612006-003	J:\GC33\DATA\101016-504\1010020.D	10/10/16	22:24

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016
Time Analyzed: 20:50

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1609129-6	File ID:	J:\GC33\DATA\101016-504\1010016.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1609129

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QC	K1612058-002	J:\GC33\DATA\101016-504\1010031.D	10/11/16	02:44
Batch QCMS	KWG1609129-3	J:\GC33\DATA\101016-504\1010032.D	10/11/16	03:07
Batch QCDMS	KWG1609129-4	J:\GC33\DATA\101016-504\1010033.D	10/11/16	03:31

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D	F	J:\GC33\DATA\101016-504\1010009.D
B	J:\GC33\DATA\101016-504\1010005.D	G	J:\GC33\DATA\101016-504\1010010.D
C	J:\GC33\DATA\101016-504\1010006.D	H	J:\GC33\DATA\101016-504\1010011.D
D	J:\GC33\DATA\101016-504\1010007.D		
E	J:\GC33\DATA\101016-504\1010008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	7.68E+5	B	0.13	8.48E+5	C	0.25	9.56E+5	D	0.63	1.27E+6	E	1.3	1.12E+6
	F	3.8	1.32E+6	G	5.0	1.20E+6	H	10	1.48E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	Quadratic	COD	0.998		≥ 0.99	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Calibration Date: 10/10/2016
Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14943
Units: ppb

File ID: J:\GC33\DATA\101016-504\1010012.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1120000	1110000	NA	-2	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D\1010004.c.d	F	J:\GC33\DATA\101016-504\1010009.D\1010009.c.d
B	J:\GC33\DATA\101016-504\1010005.D\1010005.c.d	G	J:\GC33\DATA\101016-504\1010010.D\1010010.c.d
C	J:\GC33\DATA\101016-504\1010006.D\1010006.c.d	H	J:\GC33\DATA\101016-504\1010011.D\1010011.c.d
D	J:\GC33\DATA\101016-504\1010007.D\1010007.c.d		
E	J:\GC33\DATA\101016-504\1010008.D\1010008.c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	8.73E+5	B	0.13	9.71E+5	C	0.25	1.05E+6	D	0.63	1.09E+6	E	1.3	9.01E+5
	F	3.8	9.65E+5	G	5.0	9.21E+5	H	10	9.89E+5						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation					
		Fit Type	Eval.	Result	Q	Control Criteria	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	7.6		≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Calibration Date: 10/10/2016
Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL14943
Units: ppb

File ID: J:\GC33\DATA\101016-504\1010012.D\1010012c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	970000	876000	-10	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Date Analyzed: 10/10/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\101016-504\1010013.D	Analysis Lot:	KWG1609198
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1120000	1130000	NA	0	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Date Analyzed: 10/10/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 10/10/2016
Calibration ID: CAL14943
Analysis Lot: KWG1609198
Units: ppb

File ID: J:\GC33\DATA\101016-504\1010013.D\1010013C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	970000	861000	-11	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Date Analyzed: 10/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\101016-504\1010025.D	Analysis Lot:	KWG1609198
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.1	1120000	1340000	NA	8	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Date Analyzed: 10/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\101016-504\1010025.D\1010025C.D	Analysis Lot:	KWG1609198
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.0	970000	1030000	6	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Date Analyzed: 10/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\101016-504\1010036.D	Analysis Lot:	KWG1609198
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.1	1120000	1360000	NA	10	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006
Date Analyzed: 10/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\101016-504\1010036.D\1010036C.D	Analysis Lot:	KWG1609198
		Units:	ppb
		Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	3.7	970000	964000	-1	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612006

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1609198
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\1010013.D	Continuing Calibration Verification	KWG1609198-1	10/10/2016	19:39		10/10/2016	19:55
\1010014.D	Instrument Blank	KWG1609198-4	10/10/2016	20:02		10/10/2016	20:19
\1010015.D	Lab Control Sample	KWG1609129-5	10/10/2016	20:26		10/10/2016	20:43
\1010016.D	Lab Control Sample	KWG1609129-6	10/10/2016	20:50		10/10/2016	21:06
\1010017.D	Method Blank	KWG1609129-7	10/10/2016	21:13		10/10/2016	21:30
\1010018.D	16279-GACI	K1612006-001	10/10/2016	21:37		10/10/2016	21:53
\1010019.D	16279-GACE	K1612006-002	10/10/2016	22:00		10/10/2016	22:17
\1010020.D	Trip Blank	K1612006-003	10/10/2016	22:24		10/10/2016	22:40
\1010021.D	ZZZZZZ	ZZZZZZ	10/10/2016	22:47		10/10/2016	23:04
\1010022.D	ZZZZZZ	ZZZZZZ	10/10/2016	23:11		10/10/2016	23:28
\1010023.D	ZZZZZZ	ZZZZZZ	10/10/2016	23:34		10/10/2016	23:51
\1010024.D	ZZZZZZ	ZZZZZZ	10/10/2016	23:58		10/11/2016	00:15
\1010025.D	Continuing Calibration Verification	KWG1609198-2	10/11/2016	00:22		10/11/2016	00:39
\1010026.D	Instrument Blank	KWG1609198-5	10/11/2016	00:45		10/11/2016	01:02
\1010027.D	ZZZZZZ	ZZZZZZ	10/11/2016	01:09		10/11/2016	01:26
\1010028.D	ZZZZZZ	ZZZZZZ	10/11/2016	01:33		10/11/2016	01:49
\1010029.D	ZZZZZZ	ZZZZZZ	10/11/2016	01:56		10/11/2016	02:13
\1010030.D	ZZZZZZ	ZZZZZZ	10/11/2016	02:20		10/11/2016	02:37
\1010031.D	Batch QC	K1612058-002	10/11/2016	02:44		10/11/2016	03:00
\1010032.D	Batch QCMS	KWG1609129-3	10/11/2016	03:07		10/11/2016	03:24
\1010033.D	Batch QCDMS	KWG1609129-4	10/11/2016	03:31		10/11/2016	03:48
\1010034.D	ZZZZZZ	ZZZZZZ	10/11/2016	03:54		10/11/2016	04:11
\1010035.D	ZZZZZZ	ZZZZZZ	10/11/2016	04:18		10/11/2016	04:35
\1010036.D	Continuing Calibration Verification	KWG1609198-3	10/11/2016	04:42		10/11/2016	04:58
\1010037.D	Instrument Blank	KWG1609198-6	10/11/2016	05:05		10/11/2016	05:22

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Extracted: 10/10/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1609129
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16279-GACI	K1612006-001	10/05/16	10/06/16	35.6068ml	2ml	NA	
16279-GACE	K1612006-002	10/05/16	10/06/16	35.5123ml	2ml	NA	
Trip Blank	K1612006-003	10/05/16	10/06/16	35.4477ml	2ml	NA	
Method Blank	KWG1609129-7	NA	NA	36.6818ml	2ml	NA	
Batch QC	K1612058-002	NA	NA	36.0507ml	2ml	NA	
Batch QCMS	KWG1609129-3	NA	NA	36.2645ml	2ml	NA	
Batch QCDMS	KWG1609129-4	NA	NA	36.1630ml	2ml	NA	
Lab Control Sample	KWG1609129-5	NA	NA	35.0000ml	2ml	NA	
Lab Control Sample	KWG1609129-6	NA	NA	35.0000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612006
Date Collected: 10/05/2016
Date Received: 10/06/2016
Date Extracted: 10/10/2016

EPA Method 504.1

Sample Name: 16279-GACI
Lab Code: K1612006-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0098	0.00300	0.21	0.22	4.7		1	10/10/16



Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Exception Report

Data File: J:\GC33\DATA\101016-504\1010018.D
Lab ID: K1612006-001
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2016 21:37
Date Quantitated: 10/11/2016 10:38
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010018.D\1010018C.D
Lab ID: K1612006-001
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2016 21:37
Date Quantitated: 10/11/2016 10:38
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010018.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010018.D\1010018.c.d	Vial:	14
Acq Date:	10/10/2016 21:37	Quant Date:	10/11/2016 10:38
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1612006-001	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	10/05/2016
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1560600	Prep Date:	10/10/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L	ug/L	
1,2-Dibromoethane (EDB)	3.90	4.07 ^{+0.01}	4795982m	3683863m	3.90	3.80	0.22	0.21	0.21
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.6068 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010018.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 21:37:00 Operator: BS
 Sample : K1612006-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:38:45 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

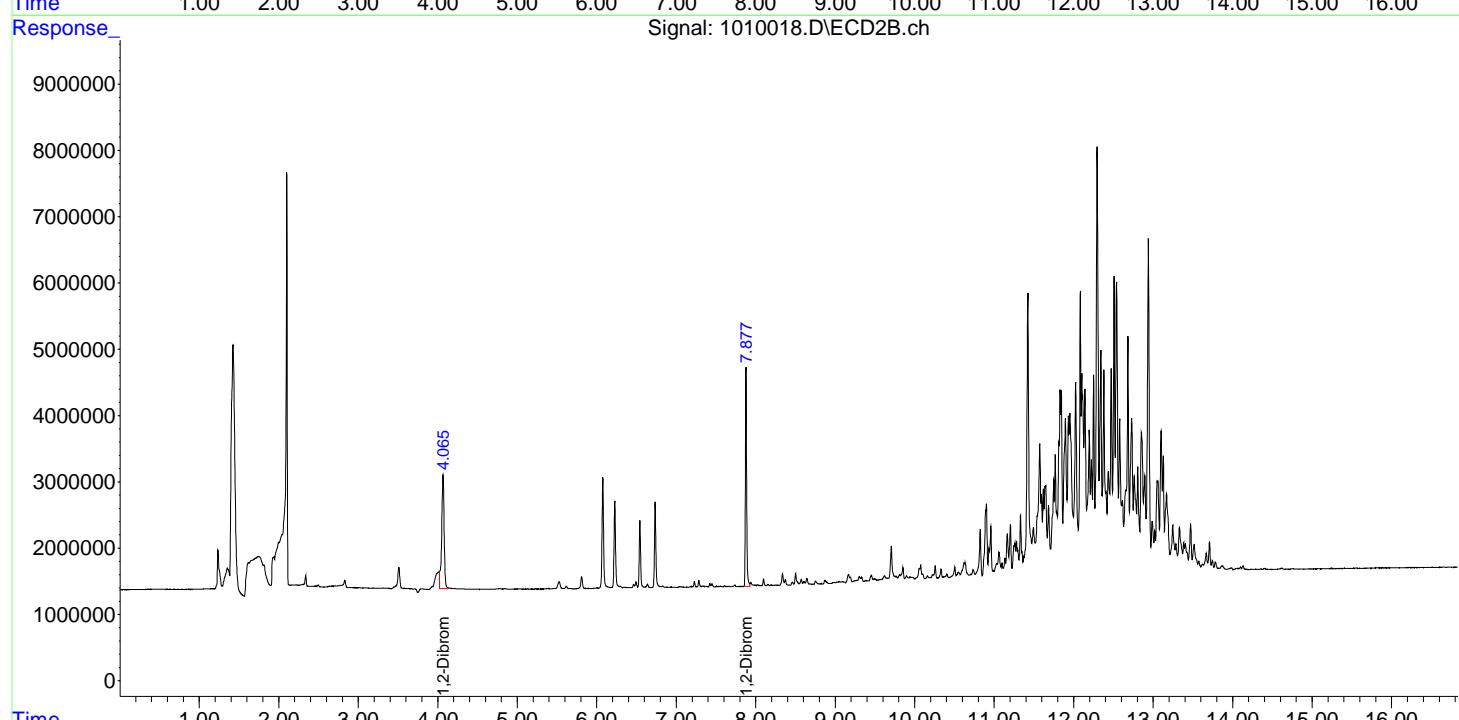
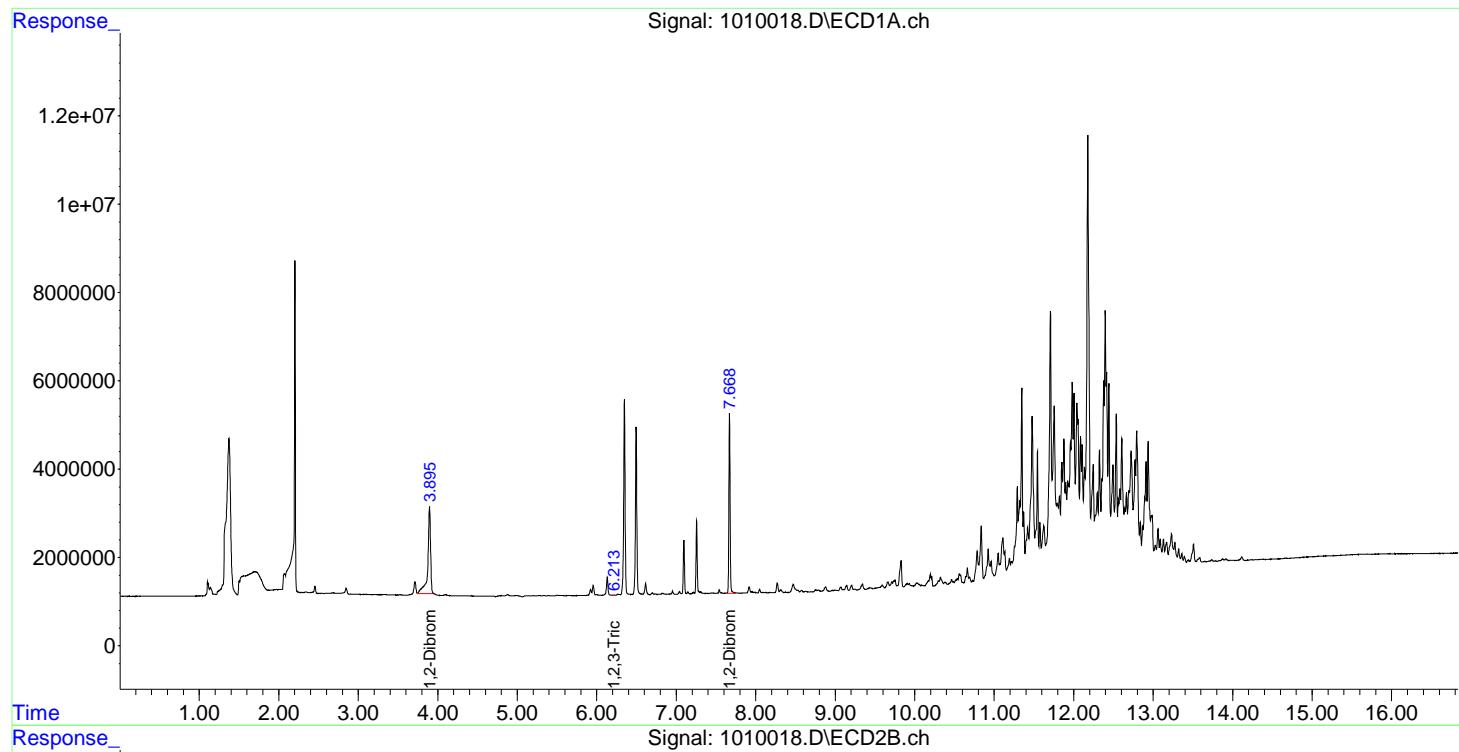
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.895	4.065	4795982	3683863	3.900m	3.796m
2) M 1,2,3-Tri...	6.213	0.000	3121	0	0.133	N.D. #
3) M 1,2-Dibro...	7.668	7.877	4312103	3577875	1.498	1.580

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010018.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 21:37:00 Operator: BS
 Sample : K1612006-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:38:45 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



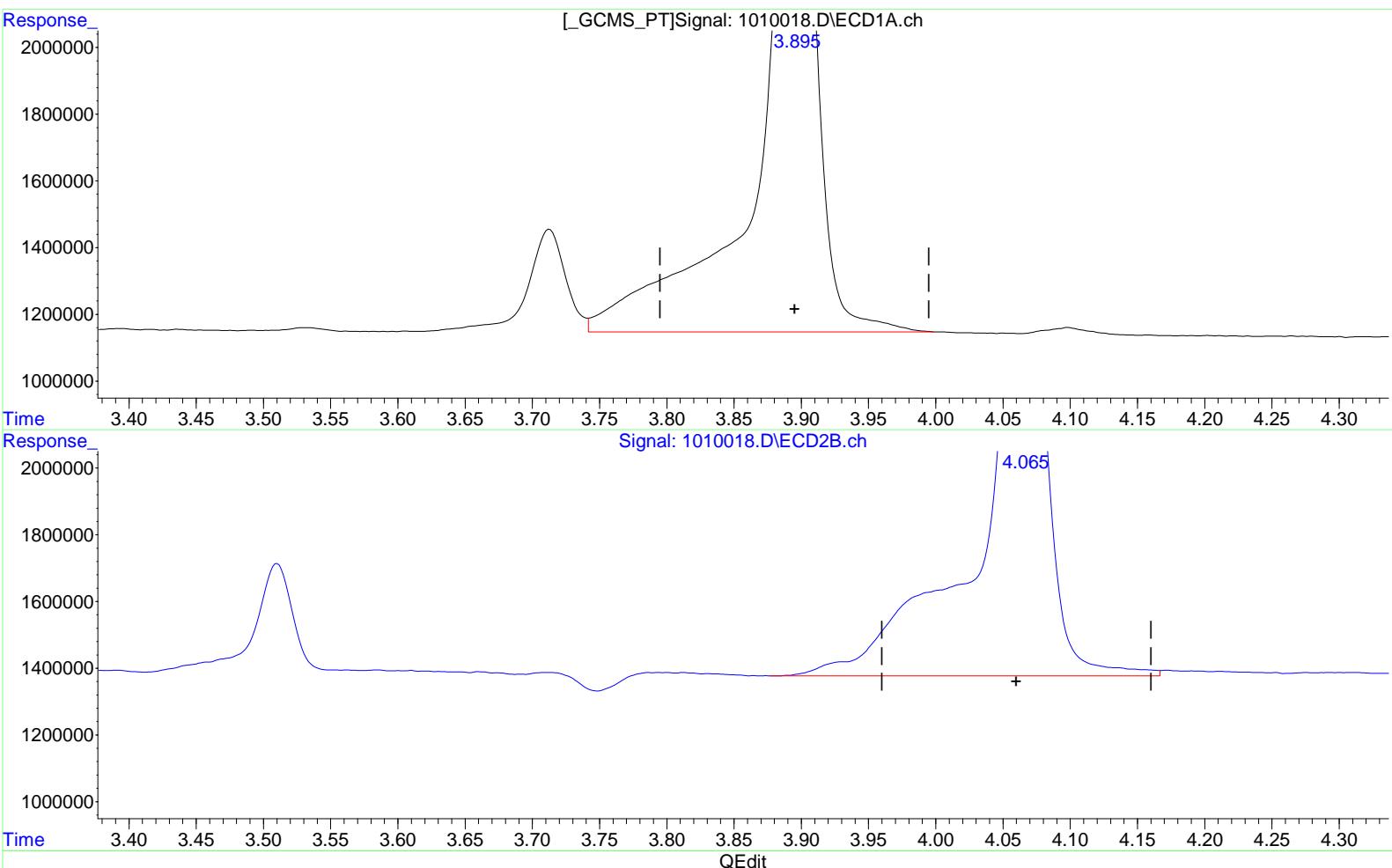
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010018.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 21:37:00 Operator: BS
 Sample : K1612006-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:38:20 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 4.283 ppb

response 5330679

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 5.052 ppb

response 4901779

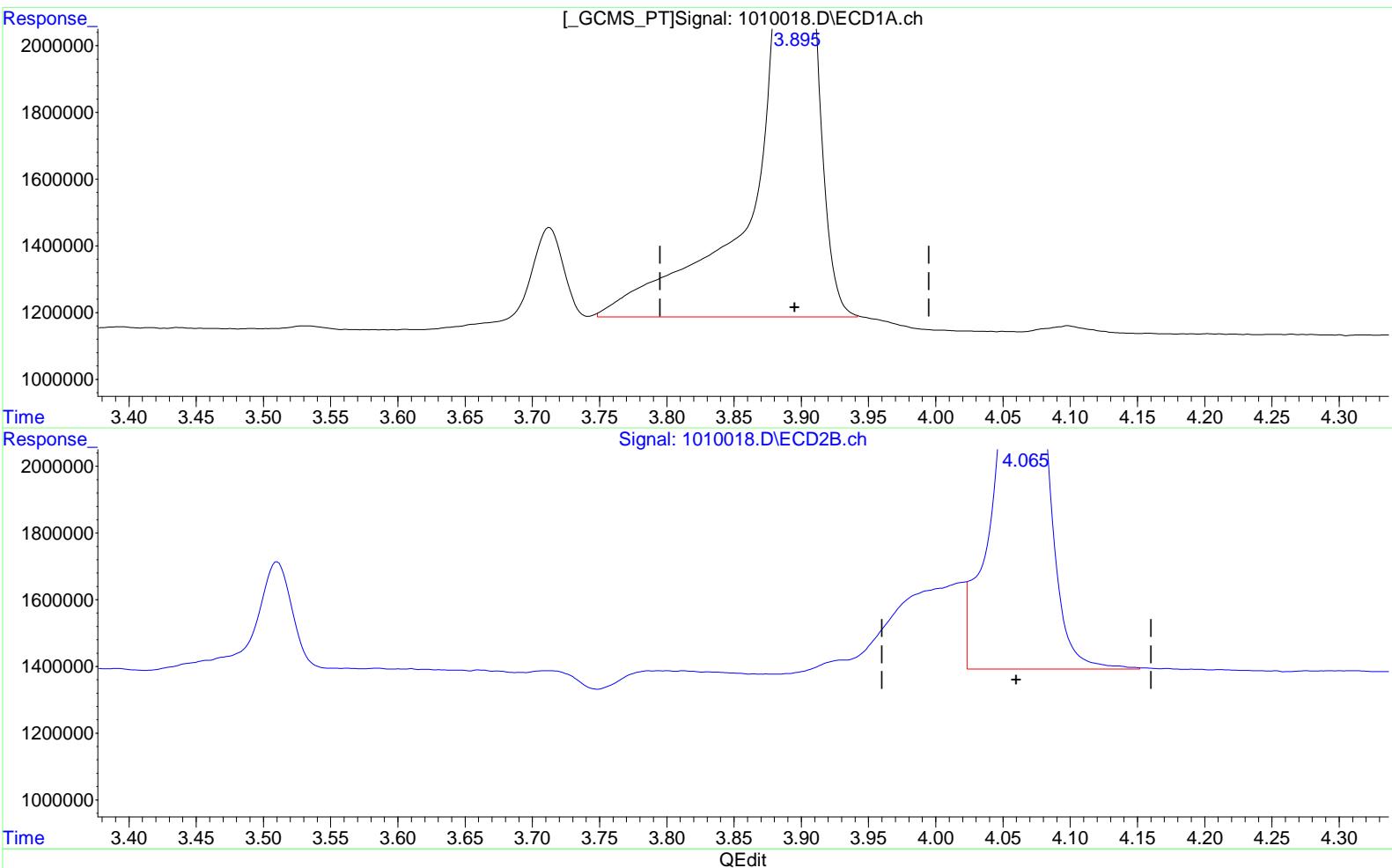
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010018.D Vial: 14
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 21:37:00 Operator: BS
 Sample : K1612006-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:38:20 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.895min 3.900 ppb m
 response 4795982

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.065min 3.796 ppb m
 response 3683863

Exception Report

Data File: J:\GC33\DATA\101016-504\1010019.D
Lab ID: K1612006-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2016 22:00
Date Quantitated: 10/11/2016 10:39
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010019.D\1010019C.D
Lab ID: K1612006-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2016 22:00
Date Quantitated: 10/11/2016 10:39
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010019.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010019.D\1010019c.d	Vial:	15
Acq Date:	10/10/2016 22:00	Quant Date:	10/11/2016 10:39
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1612006-002	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	10/05/2016
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1560601	Prep Date:	10/10/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			1365	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.5123 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010019.D Vial: 15
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 22:00:38 Operator: BS
Sample : K1612006-002 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 10:39:12 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

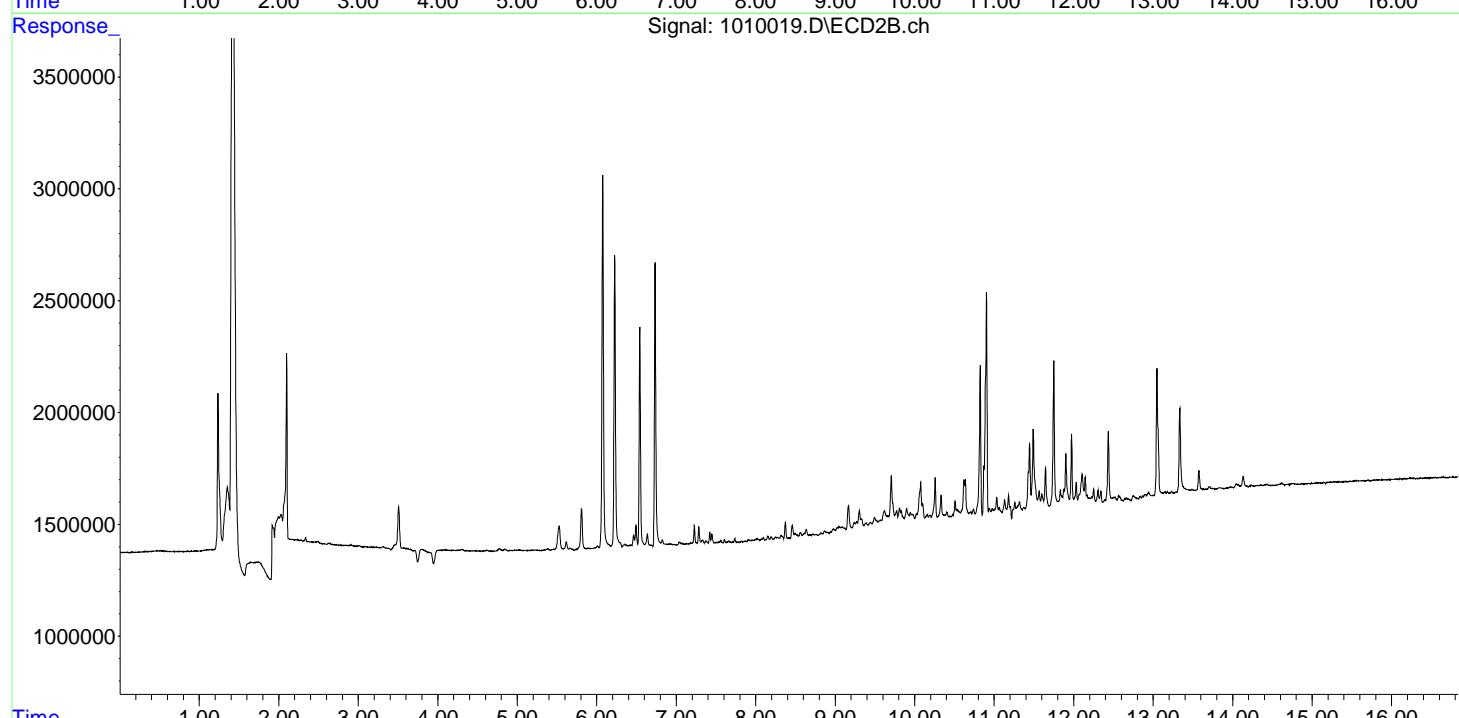
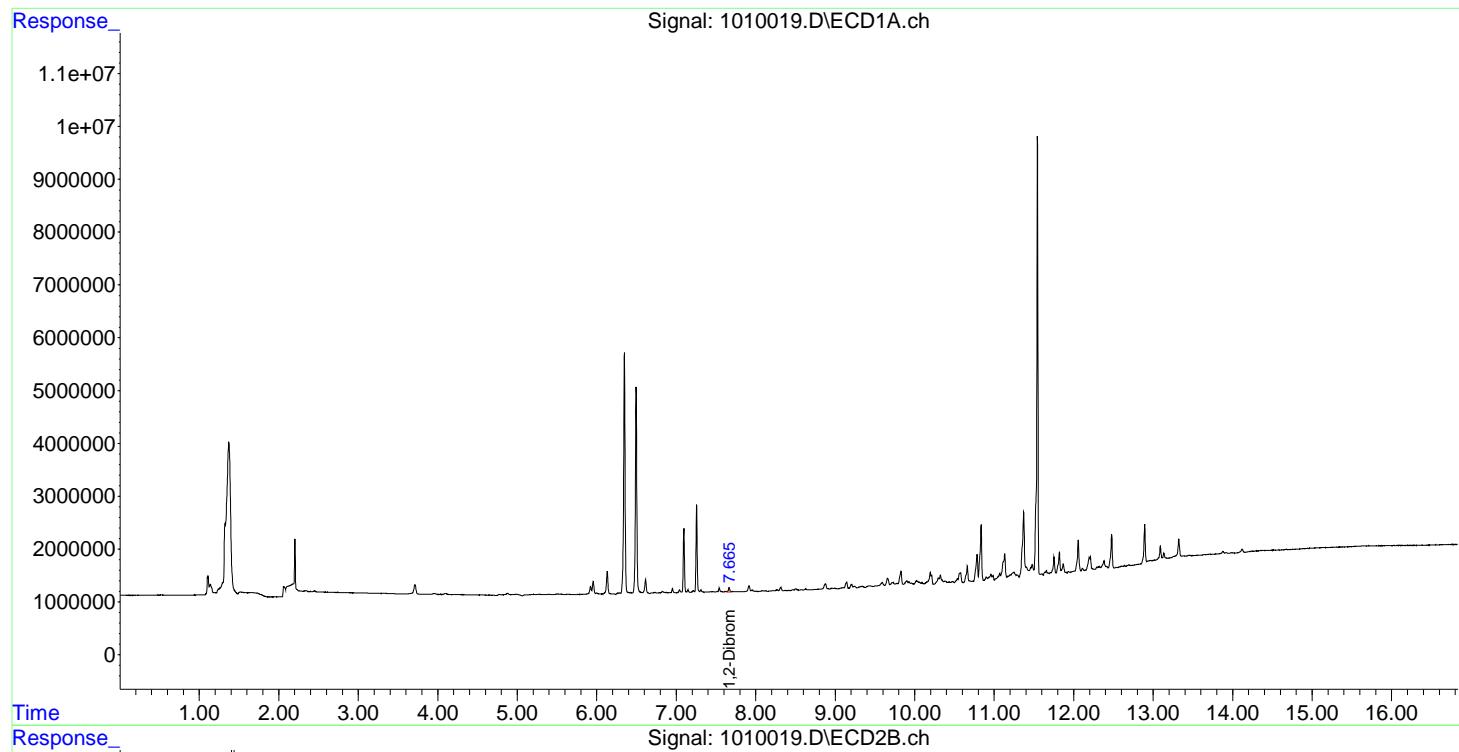
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
3) M 1,2-Dibro...	7.665	0.000	105395	0	0.037	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010019.D Vial: 15
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 22:00:38 Operator: BS
 Sample : K1612006-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:39:12 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010020.D
Lab ID: K1612006-003
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2016 22:24
Date Quantitated: 10/11/2016 10:39
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010020.D\1010020C.D
Lab ID: K1612006-003
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2016 22:24
Date Quantitated: 10/11/2016 10:39
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010020.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010020.D\1010020c.d	Vial:	16
Acq Date:	10/10/2016 22:24	Quant Date:	10/11/2016 10:39
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1612006-003	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	10/05/2016
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1560602	Prep Date:	10/10/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96 ^{+0.06}		43992	0d	0.0250	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.4477 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010020.D Vial: 16
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 22:24:10 Operator: BS
 Sample : K1612006-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:39:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

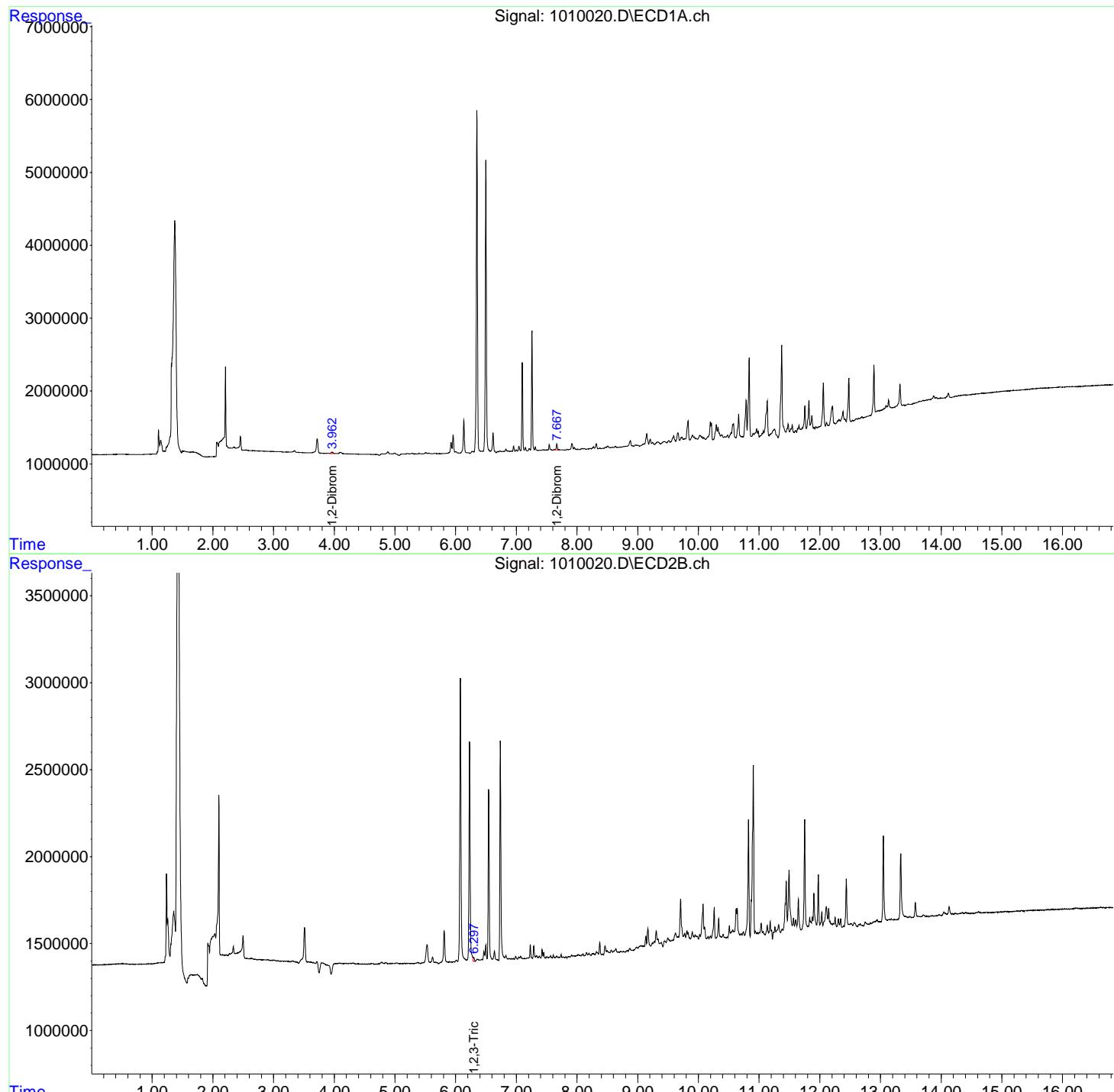
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.962f	0.000	43992	0	0.025	N.D. d#
2) M 1,2,3-Tri...	0.000	6.297	0	27997	N.D. d	0.030
3) M 1,2-Dibro...	7.667	0.000	94490	0	0.033	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010020.D Vial: 16
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 22:24:10 Operator: BS
 Sample : K1612006-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:39:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010017.D
Lab ID: KWG1609129-7
RunType: MB
Matrix: WATER

Date Acquired: 10/10/2016 21:13
Date Quantitated: 10/11/2016 10:38
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010017.D\1010017C.D
Lab ID: KWG1609129-7
RunType: MB
Matrix: WATER

Date Acquired: 10/10/2016 21:13
Date Quantitated: 10/11/2016 10:38
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010017.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\101016-504\1010017.D\1010017c.d	Vial:	13	
Acq Date:	10/10/2016 21:13	Quant Date:	10/11/2016 10:38	
Run Type:	MB	MethodJoinID:	MJ480	
Lab ID:	KWG1609129-7	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016	
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560616	Prep Date:	10/10/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:		Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.95 ^{+0.05}		35115	0d	0.0170	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0d	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropano	7.67		85586	0	0.0300	0.0000	0.00360U	0.00360U	0.00360U

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.6818 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010017.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 21:13:30 Operator: BS
 Sample : KWG1609129-7MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:38:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

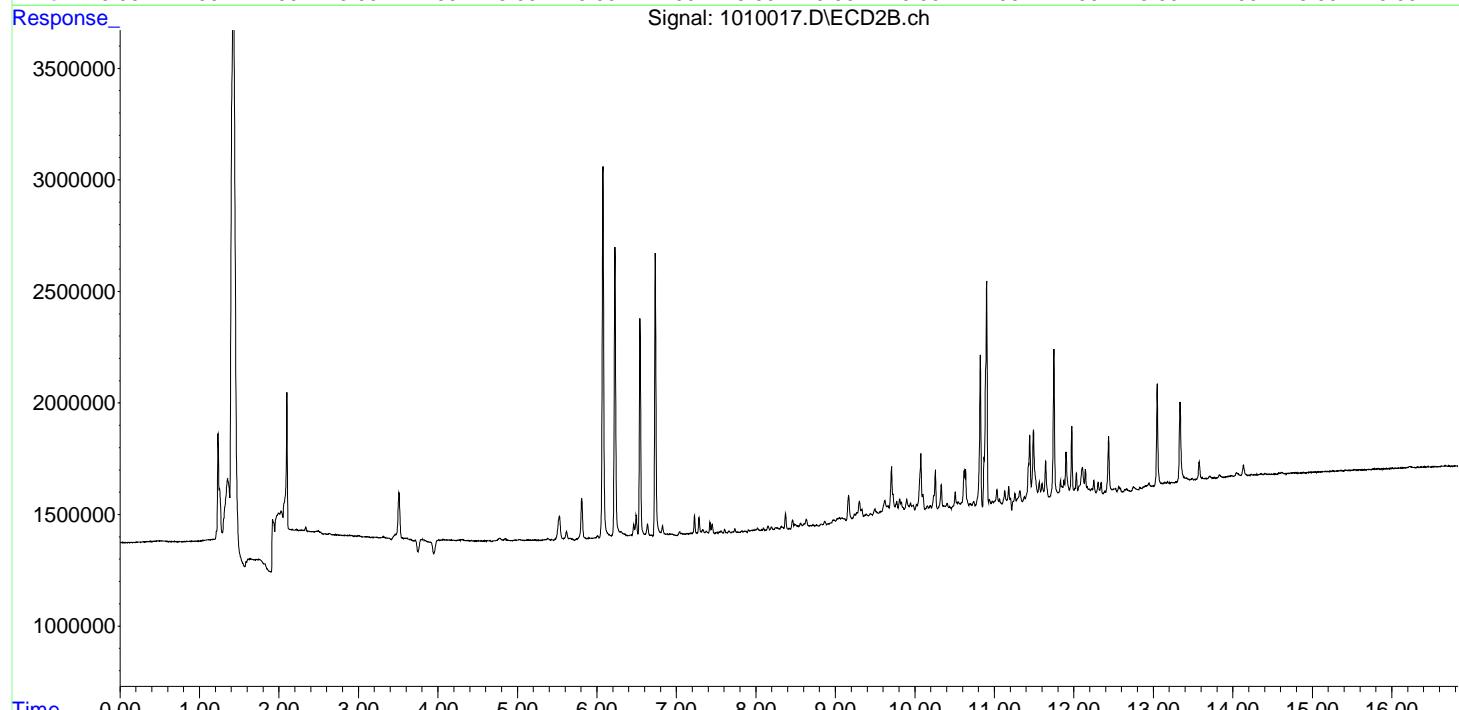
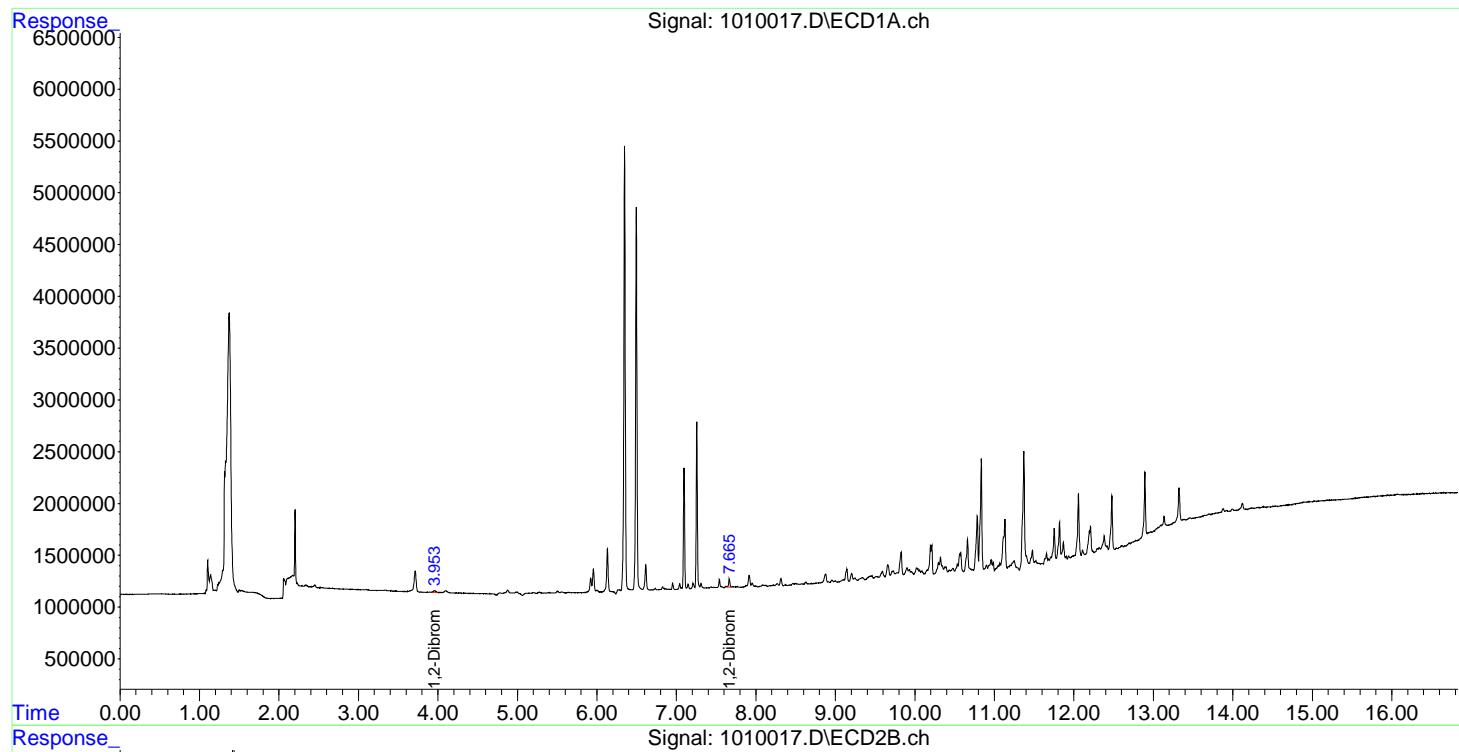
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro... 3.953f 0.000 35115 0 0.017 N.D. d#						
3) M 1,2-Dibro... 7.665 0.000 85586 0 0.030 N.D. #						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010017.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 21:13:30 Operator: BS
 Sample : KWG1609129-7MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:38:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010031.D
Lab ID: K1612058-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/11/2016 02:44
Date Quantitated: 10/11/2016 10:46
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010031.D\1010031C.D
Lab ID: K1612058-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/11/2016 02:44
Date Quantitated: 10/11/2016 10:46
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010031.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010031.D\1010031c.d	Vial:	25
Acq Date:	10/11/2016 02:44	Quant Date:	10/11/2016 10:46
Run Type:	SMPL	ListJoinID:	LJ4194
Lab ID:	K1612058-002	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	IV	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	10/03/2016	Receive Date: 10/06/2016

Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:	K1612058
Analysis Method:	504.1	Prep Method:	METHOD		
Prep Ref:	1560609	Prep Date:	10/10/2016		

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4194
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96 ^{+0.06}		32883	0d	0.0150	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0d	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropano	7.67		111143	0	0.0390	0.0000	0.00360U	0.00360U	0.00360U

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.0507 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010031.D Vial: 25
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 02:44:00 Operator: BS
 Sample : K1612058-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:11 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

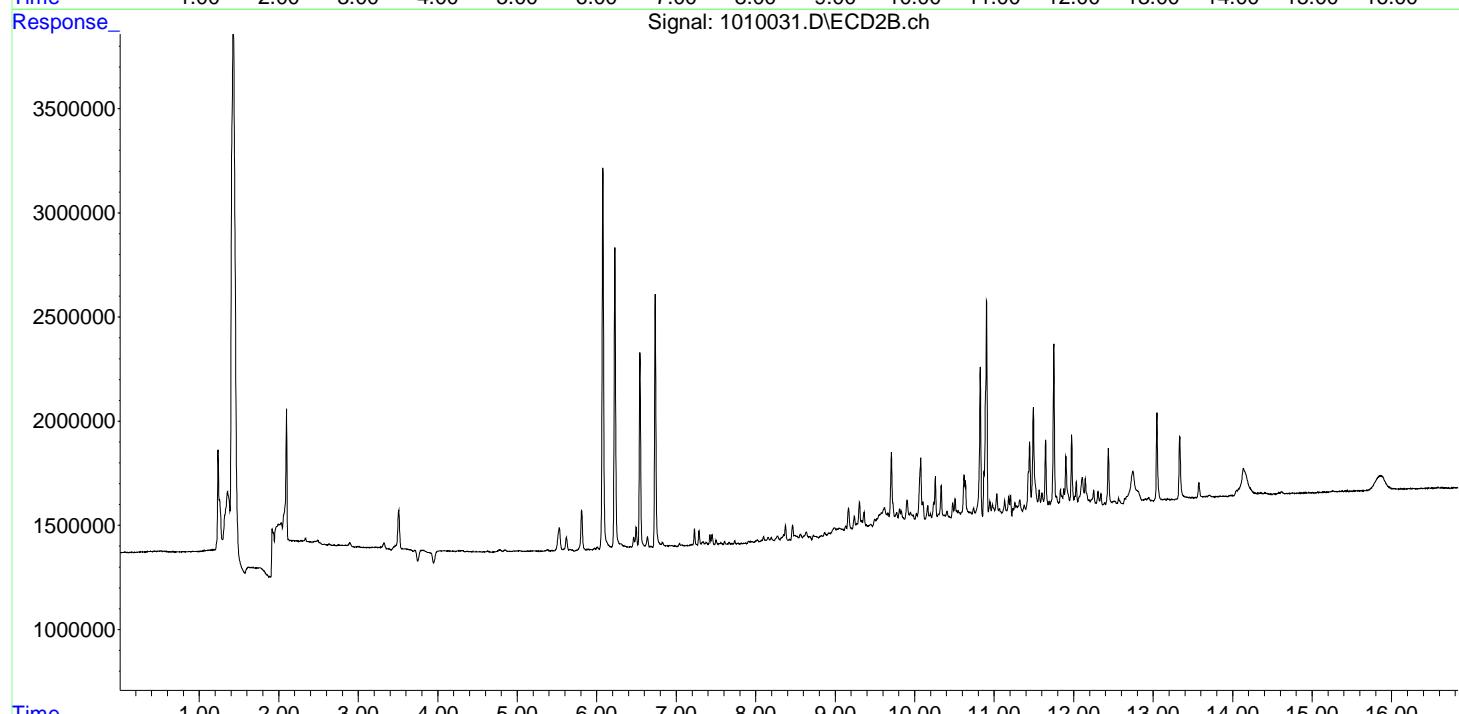
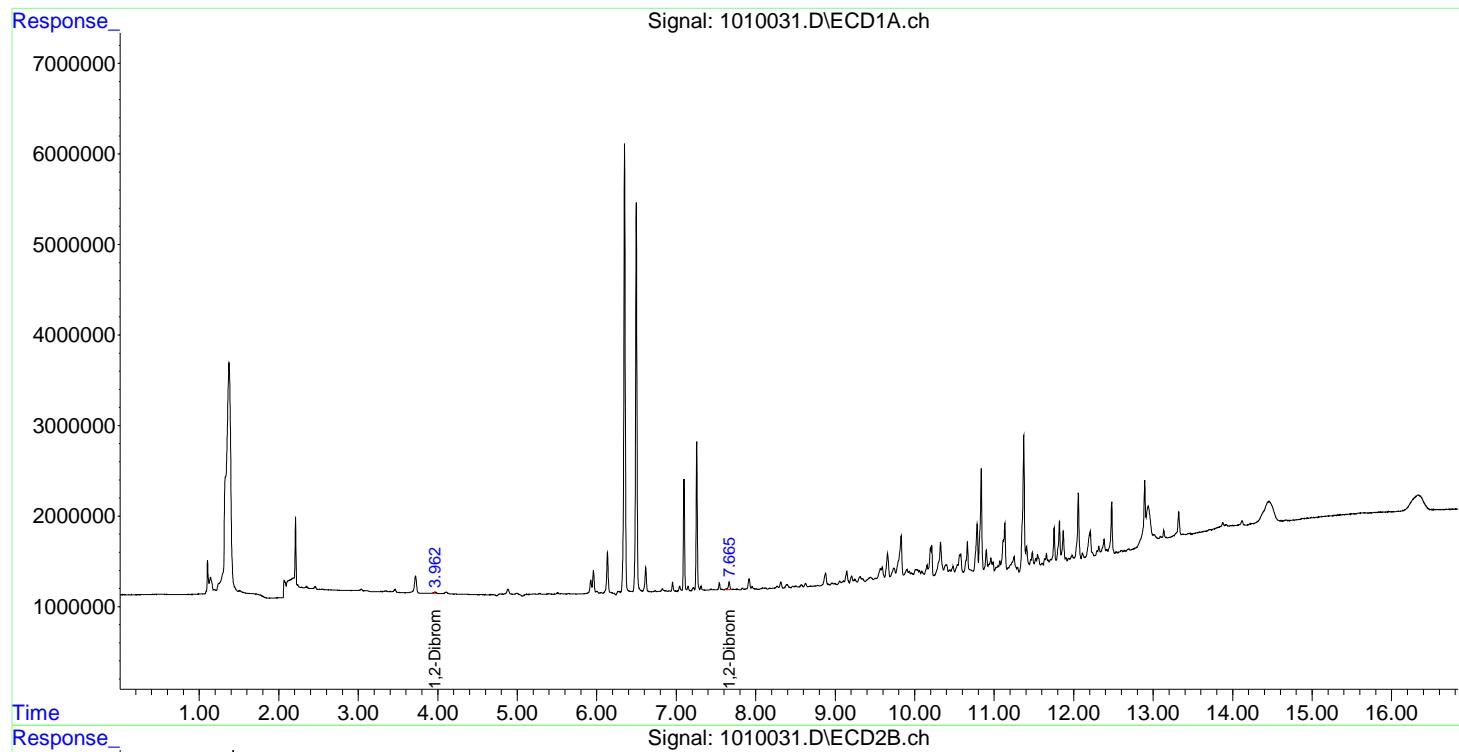
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.962f	0.000	32883	0	0.015	N.D. d#
3) M 1,2-Dibro...	7.665	0.000	111143	0	0.039	N.D. #
<hr/>						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010031.D Vial: 25
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 02:44:00 Operator: BS
 Sample : K1612058-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:11 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010032.D
Lab ID: KWG1609129-3 -- K1612058-002MS
RunType: MS
Matrix: WATER

Date Acquired: 10/11/2016 03:07
Date Quantitated: 10/11/2016 10:46
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010032.D\1010032C.D
Lab ID: KWG1609129-3 -- K1612058-002MS
RunType: MS
Matrix: WATER

Date Acquired: 10/11/2016 03:07
Date Quantitated: 10/11/2016 10:46
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010032.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010032.D\1010032c.d	Vial:	26
Acq Date:	10/11/2016 03:07	Quant Date:	10/11/2016 10:46
Run Type:	MS	MethodJoinID:	MJ480
Lab ID:	KWG1609129-3 -- K1612058-002MS	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016

Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560612	Prep Date:	10/10/2016	

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:			
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
			Quant based on Method

Target Compounds

Parameter Name	RT	RT	Resp	Resp	ppb	ppb	ug/L	ug/L	Rpt
	#1	#2	#1	#2	#1	#2	#1	#2	
1,2-Dibromoethane (EDB)	3.90	4.07 ^{+0.01}	6039476m	4556103m	4.78	4.70	0.264	0.259	0.259
1,2,3-Trichloropropane	6.24	6.30	911582	954517	4.33	4.64	0.239	0.256	0.239
1,2-Dibromo-3-chloropropan	7.67	7.88	12303447	10280392	4.27	4.54	0.236	0.250	0.236

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.2645 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010032.D Vial: 26
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:07:49 Operator: BS
 Sample : K1612058-002MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

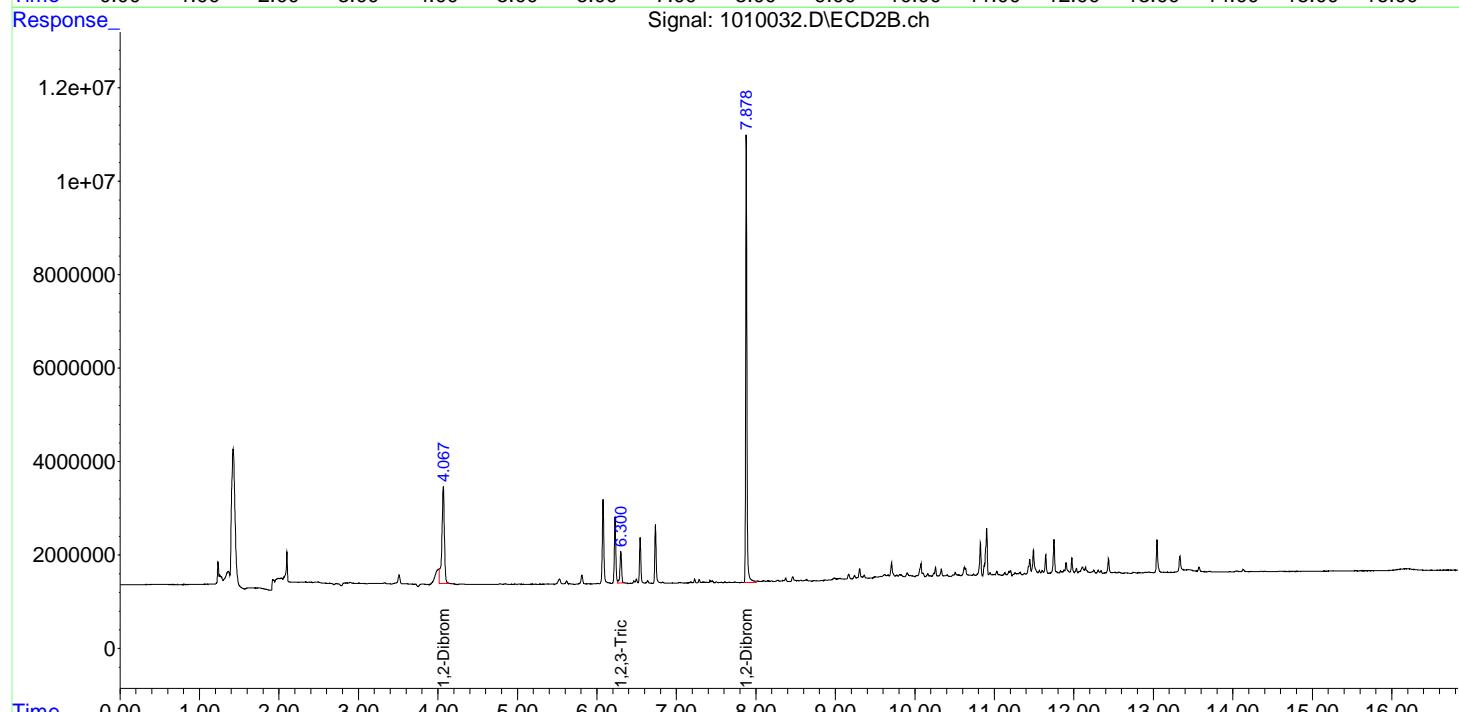
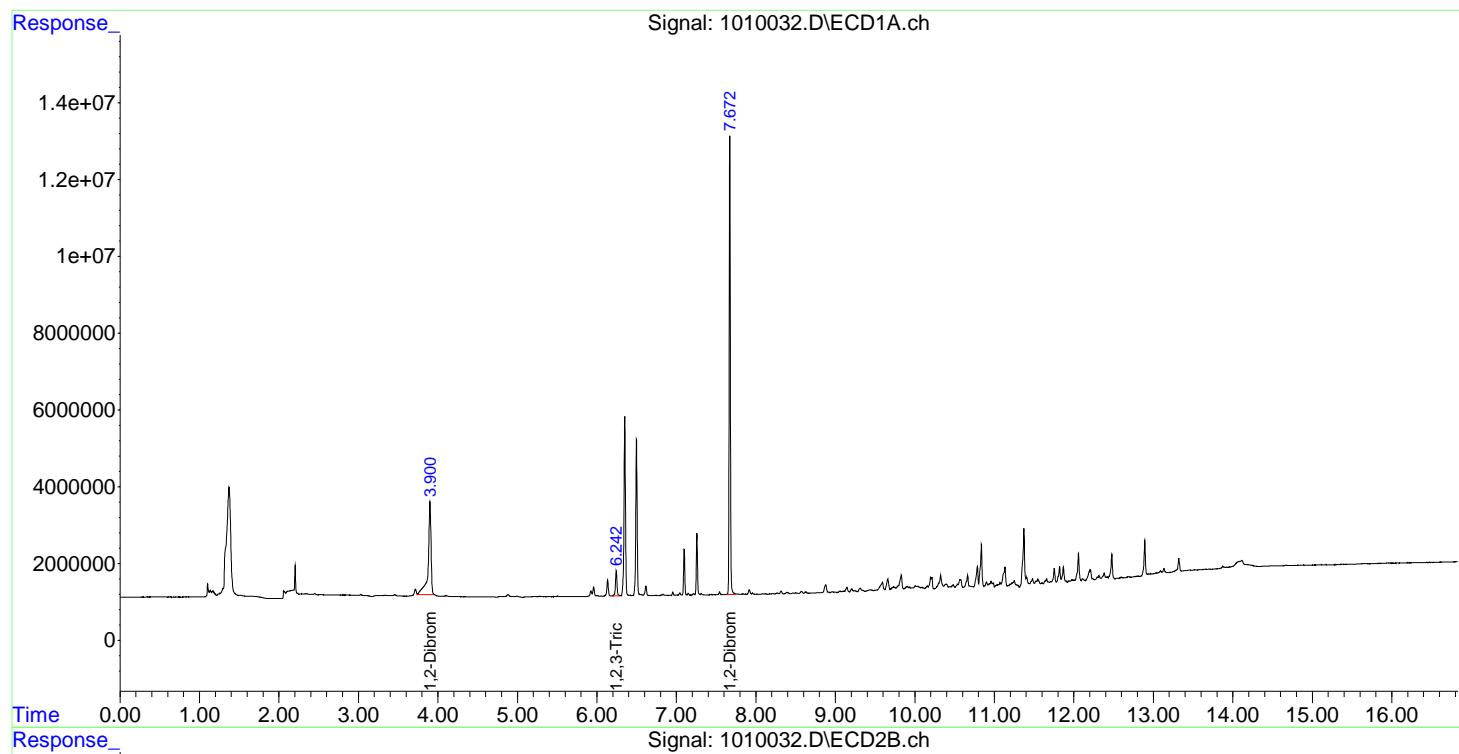
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.900	4.067	6039476	4556103	4.778m	4.695m
2) M 1,2,3-Tri...	6.242	6.300	911582	954517	4.325	4.640
3) M 1,2-Dibro...	7.672	7.878	12303447	10280392	4.274	4.539

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010032.D Vial: 26
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:07:49 Operator: BS
 Sample : K1612058-002MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

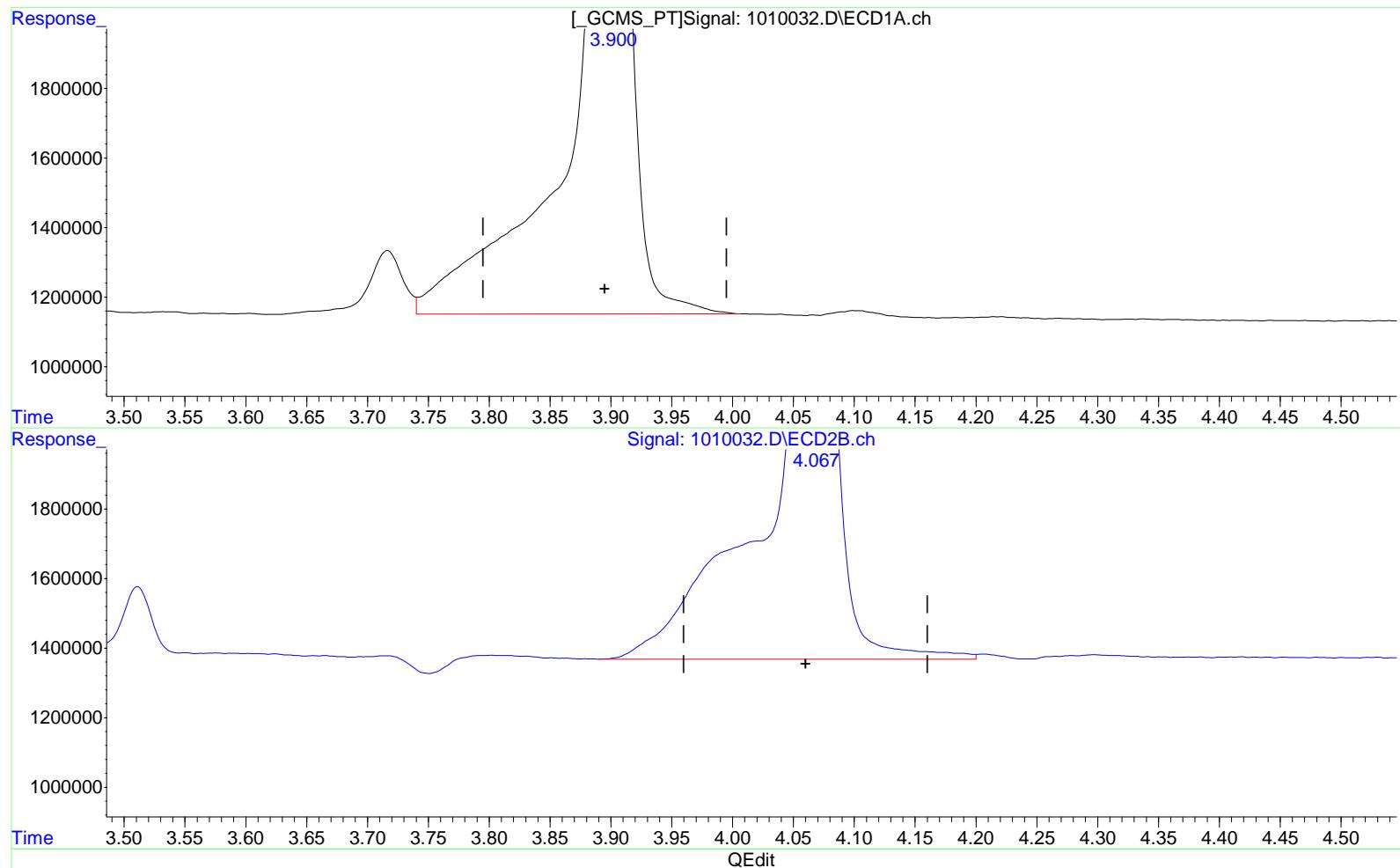
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010032.D Vial: 26
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:07:49 Operator: BS
 Sample : K1612058-002MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.900min 5.184 ppb

response 6636662

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

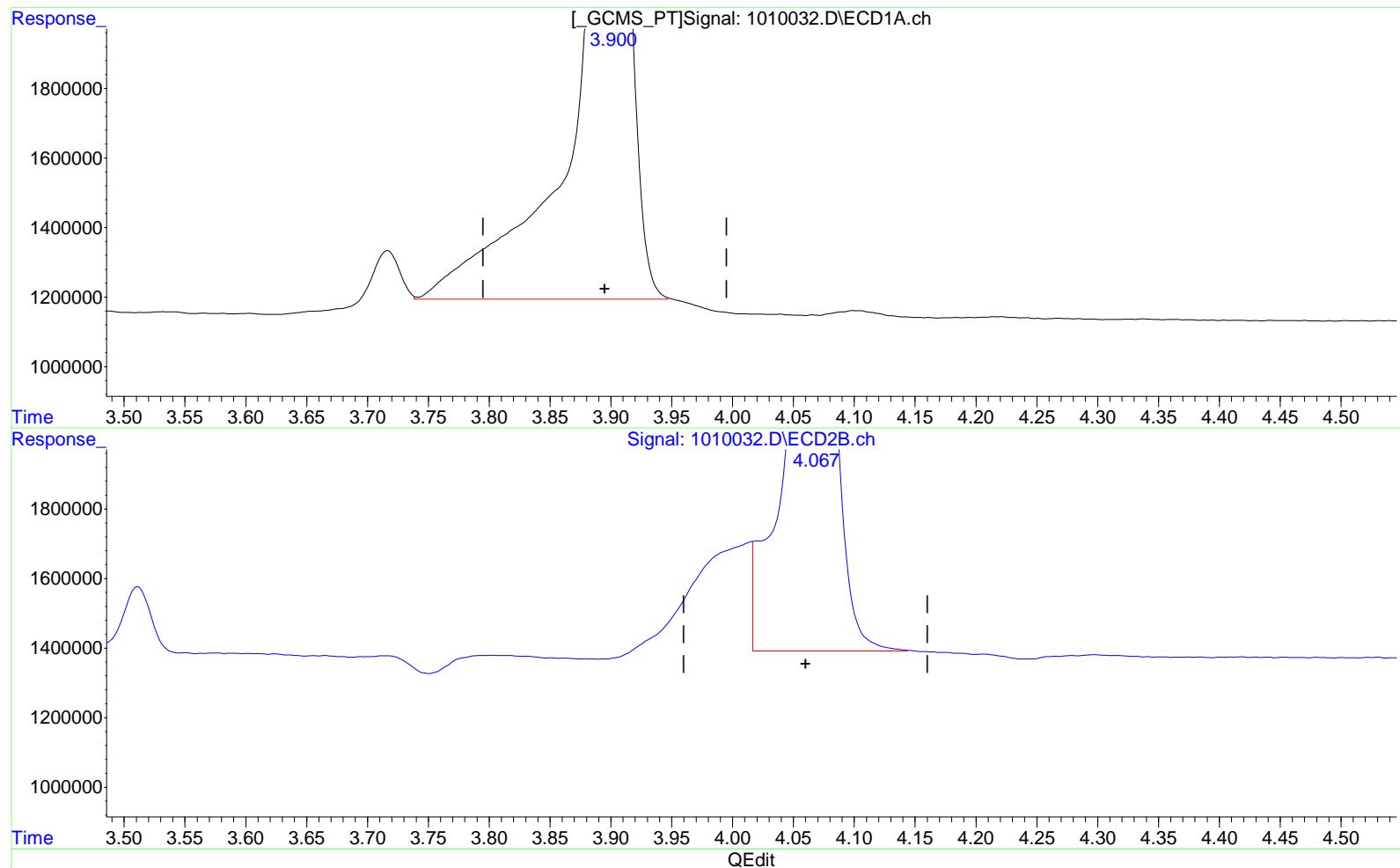
4.067min 6.189 ppb

response 6005027

Data File : J:\GC33\DATA\101016-504\1010032.D Vial: 26
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:07:49 Operator: BS
 Sample : K1612058-002MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.900min 4.778 ppb m

response 6039476

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.067min 4.695 ppb m

response 4556103

Exception Report

Data File: J:\GC33\DATA\101016-504\1010033.D
Lab ID: KWG1609129-4 -- K1612058-002DMS
RunType: DMS
Matrix: WATER

Date Acquired: 10/11/2016 03:31
Date Quantitated: 10/11/2016 10:47
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010033.D\1010033C.D
Lab ID: KWG1609129-4 -- K1612058-002DMS
RunType: DMS
Matrix: WATER

Date Acquired: 10/11/2016 03:31
Date Quantitated: 10/11/2016 10:47
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010033.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010033.D\1010033c.d	Vial:	27
Acq Date:	10/11/2016 03:31	Quant Date:	10/11/2016 10:47
Run Type:	DMS	MethodJoinID:	MJ480
Lab ID:	KWG1609129-4 -- K1612058-002DMS	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016

Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560613	Prep Date:	10/10/2016	

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:			
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
			Quant based on Method

Target Compounds

Parameter Name	RT	RT	Resp	Resp	ppb	ppb	ug/L	ug/L	Rpt
	#1	#2	#1	#2	#1	#2	#1	#2	
1,2-Dibromoethane (EDB)	3.90	4.06	6005265m	4325052m	4.75	4.46	0.263	0.246	0.246
1,2,3-Trichloropropane	6.24	6.30	910477	900020	4.32	4.37	0.239	0.242	0.239
1,2-Dibromo-3-chloropropan	7.67	7.88	12341401	9685485	4.29	4.28	0.237	0.236	0.236

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.1630 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010033.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:31:22 Operator: BS
 Sample : K1612058-002DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:47:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

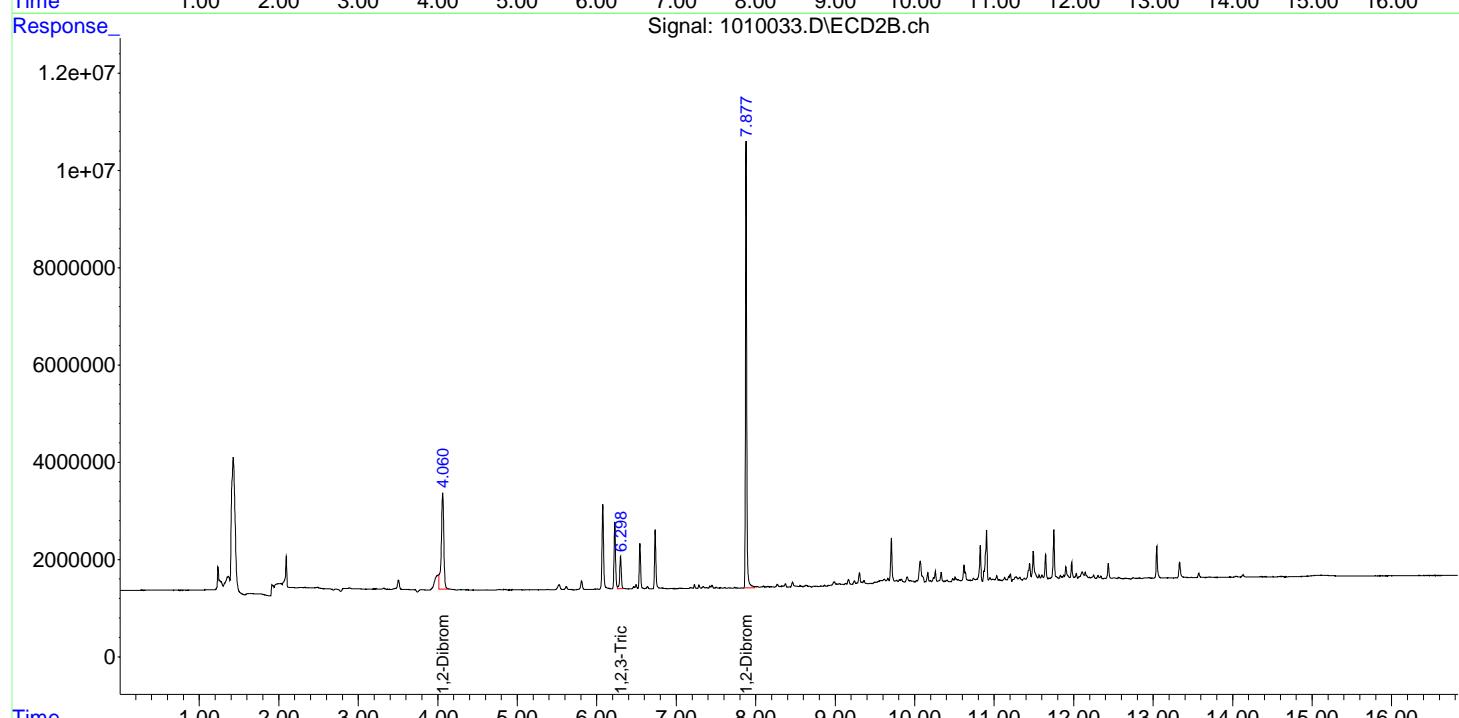
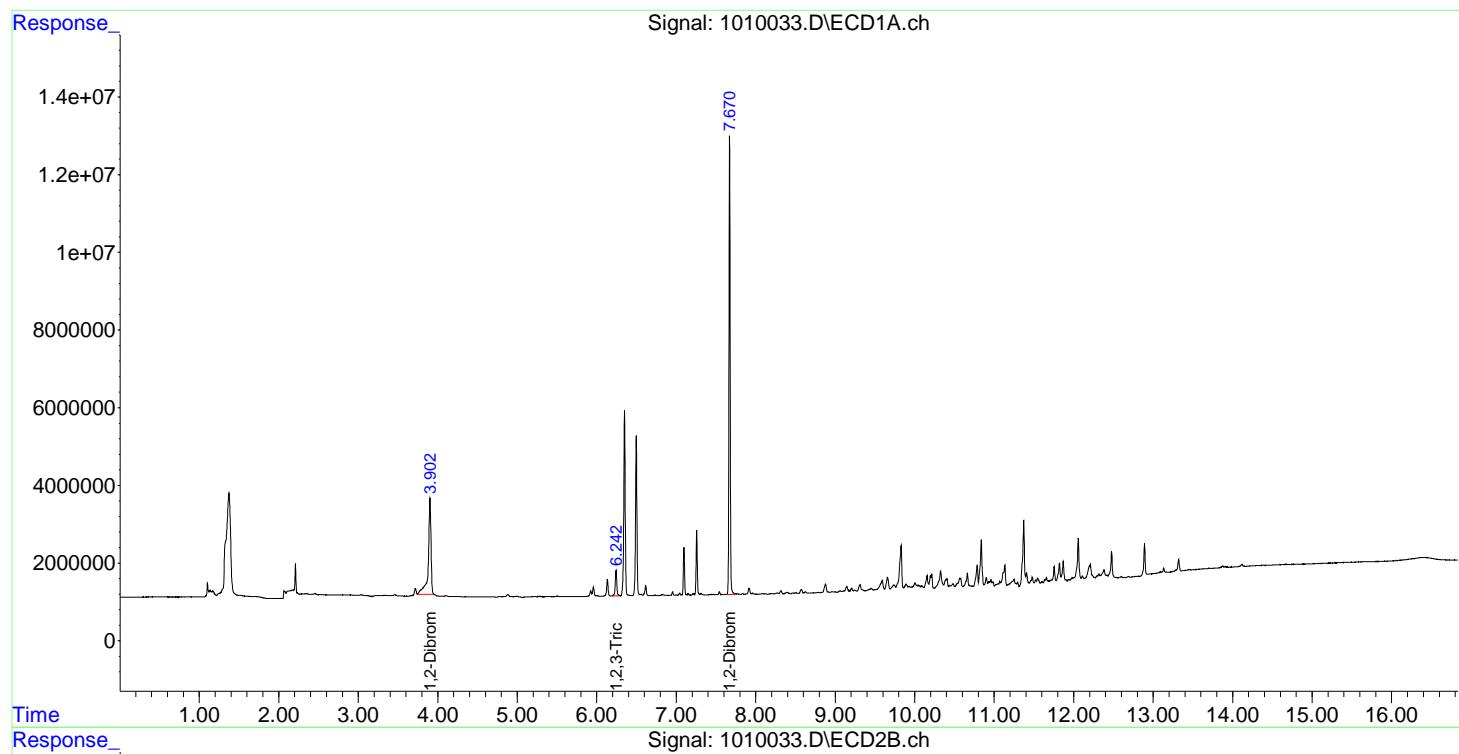
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.902	4.060	6005265	4325052	4.754m	4.457m
2) M 1,2,3-Tri...	6.242	6.298	910477	900020	4.319	4.369
3) M 1,2-Dibro...	7.670	7.877	12341401	9685485	4.287	4.276

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010033.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:31:22 Operator: BS
 Sample : K1612058-002DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:47:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



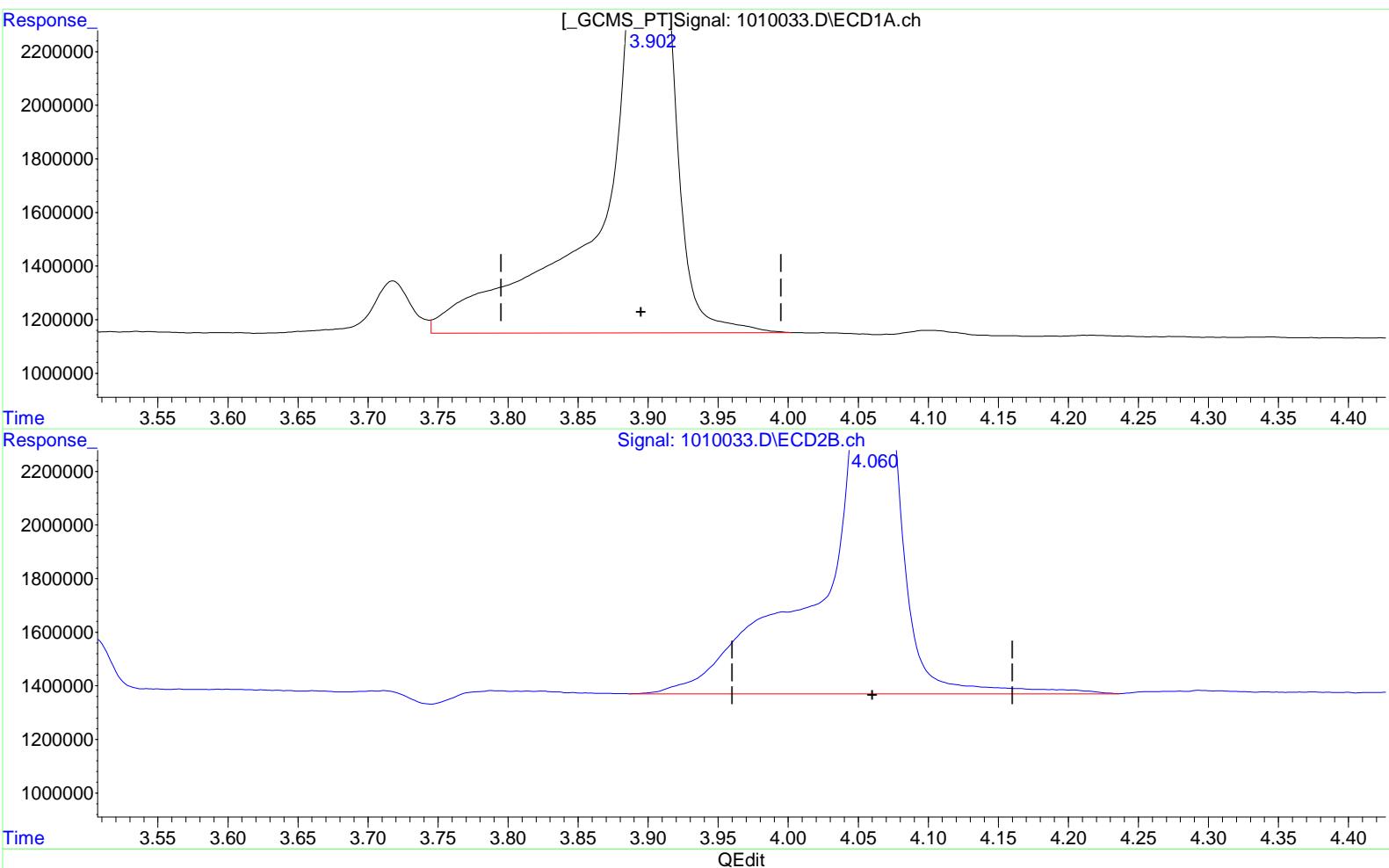
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010033.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:31:22 Operator: BS
 Sample : K1612058-002DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:53 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 5.164 ppb

response 6605680

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 5.918 ppb

response 5742363

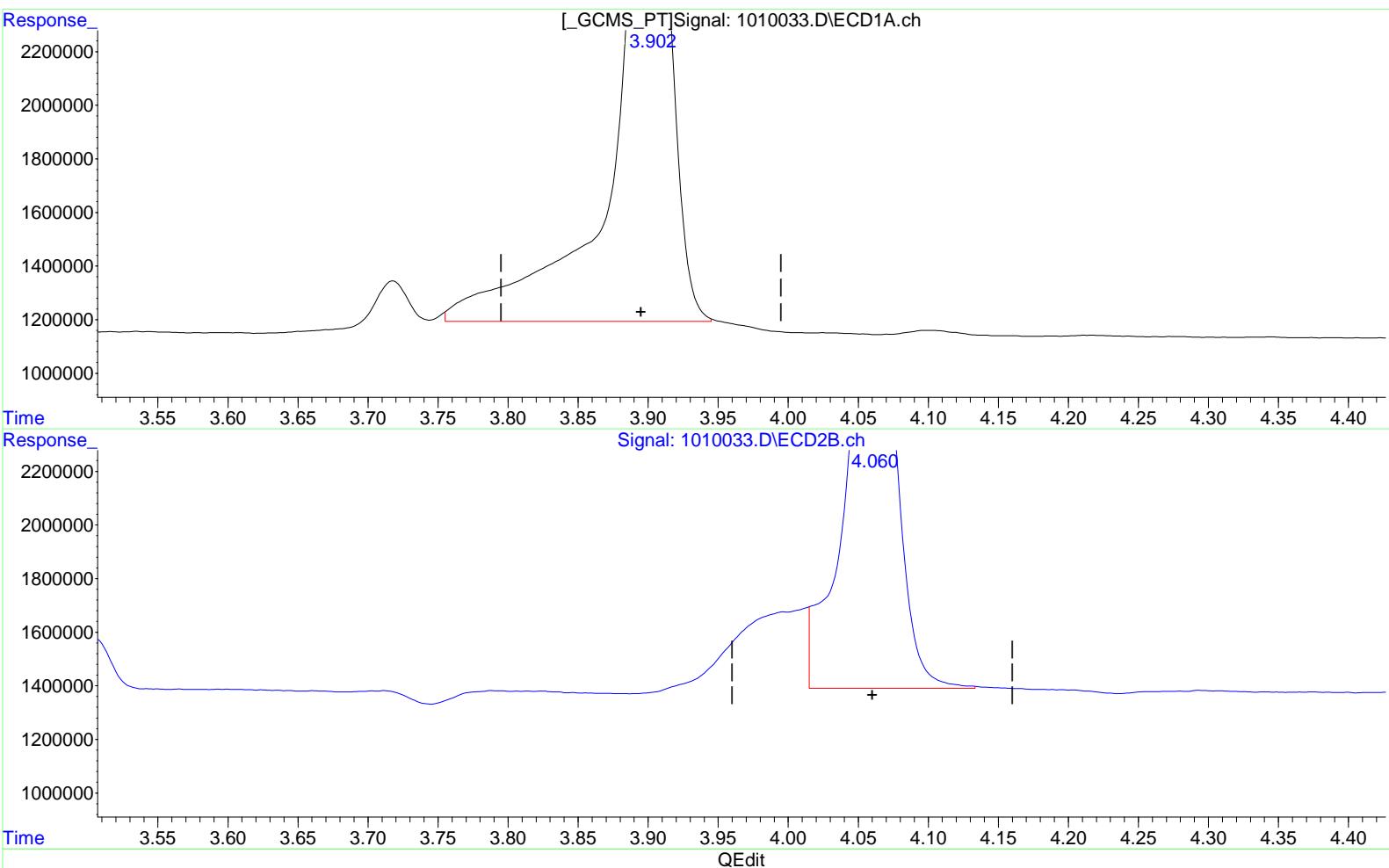
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010033.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:31:22 Operator: BS
 Sample : K1612058-002DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:53 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 4.754 ppb m

response 6005265

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 4.457 ppb m

response 4325052

Exception Report

Data File: J:\GC33\DATA\101016-504\1010015.D
Lab ID: KWG1609129-5
RunType: LCS
Matrix: WATER

Date Acquired: 10/10/2016 20:26
Date Quantitated: 10/11/2016 10:36
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010015.D\1010015C.D
Lab ID: KWG1609129-5
RunType: LCS
Matrix: WATER

Date Acquired: 10/10/2016 20:26
Date Quantitated: 10/11/2016 10:36
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010015.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\101016-504\1010015.D\1010015c.d	Vial:	11	
Acq Date:	10/10/2016 20:26	Quant Date:	10/11/2016 10:36	
Run Type:	LCS	MethodJoinID:	MJ480	
Lab ID:	KWG1609129-5	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016	
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560614	Prep Date:	10/10/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89 ^{-0.01}	4.07 ^{+0.01}	5684645m	4047249m	4.53	4.17	0.259	0.238	0.238
1,2,3-Trichloropropane	6.24	6.30	887038	953790	4.21	4.64	0.241	0.265	0.241
1,2-Dibromo-3-chloropropano	7.67	7.88	11850358	9686511	4.12	4.28	0.235	0.244	0.235

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.0000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010015.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:26:20 Operator: BS
 Sample : KWG1609129-5LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

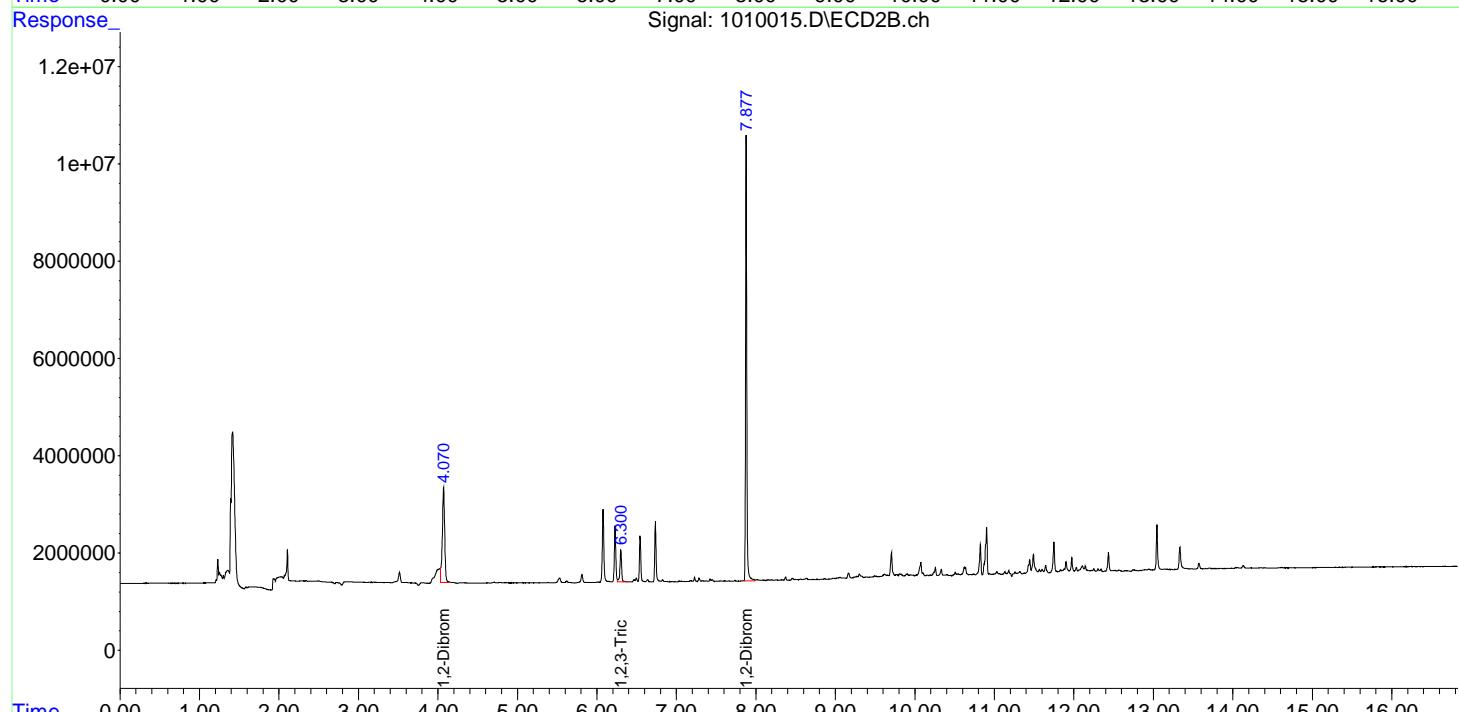
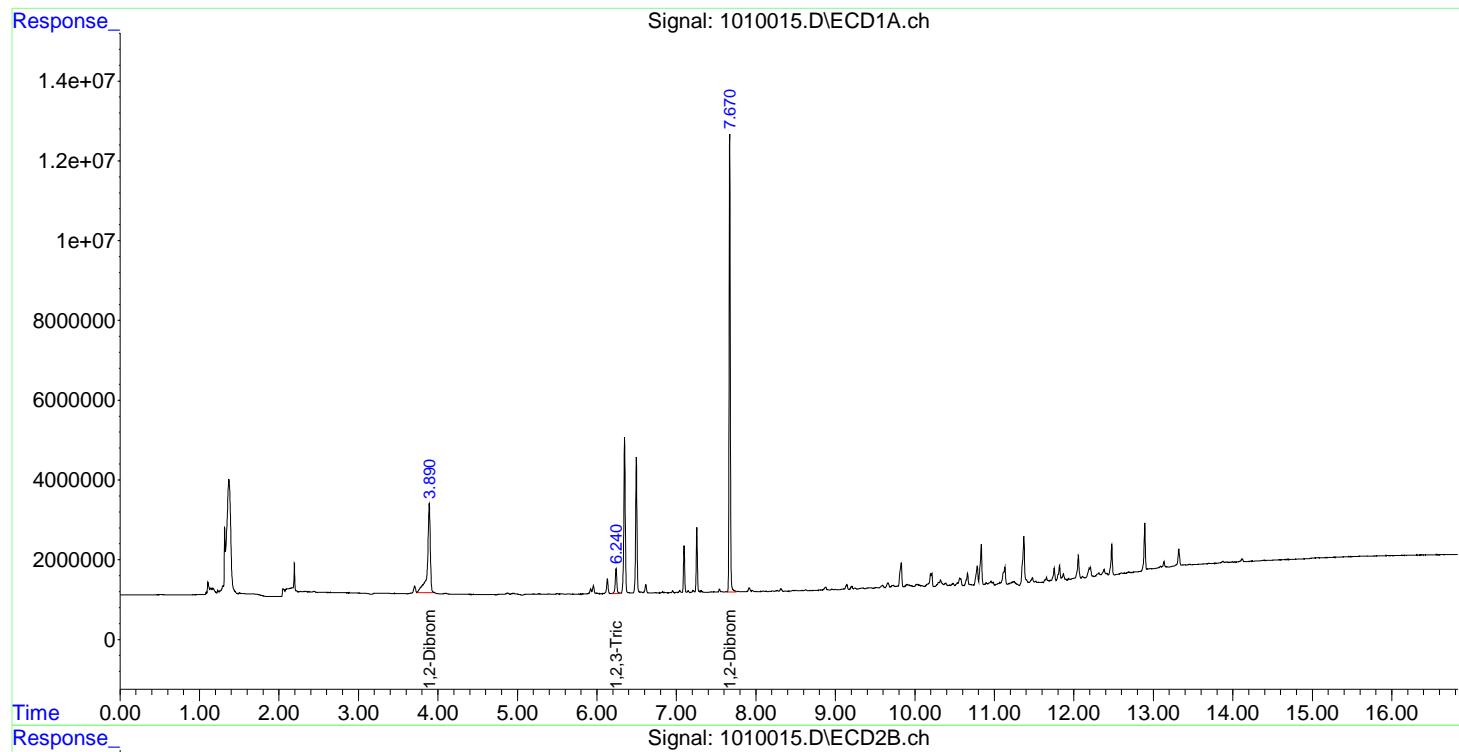
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.890	4.070	5684645	4047249	4.532m	4.171m
2) M 1,2,3-Tri...	6.240	6.300	887038	953790	4.211	4.636
3) M 1,2-Dibro...	7.670	7.877	11850358	9686511	4.116	4.276

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010015.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:26:20 Operator: BS
 Sample : KWG1609129-5LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

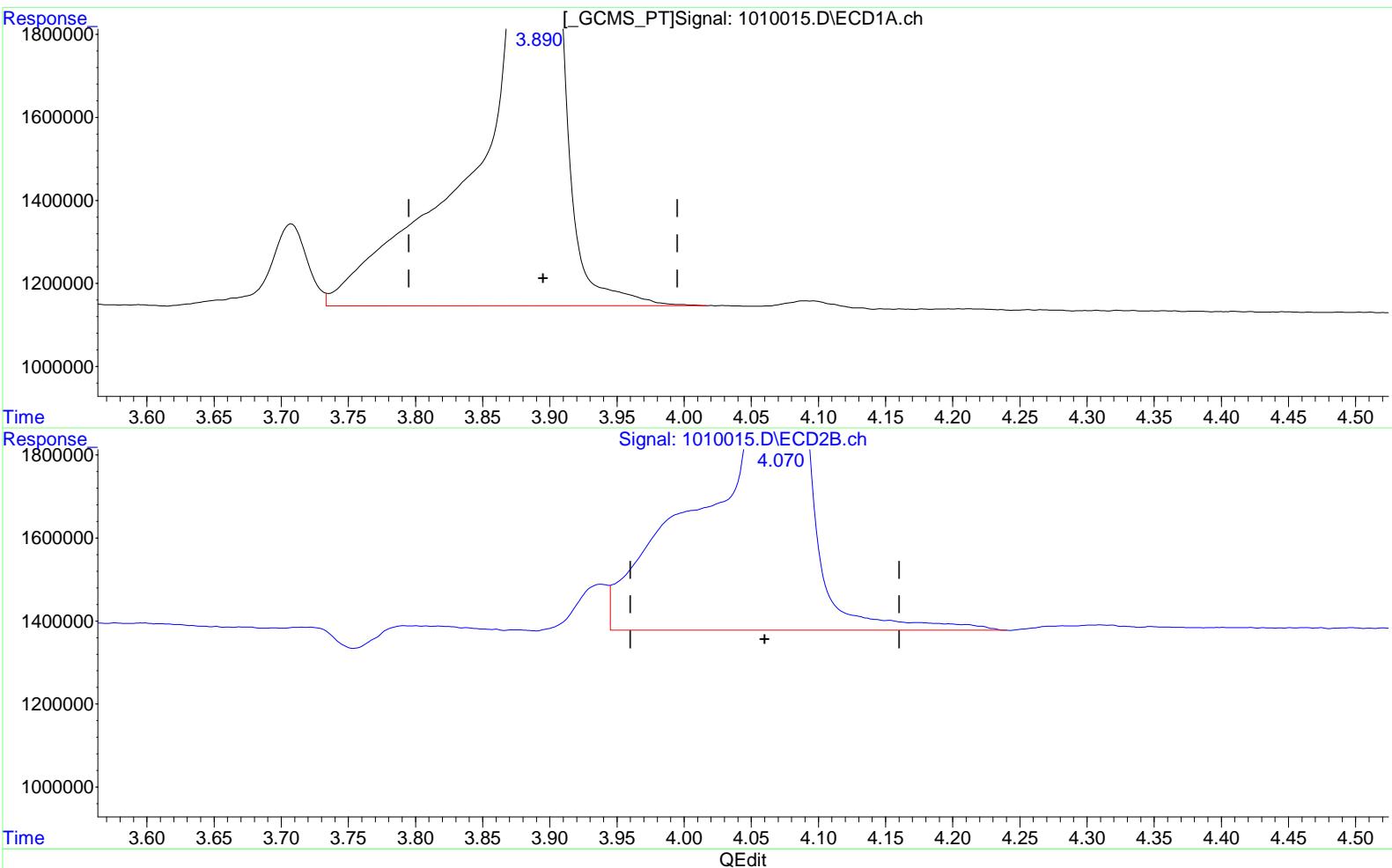
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010015.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:26:20 Operator: BS
 Sample : KWG1609129-5LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:30 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.890min 4.804 ppb

response 6077024

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.070min 5.689 ppb

response 5520503

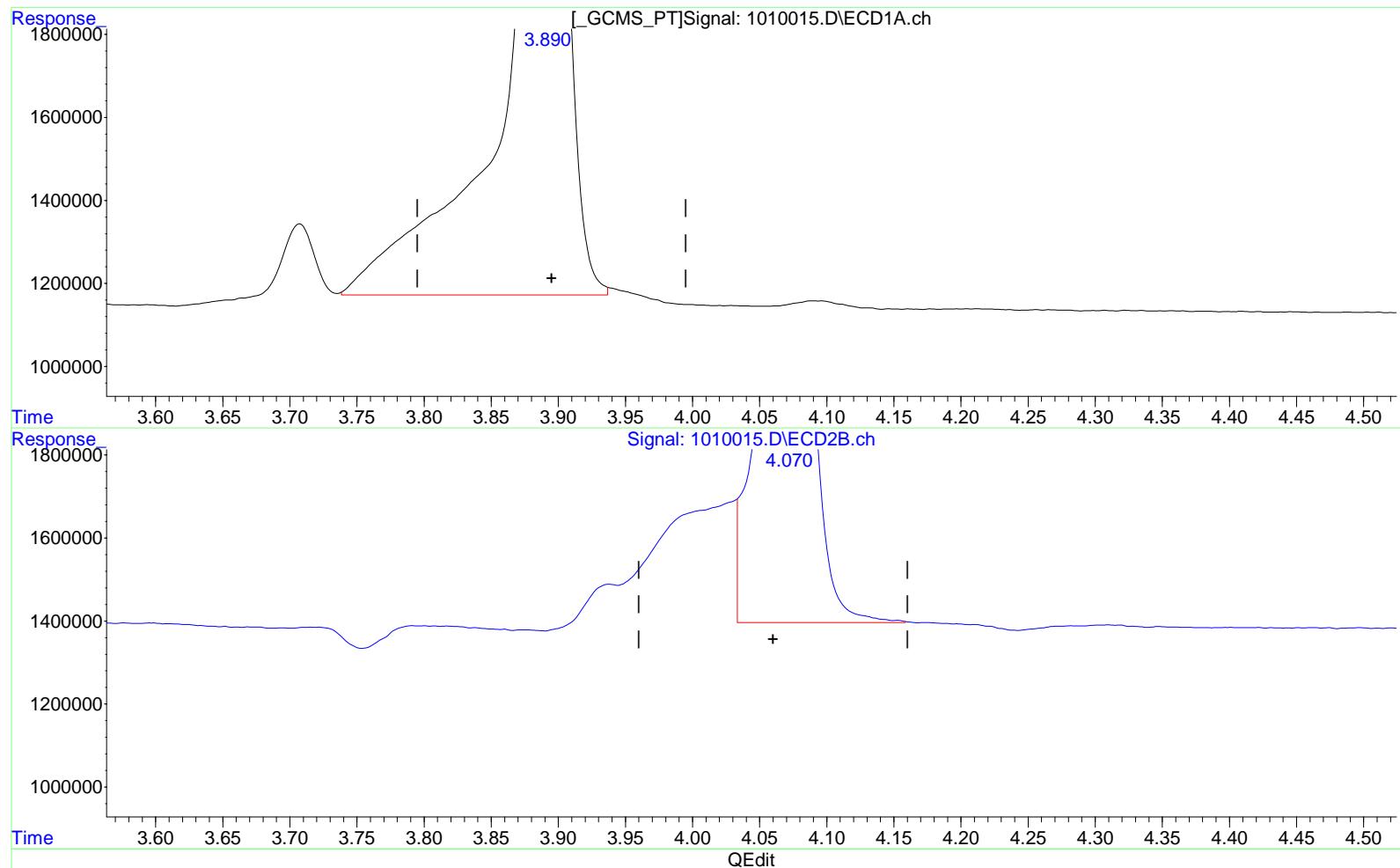
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010015.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:26:20 Operator: BS
 Sample : KWG1609129-5LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:30 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.890min 4.532 ppb m
 response 5684645

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.070min 4.171 ppb m
 response 4047249

Exception Report

Data File: J:\GC33\DATA\101016-504\1010016.D
Lab ID: KWG1609129-6
RunType: LCS
Matrix: WATER

Date Acquired: 10/10/2016 20:50
Date Quantitated: 10/11/2016 10:37
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010016.D\1010016C.D
Lab ID: KWG1609129-6
RunType: LCS
Matrix: WATER

Date Acquired: 10/10/2016 20:50
Date Quantitated: 10/11/2016 10:37
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010016.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\101016-504\1010016.D\1010016c.d	Vial:	12	
Acq Date:	10/10/2016 20:50	Quant Date:	10/11/2016 10:37	
Run Type:	LCS	MethodJoinID:	MJ480	
Lab ID:	KWG1609129-6	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016	
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560615	Prep Date:	10/10/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Quant based on Method		

Target Compounds

Parameter Name	RT	RT	Resp	Resp	ppb	ppb	ug/L	ug/L	
	#1	#2	#1	#2	#1	#2	#1	#2	Rpt
1,2-Dibromoethane (EDB)	3.90	4.06	5515356m	3989099m	4.41	4.11	0.252	0.235	0.235
1,2,3-Trichloropropane	6.24	6.30	871110	862941	4.14	4.18	0.236	0.239	0.236
1,2-Dibromo-3-chloropropan	7.67	7.88	11919454	9399105	4.14	4.15	0.237	0.237	0.237

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.0000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010016.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:50:00 Operator: BS
 Sample : KWG1609129-6LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:37:43 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

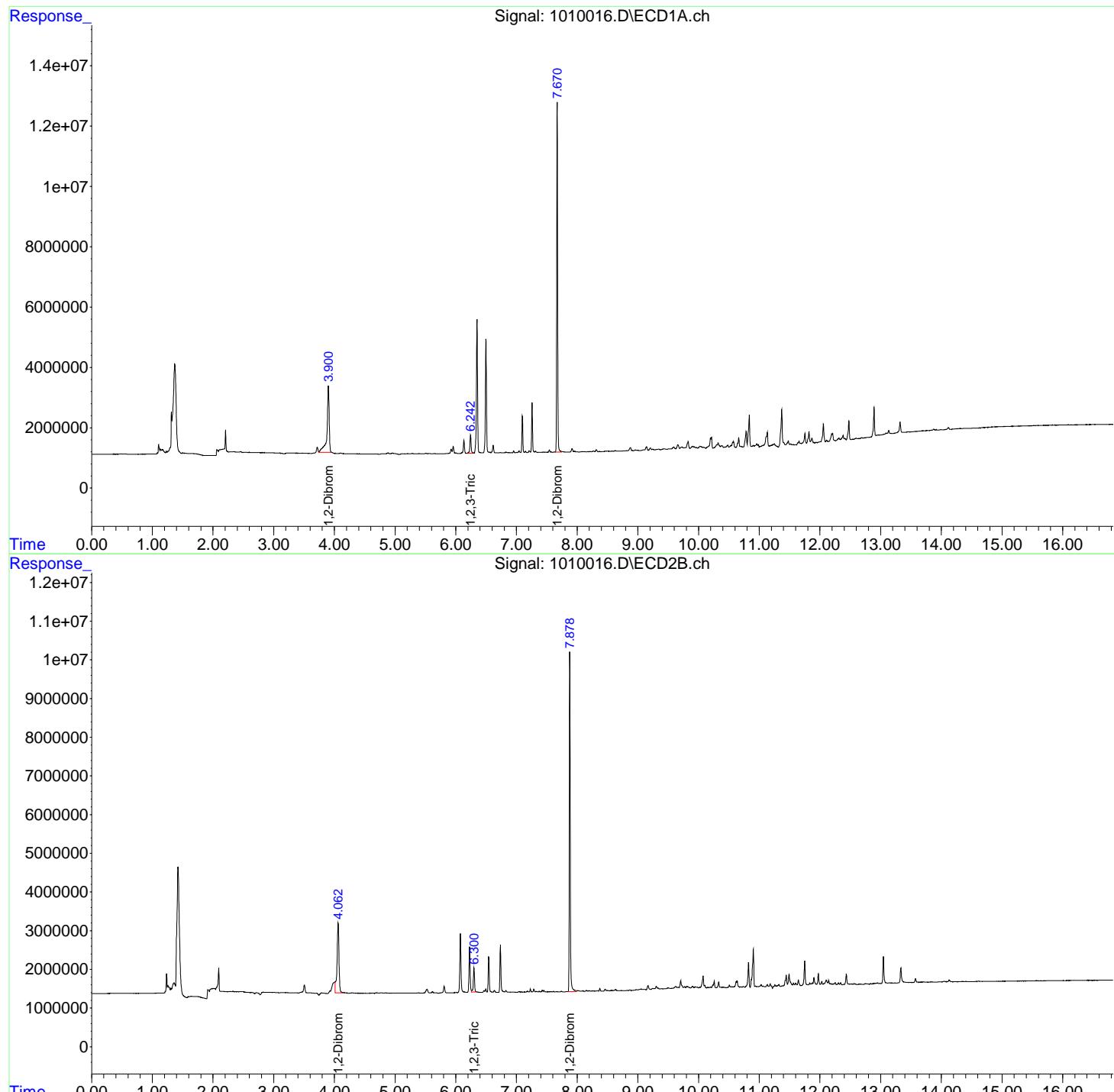
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.900	4.062	5515356	3989099	4.413m	4.111m
2) M 1,2,3-Tri...	6.242	6.300	871110	862941	4.138	4.184
3) M 1,2-Dibro...	7.670	7.878	11919454	9399105	4.140	4.150

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010016.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:50:00 Operator: BS
 Sample : KWG1609129-6LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:37:43 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

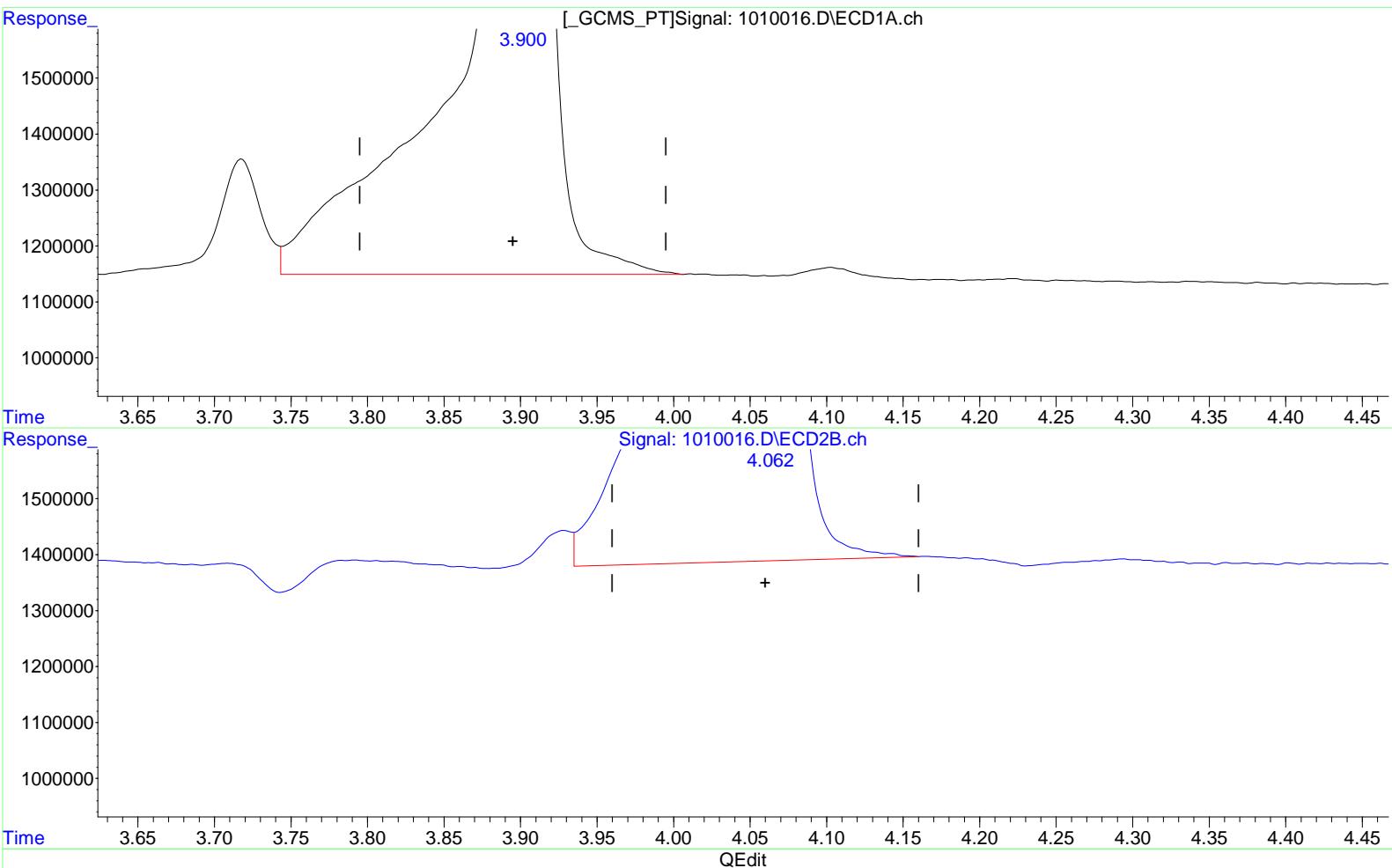
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010016.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:50:00 Operator: BS
 Sample : KWG1609129-6LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:37:17 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.900min 4.789 ppb

response 6055658

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

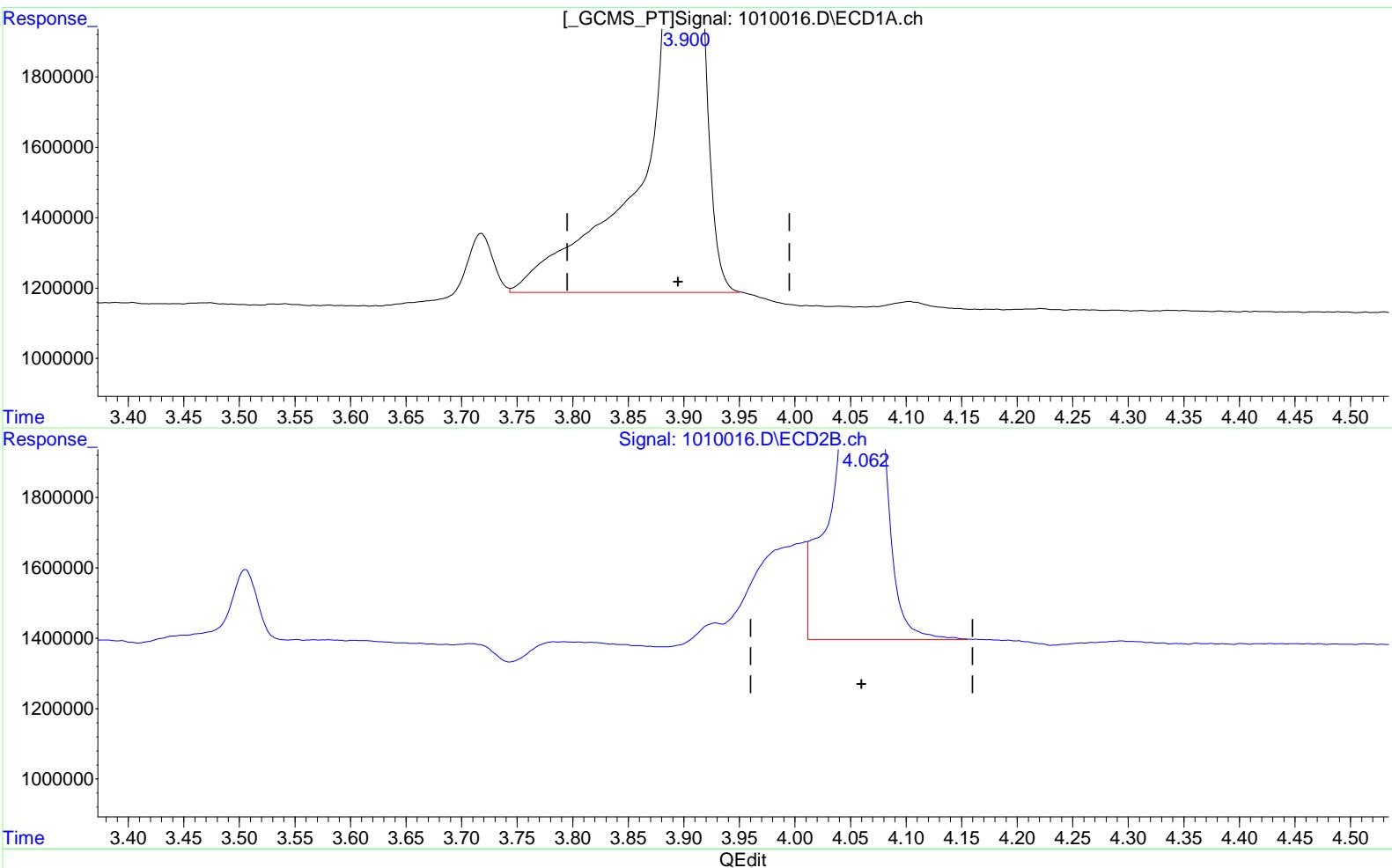
4.062min 5.157 ppb

response 5003862

Data File : J:\GC33\DATA\101016-504\1010016.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:50:00 Operator: BS
 Sample : KWG1609129-6LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:37:17 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.900min 4.413 ppb m
 response 5515356

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.062min 4.111 ppb m
 response 3989099

Exception Report

Data File: J:\GC33\DATA\101016-504\1010013.D
Lab ID: KWG1609198-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/10/2016 19:39
Date Quantitated: 10/11/2016 10:33
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010013.D\1010013C.D
Lab ID: KWG1609198-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/10/2016 19:39
Date Quantitated: 10/11/2016 10:33
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010013.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010013.D\1010013c.d	Vial:	6
Acq Date:	10/10/2016 19:39	Quant Date:	10/11/2016 10:33
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1609198-1	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/11/2016
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.06	1410559m	1076848m	1.25	1.11			
1,2,3-Trichloropropane	6.24	6.30	256360	247318	1.30	1.12			
1,2-Dibromo-3-chloropropano	7.67	7.88	3287157	2521474	1.14	1.11			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:45 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

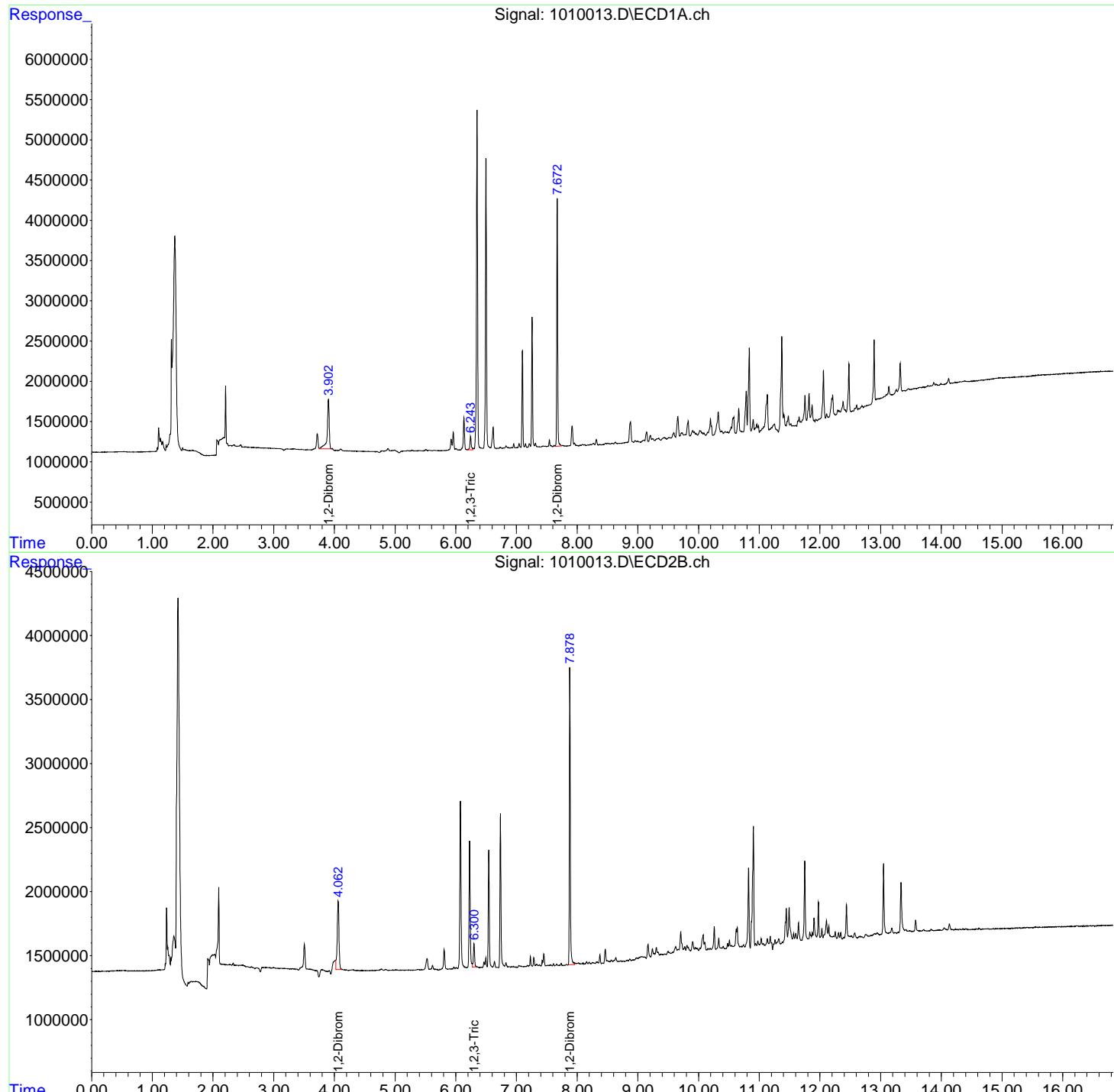
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.902	4.062	1410559	1076848	1.245m	1.110m
2) M 1,2,3-Tri...	6.243	6.300	256360	247318	1.302	1.121
3) M 1,2-Dibro...	7.672	7.878	3287157	2521474	1.142	1.113

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:45 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



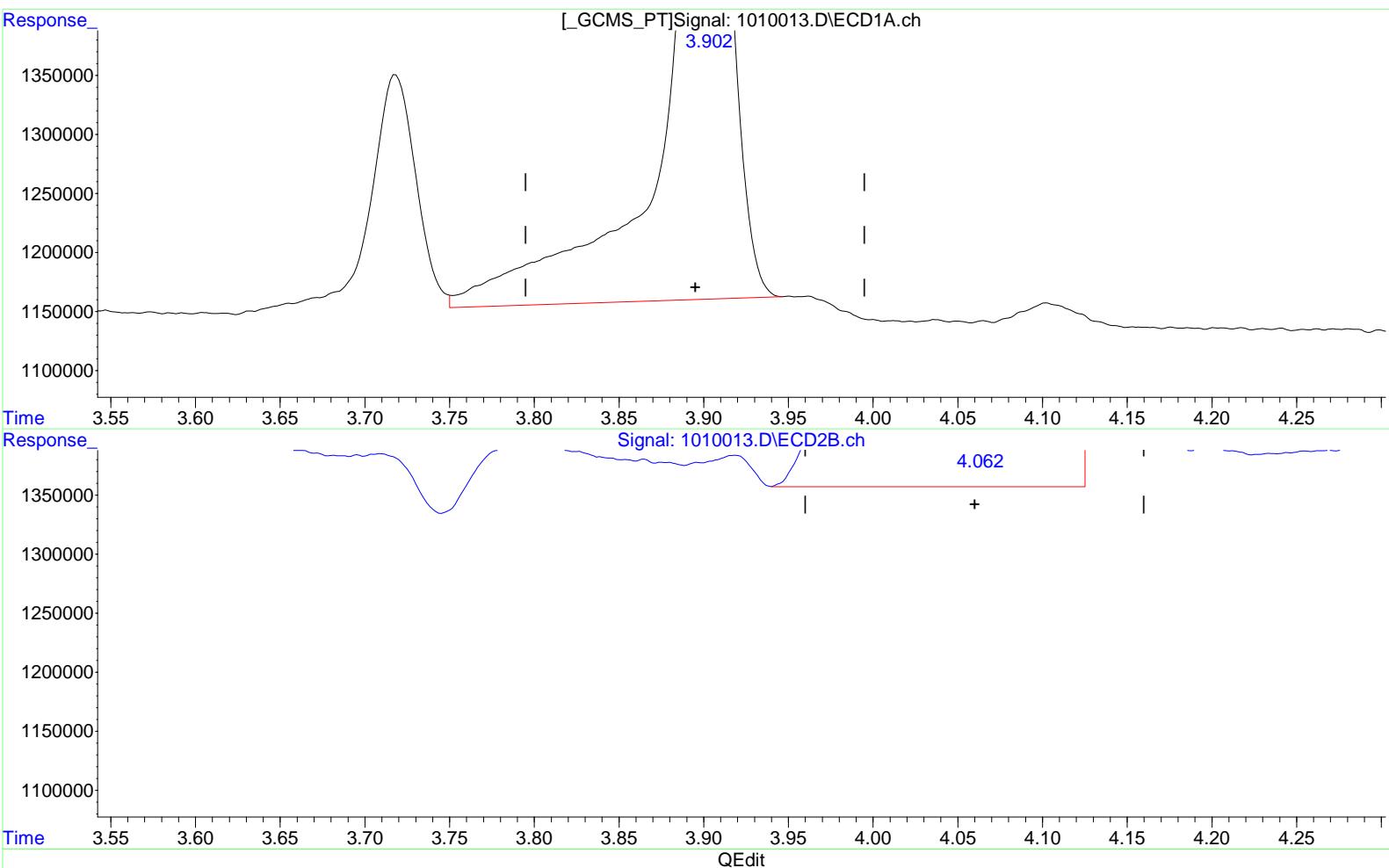
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:01 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 1.288 ppb

response 1460093

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 1.711 ppb

response 1660125

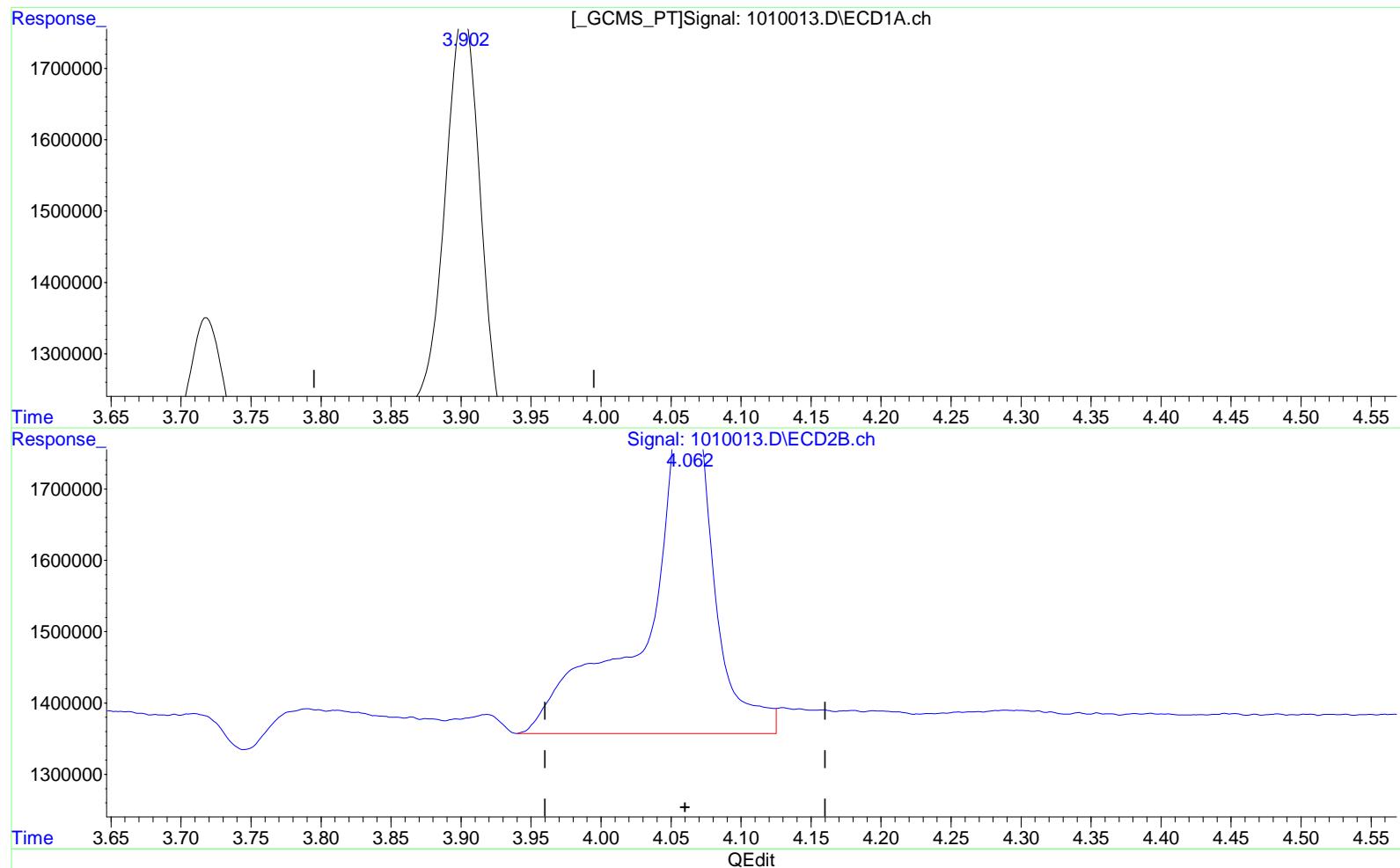
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:01 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 1.245 ppb m

response 1410559

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 1.711 ppb

response 1660125

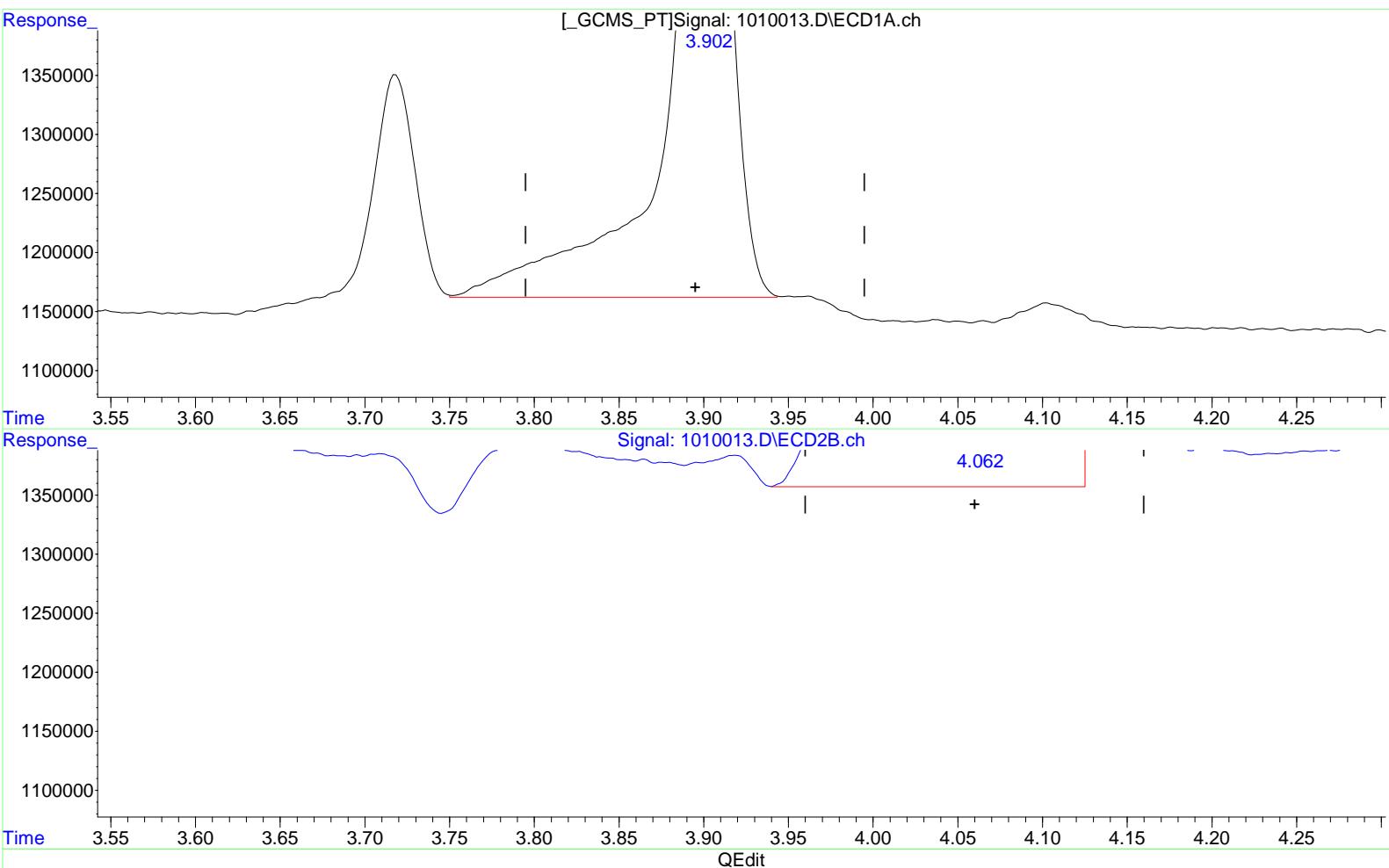
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:01 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.902min 1.245 ppb m
 response 1410559

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.062min 1.711 ppb
 response 1660125

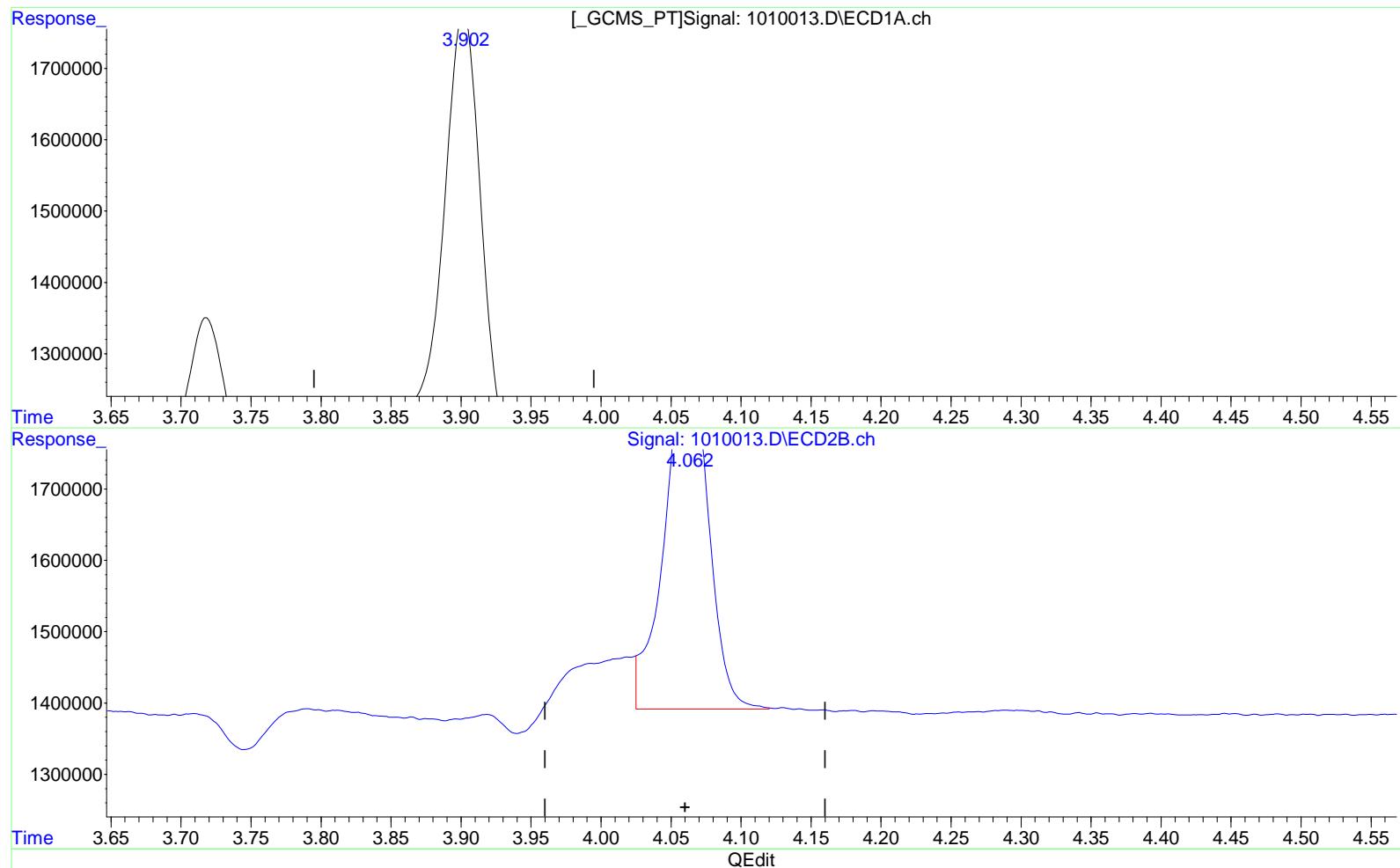
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:01 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 1.245 ppb m

response 1410559

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 1.110 ppb m

response 1076848

Exception Report

Data File: J:\GC33\DATA\101016-504\1010025.D
Lab ID: KWG1609198-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 00:22
Date Quantitated: 10/11/2016 10:41
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010025.D\1010025C.D
Lab ID: KWG1609198-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 00:22
Date Quantitated: 10/11/2016 10:41
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010025.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010025.D\1010025.c.d	Vial:	7
Acq Date:	10/11/2016 00:22	Quant Date:	10/11/2016 10:41
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1609198-2	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/11/2016
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.06	5010997m	3848368m	4.06	3.97			
1,2,3-Trichloropropane	6.24	6.30	815102	840817	3.88	4.07			
1,2-Dibromo-3-chloropropano	7.67	7.88	10395829	8351478	3.61	3.69			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010025.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:22:16 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

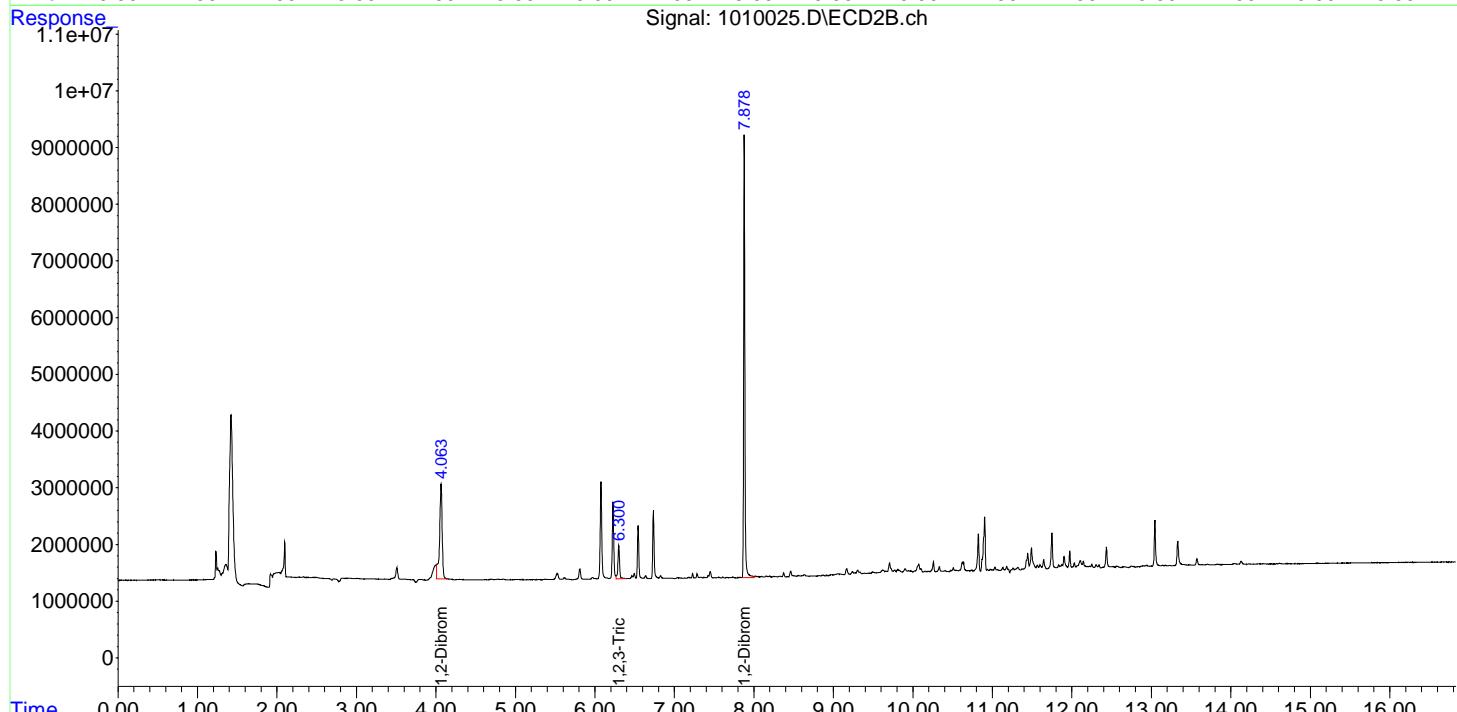
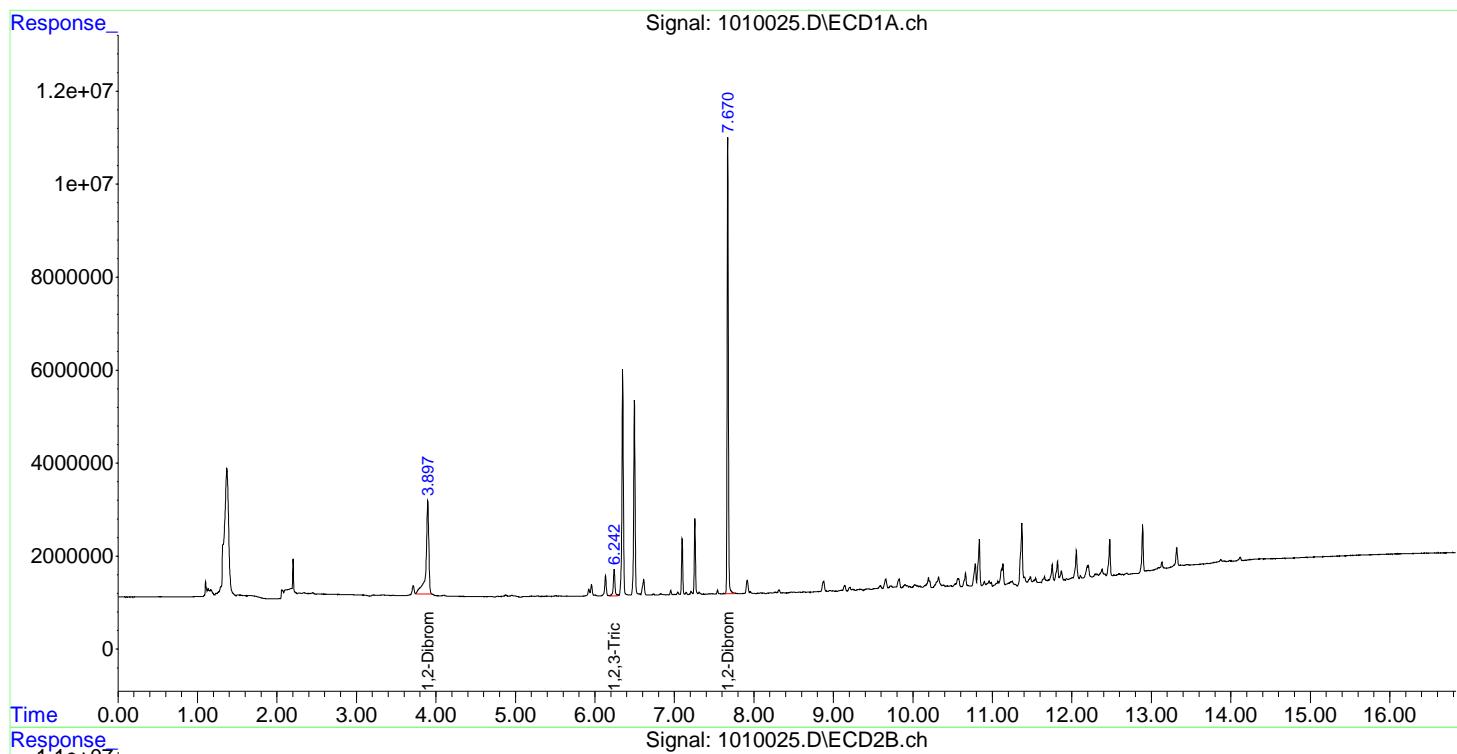
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.897	4.063	5010997	3848368	4.055m	3.966m
2) M 1,2,3-Tri...	6.242	6.300	815102	840817	3.879	4.074
3) M 1,2-Dibro...	7.670	7.878	10395829	8351478	3.611	3.687

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010025.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:22:16 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

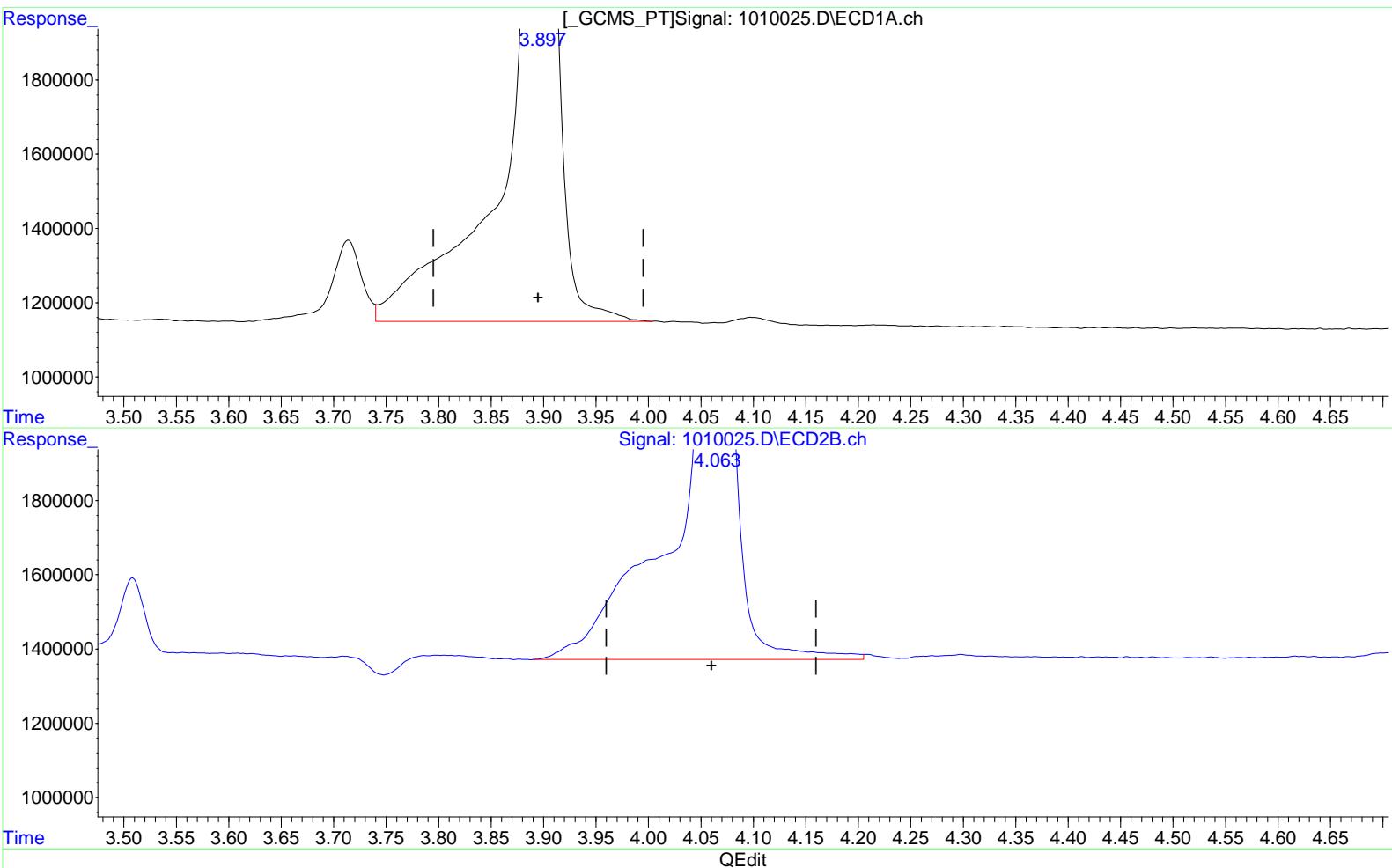
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010025.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:22:16 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:26 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.425 ppb

response 5532405

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

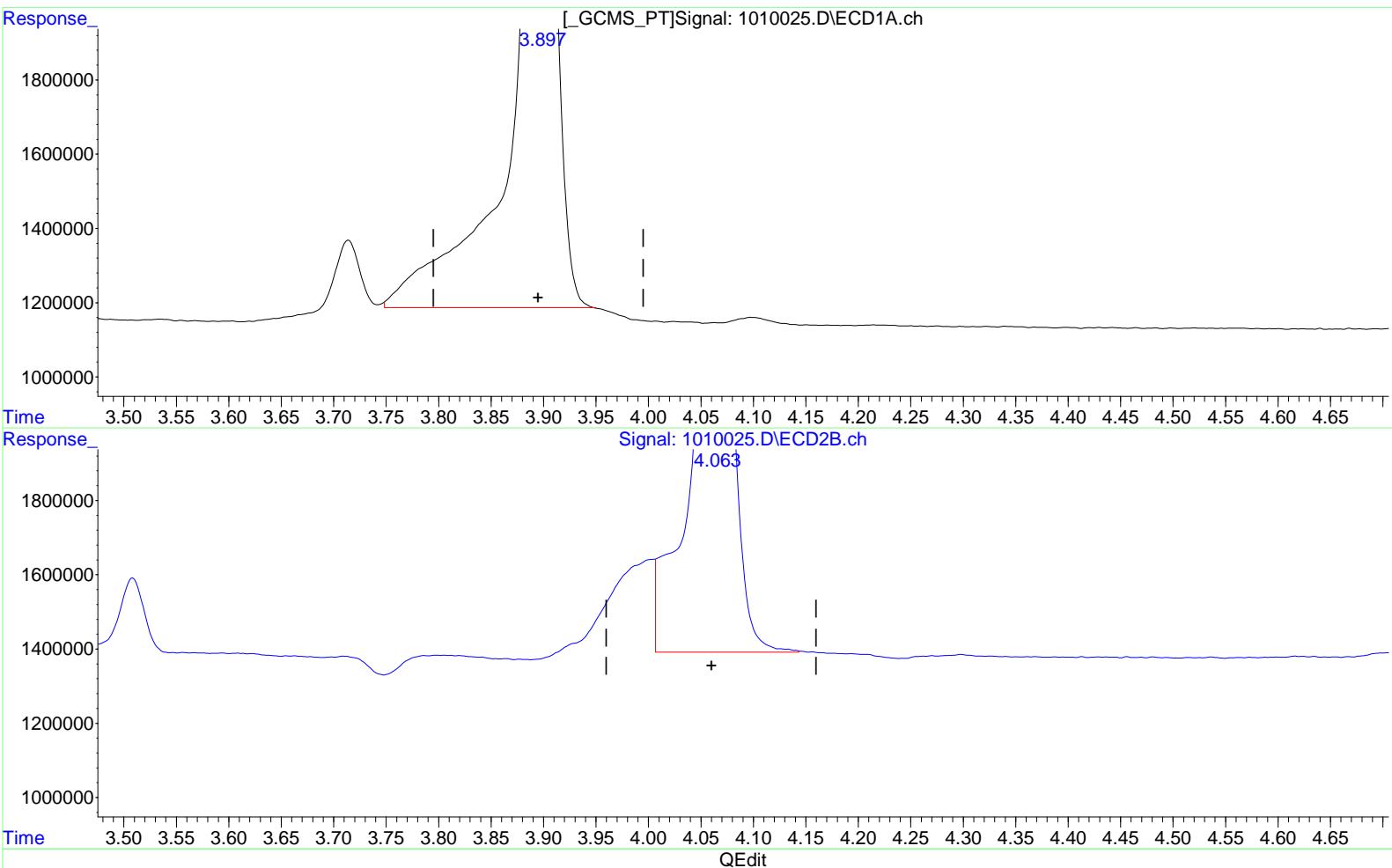
4.063min 5.097 ppb

response 4946166

Data File : J:\GC33\DATA\101016-504\1010025.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:22:16 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:26 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.055 ppb m

response 5010997

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 3.966 ppb m

response 3848368

Exception Report

Data File: J:\GC33\DATA\101016-504\1010036.D
Lab ID: KWG1609198-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 04:42
Date Quantitated: 10/11/2016 10:48
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010036.D\1010036C.D
Lab ID: KWG1609198-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 04:42
Date Quantitated: 10/11/2016 10:48
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010036.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010036.D\1010036c.d	Vial:	7
Acq Date:	10/11/2016 04:42	Quant Date:	10/11/2016 10:48
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1609198-3	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/11/2016
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.07	5114545m	3615693m	4.13	3.73			
1,2,3-Trichloropropane	6.24	6.30	827373	815674	3.94	3.95			
1,2-Dibromo-3-chloropropan	7.67	7.88	10655071	8116255	3.70	3.58			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010036.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 04:42:02 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:48:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

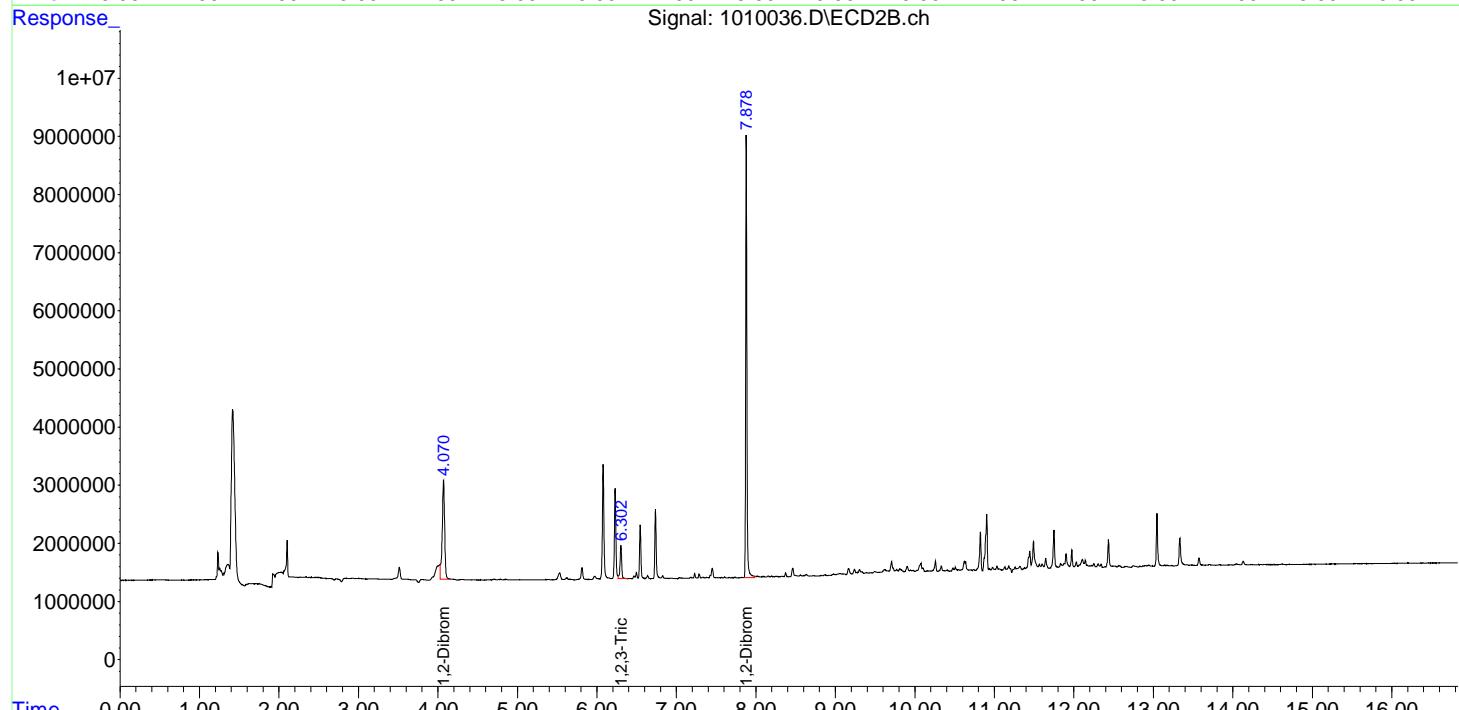
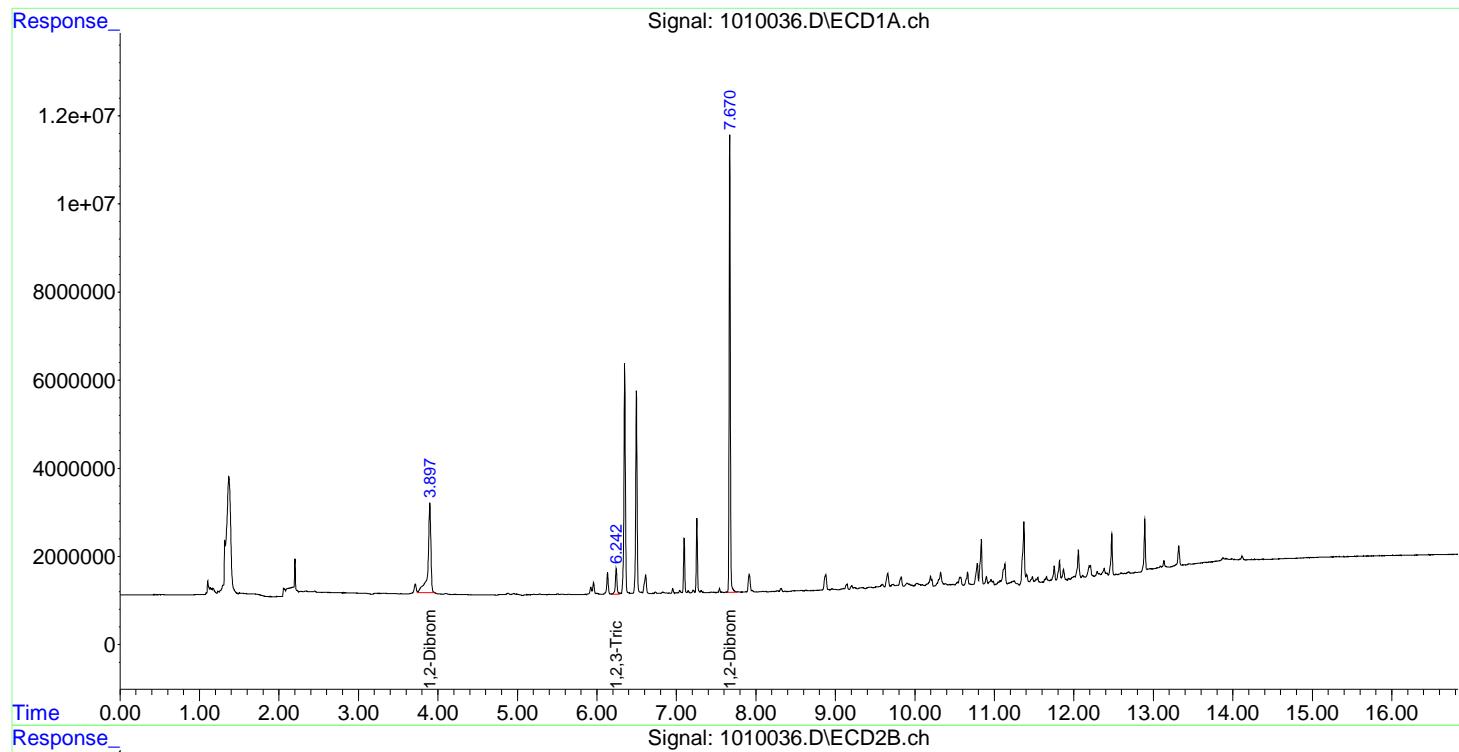
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.897	4.070	5114545	3615693	4.129m	3.726m
2) M 1,2,3-Triiodopropane	6.242	6.302	827373	815674	3.936	3.949
3) M 1,2-Dibromoethane	7.670	7.878	10655071	8116255	3.701	3.583

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010036.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 04:42:02 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:48:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

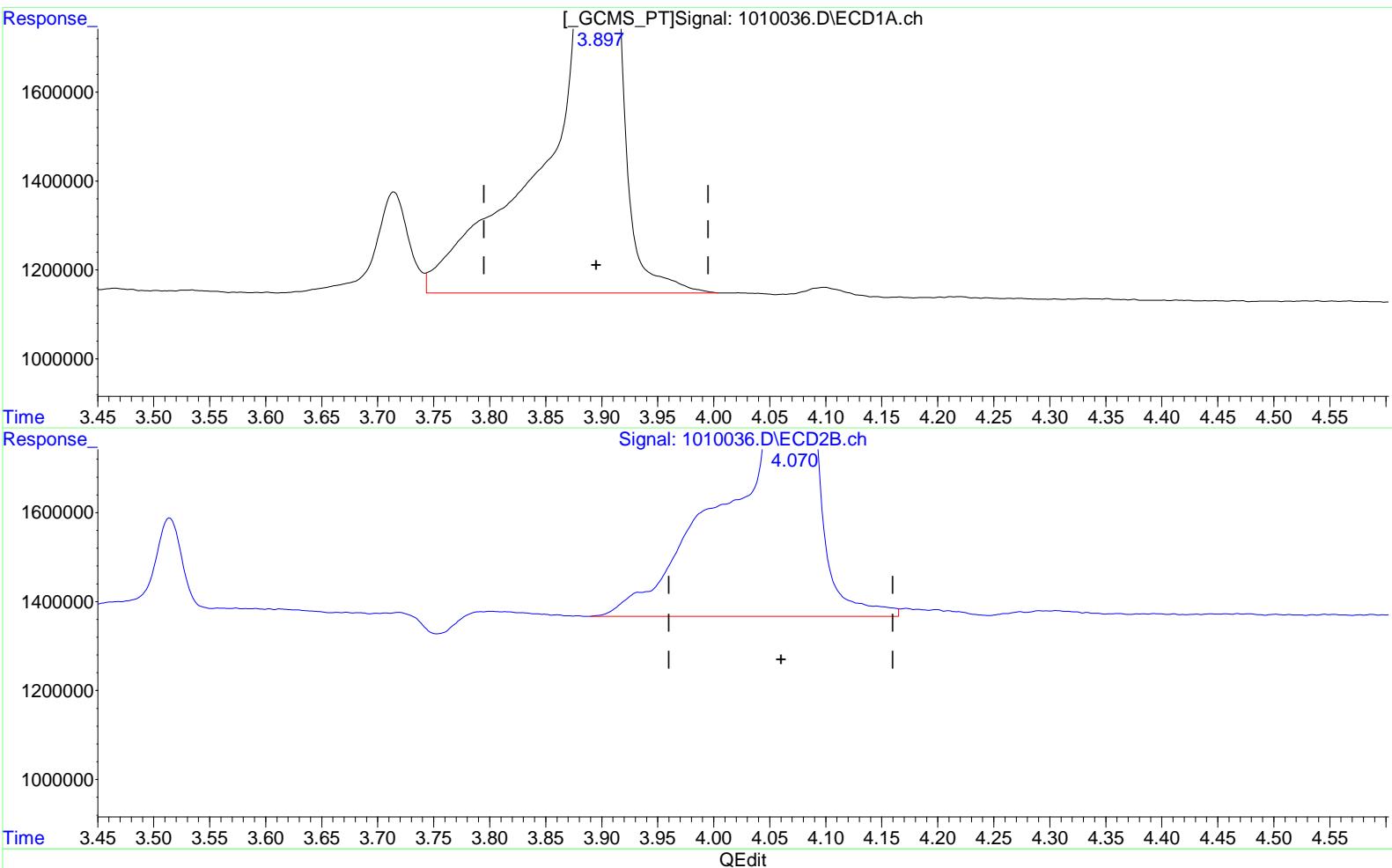
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010036.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 04:42:02 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:48:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.462 ppb

response 5584902

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

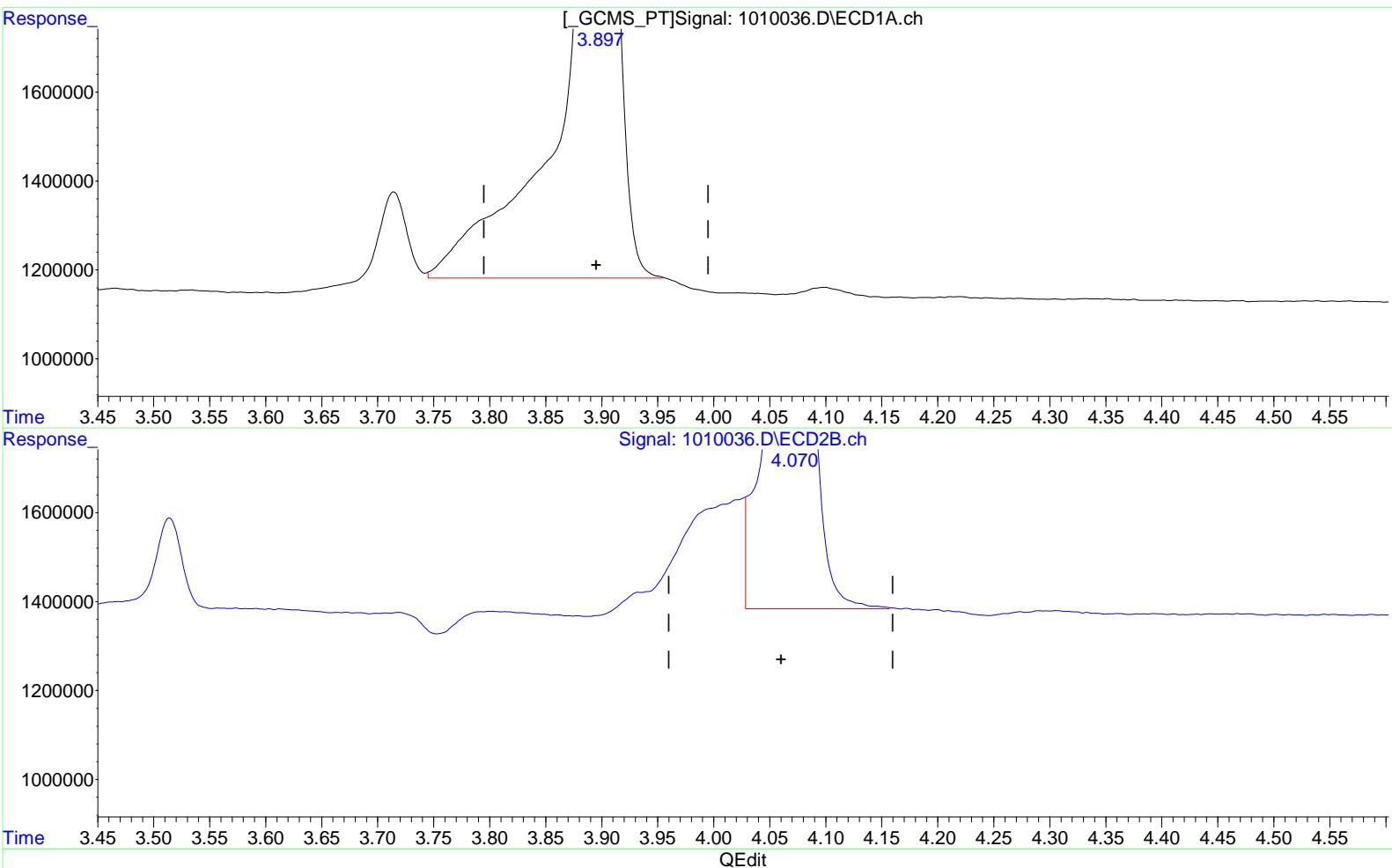
4.070min 4.999 ppb

response 4851003

Data File : J:\GC33\DATA\101016-504\1010036.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 04:42:02 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:48:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.897min 4.129 ppb m
 response 5114545

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.070min 3.726 ppb m
 response 3615693

Exception Report

Data File: J:\GC33\DATA\101016-504\1010014.D
Lab ID: KWG1609198-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/10/2016 20:02
Date Quantitated: 10/11/2016 10:36
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010014.D\1010014C.D
Lab ID: KWG1609198-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/10/2016 20:02
Date Quantitated: 10/11/2016 10:36
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010014.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010014.D\1010014.c.d	Vial:	1
Acq Date:	10/10/2016 20:02	Quant Date:	10/11/2016 10:36
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1609198-4	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Soln Conc. Units:	ppb	Matrix:	NOT APPLICABLE
Bottle ID:	Tier:	Receive Date:	10/11/2016
Prod Code:	504.1 EDB DBCP	Collect Date:	
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:		ug/L		Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96		51415	0d	0.0320	0.0000			
1,2,3-Trichloropropane		6.31	0d	401413	0.0000	1.89			
1,2-Dibromo-3-chloropropano	7.67		100681	0d	0.0350	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010014.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:02:43 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

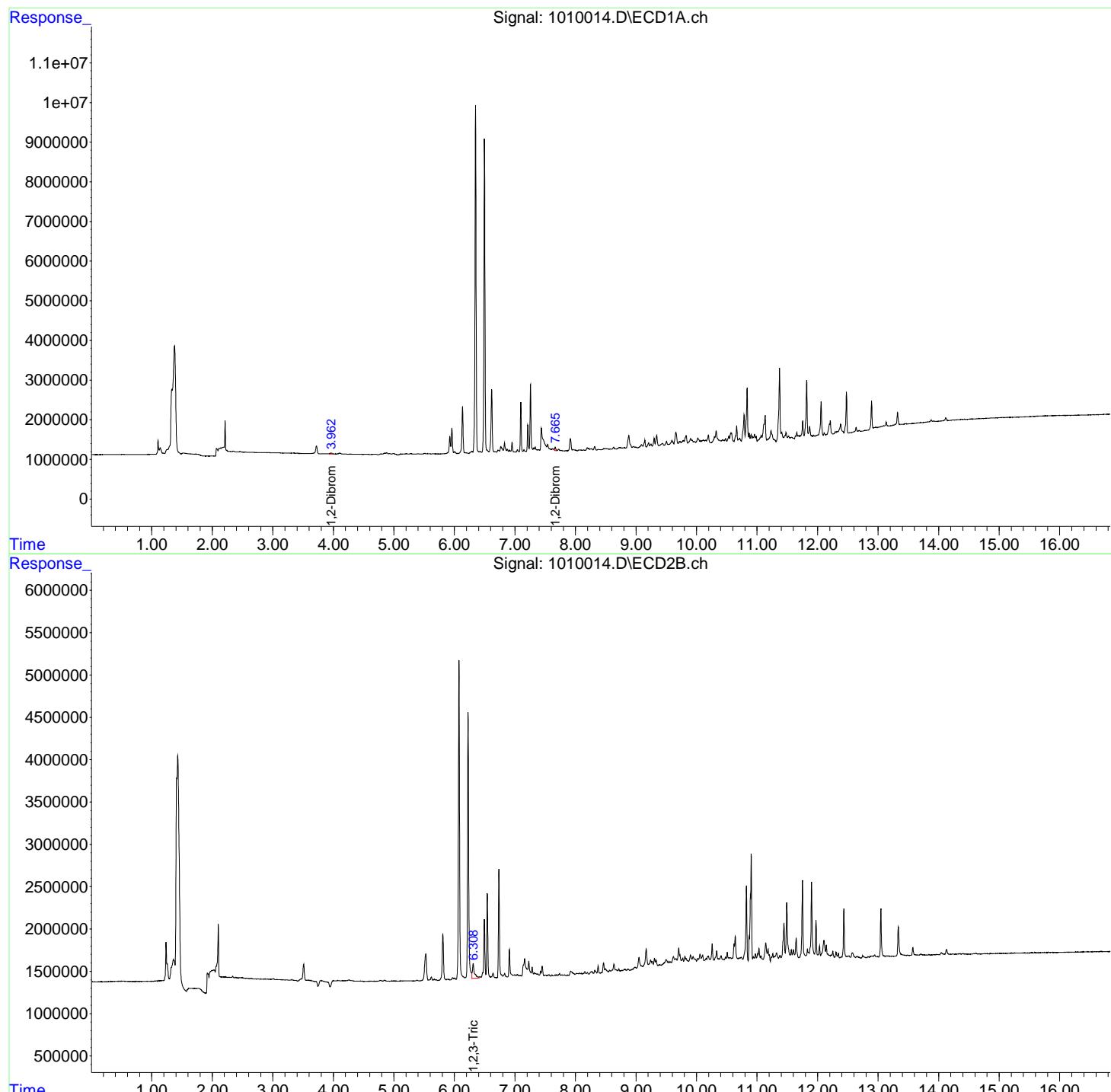
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.962f	0.000	51415	0	0.032	N.D. d#
2) M 1,2,3-Tri...	0.000	6.308	0	401413	N.D. d	1.888
3) M 1,2-Dibro...	7.665	0.000	100681	0	0.035	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010014.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:02:43 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010026.D
Lab ID: KWG1609198-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 00:45
Date Quantitated: 10/11/2016 10:42
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010026.D\1010026C.D
Lab ID: KWG1609198-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 00:45
Date Quantitated: 10/11/2016 10:42
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010026.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010026.D\1010026c.d	Vial:	1
Acq Date:	10/11/2016 00:45	Quant Date:	10/11/2016 10:42
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1609198-5	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	10/11/2016
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:		ug/L		Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96		54128	0d	0.0350	0.0000			
1,2,3-Trichloropropane		6.31	0d	323280	0.0000	1.50			
1,2-Dibromo-3-chloropropano	7.67		150811	0d	0.0520	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010026.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:45:49 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:42:43 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

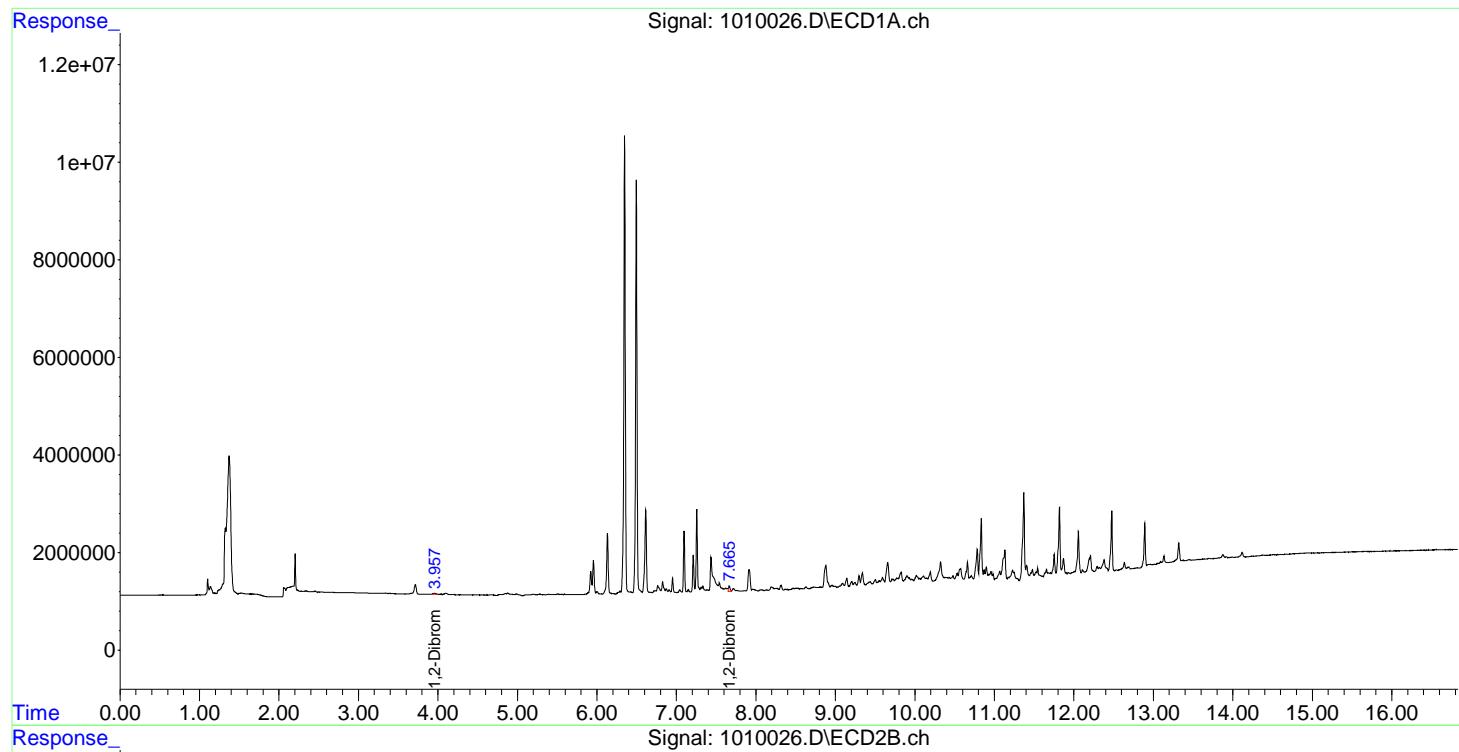
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.957f	0.000	54128	0	0.035	N.D. d#
2) M 1,2,3-Tri...	0.000	6.308	0	323280	N.D. d	1.499
3) M 1,2-Dibro...	7.665	0.000	150811	0	0.052	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010026.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:45:49 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:42:43 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010037.D
Lab ID: KWG1609198-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 05:05
Date Quantitated: 10/11/2016 10:49
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010037.D\1010037C.D
Lab ID: KWG1609198-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 05:05
Date Quantitated: 10/11/2016 10:49
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010037.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010037.D\1010037c.d	Vial:	100
Acq Date:	10/11/2016 05:05	Quant Date:	10/11/2016 10:49
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1609198-6	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	10/11/2016
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96		58889	0d	0.0390	0.0000			
1,2,3-Trichloropropane		6.31	0d	330995	0.0000	1.54			
1,2-Dibromo-3-chloropropano	7.67		106520	0d	0.0370	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010037.D Vial: 100
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 05:05:40 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:49:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

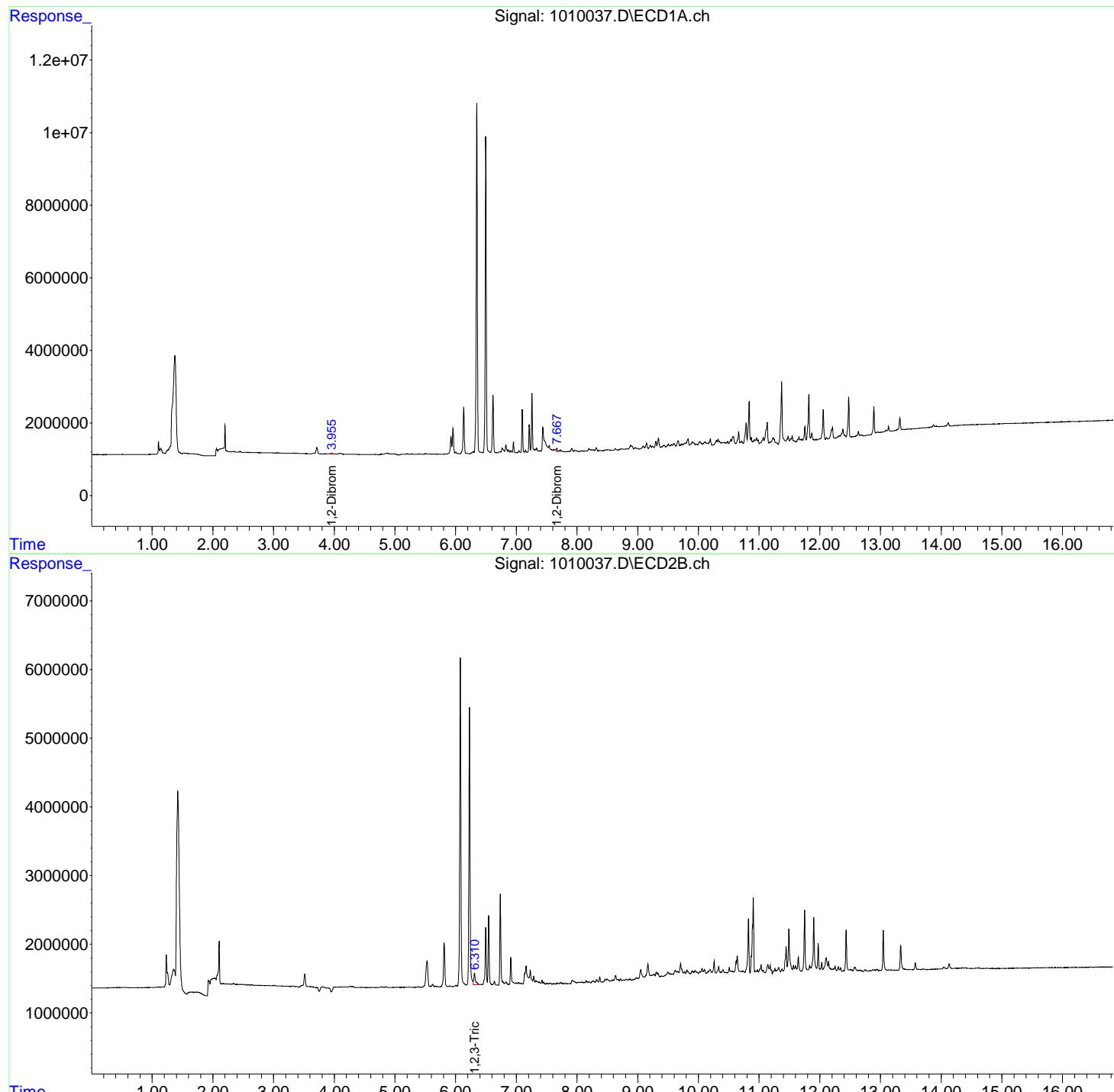
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.955f	0.000	58889	0	0.039	N.D. d#
2) M 1,2,3-Tri...	0.000	6.310	0	330995	N.D. d	1.537
3) M 1,2-Dibro...	7.667	0.000	106520	0	0.037	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010037.D Vial: 100
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 05:05:40 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:49:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
No	1	Vial	94	504-1 PRIMER MeOH	1010001	F:01:01
No	2	Vial	95	504-1 PRIMER Hexane	1010002	F:02:01
No	3	Vial	1	504-1 ICAL BLANK	1010003	F:03:01
No	4	Vial	2	504-1 ICAL LV1 101016	1010004	F:04:01
No	5	Vial	3	504-1 ICAL LV2 101016	1010005	F:05:01
No	6	Vial	4	504-1 ICAL LV3 101016	1010006	F:06:01
No	7	Vial	5	504-1 ICAL LV4 101016	1010007	F:07:01
No	8	Vial	6	504-1 ICAL LV5 101016	1010008	F:08:01
No	9	Vial	7	504-1 ICAL LV6 101016	1010009	F:09:01
No	10	Vial	8	504-1 ICAL LV7 101016	1010010	F:10:01
No	11	Vial	9	504-1 ICAL LV8 101016	1010011	F:11:01
No	12	Vial	10	504-1 ICAL ICV 101016	1010012	F:12:01
No	13	Vial	6	504-1 101016 LV5	1010013	F:13:01
No	14	Vial	1	504-1 IB	1010014	F:14:01
No	15	Vial	11	504-1 KWG1609129-5LCS	1010015	F:15:01
No	16	Vial	12	504-1 KWG1609129-6LCS	1010016	F:16:01
No	17	Vial	13	504-1 KWG1609129-7MB	1010017	F:17:01
No	18	Vial	14	504-1 K1612006-001	1010018	F:18:01
No	19	Vial	15	504-1 K1612006-002	1010019	F:19:01
No	20	Vial	16	504-1 K1612006-003	1010020	F:20:01
No	21	Vial	17	504-1 K1612014-001	1010021	F:21:01
No	22	Vial	18	504-1 K1612056-001	1010022	F:22:01
No	23	Vial	19	504-1 K1612056-002	1010023	F:23:01
No	24	Vial	20	504-1 K1612056-003	1010024	F:24:01
No	25	Vial	7	504-1 101016 504 LV6	1010025	F:25:01
No	26	Vial	1	504-1 IB	1010026	F:26:01
No	27	Vial	21	504-1 K1612057-001	1010027	F:27:01
No	28	Vial	22	504-1 K1612057-001MS	1010028	F:28:01

Run#517961
CHL 14943

MS 10/11/14

PRO
Sep

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010003.D Vial: 1
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 15:42:57 Operator: BS
Sample : ICAL BLANK Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:55:18 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	0.000	6.305	0	349661	N.D.	d 1.630
3) M 1,2-Dibro...	7.663	0.000	94406	0	0.033	N.D. d#

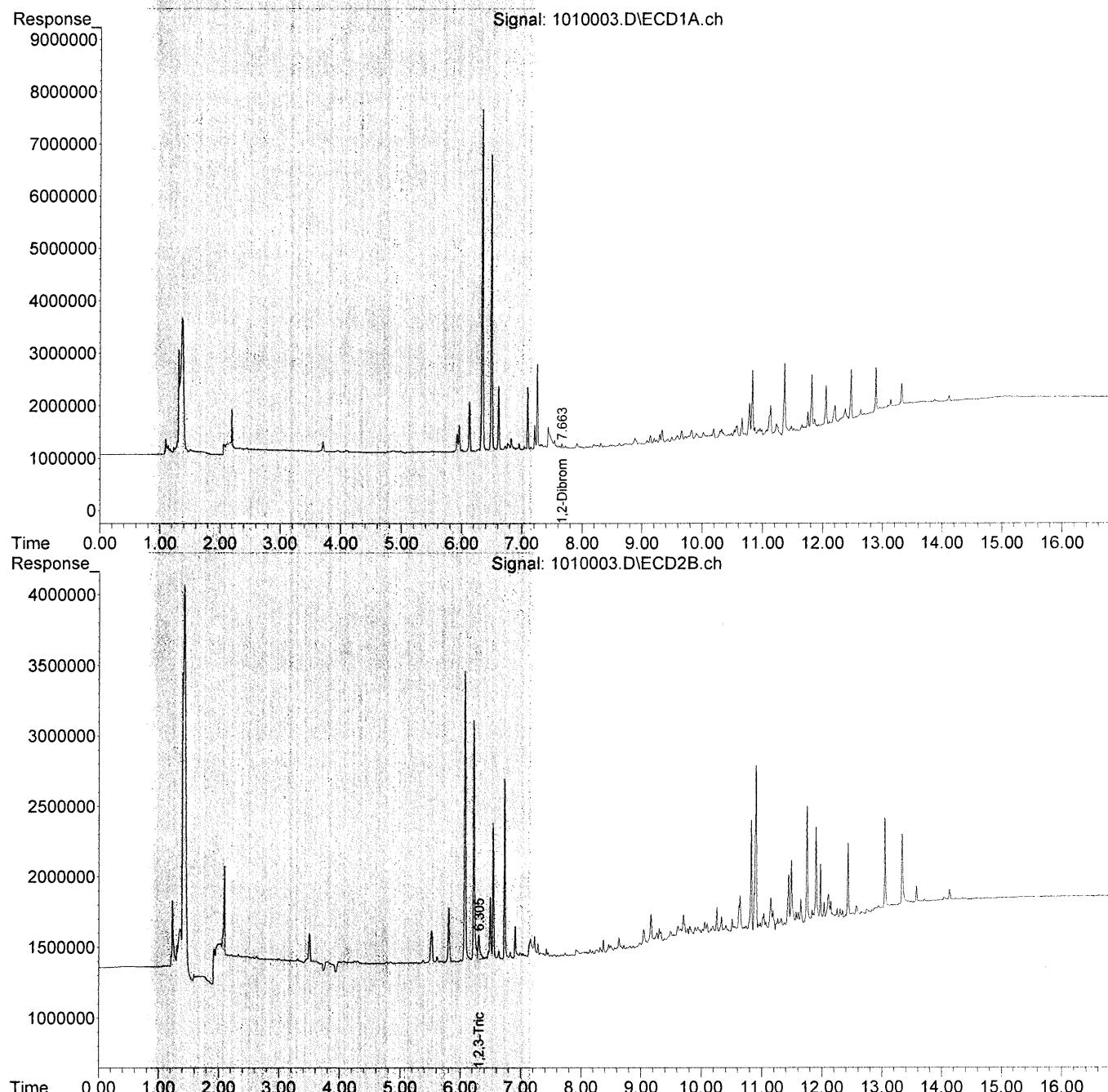
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010003.D Vial: 1
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 15:42:57 Operator: BS
Sample : ICAL BLANK Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:55:18 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:06:36 Operator: BS
Sample : ICAL LV1 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:07:51 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.895	4.060	57594	65501	0.096m	0.047 #

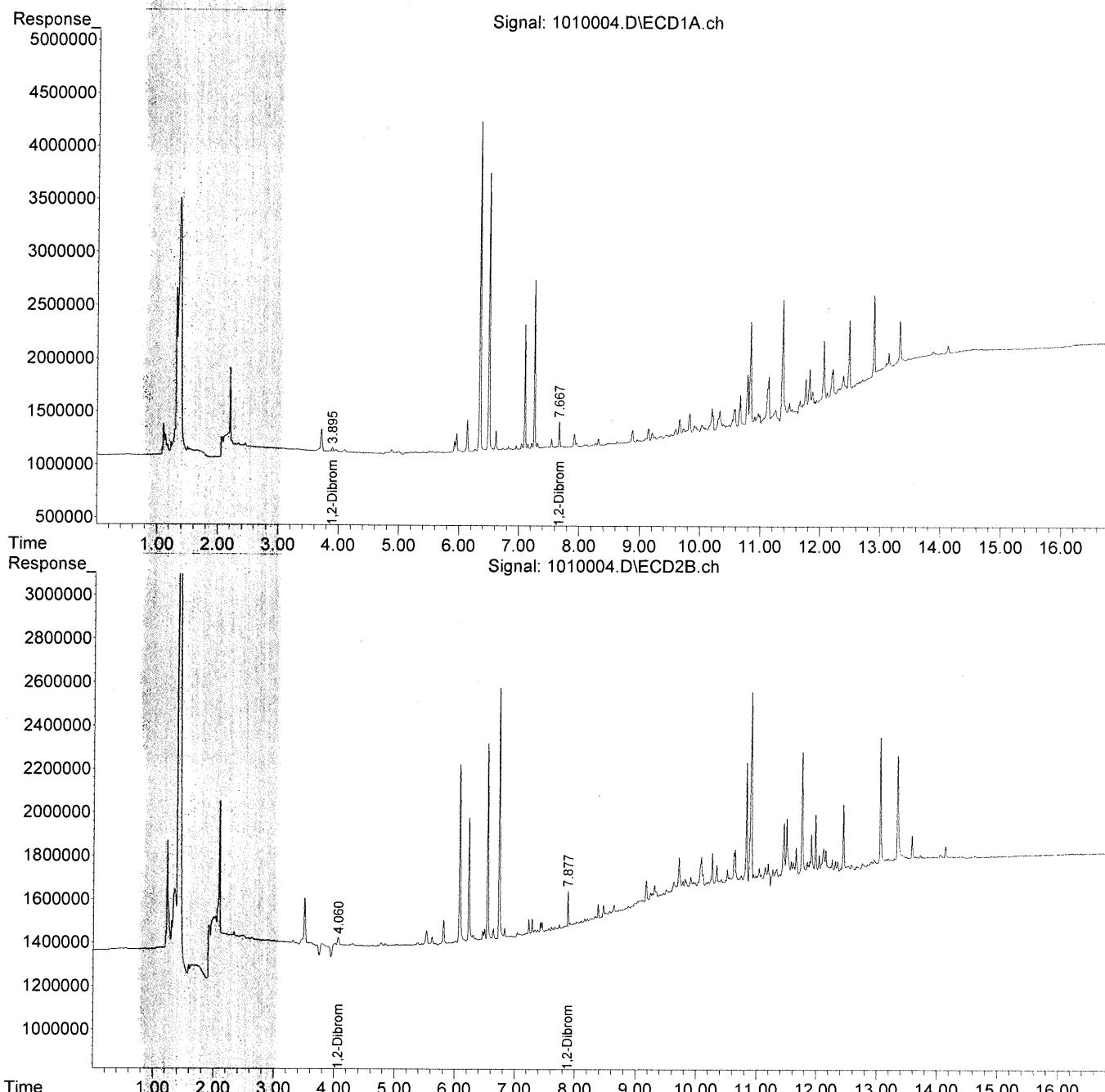
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:06:36 Operator: BS
Sample : ICAL LV1 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:07:51 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

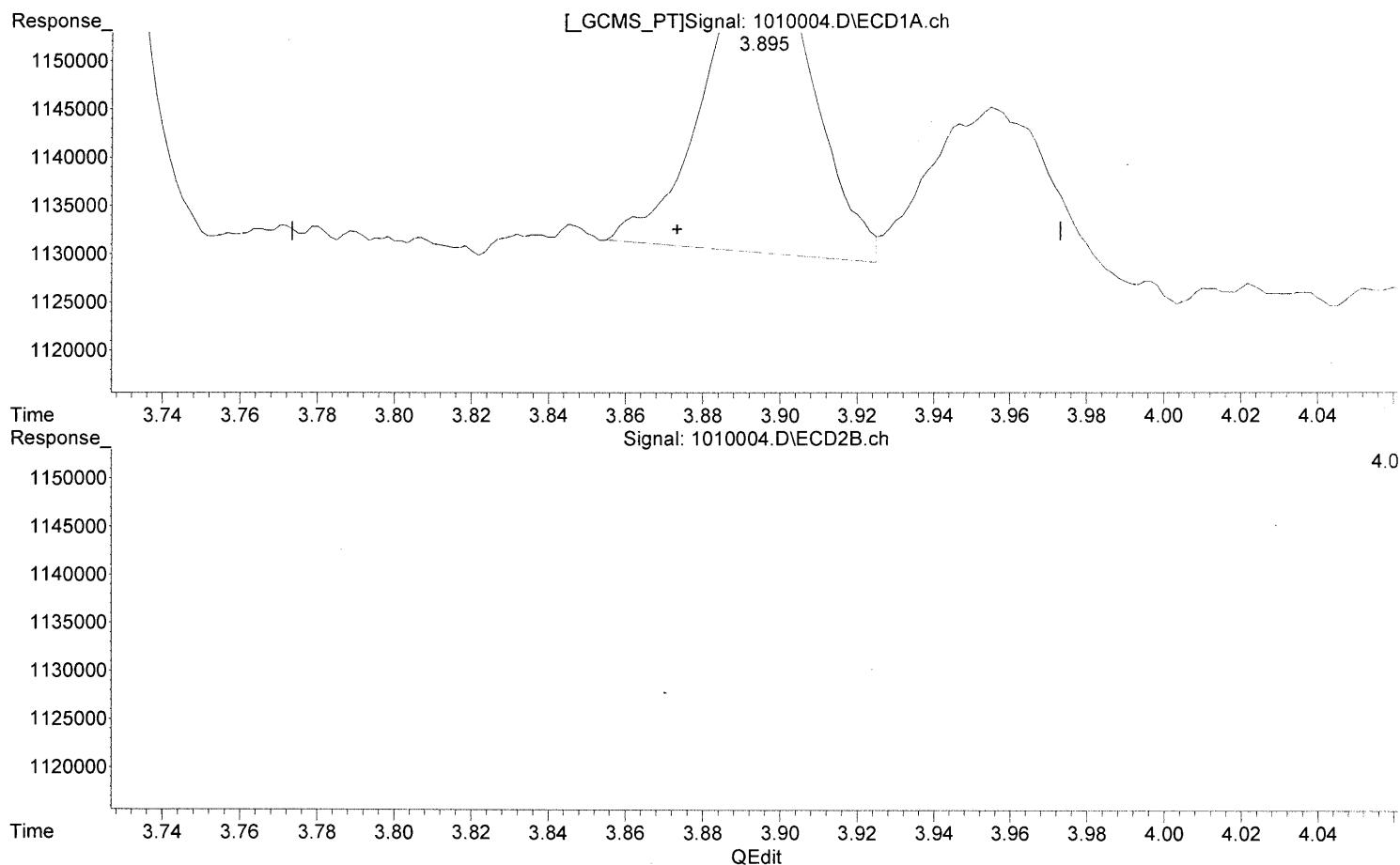


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.100 ppb

response 62200

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.047 ppb

response 65501

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:07:22 2016

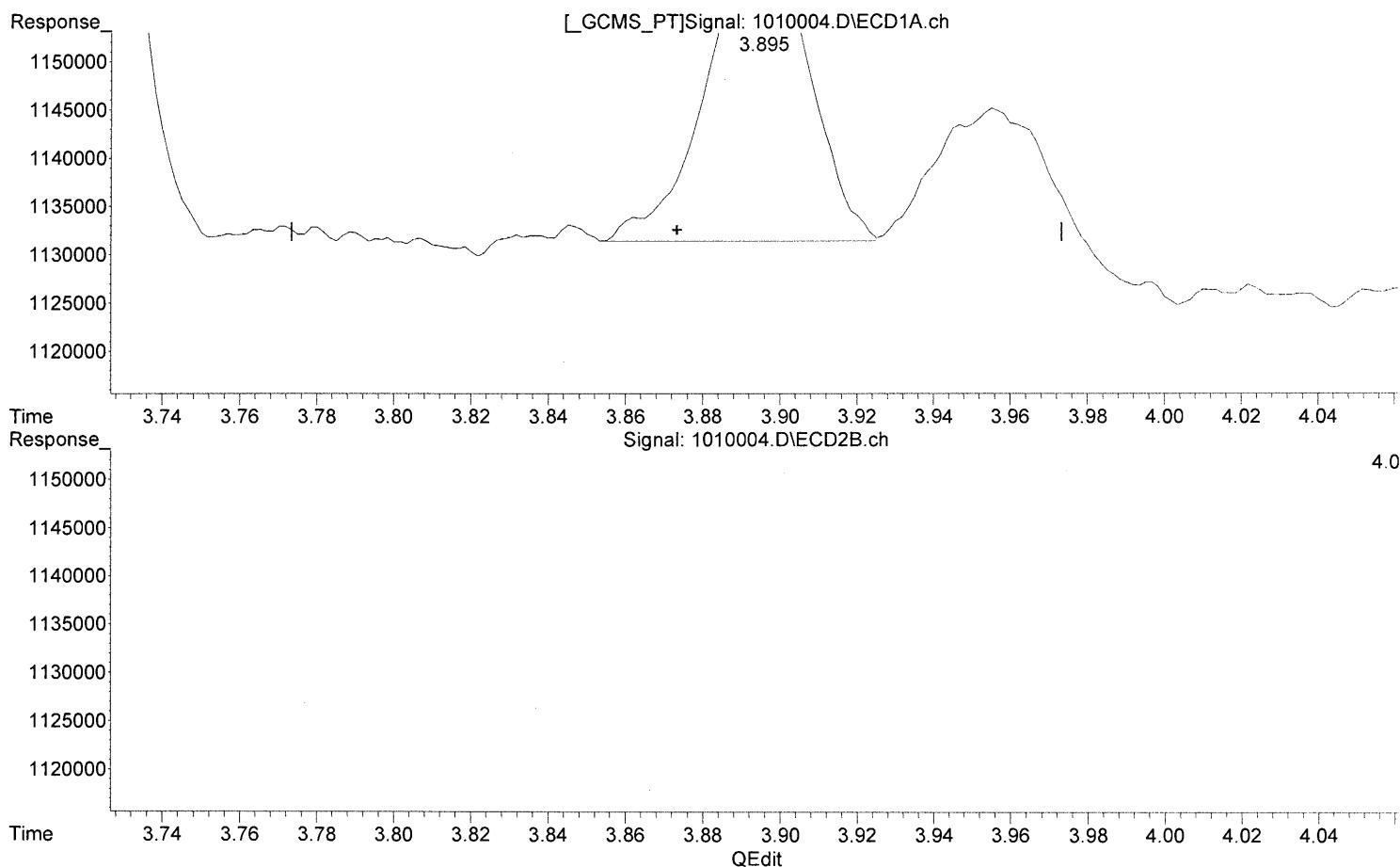
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.096 ppb m

response 57594

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.047 ppb

response 65501



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:07:31 2016

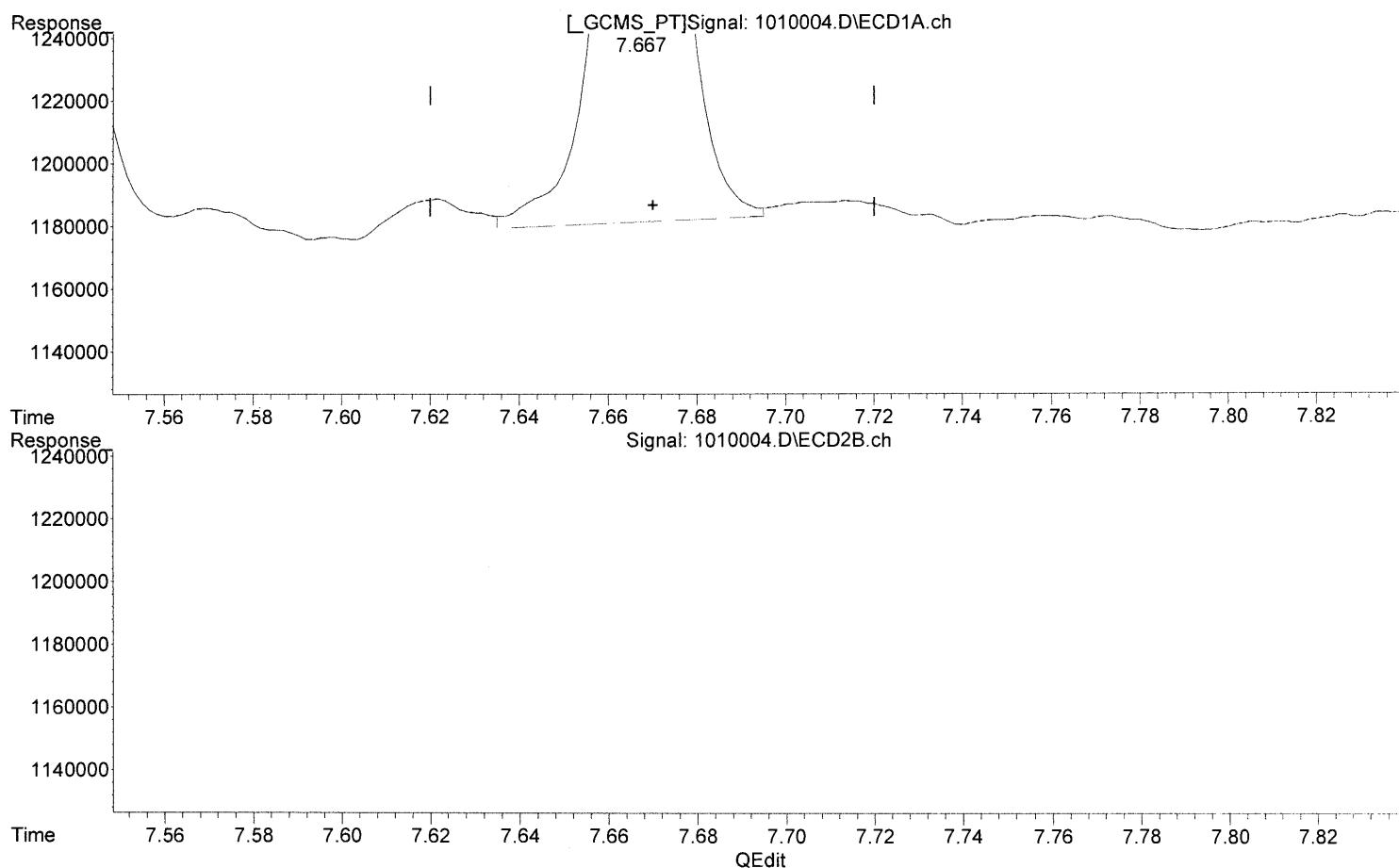
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.667min 0.120 ppb

response 268810

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.052 ppb

response 162902

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:07:46 2016

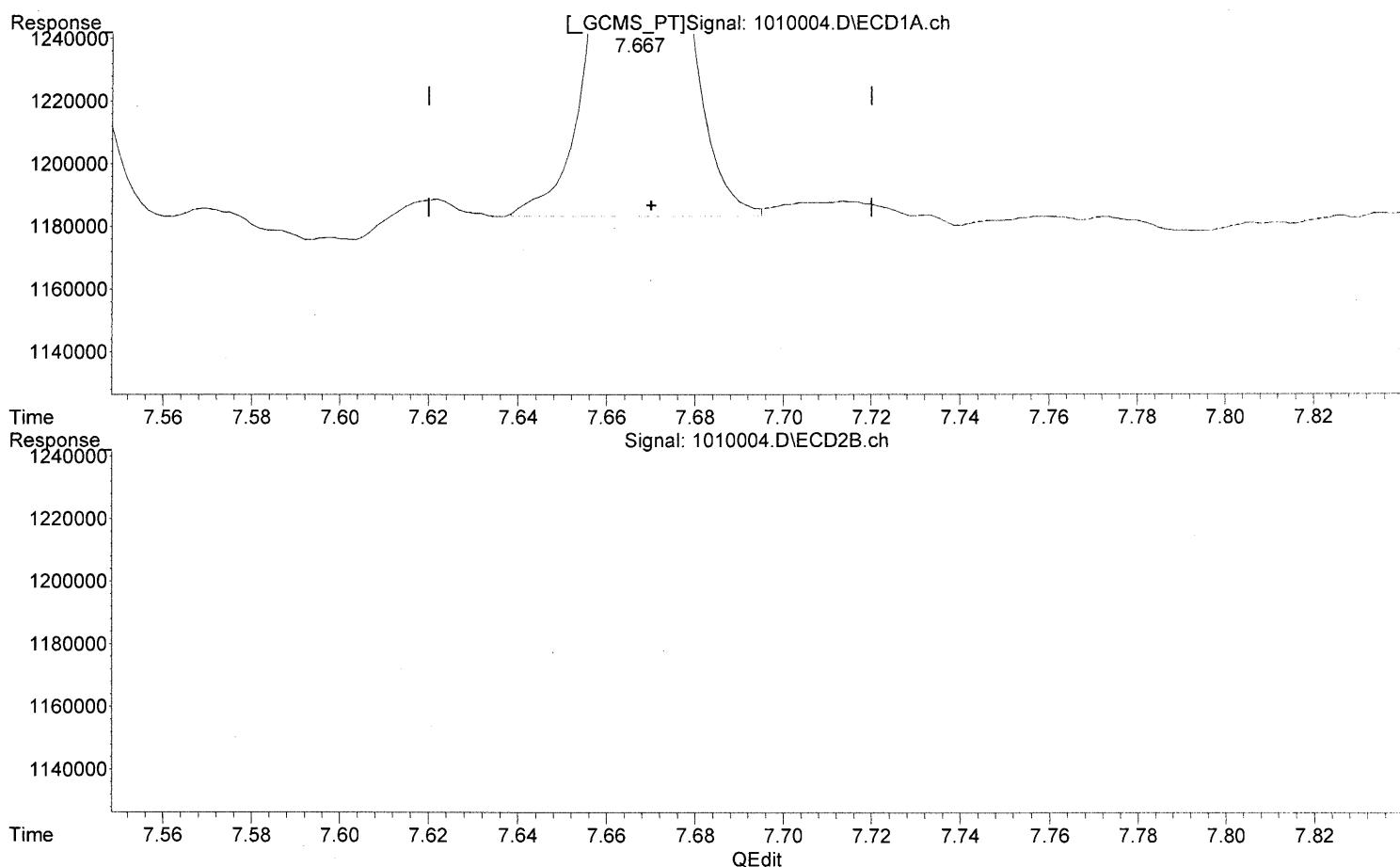
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)
 7.667min 0.116 ppb m
 response 261537

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)
 7.877min 0.052 ppb
 response 162902

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:07:56 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:30:07 Operator: BS
Sample : ICAL LV2 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:11:15 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.895	4.062	106012	121390	0.137m	0.088 #
3) M 1,2-Dibromoethane	7.668	7.877	389497	297791	0.173m	0.095 #

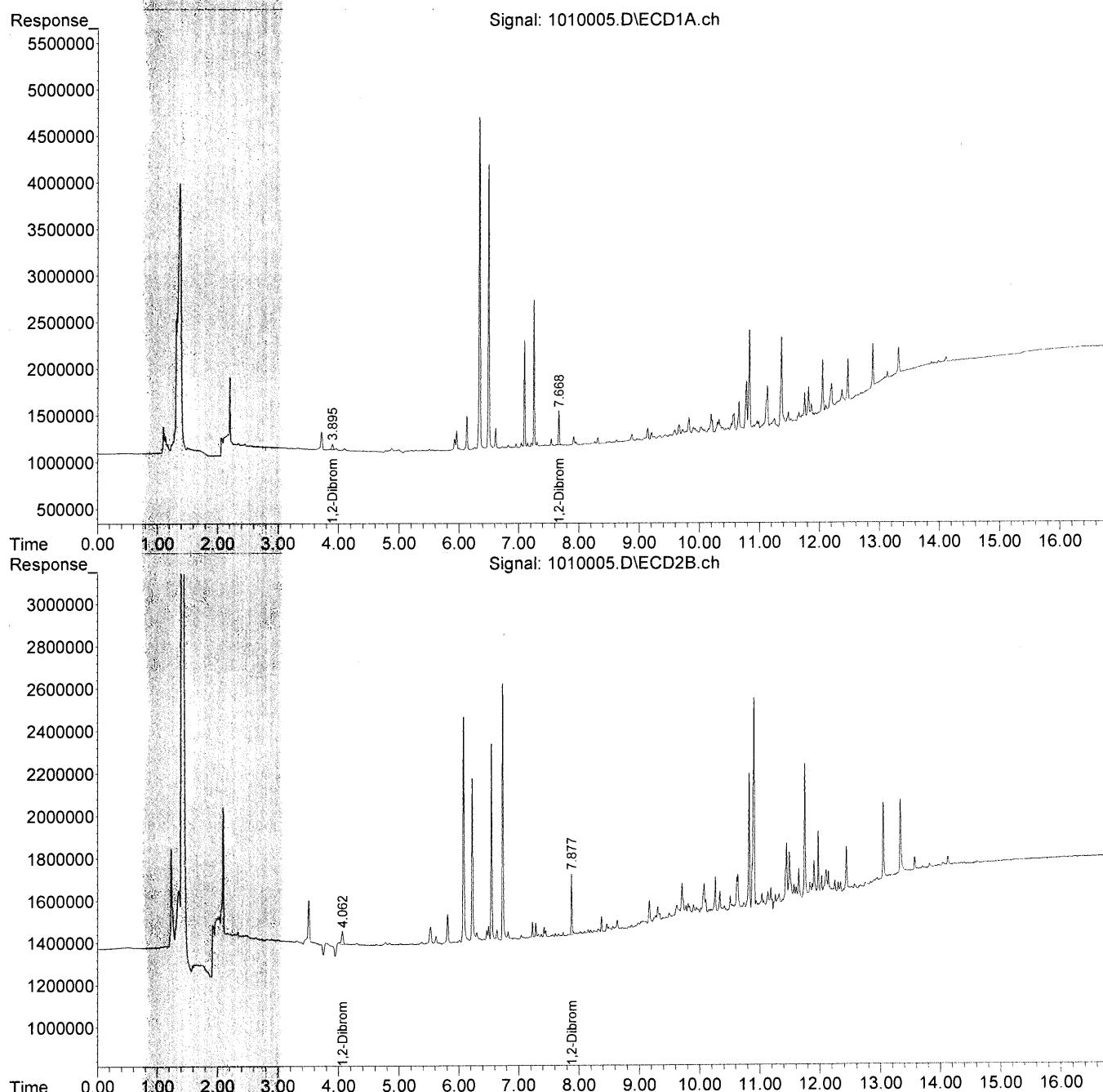
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:30:07 Operator: BS
Sample : ICAL LV2 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:11:15 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

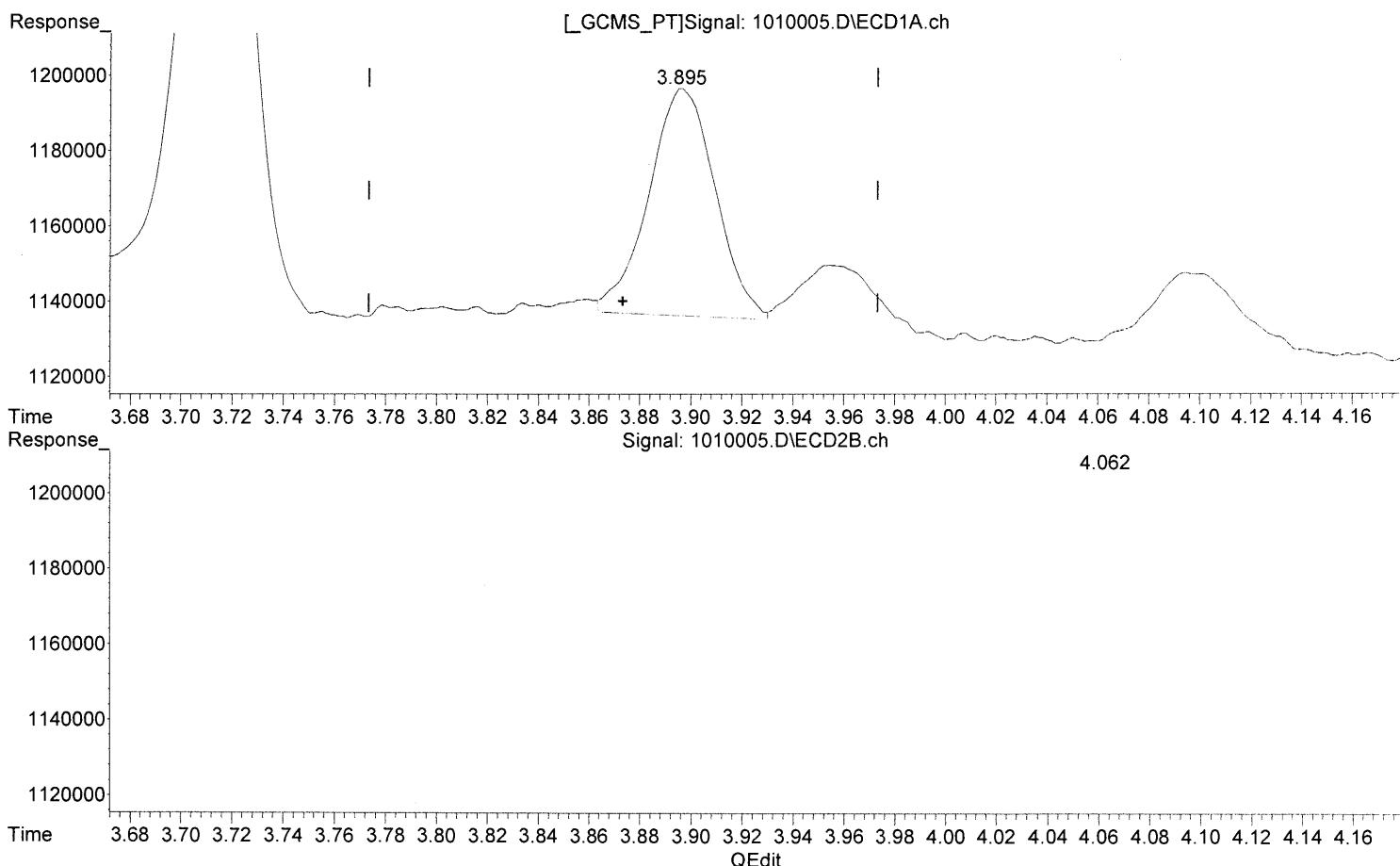


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.139 ppb

response 109098

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 0.088 ppb

response 121390



(+) = Expected Retention Time

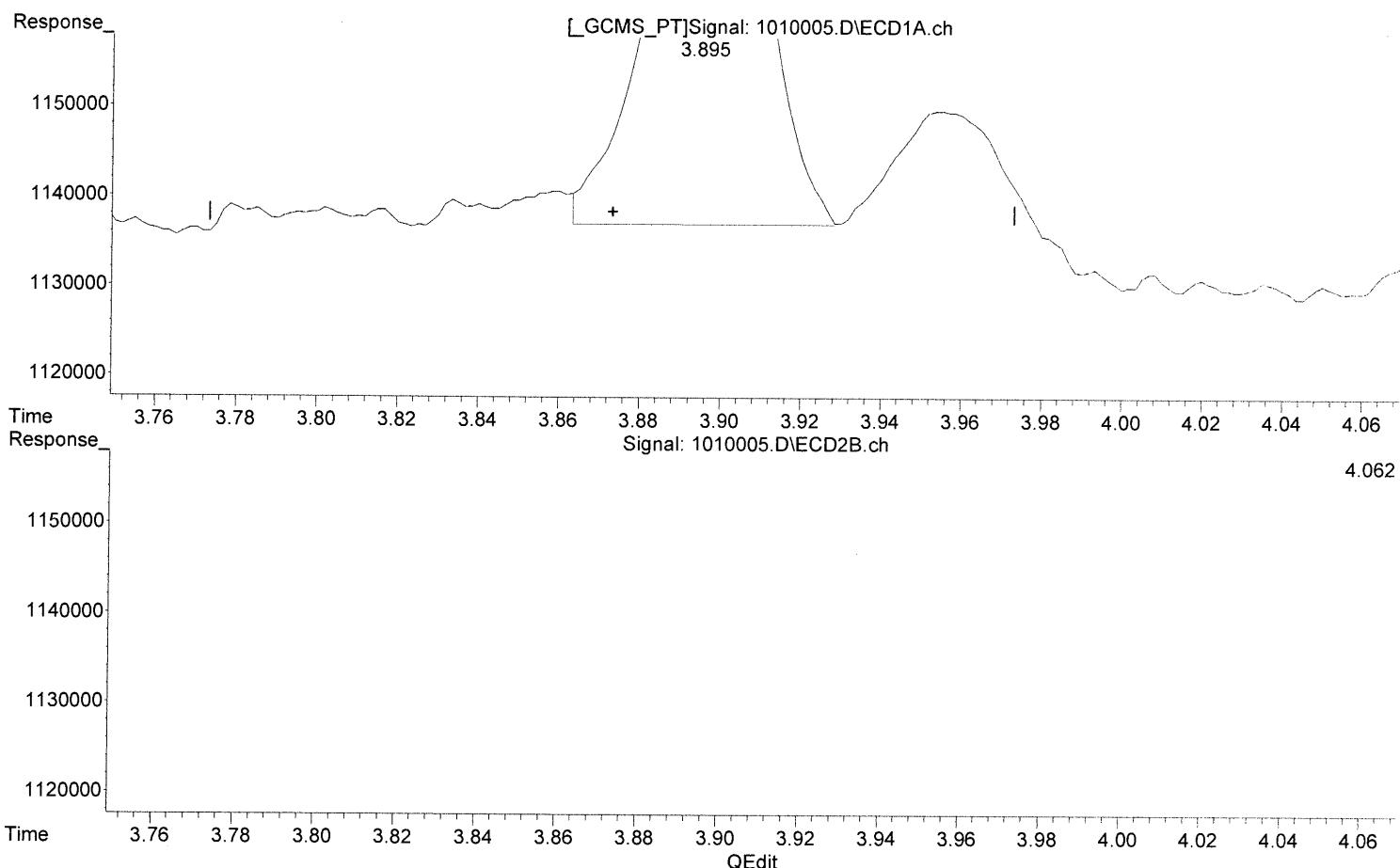
101116_504.M Tue Oct 11 08:08:34 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.895min 0.137 ppb m
 response 106012

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.062min 0.088 ppb
 response 121390



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:09:07 2016

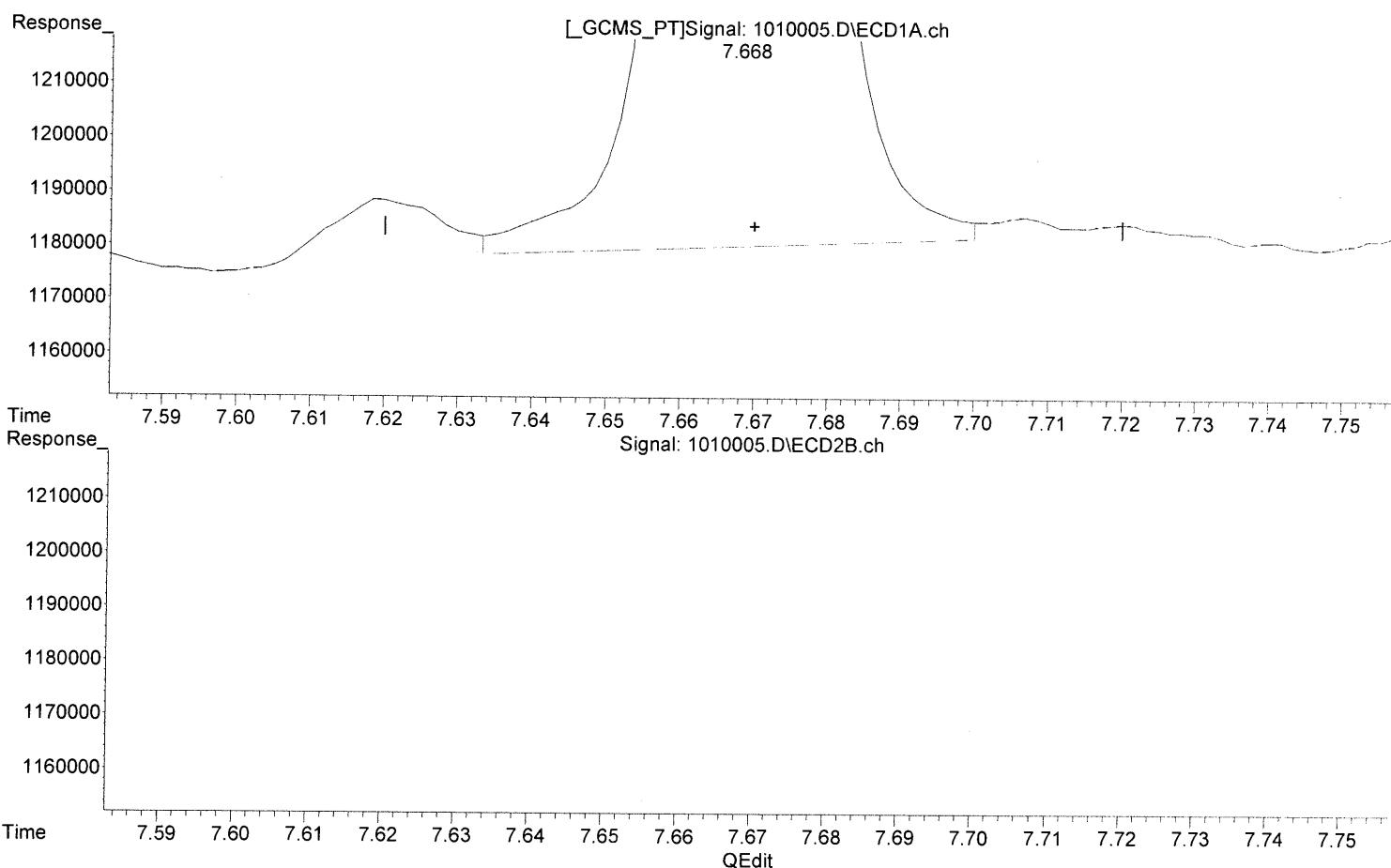
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.668min 0.176 ppb

response 396019

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.095 ppb

response 297791

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:08 2016



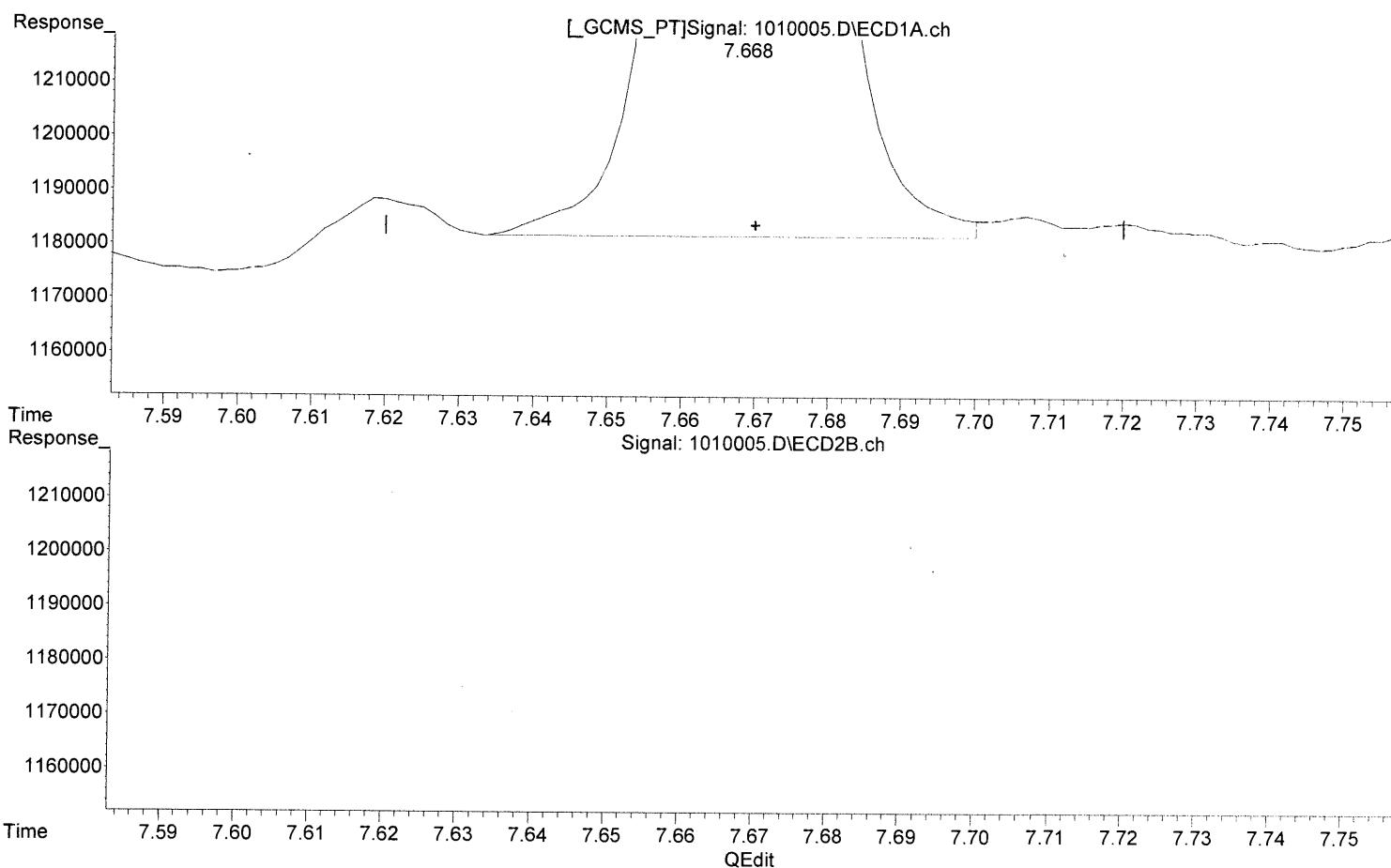
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.668min 0.173 ppb m

response 389497

Manual Integration:

After

Baseline/Shoulder

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.095 ppb

response 297791



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:17 2016

Page: 1

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:53:42 Operator: BS
Sample : ICAL LV3 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:12:35 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromo...	3.885	4.073	239042	262600	0.249m	0.190m
2) M 1,2,3-Tri...	6.240	6.300	33031	73436	0.204	0.123 #
3) M 1,2-Dibromo...	7.670	7.877	701491	613475	0.312m	0.195 #

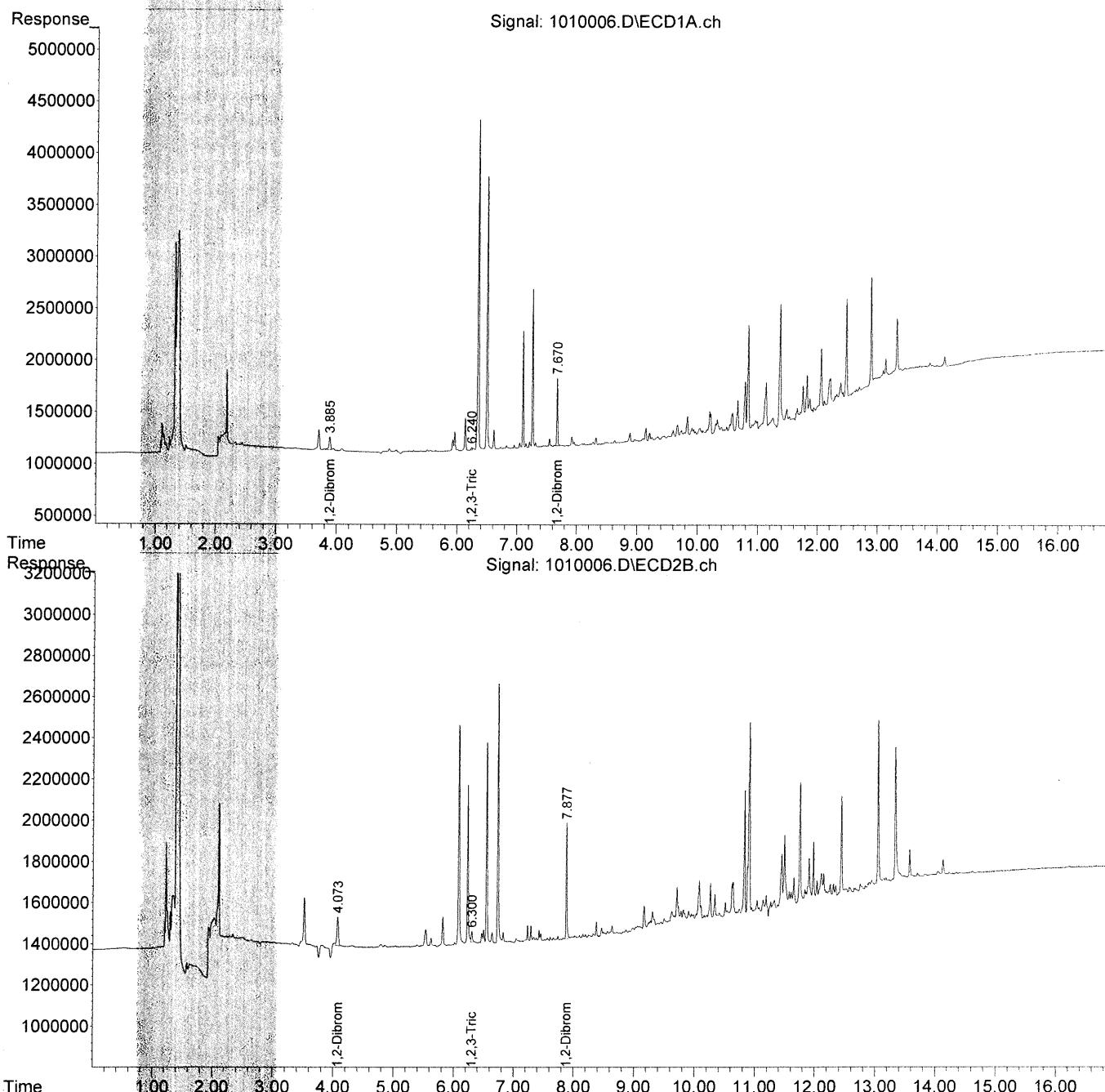
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:53:42 Operator: BS
Sample : ICAL LV3 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:12:35 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

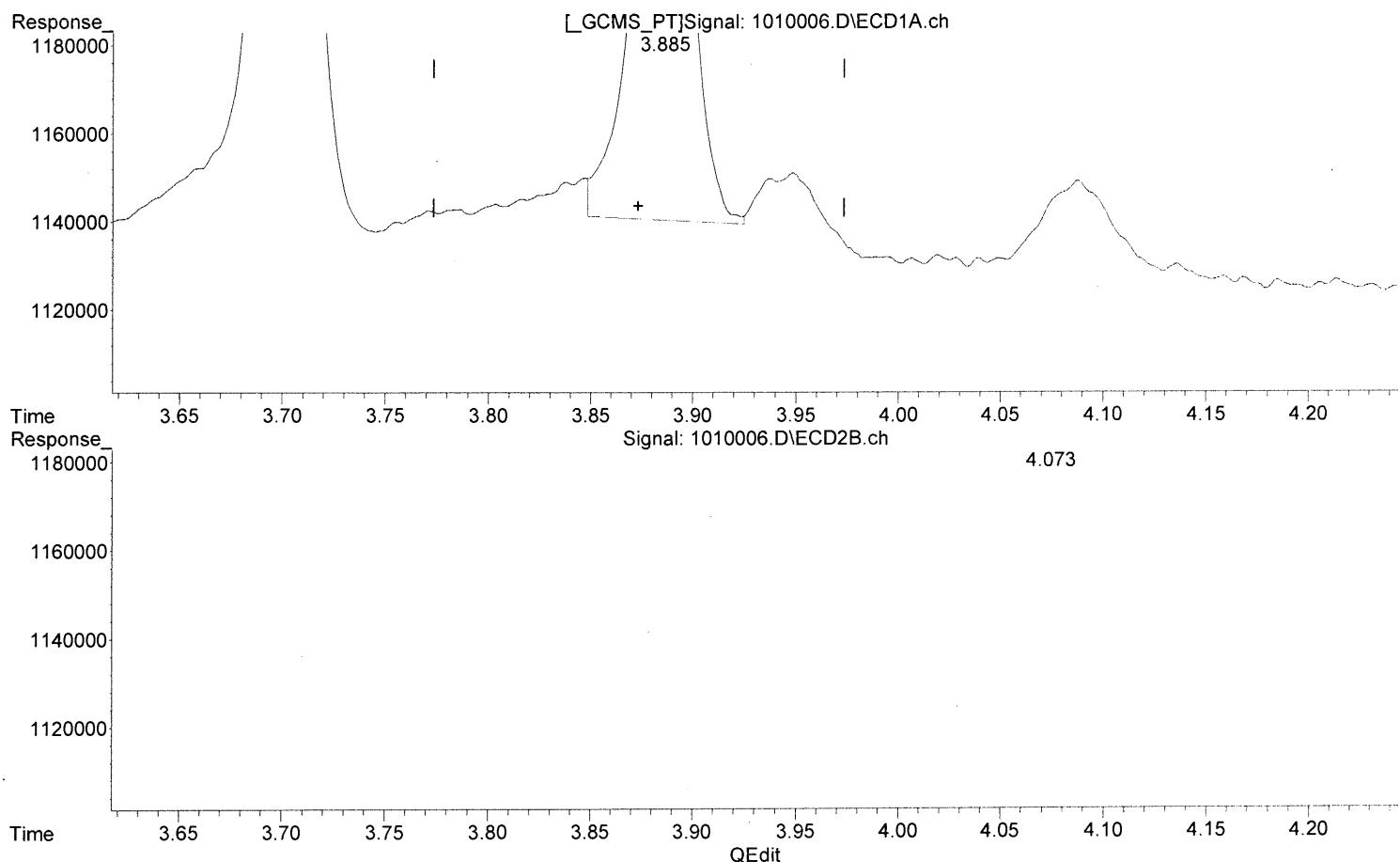


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.238 ppb

response 226147

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:11:47 2016

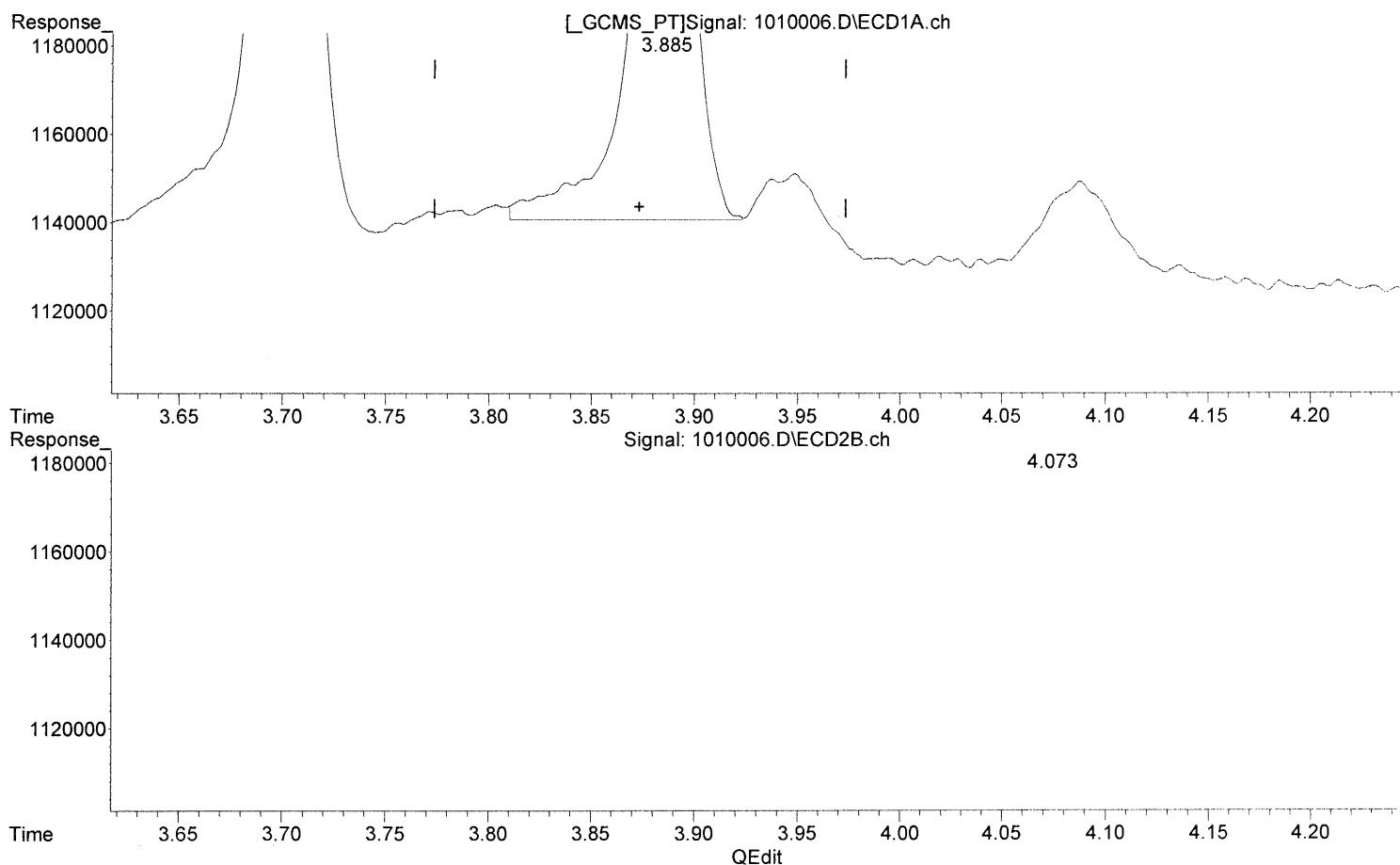
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:55 2016

Page: 1

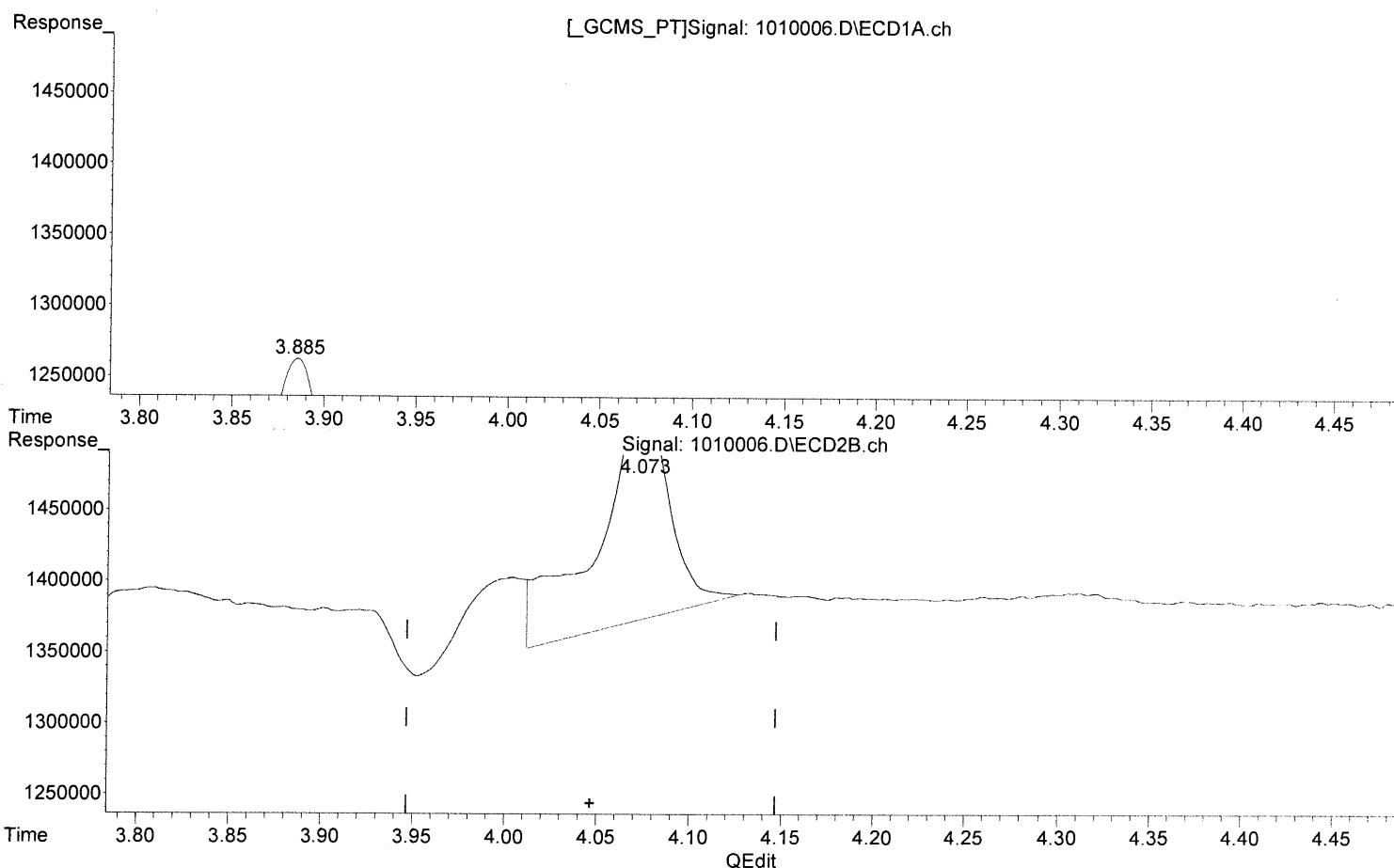


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:12:02 2016

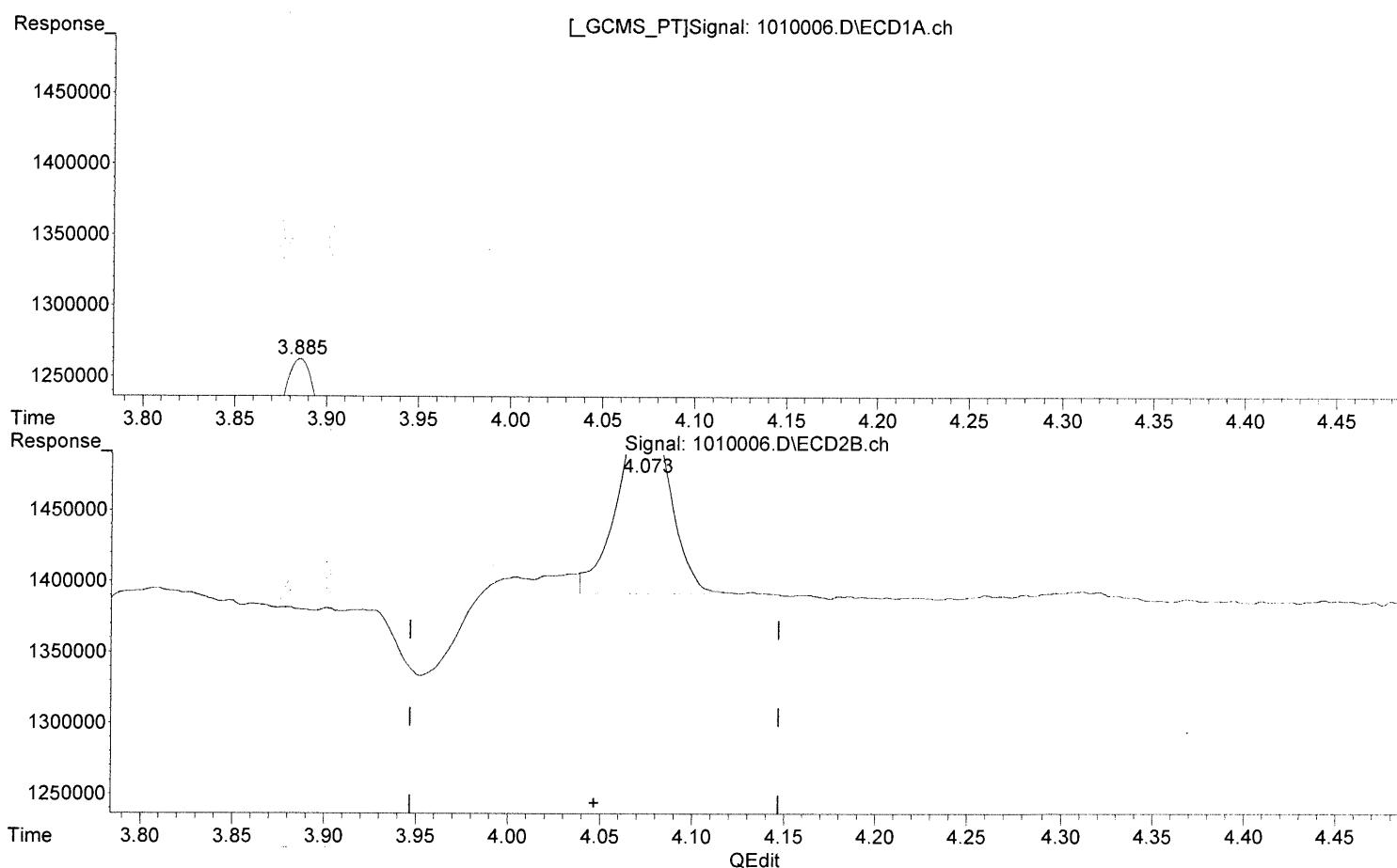
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.190 ppb m

response 262600



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:12 2016

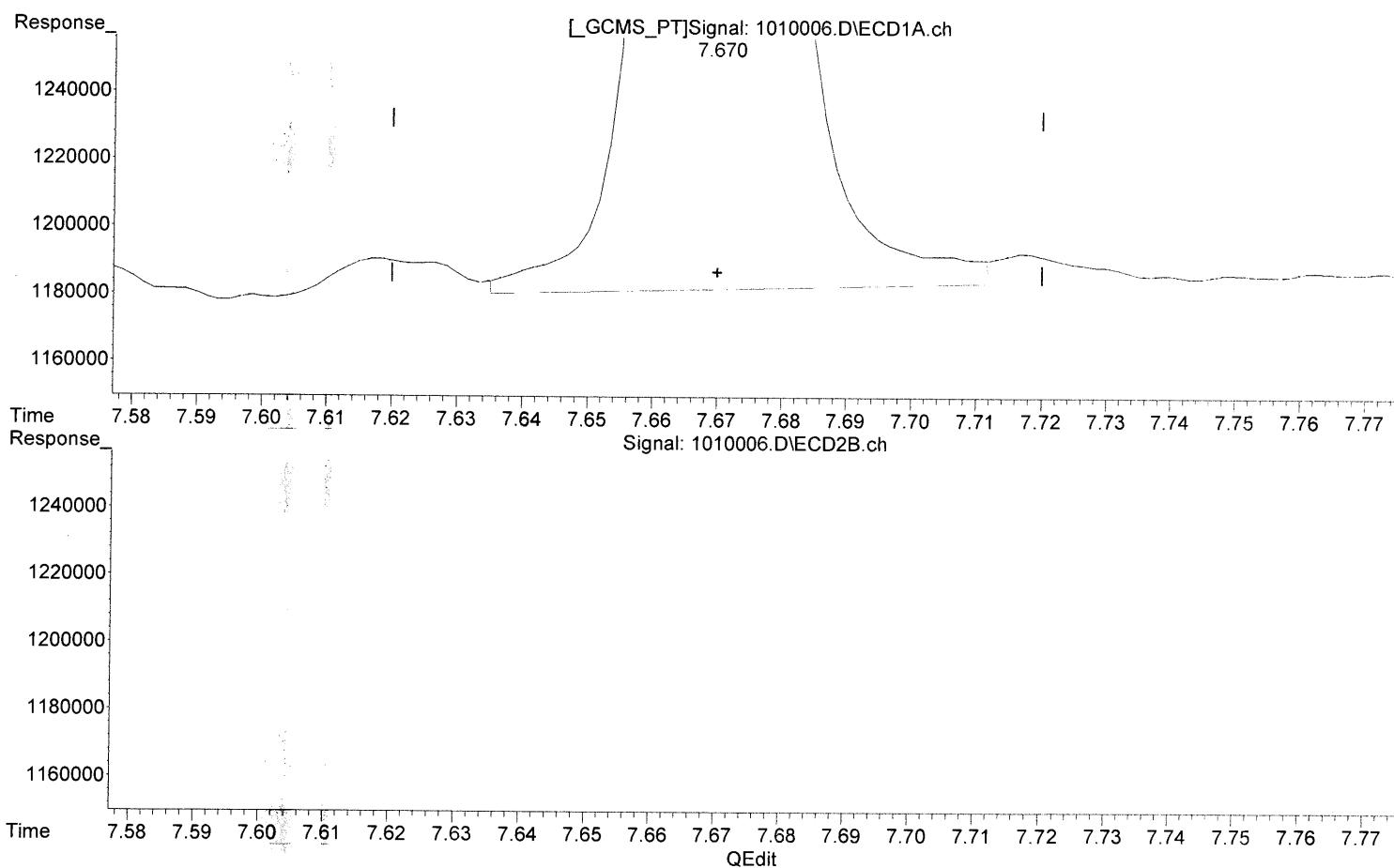
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.670min 0.316 ppb

response 710176

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.195 ppb

response 613475



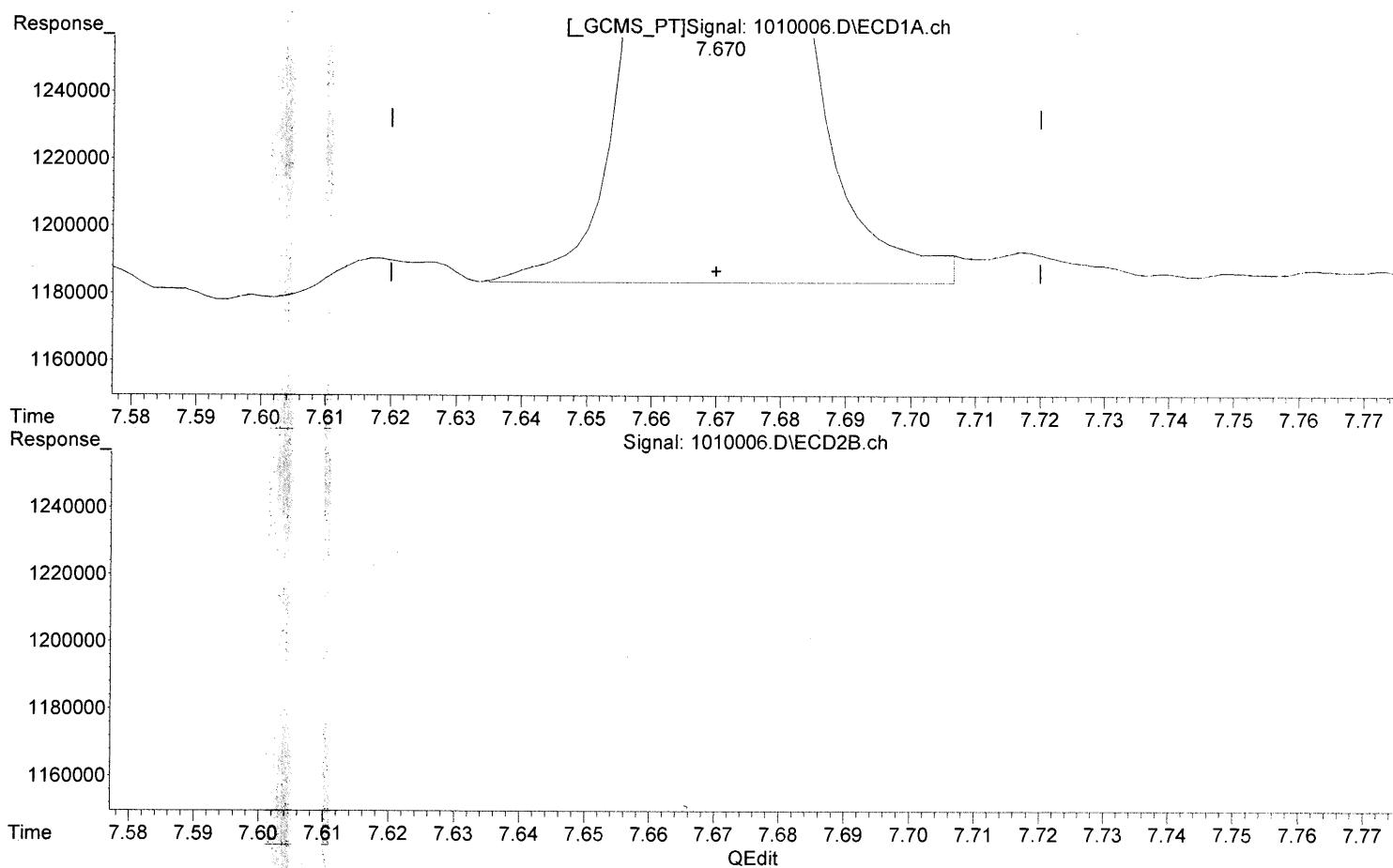
(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:30 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.670min 0.312 ppb m

response 701491

Manual Integration:

After

Baseline/Shoulder

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.195 ppb

response 613475

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:38 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:17:23 Operator: BS
Sample : ICAL LV4 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:13:38 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth: 504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.892	4.065	795089	682200	0.717m	0.494 #
2) M 1,2,3-Triiodopropane	6.240	6.300	138223	157791	0.854m	0.466 #
3) M 1,2-Dibromoethane	7.670	7.877	1755563	1454249	0.781	0.463 #

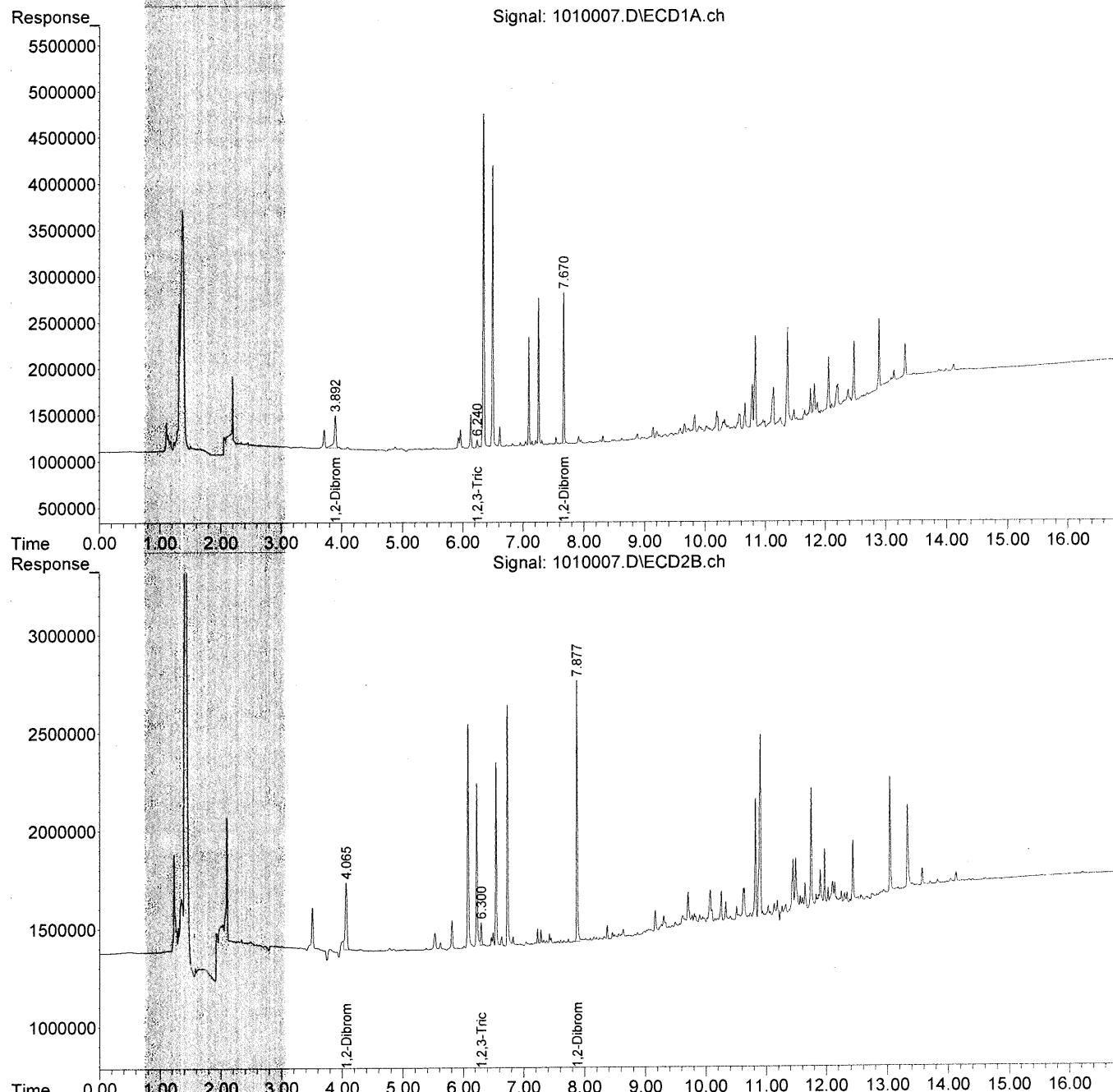
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:17:23 Operator: BS
Sample : ICAL LV4 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:13:38 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

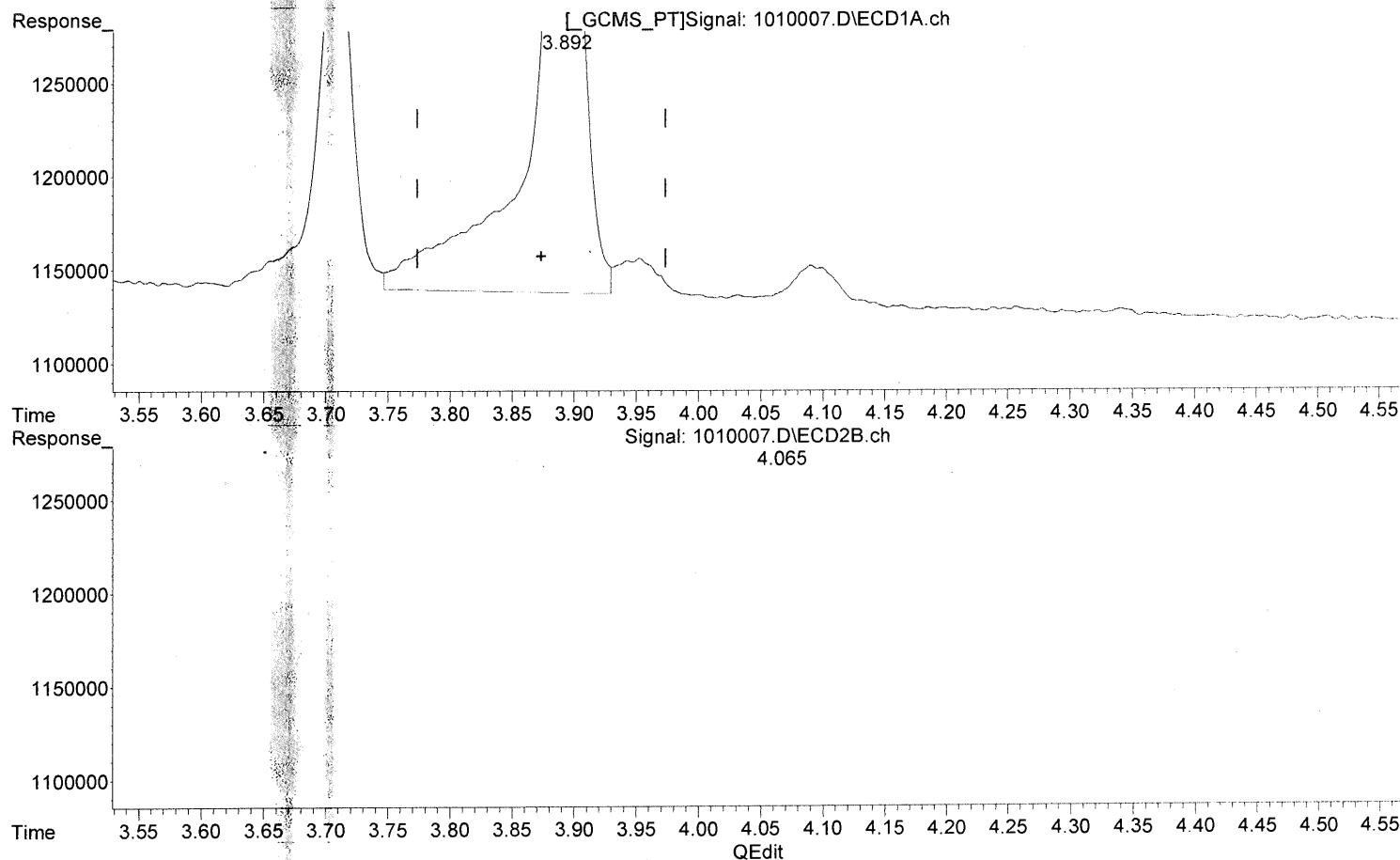


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 0.803 ppb

response 897642

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 0.494 ppb

response 682200

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:13:14 2016

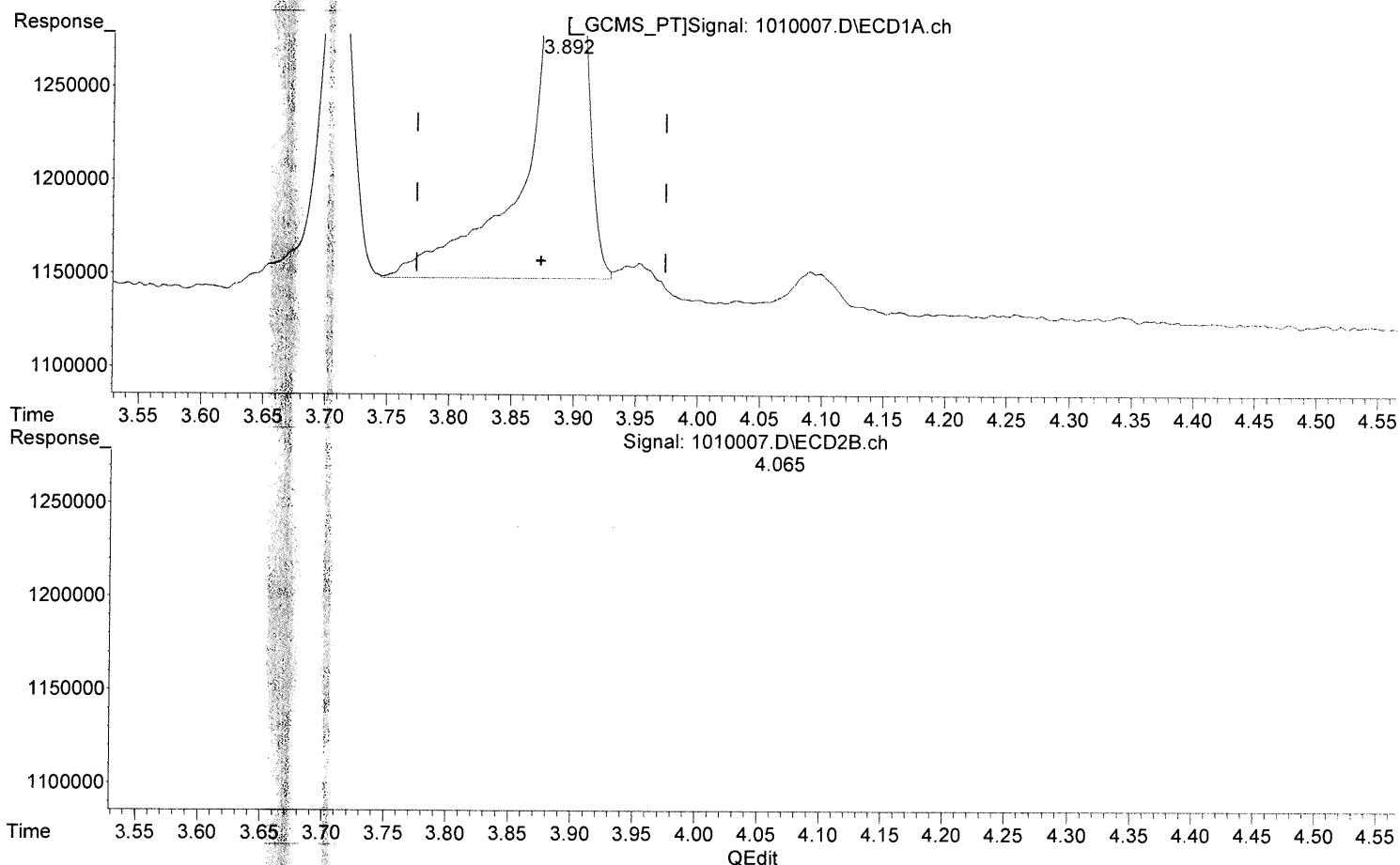
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 0.717 ppb m

response 795089

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 0.494 ppb

response 682200

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:13:21 2016

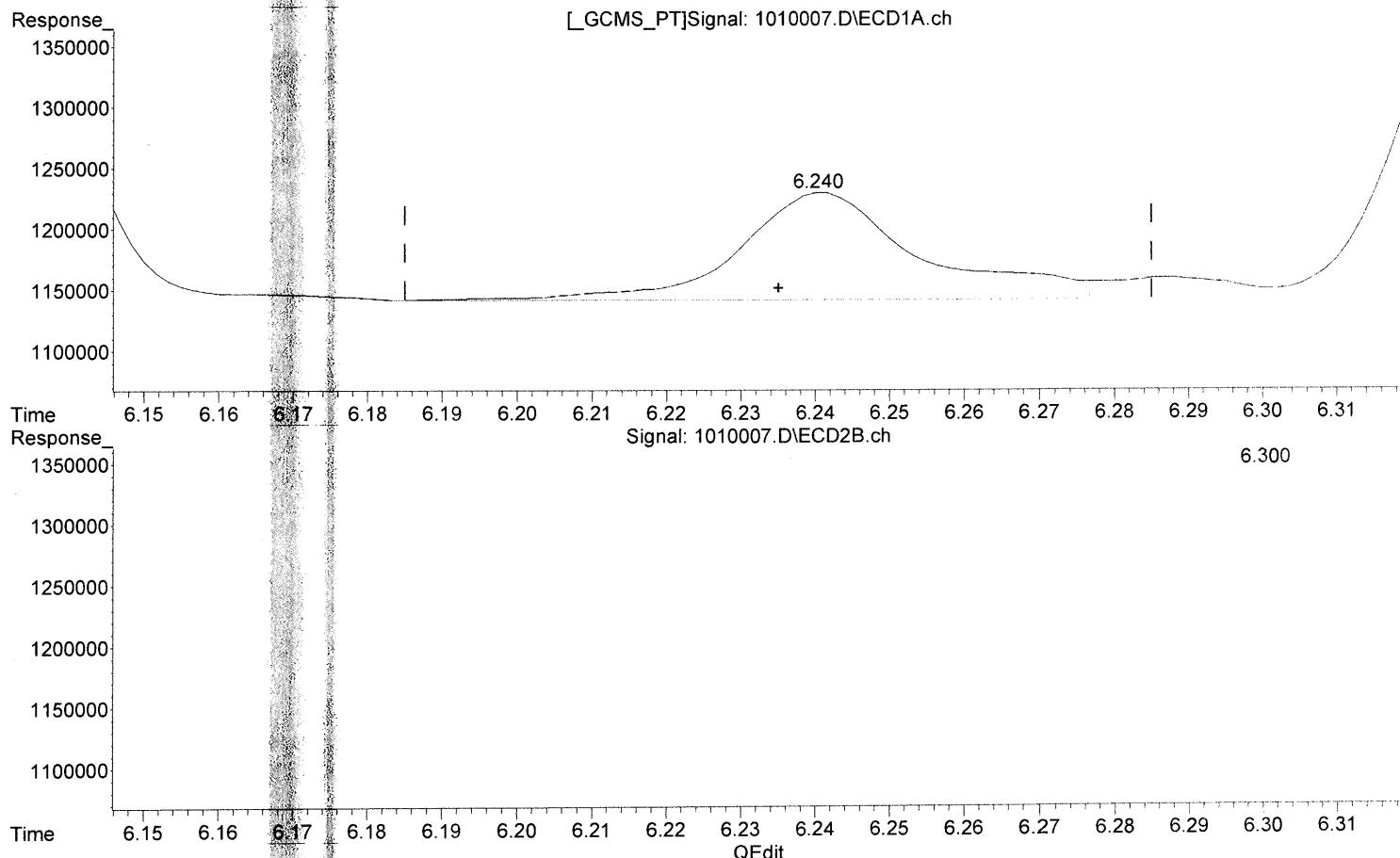
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

Manual Integration:

6.240min 0.921 ppb

Before

response 149093

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.300min 0.466 ppb

response 157791

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:13:31 2016

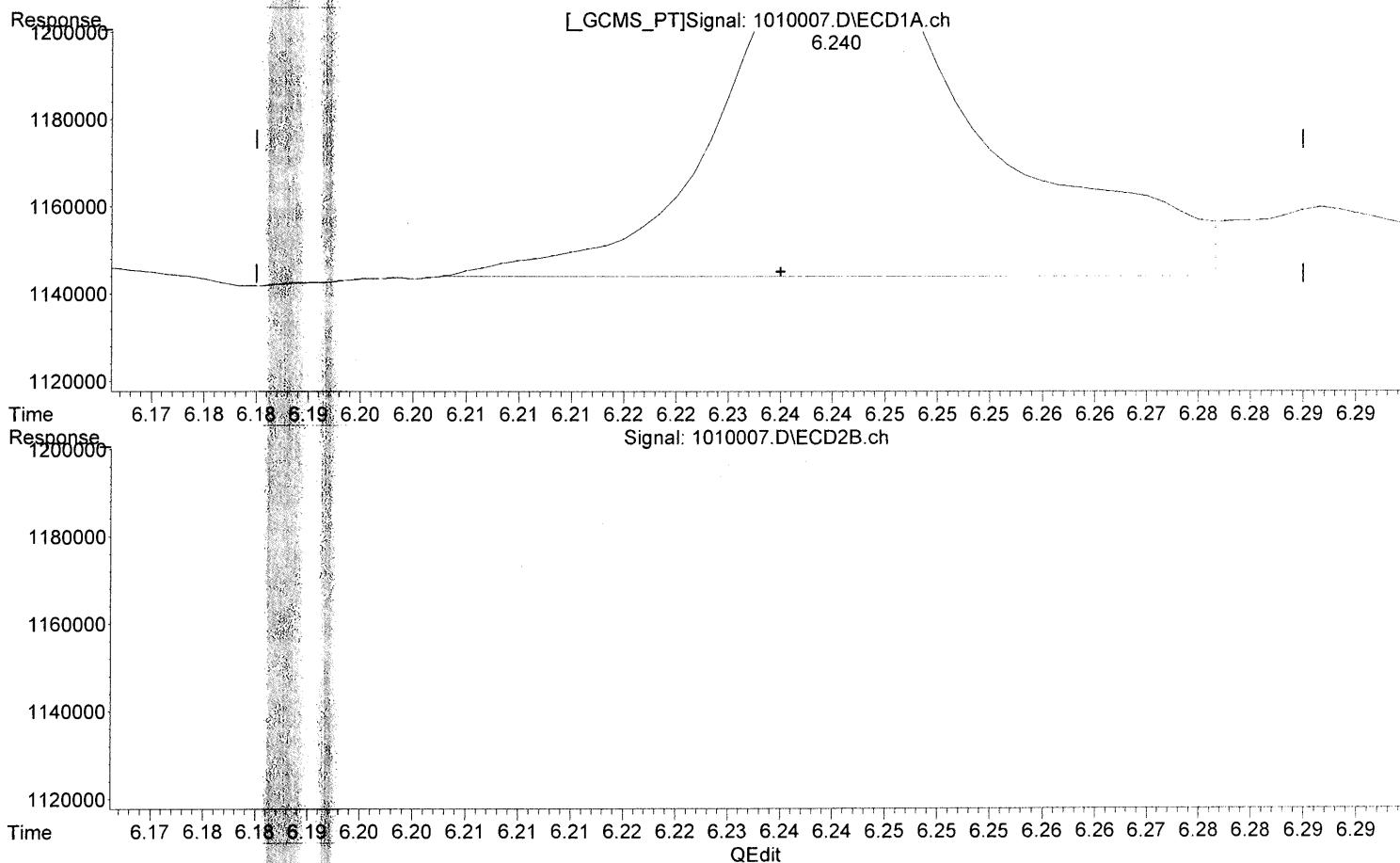
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.240min 0.854 ppb m

response 138223

Manual Integration:

After

Baseline/Shoulder

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.300min 0.466 ppb

response 157791

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:13:41 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:40:57 Operator: BS
Sample : ICAL LV5 101016 Inst : GCI
Misc : Multiplr: 1.00

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:14:58 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.898	4.060	1401531	1125916	1.228m	0.815m#
2) M 1,2,3-Triiodopropane	6.242	6.298	245184	246237	1.515m	0.822 #
3) M 1,2-Dibromoethane	7.670	7.877	3219717	2577549	1.431	0.820 #

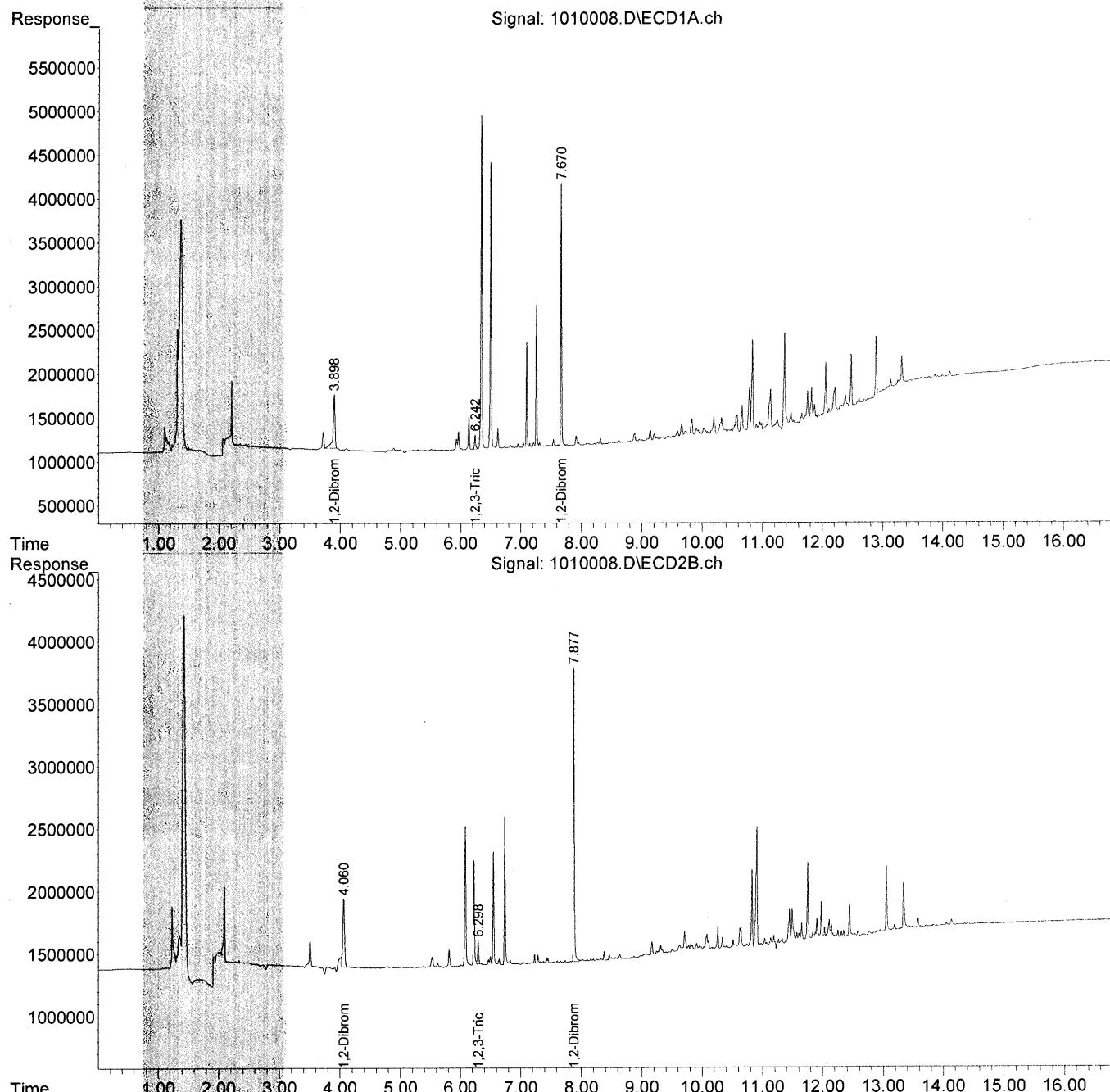
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:40:57 Operator: BS
Sample : ICAL LV5 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:14:58 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via: Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

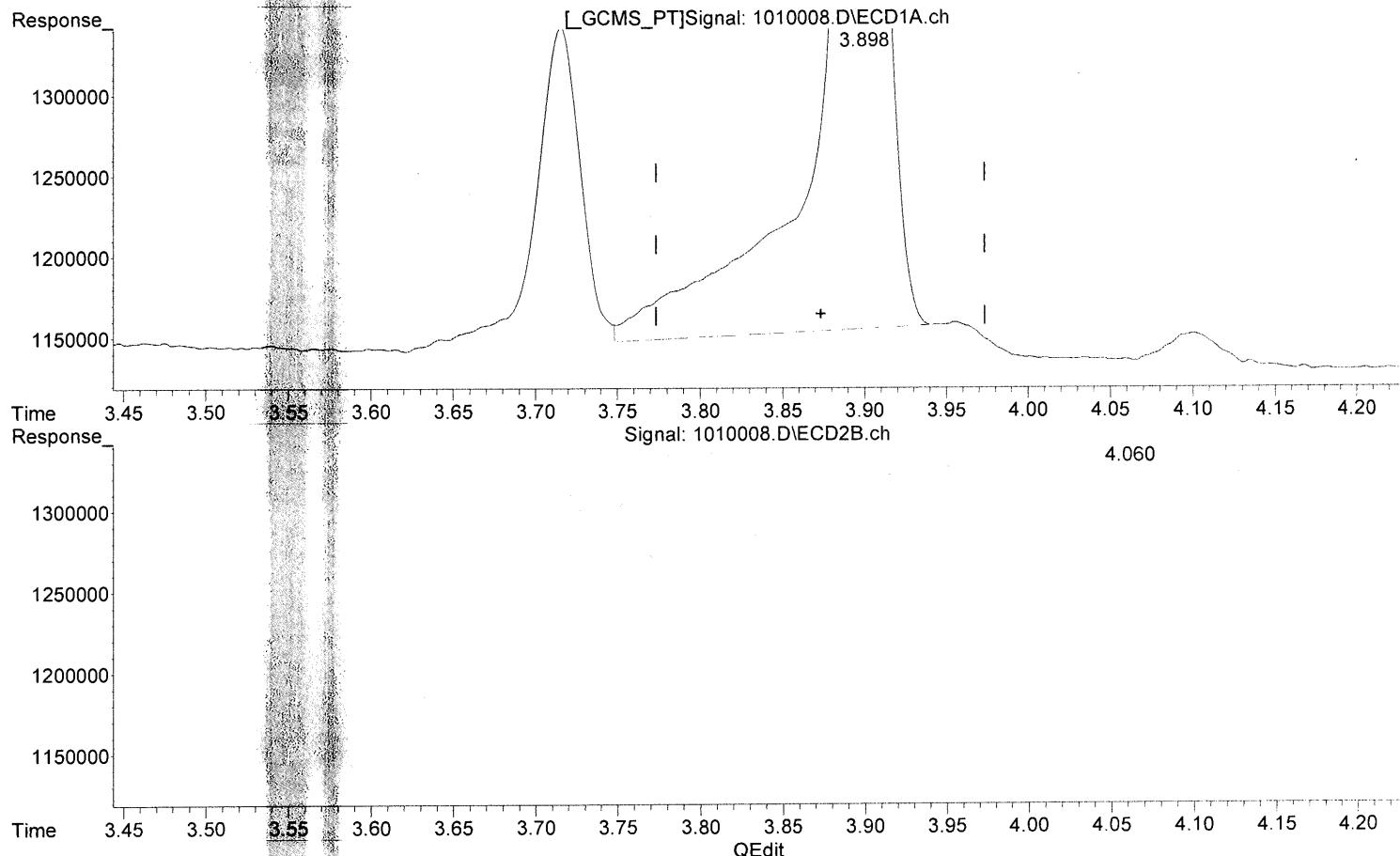


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.266 ppb

response 1446490

Manual Integration:

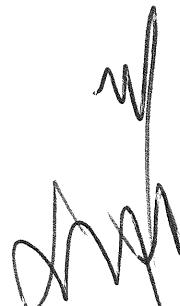
Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:15 2016

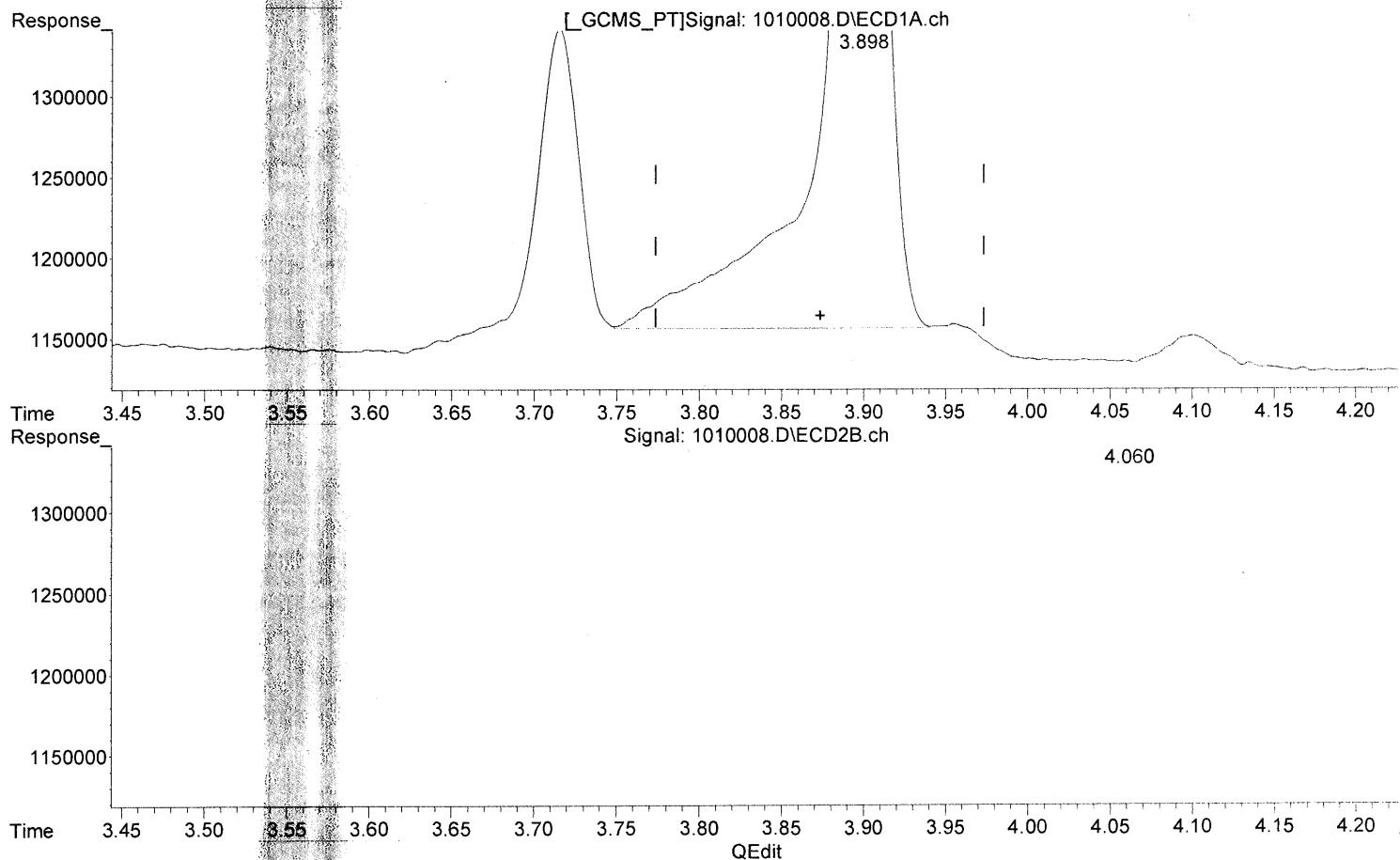
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:14:27 2016

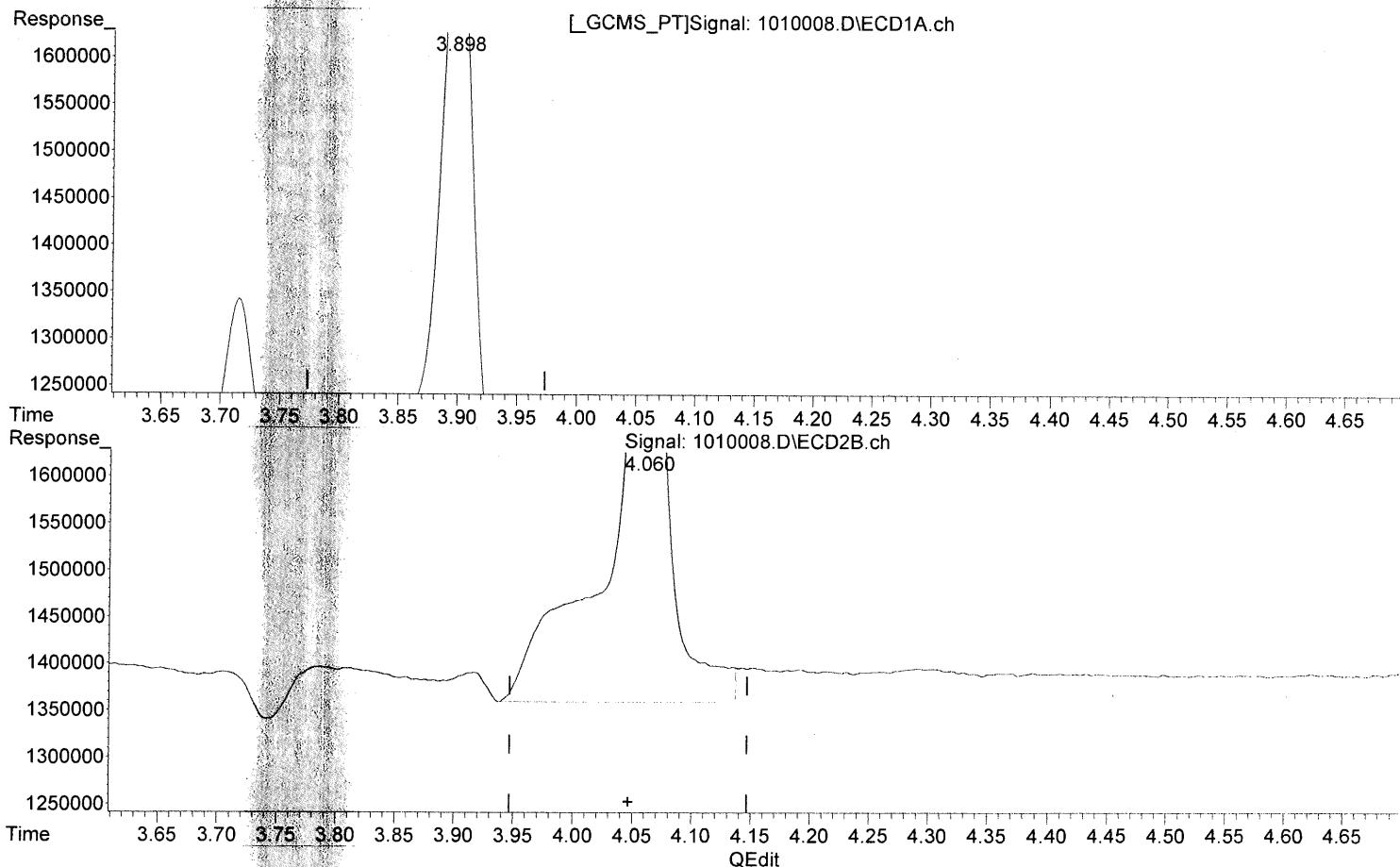
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



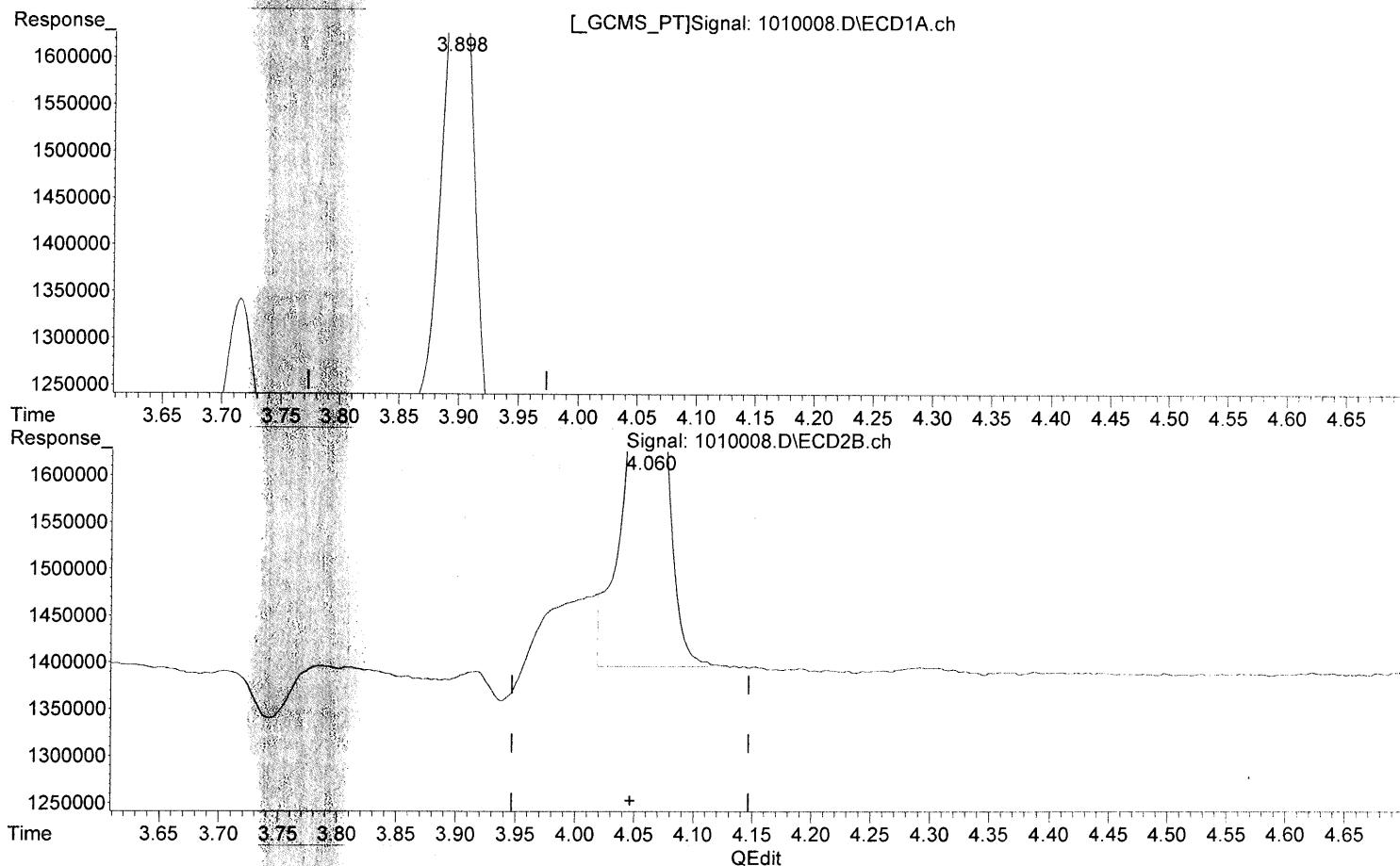
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:32 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LVS 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.815 ppb m

response 1125916



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:14:43 2016

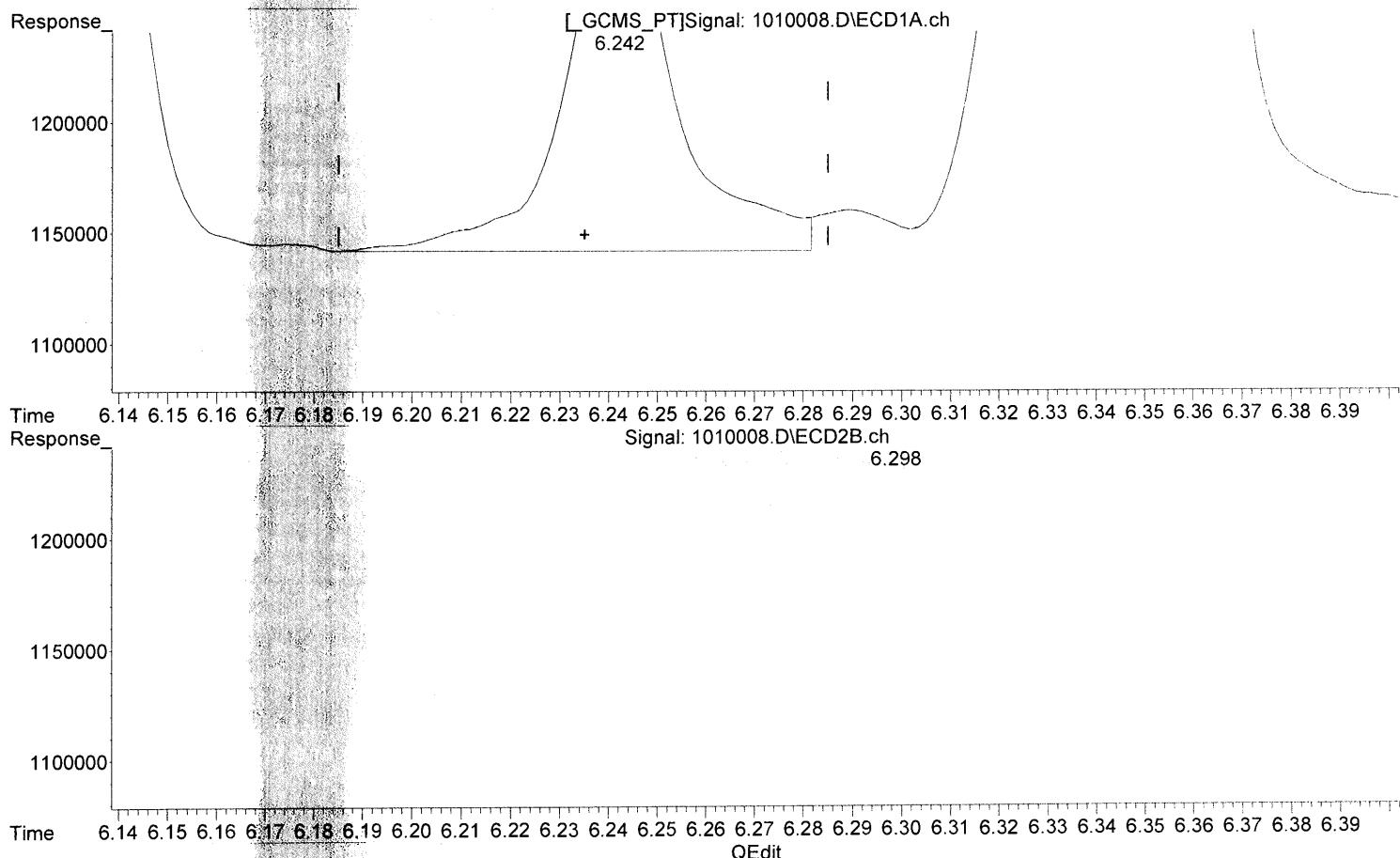
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.242min 1.603 ppb

response 259440

Manual Integration:

Before

10/11/16



(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.822 ppb

response 246237

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:53 2016

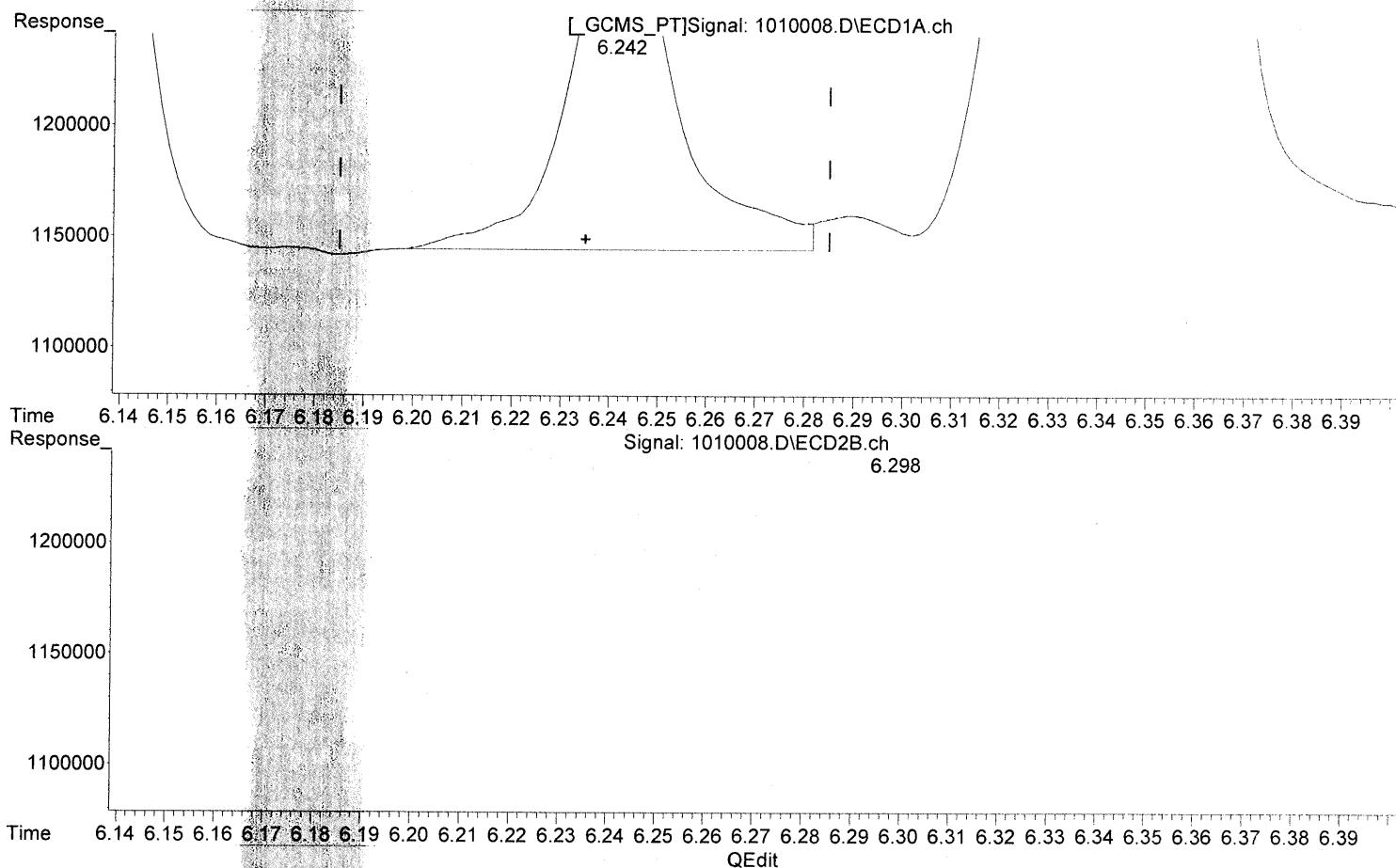
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LVS 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.242min 1.515 ppb m

response 245184

Manual Integration:

After

Baseline/Shoulder

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.822 ppb

response 246237

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:00 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:04:33 Operator: BS
Sample : ICAL LV6 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:15:49 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.897	4.062	4963671	3617450	4.246m	2.618m#
2) M 1,2,3-Tribromoethane	6.240	6.298	804323	798984	4.971	2.980 #
3) M 1,2-Dibromoethane	7.668	7.877	10079049	8377811	4.481	2.665 #

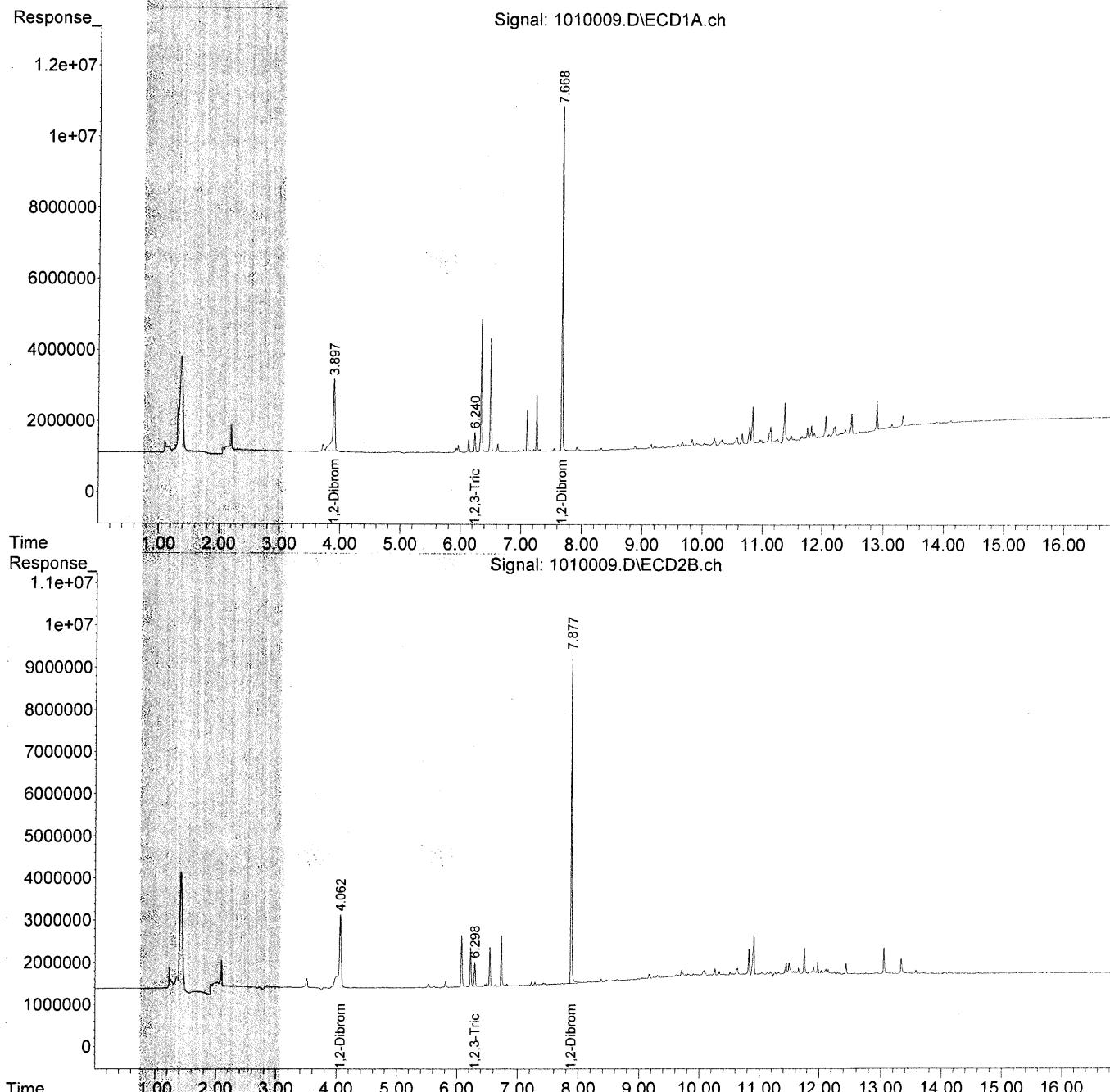
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:04:33 Operator: BS
Sample : ICAL LV6 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:15:49 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m

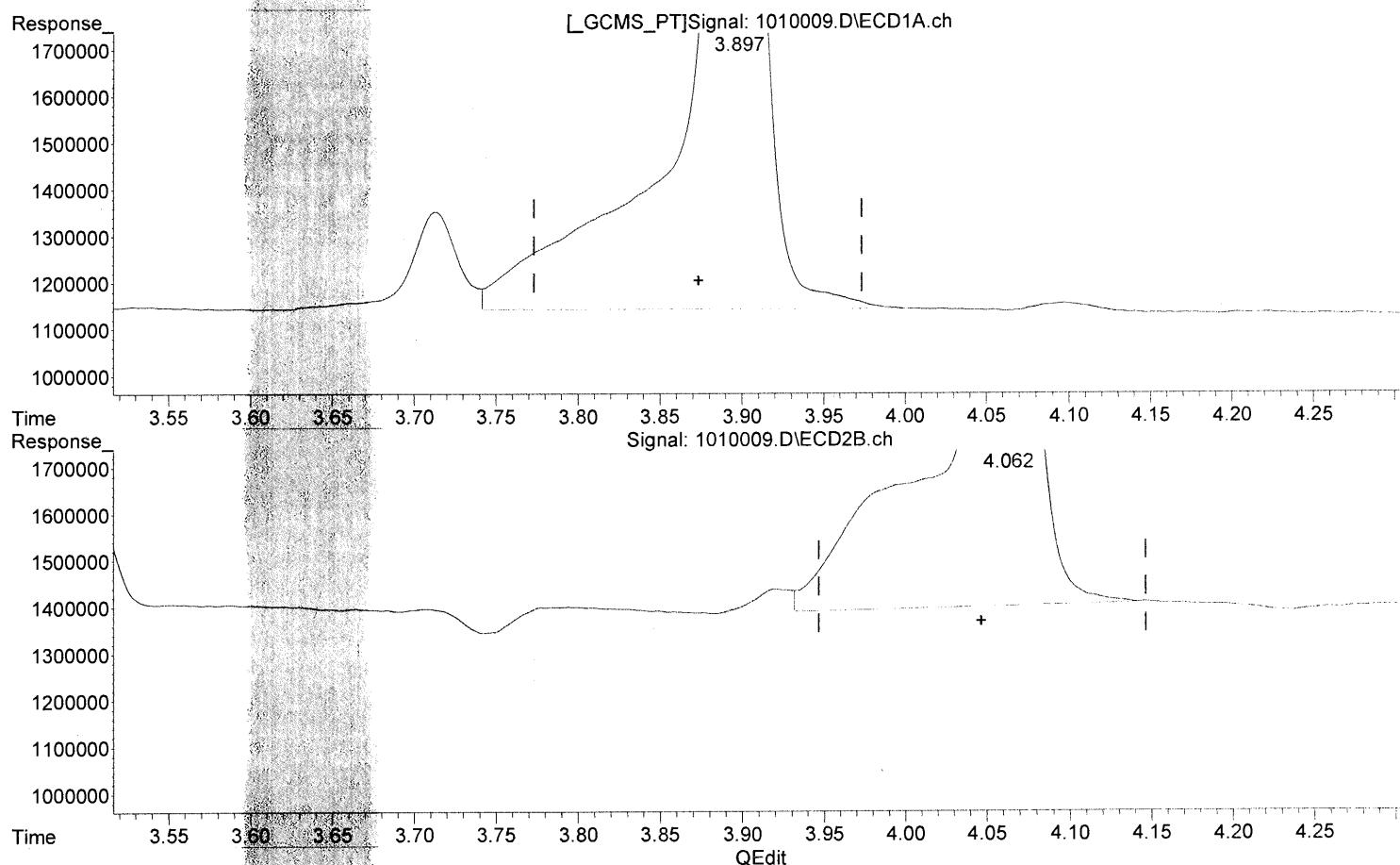


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.696 ppb

response 5492984

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:24 2016

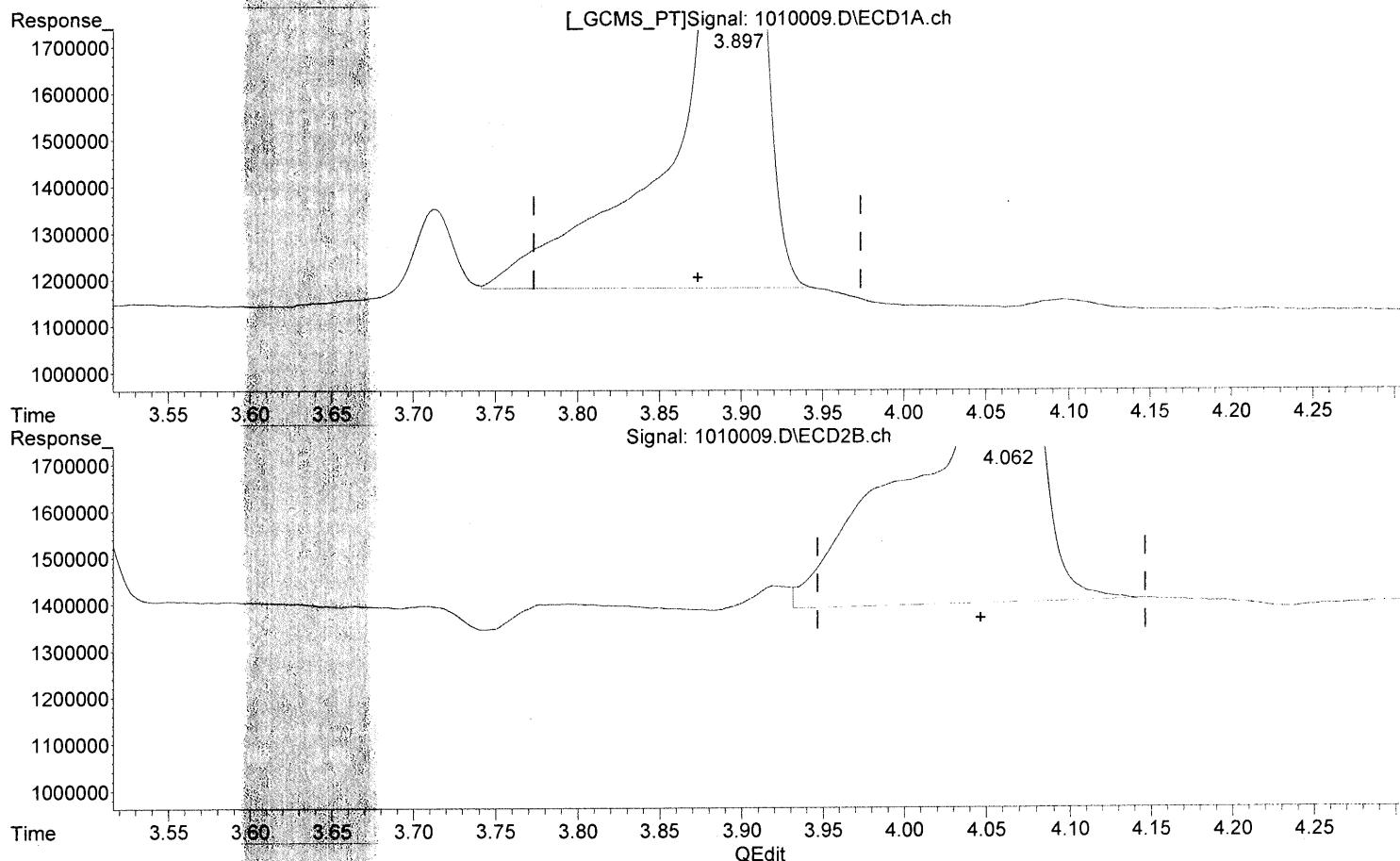
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb.m

response 4963671

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:30 2016

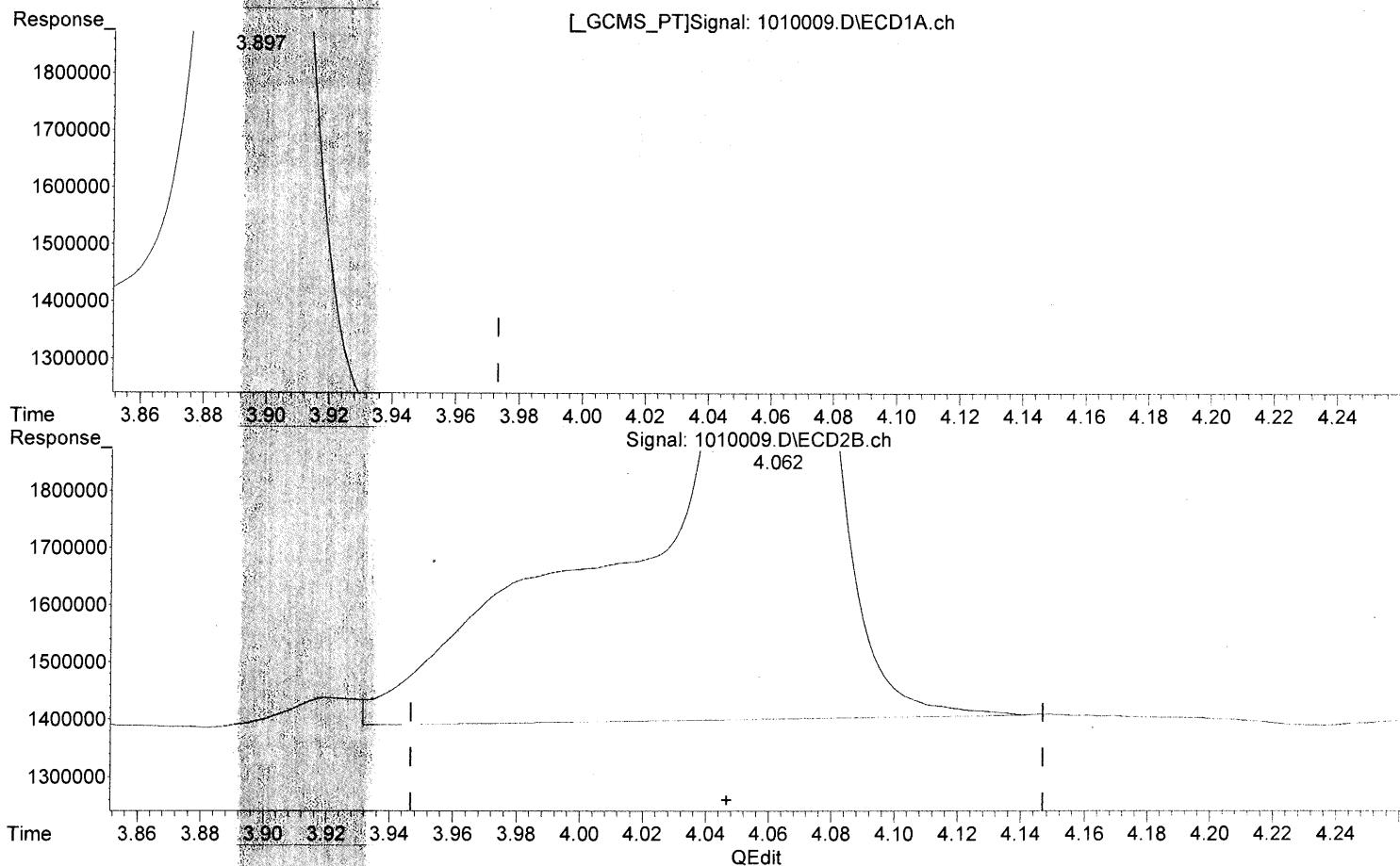
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb m

response 4963671

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:38 2016

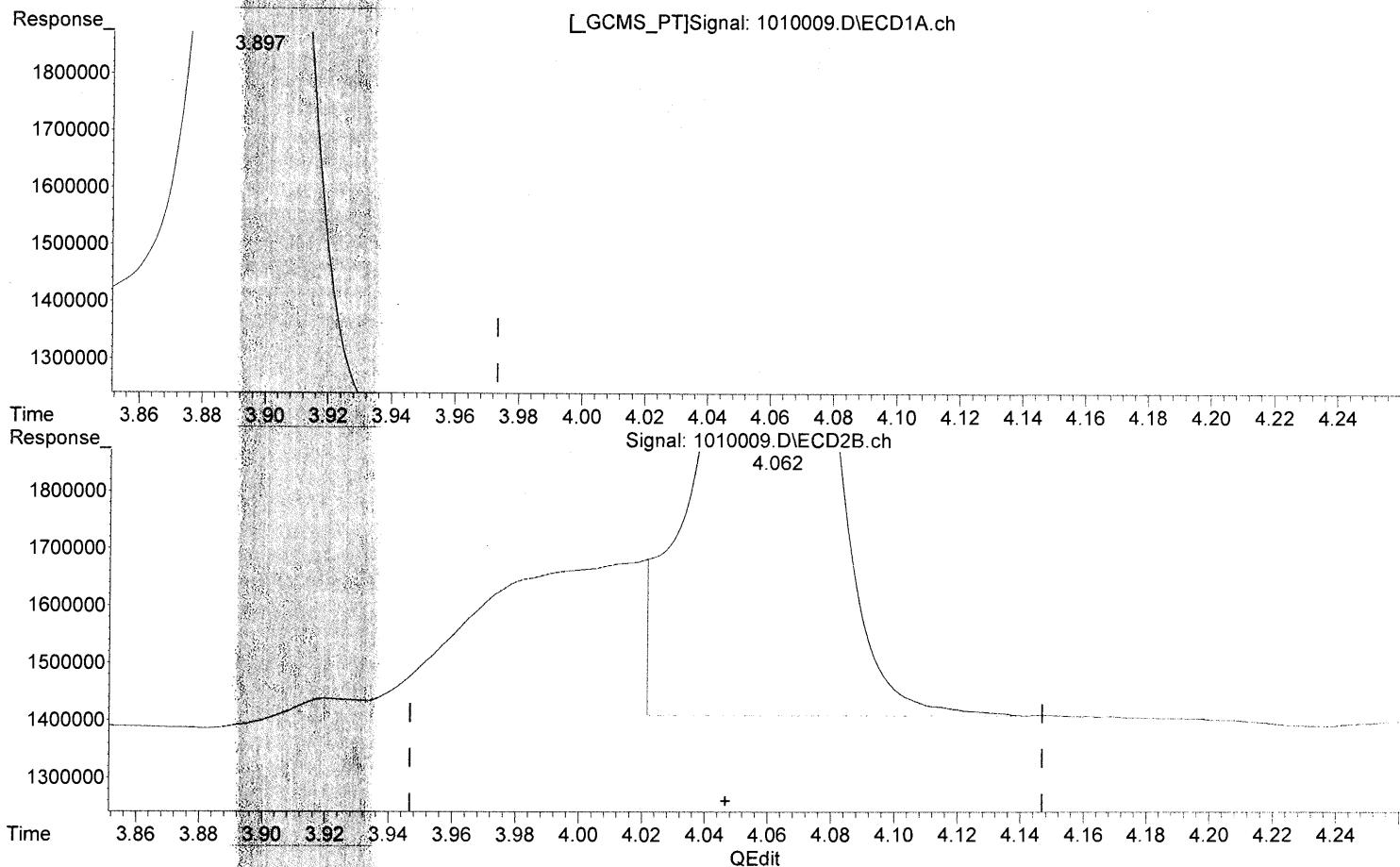
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb m

response 4963671

Manual Integration:

After

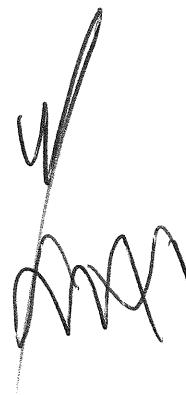
Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 2.618 ppb m

response 3617450



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:52 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:28:17 Operator: BS
Sample : ICAL LV7 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:16:52 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.897	4.063	6005701	4607340	5.133m	3.334m#
2) M 1,2,3-Tri...	6.240	6.298	973722	1023621	6.018	3.827 #
3) M 1,2-Dibro...	7.668	7.875	12908190	10815899	5.739	3.440 #

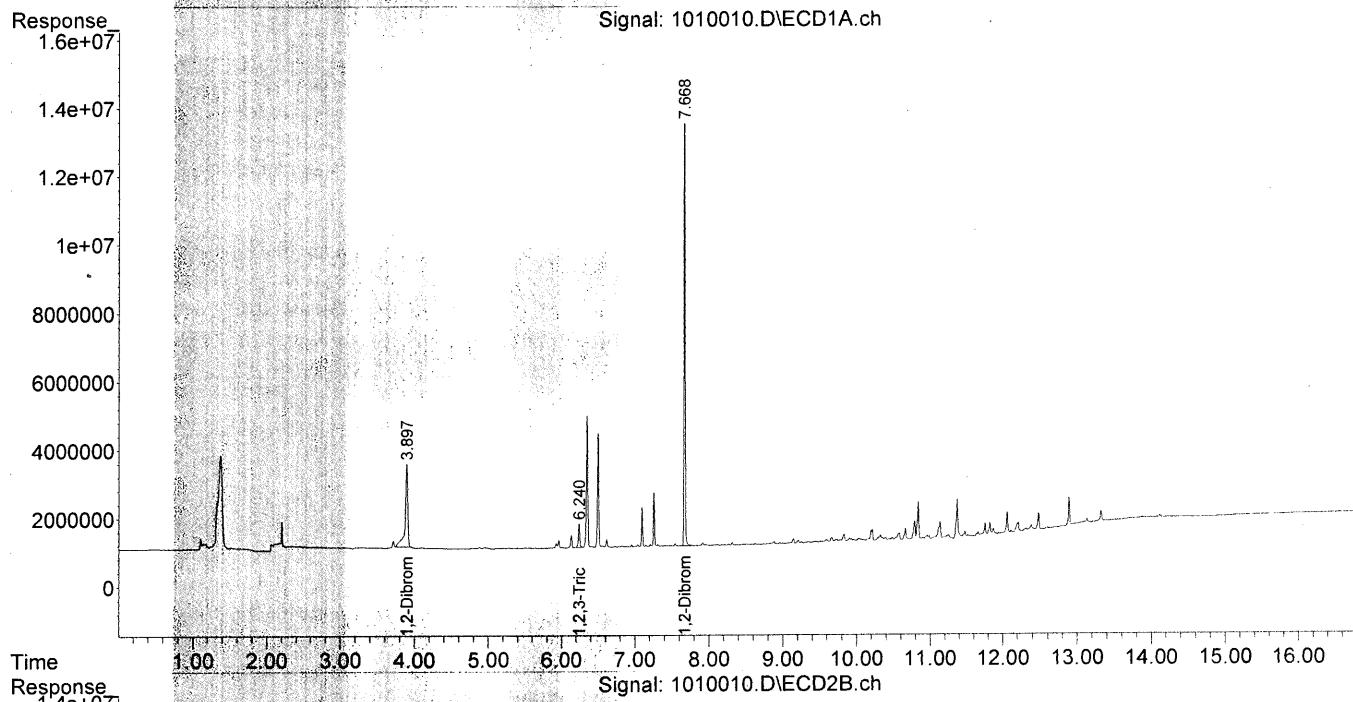
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:28:17 Operator: BS
Sample : ICAL LV7 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:16:52 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

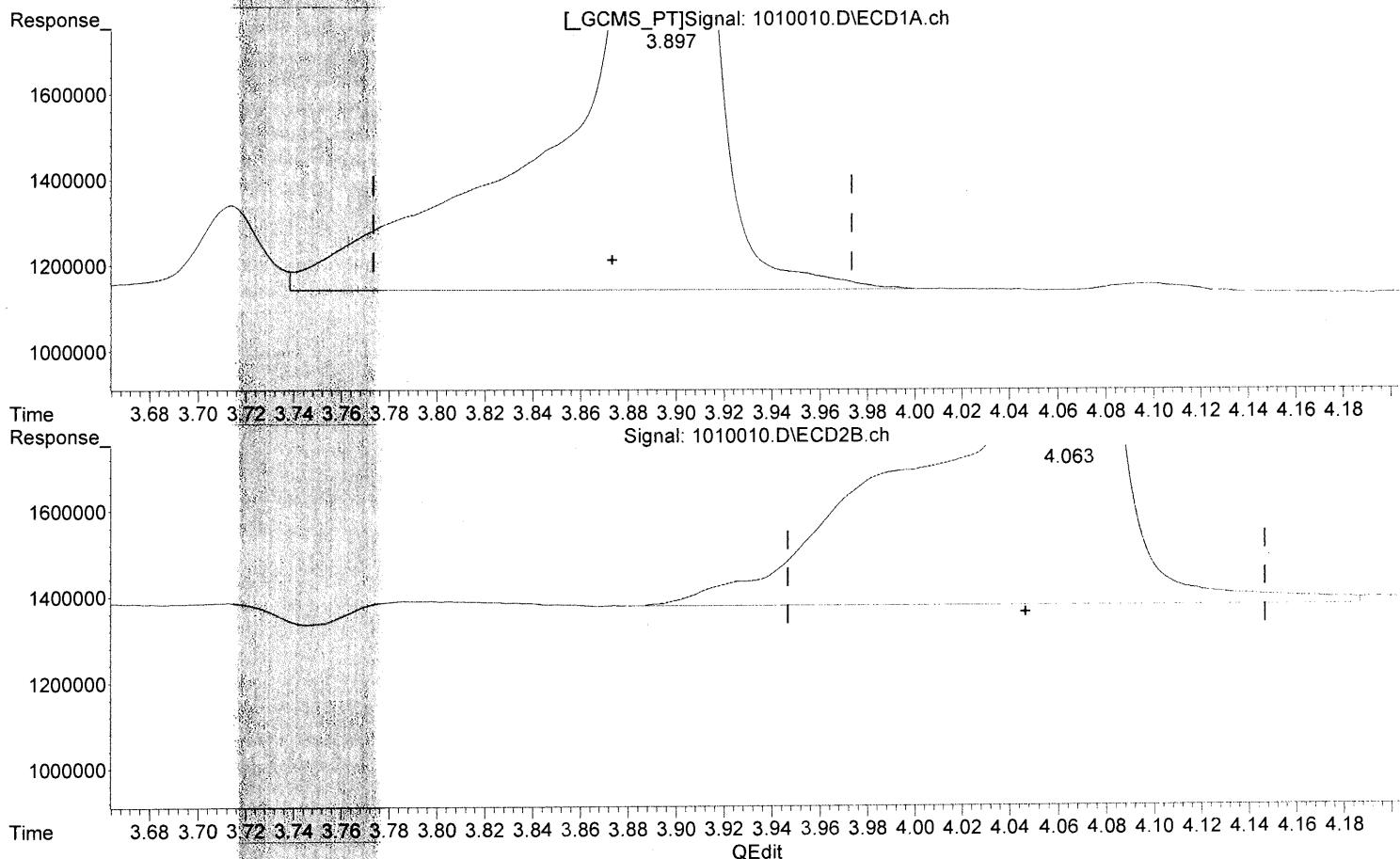


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.593 ppb

response 6545020

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:16:30 2016

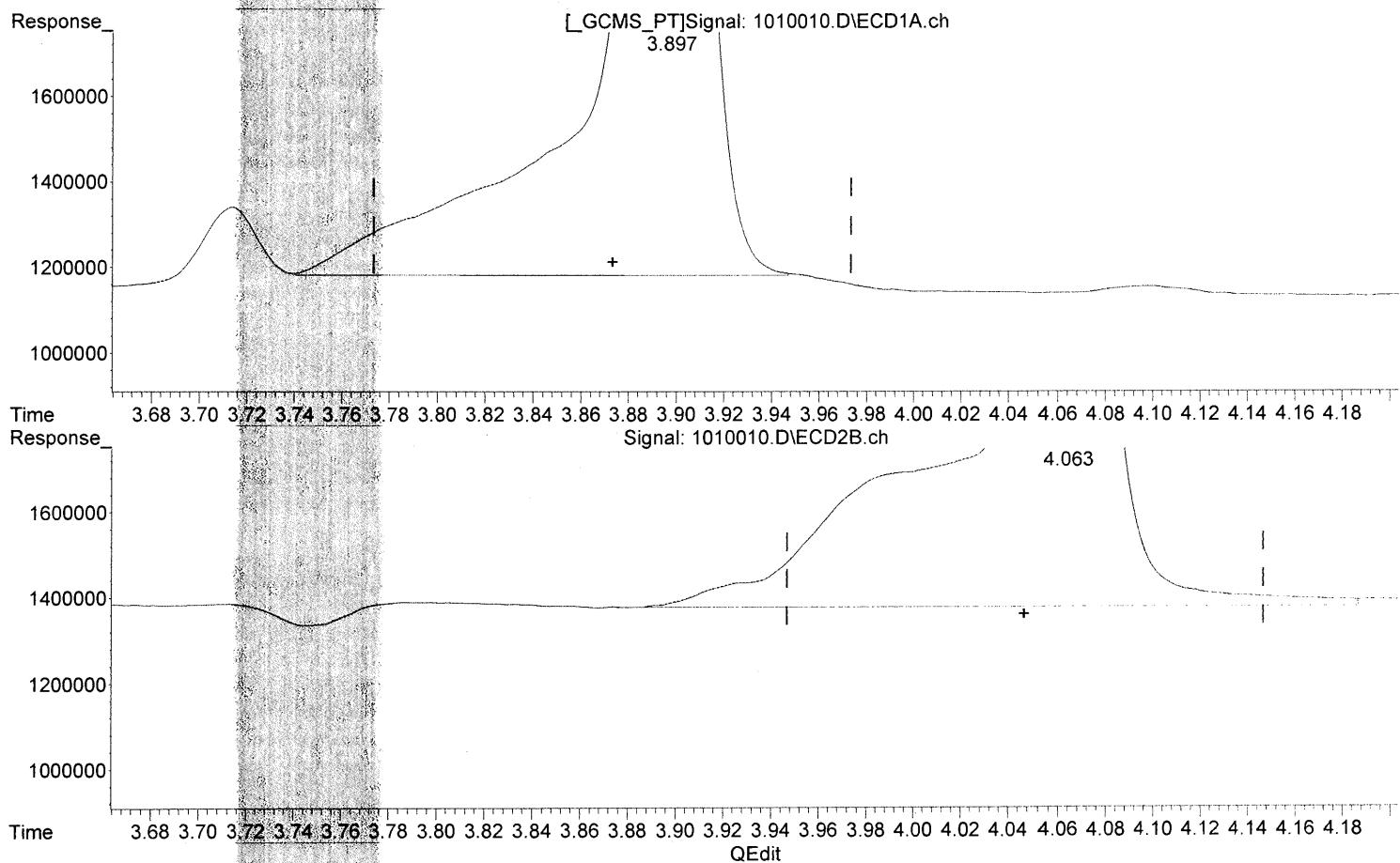
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.133 ppb m

response 6005701

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939



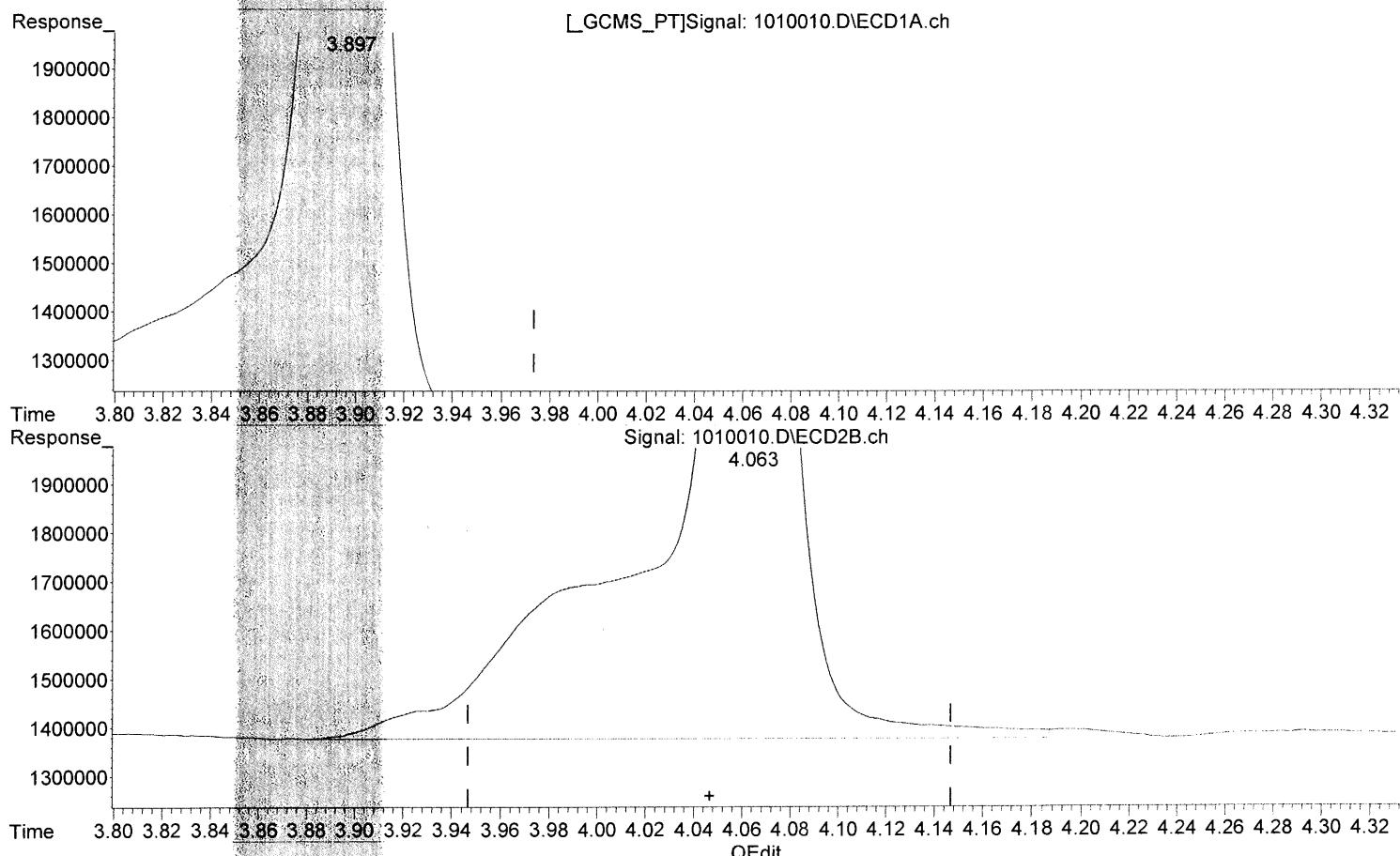
(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:16:39 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

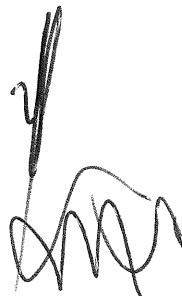
3.897min 5.133 ppb m

response 6005701

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:16:46 2016

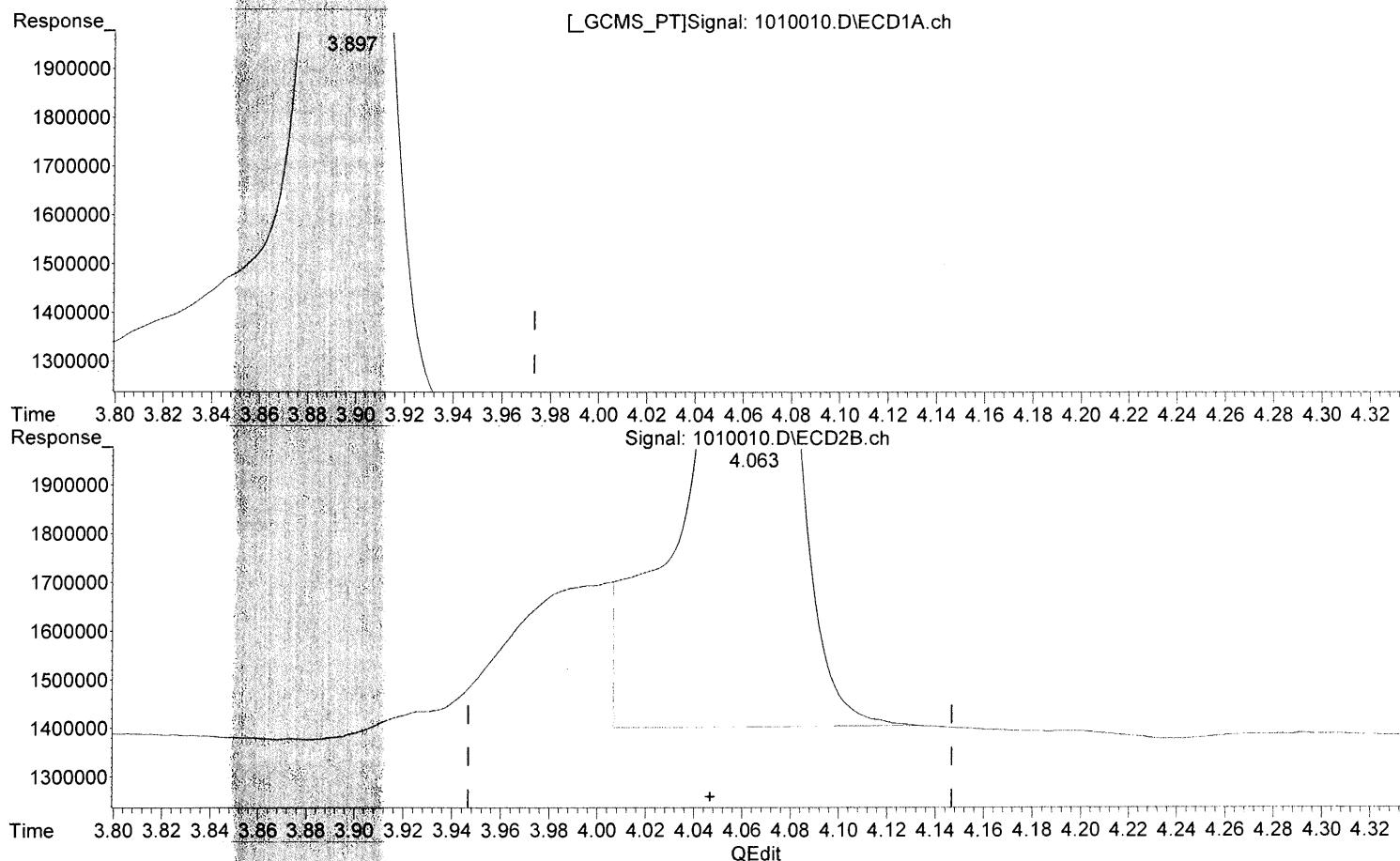
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method: J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update: Fri Sep 16 09:42:15 2016
 Response via: Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.133 ppb m

response 6005701

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 3.334 ppb m

response 4607340

Manual Integration:

After

Baseline/Shoulder

10/11/16



(+) = Expected Retention Time

101116_504.M Tue Oct 11 08:16:56 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:51:51 Operator: BS
Sample : ICAL LV8 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:18:12 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.908	4.068	14751554	9894375	12.661m	7.160m#
2) M 1,2,3-Triiodopropane	6.247	6.303	2175504	2027409	13.445	7.424 #
3) M 1,2-Dibromoethane	7.672	7.880	29684327	23263534	13.197	7.399 #
<hr/>						

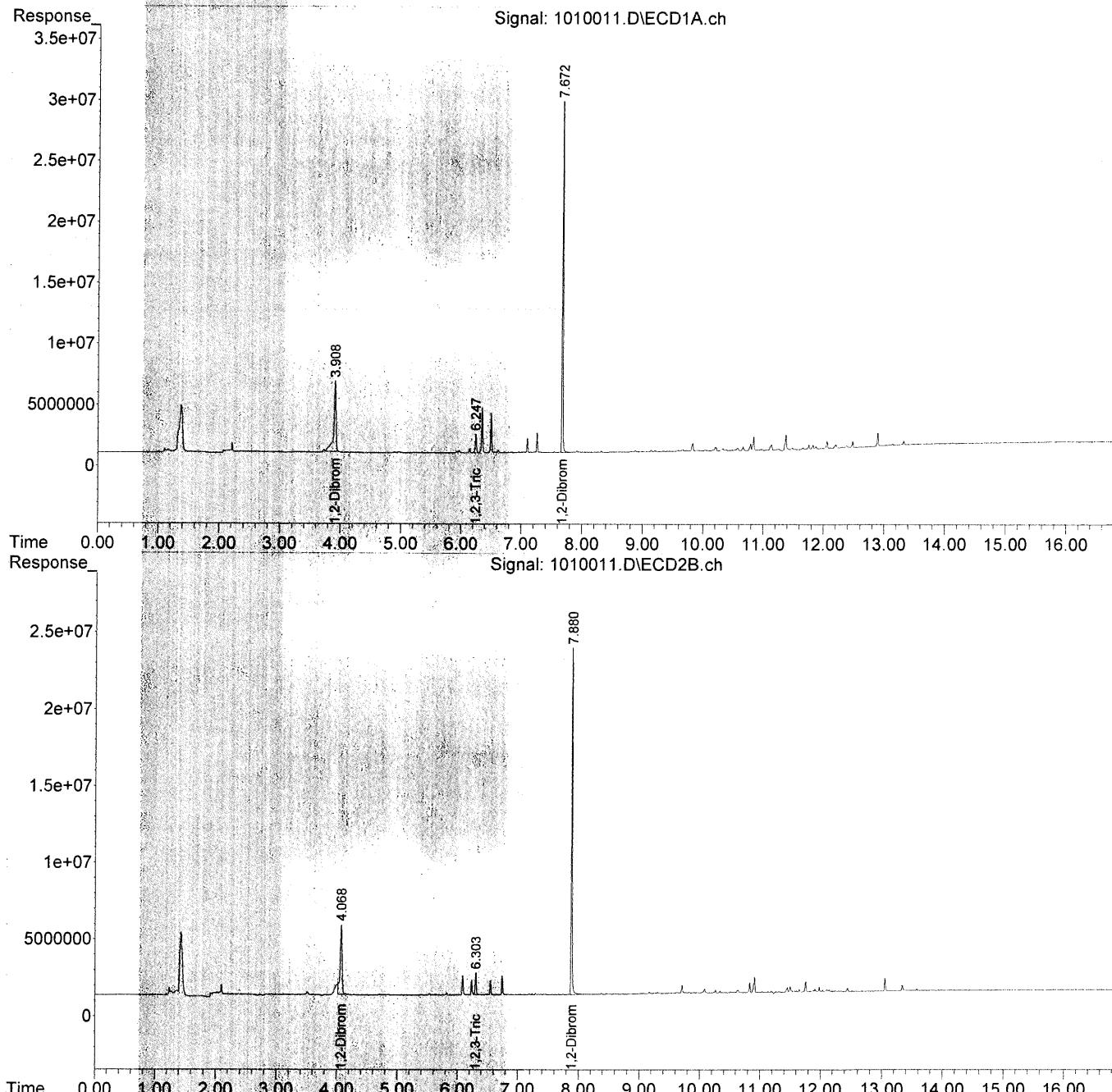
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:51:51 Operator: BS
Sample : ICAL LV8 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:18:12 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CALL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

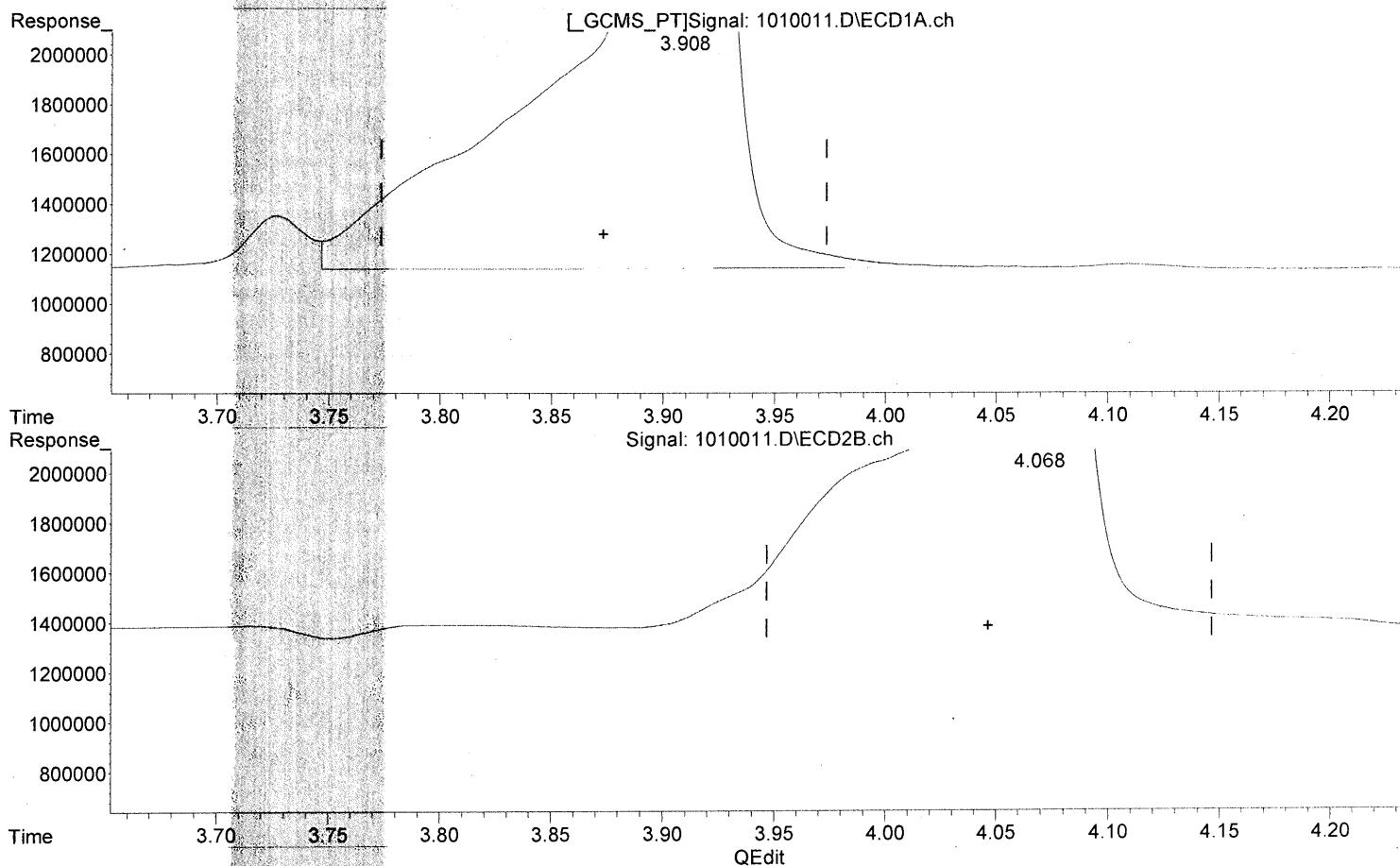


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 13.407 ppb

response 15609023

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:17:43 2016

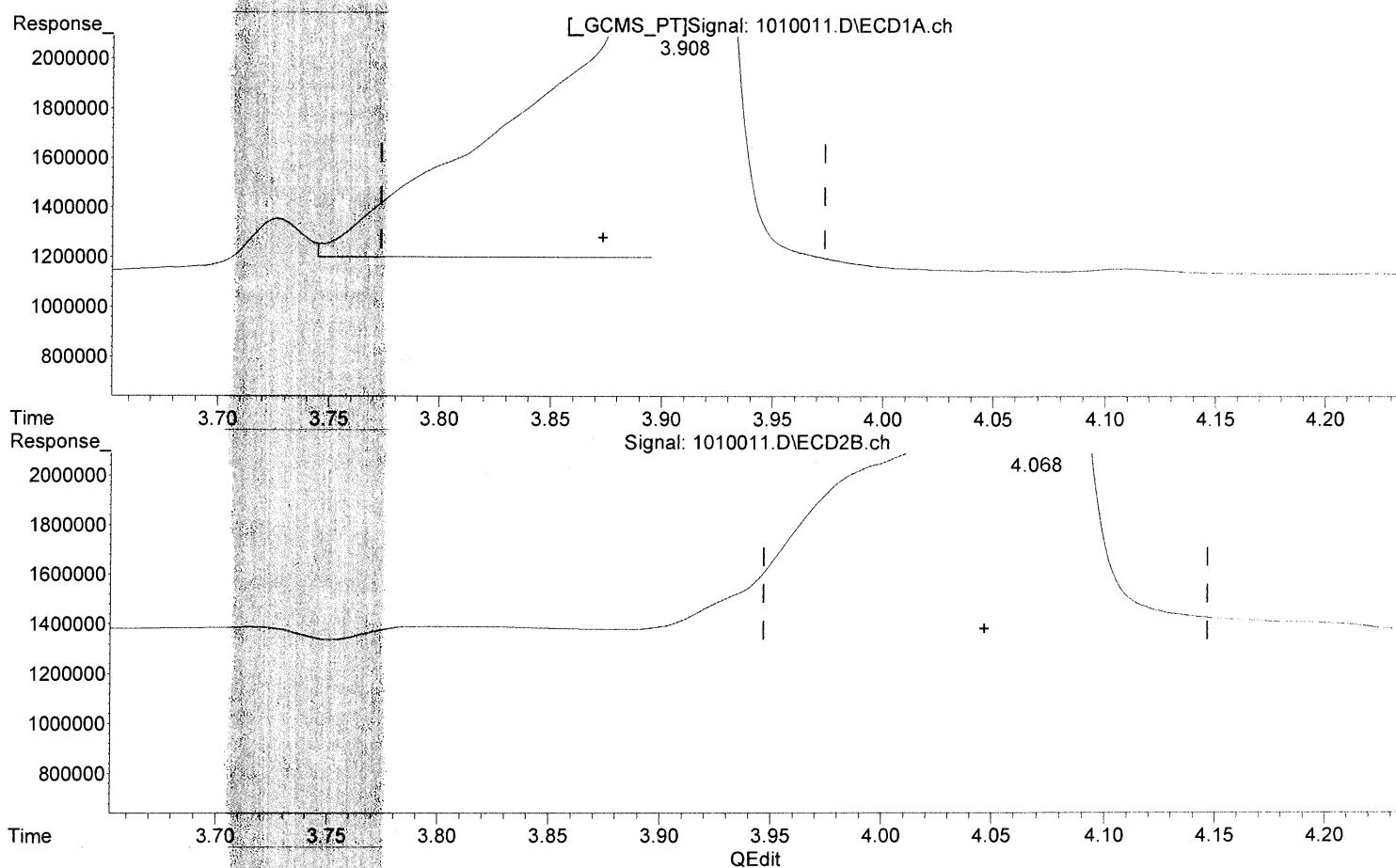
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12,661 ppb m

response 14751554

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:17:58 2016

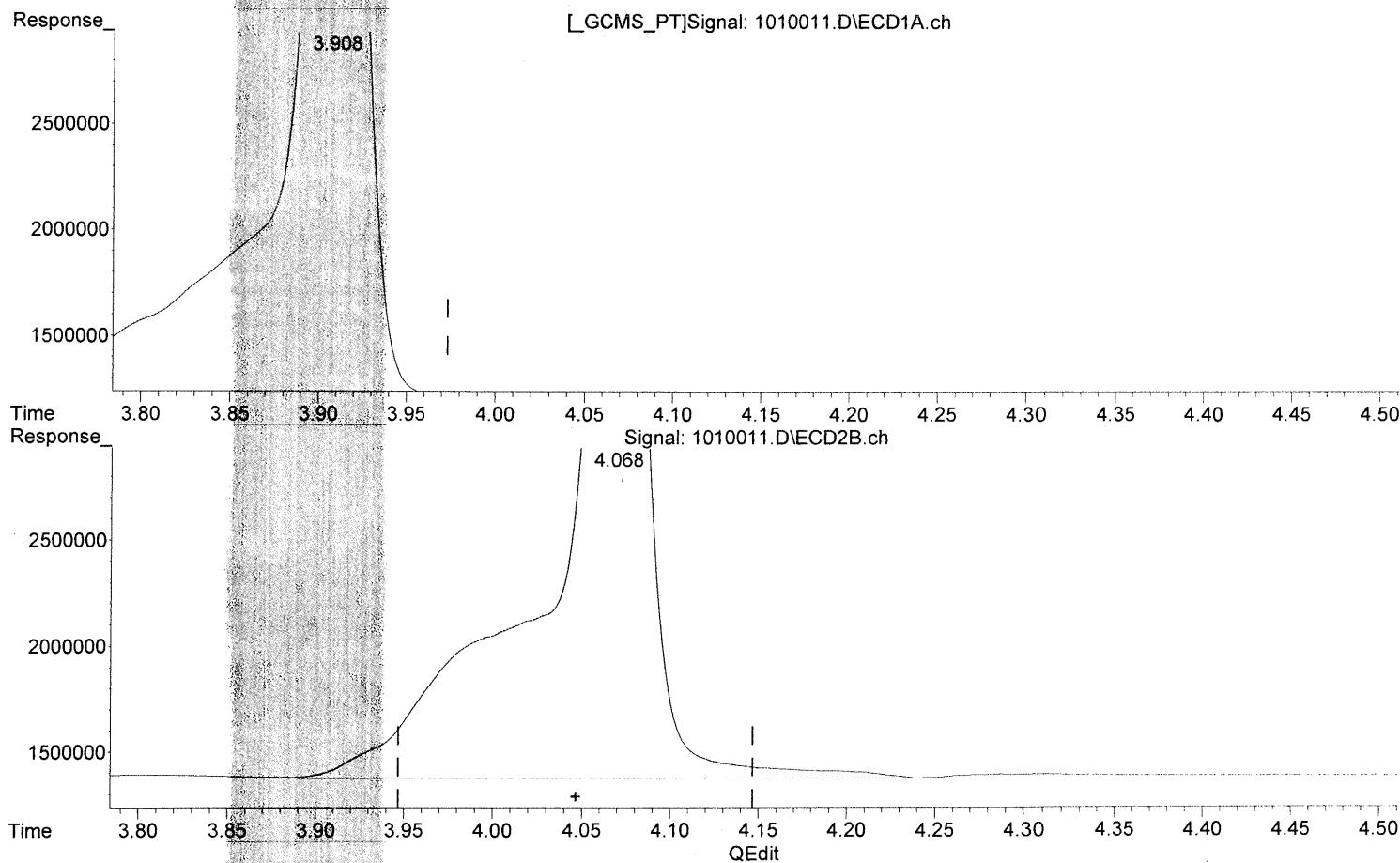
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12.661 ppb m

response 14751554

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:18:08 2016

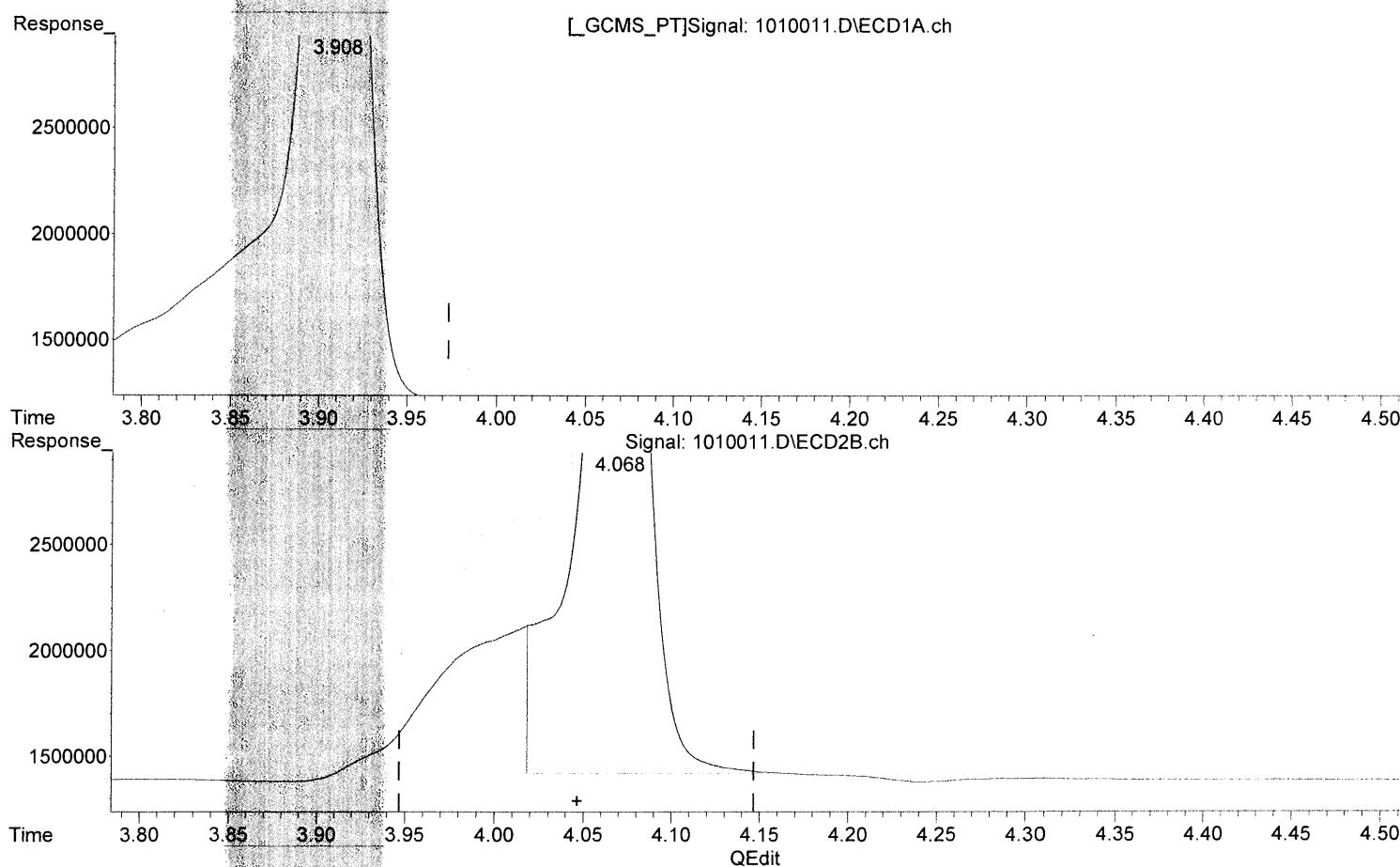
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method: J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12.661 ppb m

response 14751554

Manual Integration:

After

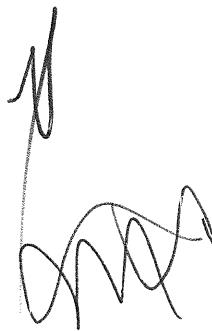
Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 7.160 ppb m

response 9894375



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:18:16 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 19:15:26 Operator: BS
Sample : ICAL ICV 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:41:21 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:19:10 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX^CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.898	4.063	1383314	1094744	1.222m	1.128m
2) M 1,2,3-Triiodopropane	6.243	6.300	227282	242192	1.168	1.096
3) M 1,2-Dibromoethane	7.670	7.878	3199031	2515344	1.111	1.110

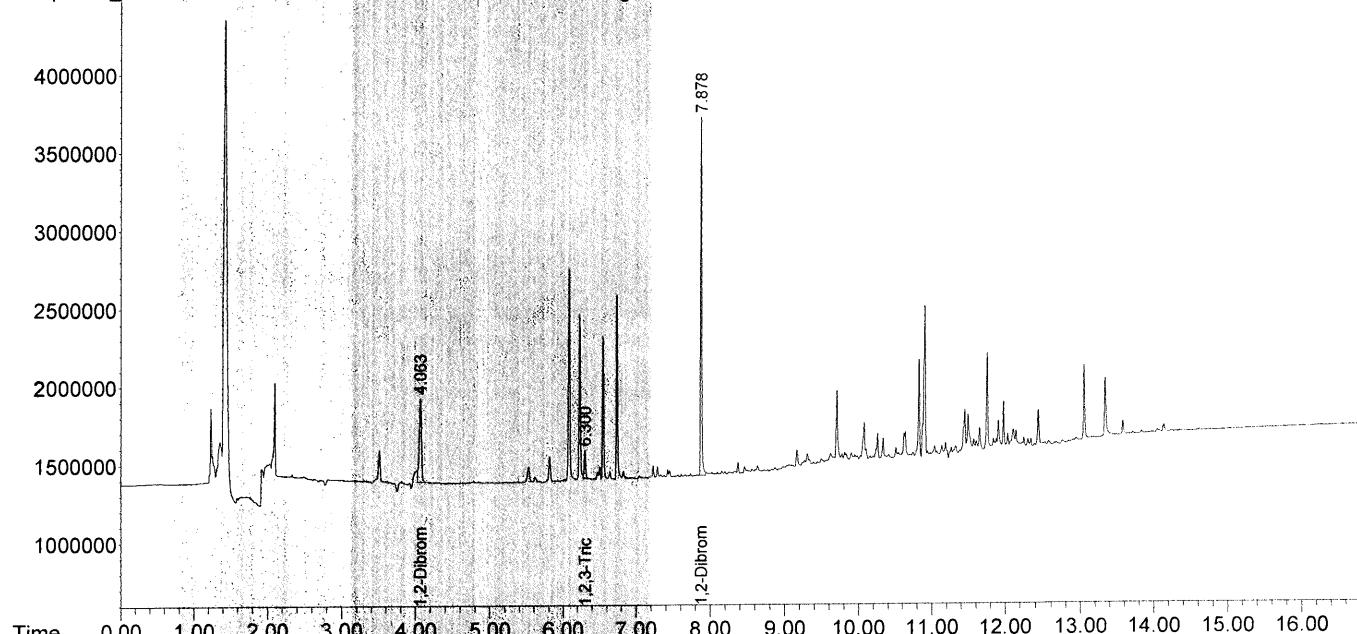
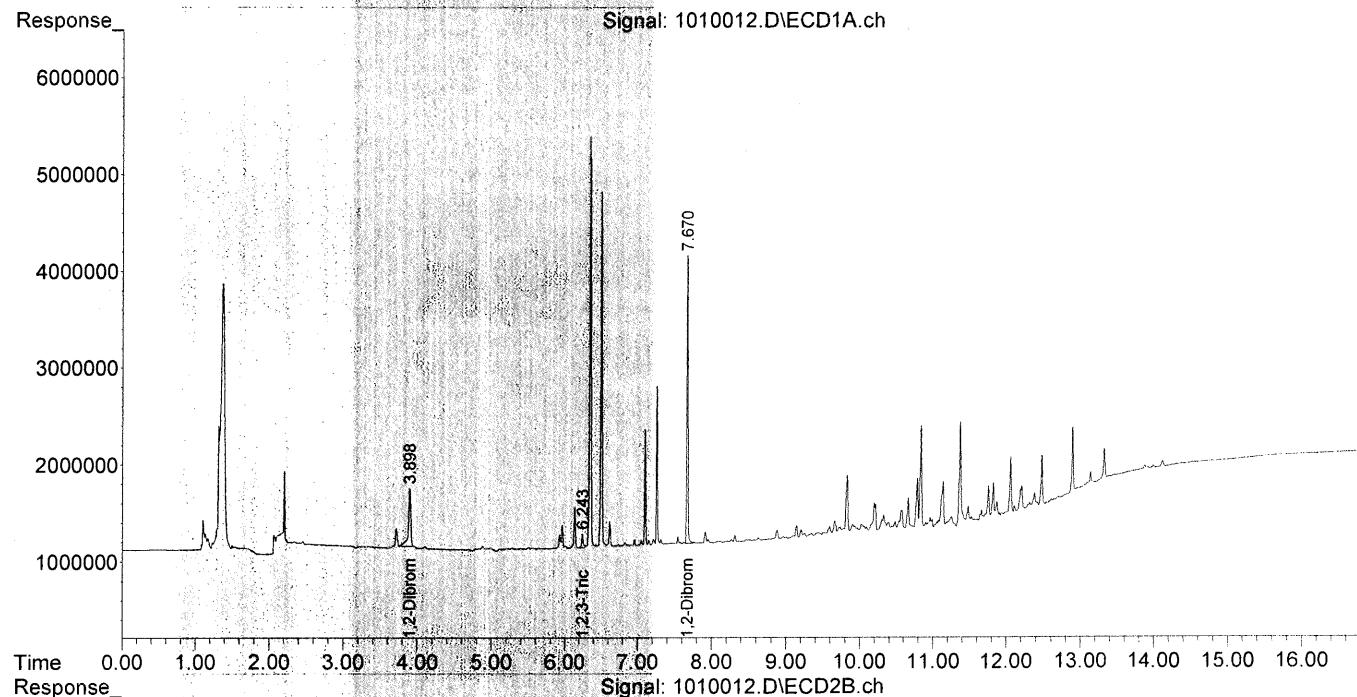
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 19:15:26 Operator: BS
Sample : ICAL ICV 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:41:21 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:19:10 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

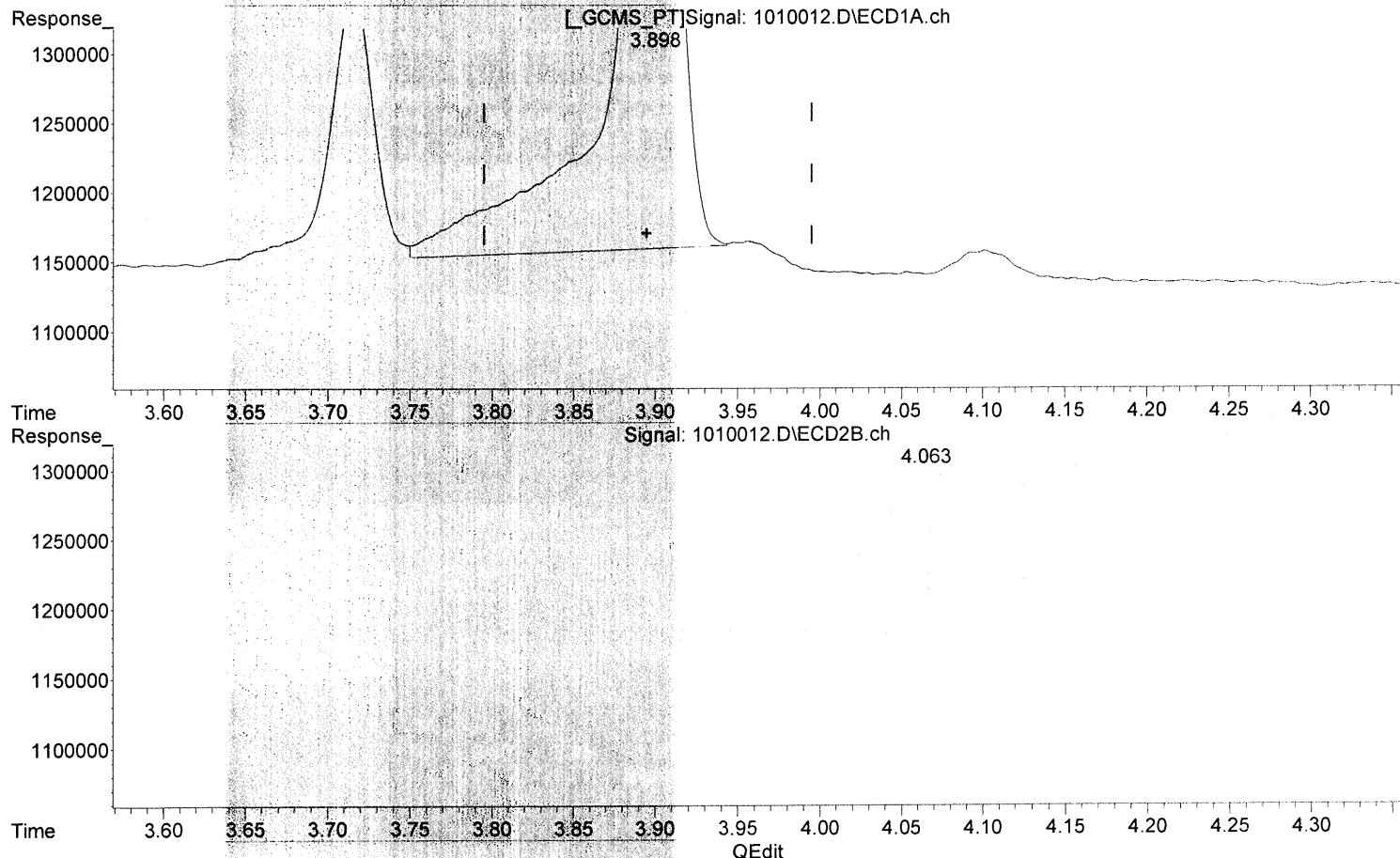


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.253 ppb

response 1419678

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:40:48 2016

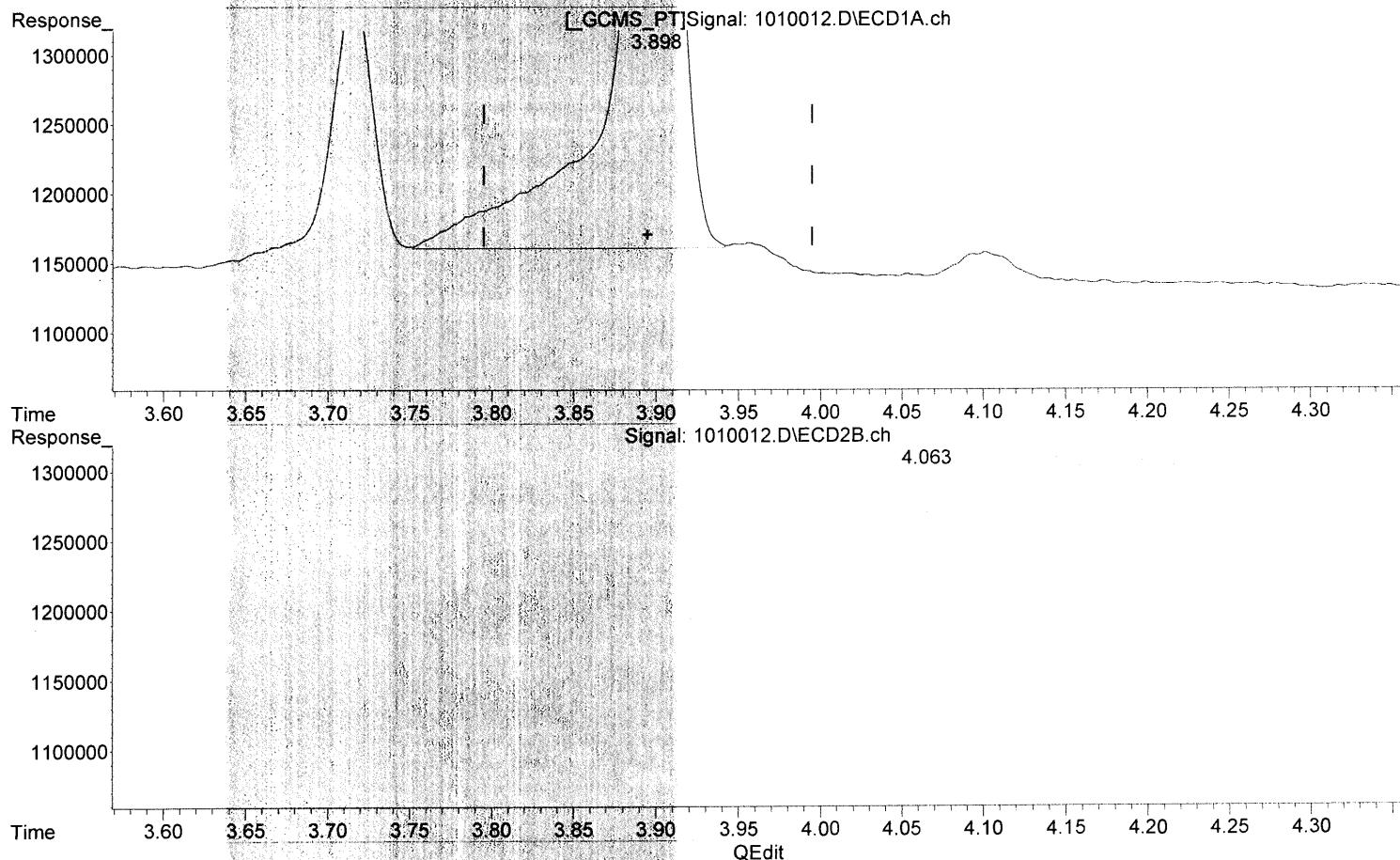
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:41:07 2016

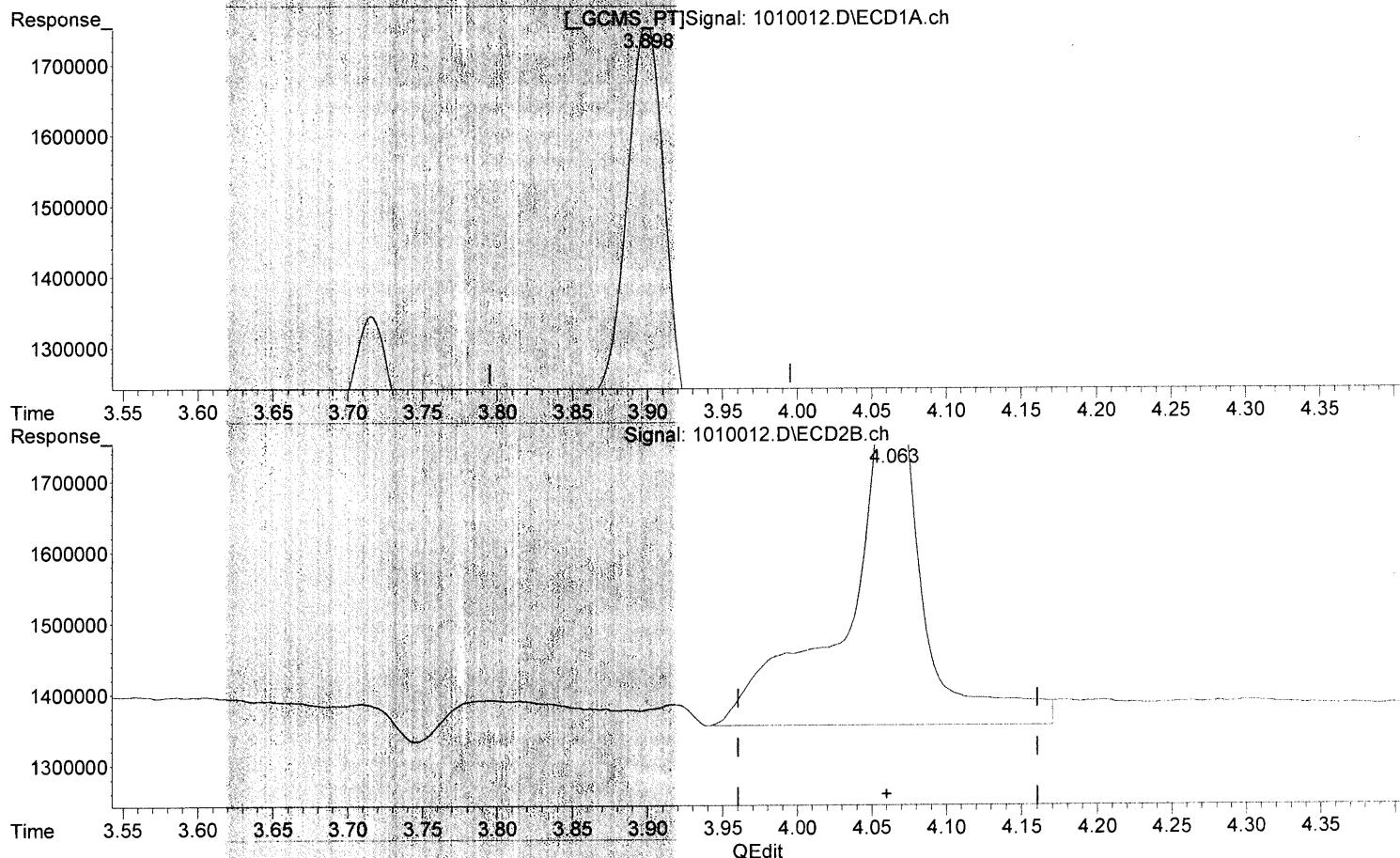
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CALL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

Manual Integration:

Before

10/11/16

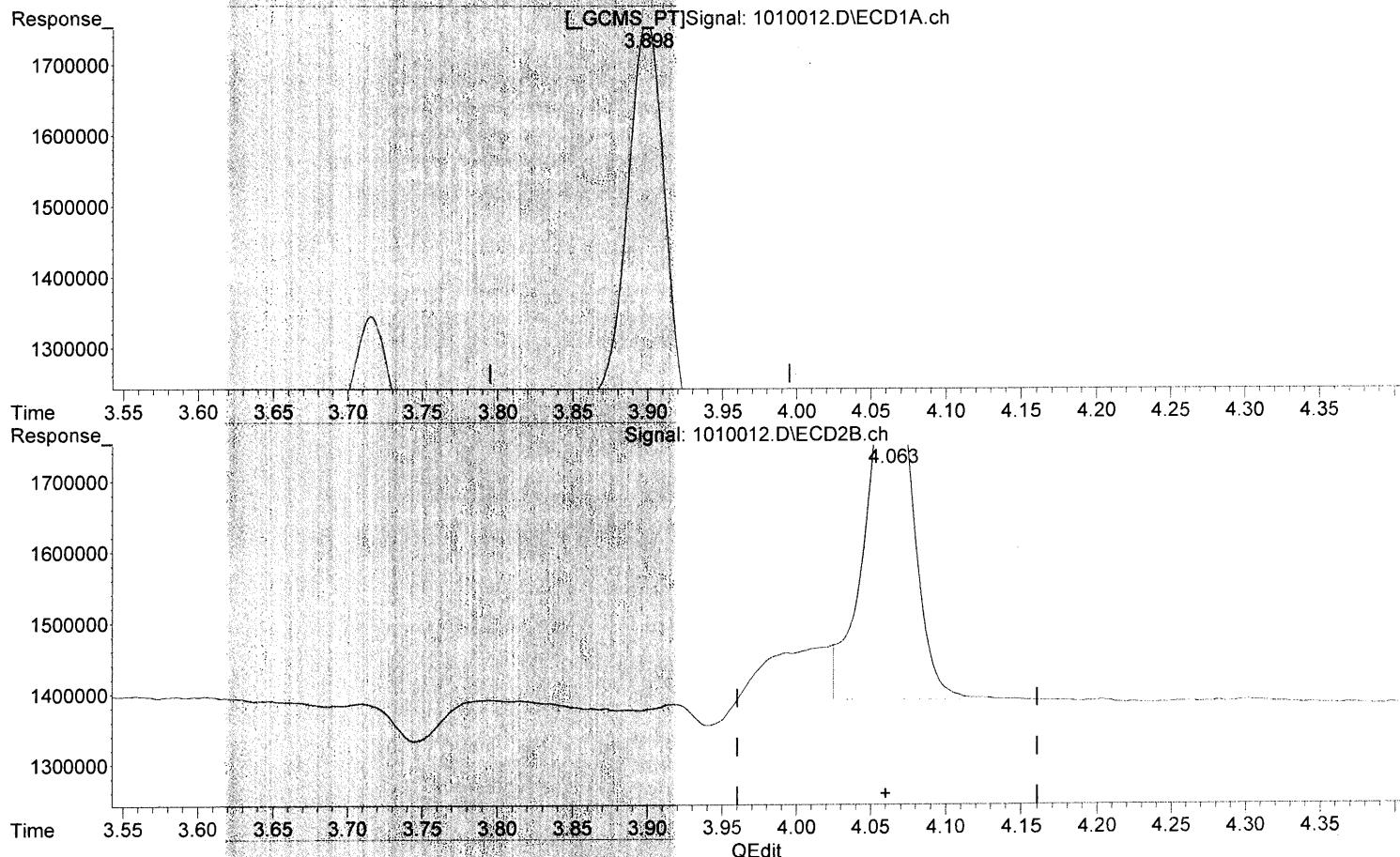


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.128 ppb m

response 1094744

Manual Integration:

After

Baseline/Shoulder

10/11/16



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:41:25 2016

Page: 1

EDB/TCP/DBCP in Water

Serv. Req. IDs:

1ca1

Method:

EPA 504.1

BATCH ID: kWG1609129

Comments:

Spike Information		Extract Information	
Matrix Spike ID/Conc:	<u>DWST07-91L</u>	<u>50 ppb</u>	Start Date: <u>10/10/16</u>
ICV Spike ID/Conc:	<u>DWST07-91H</u>	<u>50 ppb</u>	End Date: <u>10/10/16</u>
Start / Stop Time:	<u>10:00 13:05</u>		Hexane Lot <u>OP 775</u>
			NaCl Lot # <u>131606</u>
			Balance ID# <u>L-BALANCE-44</u>
Personnel and Bench Sheet Review			
Started By:	<u>LMuresan</u>		Assisted By: <u> </u>
Completed By:	<u>LMuresan</u>		Assisted By: <u> </u>
Bench Sheet Reviewed By/Date Reviewed:	<u> </u> <u>10/11/16</u>		Extracts Examined Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Preparation Information

Group ID:	KWG1609129	Prep Method:	METHOD	Prep Date:	10/10/16 10:00
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1612006-001	16279-GACI	504.1 EDB DBCP 123TCP	WATER	35.6068ml	2ml
K1612006-002	16279-GACE	504.1 EDB DBCP 123TCP	WATER	35.5123ml	2ml
K1612006-003	Trip Blank	504.1 EDB DBCP 123TCP	WATER	35.4477ml	2ml
K1612014-001	PARA SITE 1	504.1 EDB DBCP 123TCP	DRINKING	35.8942ml	2ml
K1612056-001	16272-GACI	504.1 EDB DBCP 123TCP	GROUND	35.5762ml	2ml
K1612056-002	16272-GACE	504.1 EDB DBCP 123TCP	GROUND	35.3232ml	2ml
K1612056-003	Trip Blank	504.1 EDB DBCP 123TCP	WATER	35.3692ml	2ml
K1612057-001	BB63606/GWPWPV09	504.1 EDB DBCP 123TCP	WATER	35.5935ml	2ml
K1612058-001	EL-68	504.1 EDB DBCP 123TCP	WATER	36.6818ml	2ml
K1612058-002	Potholes	504.1 EDB DBCP 123TCP	WATER	36.0507ml	2ml
K1612058-003	Sunrise	504.1 EDB DBCP 123TCP	WATER	35.9323ml	2ml
K1612058-007	Trip Blank	504.1 EDB DBCP 123TCP	WATER	35.8764ml	2ml
KWG1609129-1	Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.4995ml	2ml
KWG1609129-2	Duplicate Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.2273ml	2ml
KWG1609129-3	Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.2645ml	2ml
KWG1609129-4	Duplicate Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.1630ml	2ml
KWG1609129-5	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.0000ml	2ml
KWG1609129-6	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.0000ml	2ml
KWG1609129-7	Method Blank	504.1 EDB DBCP 123TCP	WATER	36.6818ml	2ml

Lab Code	Parent Lab Code	Comments
KWG1609129-1	K1612057-001	
KWG1609129-2	K1612057-001	
KWG1609129-3	K1612058-002	
KWG1609129-4	K1612058-002	

Comments: _____

Started By:	LMuresan	Assisted By:	_____	Training	Yes	No
Completed By:	LMuresan	Assisted By:	_____	Yes	No	
Reviewed By:	_____	Date:	10/10/16	Storage:	_____	_____

Chain of Custody

Relinquished By:	LM	Date:	10/10/16	Extracts Examined
Received By:	ML	Date:	10/10/16	Yes No

Group ID:	KWG1609129	Prep Method:	METHOD	Prep Date:	10/10/16 10:00
Department:	Semivola GC				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1612006-001	1560600					
K1612006-002	1560601					
K1612006-003	1560602					
K1612014-001	1560603					
K1612056-001	1560604					
K1612056-002	1560605					
K1612056-003	1560606					
K1612057-001	1560607					
K1612058-001	1560608					
K1612058-002	1560609					
K1612058-003	1560599					
K1612058-007	1560852					
KWG1609129-1	1560610					
KWG1609129-2	1560611					
KWG1609129-3	1560612					
KWG1609129-4	1560613					
KWG1609129-5	1560614					
KWG1609129-6	1560615					
KWG1609129-7	1560616					

Comments: _____

Started By:	LMuresan	Assisted By:	_____	Training Yes	Training No
Completed By:	LMuresan	Assisted By:	_____	Yes	No
Reviewed By:	_____	Date:	_____	Storage:	_____

Chain of Custody

Relinquished By:	LM	Date:	10/10/16	Extracts Examined
Received By:	WT	Date:	10/10/16	Yes

EDB/TCP/DBCP in Water

Serv. Req. IDs:

K1612006, 2014, 2056, 2057, 2058

Method: EPA 504.1

Lab Code	#	Comments	Wt. of sample and vial(g)	Wt. of vial (g)	Sample Amount (mL)	Spike Vol.	NaCl added	Final Volume (ml)
K1612006-1	.01		58.9294	23.3226	35.6068	-	7	2
-2	.01		58.6802	23.1679	35.5123	-	7	2
-3	.02		58.7154	23.2677	35.4477	-	7	2
K1612014-1	.09		58.5995	22.7053	35.8942	-	7	2
K1612056-1	.01		58.9622	23.3860	35.5162	-	7	2
-2	.01		58.7733	23.4501	35.3232	-	7	2
-3	.01		58.7094	23.3402	35.3692	-	7	2
K1612057-1	.05	light sediment	58.9974	23.4039	35.5935	-	7	2
K1612058-1	.23		59.4541	22.7723	36.6818	-	7	2
-2*	.49	algae	58.7034	22.6527	36.0509	-	7	2
-3*	.49	algae	57.9857	22.6534	35.9323	-	7	2
K1612057-1 MS	.06	light sediment	59.0069	22.5074	36.4995	175	7	2
-1 DM5	.07	—	58.7239	22.4966	36.2273	175	7	2
K1612058-2 MS*	.50	algae	58.4936	22.2291	36.2645	175	7	2

BATCH ID: kwf-1609129

#272882

Comments: * after extraction samples formed an emulsion -> set them on centrifuge for 5' to achieve solvent layer separation

Spike Information

Matrix Spike ID/Conc:

DWSTD 07-91 L Sop96

XP

DWSTD 07-91 H Sop96

1/27/17

Start / Stop Time:

10:00 13:05

Extract Information

Start Date:

10/10/16

End Date:

10/10/16

Hexane Lot #

0P775

NaCl Lot #

131606

Balance ID#

K-13A1ANCE-44

Personnel and Bench Sheet Review

Started By:

LMuresan

Completed By:

LMuresan

Assisted By:

Assisted By:

Bench Sheet Reviewed By/Date Reviewed:

10/11/09

Extracts Examined

Yes No

EDB/TCP/DBCP in Water

Serv. Req. IDs:

2006, 2014, 2056, 2057, 2058

Method: EPA 504.1

BATCH ID: kwGf609129

Comments:

ments: ~~the~~ sample formed an emulsion after extraction \rightarrow set on centrifuge for 5' to achieve solvent layer separation

Personnel and Bench Sheet Review

Started By:

L Muregan
L Muregan

Completed By:

Assisted By:

Assisted By:

Bench Sheet Reviewed By/Date Reviewed:

Extracts Examined

Yes No

Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
No	1	Vial	94	504-1 PRIMER MeOH	1010001	F:01:01
No	2	Vial	95	504-1 PRIMER Hexane	1010002	F:02:01
No	3	Vial	1	504-1 ICAL BLANK	1010003	F:03:01
No	4	Vial	2	504-1 ICAL LV1 101016	1010004	F:04:01
No	5	Vial	3	504-1 ICAL LV2 101016	1010005	F:05:01
No	6	Vial	4	504-1 ICAL LV3 101016	1010006	F:06:01
No	7	Vial	5	504-1 ICAL LV4 101016	1010007	F:07:01
No	8	Vial	6	504-1 ICAL LV5 101016	1010008	F:08:01
No	9	Vial	7	504-1 ICAL LV6 101016	1010009	F:09:01
No	10	Vial	8	504-1 ICAL LV7 101016	1010010	F:10:01
No	11	Vial	9	504-1 ICAL LV8 101016	1010011	F:11:01
No	12	Vial	10	504-1 ICAL ICV 101016	1010012	F:12:01
No	13	Vial	6	504-1 101016 LV5	1010013	F:13:01
No	14	Vial	1	504-1 IB	1010014	F:14:01
No	15	Vial	11	504-1 KWG1609129-5LCS	1010015	F:15:01
No	16	Vial	12	504-1 KWG1609129-6LCS	1010016	F:16:01
No	17	Vial	13	504-1 KWG1609129-7MB	1010017	F:17:01
No	18	Vial	14	504-1 K1612006-001	1010018	F:18:01
No	19	Vial	15	504-1 K1612006-002	1010019	F:19:01
No	20	Vial	16	504-1 K1612006-003	1010020	F:20:01
No	21	Vial	17	504-1 K1612014-001	1010021	F:21:01
No	22	Vial	18	504-1 K1612056-001	1010022	F:22:01
No	23	Vial	19	504-1 K1612056-002	1010023	F:23:01
No	24	Vial	20	504-1 K1612056-003	1010024	F:24:01
No	25	Vial	7	504-1 101016 504 LV6	1010025	F:25:01
No	26	Vial	1	504-1 IB	1010026	F:26:01
No	27	Vial	21	504-1 K1612057-001	1010027	F:27:01
No	28	Vial	22	504-1 K1612057-001MS	1010028	F:28:01

Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	29	Vial 23	504-1 K1612057-001DMS	1010029		F:29:01
No	30	Vial 24	504-1 K1612058-001	1010030		F:30:01
No	31	Vial 25	504-1 K1612058-002	1010031		F:31:01
No	32	Vial 26	504-1 K1612058-002MS	1010032		F:32:01
No	33	Vial 27	504-1 K1612058-002DMS	1010033		F:33:01
No	34	Vial 28	504-1 K1612058-003	1010034		F:34:01
No	35	Vial 29	504-1 K1612058-007	1010035		F:35:01
No	36	Vial 7	504-1 101016 504 LV6	1010036		F:36:01
No	37	Vial 100	504-1 IB	1010037		F:37:01
No	38	Vial 35	504-1 ICAL LV1 3511	1010038		F:38:01
No	39	Vial 36	504-1 ICAL LV2 3511	1010039		F:39:01
No	40	Vial 37	504-1 ICAL LV3 3511	1010040		F:40:01
No	41	Vial 38	504-1 ICAL LV4 3511	1010041		F:41:01
No	42	Vial 39	504-1 ICAL LV5 3511	1010042		F:42:01
No	43	Vial 40	504-1 ICAL LV6 3511	1010043		F:43:01
No	44	Vial 41	504-1 ICAL LV7 3511	1010044		F:44:01
No	45	Vial 42	504-1 ICAL LV8 3511	1010045		F:45:01
No	46	Vial 43	504-1 ICAL ICV 3511	1010046		F:46:01
No	47	Vial 39	504-1 ICAL LV5 3511	1010047		F:47:01
No	48	Vial 100	504-1 IB	1010048		F:48:01
No	49	Vial 44	504-1 KWG1609130-1IPR	1010049		F:49:01
No	50	Vial 45	504-1 KWG1609130-2IPR	1010050		F:50:01
No	51	Vial 46	504-1 KWG1609130-3IPR	1010051		F:51:01
No	52	Vial 47	504-1 KWG1609130-4IPR	1010052		F:52:01
No	53	Vial 48	504-1 KWG1609130-5MB	1010053		F:53:01
No	54	Vial 40	504-1 ICAL LV6 3511	1010054		F:54:01
No	55	Vial 100	504-1 IB	1010055		F:55:01



ALS Environmental
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November 03, 2016

Analytical Report for Service Request No: K1612056

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory October 06, 2016
For your reference, these analyses have been assigned our service request number **K1612056**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink, appearing to read "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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 - EPA Method 504.1

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.alsglobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialist **Service Request No.:** K1612056
Project: Drexel **Date Received:** 10/06/16
Sample Matrix: Ground Water and Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

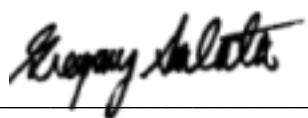
Sample Receipt

Three samples were received for analysis at ALS Environmental on 10/06/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB by EPA Method 504.1

No anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

DATE 9-28-16 PAGE 1 OF 1

PROJECT NAME <u>Drexel</u> PROJECT MANAGER <u>Timmerly Bullman</u> COMPANY NAME <u>EPS Inc.</u> ADDRESS <u>1050 Crown Pointe Pkwy Ste 550 Atlanta, GA 30338</u> <u>tbullman@envplanning.com</u> PHONE <u>404-315-9113</u> SAMPLERS SIGNATURE <u>Terrance Walker</u>					NUMBER OF CONTAINERS	ANALYSIS REQUESTED																
SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX		EDB (Methyl Soil)																
16272-GACE	9/28/16	12:15 pm	GW(2)		X																	
16272-GACE	9/28/16	12:25 pm	GW(2)		X																	
Trip Blank	3/16/16		W (2)		X																	
REMARKS																						
REPORT REQUIREMENTS		INVOICE INFORMATION			Circle which metals are to be analyzed:																	
		P.O. #			Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg																	
I. Routine Report: Method Blank, Surrogate, as required		Bill To:			Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg																	
II. Report Dup., MS, MSD as required		TURNAROUND REQUIREMENTS			*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: (CIRCLE ONE)																	
III. CLP Like Summary (no raw data)		24 hr. <input checked="" type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (10-15 working days)			SPECIAL INSTRUCTIONS/COMMENTS:																	
IV. Data Validation Report		<input type="checkbox"/> Provide Verbal Preliminary Results																				
V. EDD		<input type="checkbox"/> Provide FAX preliminary Results																				
Requested Report Date _____		<input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)																				
RELINQUISHED BY: <u>Terrance Walker</u> Signature Terrance Walker Printed Name				RECEIVED BY: <u>Lars</u> Signature E.S. Single Printed Name				RELINQUISHED BY: <u>(O-6-16 09:40)</u> Signature Firm				RECEIVED BY: <u></u> Signature Date/Time Firm										

PC 65

Cooler Receipt and Preservation Form

Client Drexel

Service Request K16

Received: 10-6-16 Opened: 10-6-16 By: eg Unloaded: 10-6-16 By: eg

1. Samples were received via? Mail Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? Y N If yes, how many and where? 1 front
If present, were custody seals intact? Y N If present, were they signed and dated? N

Raw Cooler Temp	Corrected, Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number	NA	Filed
133	13.3	14.4	14.4	<input checked="" type="checkbox"/>	370		7773 9647 6982		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below.* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
All	All	X								

Notes, Discrepancies, & Resolutions: _____

Page _____ of _____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Environmental Planning Specialists **Service Request:** K1612056
Project: Drexel

Cover Page - Organic Analysis Data Package
EPA Method 504.1

Sample Name	Lab Code	Date Collected	Date Received
16272-GACI	K1612056-001	09/28/2016	10/06/2016
16272-GACE	K1612056-002	09/28/2016	10/06/2016
Trip Blank	K1612056-003	09/28/2016	10/06/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1612056
Date Collected: 09/28/2016
Date Received: 10/06/2016

EPA Method 504.1

Sample Name: 16272-GACI **Units:** ug/L
Lab Code: K1612056-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.19	0.0098	0.00300	1	10/10/16	10/10/16	KWG1609129	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1612056
Date Collected: 09/28/2016
Date Received: 10/06/2016

EPA Method 504.1

Sample Name: 16272-GACE **Units:** ug/L
Lab Code: K1612056-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0099	0.00300	1	10/10/16	10/10/16	KWG1609129	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612056
Date Collected: 09/28/2016
Date Received: 10/06/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1612056-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0098	0.00300	1	10/10/16	10/10/16	KWG1609129	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612056
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1609129-7 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.0095	0.00300	1	10/10/16	10/10/16	KWG1609129	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612056
Date Extracted: 10/10/2016
Date Analyzed: 10/11/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1612057-001	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1609129

Analyte Name	Sample Result	Batch QCMS			Batch QCDMS			%Rec Limits	RPD	RPD Limit			
		KGW1609129-1			KGW1609129-2								
		Matrix Spike			Duplicate Matrix Spike								
1,2-Dibromoethane (EDB)	ND	0.258	0.240	107	0.256	0.242	106	65-135	1	30			

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612056
Date Extracted: 10/10/2016
Date Analyzed: 10/11/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1612058-002	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1609129

Analyte Name	Sample Result	Batch QCMS KWG1609129-3			Batch QCDMS KWG1609129-4			Duplicate Matrix Spike		
		Matrix Spike								
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	ND	0.259	0.241	107	0.246	0.242	102	65-135	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612056
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L

Basis: NA

Level: Low

Extraction Lot: KWG1609129

Lab Control Sample
KWG1609129-5
Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec
		Amount	Limits	
1,2-Dibromoethane (EDB)	0.238	0.250	95	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612056
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Extraction Lot: KWG1609129

Lab Control Sample
KWG1609129-6
Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec
		Amount	Limits	
1,2-Dibromoethane (EDB)	0.235	0.250	94	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612056
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016
Time Analyzed: 21:13

Method Blank Summary**EPA Method 504.1**

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1609129-7	File ID:	J:\GC33\DATA\101016-504\1010017.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1609129

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1609129-5	J:\GC33\DATA\101016-504\1010015.D	10/10/16	20:26
Lab Control Sample	KWG1609129-6	J:\GC33\DATA\101016-504\1010016.D	10/10/16	20:50
16272-GACI	K1612056-001	J:\GC33\DATA\101016-504\1010022.D	10/10/16	23:11
16272-GACE	K1612056-002	J:\GC33\DATA\101016-504\1010023.D	10/10/16	23:34
Trip Blank	K1612056-003	J:\GC33\DATA\101016-504\1010024.D	10/10/16	23:58
Batch QC	K1612057-001	J:\GC33\DATA\101016-504\1010027.D	10/11/16	01:09
Batch QCMS	KWG1609129-1	J:\GC33\DATA\101016-504\1010028.D	10/11/16	01:33
Batch QCDMS	KWG1609129-2	J:\GC33\DATA\101016-504\1010029.D	10/11/16	01:56
Batch QC	K1612058-002	J:\GC33\DATA\101016-504\1010031.D	10/11/16	02:44
Batch QCMS	KWG1609129-3	J:\GC33\DATA\101016-504\1010032.D	10/11/16	03:07
Batch QCDMS	KWG1609129-4	J:\GC33\DATA\101016-504\1010033.D	10/11/16	03:31

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612056
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016
Time Analyzed: 20:26

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1609129-5	File ID:	J:\GC33\DATA\101016-504\1010015.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1609129

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1609129-7	J:\GC33\DATA\101016-504\1010017.D	10/10/16	21:13
16272-GACI	K1612056-001	J:\GC33\DATA\101016-504\1010022.D	10/10/16	23:11
16272-GACE	K1612056-002	J:\GC33\DATA\101016-504\1010023.D	10/10/16	23:34
Trip Blank	K1612056-003	J:\GC33\DATA\101016-504\1010024.D	10/10/16	23:58
Batch QC	K1612057-001	J:\GC33\DATA\101016-504\1010027.D	10/11/16	01:09
Batch QCMS	KWG1609129-1	J:\GC33\DATA\101016-504\1010028.D	10/11/16	01:33
Batch QCDMS	KWG1609129-2	J:\GC33\DATA\101016-504\1010029.D	10/11/16	01:56

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1612056
Date Extracted: 10/10/2016
Date Analyzed: 10/10/2016
Time Analyzed: 20:50

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1609129-6	File ID:	J:\GC33\DATA\101016-504\1010016.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1609129

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QC	K1612058-002	J:\GC33\DATA\101016-504\1010031.D	10/11/16	02:44
Batch QCMS	KWG1609129-3	J:\GC33\DATA\101016-504\1010032.D	10/11/16	03:07
Batch QCDMS	KWG1609129-4	J:\GC33\DATA\101016-504\1010033.D	10/11/16	03:31

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612056
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943 **Column:** RTX-CLP
Instrument ID: GC33

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D	F	J:\GC33\DATA\101016-504\1010009.D
B	J:\GC33\DATA\101016-504\1010005.D	G	J:\GC33\DATA\101016-504\1010010.D
C	J:\GC33\DATA\101016-504\1010006.D	H	J:\GC33\DATA\101016-504\1010011.D
D	J:\GC33\DATA\101016-504\1010007.D		
E	J:\GC33\DATA\101016-504\1010008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	7.68E+5	B	0.13	8.48E+5	C	0.25	9.56E+5	D	0.63	1.27E+6	E	1.3	1.12E+6
	F	3.8	1.32E+6	G	5.0	1.20E+6	H	10	1.48E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612056
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	Quadratic	COD	0.998	≥ 0.99	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612056
Calibration Date: 10/10/2016
Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14943
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\DATA\101016-504\1010012.D **Column ID:** RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1120000	1110000	NA	-2	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612056
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943 **Column:** RTX-CLP2
Instrument ID: GC33

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D\1010004.c.d	F	J:\GC33\DATA\101016-504\1010009.D\1010009.c.d
B	J:\GC33\DATA\101016-504\1010005.D\1010005.c.d	G	J:\GC33\DATA\101016-504\1010010.D\1010010.c.d
C	J:\GC33\DATA\101016-504\1010006.D\1010006.c.d	H	J:\GC33\DATA\101016-504\1010011.D\1010011.c.d
D	J:\GC33\DATA\101016-504\1010007.D\1010007.c.d		
E	J:\GC33\DATA\101016-504\1010008.D\1010008.c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	8.73E+5	B	0.13	9.71E+5	C	0.25	1.05E+6	D	0.63	1.09E+6	E	1.3	9.01E+5
	F	3.8	9.65E+5	G	5.0	9.21E+5	H	10	9.89E+5						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612056
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	7.6	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612056
Calibration Date: 10/10/2016
Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14943
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\DATA\101016-504\1010012.D\1010012.c.d **Column ID:** RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	970000	876000	-10	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists **Service Request:** K1612056
Project: Drexel **Date Analyzed:** 10/10/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1609198
		Units:	ppb
File ID:	J:\GC33\DATA\101016-504\1010013.D	Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1120000	1130000	NA	0	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1612056
Project: Drexel **Date Analyzed:** 10/10/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1609198
		Units:	ppb
File ID:	J:\GC33\DATA\101016-504\1010013.D\1010013C.D	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	970000	861000	-11	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists **Service Request:** K1612056
Project: Drexel **Date Analyzed:** 10/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1609198
		Units:	ppb
File ID:	J:\GC33\DATA\101016-504\1010025.D	Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.1	1120000	1340000	NA	8	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists **Service Request:** K1612056
Project: Drexel **Date Analyzed:** 10/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1609198
		Units:	ppb
File ID:	J:\GC33\DATA\101016-504\1010025.D\1010025.C.D	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.0	970000	1030000	6	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists **Service Request:** K1612056
Project: Drexel **Date Analyzed:** 10/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1609198
		Units:	ppb
File ID:	J:\GC33\DATA\101016-504\1010036.D	Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	4.1	1120000	1360000	NA	10	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1612056
Project: Drexel **Date Analyzed:** 10/11/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1609198
		Units:	ppb
File ID:	J:\GC33\DATA\101016-504\1010036.D\1010036C.D	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	3.8	3.7	970000	964000	-1	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1612056

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1609198
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\1010013.D	Continuing Calibration Verification	KWG1609198-1	10/10/2016	19:39		10/10/2016	19:55
\1010014.D	Instrument Blank	KWG1609198-4	10/10/2016	20:02		10/10/2016	20:19
\1010015.D	Lab Control Sample	KWG1609129-5	10/10/2016	20:26		10/10/2016	20:43
\1010016.D	Lab Control Sample	KWG1609129-6	10/10/2016	20:50		10/10/2016	21:06
\1010017.D	Method Blank	KWG1609129-7	10/10/2016	21:13		10/10/2016	21:30
\1010018.D	ZZZZZZ	ZZZZZZ	10/10/2016	21:37		10/10/2016	21:53
\1010019.D	ZZZZZZ	ZZZZZZ	10/10/2016	22:00		10/10/2016	22:17
\1010020.D	ZZZZZZ	ZZZZZZ	10/10/2016	22:24		10/10/2016	22:40
\1010021.D	ZZZZZZ	ZZZZZZ	10/10/2016	22:47		10/10/2016	23:04
\1010022.D	16272-GACI	K1612056-001	10/10/2016	23:11		10/10/2016	23:28
\1010023.D	16272-GACE	K1612056-002	10/10/2016	23:34		10/10/2016	23:51
\1010024.D	Trip Blank	K1612056-003	10/10/2016	23:58		10/11/2016	00:15
\1010025.D	Continuing Calibration Verification	KWG1609198-2	10/11/2016	00:22		10/11/2016	00:39
\1010026.D	Instrument Blank	KWG1609198-5	10/11/2016	00:45		10/11/2016	01:02
\1010027.D	Batch QC	K1612057-001	10/11/2016	01:09		10/11/2016	01:26
\1010028.D	Batch QCMS	KWG1609129-1	10/11/2016	01:33		10/11/2016	01:49
\1010029.D	Batch QCDMS	KWG1609129-2	10/11/2016	01:56		10/11/2016	02:13
\1010030.D	ZZZZZZ	ZZZZZZ	10/11/2016	02:20		10/11/2016	02:37
\1010031.D	Batch QC	K1612058-002	10/11/2016	02:44		10/11/2016	03:00
\1010032.D	Batch QCMS	KWG1609129-3	10/11/2016	03:07		10/11/2016	03:24
\1010033.D	Batch QCDMS	KWG1609129-4	10/11/2016	03:31		10/11/2016	03:48
\1010034.D	ZZZZZZ	ZZZZZZ	10/11/2016	03:54		10/11/2016	04:11
\1010035.D	ZZZZZZ	ZZZZZZ	10/11/2016	04:18		10/11/2016	04:35
\1010036.D	Continuing Calibration Verification	KWG1609198-3	10/11/2016	04:42		10/11/2016	04:58
\1010037.D	Instrument Blank	KWG1609198-6	10/11/2016	05:05		10/11/2016	05:22

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1612056
Date Extracted: 10/10/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1609129
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16272-GACI	K1612056-001	09/28/16	10/06/16	35.5762ml	2ml	NA	
16272-GACE	K1612056-002	09/28/16	10/06/16	35.3232ml	2ml	NA	
Trip Blank	K1612056-003	09/28/16	10/06/16	35.3692ml	2ml	NA	
Method Blank	KWG1609129-7	NA	NA	36.6818ml	2ml	NA	
Batch QC	K1612057-001	NA	NA	35.5935ml	2ml	NA	
Batch QC	K1612058-002	NA	NA	36.0507ml	2ml	NA	
Batch QCMS	KWG1609129-1	NA	NA	36.4995ml	2ml	NA	
Batch QCDMS	KWG1609129-2	NA	NA	36.2273ml	2ml	NA	
Batch QCMS	KWG1609129-3	NA	NA	36.2645ml	2ml	NA	
Batch QCDMS	KWG1609129-4	NA	NA	36.1630ml	2ml	NA	
Lab Control Sample	KWG1609129-5	NA	NA	35.0000ml	2ml	NA	
Lab Control Sample	KWG1609129-6	NA	NA	35.0000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Ground water

Service Request: K1612056
Date Collected: 09/28/2016
Date Received: 10/06/2016
Date Extracted: 10/10/2016

EPA Method 504.1

Sample Name: 16272-GACI
Lab Code: K1612056-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0098	0.00300	0.19	0.22	14.6		1	10/10/16



Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Exception Report

Data File: J:\GC33\DATA\101016-504\1010022.D
Lab ID: K1612056-001
RunType: SMPL
Matrix: GROUND WATER

Date Acquired: 10/10/2016 23:11
Date Quantitated: 10/11/2016 10:40
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010022.D\1010022C.D
Lab ID: K1612056-001
RunType: SMPL
Matrix: GROUND WATER

Date Acquired: 10/10/2016 23:11
Date Quantitated: 10/11/2016 10:40
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010022.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010022.D\1010022.c.d	Vial:	18
Acq Date:	10/10/2016 23:11	Quant Date:	10/11/2016 10:40
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1612056-001	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	09/28/2016
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1560604	Prep Date:	10/10/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L	ug/L	
1,2-Dibromoethane (EDB)	3.90	4.07 ^{+0.01}	4752823m	3349510m	3.87	3.45	0.22	0.19	0.19
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.5762 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010022.D Vial: 18
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 23:11:23 Operator: BS
 Sample : K1612056-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:40:36 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

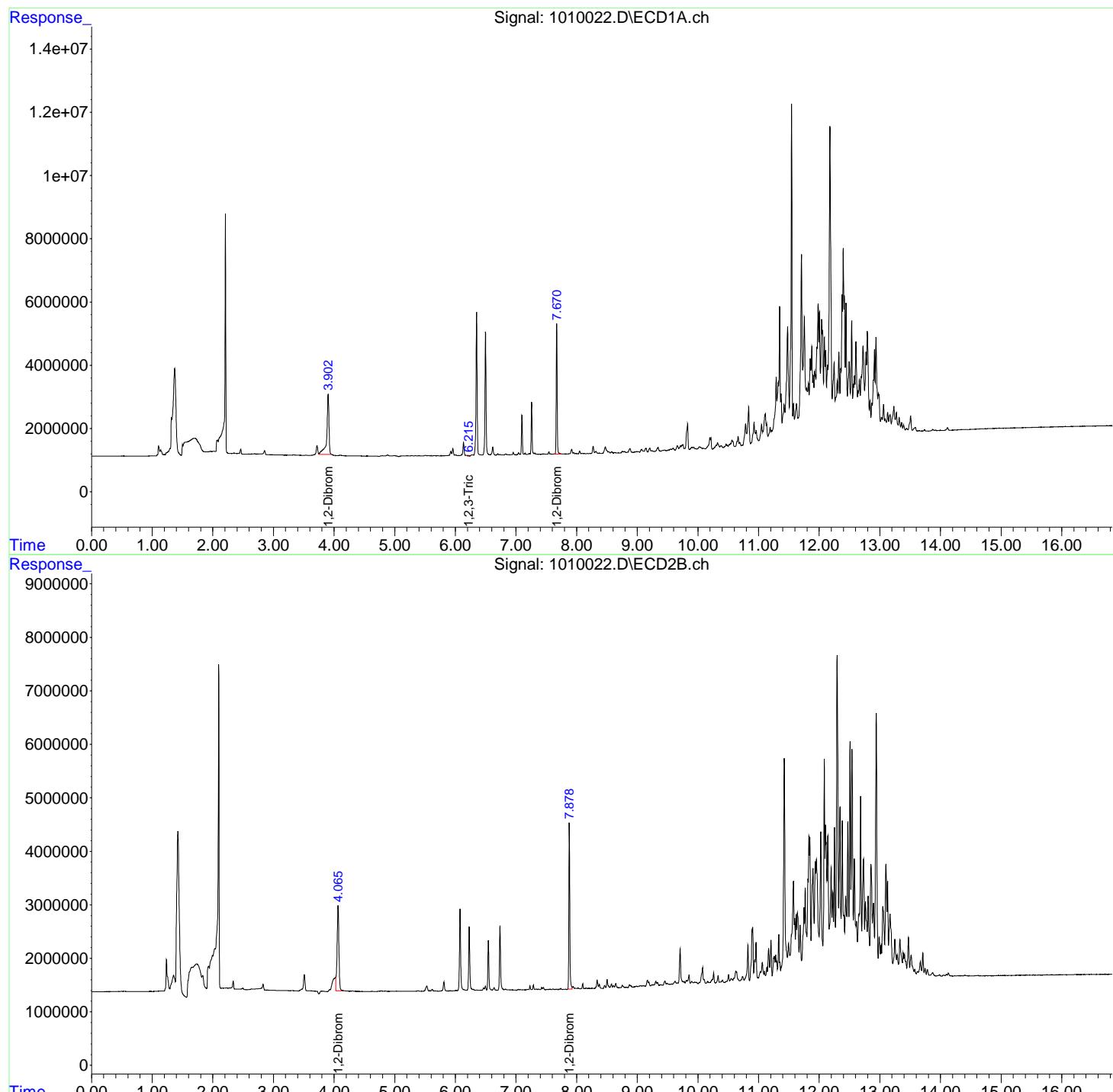
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.902	4.065	4752823	3349510	3.869m	3.452m
2) M 1,2,3-Tri...	6.215	0.000	22698	0	0.224	N.D. #
3) M 1,2-Dibro...	7.670	7.878	4448382	3380798	1.545	1.493

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010022.D Vial: 18
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 23:11:23 Operator: BS
 Sample : K1612056-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:40:36 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



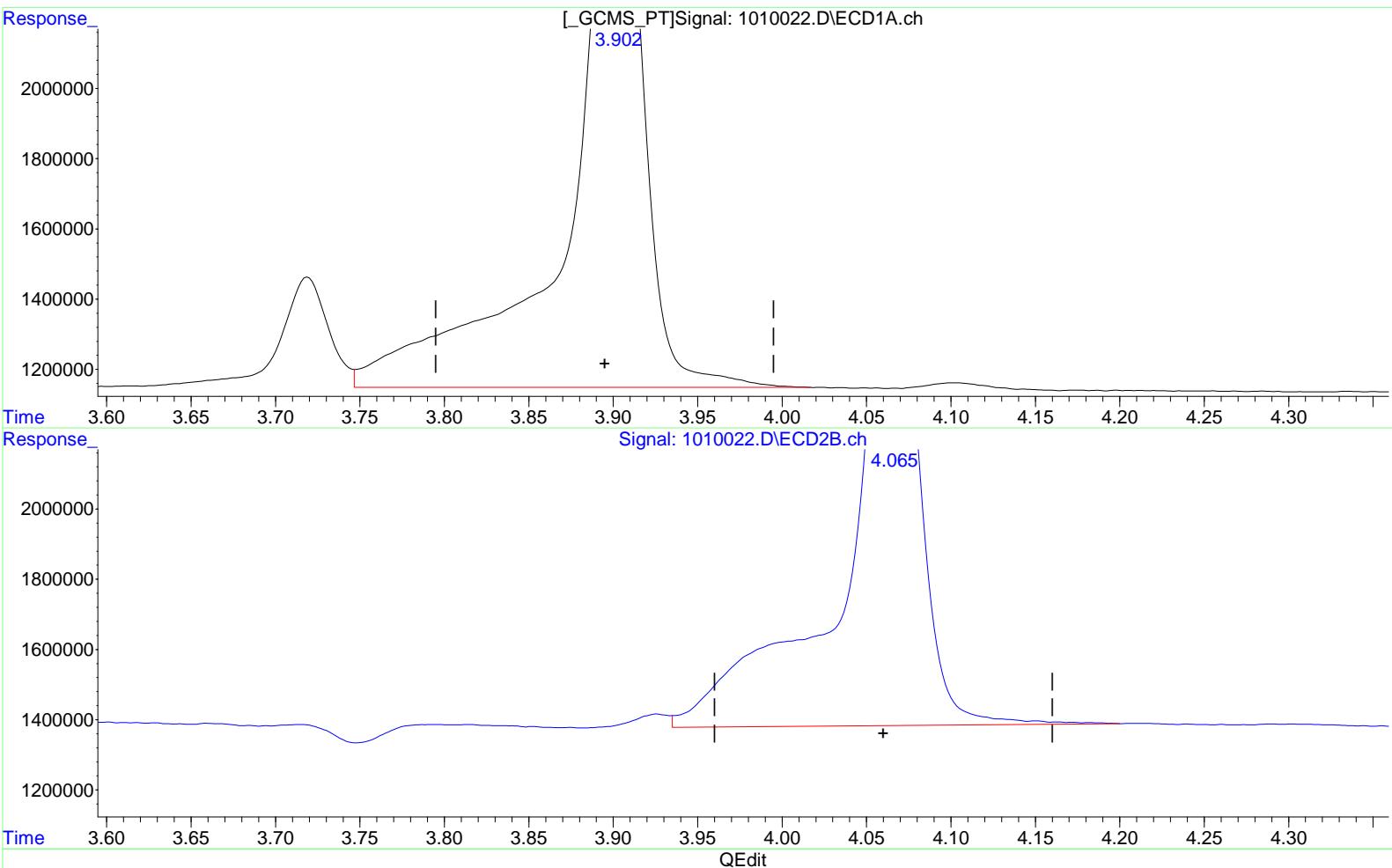
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010022.D Vial: 18
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 23:11:23 Operator: BS
 Sample : K1612056-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:40:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 4.251 ppb

response 5285933

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 4.548 ppb

response 4413365

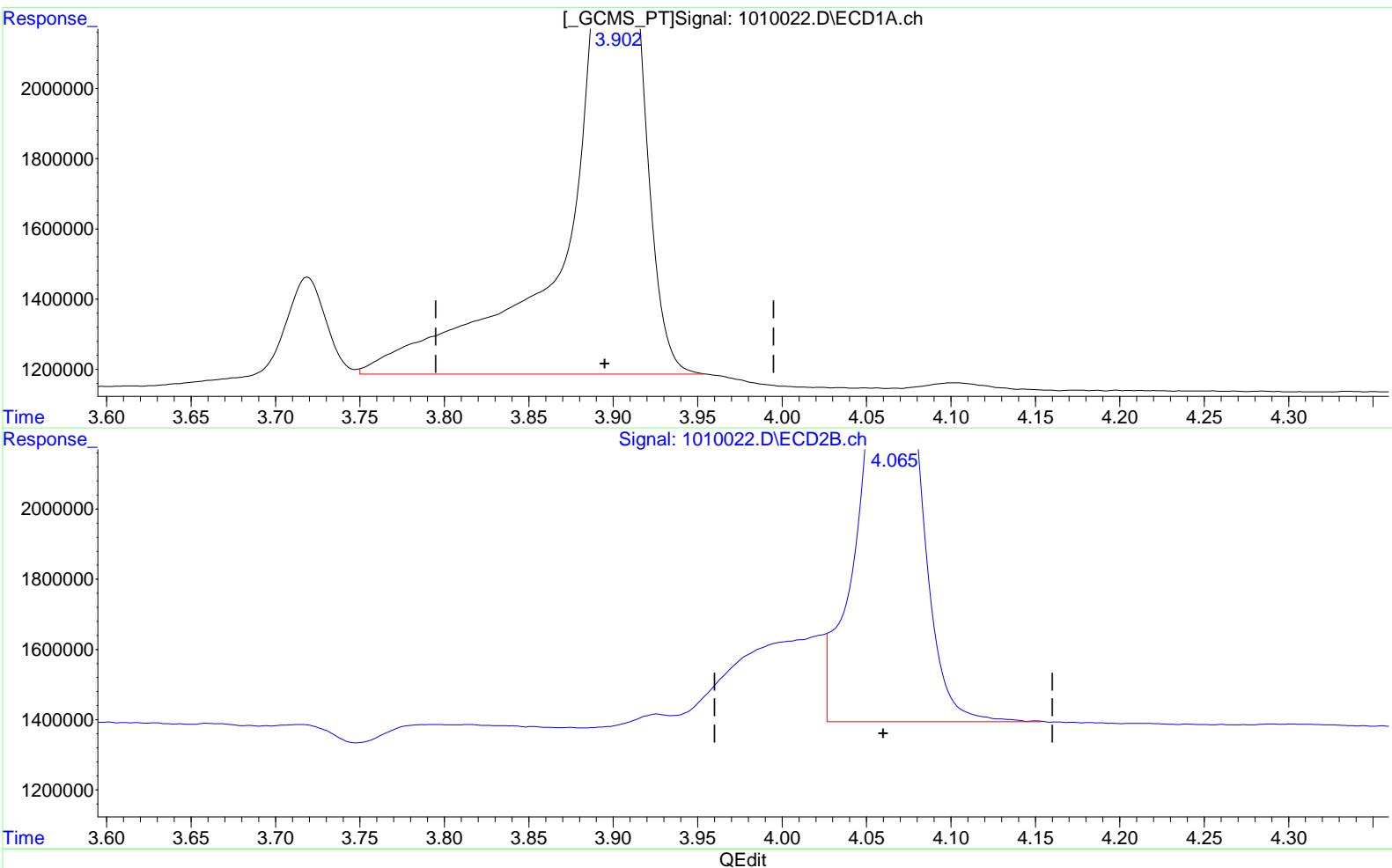
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010022.D Vial: 18
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 23:11:23 Operator: BS
 Sample : K1612056-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:40:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.902min 3.869 ppb m
 response 4752823

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.065min 3.452 ppb m
 response 3349510

Exception Report

Data File: J:\GC33\DATA\101016-504\1010023.D
Lab ID: K1612056-002
RunType: SMPL
Matrix: GROUND WATER

Date Acquired: 10/10/2016 23:34
Date Quantitated: 10/11/2016 10:40
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010023.D\1010023C.D
Lab ID: K1612056-002
RunType: SMPL
Matrix: GROUND WATER

Date Acquired: 10/10/2016 23:34
Date Quantitated: 10/11/2016 10:40
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010023.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010023.D\1010023.c.d	Vial:	19
Acq Date:	10/10/2016 23:34	Quant Date:	10/11/2016 10:40
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1612056-002	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	09/28/2016
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1560605	Prep Date:	10/10/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96 ^{+0.06}		43661	0d	0.0250	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.3232 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010023.D Vial: 19
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 23:34:58 Operator: BS
 Sample : K1612056-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:40:57 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

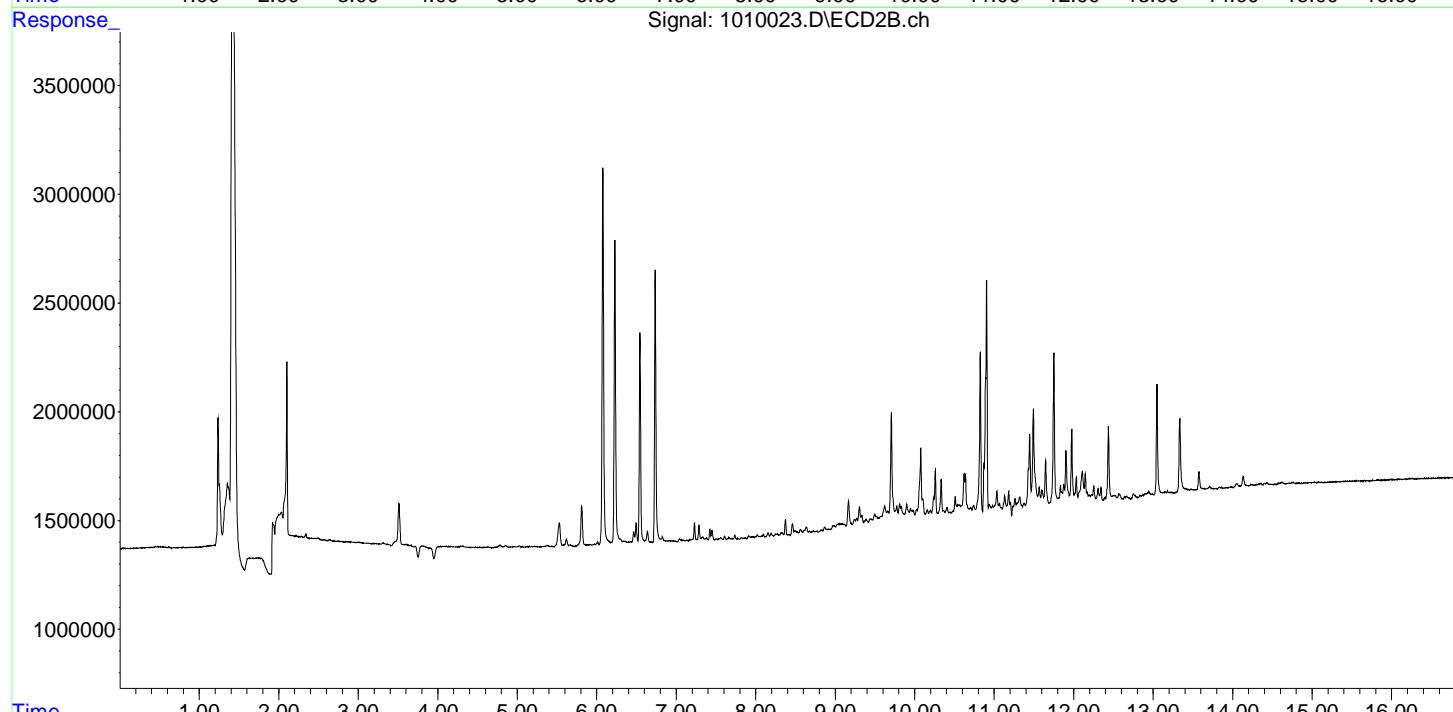
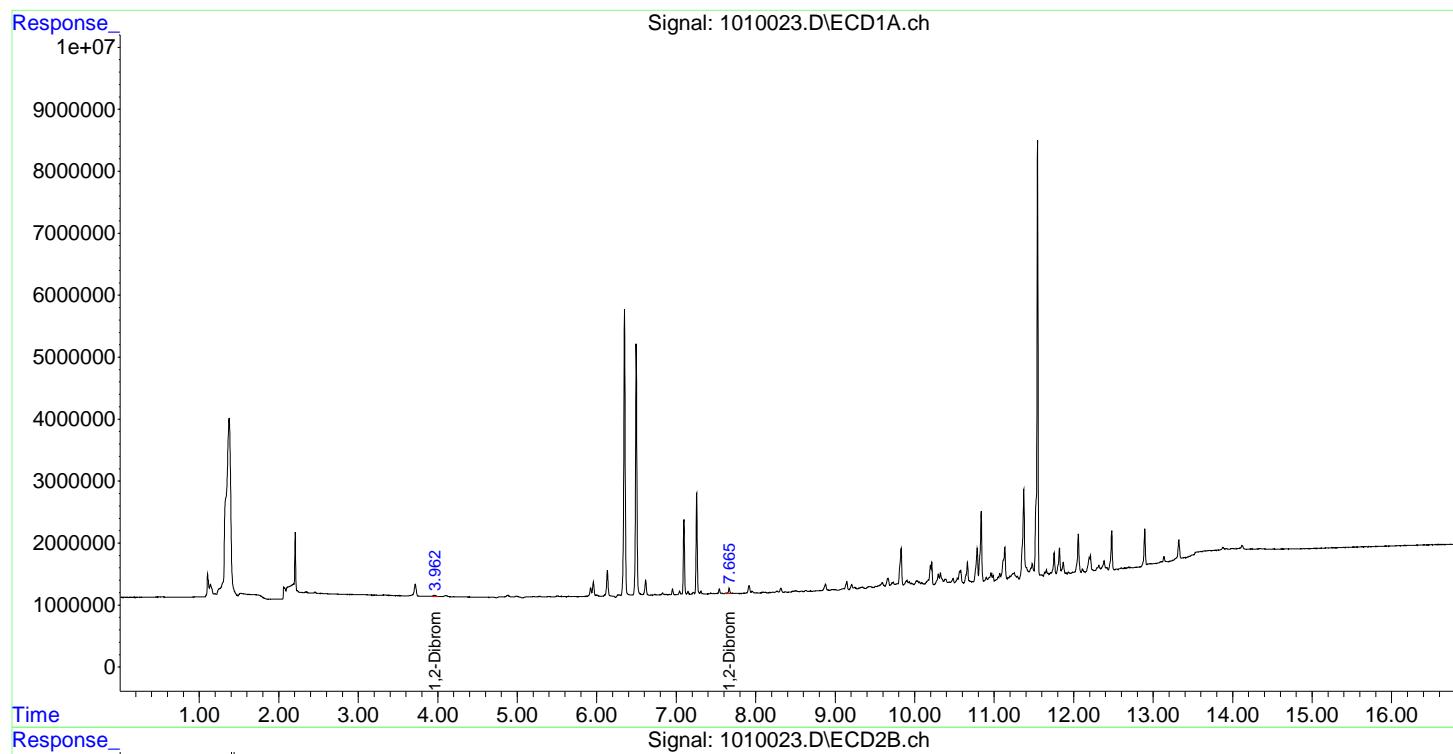
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro... 3.962f 0.000 43661 0 0.025 N.D. d#						
3) M 1,2-Dibro... 7.665 0.000 93158 0 0.032 N.D. #						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010023.D Vial: 19
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 23:34:58 Operator: BS
 Sample : K1612056-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:40:57 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010024.D
Lab ID: K1612056-003
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2016 23:58
Date Quantitated: 10/11/2016 10:41
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010024.D\1010024C.D
Lab ID: K1612056-003
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2016 23:58
Date Quantitated: 10/11/2016 10:41
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010024.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010024.D\1010024.c.d	Vial:	20
Acq Date:	10/10/2016 23:58	Quant Date:	10/11/2016 10:41
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1612056-003	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	09/28/2016
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1560606	Prep Date:	10/10/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units: ug/L				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96 ^{+0.06}		41845	0d	0.0230	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.3692 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010024.D Vial: 20
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 23:58:33 Operator: BS
 Sample : K1612056-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

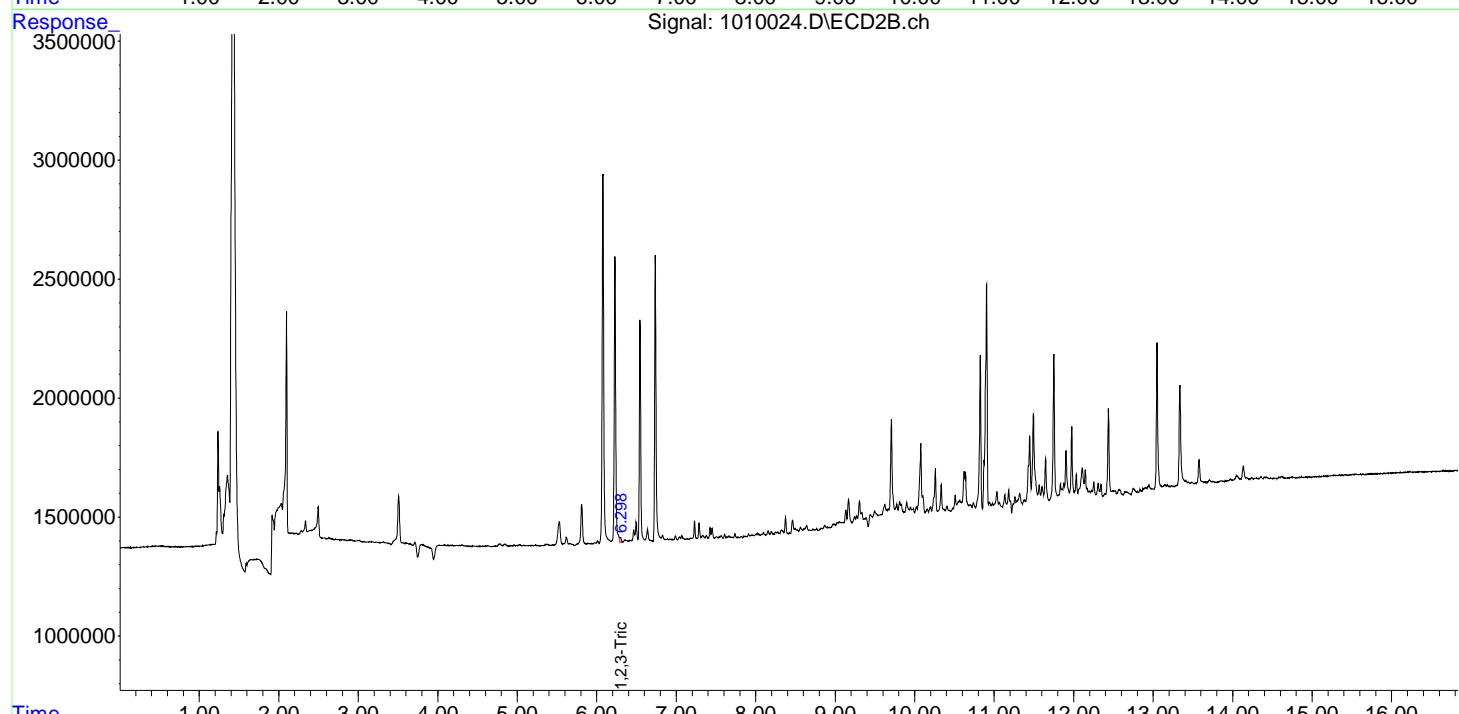
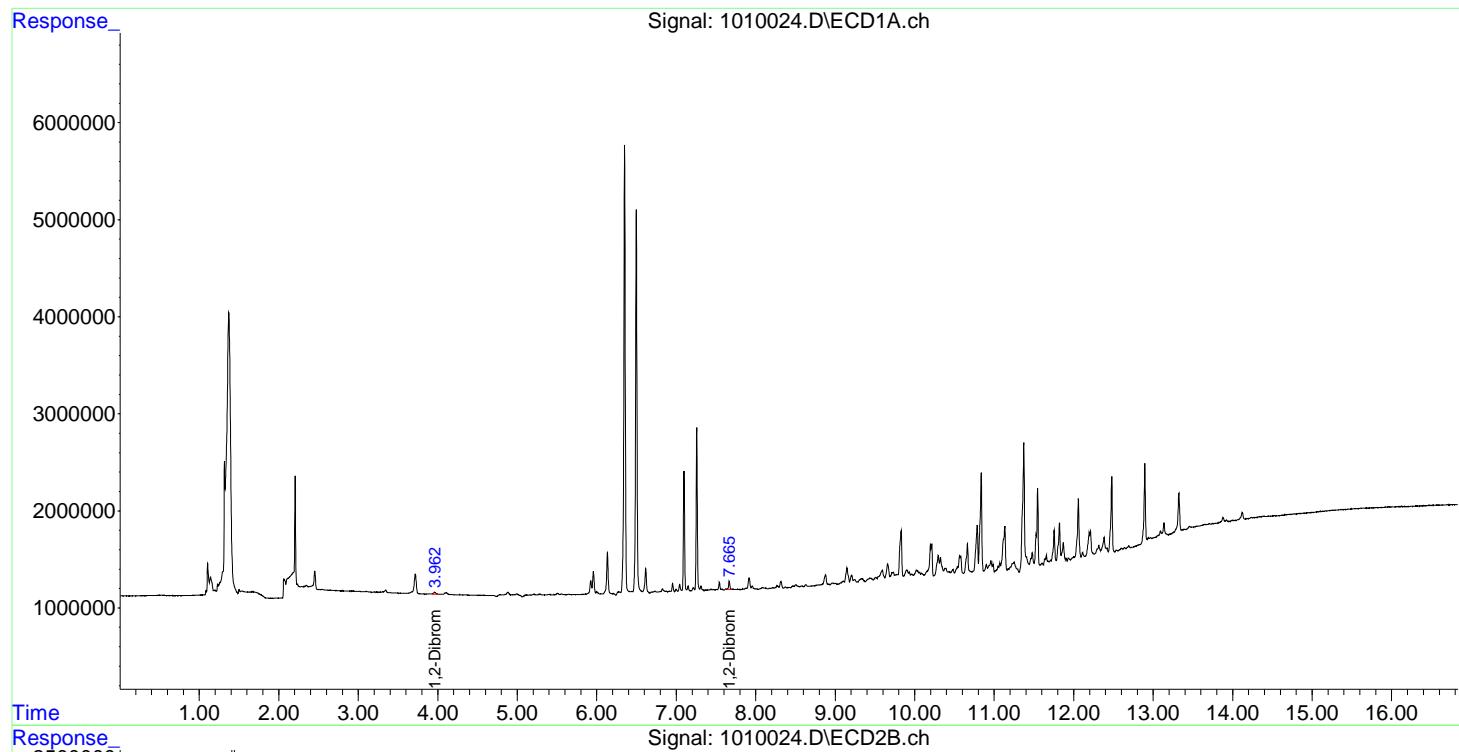
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.962f	0.000	41845	0	0.023	N.D. d#
2) M 1,2,3-Tri...	0.000	6.298	0	24991	N.D. d	0.015
3) M 1,2-Dibro...	7.665	0.000	97145	0	0.034	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010024.D Vial: 20
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 23:58:33 Operator: BS
 Sample : K1612056-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010017.D
Lab ID: KWG1609129-7
RunType: MB
Matrix: WATER

Date Acquired: 10/10/2016 21:13
Date Quantitated: 10/11/2016 10:38
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010017.D\1010017C.D
Lab ID: KWG1609129-7
RunType: MB
Matrix: WATER

Date Acquired: 10/10/2016 21:13
Date Quantitated: 10/11/2016 10:38
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010017.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\101016-504\1010017.D\1010017c.d	Vial:	13	
Acq Date:	10/10/2016 21:13	Quant Date:	10/11/2016 10:38	
Run Type:	MB	MethodJoinID:	MJ480	
Lab ID:	KWG1609129-7	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016	
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560616	Prep Date:	10/10/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:		Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.95 ^{+0.05}		35115	0d	0.0170	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0d	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropan	7.67		85586	0	0.0300	0.0000	0.00360U	0.00360U	0.00360U

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.6818 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010017.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 21:13:30 Operator: BS
 Sample : KWG1609129-7MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:38:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

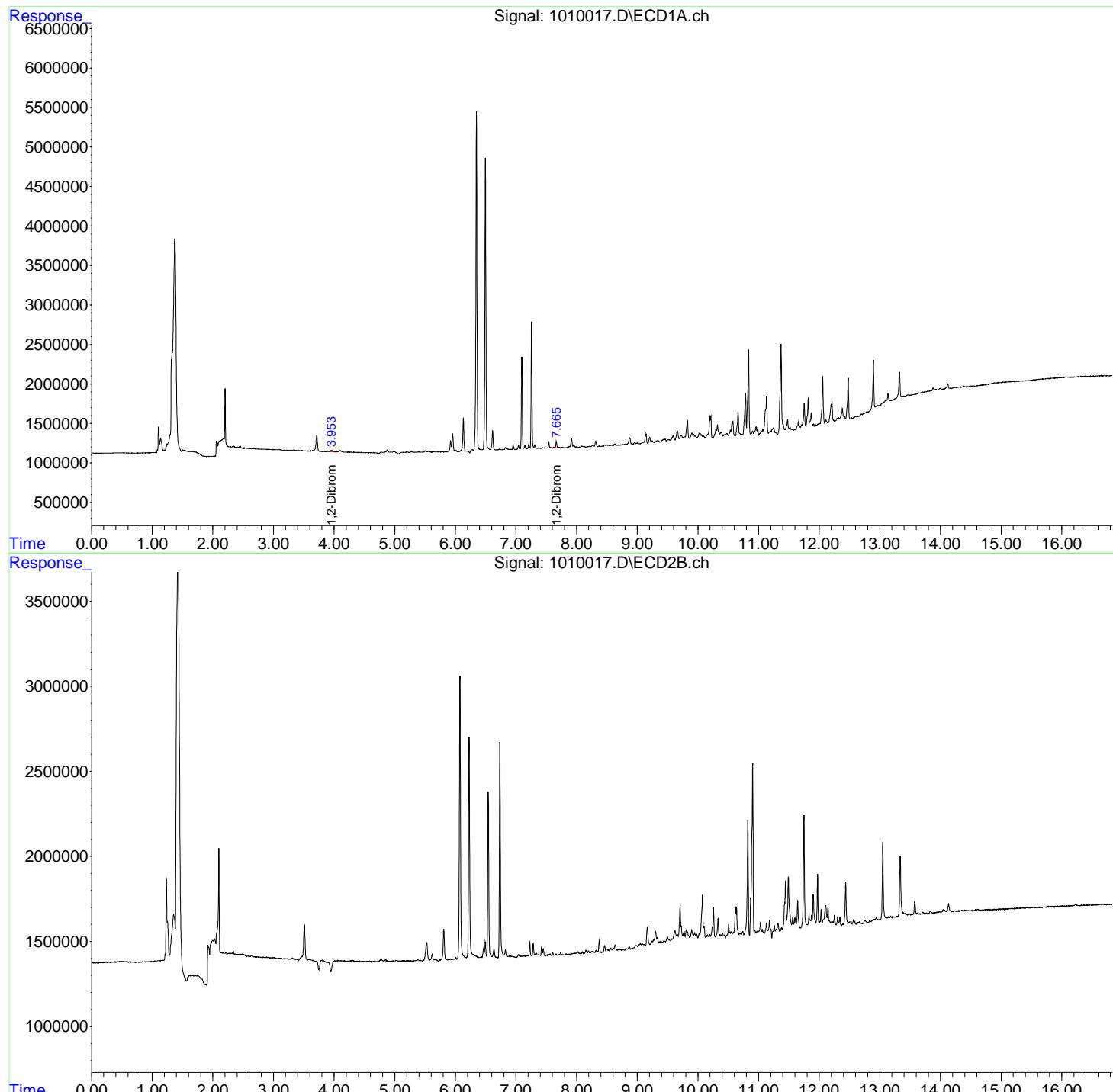
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro... 3.953f 0.000 35115 0 0.017 N.D. d#						
3) M 1,2-Dibro... 7.665 0.000 85586 0 0.030 N.D. #						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010017.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 21:13:30 Operator: BS
 Sample : KWG1609129-7MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:38:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010027.D
Lab ID: K1612057-001
RunType: SMPL
Matrix: WATER

Date Acquired: 10/11/2016 01:09
Date Quantitated: 10/11/2016 10:43
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4820

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010027.D\1010027C.D
Lab ID: K1612057-001
RunType: SMPL
Matrix: WATER

Date Acquired: 10/11/2016 01:09
Date Quantitated: 10/11/2016 10:43
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4820

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010027.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010027.D\1010027c.d	Vial:	21
Acq Date:	10/11/2016 01:09	Quant Date:	10/11/2016 10:43
Run Type:	SMPL	ListJoinID:	LJ4820
Lab ID:	K1612057-001	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	II
Prod Code:	504.1 EDB DBCP	Collect Date:	10/05/2016
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1560607	Prep Date:	10/10/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4820
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			0d	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
1,2-Dibromo-3-chloropropan	7.67		93067	0	0.0320	0.0000	0.00360U	0.00360U	0.00360U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.5935 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010027.D Vial: 21
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11-Oct-2016, 01:09:27 Operator: BS
Sample : K1612057-001 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 10:43:13 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

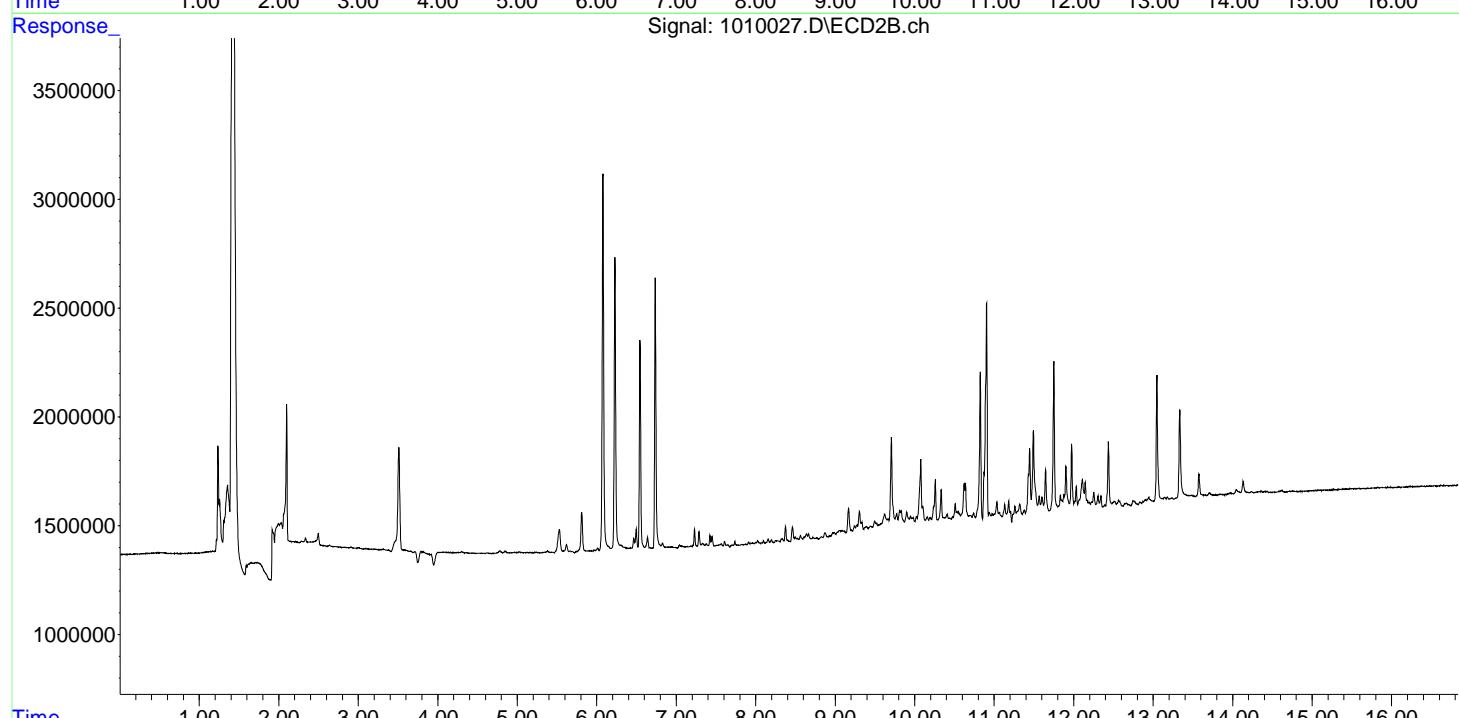
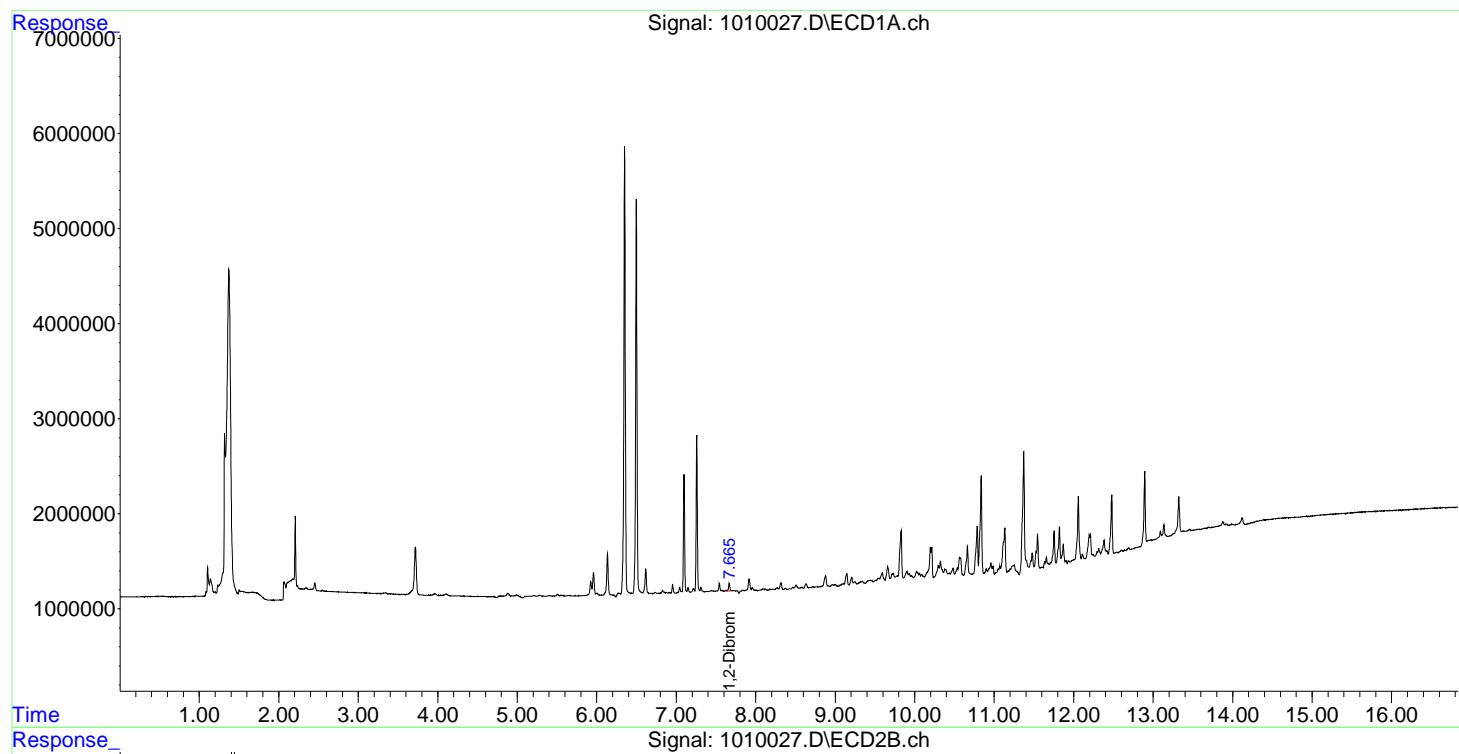
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
3) M 1,2-Dibro...	7.665	0.000	93067	0	0.032	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010027.D Vial: 21
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 01:09:27 Operator: BS
 Sample : K1612057-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:43:13 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010031.D
Lab ID: K1612058-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/11/2016 02:44
Date Quantitated: 10/11/2016 10:46
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010031.D\1010031C.D
Lab ID: K1612058-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/11/2016 02:44
Date Quantitated: 10/11/2016 10:46
Batch ID: KWG1609198
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010031.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010031.D\1010031c.d	Vial:	25
Acq Date:	10/11/2016 02:44	Quant Date:	10/11/2016 10:46
Run Type:	SMPL	ListJoinID:	LJ4194
Lab ID:	K1612058-002	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	10/03/2016
		Matrix:	WATER
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1560609	Prep Date:	10/10/2016
Report Group:	K1612058		
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4194
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96 ^{+0.06}		32883	0d	0.0150	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0d	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropan	7.67		111143	0	0.0390	0.0000	0.00360U	0.00360U	0.00360U

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.0507 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010031.D Vial: 25
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11-Oct-2016, 02:44:00 Operator: BS
Sample : K1612058-002 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 10:46:11 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

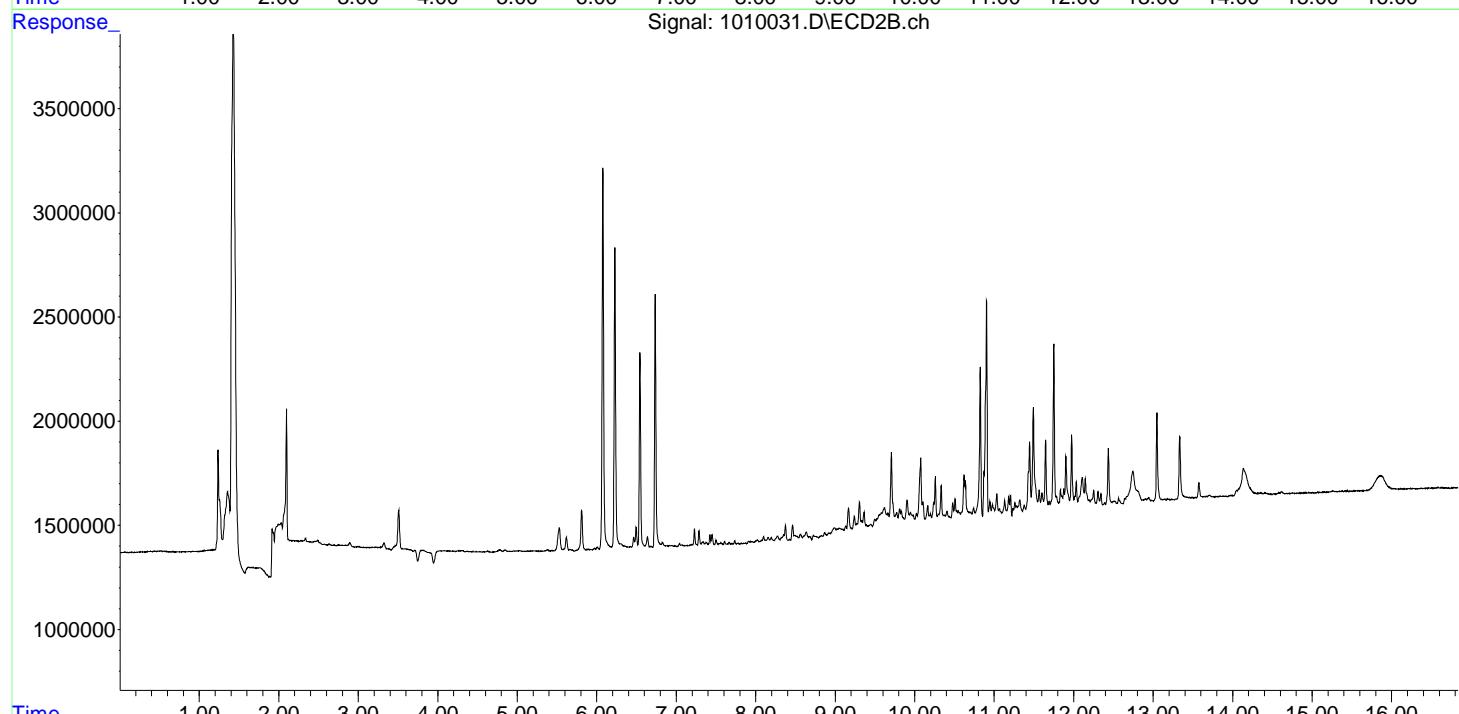
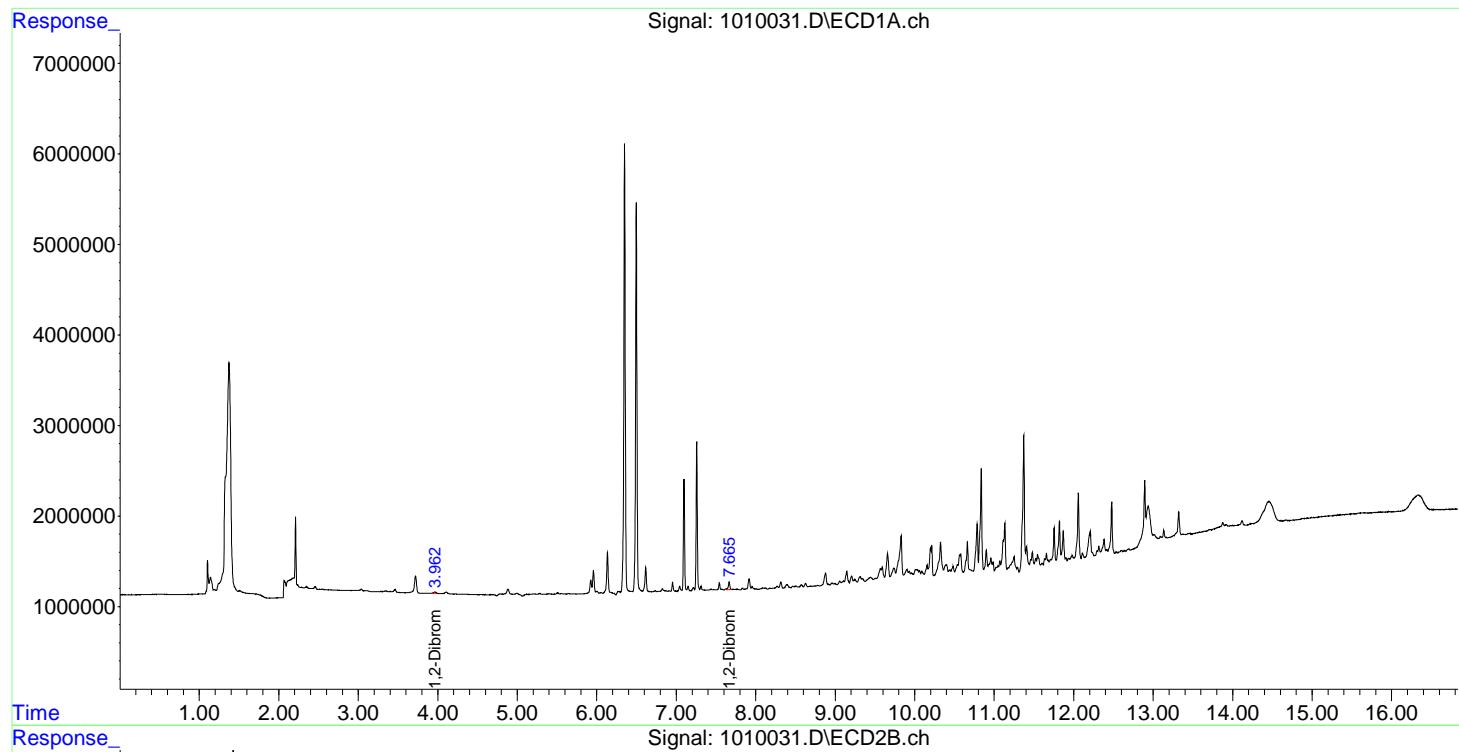
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.962f	0.000	32883	0	0.015	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010031.D Vial: 25
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 02:44:00 Operator: BS
 Sample : K1612058-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:11 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010028.D
Lab ID: KWG1609129-1 -- K1612057-001MS
RunType: MS
Matrix: WATER

Date Acquired: 10/11/2016 01:33
Date Quantitated: 10/11/2016 10:43
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010028.D\1010028C.D
Lab ID: KWG1609129-1 -- K1612057-001MS
RunType: MS
Matrix: WATER

Date Acquired: 10/11/2016 01:33
Date Quantitated: 10/11/2016 10:43
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010028.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\101016-504\1010028.D\1010028.c.d	Vial:	22	
Acq Date:	10/11/2016 01:33	Quant Date:	10/11/2016 10:43	
Run Type:	MS	MethodJoinID:	MJ480	
Lab ID:	KWG1609129-1 -- K1612057-001MS	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016	
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560610	Prep Date:	10/10/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.07 ^{+0.01}	6168949m	4563515m	4.87	4.70	0.267	0.258	0.258
1,2,3-Trichloropropane	6.24	6.30	981708	987692	4.65	4.81	0.255	0.263	0.255
1,2-Dibromo-3-chloropropan	7.67	7.88	12523446	9815595	4.35	4.33	0.238	0.237	0.237

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.4995 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010028.D Vial: 22
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 01:33:10 Operator: BS
 Sample : K1612057-001MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:43:46 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

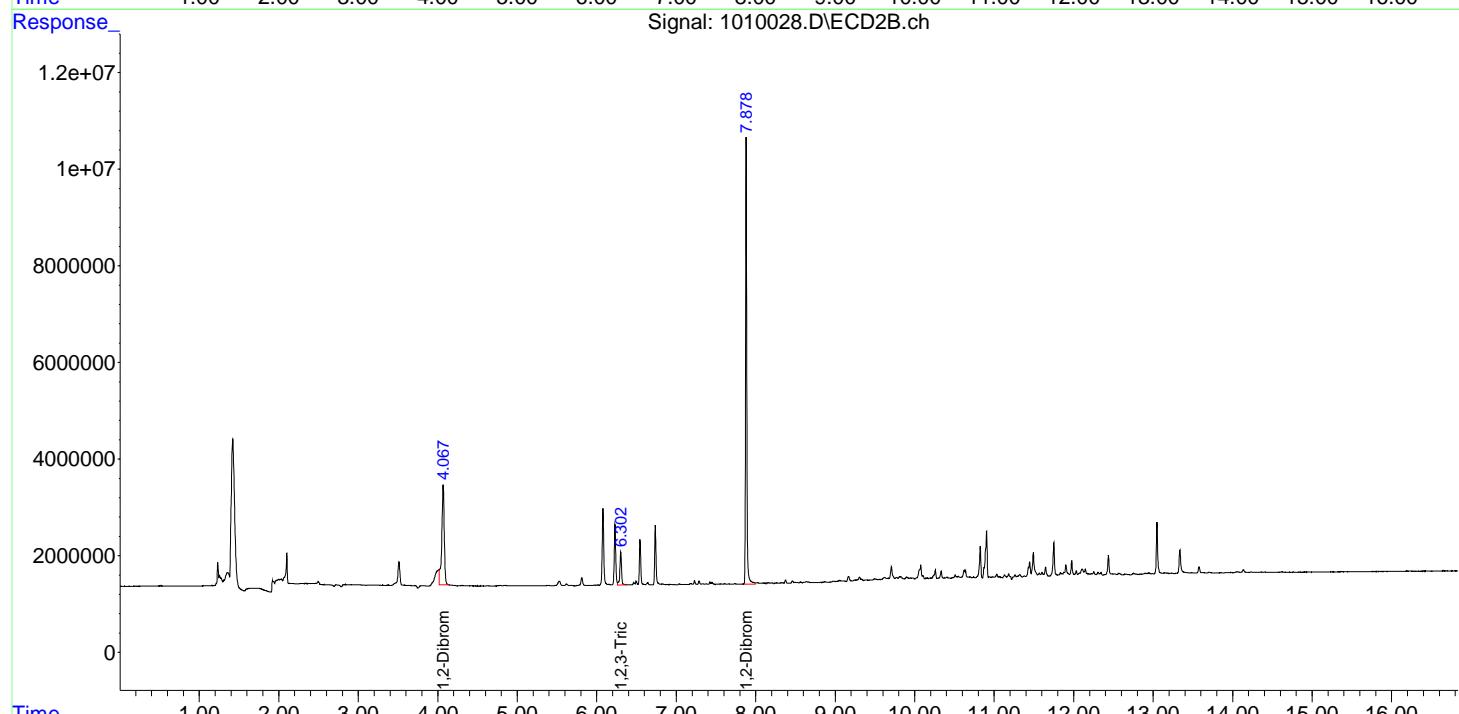
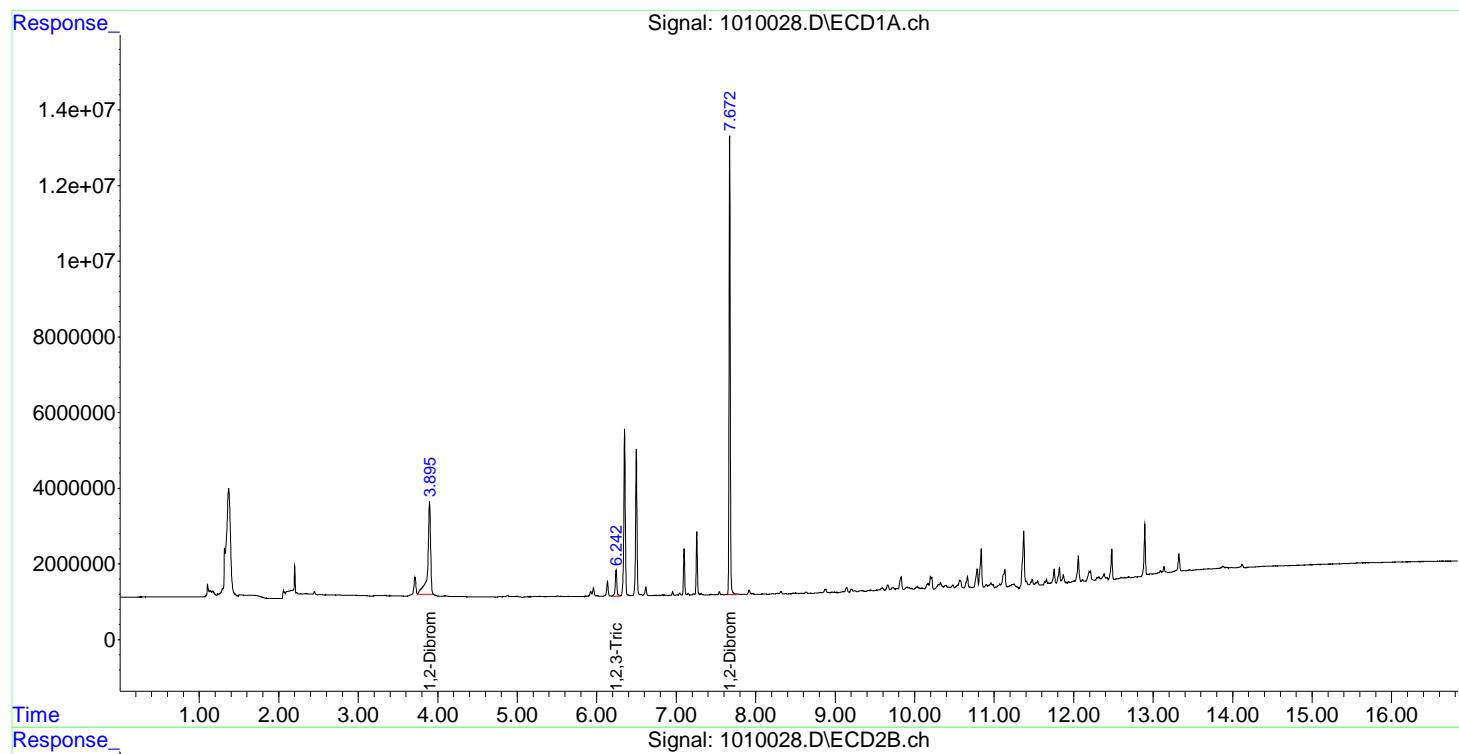
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.895	4.067	6168949	4563515	4.867m	4.703m
2) M 1,2,3-Tri...	6.242	6.302	981708	987692	4.648	4.805
3) M 1,2-Dibro...	7.672	7.878	12523446	9815595	4.350	4.333

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010028.D Vial: 22
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 01:33:10 Operator: BS
 Sample : K1612057-001MS Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:43:46 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

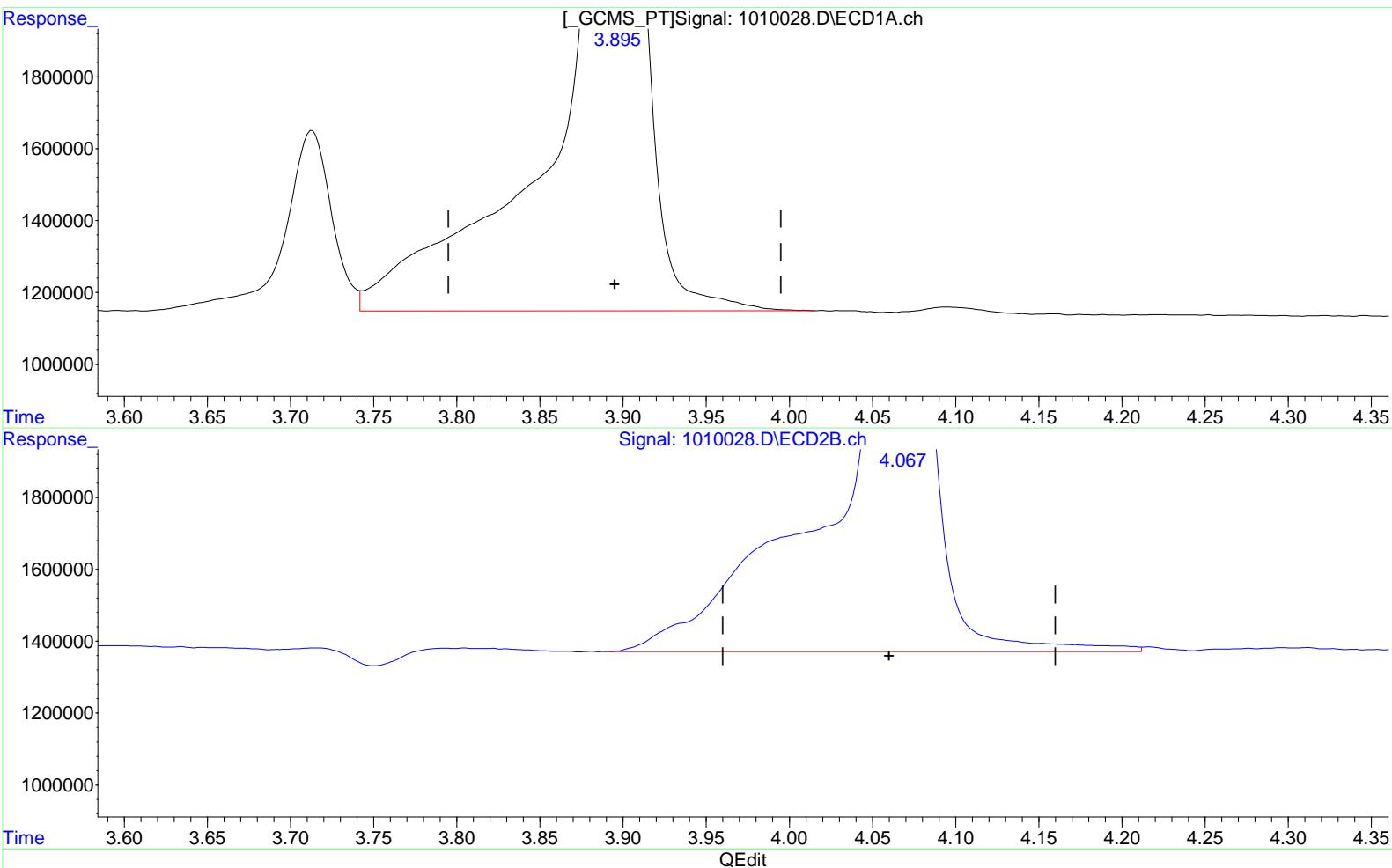
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010028.D Vial: 22
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 01:33:10 Operator: BS
 Sample : K1612057-001MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:43:24 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 5.305 ppb

response 6816917

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.067min 6.283 ppb

response 6096246

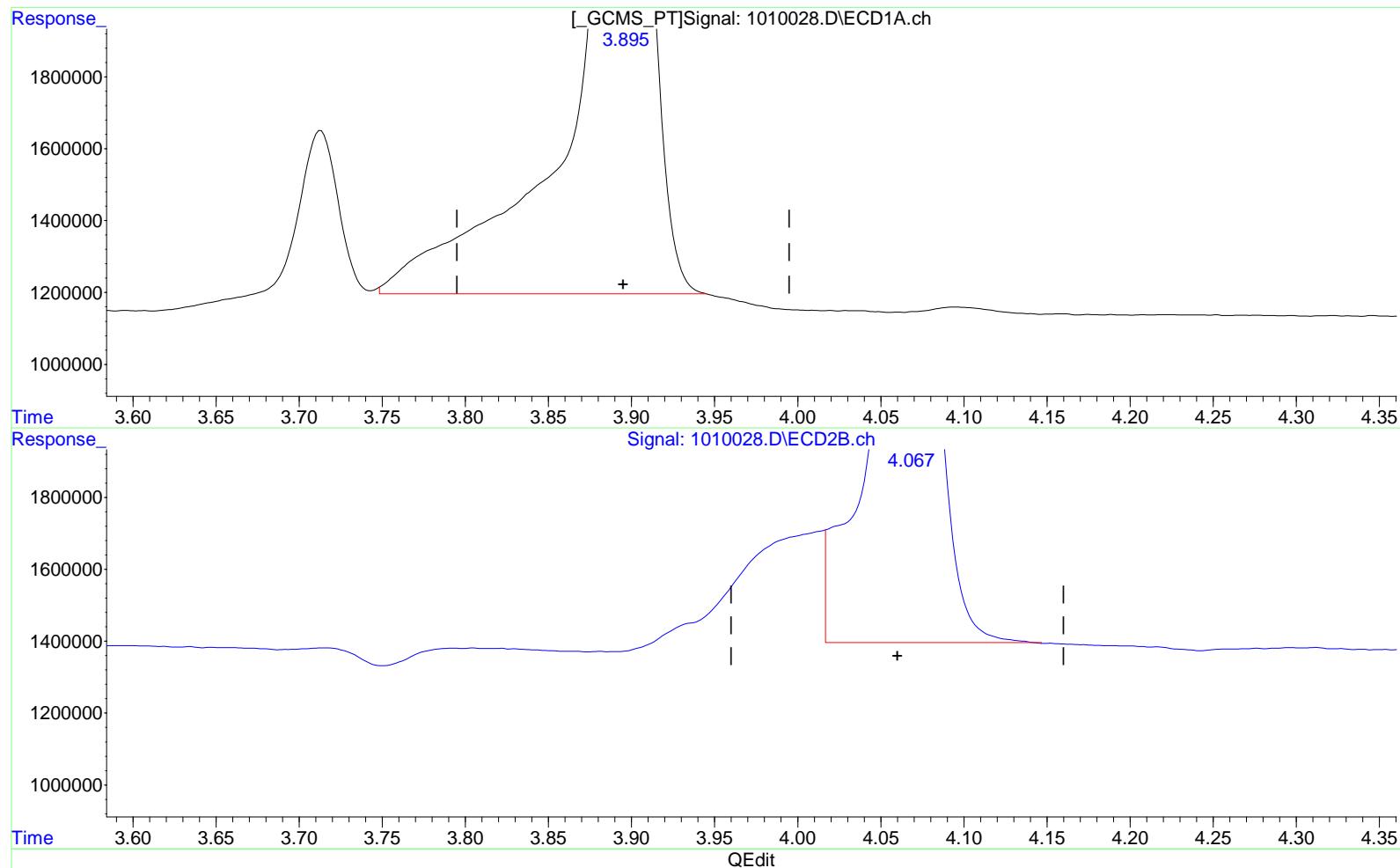
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010028.D Vial: 22
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 01:33:10 Operator: BS
 Sample : K1612057-001MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:43:24 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 4.867 ppb m

response 6168949

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.067min 4.703 ppb m

response 4563515

Exception Report

Data File: J:\GC33\DATA\101016-504\1010029.D
Lab ID: KWG1609129-2 -- K1612057-001DMS
RunType: DMS
Matrix: WATER

Date Acquired: 10/11/2016 01:56
Date Quantitated: 10/11/2016 10:44
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010029.D\1010029C.D
Lab ID: KWG1609129-2 -- K1612057-001DMS
RunType: DMS
Matrix: WATER

Date Acquired: 10/11/2016 01:56
Date Quantitated: 10/11/2016 10:44
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010029.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010029.D\1010029.c.d	Vial:	23
Acq Date:	10/11/2016 01:56	Quant Date:	10/11/2016 10:44
Run Type:	DMS	MethodJoinID:	MJ480
Lab ID:	KWG1609129-2 -- K1612057-001DMS	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016

Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560611	Prep Date:	10/10/2016	

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:			
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
			Quant based on Method

Target Compounds

Parameter Name	RT	RT	Resp	Resp	ppb	ppb	ug/L	ug/L	Rpt
	#1	#2	#1	#2	#1	#2	#1	#2	
1,2-Dibromoethane (EDB)	3.90	4.07 ^{+0.01}	6006818m	4506324m	4.76	4.64	0.263	0.256	0.256
1,2,3-Trichloropropane	6.24	6.30	956692	962001	4.53	4.68	0.250	0.258	0.250
1,2-Dibromo-3-chloropropan	7.67	7.88	12274505	9790898	4.26	4.32	0.235	0.239	0.235

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.2273 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010029.D Vial: 23
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 01:56:44 Operator: BS
 Sample : K1612057-001DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:44:25 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

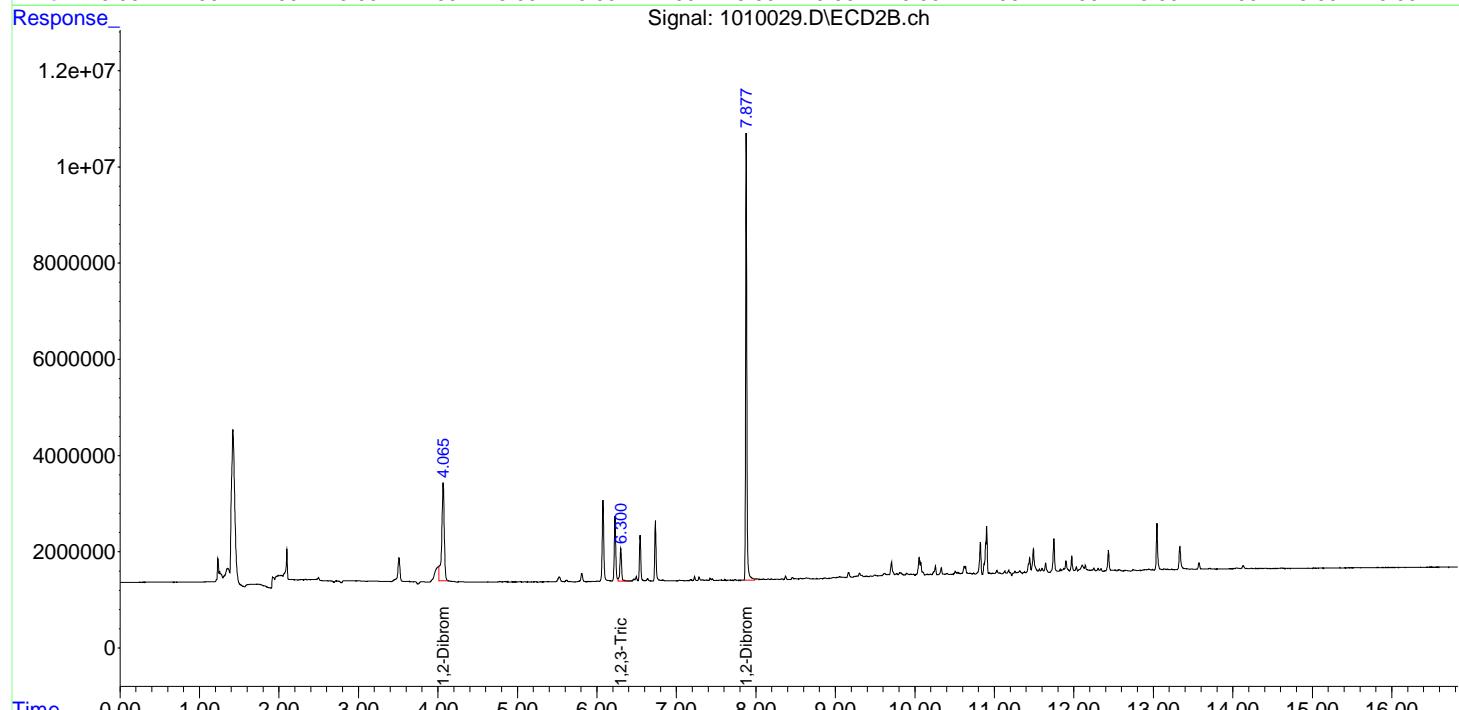
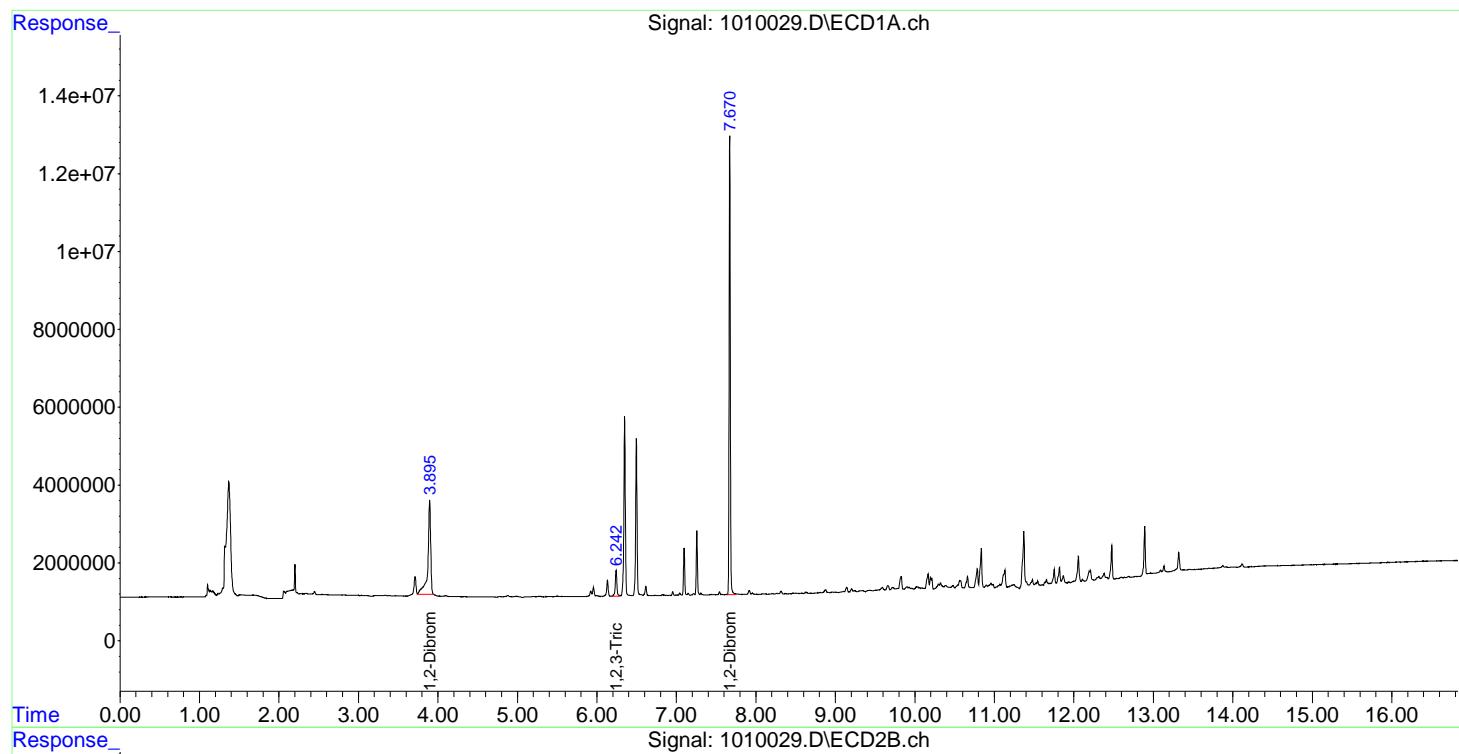
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.895	4.065	6006818	4506324	4.755m	4.644m
2) M 1,2,3-Tri...	6.242	6.300	956692	962001	4.533	4.677
3) M 1,2-Dibro...	7.670	7.877	12274505	9790898	4.264	4.323

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010029.D Vial: 23
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 01:56:44 Operator: BS
 Sample : K1612057-001DMS Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:44:25 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



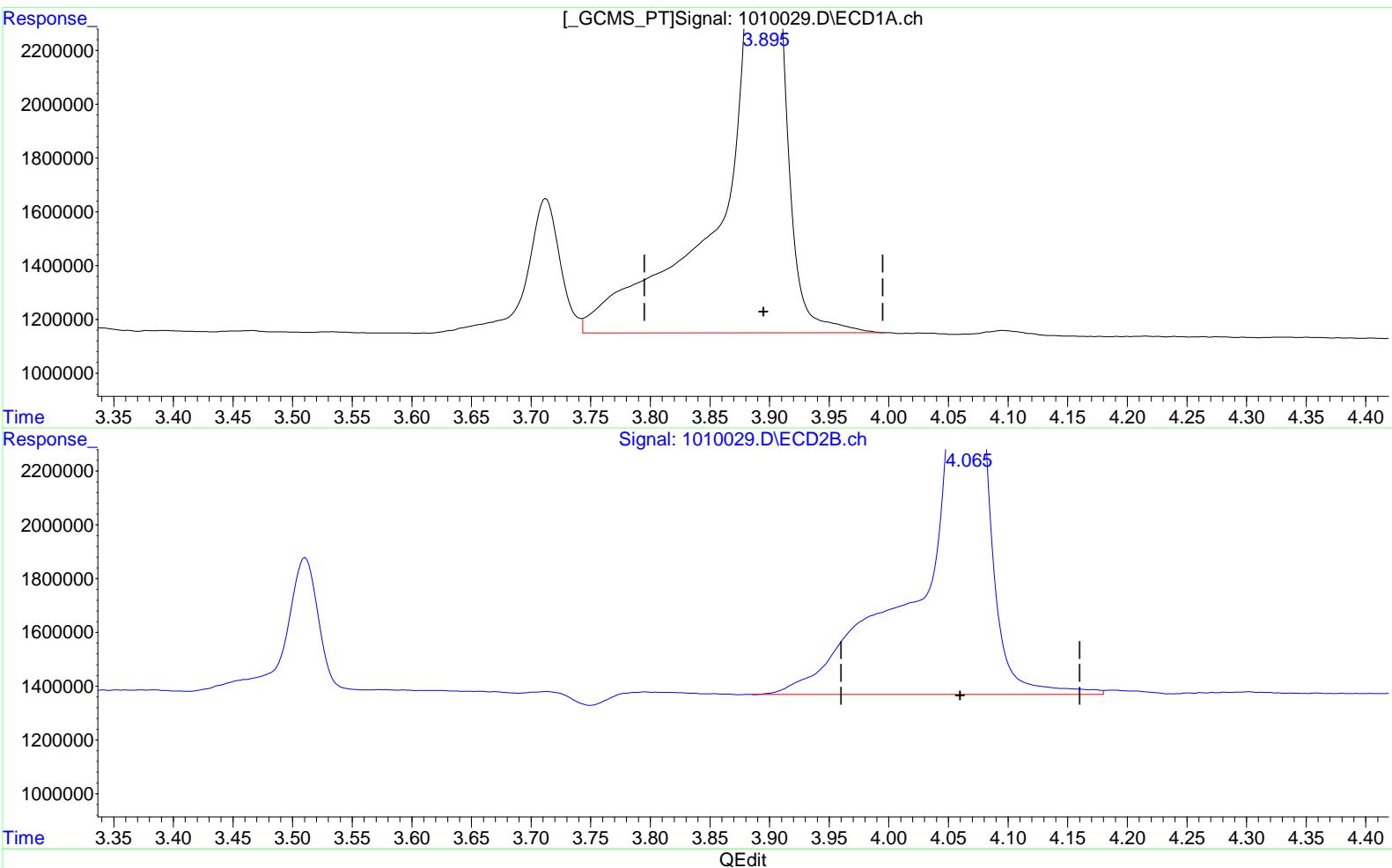
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010029.D Vial: 23
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 01:56:44 Operator: BS
 Sample : K1612057-001DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:44:02 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 5.185 ppb

response 6637777

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

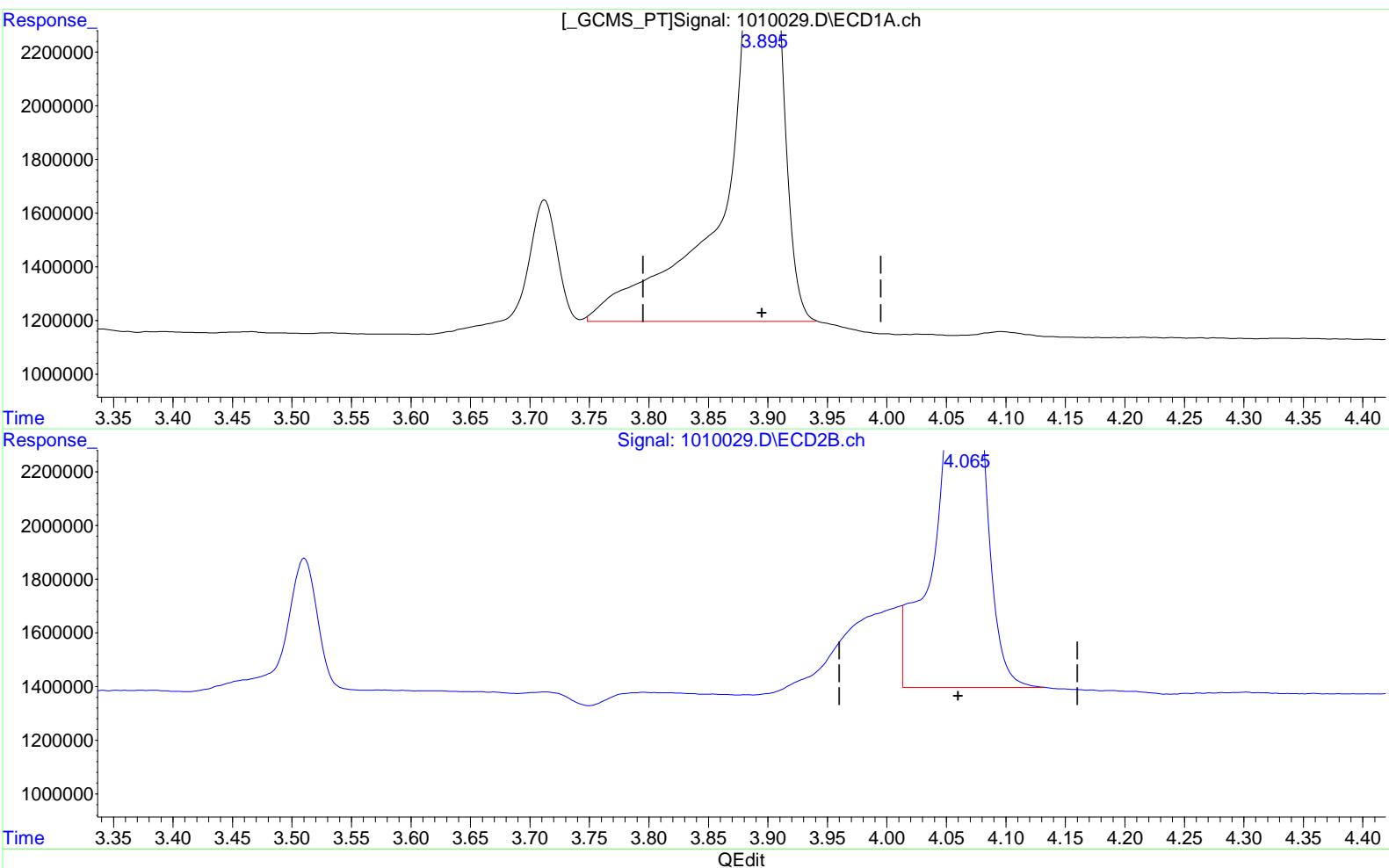
4.065min 6.138 ppb

response 5955875

Data File : J:\GC33\DATA\101016-504\1010029.D Vial: 23
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 01:56:44 Operator: BS
 Sample : K1612057-001DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:44:02 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.895min 4.755 ppb m
 response 6006818

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.065min 4.644 ppb m
 response 4506324

Exception Report

Data File: J:\GC33\DATA\101016-504\1010032.D
Lab ID: KWG1609129-3 -- K1612058-002MS
RunType: MS
Matrix: WATER

Date Acquired: 10/11/2016 03:07
Date Quantitated: 10/11/2016 10:46
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010032.D\1010032C.D
Lab ID: KWG1609129-3 -- K1612058-002MS
RunType: MS
Matrix: WATER

Date Acquired: 10/11/2016 03:07
Date Quantitated: 10/11/2016 10:46
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010032.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010032.D\1010032c.d	Vial:	26
Acq Date:	10/11/2016 03:07	Quant Date:	10/11/2016 10:46
Run Type:	MS	MethodJoinID:	MJ480
Lab ID:	KWG1609129-3 -- K1612058-002MS	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016

Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560612	Prep Date:	10/10/2016	

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:			
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
			Quant based on Method

Target Compounds

Parameter Name	RT	RT	Resp	Resp	ppb	ppb	ug/L	ug/L	Rpt
	#1	#2	#1	#2	#1	#2	#1	#2	
1,2-Dibromoethane (EDB)	3.90	4.07 ^{+0.01}	6039476m	4556103m	4.78	4.70	0.264	0.259	0.259
1,2,3-Trichloropropane	6.24	6.30	911582	954517	4.33	4.64	0.239	0.256	0.239
1,2-Dibromo-3-chloropropan	7.67	7.88	12303447	10280392	4.27	4.54	0.236	0.250	0.236

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.2645 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010032.D Vial: 26
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:07:49 Operator: BS
 Sample : K1612058-002MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

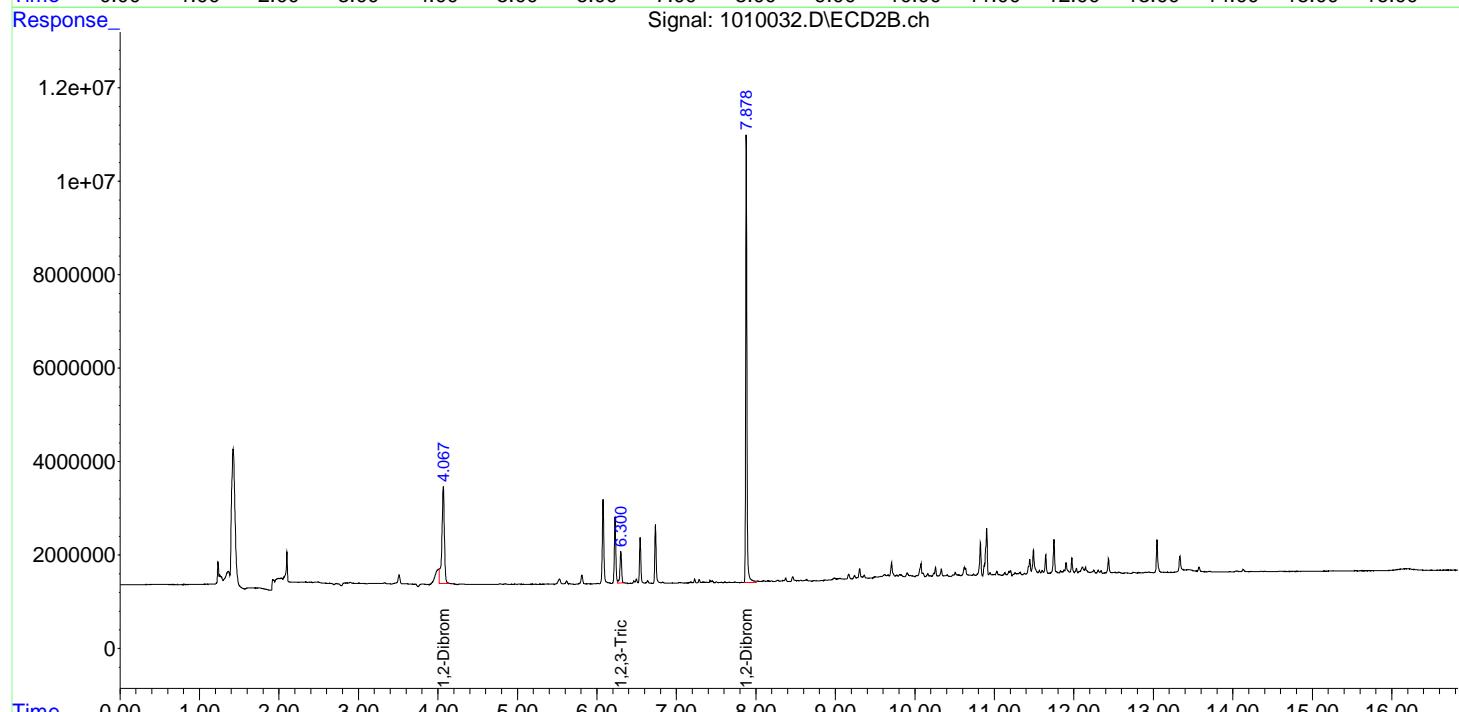
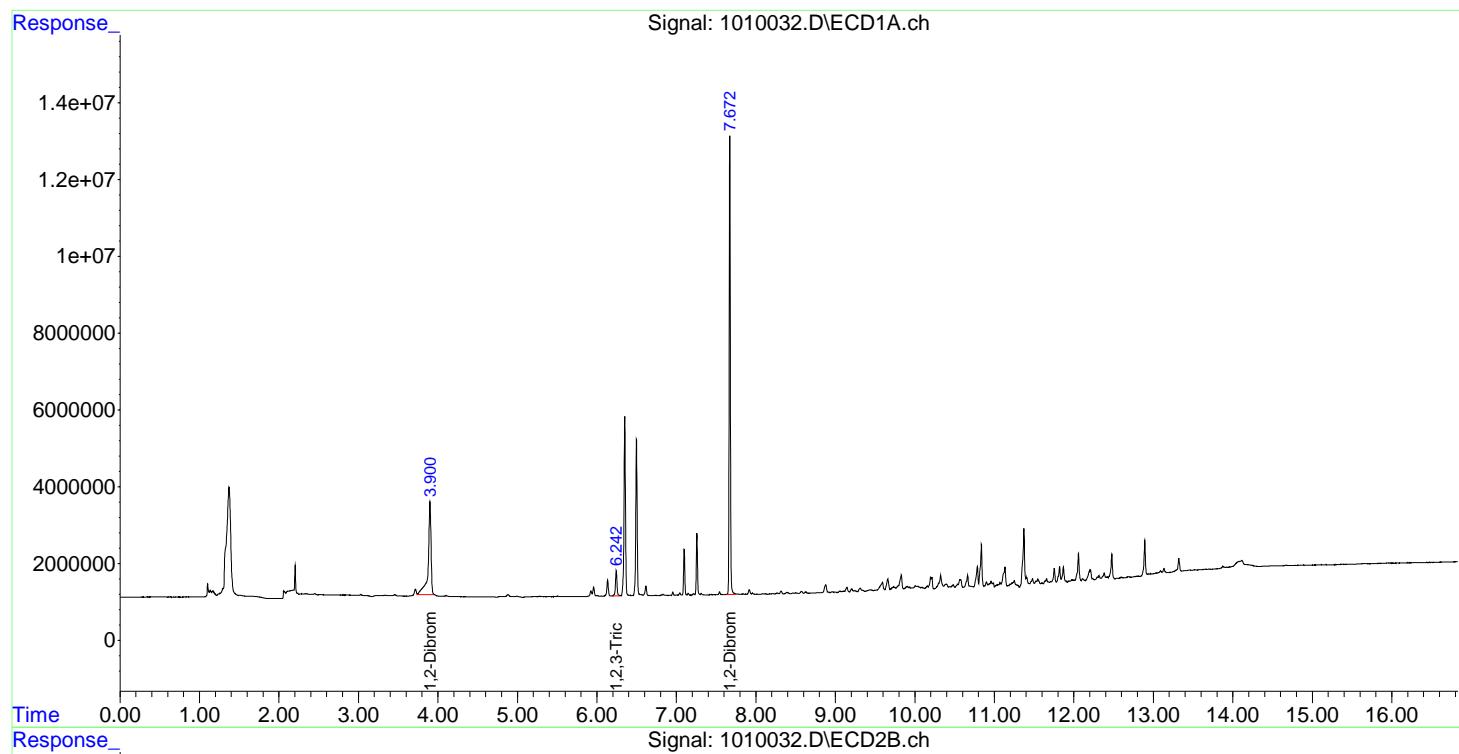
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.900	4.067	6039476	4556103	4.778m	4.695m
2) M 1,2,3-Tri...	6.242	6.300	911582	954517	4.325	4.640
3) M 1,2-Dibro...	7.672	7.878	12303447	10280392	4.274	4.539

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010032.D Vial: 26
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:07:49 Operator: BS
 Sample : K1612058-002MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

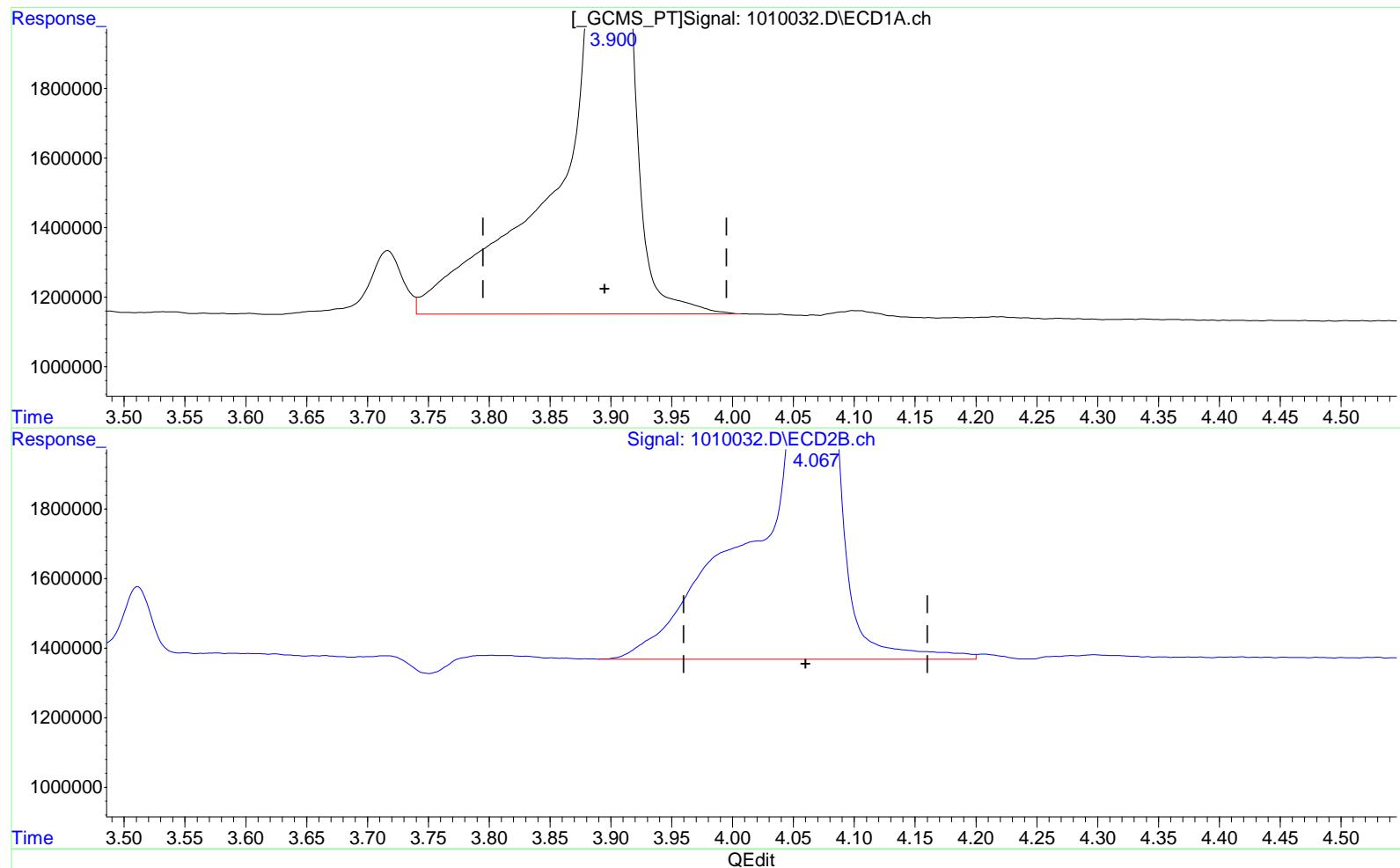
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010032.D Vial: 26
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:07:49 Operator: BS
 Sample : K1612058-002MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.900min 5.184 ppb
 response 6636662

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.067min 6.189 ppb
 response 6005027

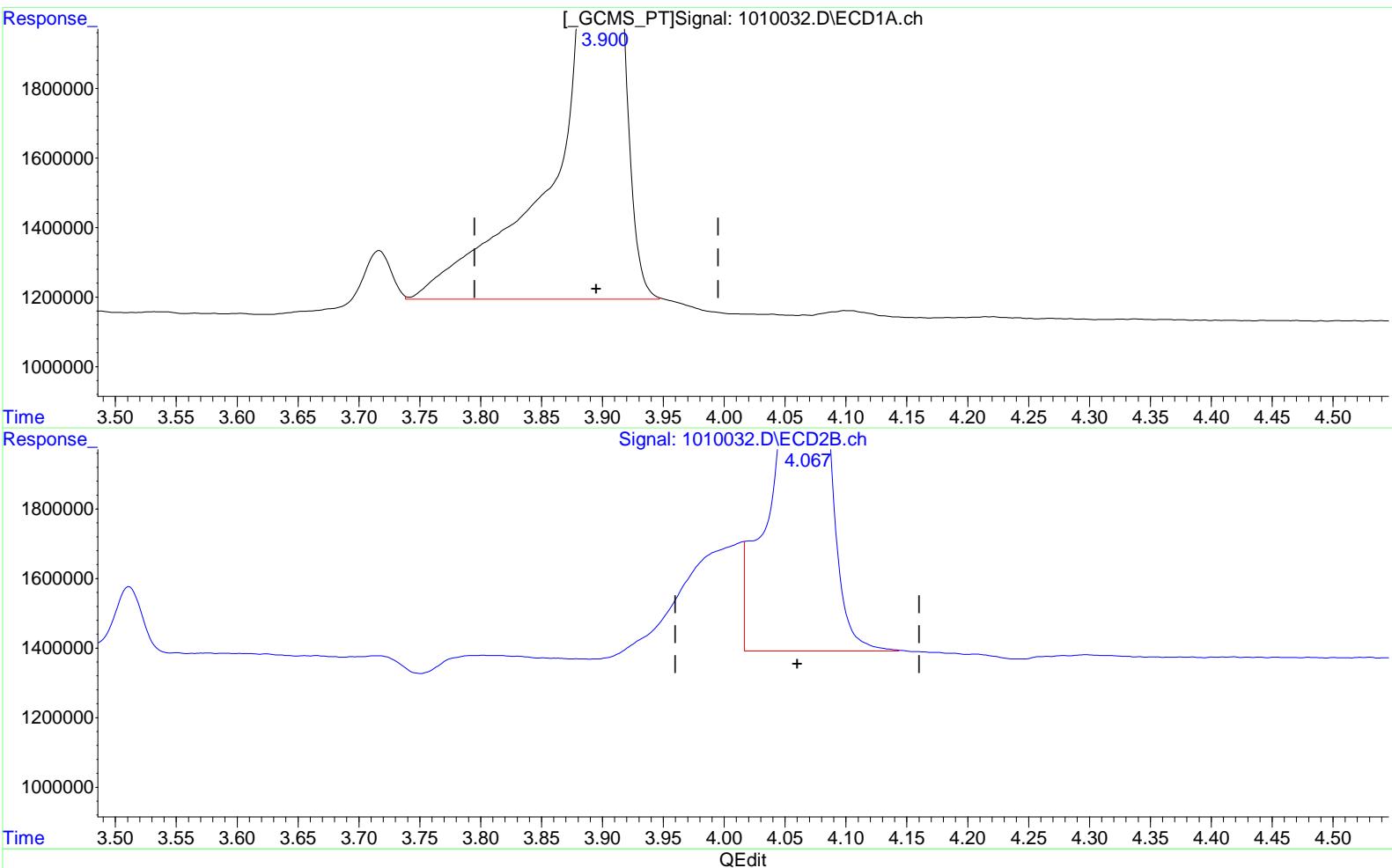
Quantitation Report (Qedit)

1st *JMS* 10/11/162nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010032.D Vial: 26
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:07:49 Operator: BS
 Sample : K1612058-002MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.900min 4.778 ppb m

response 6039476

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.067min 4.695 ppb m

response 4556103

Exception Report

Data File: J:\GC33\DATA\101016-504\1010033.D
Lab ID: KWG1609129-4 -- K1612058-002DMS
RunType: DMS
Matrix: WATER

Date Acquired: 10/11/2016 03:31
Date Quantitated: 10/11/2016 10:47
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010033.D\1010033C.D
Lab ID: KWG1609129-4 -- K1612058-002DMS
RunType: DMS
Matrix: WATER

Date Acquired: 10/11/2016 03:31
Date Quantitated: 10/11/2016 10:47
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010033.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010033.D\1010033c.d	Vial:	27
Acq Date:	10/11/2016 03:31	Quant Date:	10/11/2016 10:47
Run Type:	DMS	MethodJoinID:	MJ480
Lab ID:	KWG1609129-4 -- K1612058-002DMS	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016

Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560613	Prep Date:	10/10/2016	

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:			
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Method ID:	MJ480
			Quant based on Method

Target Compounds

Parameter Name	RT	RT	Resp	Resp	ppb	ppb	ug/L	ug/L	Rpt
	#1	#2	#1	#2	#1	#2	#1	#2	
1,2-Dibromoethane (EDB)	3.90	4.06	6005265m	4325052m	4.75	4.46	0.263	0.246	0.246
1,2,3-Trichloropropane	6.24	6.30	910477	900020	4.32	4.37	0.239	0.242	0.239
1,2-Dibromo-3-chloropropan	7.67	7.88	12341401	9685485	4.29	4.28	0.237	0.236	0.236

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.1630 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010033.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:31:22 Operator: BS
 Sample : K1612058-002DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:47:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

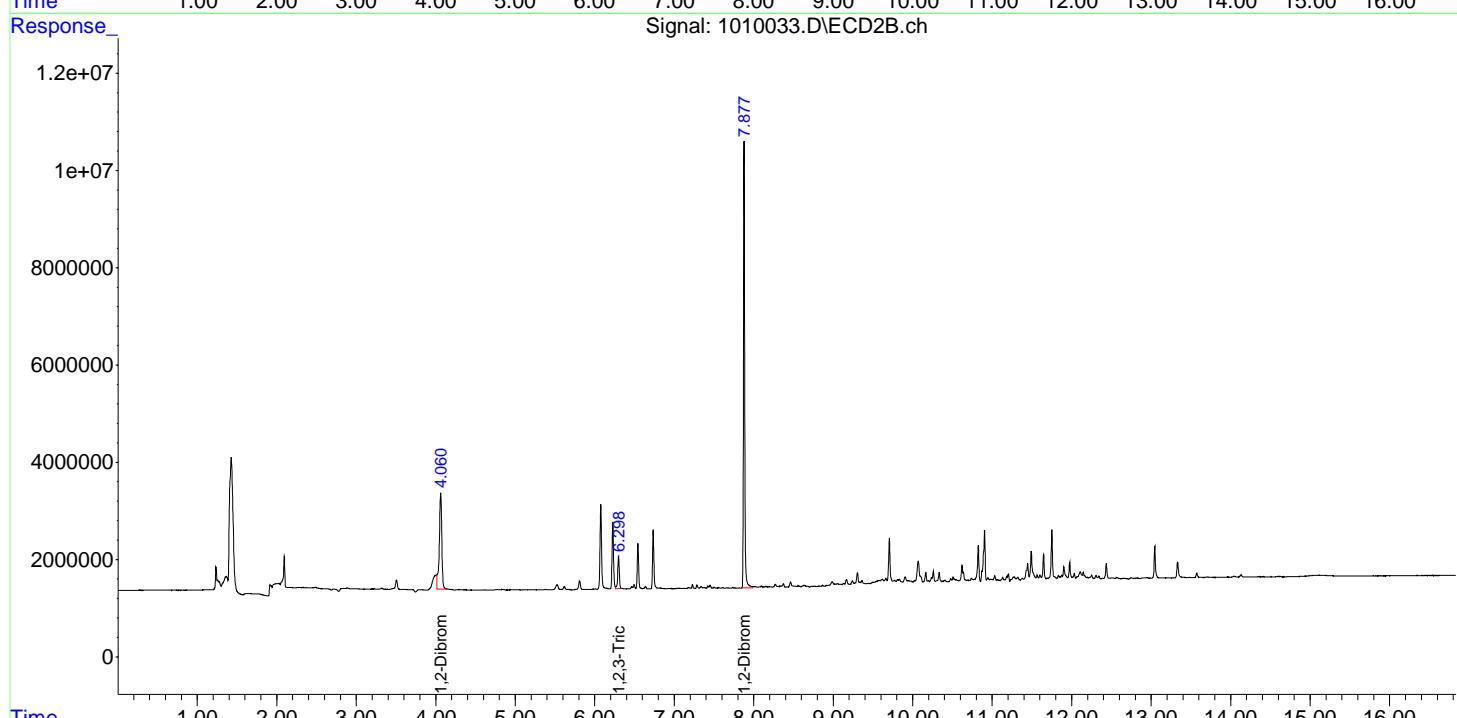
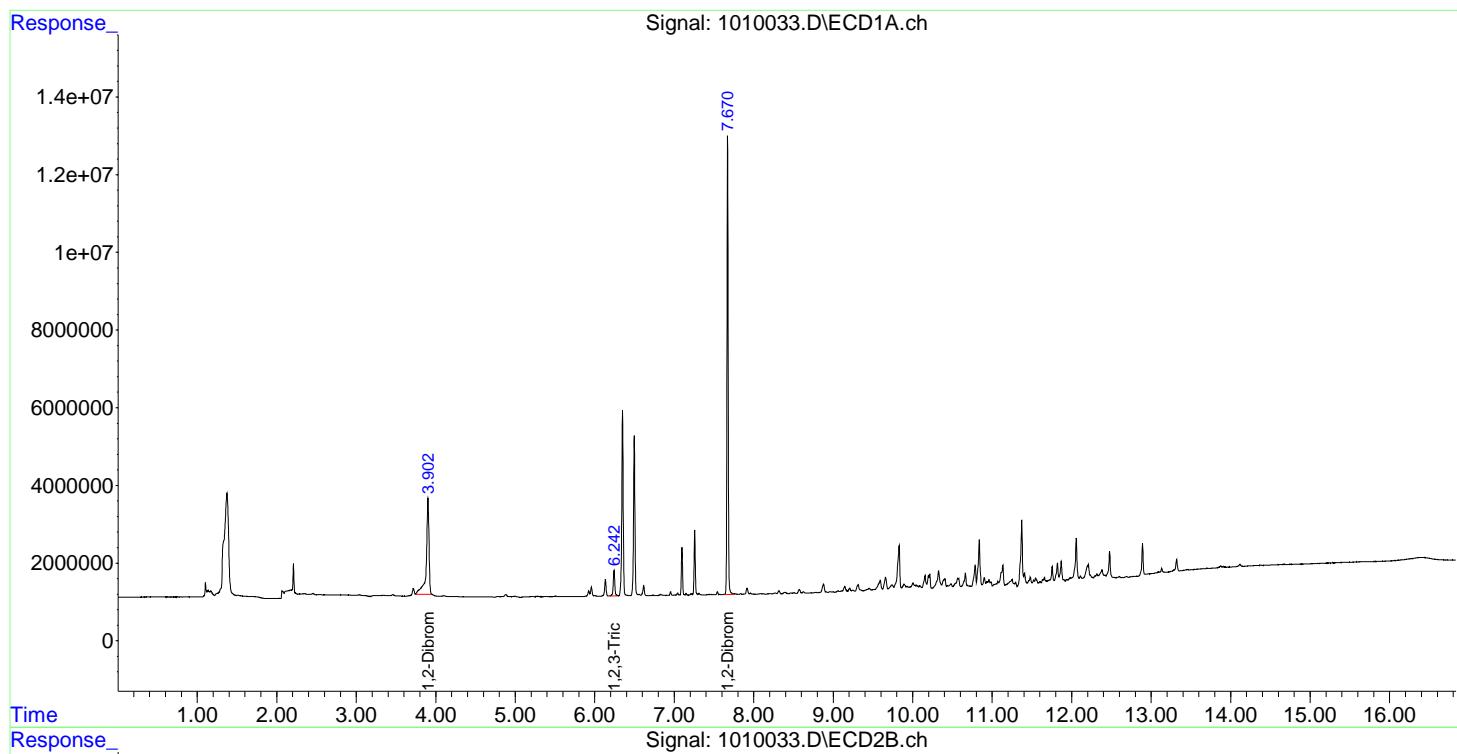
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.902	4.060	6005265	4325052	4.754m	4.457m
2) M 1,2,3-Tribromoethane	6.242	6.298	910477	900020	4.319	4.369
3) M 1,2-Dibromoethane	7.670	7.877	12341401	9685485	4.287	4.276

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010033.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:31:22 Operator: BS
 Sample : K1612058-002DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:47:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



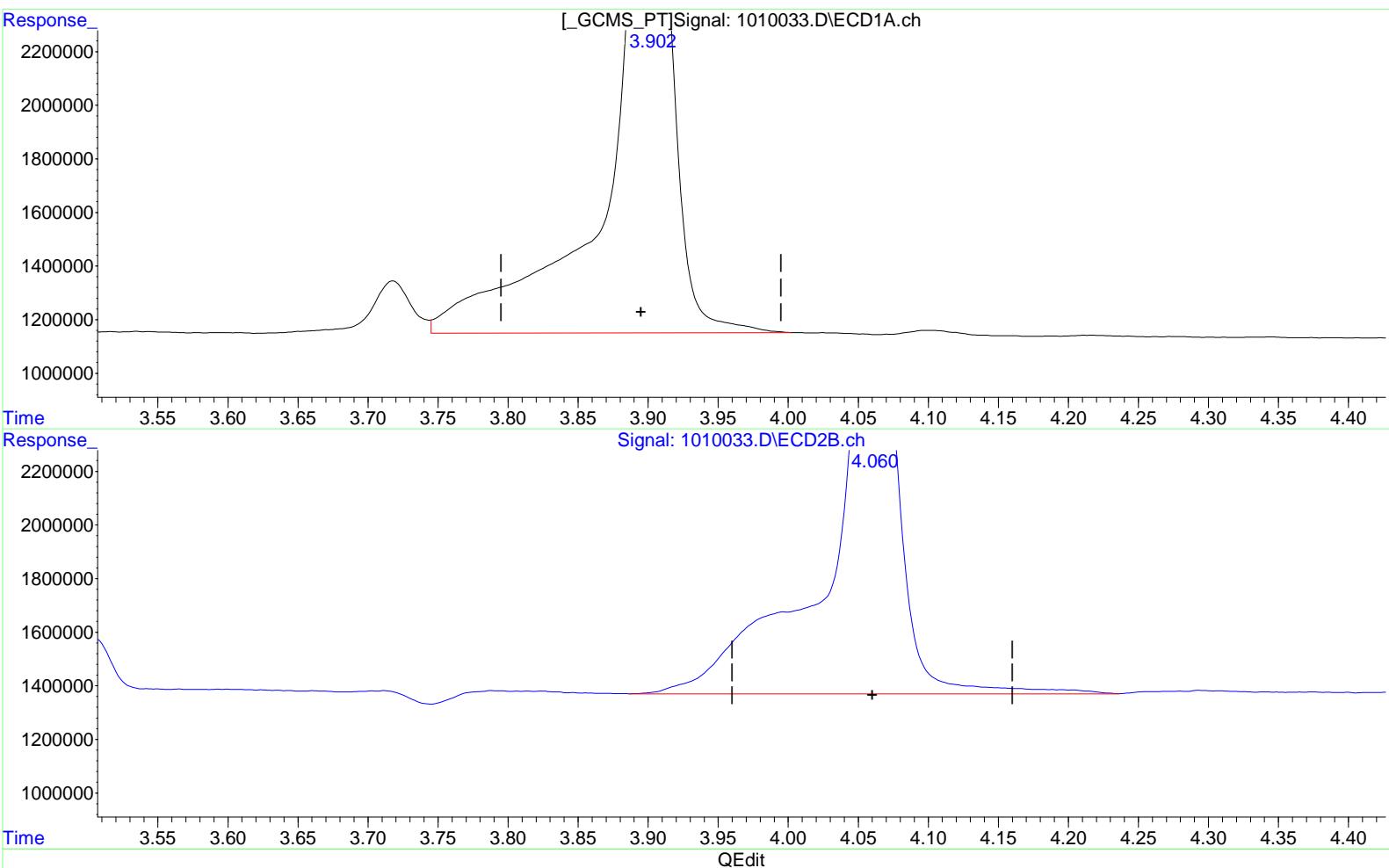
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010033.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:31:22 Operator: BS
 Sample : K1612058-002DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:53 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 5.164 ppb

response 6605680

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 5.918 ppb

response 5742363

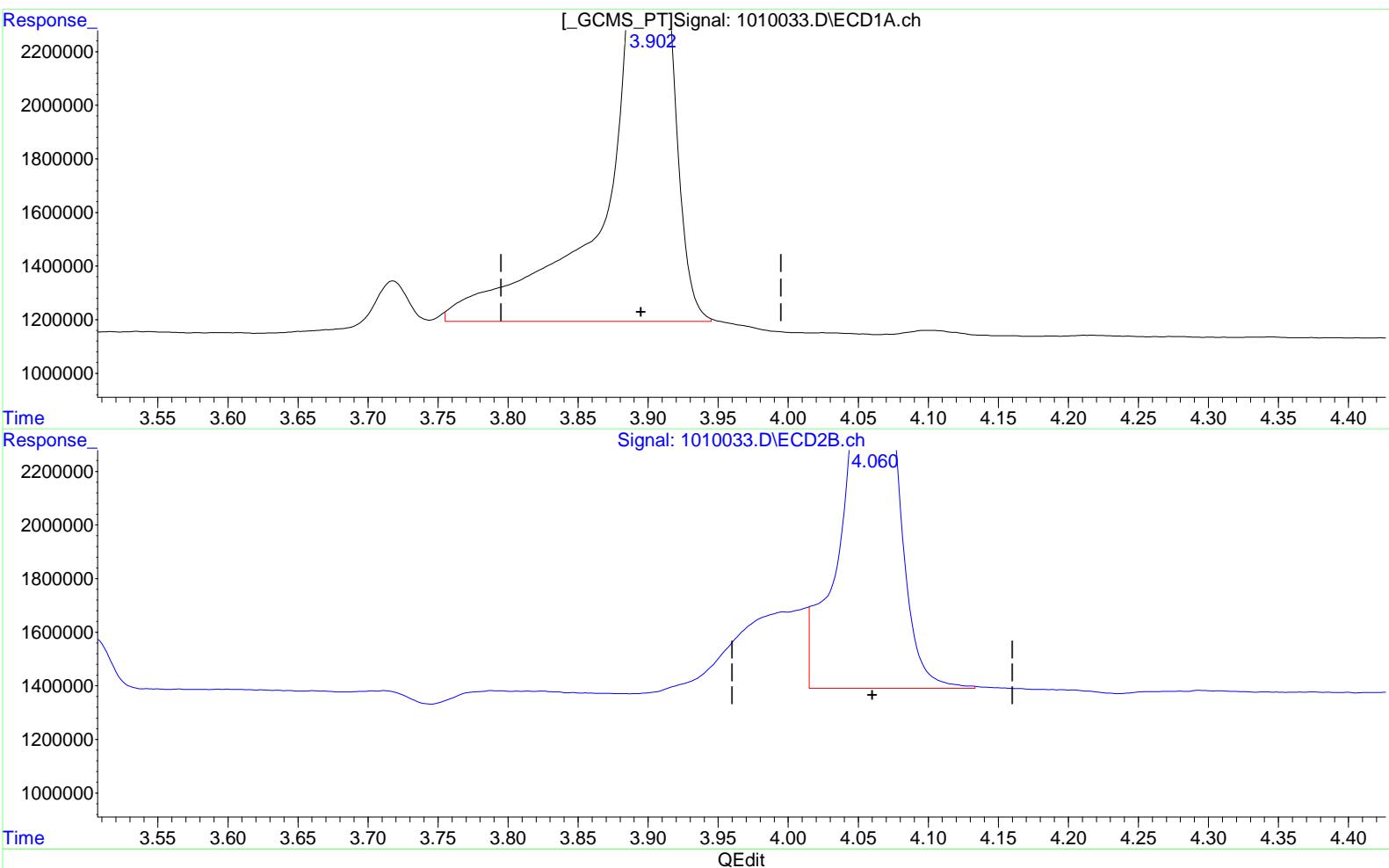
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010033.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 03:31:22 Operator: BS
 Sample : K1612058-002DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:46:53 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 4.754 ppb m

response 6005265

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 4.457 ppb m

response 4325052

Exception Report

Data File: J:\GC33\DATA\101016-504\1010015.D
Lab ID: KWG1609129-5
RunType: LCS
Matrix: WATER

Date Acquired: 10/10/2016 20:26
Date Quantitated: 10/11/2016 10:36
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010015.D\1010015C.D
Lab ID: KWG1609129-5
RunType: LCS
Matrix: WATER

Date Acquired: 10/10/2016 20:26
Date Quantitated: 10/11/2016 10:36
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010015.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\101016-504\1010015.D\1010015c.d	Vial:	11	
Acq Date:	10/10/2016 20:26	Quant Date:	10/11/2016 10:36	
Run Type:	LCS	MethodJoinID:	MJ480	
Lab ID:	KWG1609129-5	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016	
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560614	Prep Date:	10/10/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89 ^{-0.01}	4.07 ^{+0.01}	5684645m	4047249m	4.53	4.17	0.259	0.238	0.238
1,2,3-Trichloropropane	6.24	6.30	887038	953790	4.21	4.64	0.241	0.265	0.241
1,2-Dibromo-3-chloropropano	7.67	7.88	11850358	9686511	4.12	4.28	0.235	0.244	0.235

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.0000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010015.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:26:20 Operator: BS
 Sample : KWG1609129-5LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

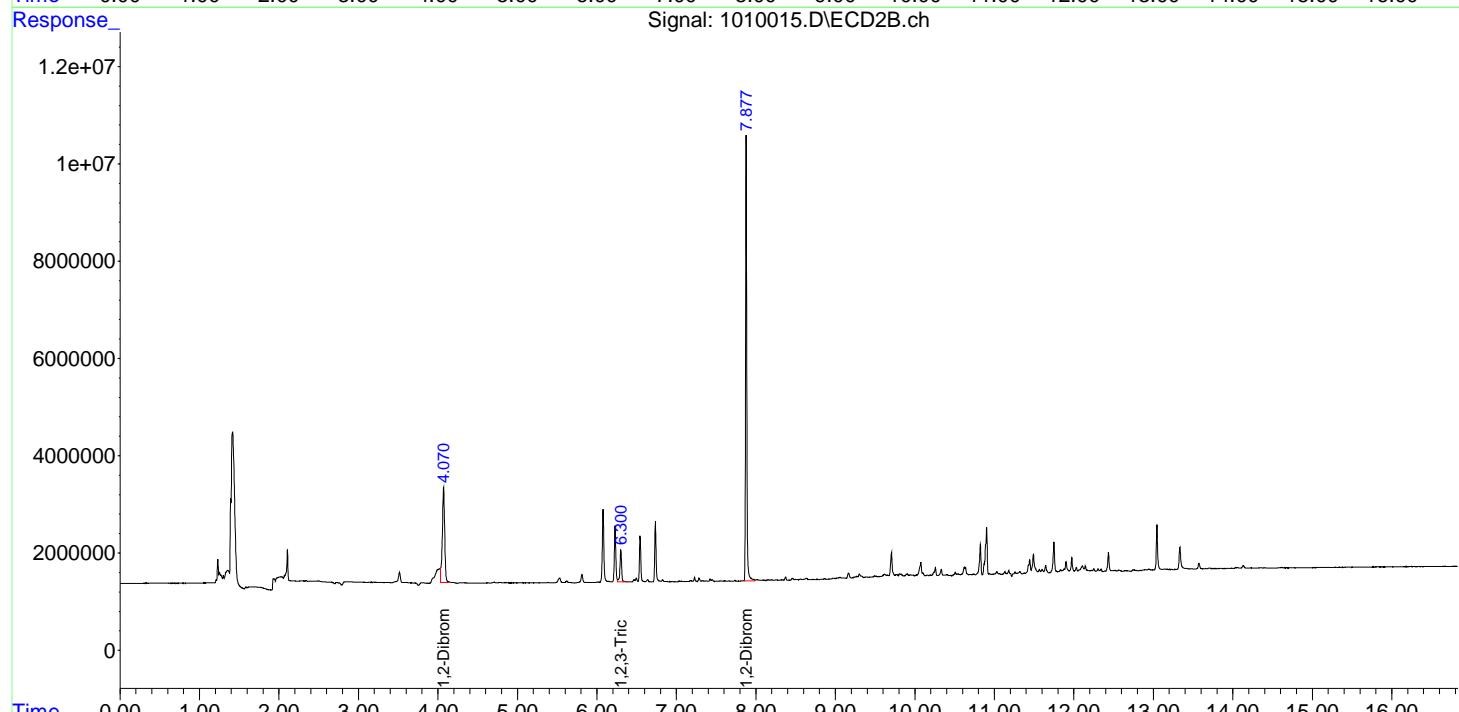
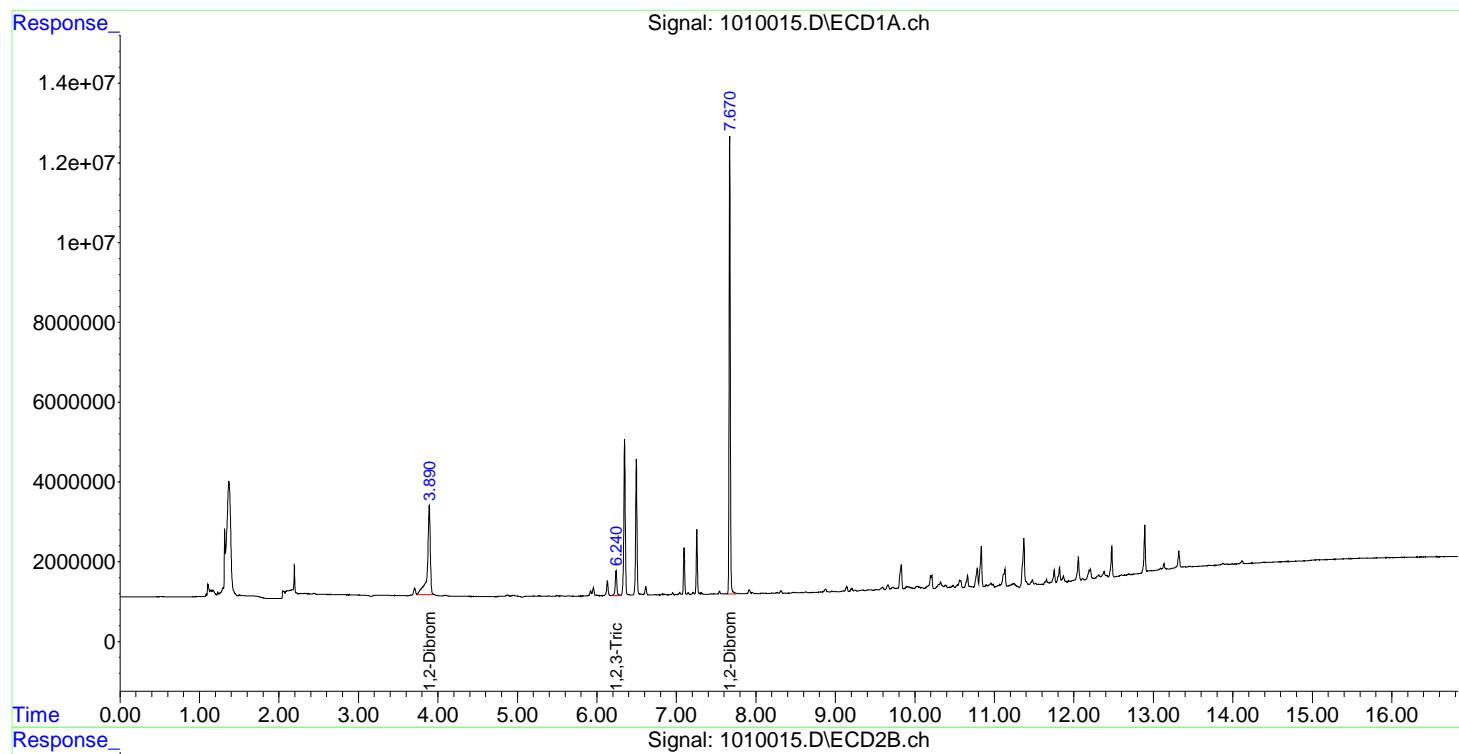
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.890	4.070	5684645	4047249	4.532m	4.171m
2) M 1,2,3-Tri...	6.240	6.300	887038	953790	4.211	4.636
3) M 1,2-Dibro...	7.670	7.877	11850358	9686511	4.116	4.276

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010015.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:26:20 Operator: BS
 Sample : KWG1609129-5LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

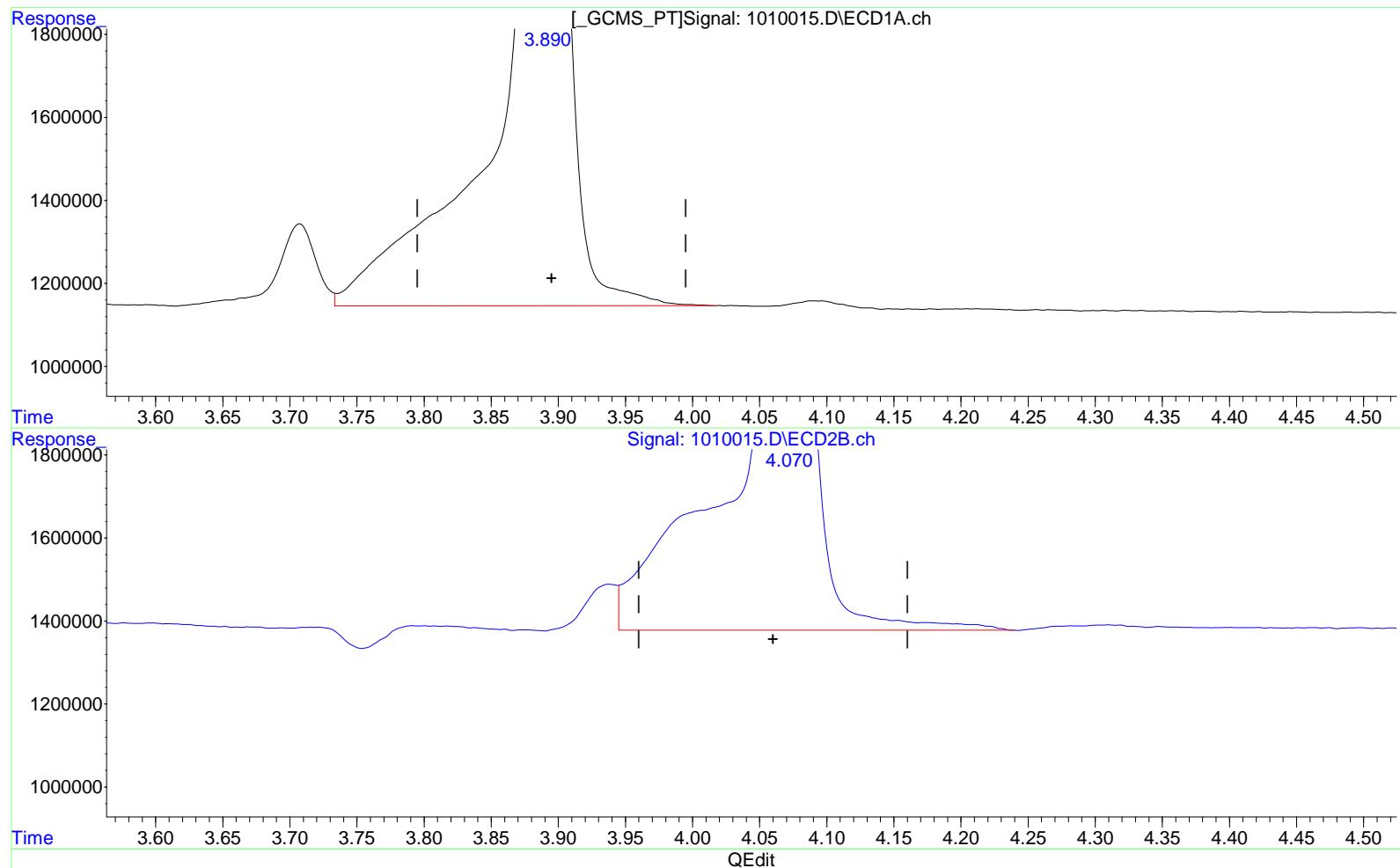
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010015.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:26:20 Operator: BS
 Sample : KWG1609129-5LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:30 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.890min 4.804 ppb

response 6077024

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.070min 5.689 ppb

response 5520503

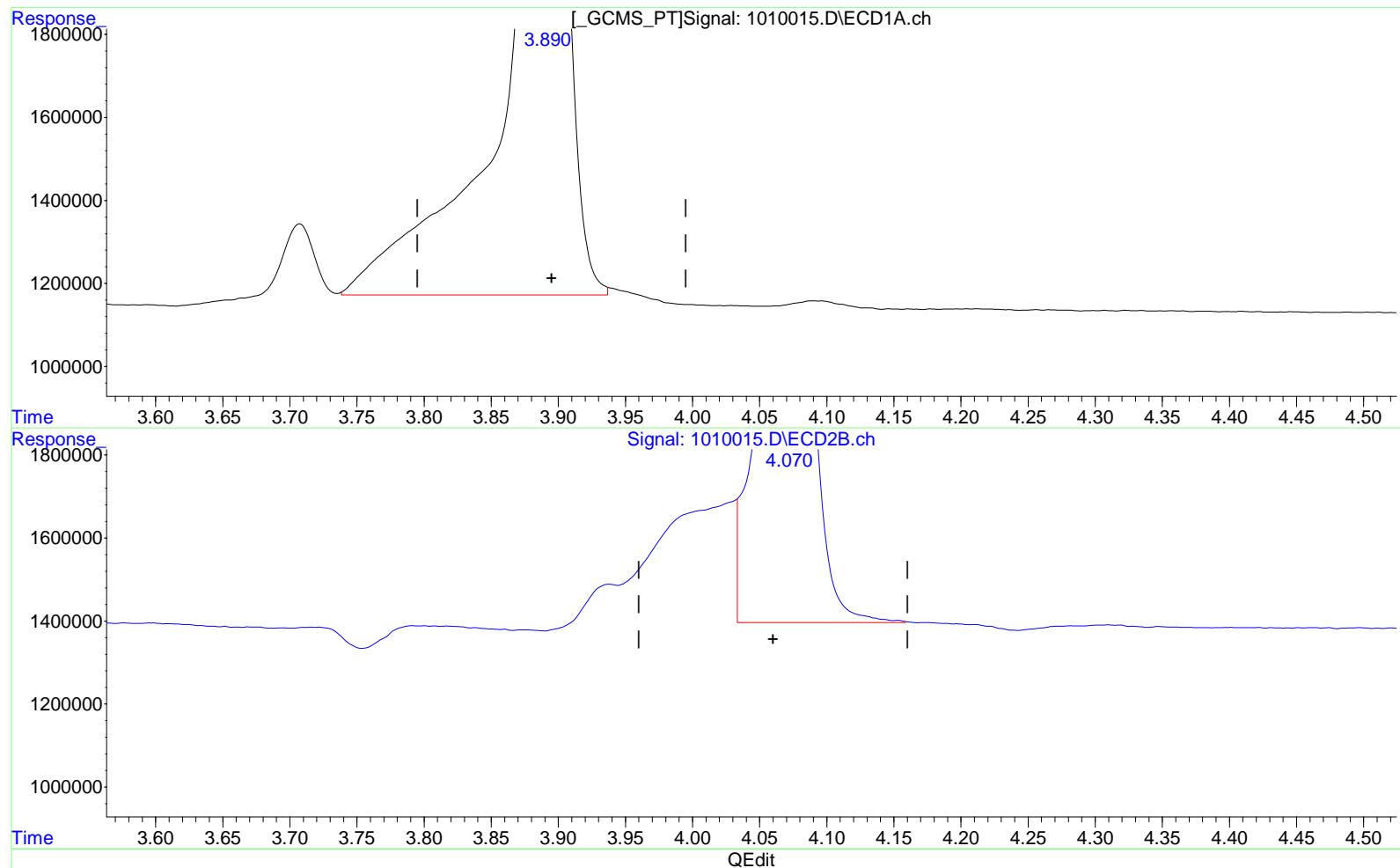
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010015.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:26:20 Operator: BS
 Sample : KWG1609129-5LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:30 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.890min 4.532 ppb m
 response 5684645

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.070min 4.171 ppb m
 response 4047249

Exception Report

Data File: J:\GC33\DATA\101016-504\1010016.D
Lab ID: KWG1609129-6
RunType: LCS
Matrix: WATER

Date Acquired: 10/10/2016 20:50
Date Quantitated: 10/11/2016 10:37
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010016.D\1010016C.D
Lab ID: KWG1609129-6
RunType: LCS
Matrix: WATER

Date Acquired: 10/10/2016 20:50
Date Quantitated: 10/11/2016 10:37
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010016.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\101016-504\1010016.D\1010016c.d	Vial:	12	
Acq Date:	10/10/2016 20:50	Quant Date:	10/11/2016 10:37	
Run Type:	LCS	MethodJoinID:	MJ480	
Lab ID:	KWG1609129-6	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/10/2016	
Analysis Lot:	KWG1609198	Prep Lot:	KWG1609129	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1560615	Prep Date:	10/10/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:	J:\GC33\DATA\101016-504\1010017.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.06	5515356m	3989099m	4.41	4.11	0.252	0.235	0.235
1,2,3-Trichloropropane	6.24	6.30	871110	862941	4.14	4.18	0.236	0.239	0.236
1,2-Dibromo-3-chloropropan	7.67	7.88	11919454	9399105	4.14	4.15	0.237	0.237	0.237

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.0000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010016.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:50:00 Operator: BS
 Sample : KWG1609129-6LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:37:43 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

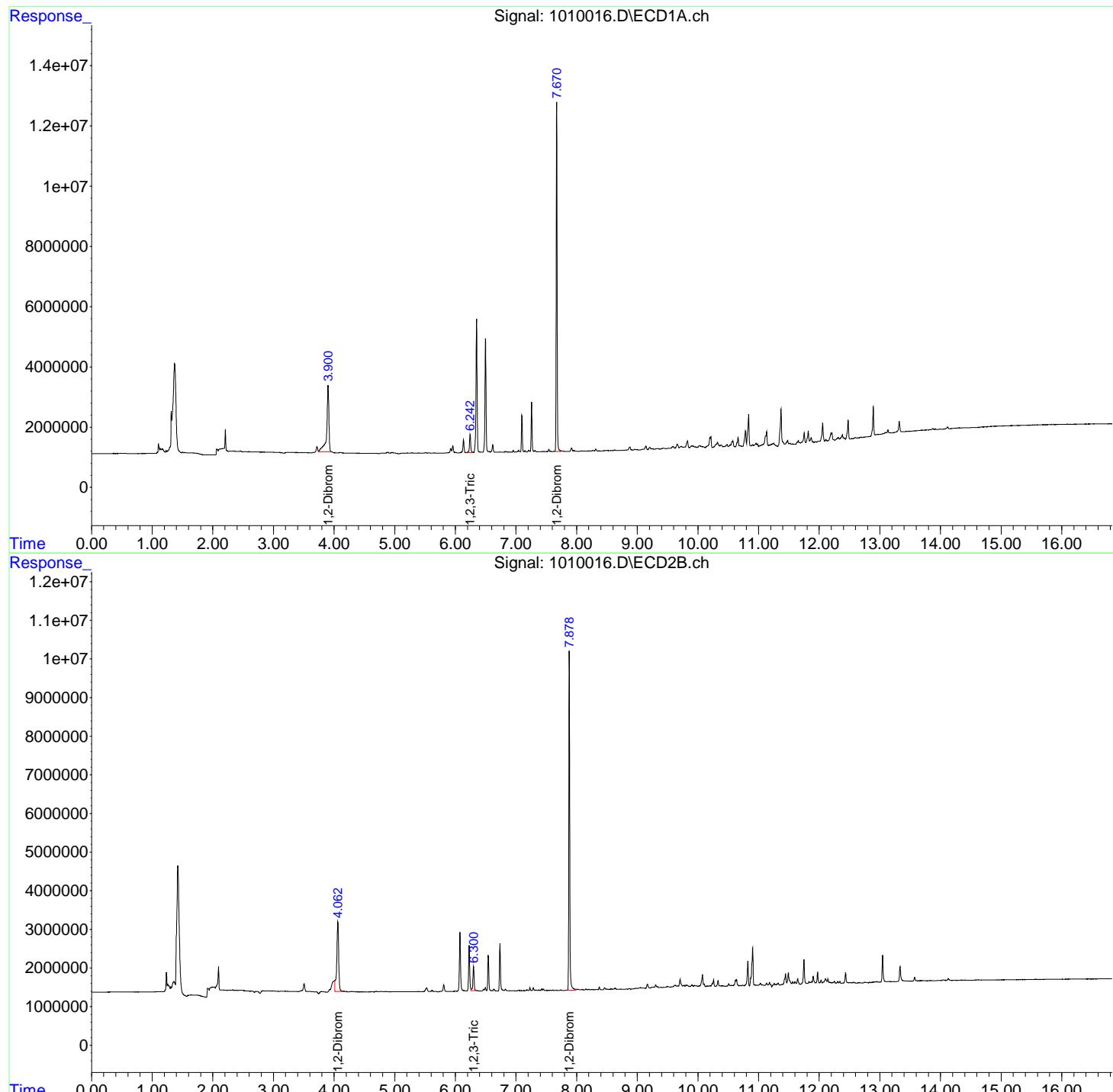
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.900	4.062	5515356	3989099	4.413m	4.111m
2) M 1,2,3-Tri...	6.242	6.300	871110	862941	4.138	4.184
3) M 1,2-Dibro...	7.670	7.878	11919454	9399105	4.140	4.150

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010016.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:50:00 Operator: BS
 Sample : KWG1609129-6LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:37:43 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

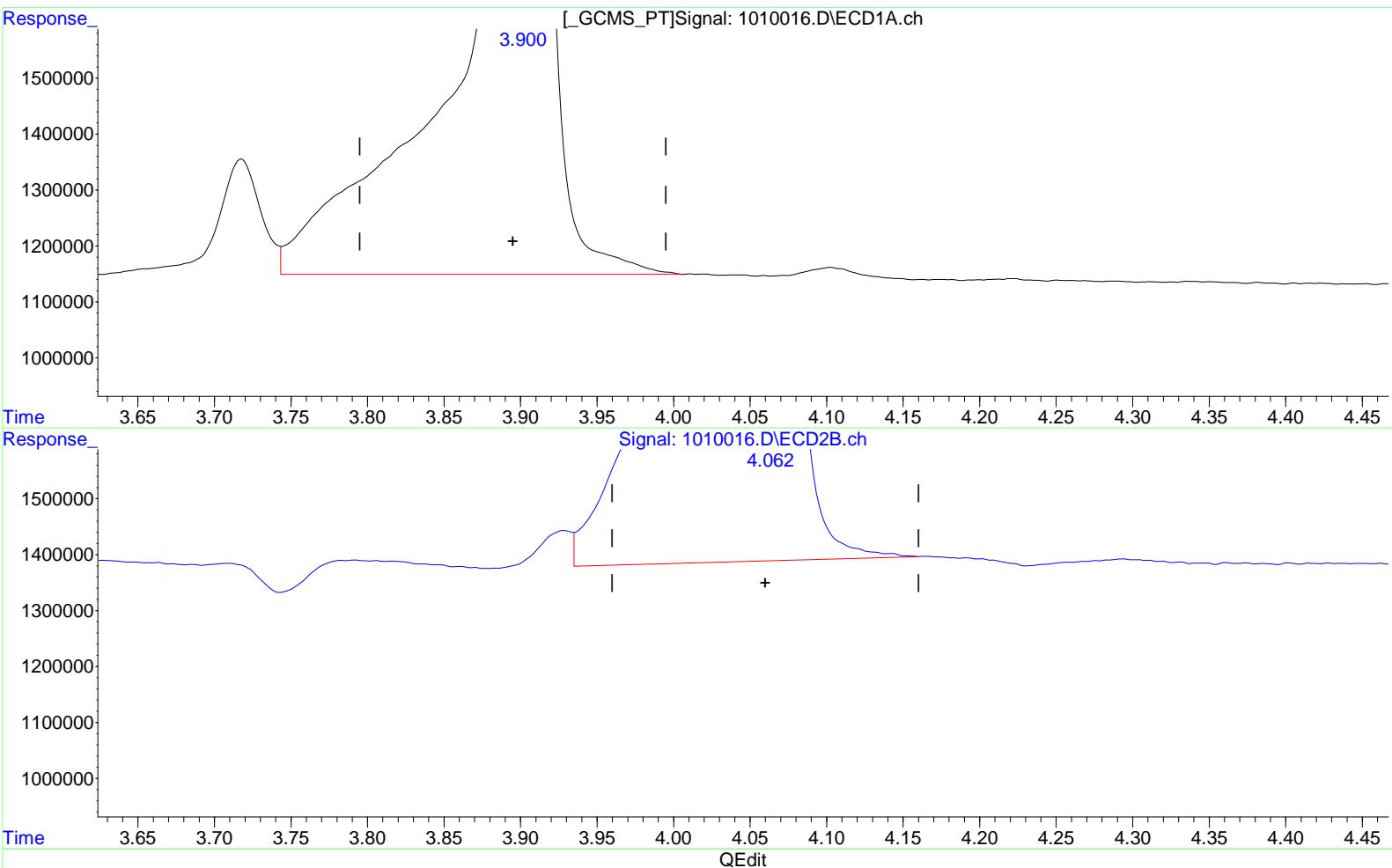
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010016.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:50:00 Operator: BS
 Sample : KWG1609129-6LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:37:17 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.900min 4.789 ppb

response 6055658

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

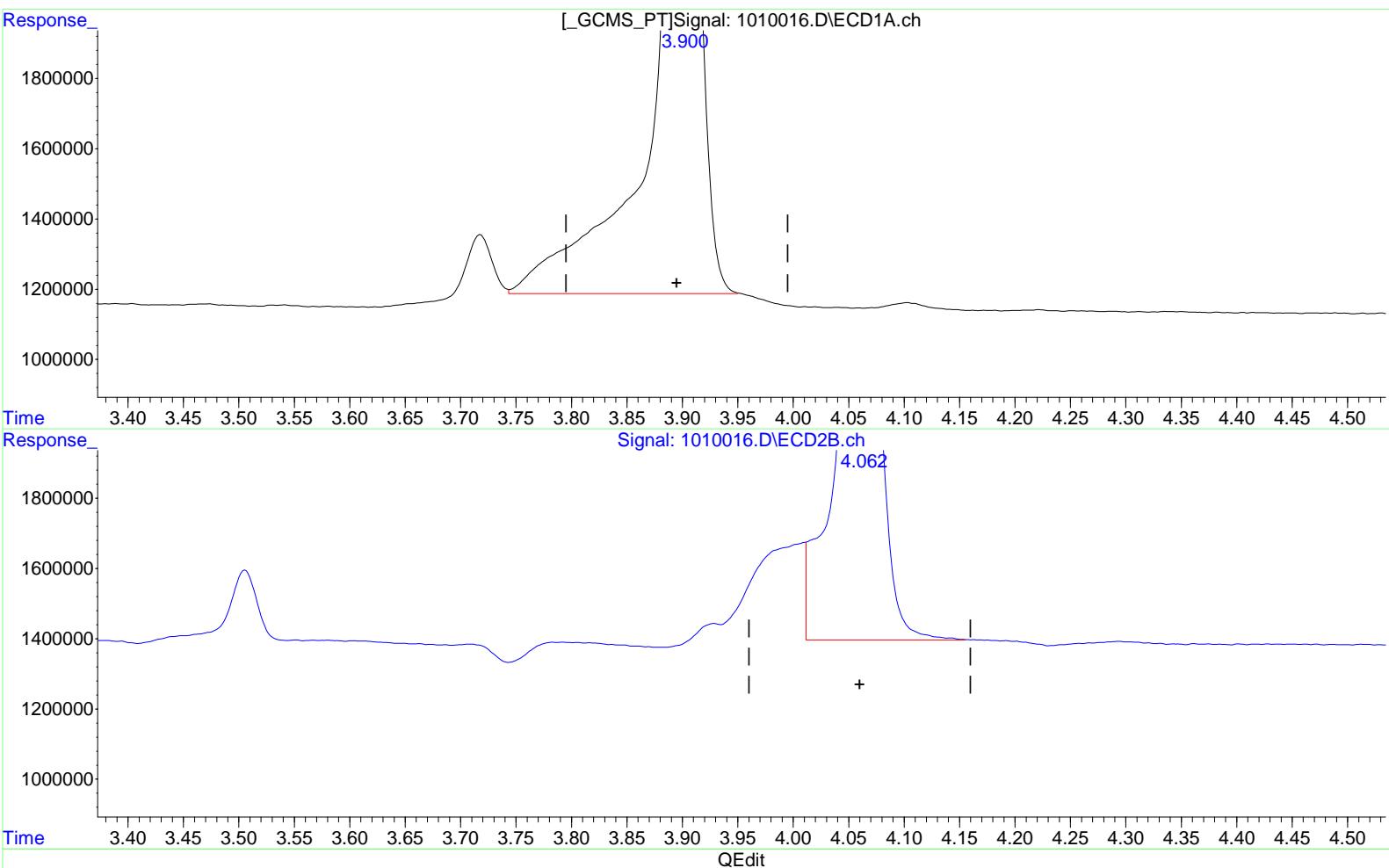
4.062min 5.157 ppb

response 5003862

Data File : J:\GC33\DATA\101016-504\1010016.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:50:00 Operator: BS
 Sample : KWG1609129-6LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:37:17 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.900min 4.413 ppb m
 response 5515356

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.062min 4.111 ppb m
 response 3989099

Exception Report

Data File: J:\GC33\DATA\101016-504\1010013.D
Lab ID: KWG1609198-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/10/2016 19:39
Date Quantitated: 10/11/2016 10:33
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010013.D\1010013C.D
Lab ID: KWG1609198-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/10/2016 19:39
Date Quantitated: 10/11/2016 10:33
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010013.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010013.D\1010013c.d	Vial:	6
Acq Date:	10/10/2016 19:39	Quant Date:	10/11/2016 10:33
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1609198-1	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	10/11/2016
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.06	1410559m	1076848m	1.25	1.11			
1,2,3-Trichloropropane	6.24	6.30	256360	247318	1.30	1.12			
1,2-Dibromo-3-chloropropan	7.67	7.88	3287157	2521474	1.14	1.11			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:45 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

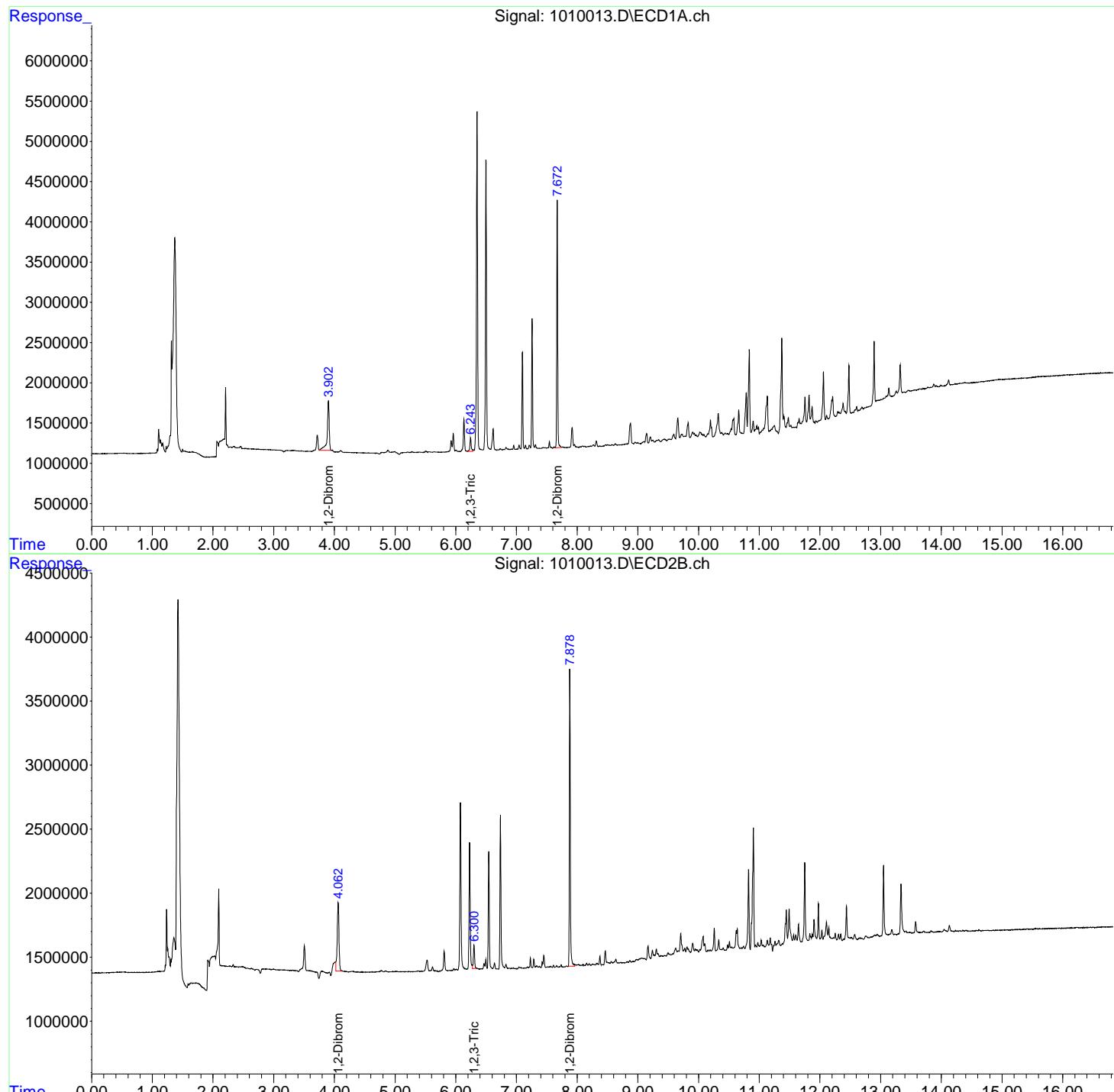
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.902	4.062	1410559	1076848	1.245m	1.110m
2) M 1,2,3-Tri...	6.243	6.300	256360	247318	1.302	1.121
3) M 1,2-Dibro...	7.672	7.878	3287157	2521474	1.142	1.113

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:45 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



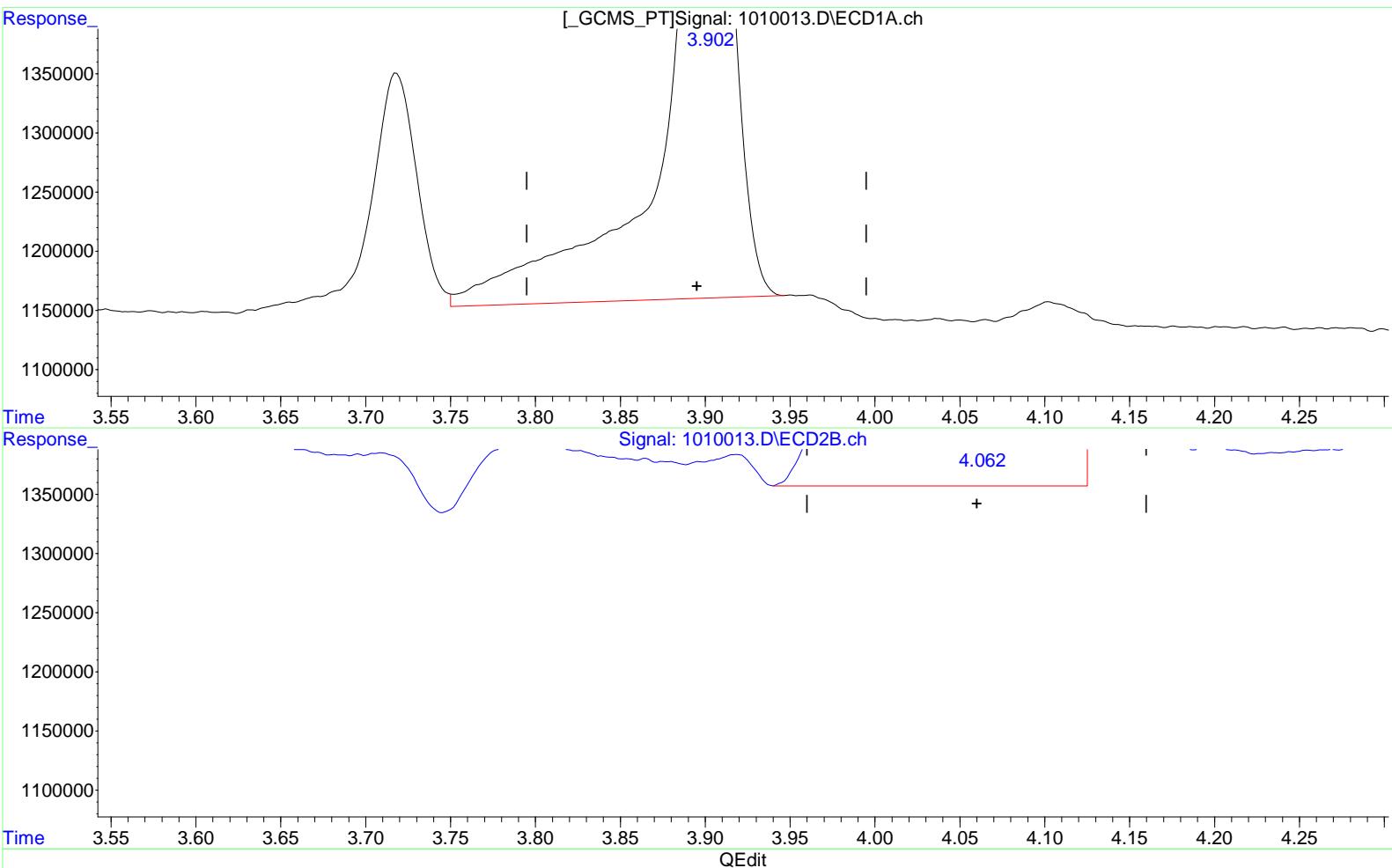
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:01 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 1.288 ppb

response 1460093

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

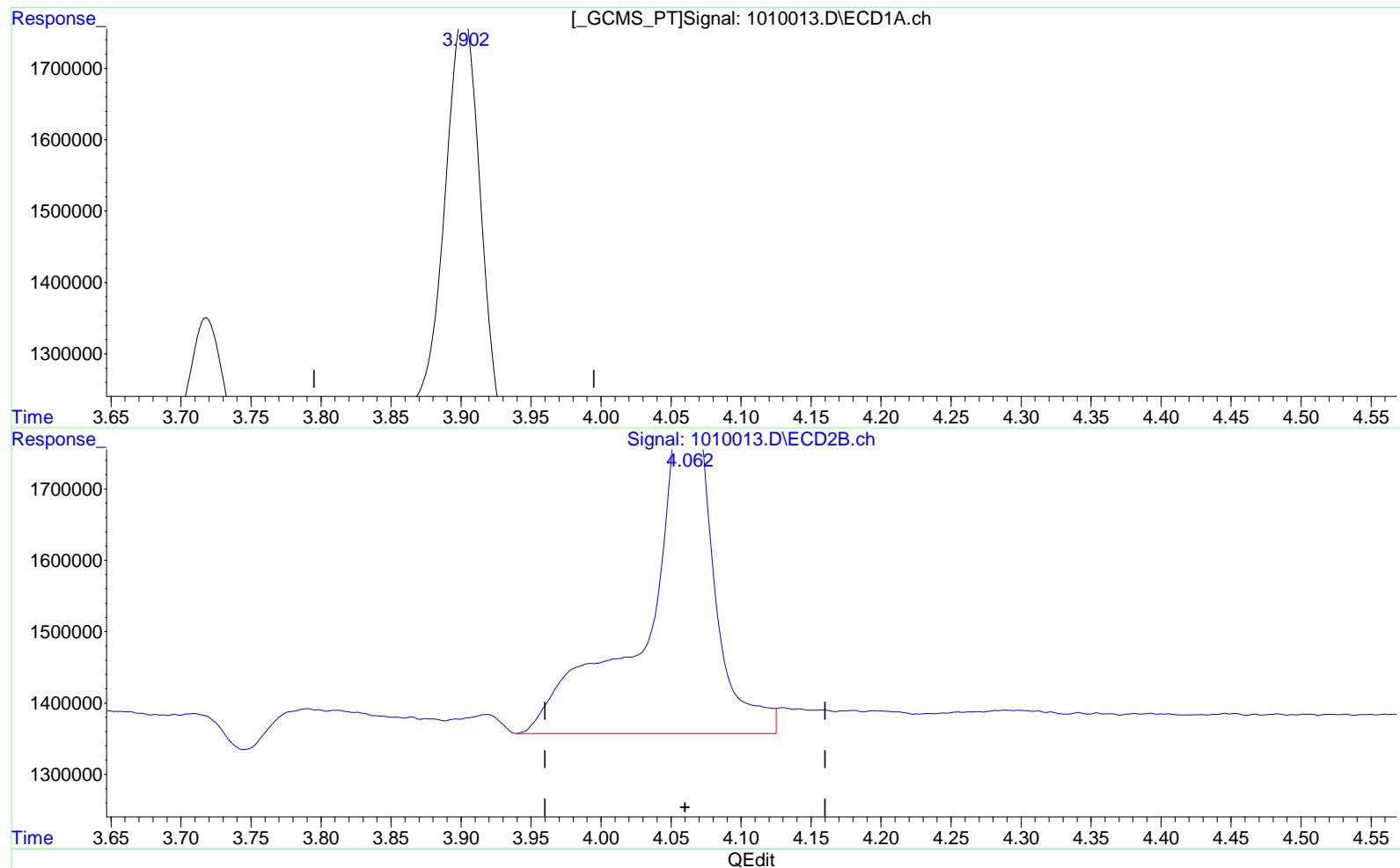
4.062min 1.711 ppb

response 1660125

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:01 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 1.245 ppb m

response 1410559

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 1.711 ppb

response 1660125

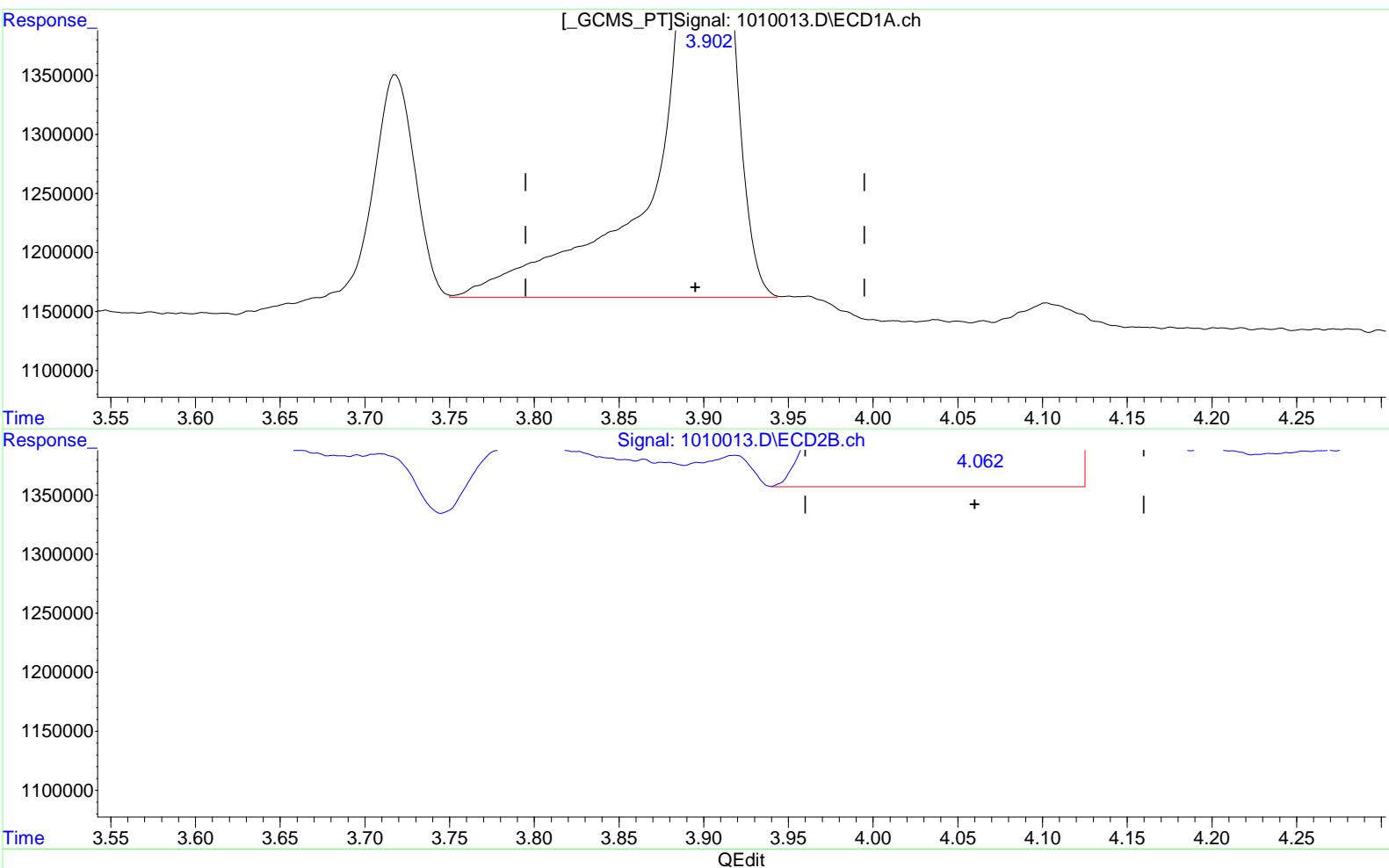
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:01 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.902min 1.245 ppb m
 response 1410559

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.062min 1.711 ppb
 response 1660125

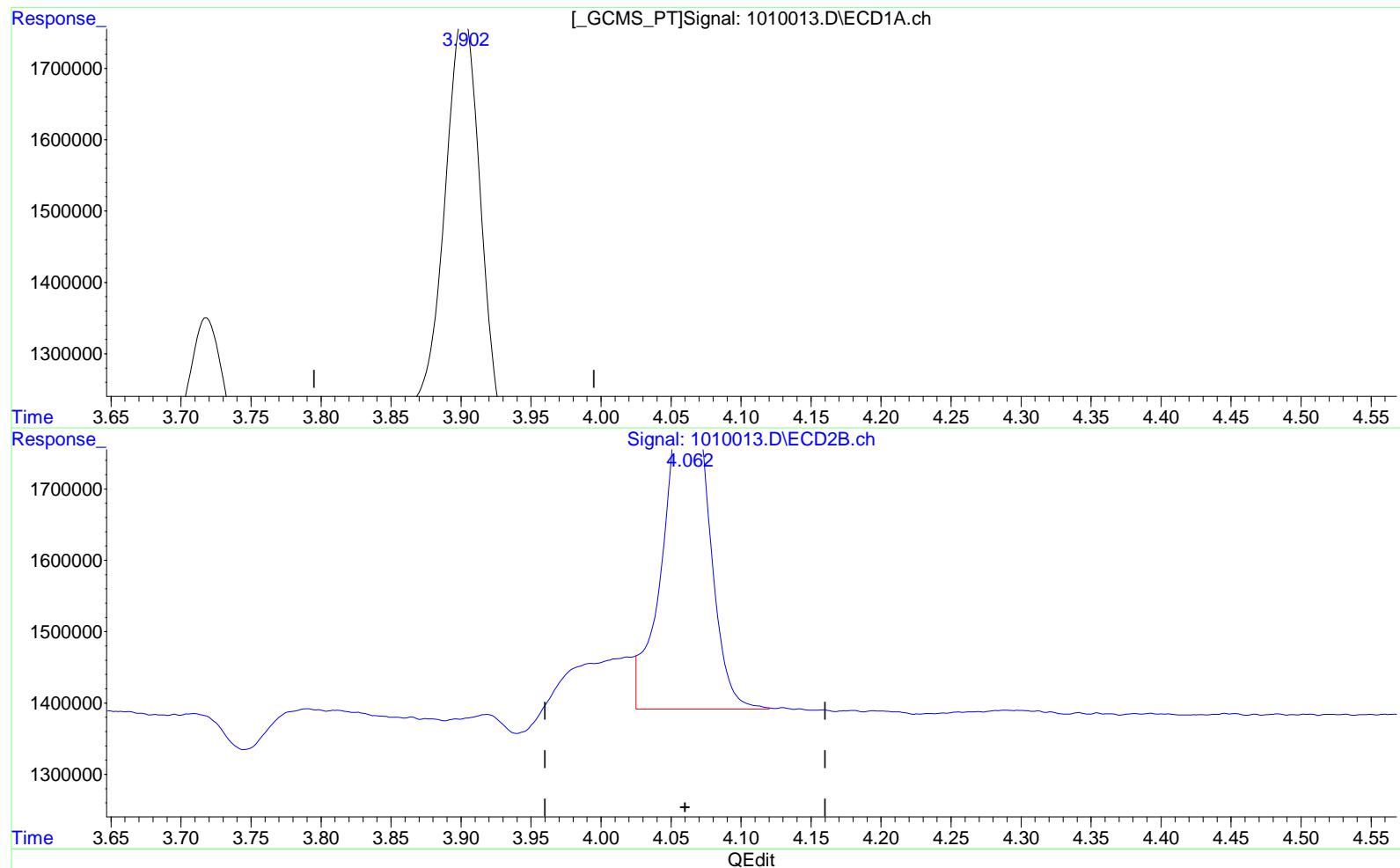
Quantitation Report (Qedit)

1st *JMS* 10/11/16
 2nd *JEP* 10/11/16

Data File : J:\GC33\DATA\101016-504\1010013.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:39:09 Operator: BS
 Sample : 101016 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:33:01 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.902min 1.245 ppb m

response 1410559

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 1.110 ppb m

response 1076848

Exception Report

Data File: J:\GC33\DATA\101016-504\1010025.D
Lab ID: KWG1609198-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 00:22
Date Quantitated: 10/11/2016 10:41
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010025.D\1010025C.D
Lab ID: KWG1609198-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 00:22
Date Quantitated: 10/11/2016 10:41
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010025.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010025.D\1010025.c.d	Vial:	7
Acq Date:	10/11/2016 00:22	Quant Date:	10/11/2016 10:41
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1609198-2	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/11/2016
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.06	5010997m	3848368m	4.06	3.97			
1,2,3-Trichloropropane	6.24	6.30	815102	840817	3.88	4.07			
1,2-Dibromo-3-chloropropano	7.67	7.88	10395829	8351478	3.61	3.69			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010025.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:22:16 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

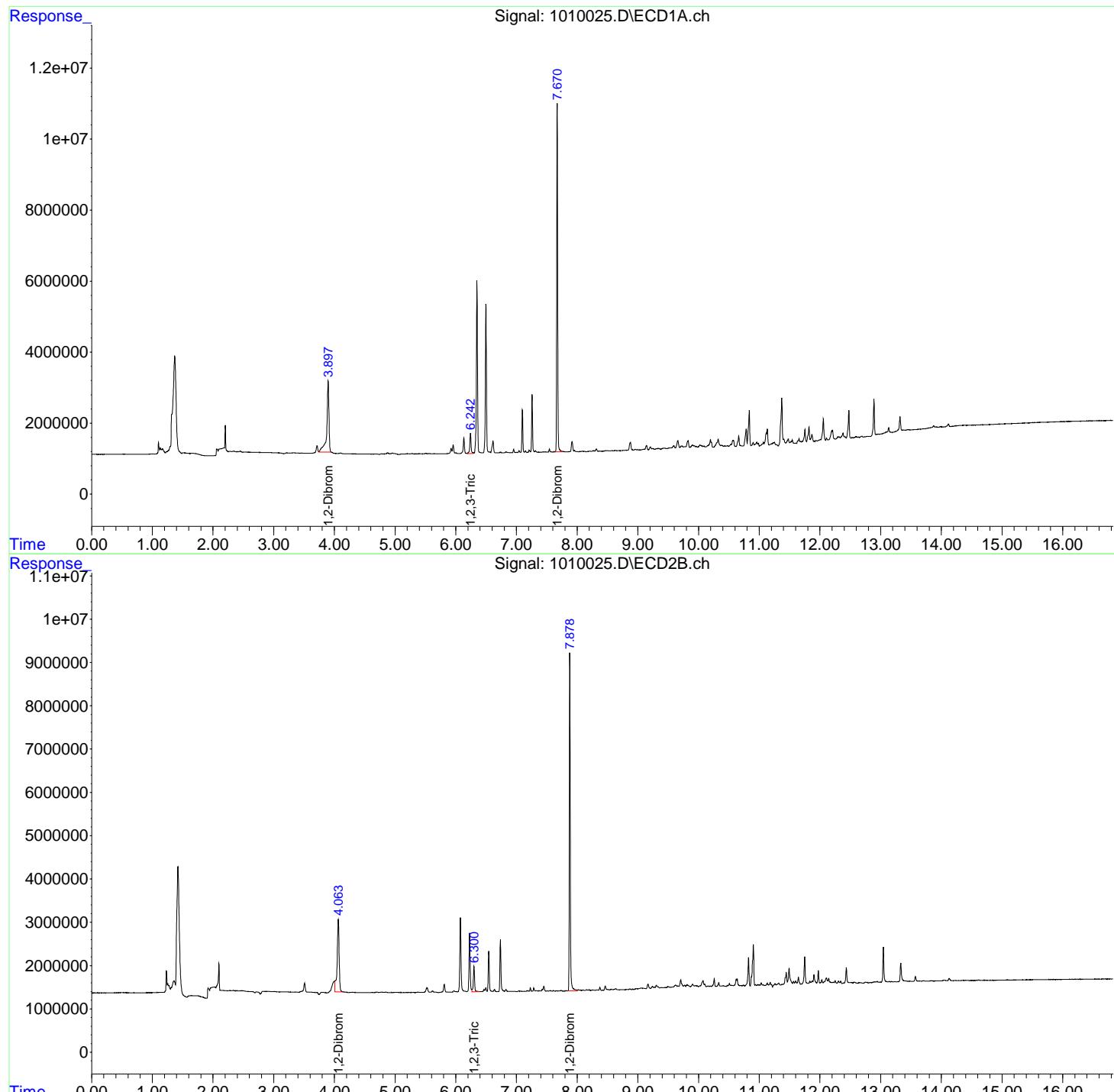
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.897	4.063	5010997	3848368	4.055m	3.966m
2) M 1,2,3-Tri...	6.242	6.300	815102	840817	3.879	4.074
3) M 1,2-Dibro...	7.670	7.878	10395829	8351478	3.611	3.687

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010025.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:22:16 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

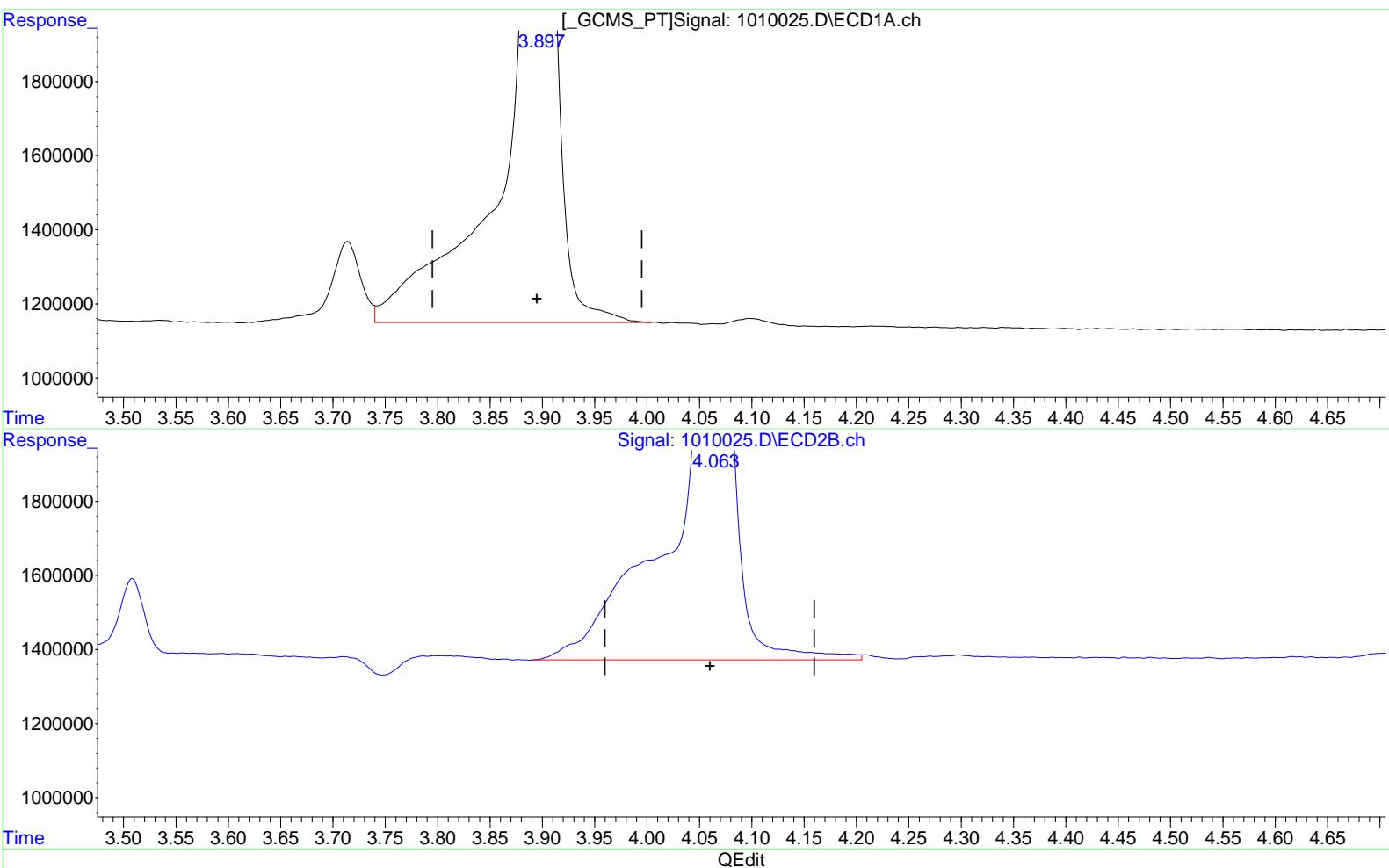
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010025.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:22:16 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:26 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.425 ppb

response 5532405

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

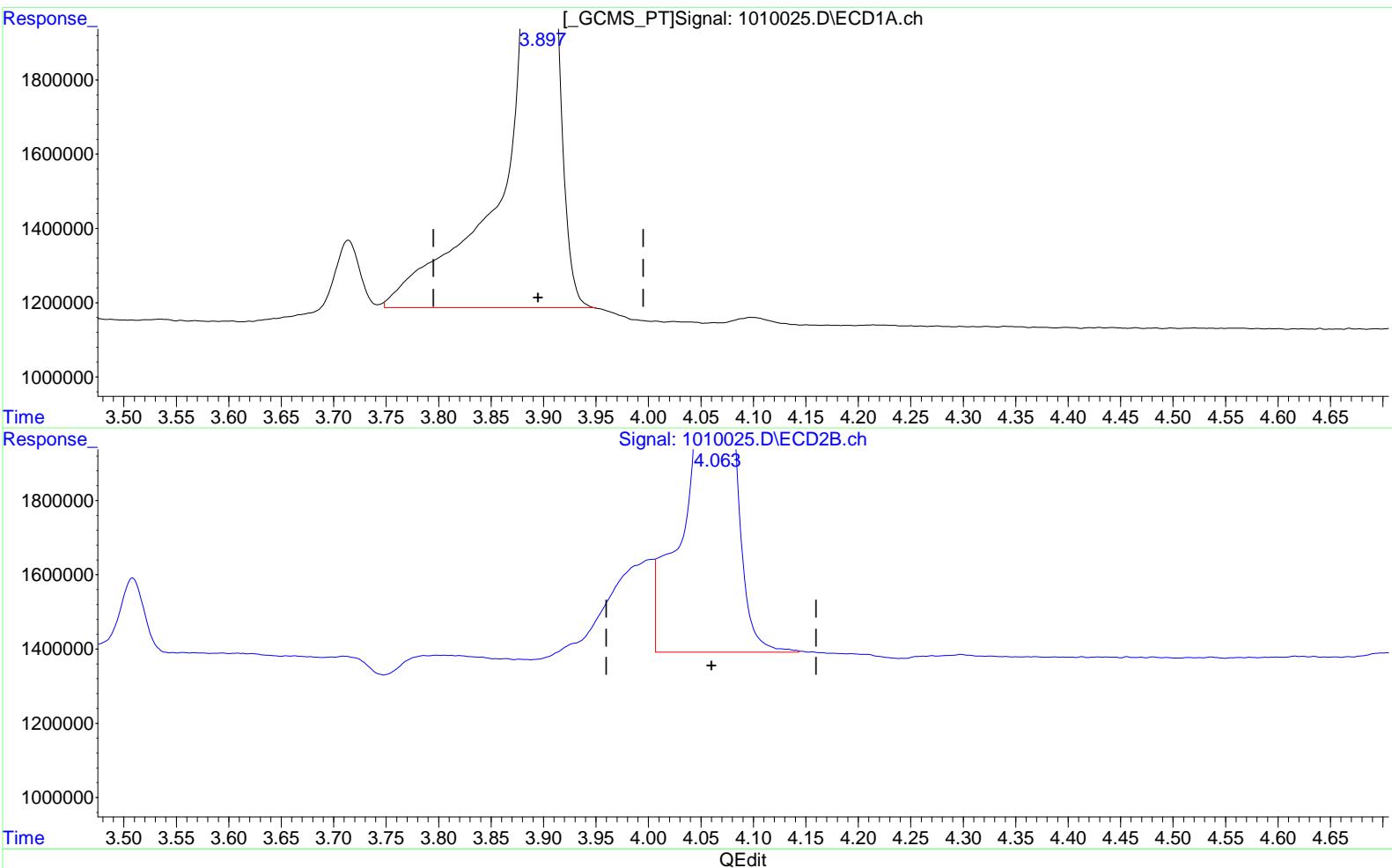
4.063min 5.097 ppb

response 4946166

Data File : J:\GC33\DATA\101016-504\1010025.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:22:16 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:41:26 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.897min 4.055 ppb m
 response 5010997

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.063min 3.966 ppb m
 response 3848368

Exception Report

Data File: J:\GC33\DATA\101016-504\1010036.D
Lab ID: KWG1609198-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 04:42
Date Quantitated: 10/11/2016 10:48
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010036.D\1010036C.D
Lab ID: KWG1609198-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 04:42
Date Quantitated: 10/11/2016 10:48
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010036.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010036.D\1010036c.d	Vial:	7
Acq Date:	10/11/2016 04:42	Quant Date:	10/11/2016 10:48
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1609198-3	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 10/11/2016
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.07	5114545m	3615693m	4.13	3.73			
1,2,3-Trichloropropane	6.24	6.30	827373	815674	3.94	3.95			
1,2-Dibromo-3-chloropropan	7.67	7.88	10655071	8116255	3.70	3.58			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010036.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 04:42:02 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:48:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

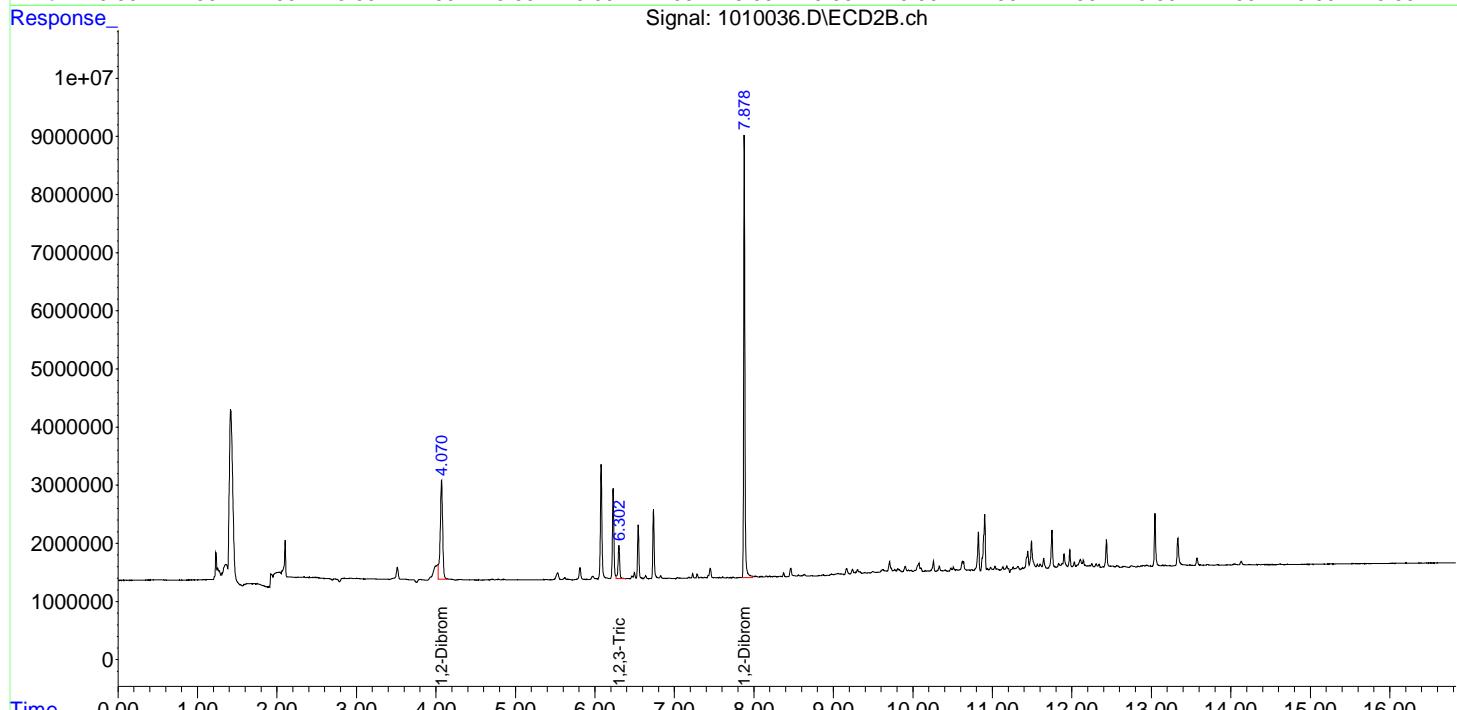
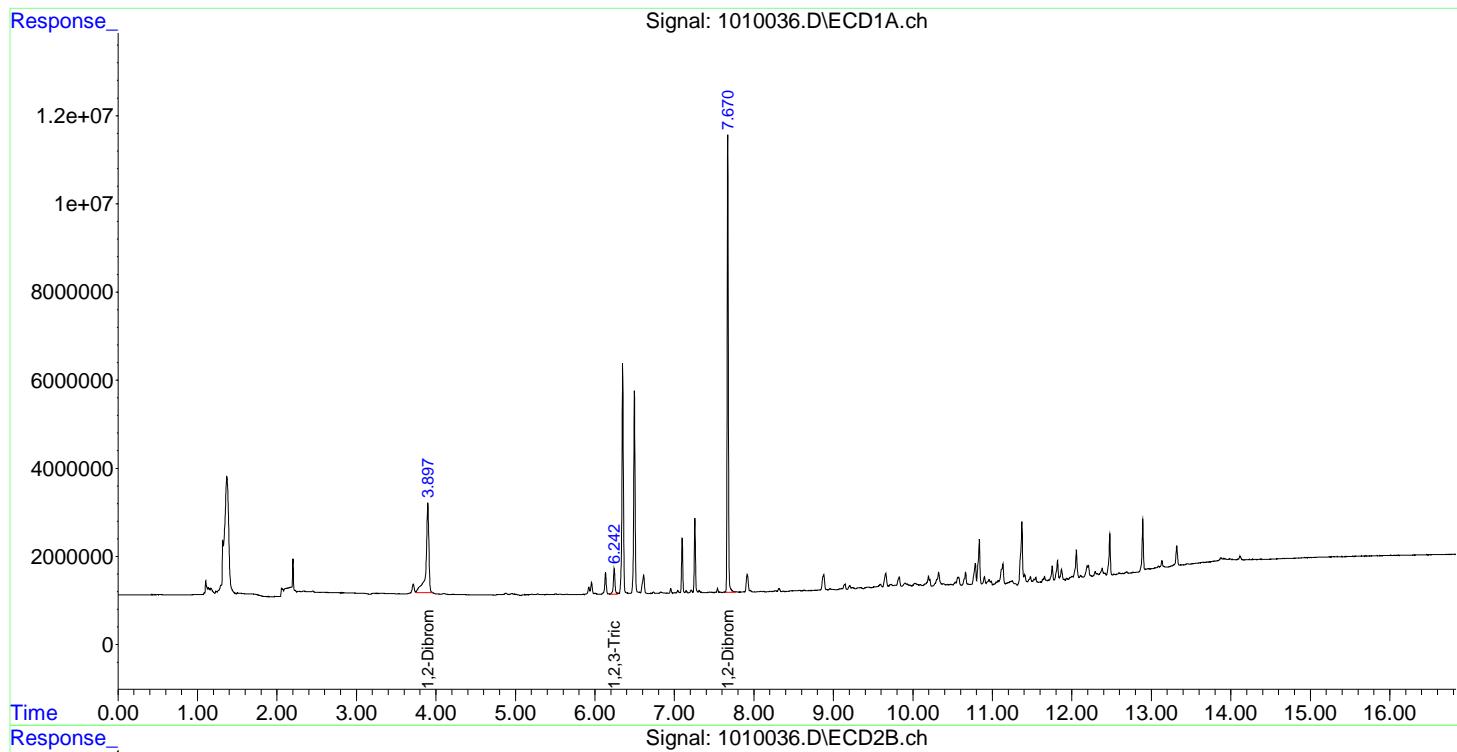
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.897	4.070	5114545	3615693	4.129m	3.726m
2) M 1,2,3-Tri...	6.242	6.302	827373	815674	3.936	3.949
3) M 1,2-Dibro...	7.670	7.878	10655071	8116255	3.701	3.583

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010036.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 04:42:02 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:48:37 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

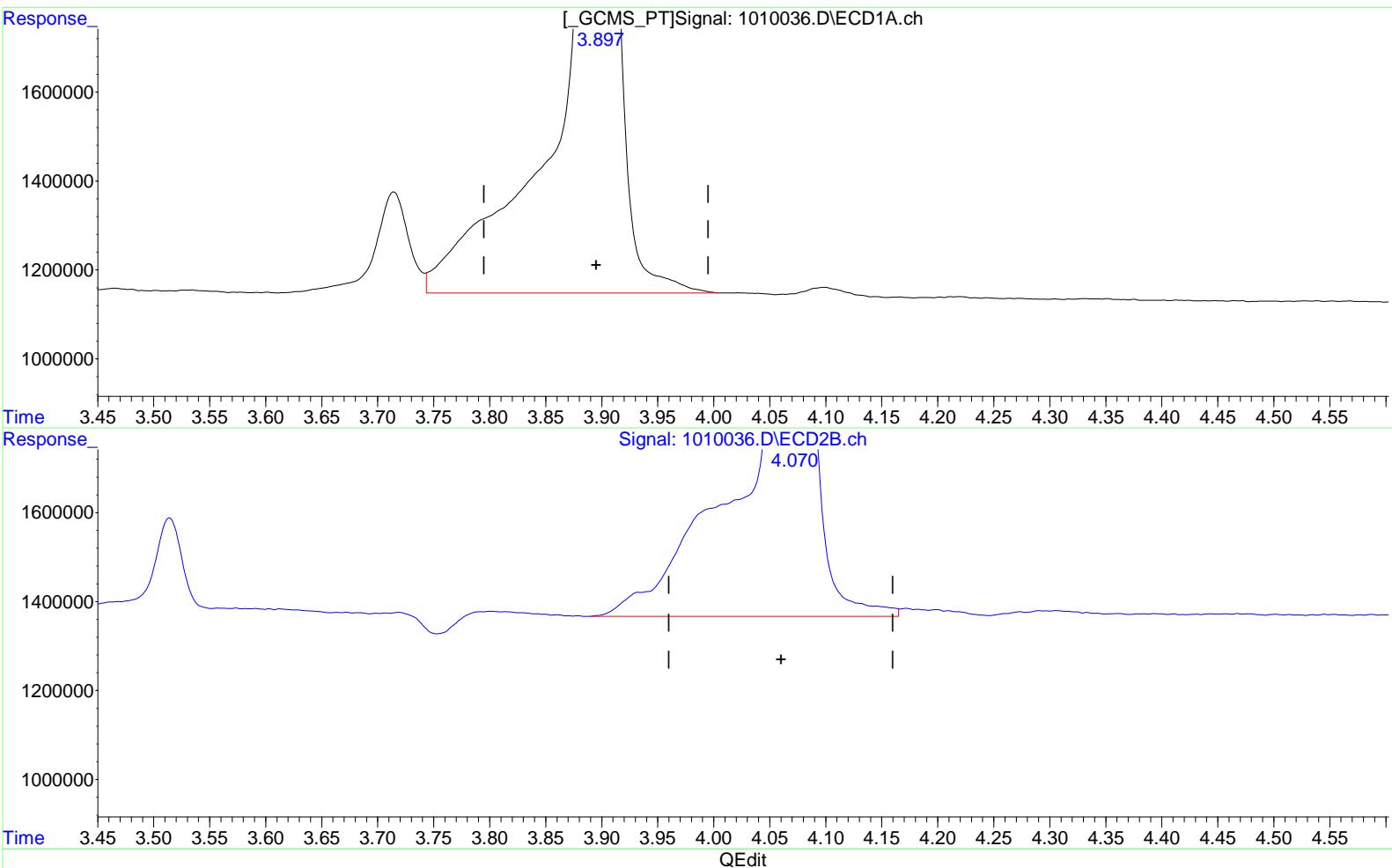
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\101016-504\1010036.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 04:42:02 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:48:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.462 ppb

response 5584902

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

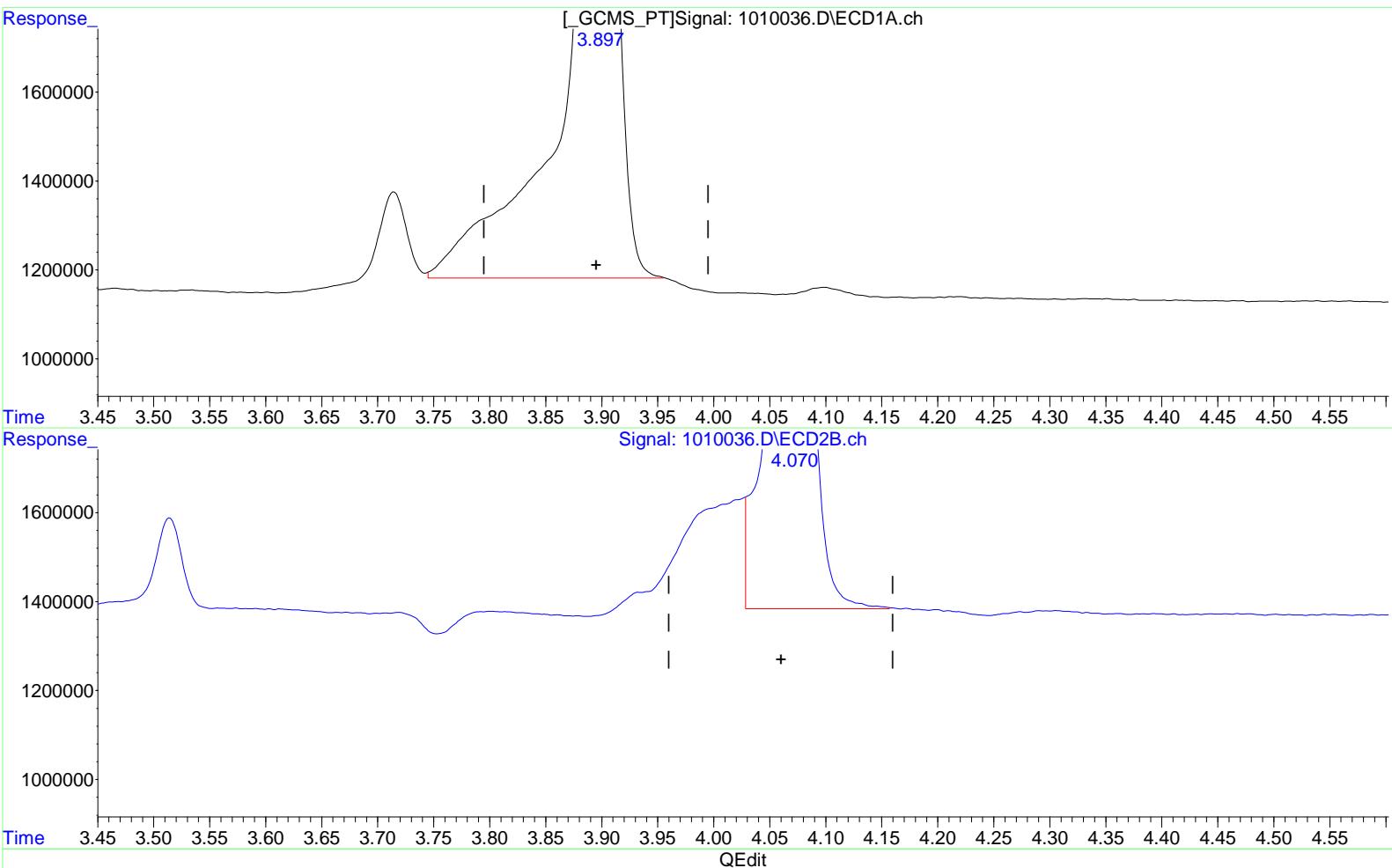
4.070min 4.999 ppb

response 4851003

Data File : J:\GC33\DATA\101016-504\1010036.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 04:42:02 Operator: BS
 Sample : 101016 504 LV6 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:48:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.897min 4.129 ppb m
 response 5114545

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.070min 3.726 ppb m
 response 3615693

Exception Report

Data File: J:\GC33\DATA\101016-504\1010014.D
Lab ID: KWG1609198-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/10/2016 20:02
Date Quantitated: 10/11/2016 10:36
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010014.D\1010014C.D
Lab ID: KWG1609198-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/10/2016 20:02
Date Quantitated: 10/11/2016 10:36
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010014.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010014.D\1010014.c.d	Vial:	1
Acq Date:	10/10/2016 20:02	Quant Date:	10/11/2016 10:36
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1609198-4	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Soln Conc. Units:	ppb	Matrix:	NOT APPLICABLE
Bottle ID:	Tier:	Receive Date:	10/11/2016
Prod Code:	504.1 EDB DBCP	Collect Date:	
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:		ug/L		Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96		51415	0d	0.0320	0.0000			
1,2,3-Trichloropropane		6.31	0d	401413	0.0000	1.89			
1,2-Dibromo-3-chloropropano	7.67		100681	0d	0.0350	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010014.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:02:43 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

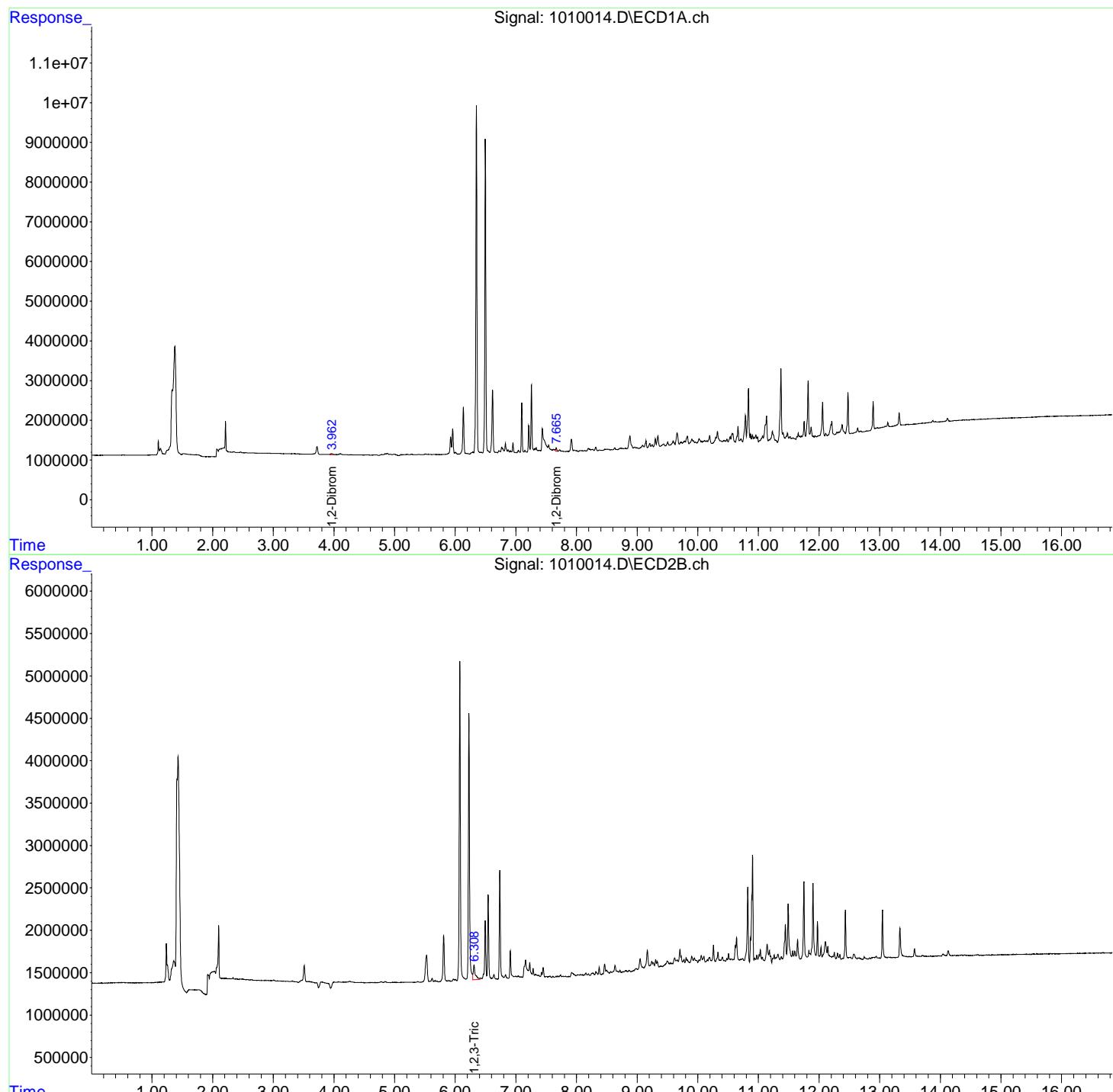
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.962f	0.000	51415	0	0.032	N.D. d#
2) M 1,2,3-Tri...	0.000	6.308	0	401413	N.D. d	1.888
3) M 1,2-Dibro...	7.665	0.000	100681	0	0.035	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010014.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 20:02:43 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:36:21 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010026.D
Lab ID: KWG1609198-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 00:45
Date Quantitated: 10/11/2016 10:42
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010026.D\1010026C.D
Lab ID: KWG1609198-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 00:45
Date Quantitated: 10/11/2016 10:42
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010026.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010026.D\1010026c.d	Vial:	1
Acq Date:	10/11/2016 00:45	Quant Date:	10/11/2016 10:42
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1609198-5	Dilution:	1.0
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Soln Conc. Units:	ppb	Matrix:	NOT APPLICABLE
Bottle ID:	Tier:	Receive Date:	10/11/2016
Prod Code:	504.1 EDB DBCP	Collect Date:	
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:		ug/L		Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96		54128	0d	0.0350	0.0000			
1,2,3-Trichloropropane		6.31	0d	323280	0.0000	1.50			
1,2-Dibromo-3-chloropropano	7.67		150811	0d	0.0520	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010026.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:45:49 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:42:43 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

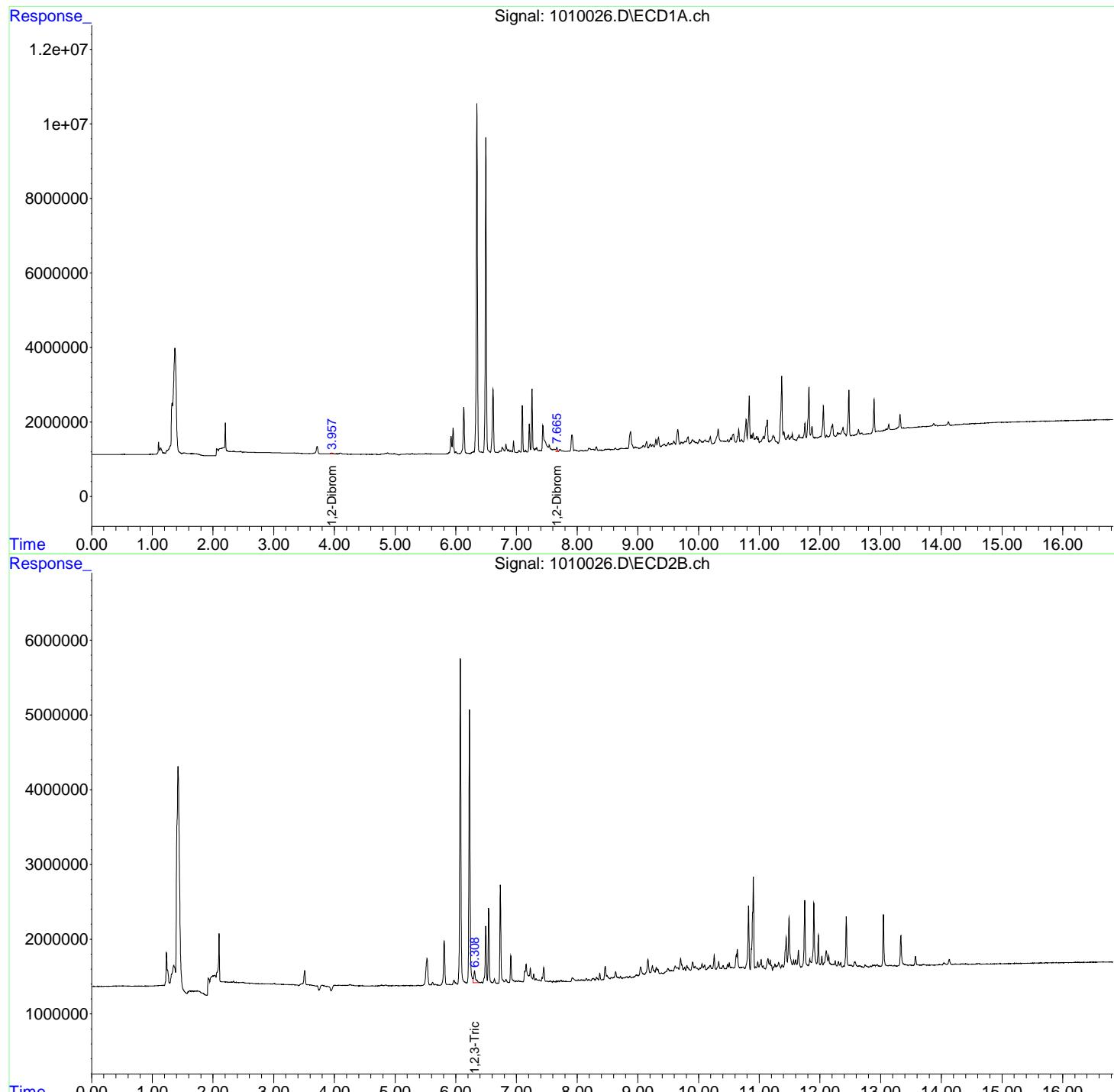
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.957f	0.000	54128	0	0.035	N.D. d#
2) M 1,2,3-Tri...	0.000	6.308	0	323280	N.D. d	1.499
3) M 1,2-Dibro...	7.665	0.000	150811	0	0.052	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010026.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 00:45:49 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:42:43 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\101016-504\1010037.D
Lab ID: KWG1609198-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 05:05
Date Quantitated: 10/11/2016 10:49
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\101016-504\1010037.D\1010037C.D
Lab ID: KWG1609198-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 10/11/2016 05:05
Date Quantitated: 10/11/2016 10:49
Batch ID: KWG1609198
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\101016-504\1010037.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\101016-504\1010037.D\1010037c.d	Vial:	100
Acq Date:	10/11/2016 05:05	Quant Date:	10/11/2016 10:49
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1609198-6	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	10/11/2016
Analysis Lot:	KWG1609198	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96		58889	0d	0.0390	0.0000			
1,2,3-Trichloropropane		6.31	0d	330995	0.0000	1.54			
1,2-Dibromo-3-chloropropano	7.67		106520	0d	0.0370	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\101016-504\1010037.D Vial: 100
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 05:05:40 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:49:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

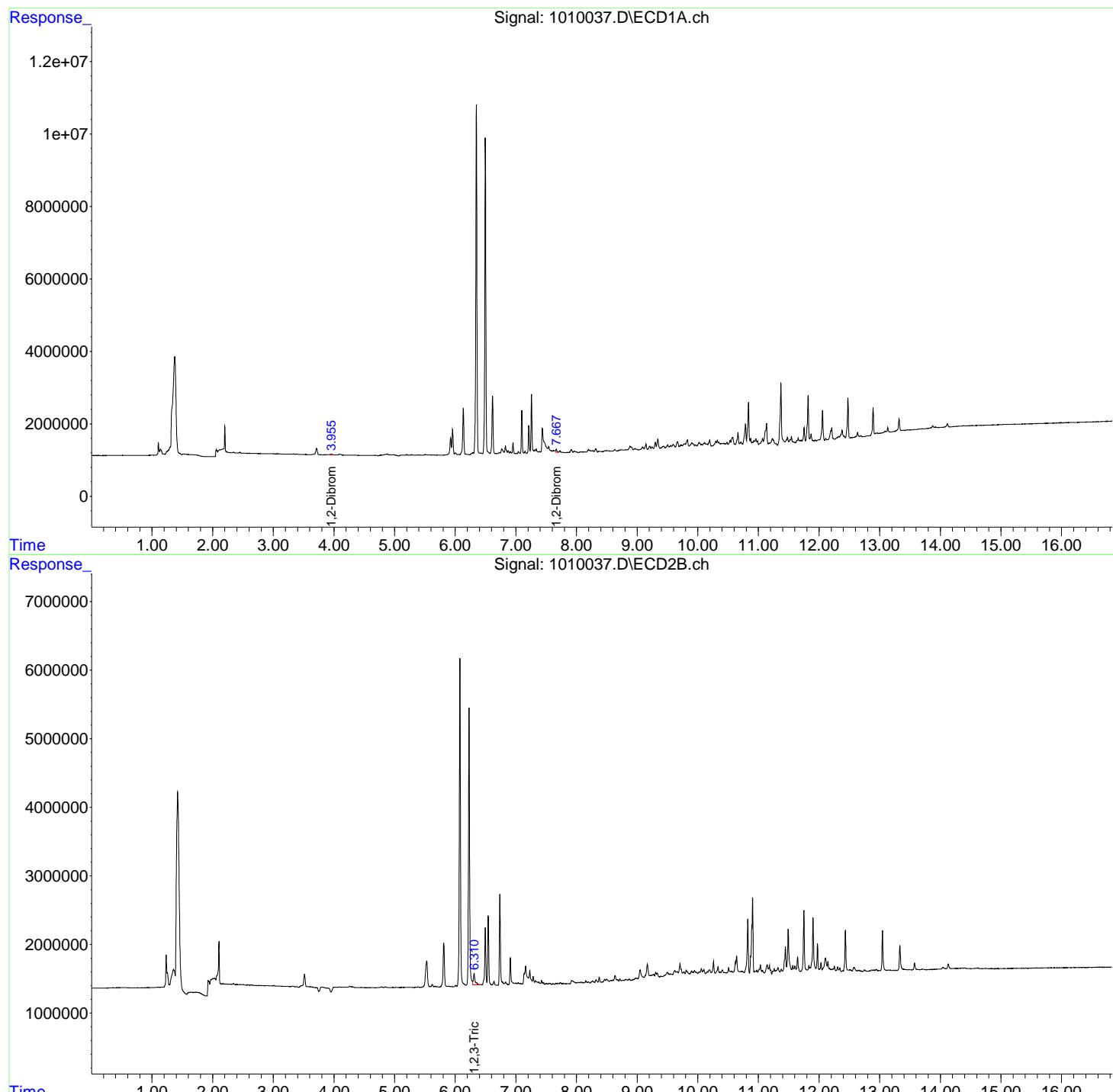
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.955f	0.000	58889	0	0.039	N.D. d#
2) M 1,2,3-Tri...	0.000	6.310	0	330995	N.D. d	1.537
3) M 1,2-Dibro...	7.667	0.000	106520	0	0.037	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\101016-504\1010037.D Vial: 100
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11-Oct-2016, 05:05:40 Operator: BS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 10:49:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
No	1	Vial	94	504-1 PRIMER MeOH	1010001	F:01:01
No	2	Vial	95	504-1 PRIMER Hexane	1010002	F:02:01
No	3	Vial	1	504-1 ICAL BLANK	1010003	F:03:01
No	4	Vial	2	504-1 ICAL LV1 101016	1010004	F:04:01
No	5	Vial	3	504-1 ICAL LV2 101016	1010005	F:05:01
No	6	Vial	4	504-1 ICAL LV3 101016	1010006	F:06:01
No	7	Vial	5	504-1 ICAL LV4 101016	1010007	F:07:01
No	8	Vial	6	504-1 ICAL LV5 101016	1010008	F:08:01
No	9	Vial	7	504-1 ICAL LV6 101016	1010009	F:09:01
No	10	Vial	8	504-1 ICAL LV7 101016	1010010	F:10:01
No	11	Vial	9	504-1 ICAL LV8 101016	1010011	F:11:01
No	12	Vial	10	504-1 ICAL ICV 101016	1010012	F:12:01
No	13	Vial	6	504-1 101016 LV5	1010013	F:13:01
No	14	Vial	1	504-1 IB	1010014	F:14:01
No	15	Vial	11	504-1 KWG1609129-5LCS	1010015	F:15:01
No	16	Vial	12	504-1 KWG1609129-6LCS	1010016	F:16:01
No	17	Vial	13	504-1 KWG1609129-7MB	1010017	F:17:01
No	18	Vial	14	504-1 K1612006-001	1010018	F:18:01
No	19	Vial	15	504-1 K1612006-002	1010019	F:19:01
No	20	Vial	16	504-1 K1612006-003	1010020	F:20:01
No	21	Vial	17	504-1 K1612014-001	1010021	F:21:01
No	22	Vial	18	504-1 K1612056-001	1010022	F:22:01
No	23	Vial	19	504-1 K1612056-002	1010023	F:23:01
No	24	Vial	20	504-1 K1612056-003	1010024	F:24:01
No	25	Vial	7	504-1 101016 504 LV6	1010025	F:25:01
No	26	Vial	1	504-1 IB	1010026	F:26:01
No	27	Vial	21	504-1 K1612057-001	1010027	F:27:01
No	28	Vial	22	504-1 K1612057-001MS	1010028	F:28:01

Run#517961
CHL 14943

MS 10/11/14

PRO
Sep

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010003.D Vial: 1
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 15:42:57 Operator: BS
Sample : ICAL BLANK Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:55:18 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	0.000	6.305	0	349661	N.D.	d 1.630
3) M 1,2-Dibro...	7.663	0.000	94406	0	0.033	N.D. d#

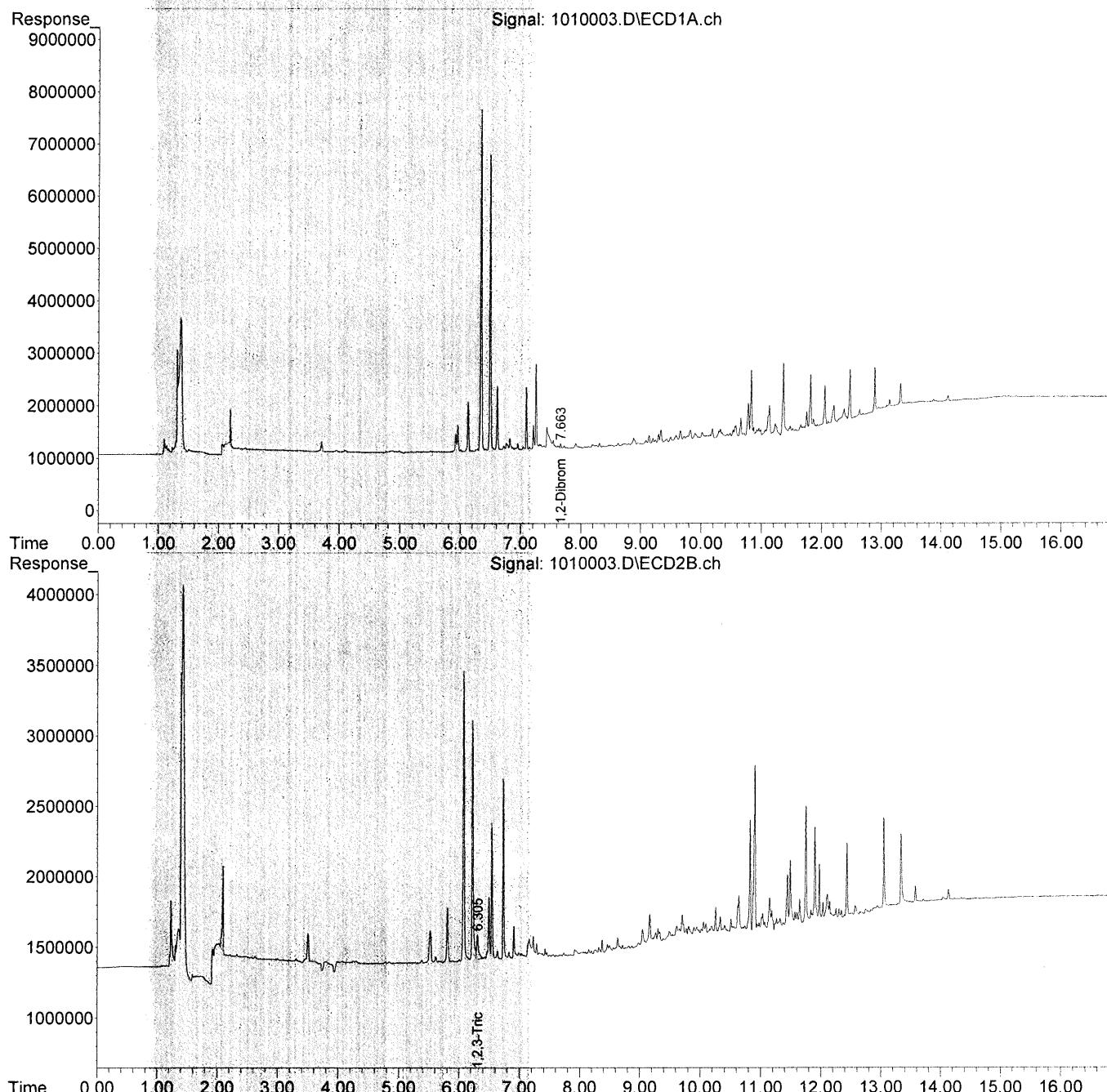
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010003.D Vial: 1
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 15:42:57 Operator: BS
Sample : ICAL BLANK Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:55:18 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:06:36 Operator: BS
Sample : ICAL LV1 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:07:51 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.895	4.060	57594	65501	0.096m	0.047 #
3) M 1,2-Dibromoethane	7.667	7.877	261537	162902	0.116m	0.052 #

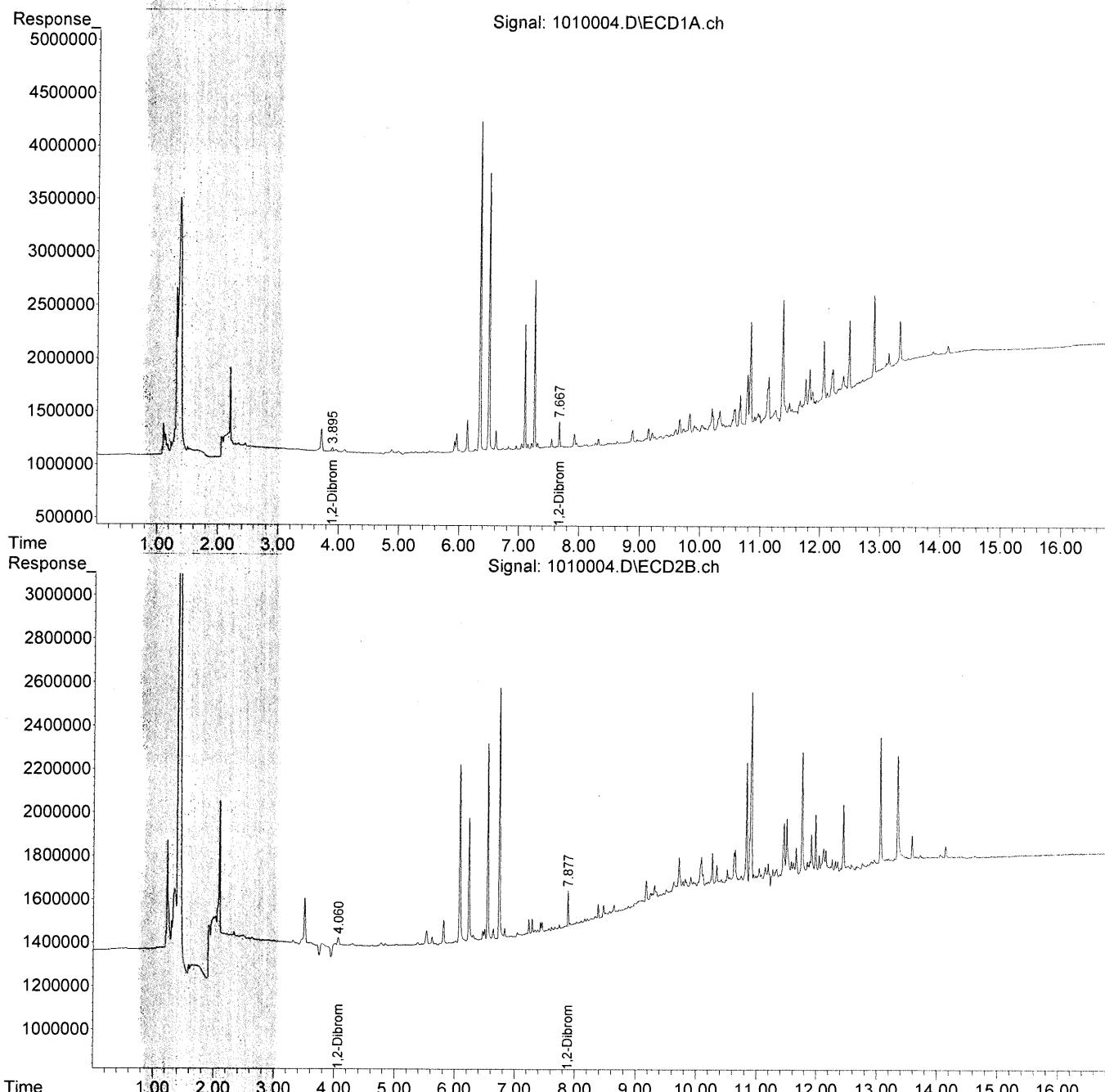
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:06:36 Operator: BS
Sample : ICAL LV1 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:07:51 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

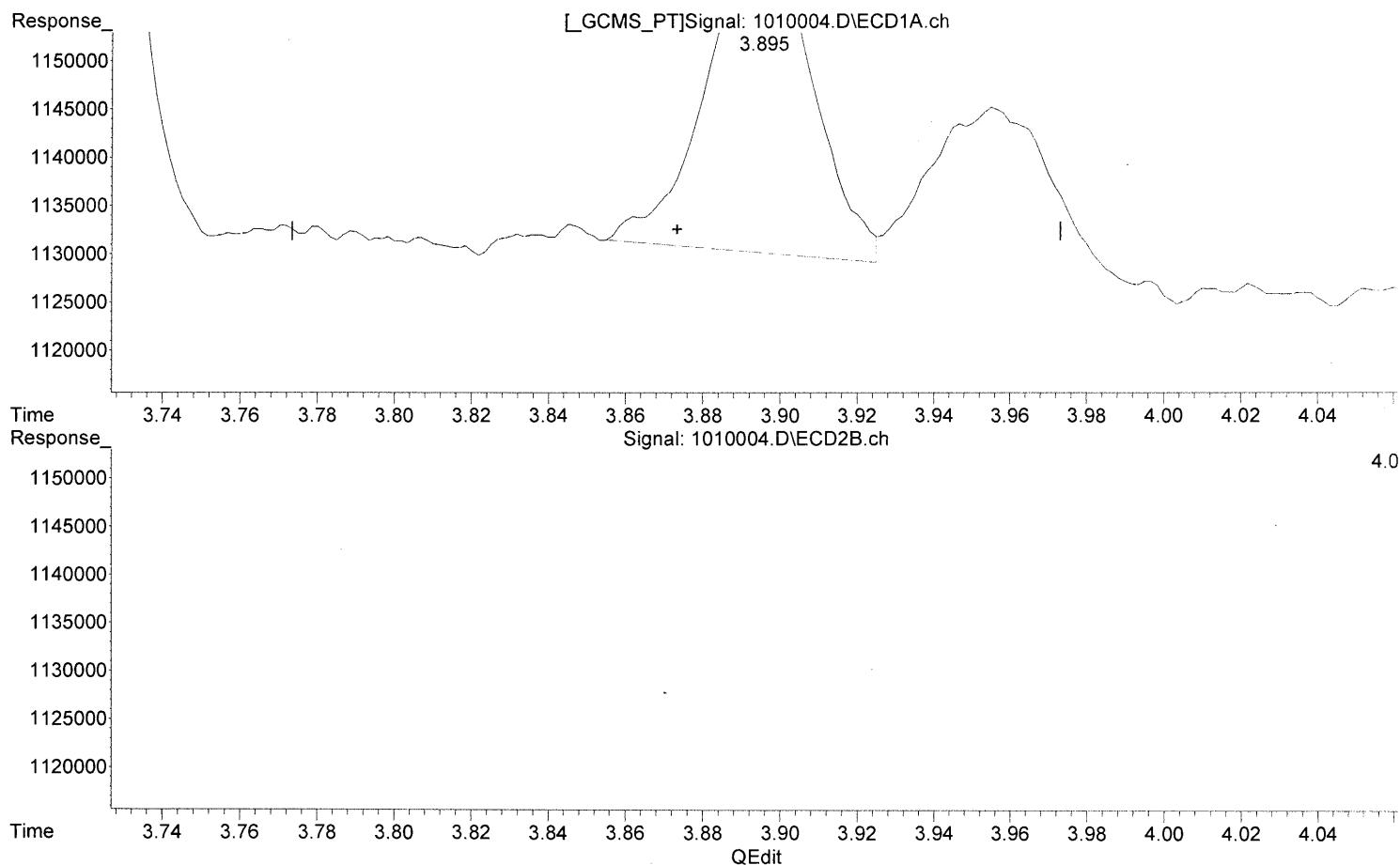


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.100 ppb

response 62200

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.047 ppb

response 65501

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:07:22 2016

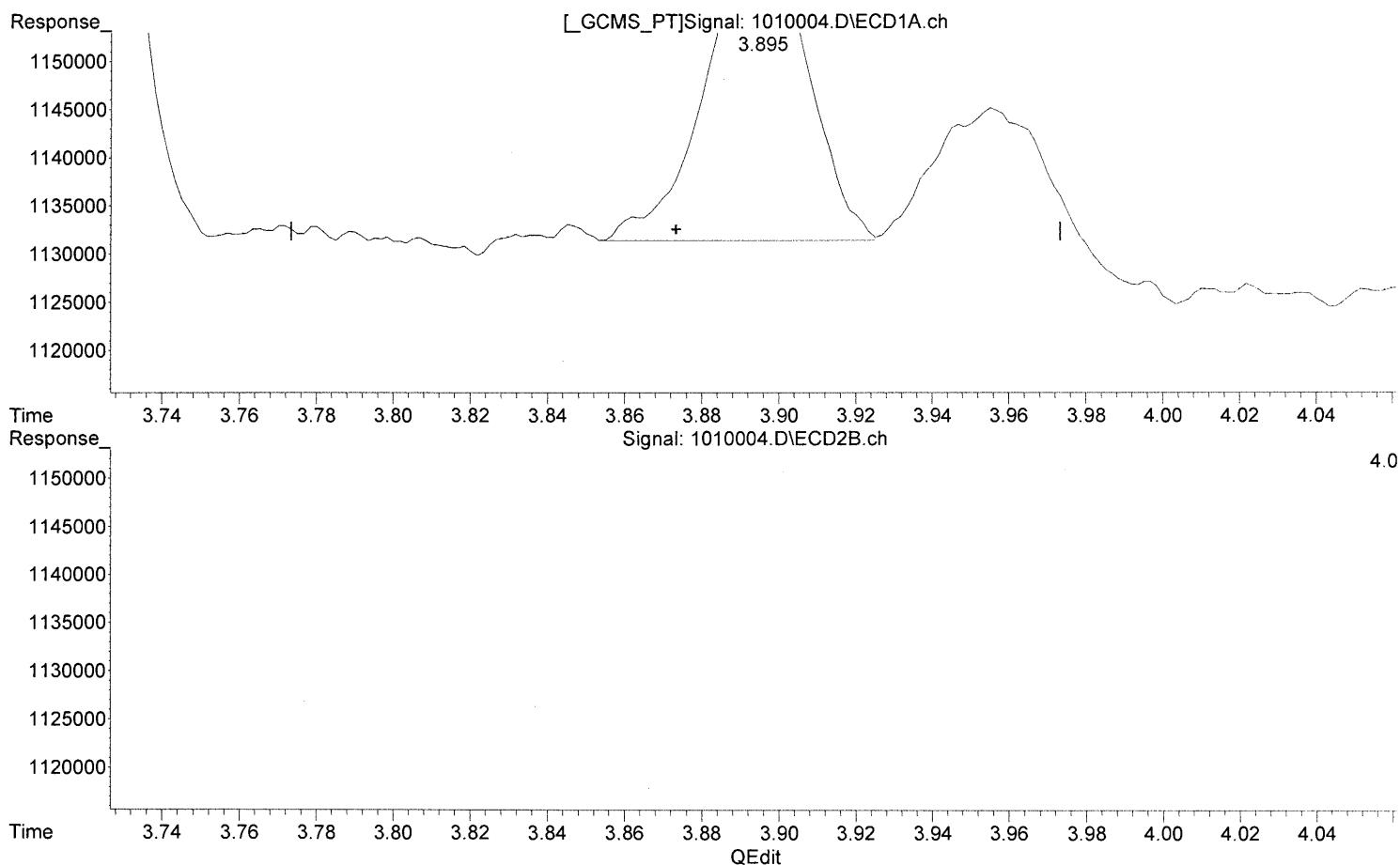
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.096 ppb m

response 57594

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.047 ppb

response 65501



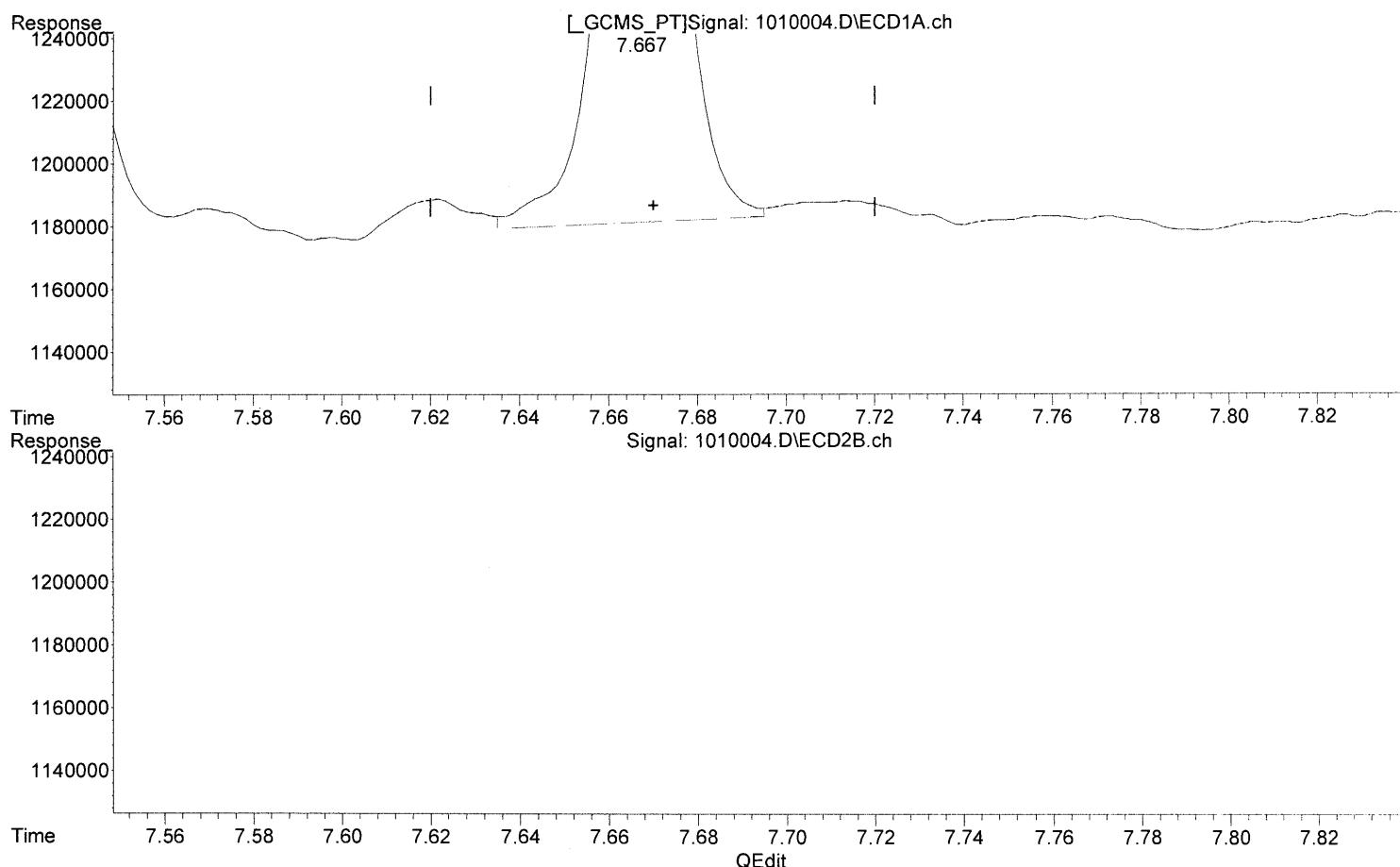
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:07:31 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.667min 0.120 ppb

response 268810

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.052 ppb

response 162902

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:07:46 2016

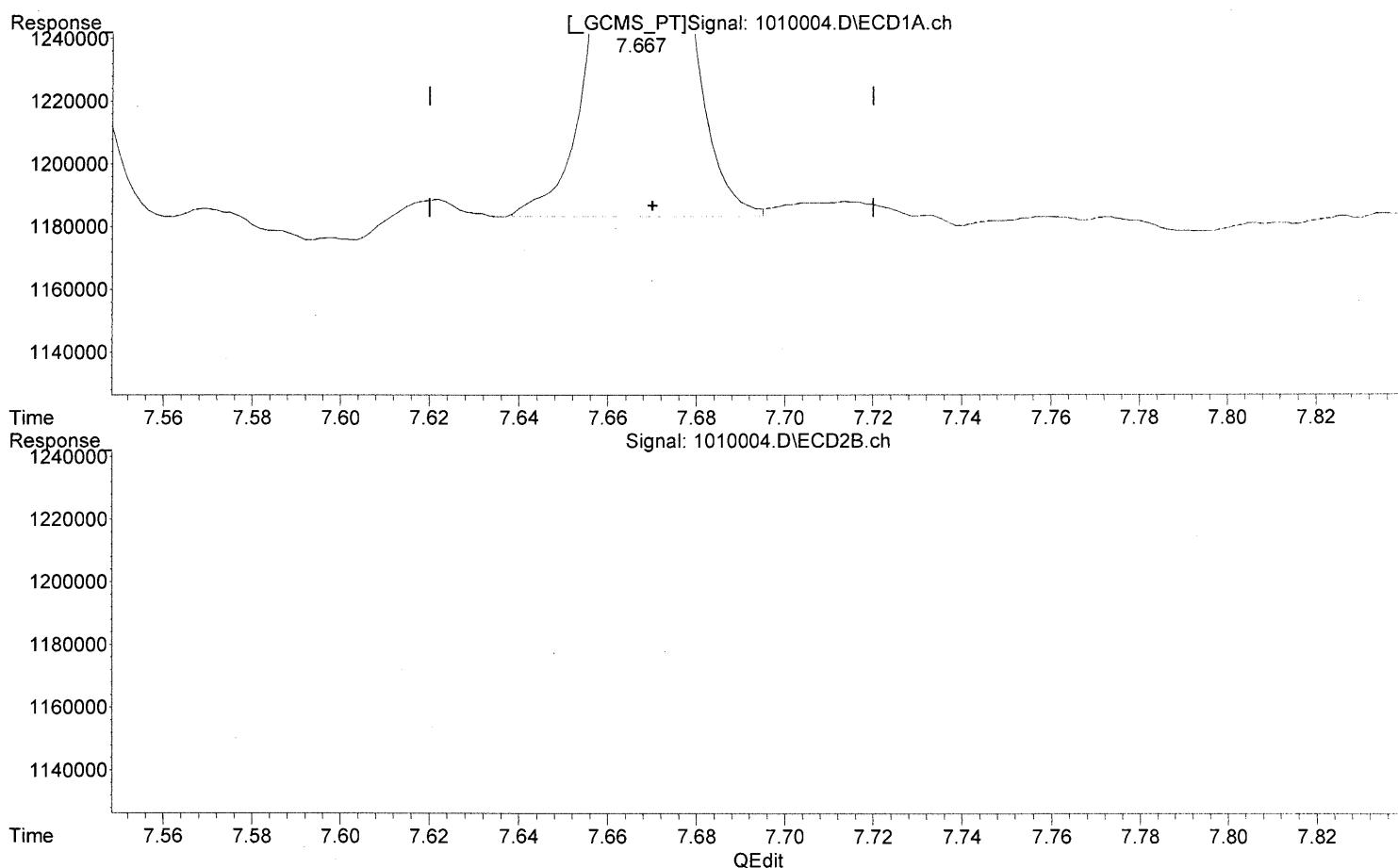
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

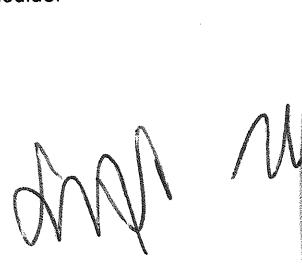
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)
 7.667min 0.116 ppb m
 response 261537

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)
 7.877min 0.052 ppb
 response 162902



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:07:56 2016

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:30:07 Operator: BS
Sample : ICAL LV2 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:11:15 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.895	4.062	106012	121390	0.137m	0.088 #
3) M 1,2-Dibromoethane	7.668	7.877	389497	297791	0.173m	0.095 #

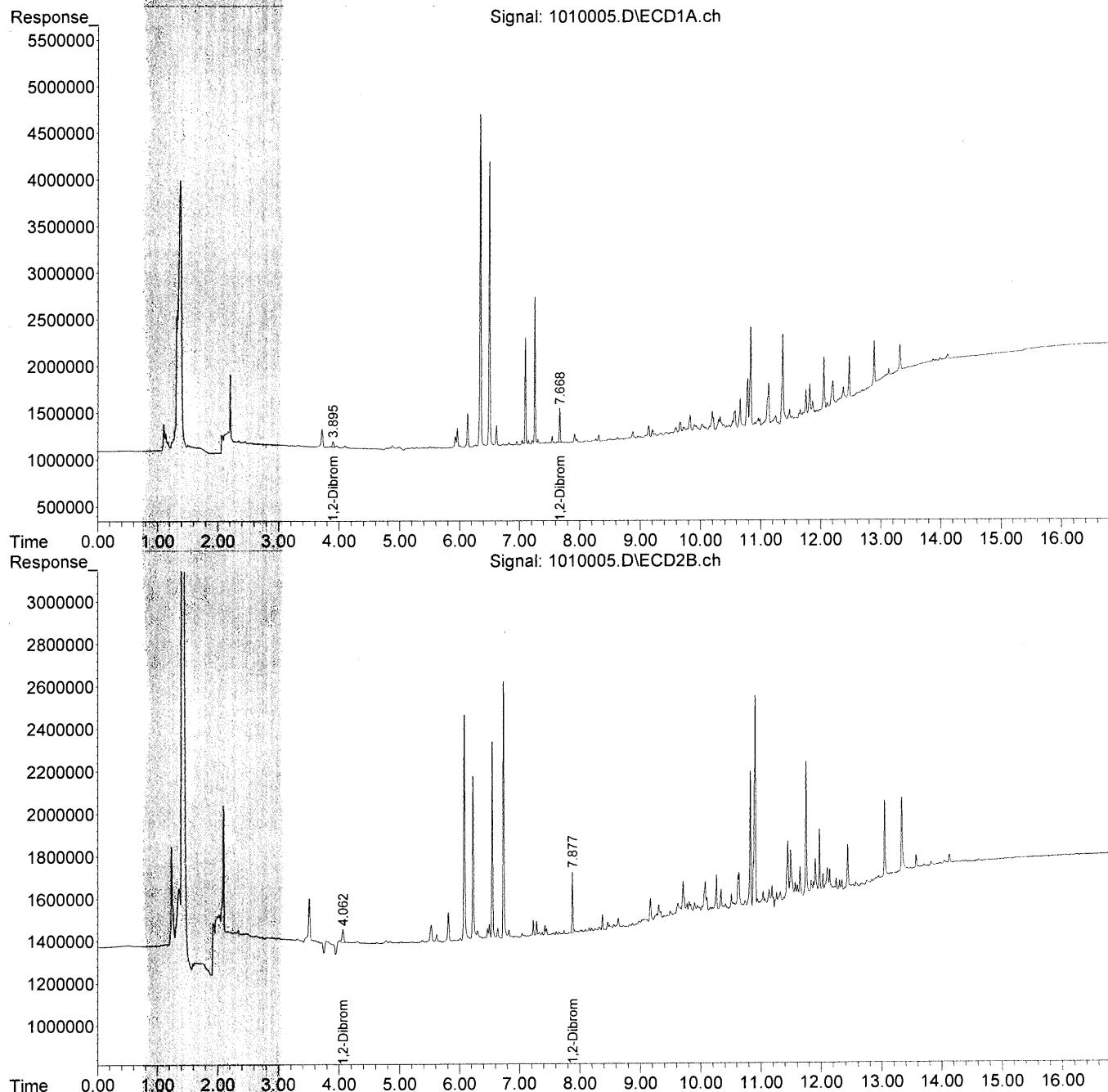
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:30:07 Operator: BS
Sample : ICAL LV2 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:11:15 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

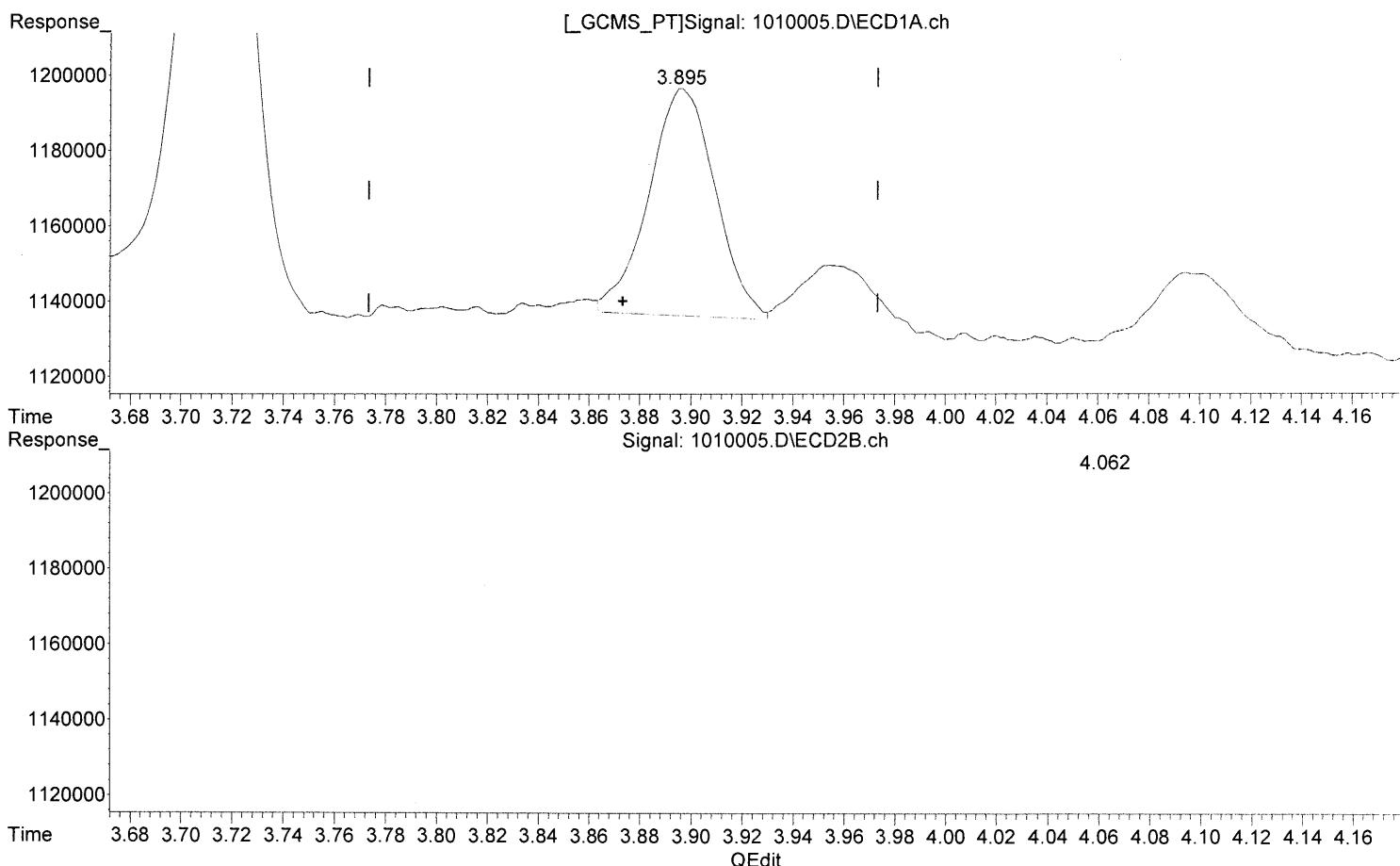


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.139 ppb

response 109098

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 0.088 ppb

response 121390



(+) = Expected Retention Time

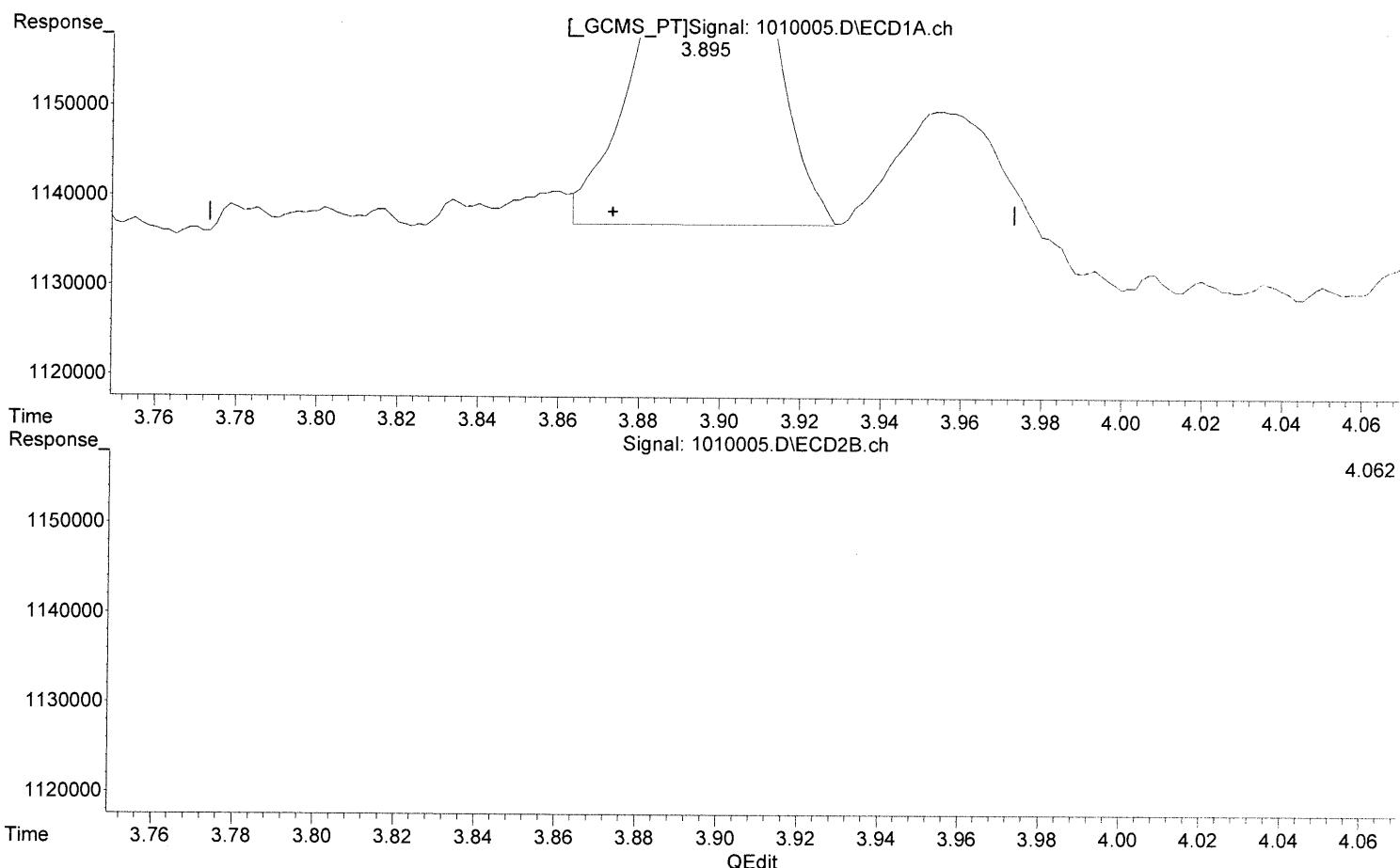
101116_504.M Tue Oct 11 08:08:34 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.137 ppb m

response 106012

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 0.088 ppb

response 121390



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:09:07 2016

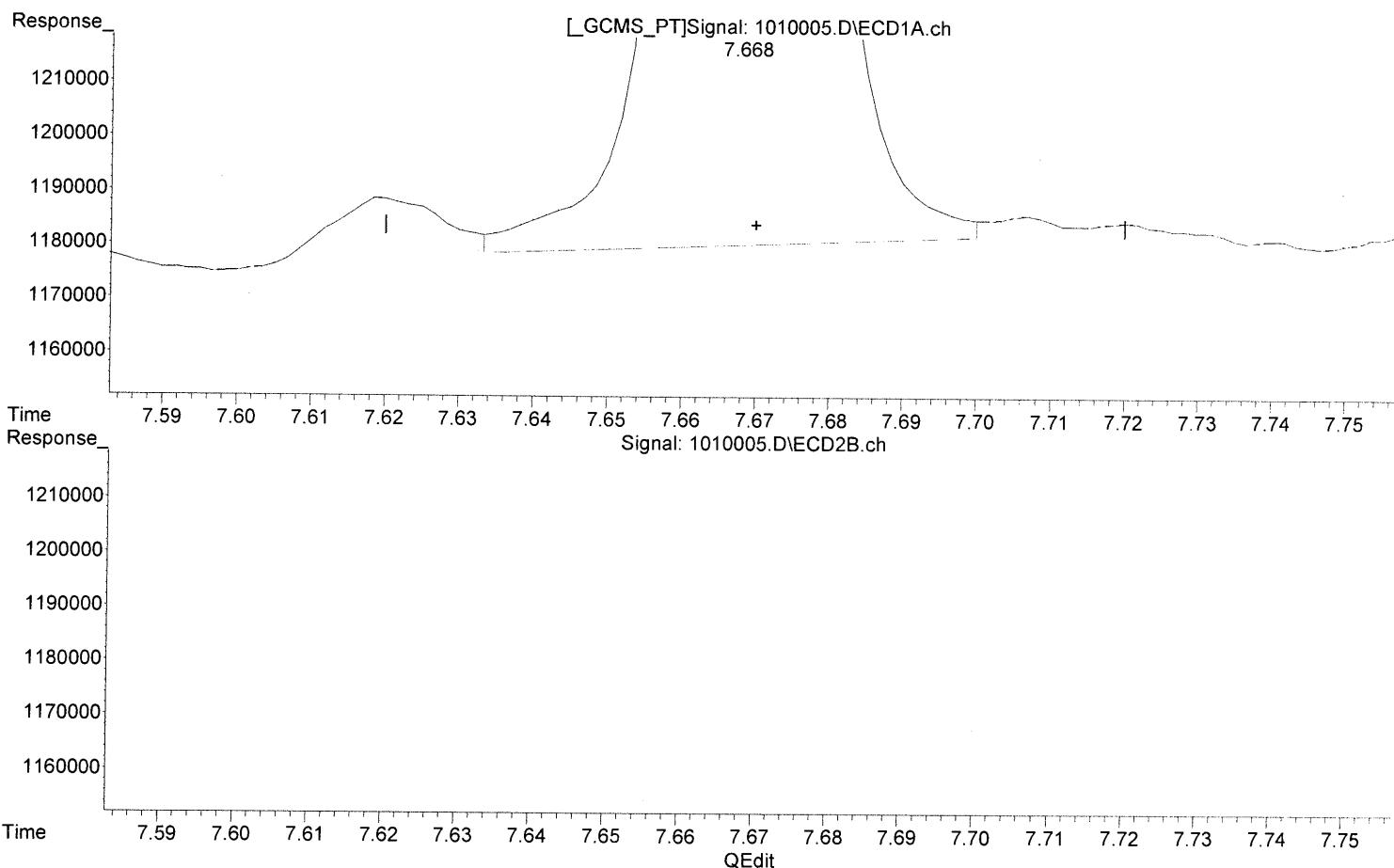
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.668min 0.176 ppb

response 396019

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.095 ppb

response 297791

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:08 2016



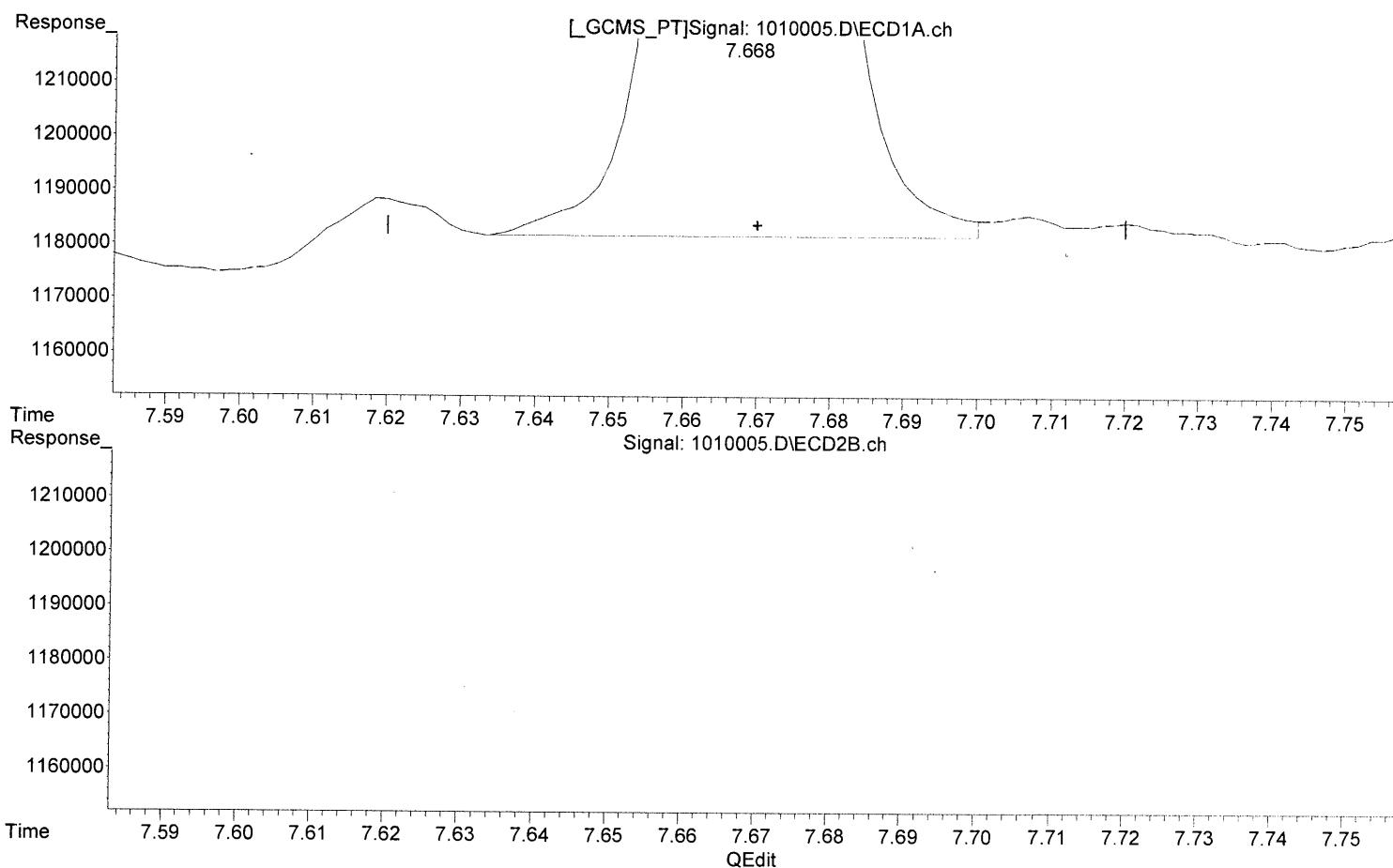
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.668min 0.173 ppb m

response 389497

Manual Integration:

After

Baseline/Shoulder

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.095 ppb

response 297791



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:17 2016

Page: 1

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:53:42 Operator: BS
Sample : ICAL LV3 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:12:35 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.885	4.073	239042	262600	0.249m	0.190m
2) M 1,2,3-Tri...	6.240	6.300	33031	73436	0.204	0.123 #
3) M 1,2-Dibro...	7.670	7.877	701491	613475	0.312m	0.195 #

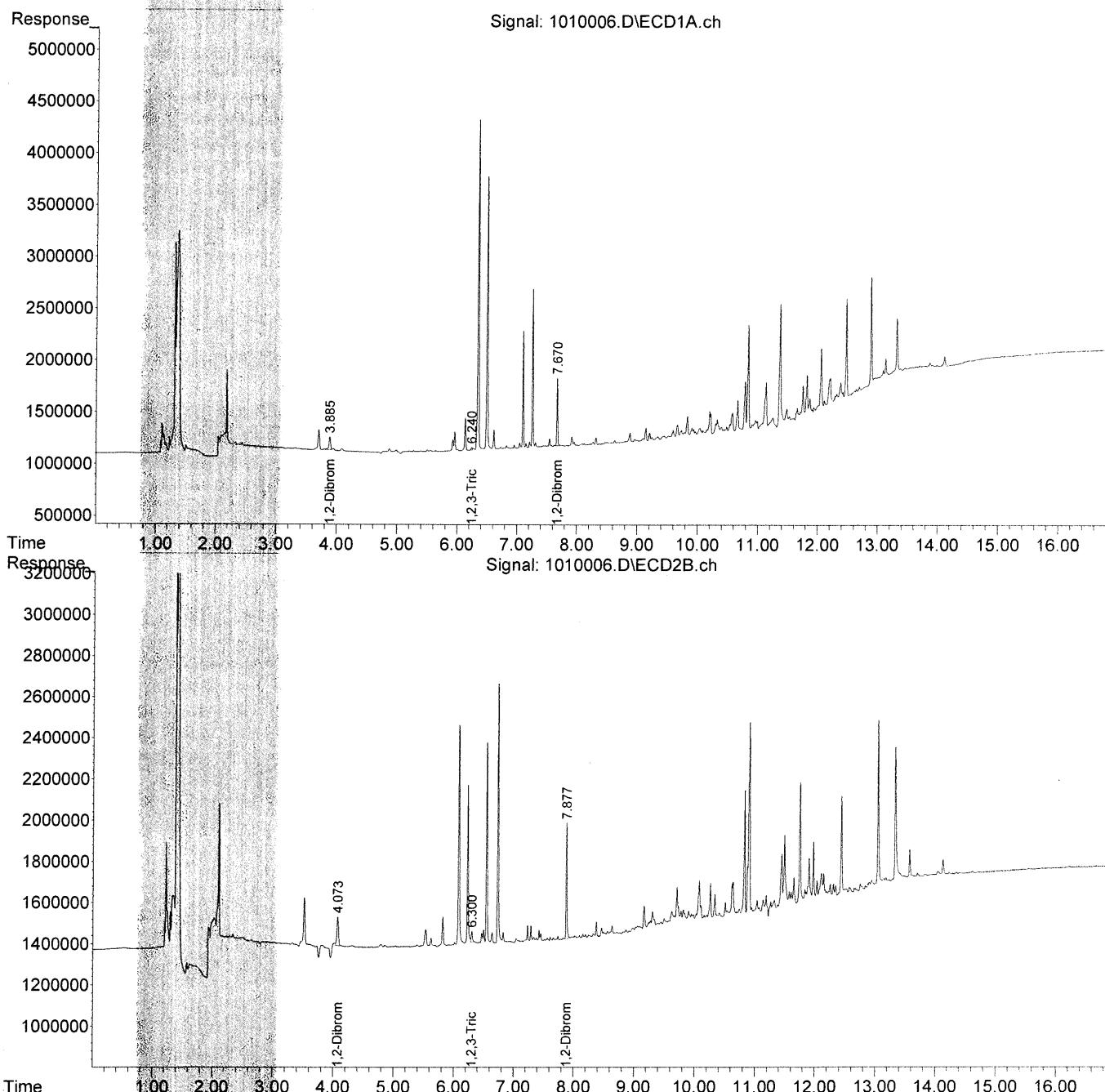
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:53:42 Operator: BS
Sample : ICAL LV3 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:12:35 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

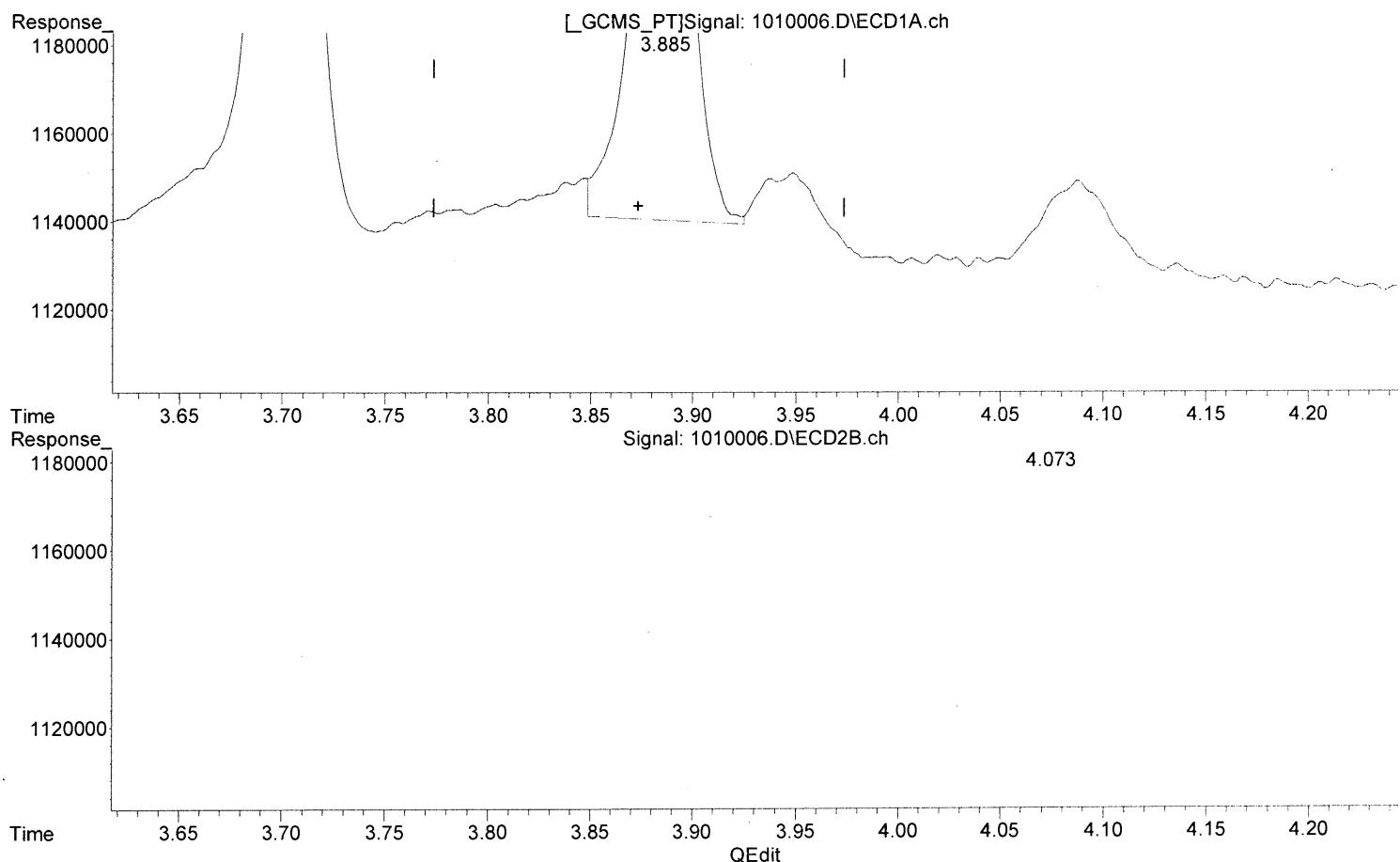


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.238 ppb

response 226147

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:11:47 2016

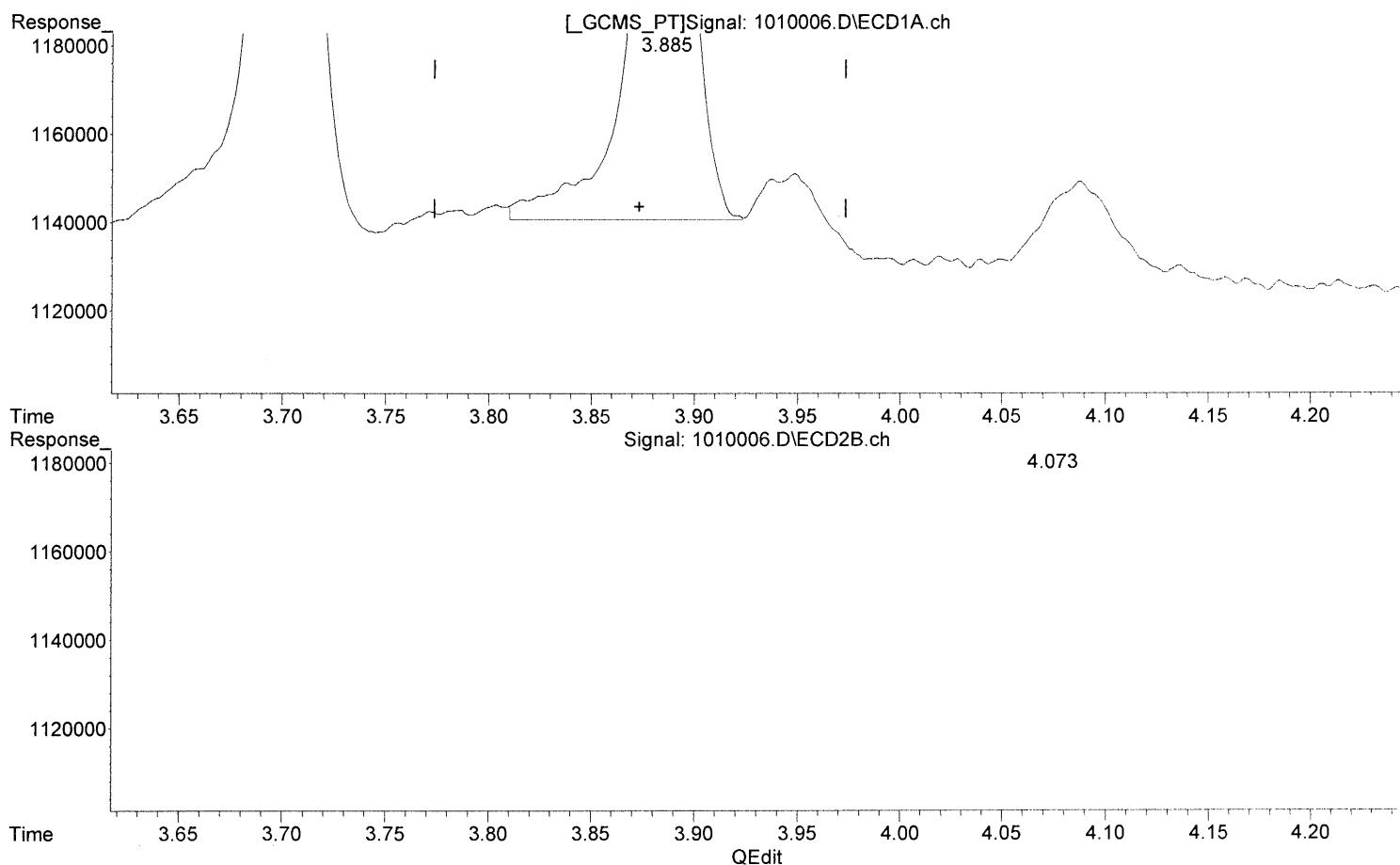
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:55 2016

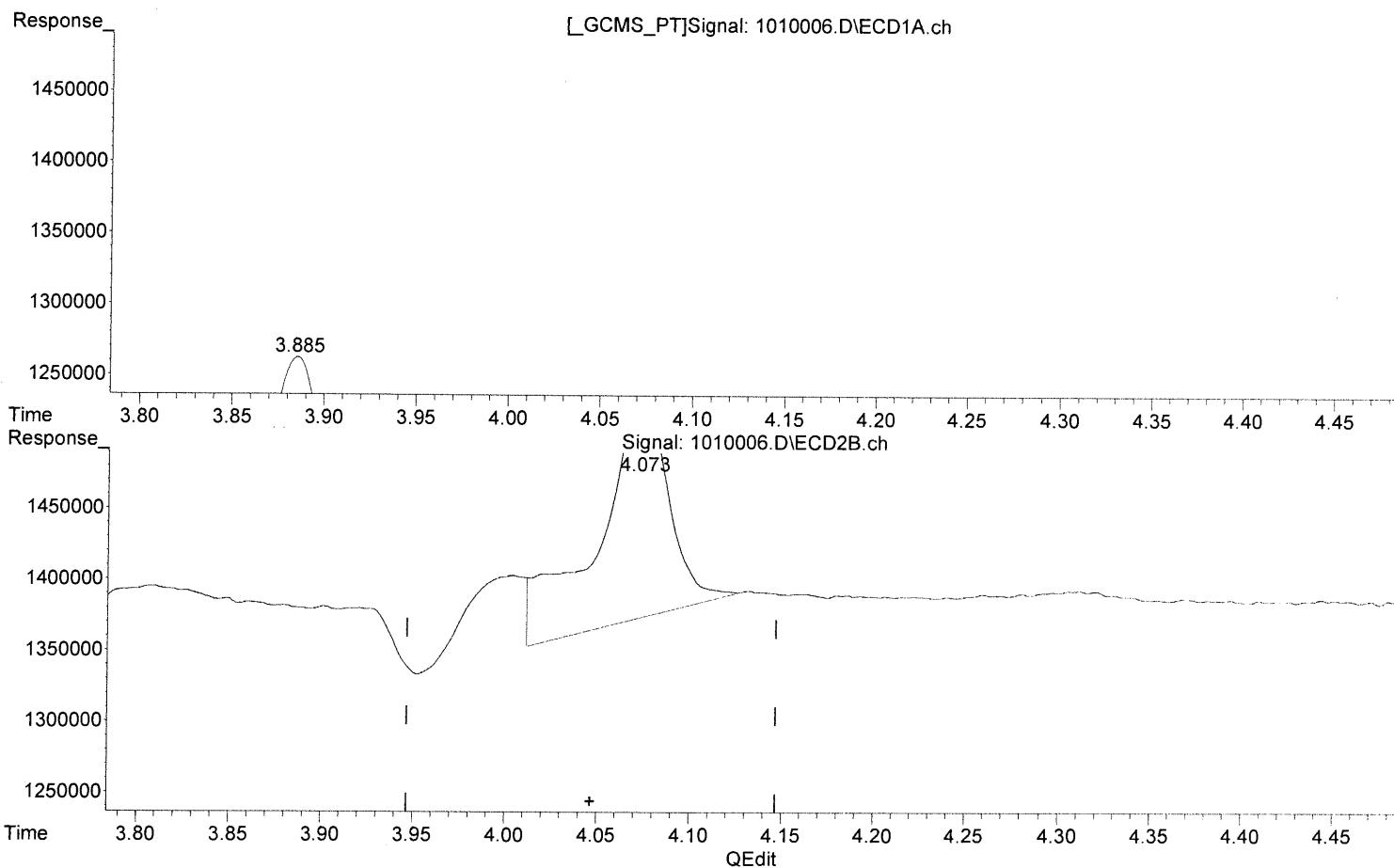


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:02 2016

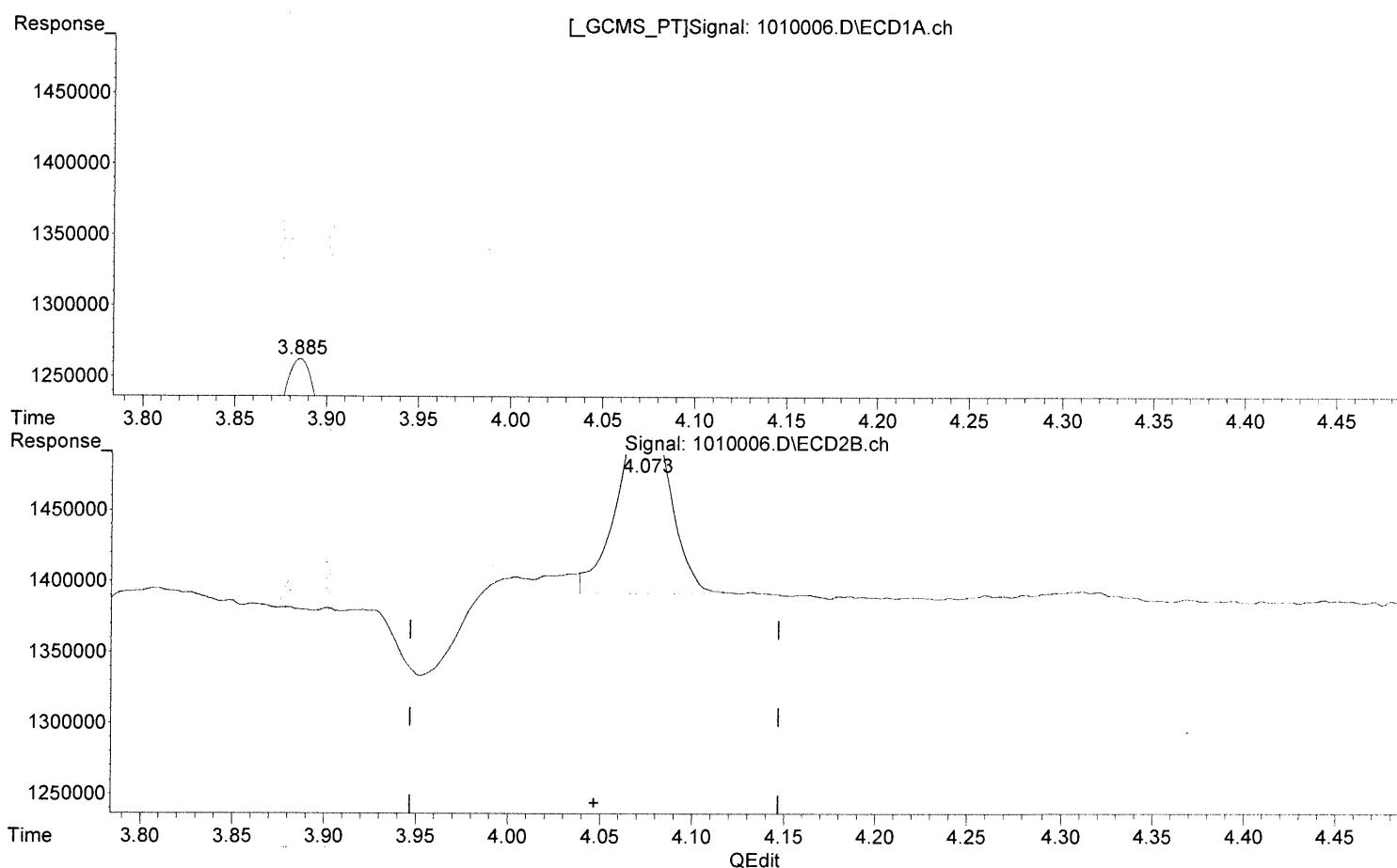
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.190 ppb m

response 262600



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:12 2016

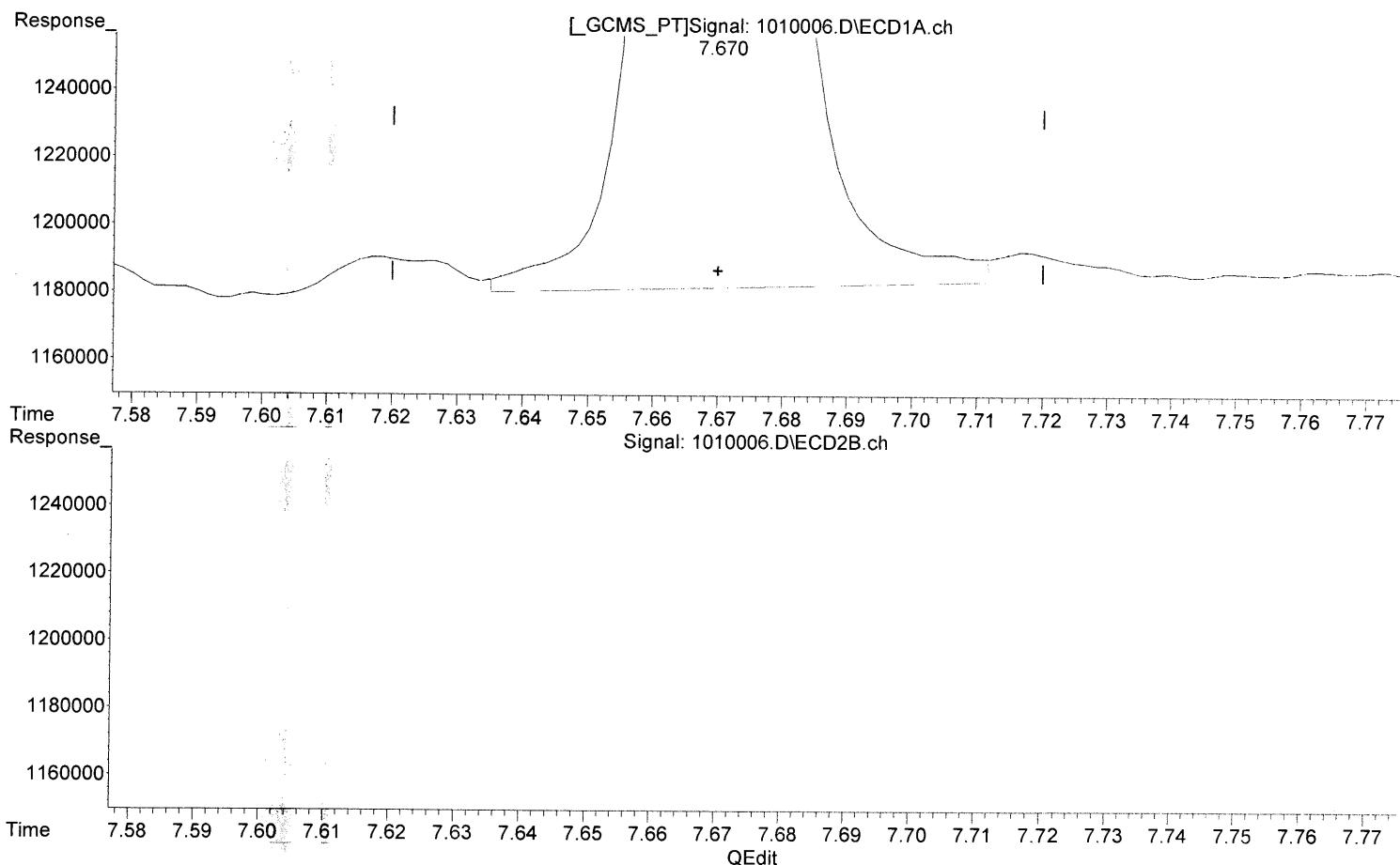
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.670min 0.316 ppb

response 710176

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.195 ppb

response 613475



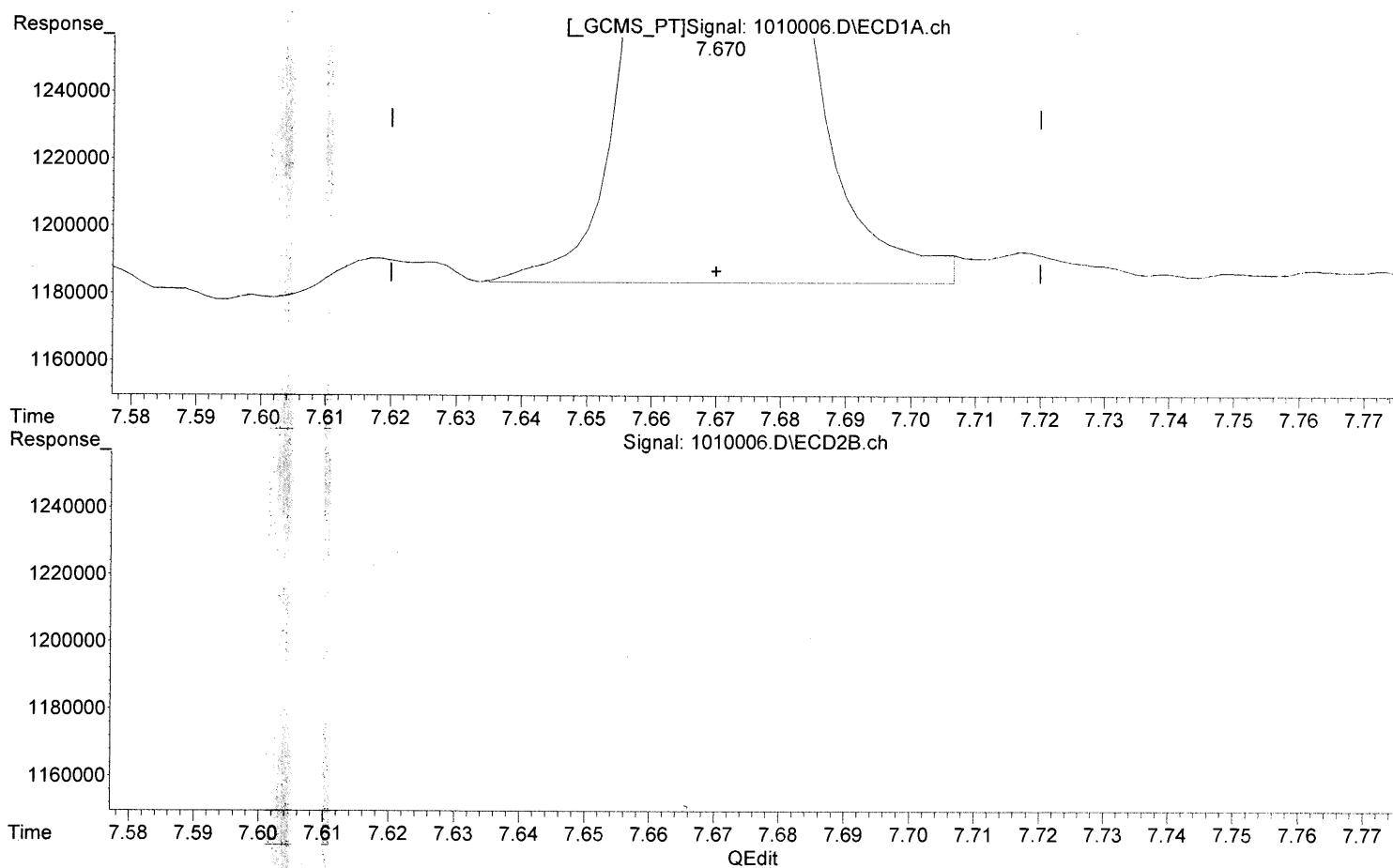
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:12:30 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.670min 0.312 ppb m

response 701491

Manual Integration:

After

Baseline/Shoulder

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.195 ppb

response 613475

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:38 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:17:23 Operator: BS
Sample : ICAL LV4 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:13:38 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth: 504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.892	4.065	795089	682200	0.717m	0.494 #
2) M 1,2,3-Triiodopropane	6.240	6.300	138223	157791	0.854m	0.466 #
3) M 1,2-Dibromoethane	7.670	7.877	1755563	1454249	0.781	0.463 #

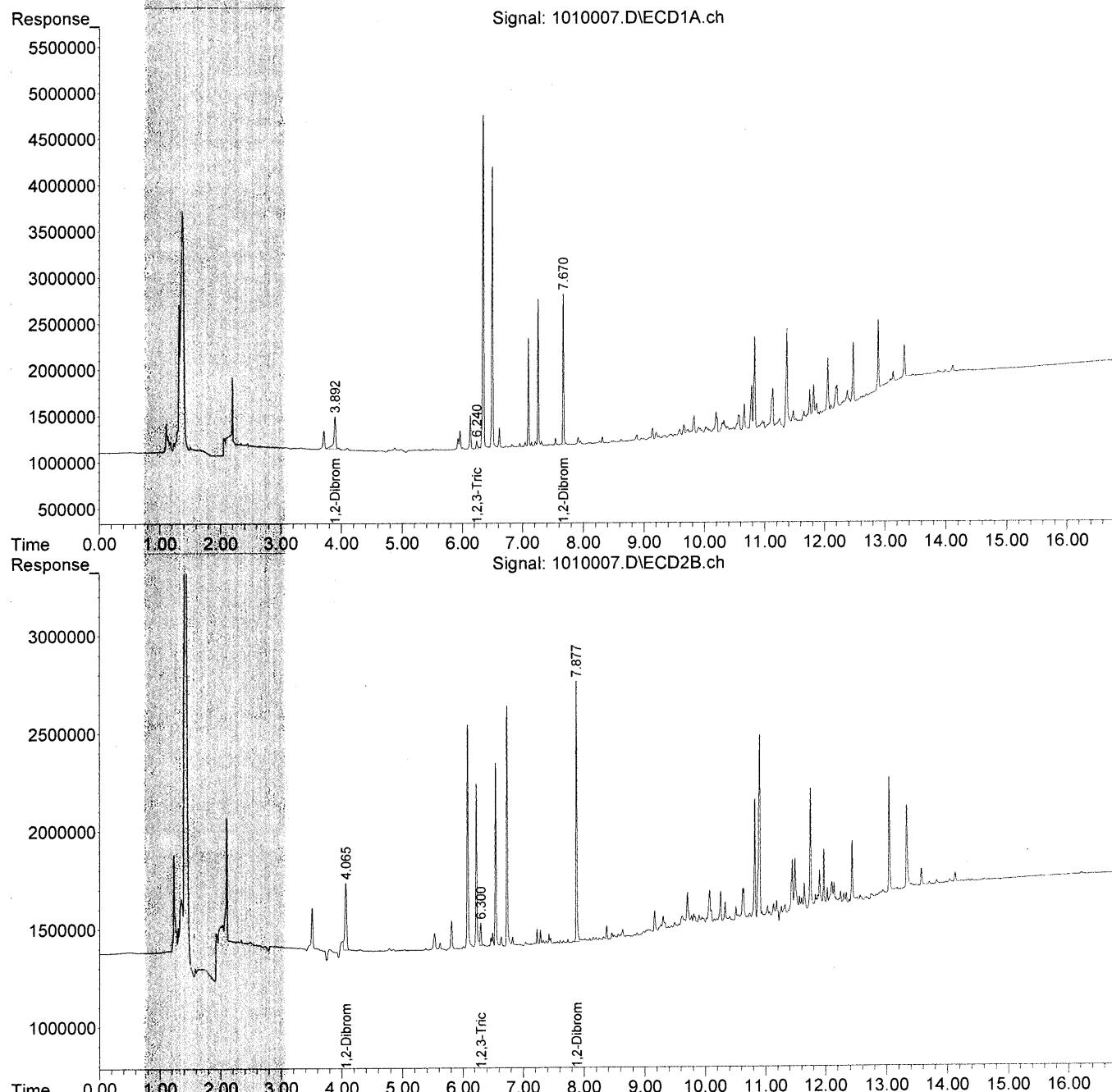
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:17:23 Operator: BS
Sample : ICAL LV4 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:13:38 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

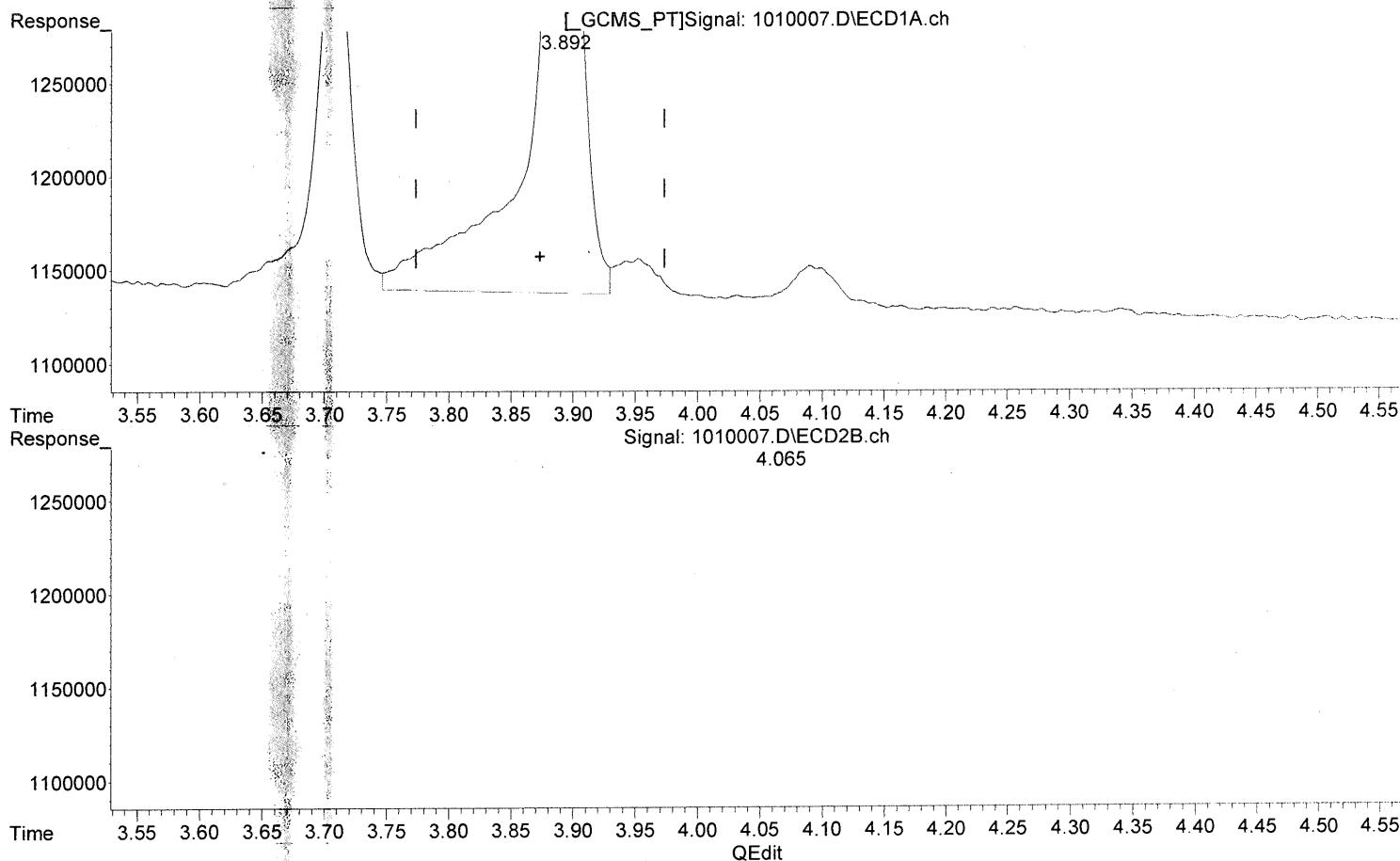


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 0.803 ppb

response 897642

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 0.494 ppb

response 682200

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:13:14 2016

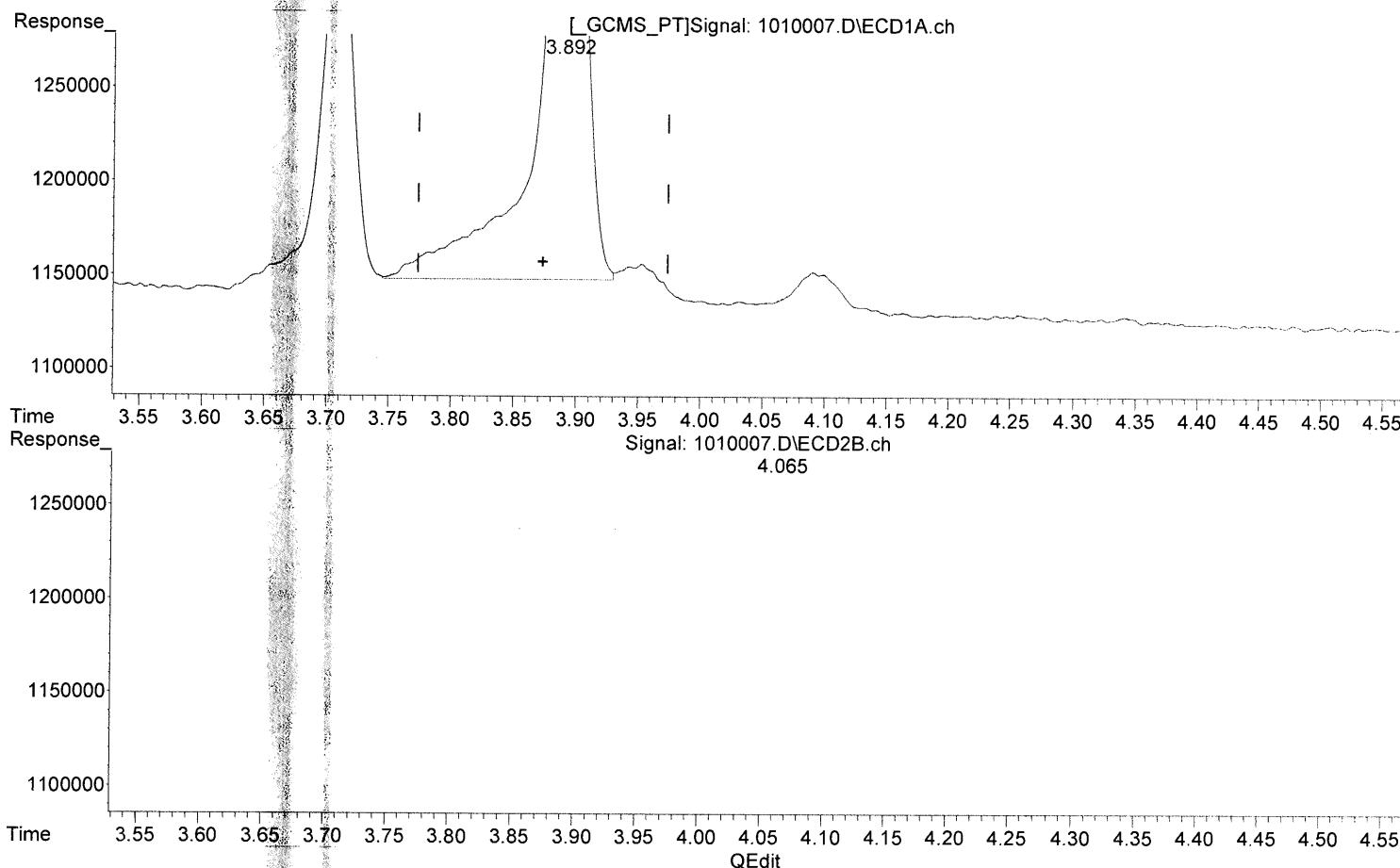
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 0.717 ppb m

response 795089

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 0.494 ppb

response 682200

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:13:21 2016

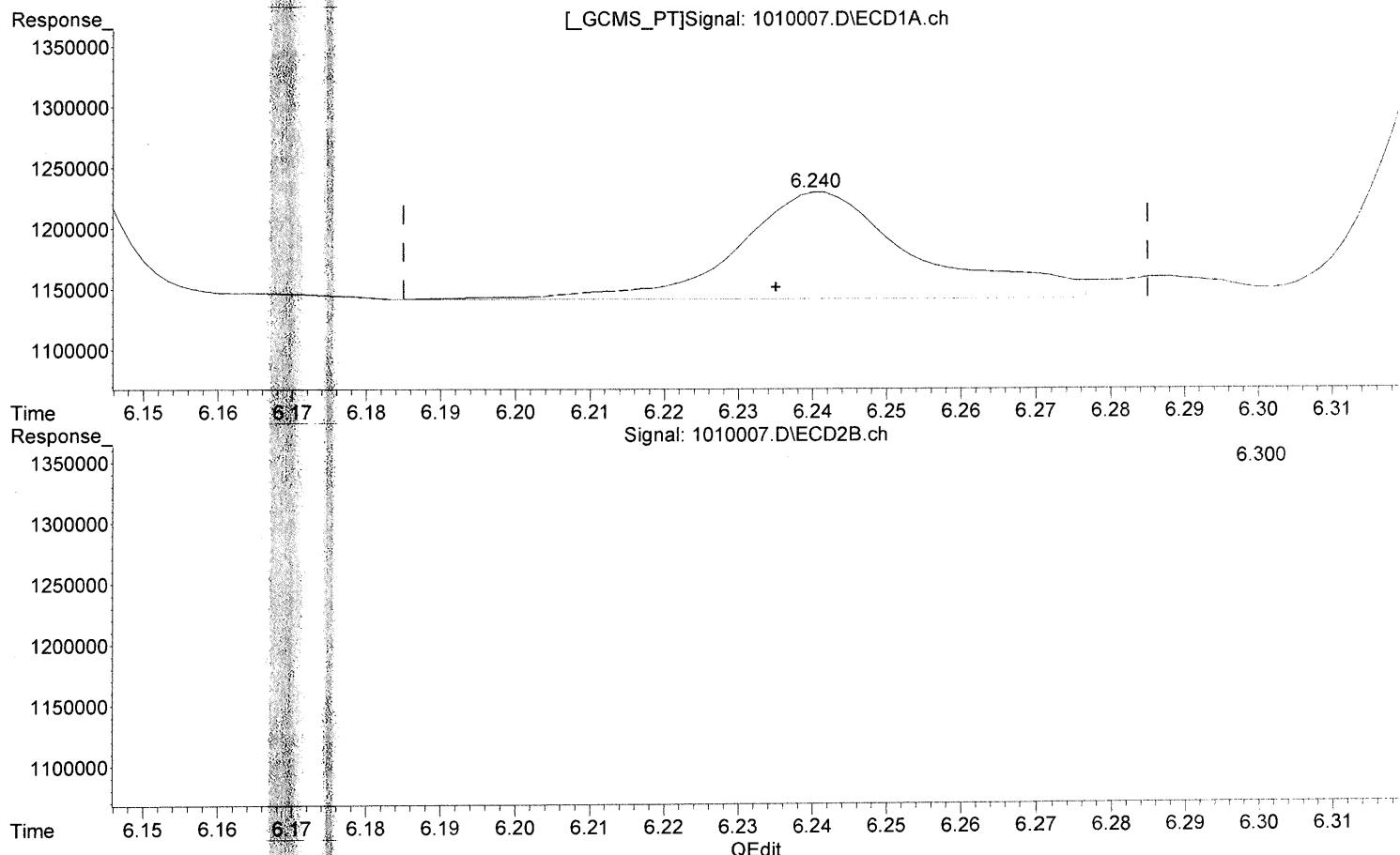
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

Manual Integration:

6.240min 0.921 ppb

Before

response 149093

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.300min 0.466 ppb

response 157791

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:13:31 2016

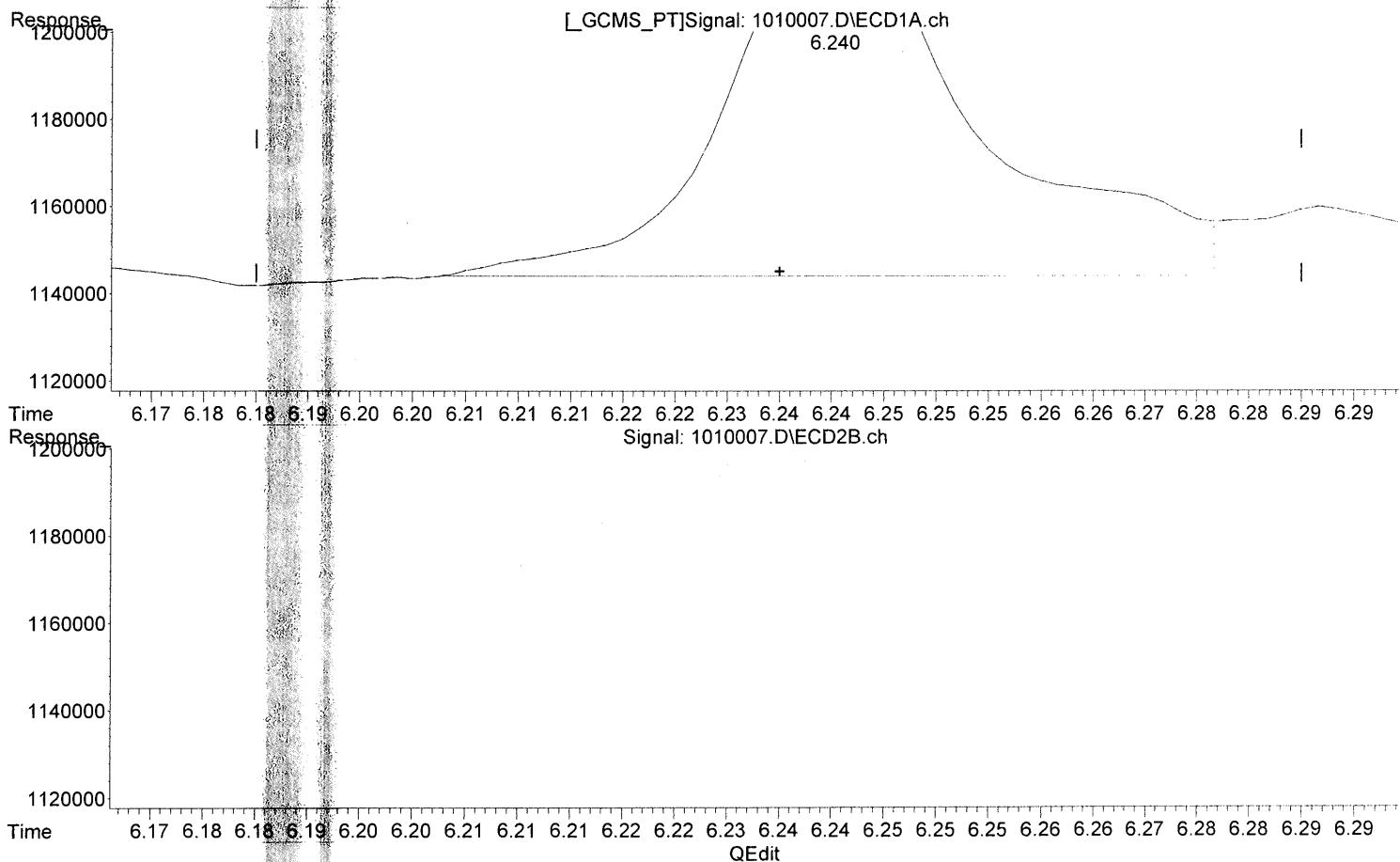
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.240min 0.854 ppb m

response 138223

Manual Integration:

After

Baseline/Shoulder

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.300min 0.466 ppb

response 157791

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:13:41 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:40:57 Operator: BS
Sample : ICAL LV5 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:14:58 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.898	4.060	1401531	1125916	1.228m	0.815m#
2) M 1,2,3-Triiodopropane	6.242	6.298	245184	246237	1.515m	0.822 #
3) M 1,2-Dibromoethane	7.670	7.877	3219717	2577549	1.431	0.820 #
<hr/>						

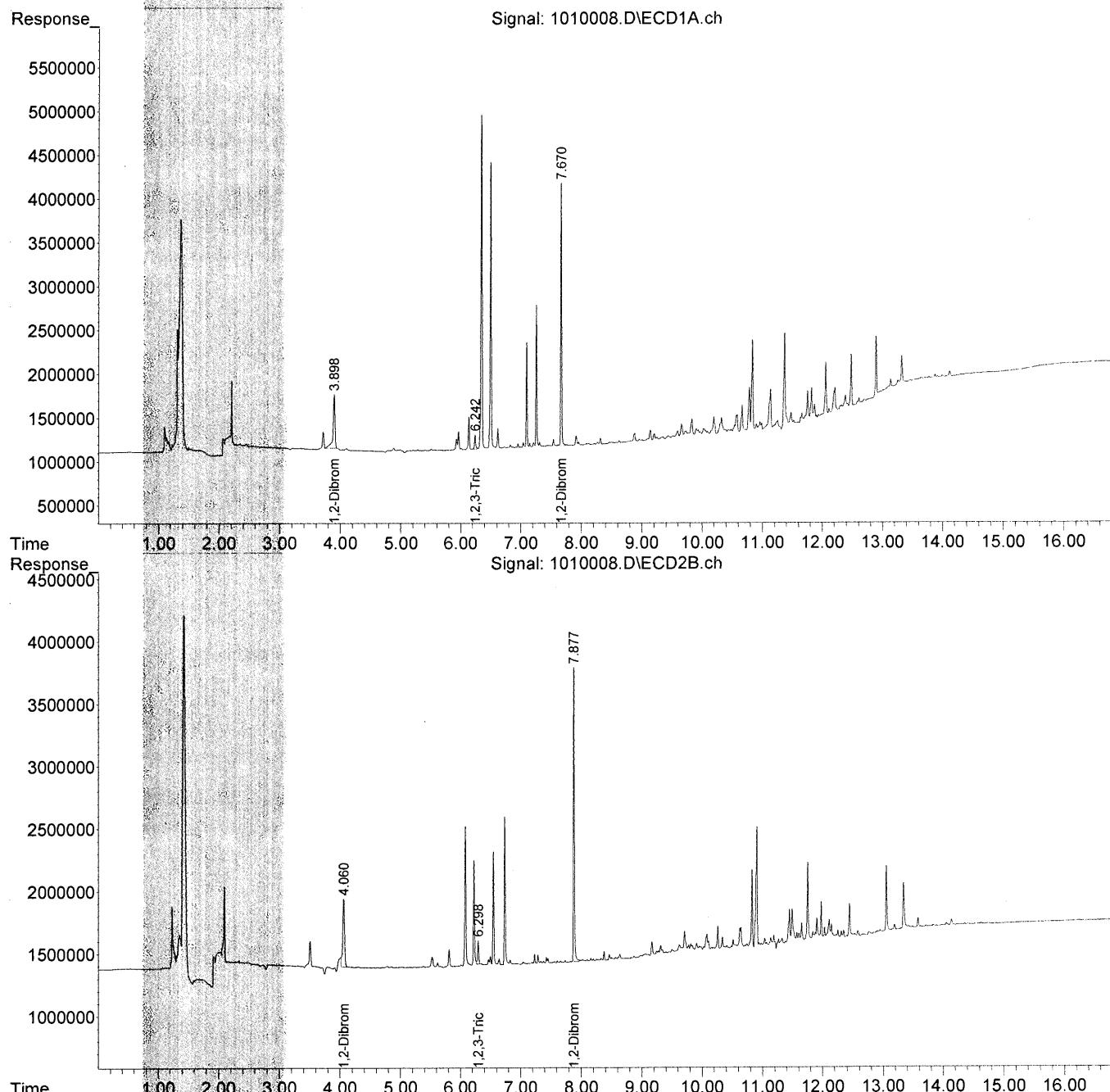
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:40:57 Operator: BS
Sample : ICAL LV5 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:14:58 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via: Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

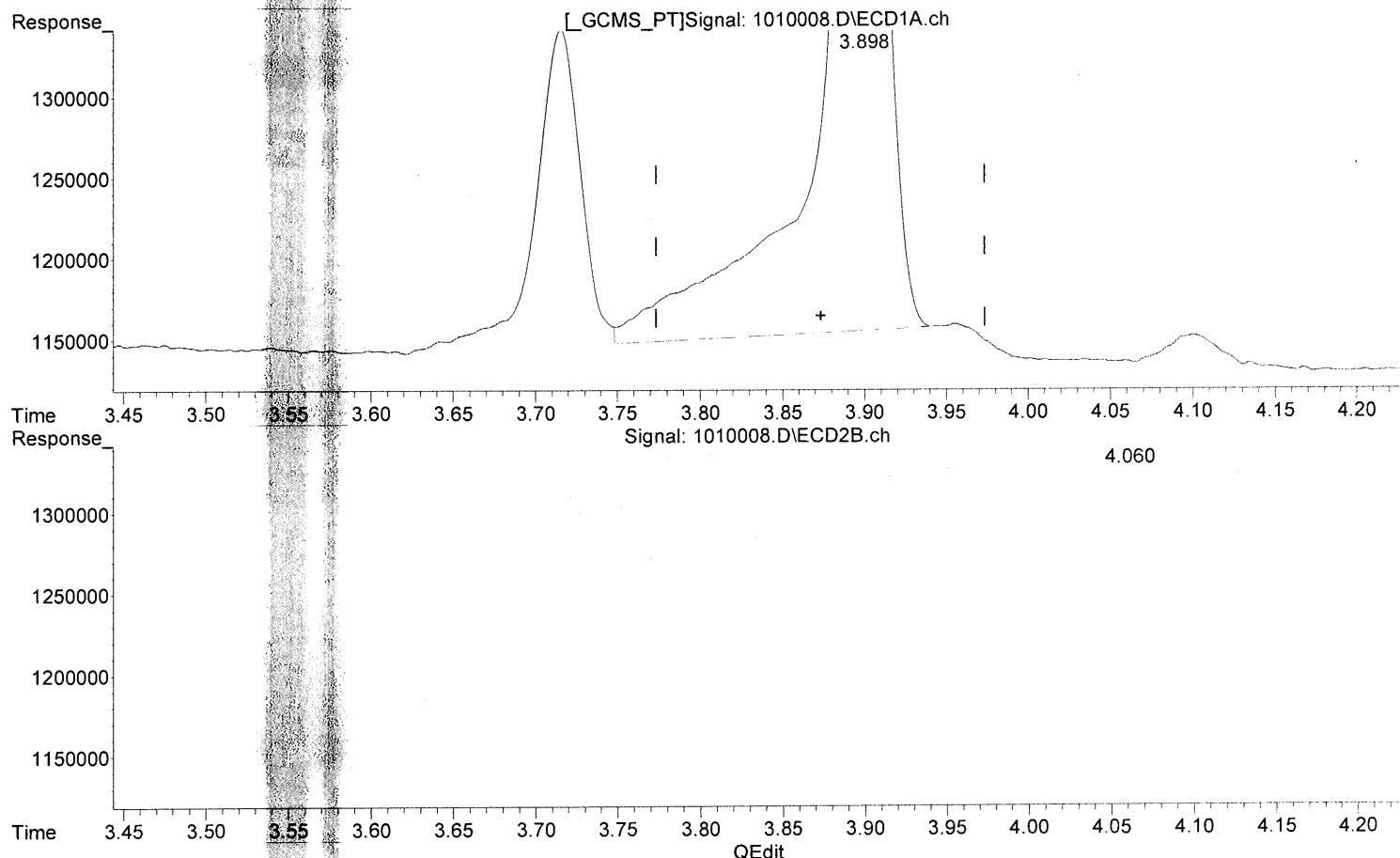


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.266 ppb

response 1446490

Manual Integration:

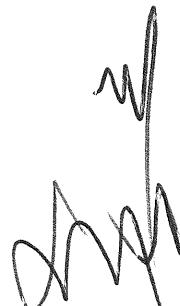
Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:15 2016

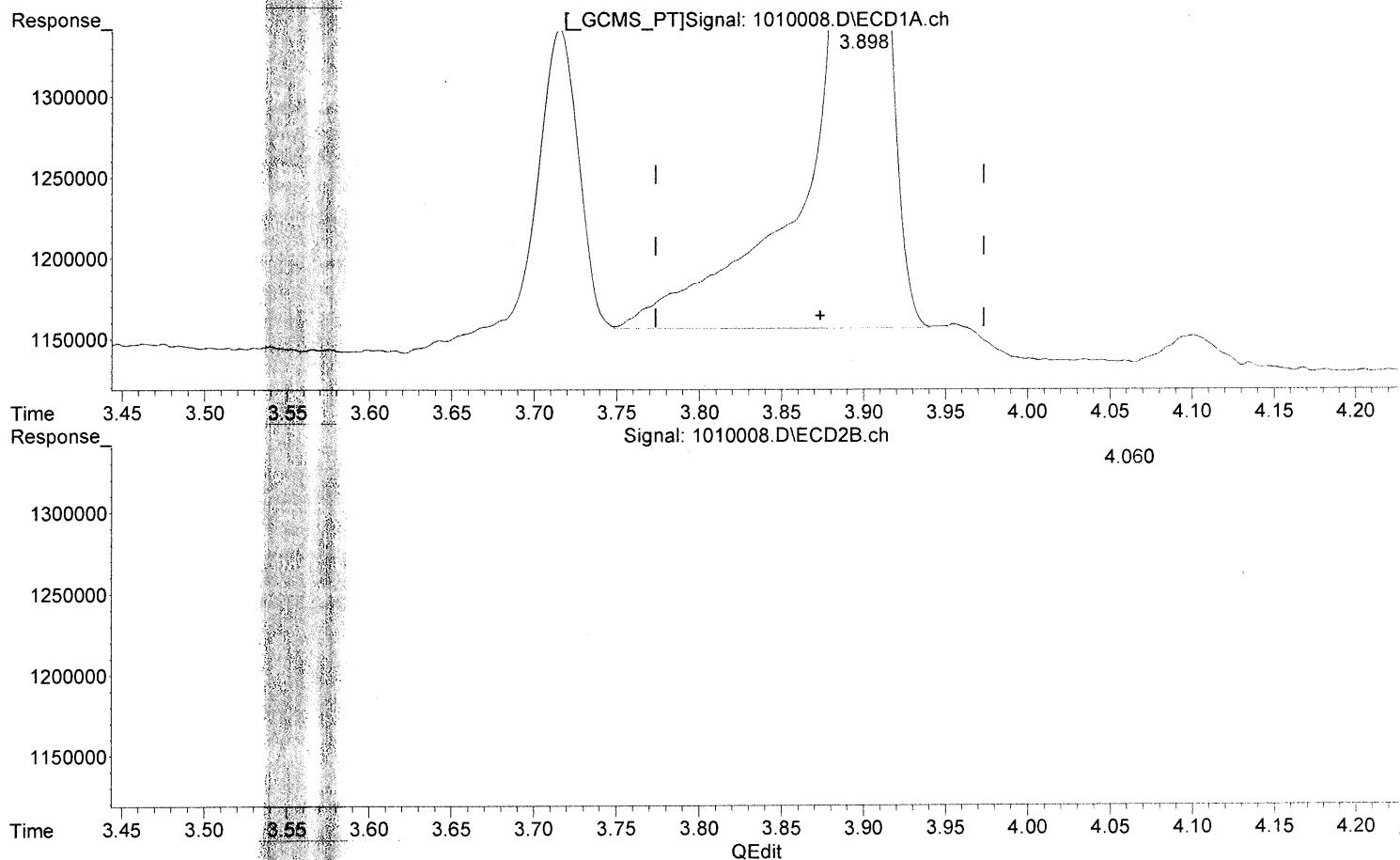
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:14:27 2016

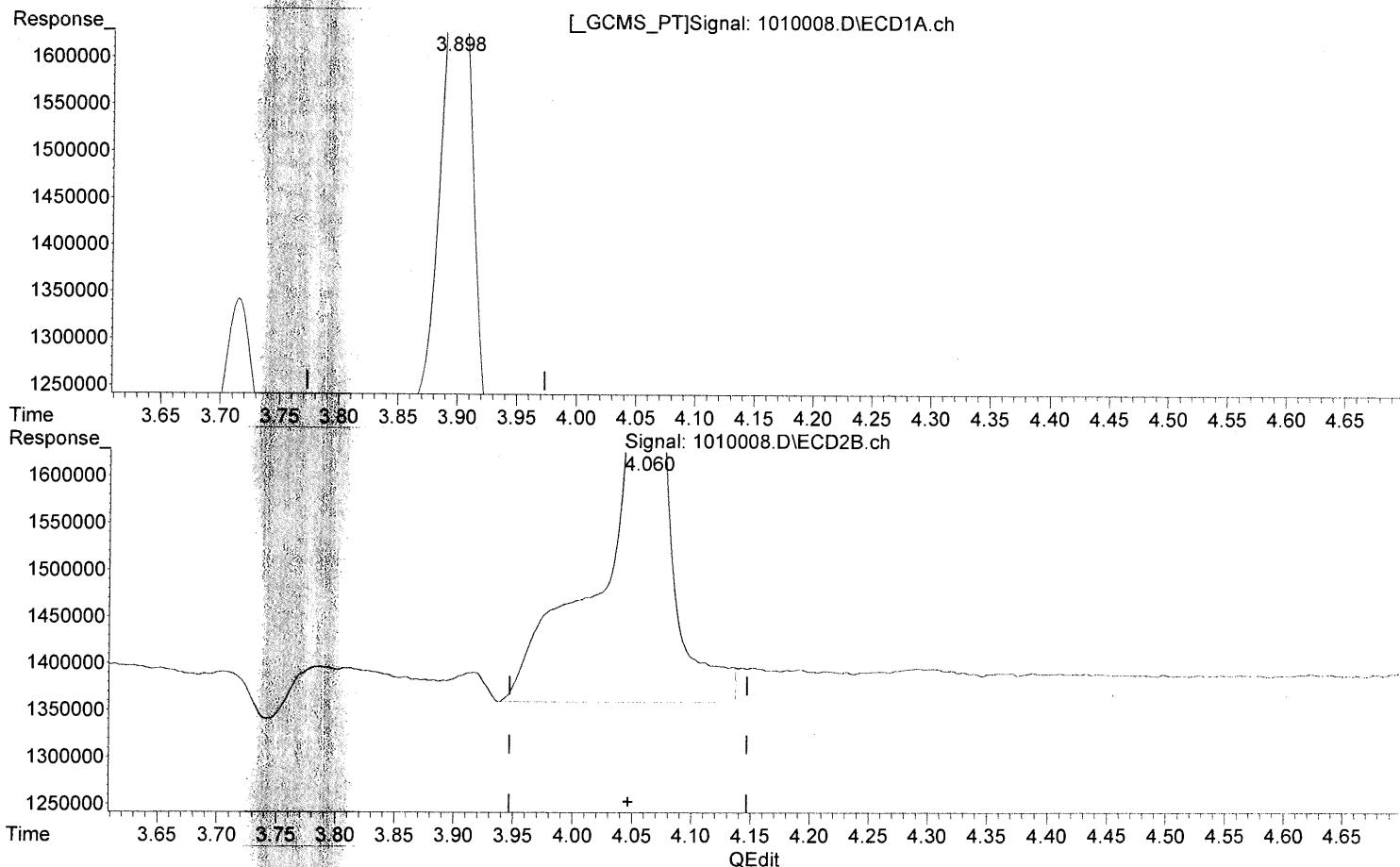
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



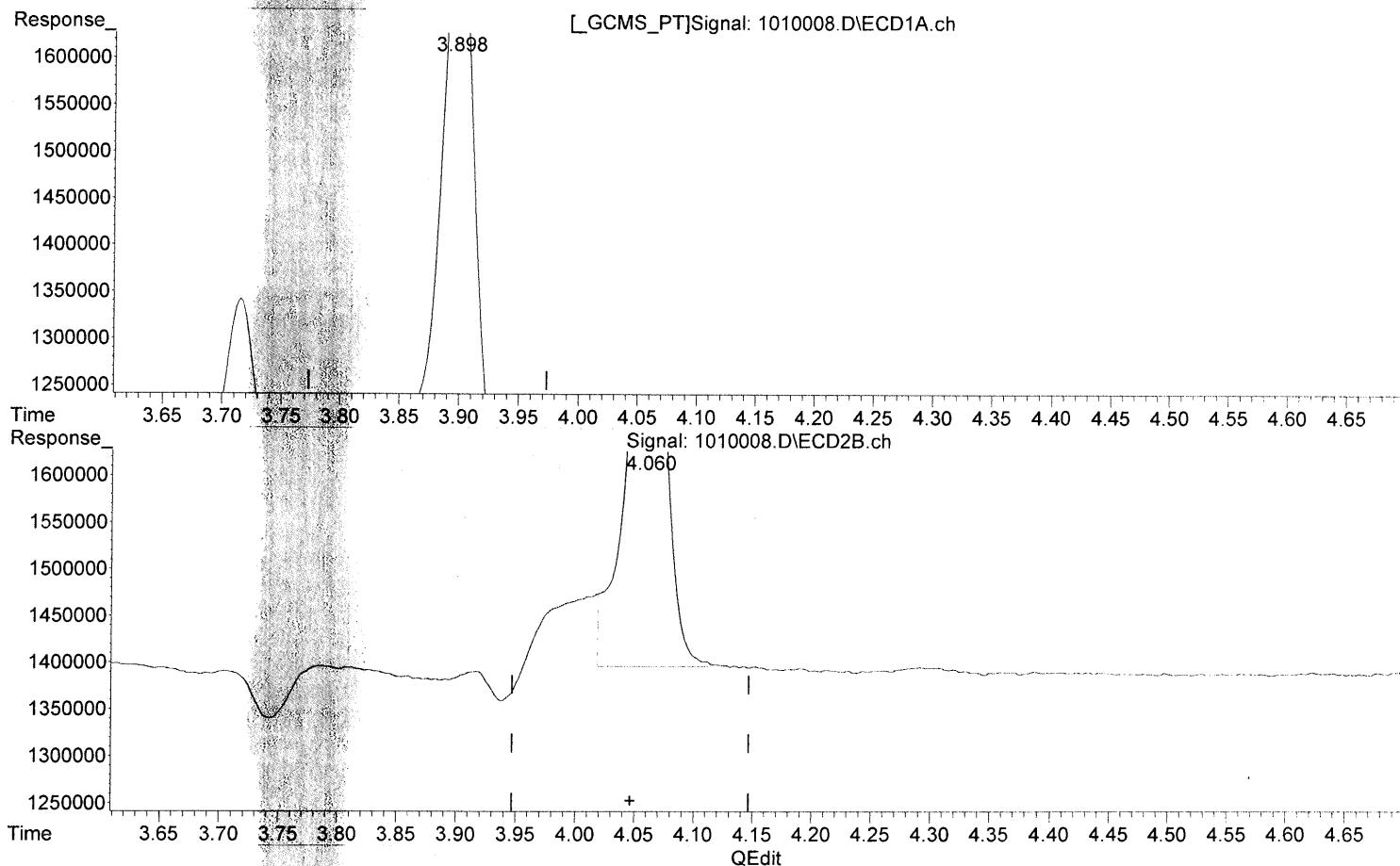
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:32 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LVS 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.815 ppb m

response 1125916



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:14:43 2016

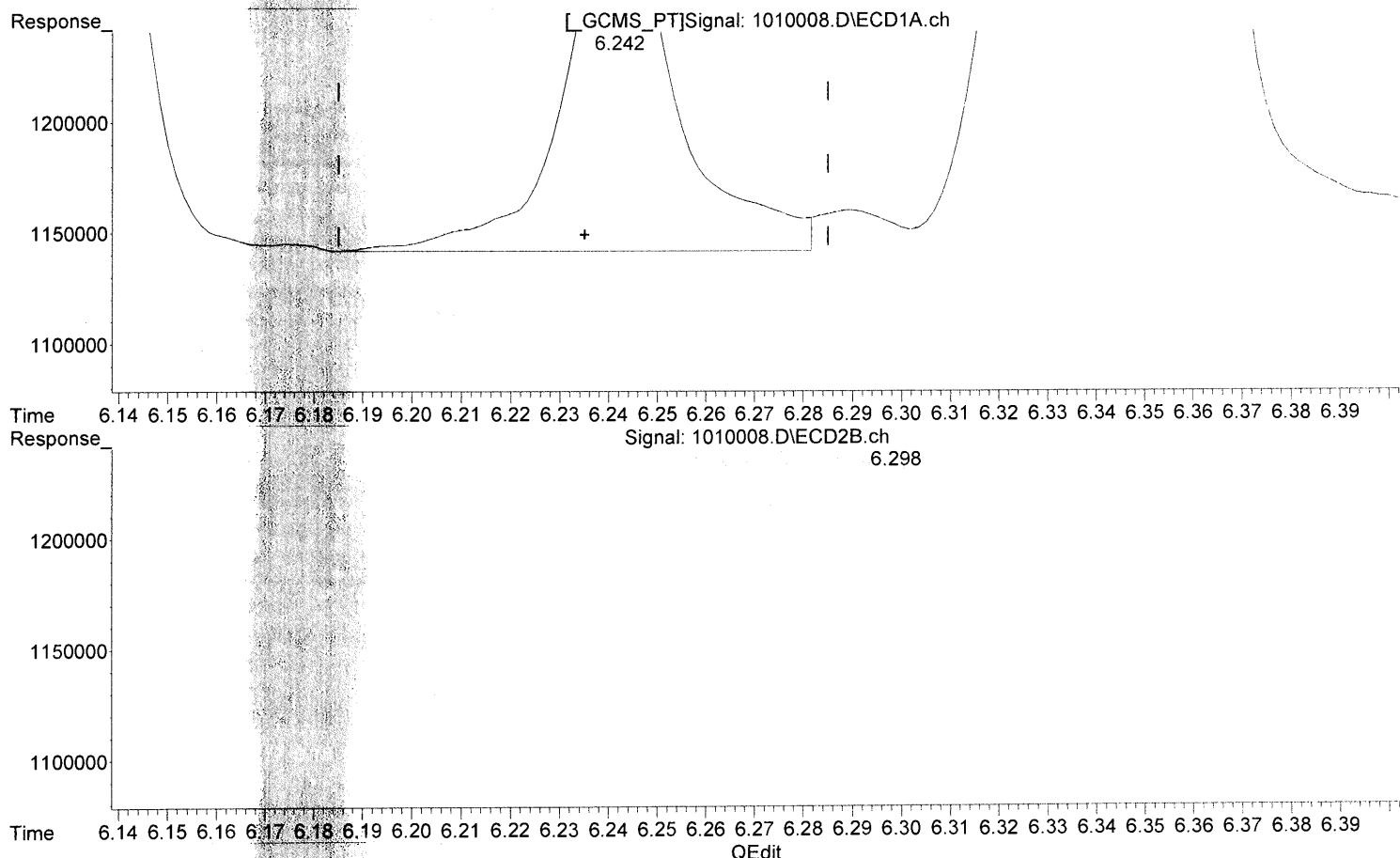
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

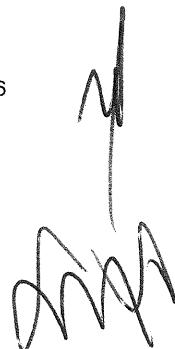
6.242min 1.603 ppb

response 259440

Manual Integration:

Before

10/11/16



(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.822 ppb

response 246237

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:53 2016

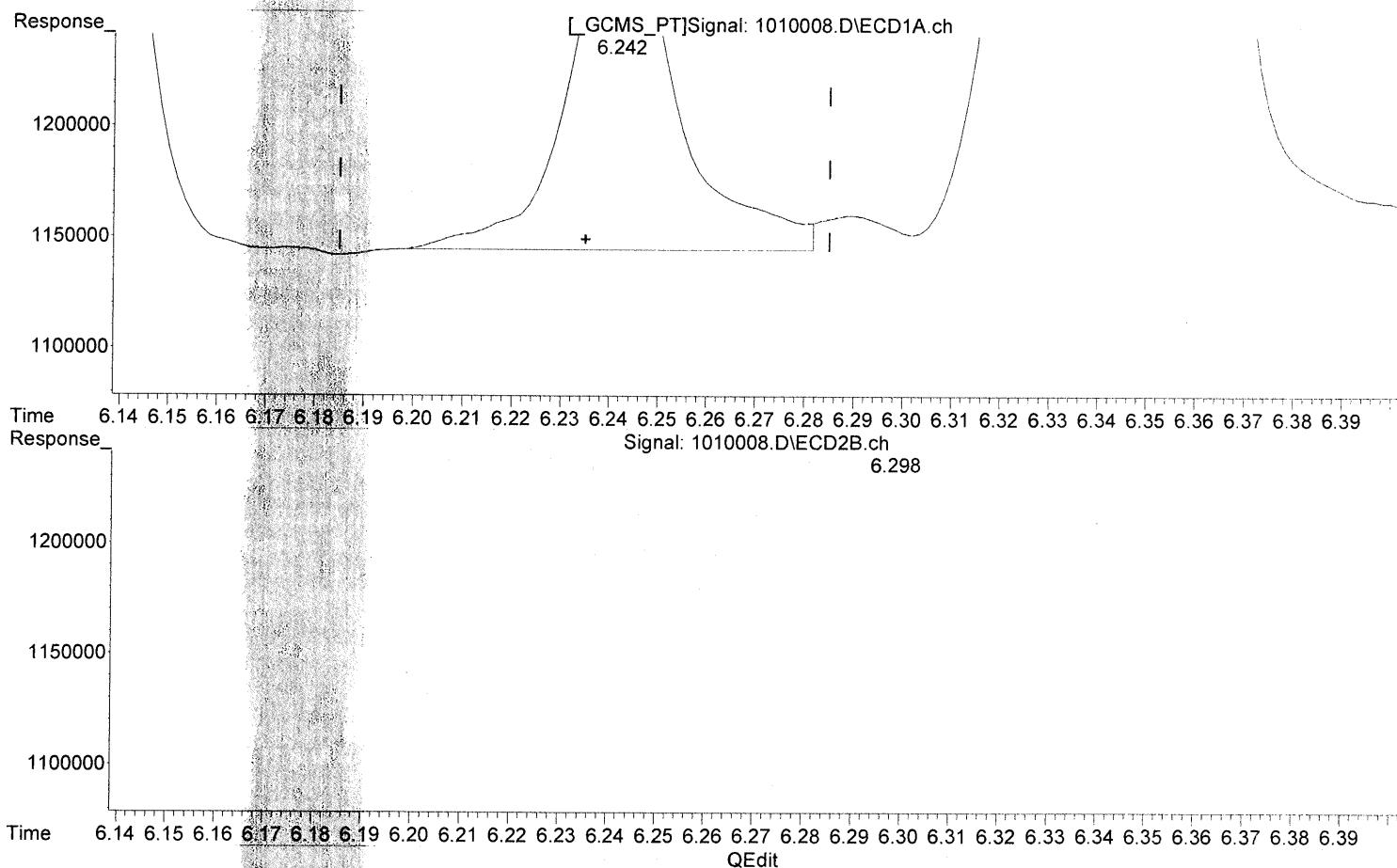
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LVS 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.242min 1.515 ppb m

response 245184

Manual Integration:

After

Baseline/Shoulder

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.822 ppb

response 246237

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:00 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:04:33 Operator: BS
Sample : ICAL LV6 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:15:49 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.897	4.062	4963671	3617450	4.246m	2.618m#
2) M 1,2,3-Tribromoethane	6.240	6.298	804323	798984	4.971	2.980 #
3) M 1,2-Dibromoethane	7.668	7.877	10079049	8377811	4.481	2.665 #

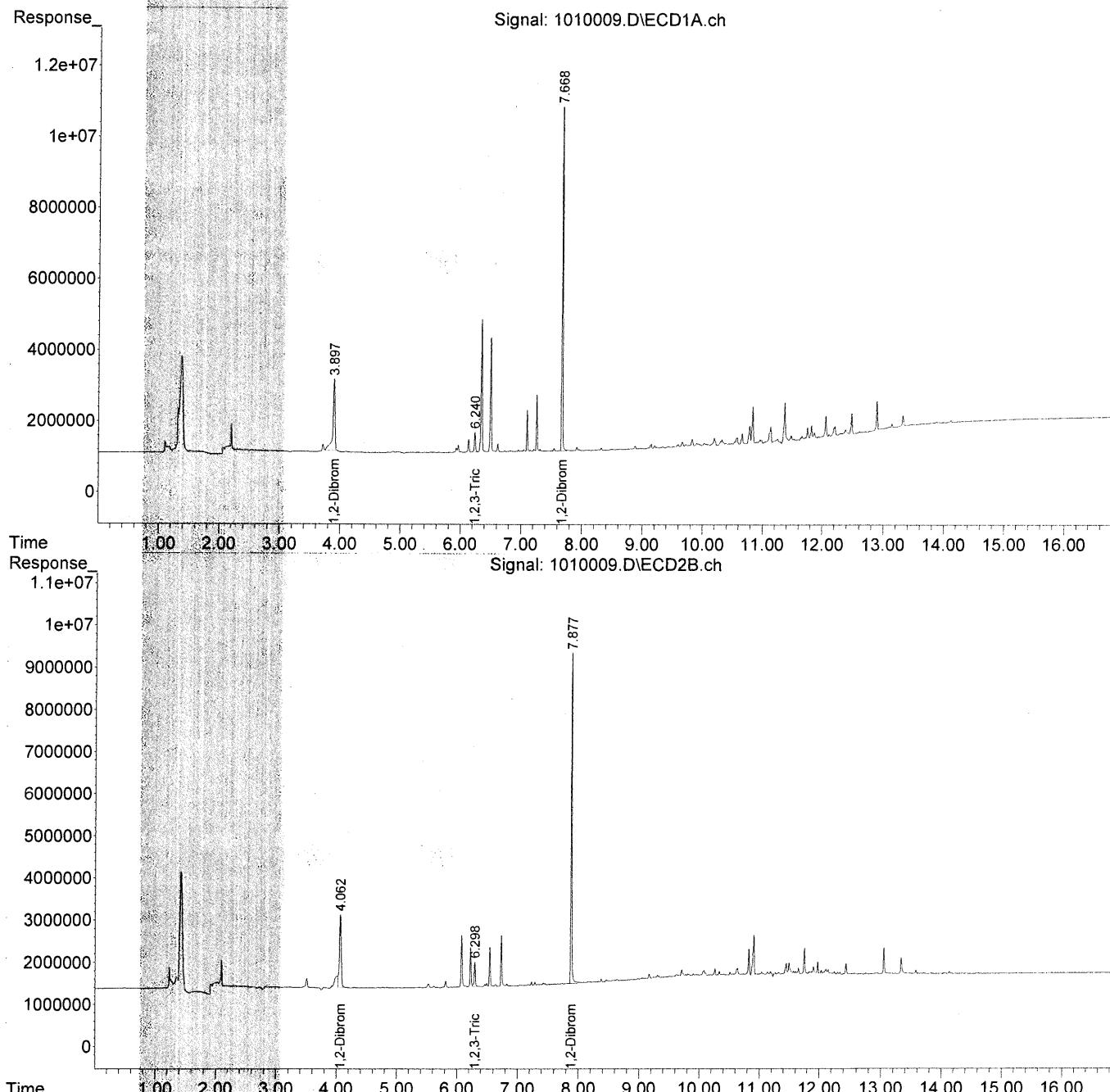
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:04:33 Operator: BS
Sample : ICAL LV6 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:15:49 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m

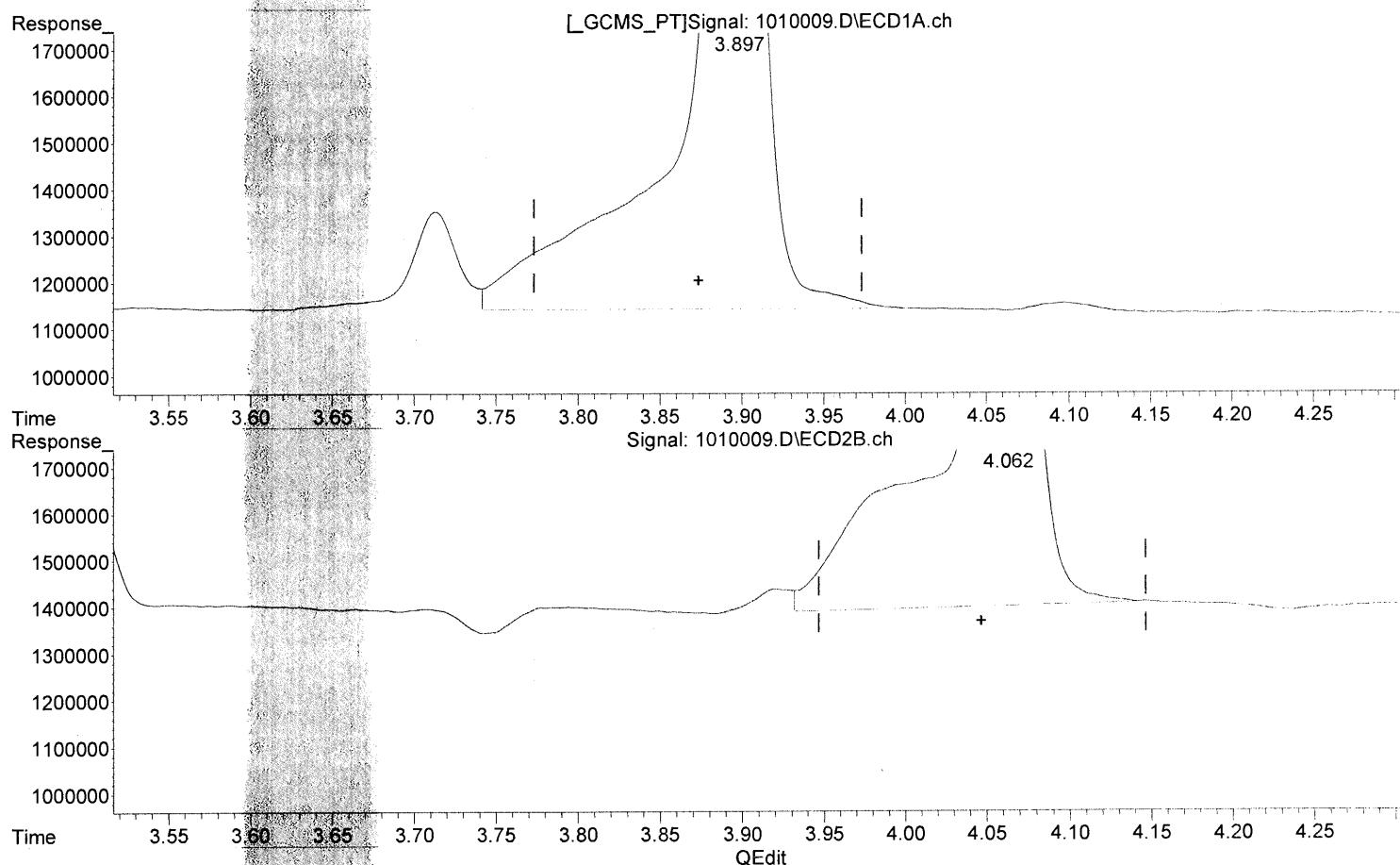


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.696 ppb

response 5492984

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:24 2016

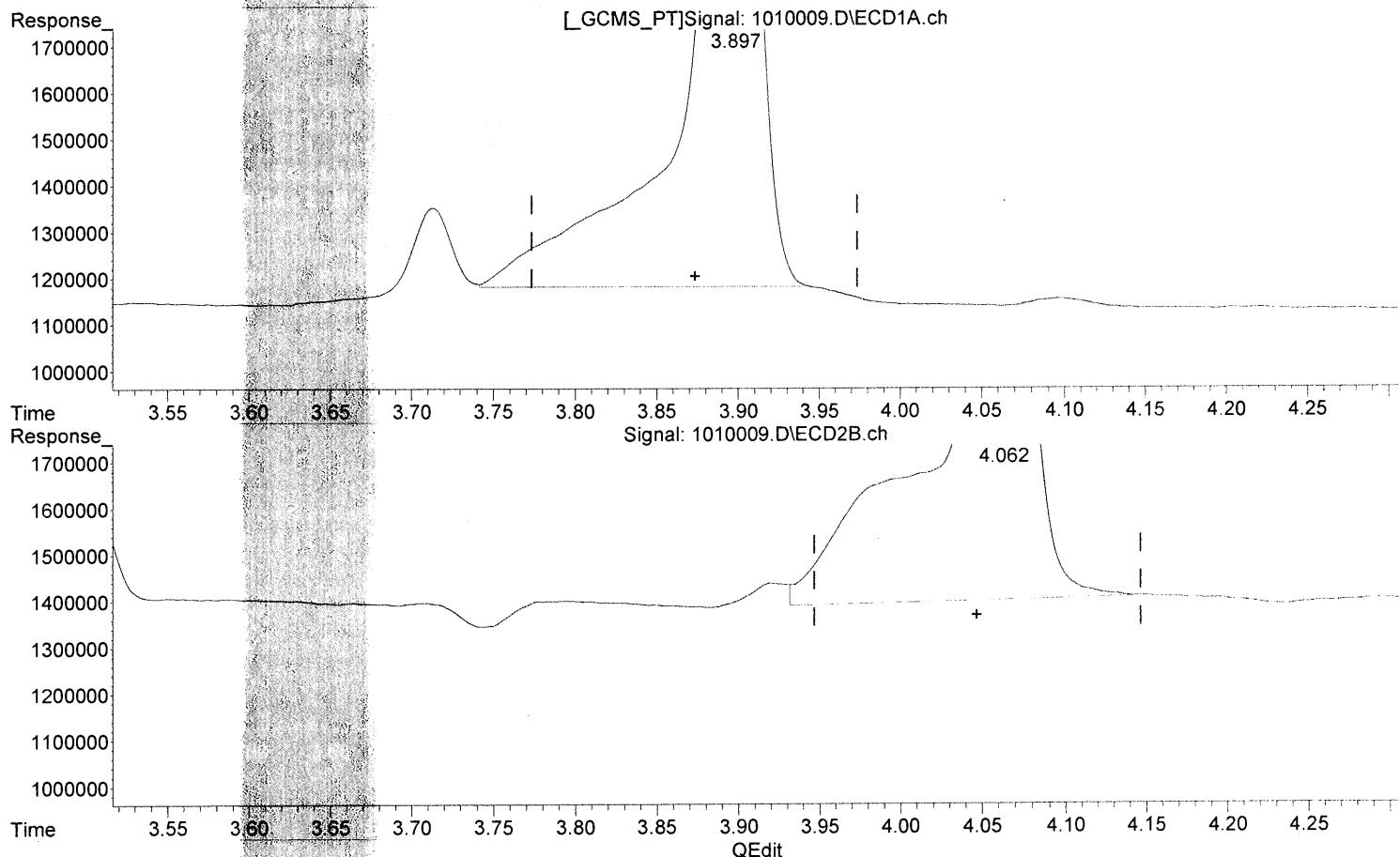
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.897min 4.246 ppb.m
 response 4963671

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.062min 3.428 ppb
 response 4737649



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:30 2016

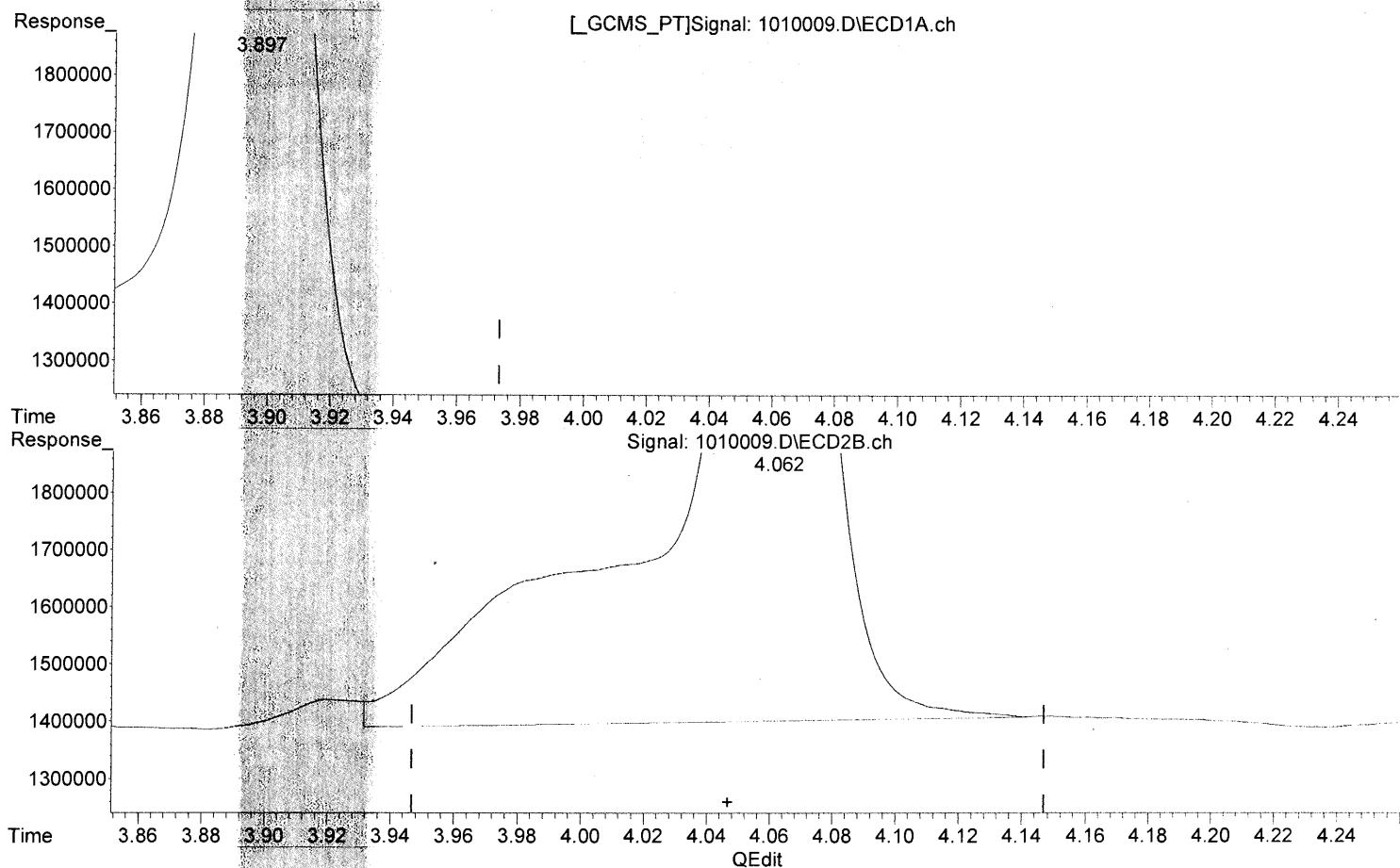
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb m

response 4963671

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649

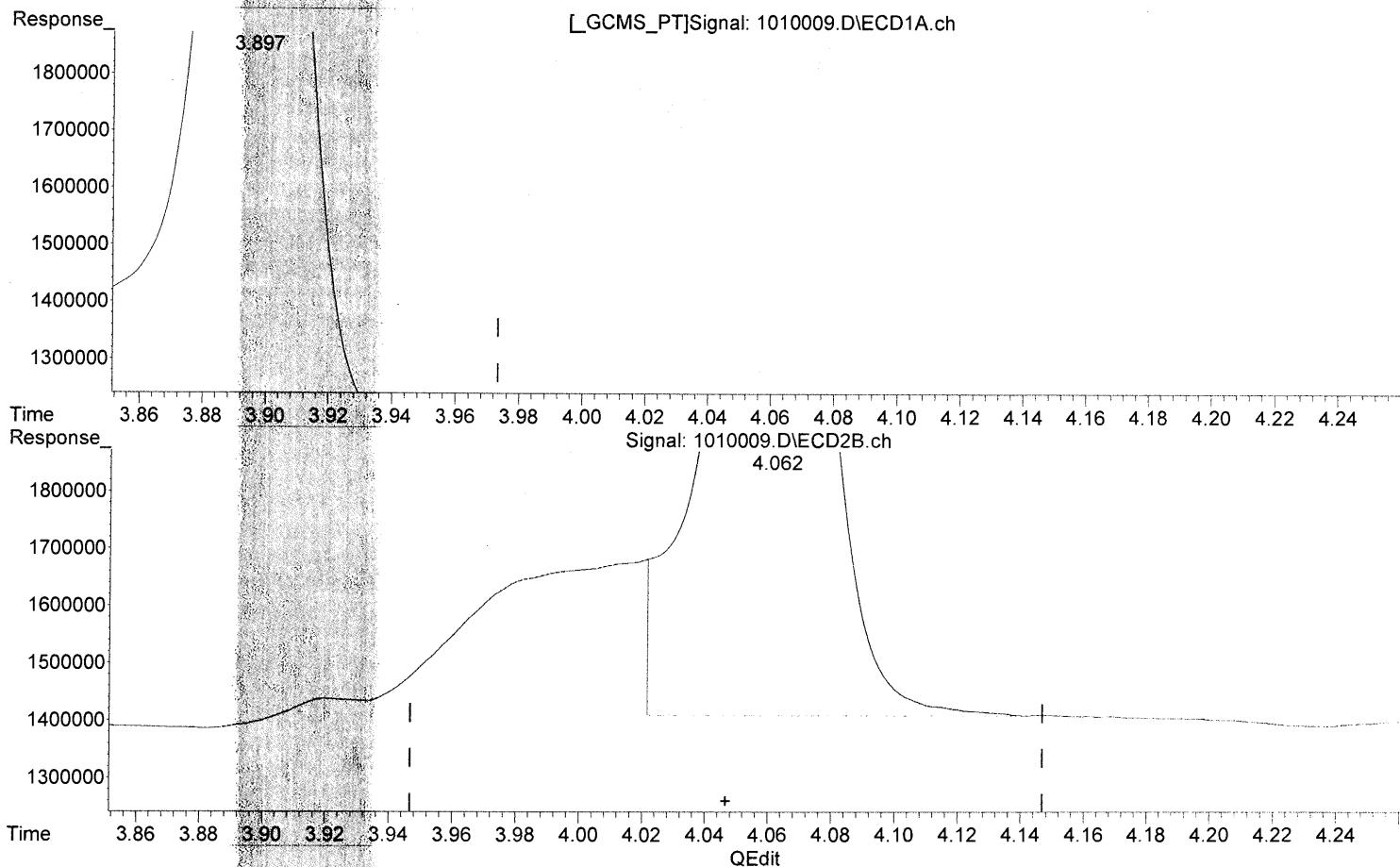
(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:38 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb m

response 4963671

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 2.618 ppb m

response 3617450



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:52 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:28:17 Operator: BS
Sample : ICAL LV7 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:16:52 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.897	4.063	6005701	4607340	5.133m	3.334m#
2) M 1,2,3-Tri...	6.240	6.298	973722	1023621	6.018	3.827 #
3) M 1,2-Dibro...	7.668	7.875	12908190	10815899	5.739	3.440 #

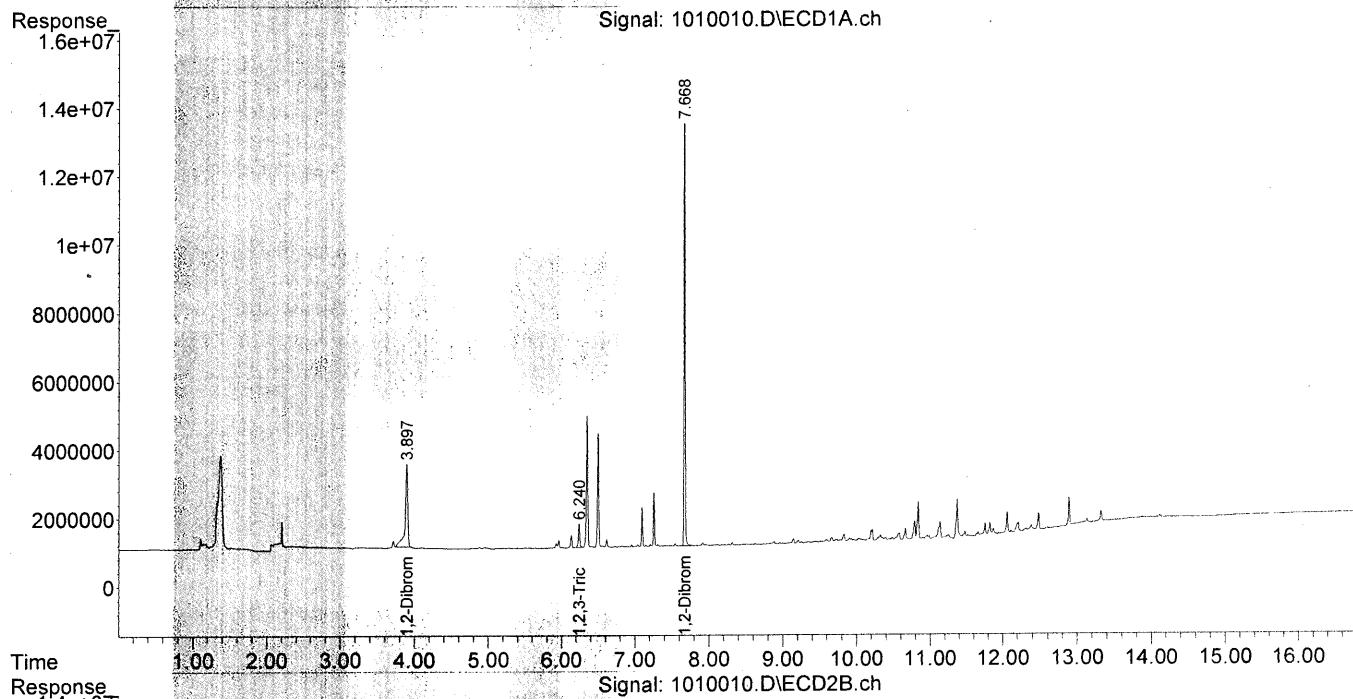
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:28:17 Operator: BS
Sample : ICAL LV7 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:16:52 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

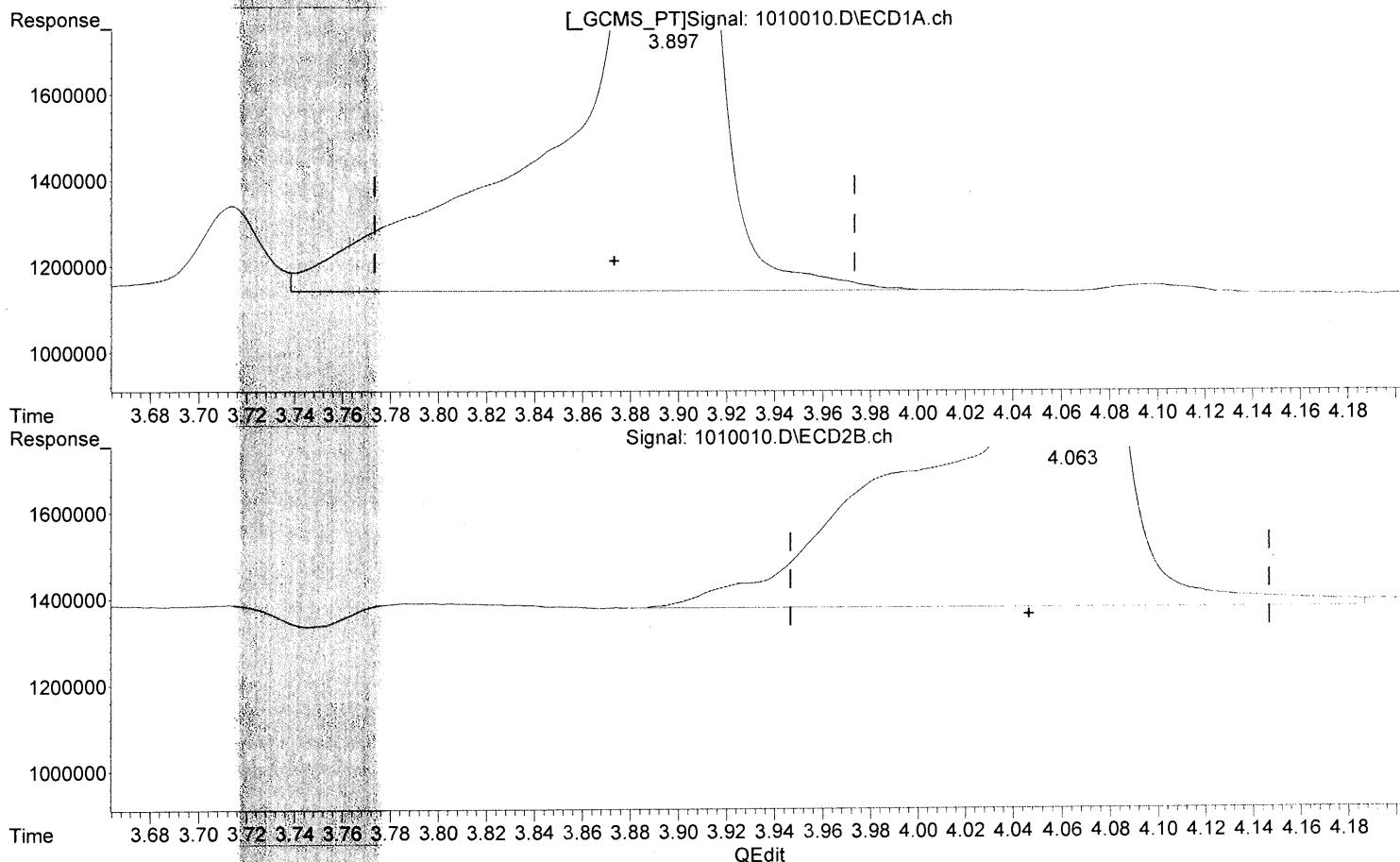


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.593 ppb

response 6545020

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:16:30 2016

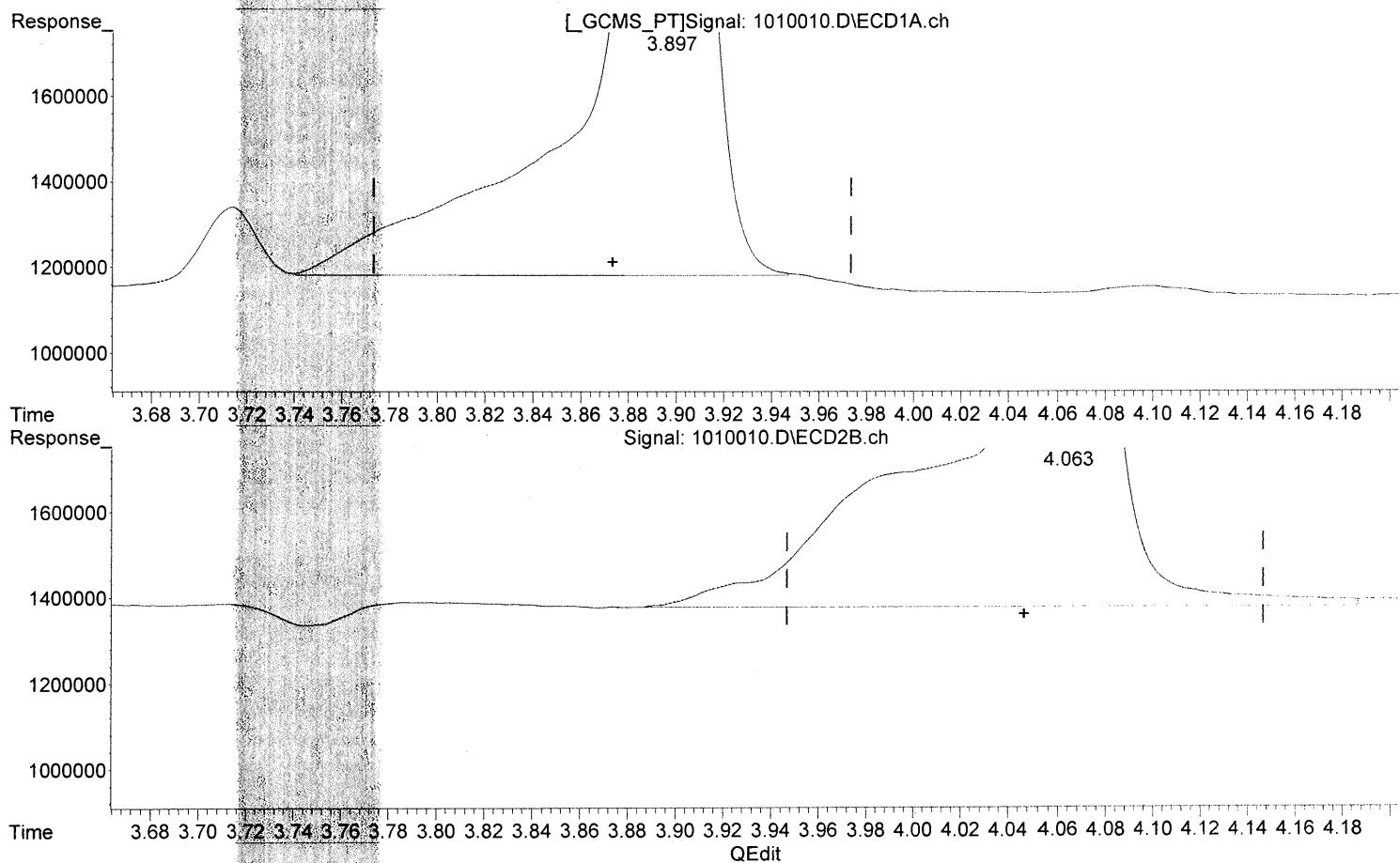
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.133 ppb m

response 6005701

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939



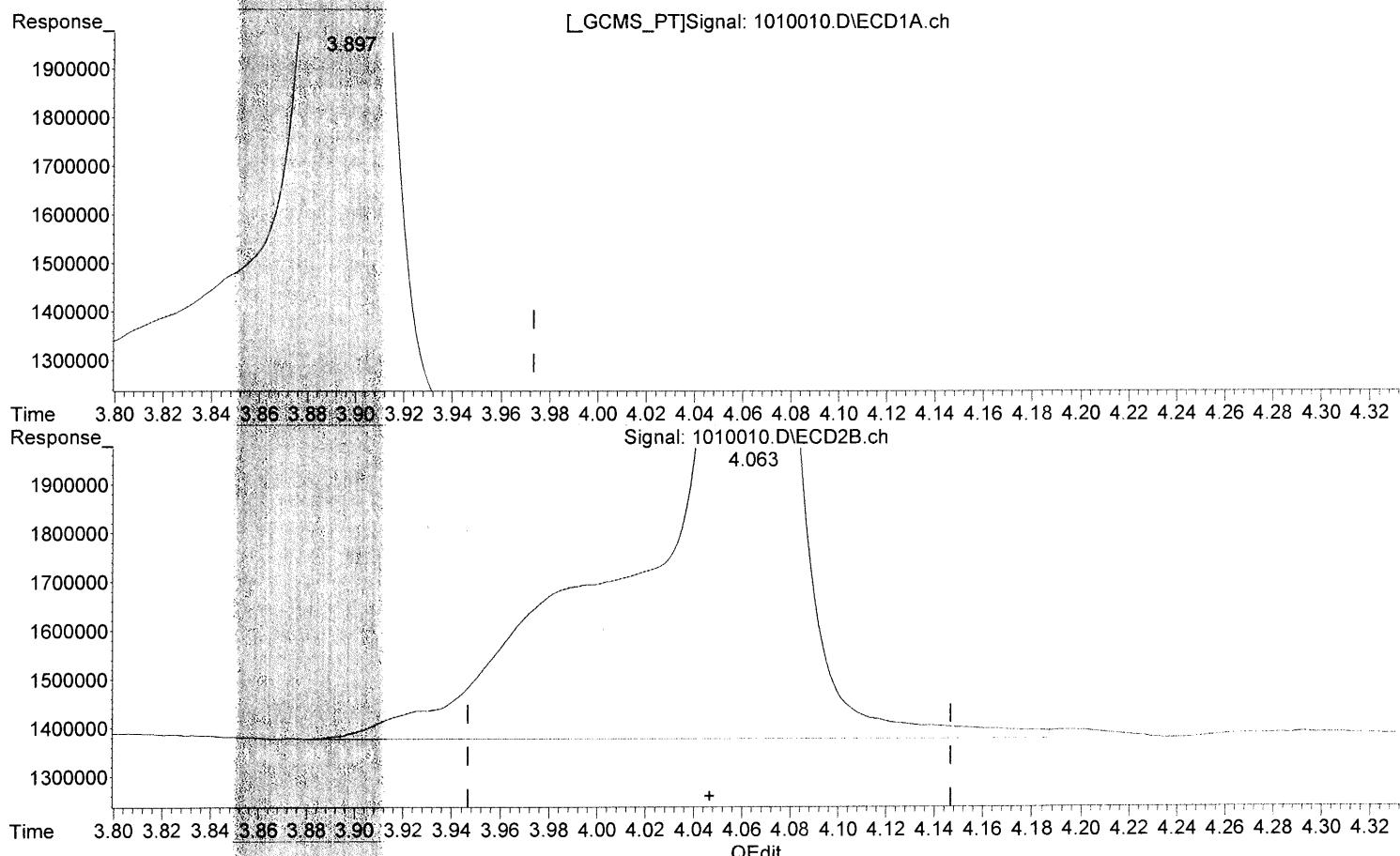
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:16:39 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

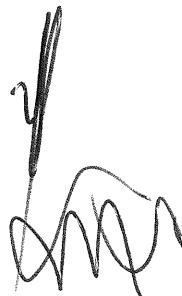
3.897min 5.133 ppb m

response 6005701

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:16:46 2016

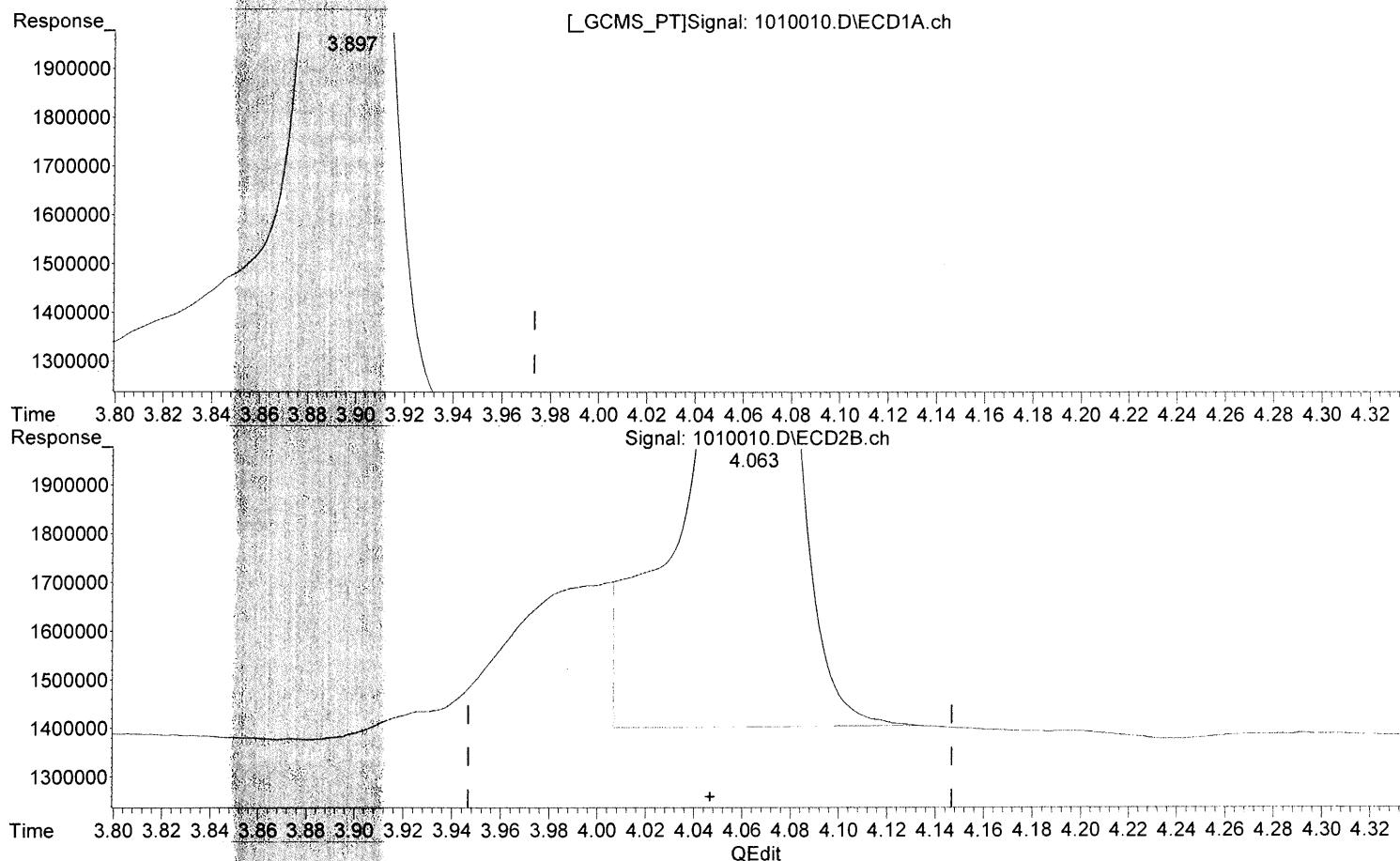
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5,133 ppb m

response 6005701

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 3,334 ppb m

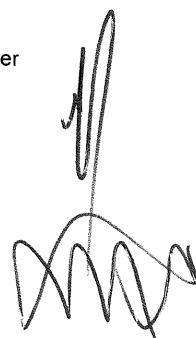
response 4607340

Manual Integration:

After

Baseline/Shoulder

10/11/16



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:16:56 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:51:51 Operator: BS
Sample : ICAL LV8 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:18:12 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.908	4.068	14751554	9894375	12.661m	7.160m#
2) M 1,2,3-Triiodopropane	6.247	6.303	2175504	2027409	13.445	7.424 #
3) M 1,2-Dibromoethane	7.672	7.880	29684327	23263534	13.197	7.399 #
<hr/>						

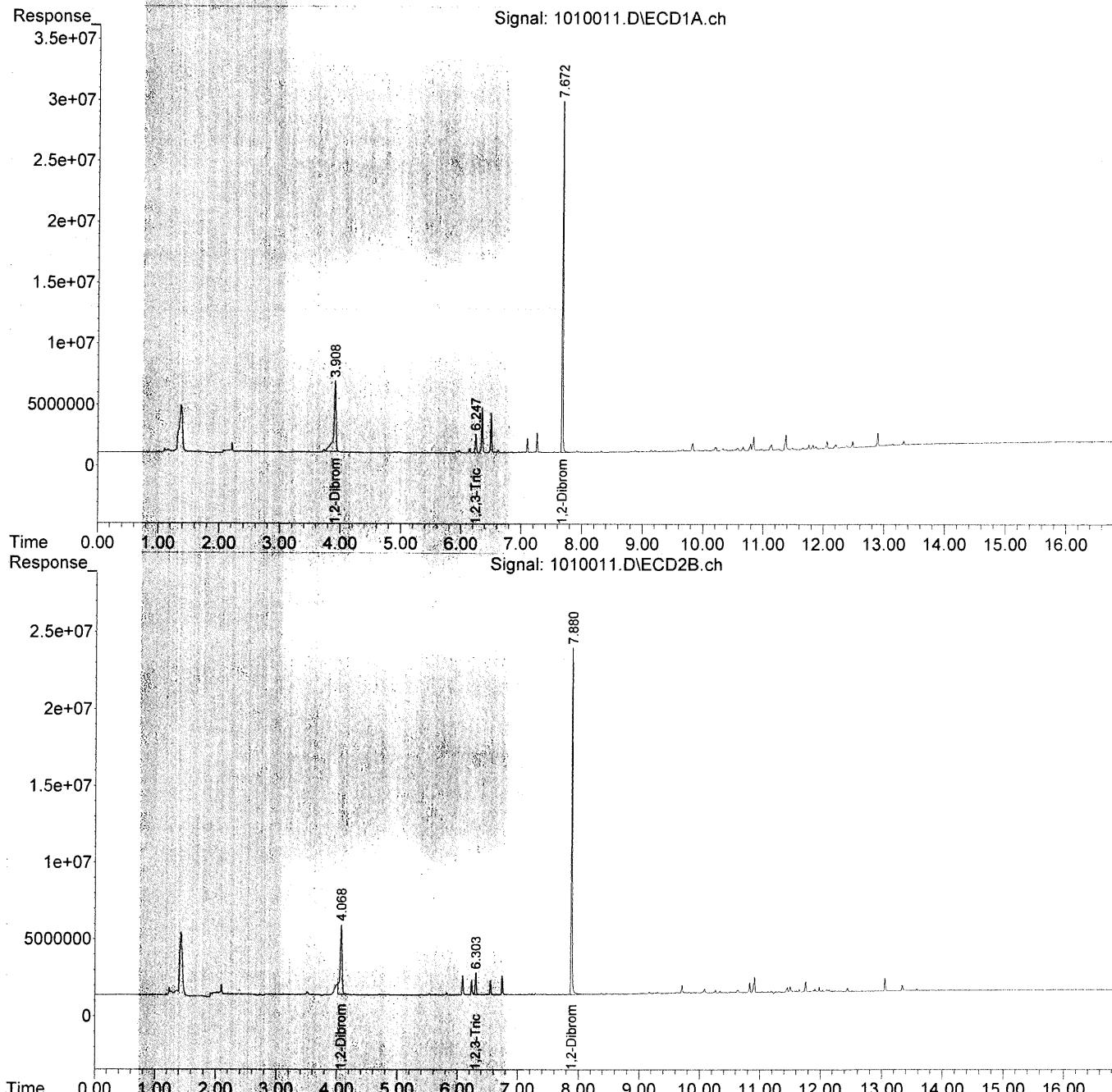
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:51:51 Operator: BS
Sample : ICAL LV8 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:18:12 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CALL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

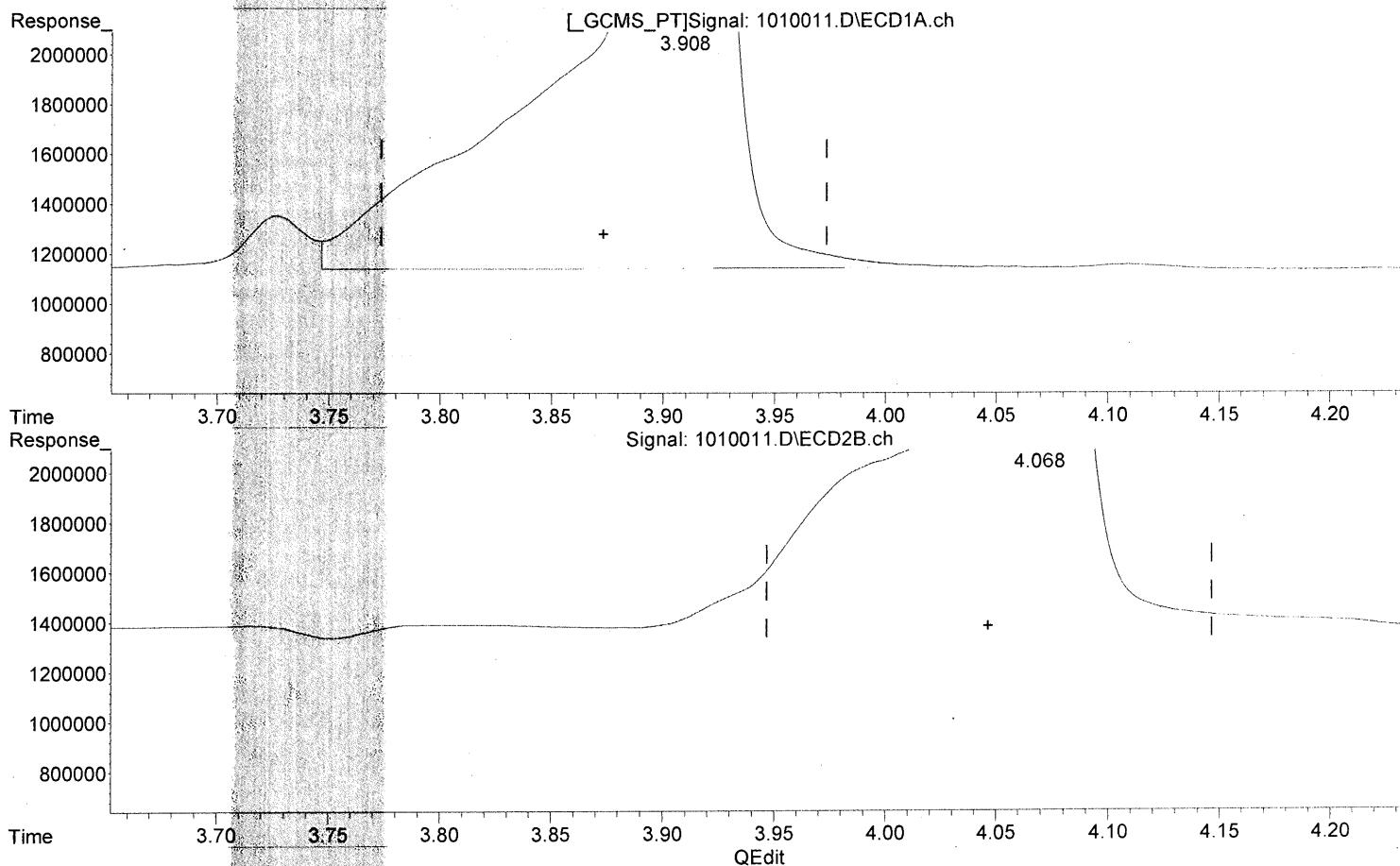


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 13.407 ppb

response 15609023

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:17:43 2016

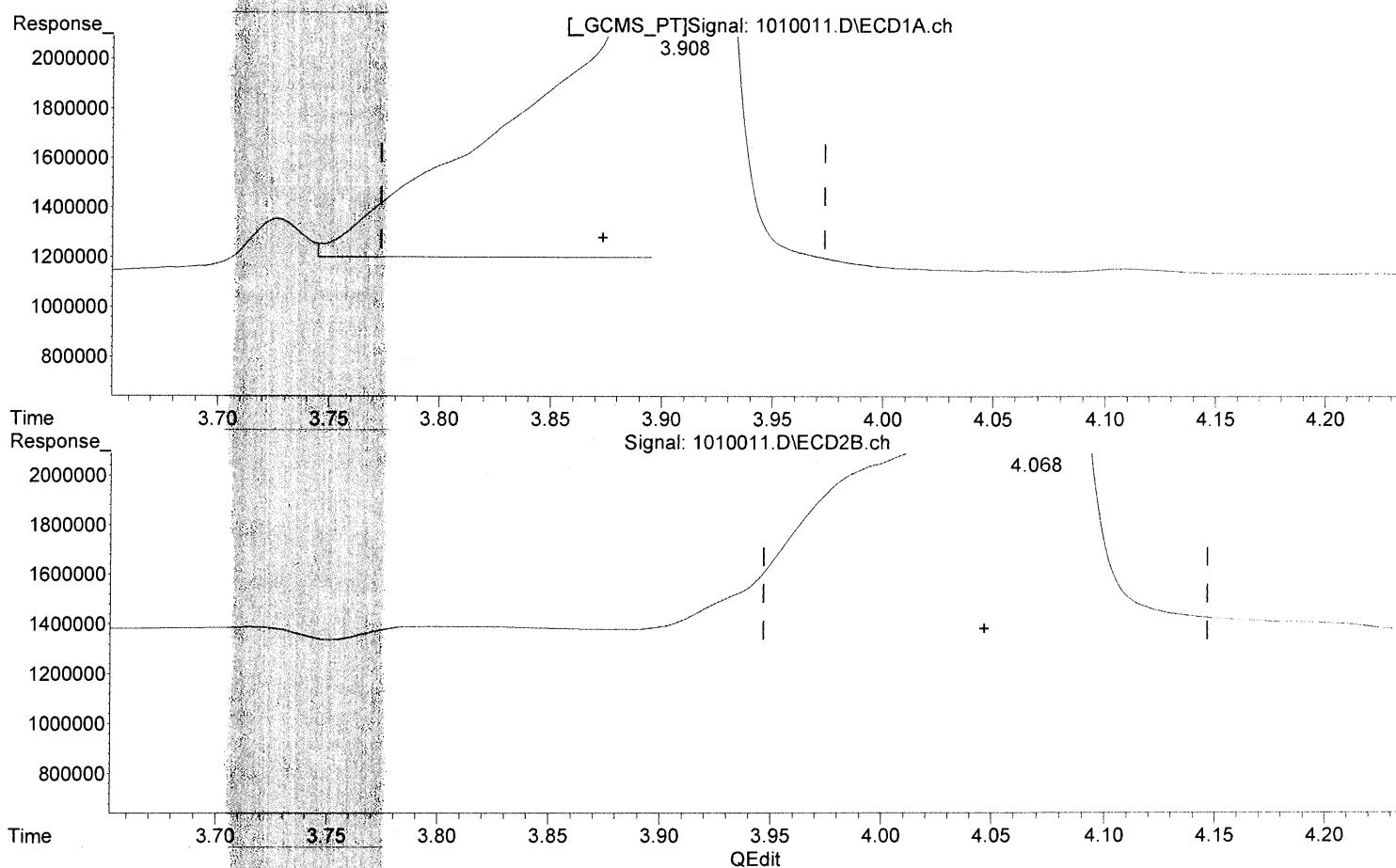
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12,661 ppb m

response 14751554

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:17:58 2016

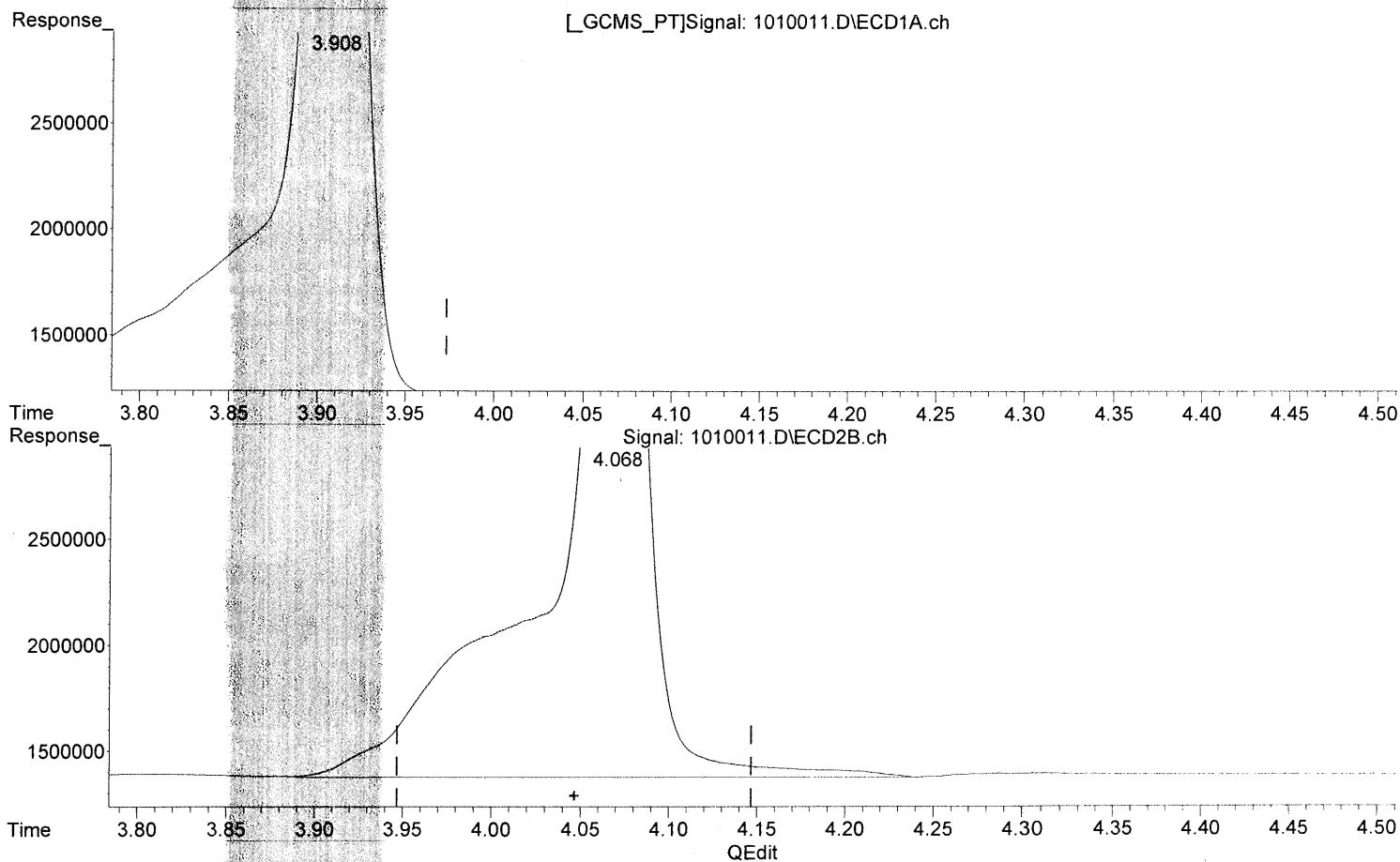
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12.661 ppb m

response 14751554

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:18:08 2016

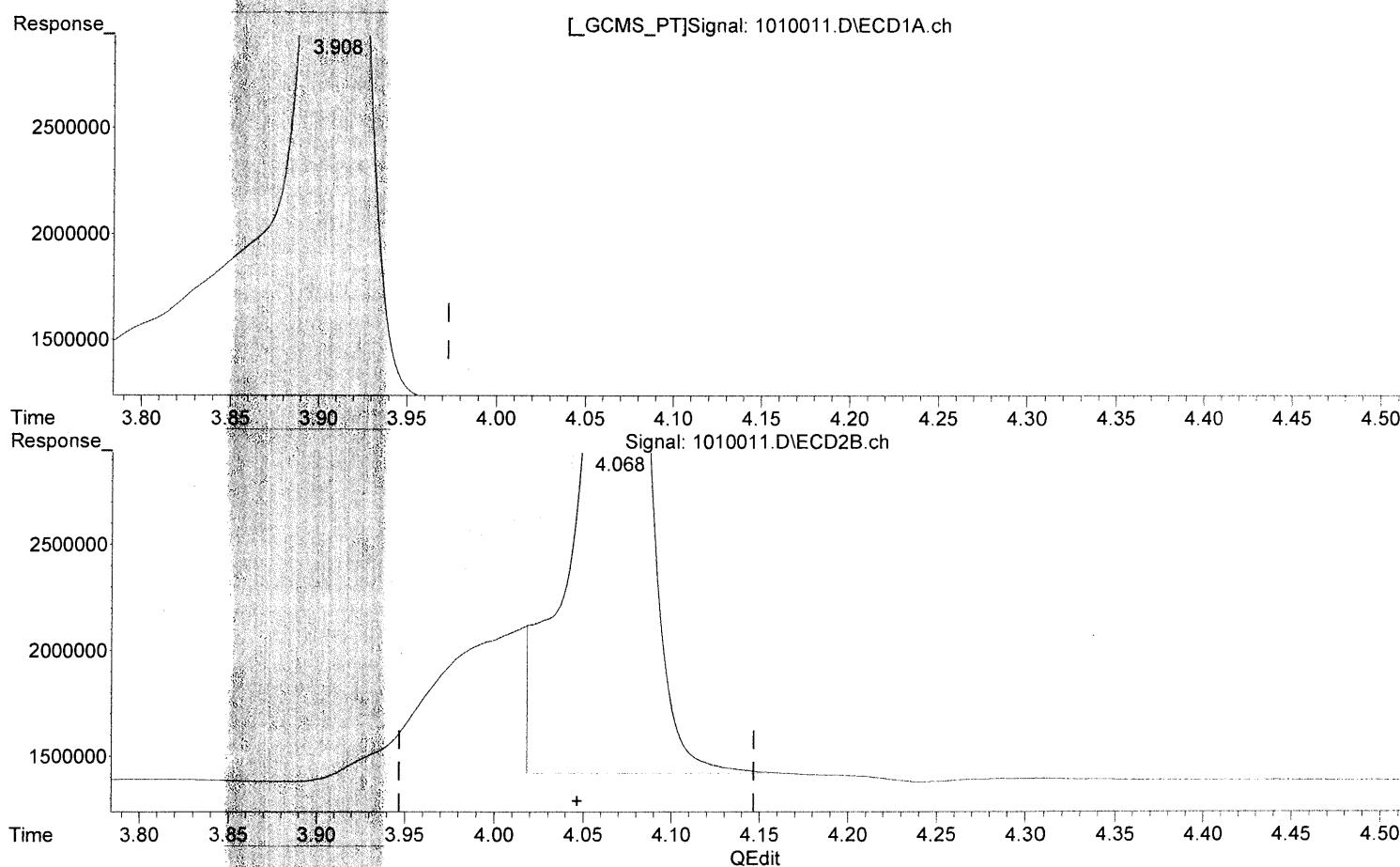
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method: J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12.661 ppb m

response 14751554

Manual Integration:

After

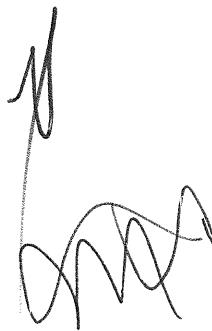
Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 7.160 ppb m

response 9894375



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:18:16 2016

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 19:15:26 Operator: BS
Sample : ICAL ICV 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:41:21 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:19:10 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX^CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.898	4.063	1383314	1094744	1.222m	1.128m
2) M 1,2,3-Triiodopropane	6.243	6.300	227282	242192	1.168	1.096
3) M 1,2-Dibromoethane	7.670	7.878	3199031	2515344	1.111	1.110

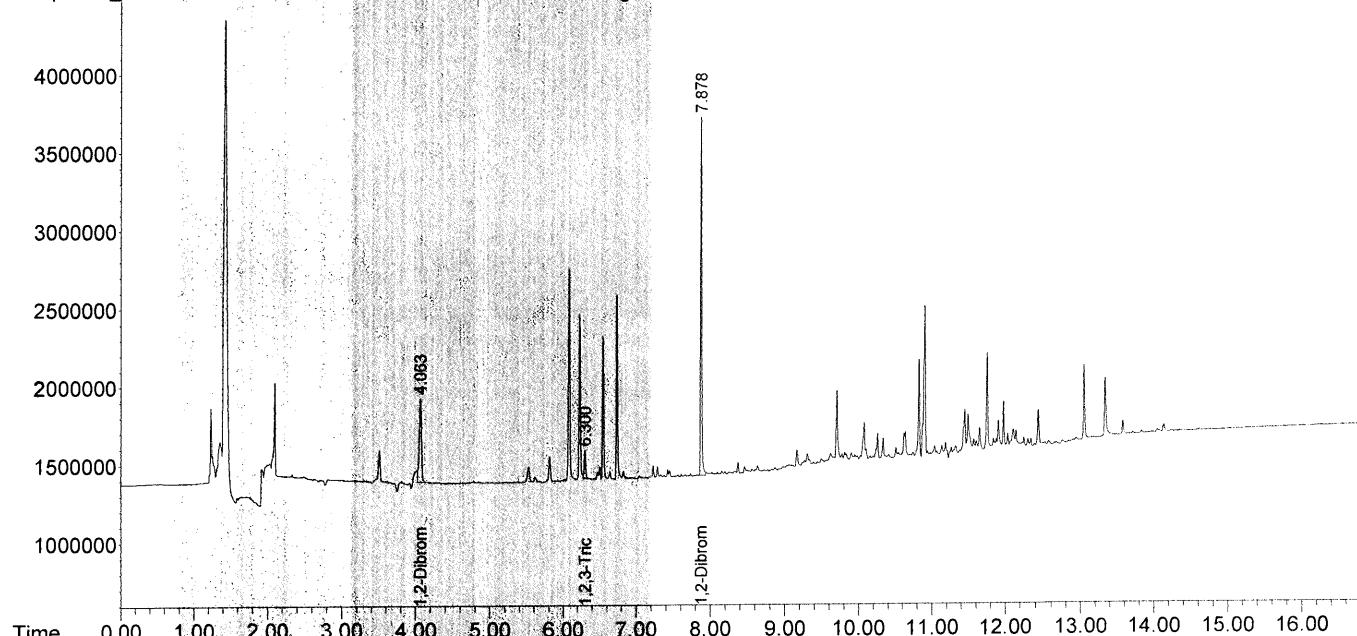
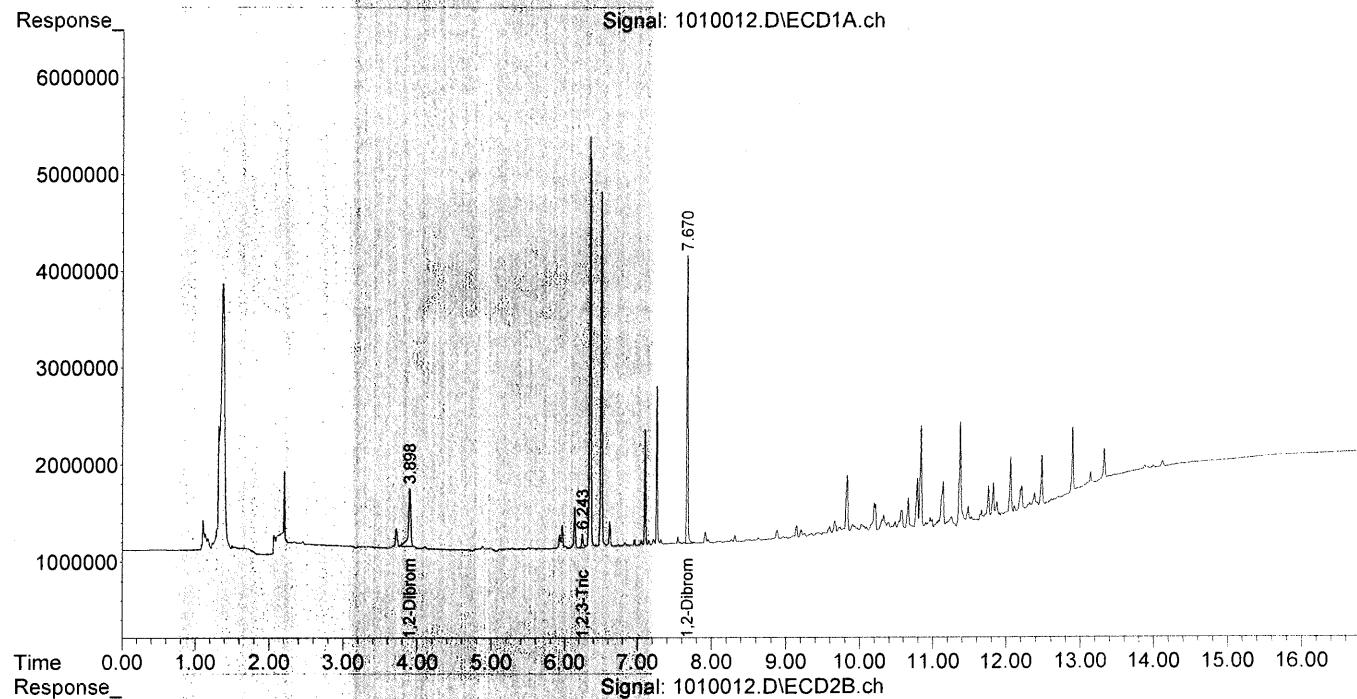
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 19:15:26 Operator: BS
Sample : ICAL ICV 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:41:21 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:19:10 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

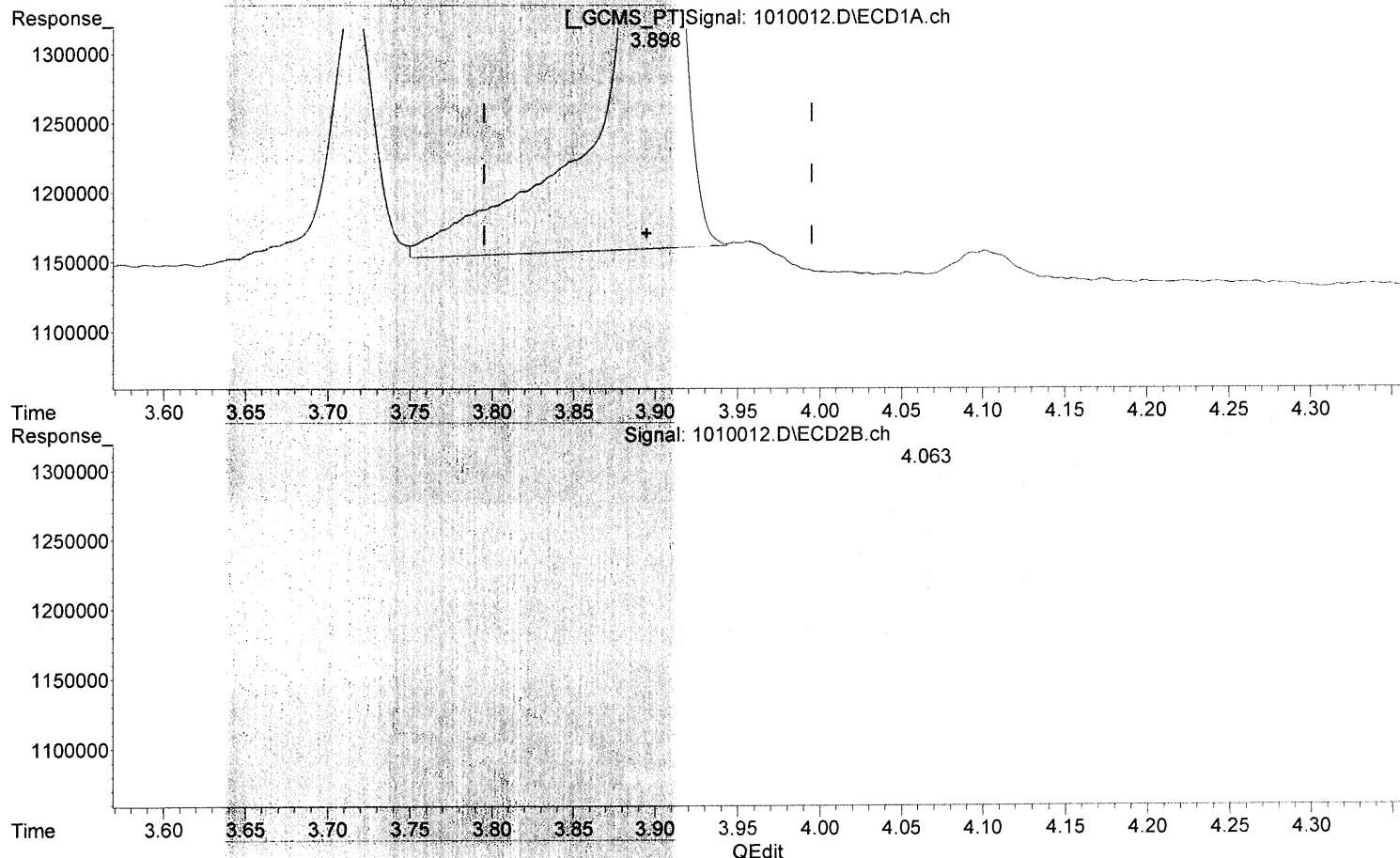


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.253 ppb

response 1419678

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:40:48 2016

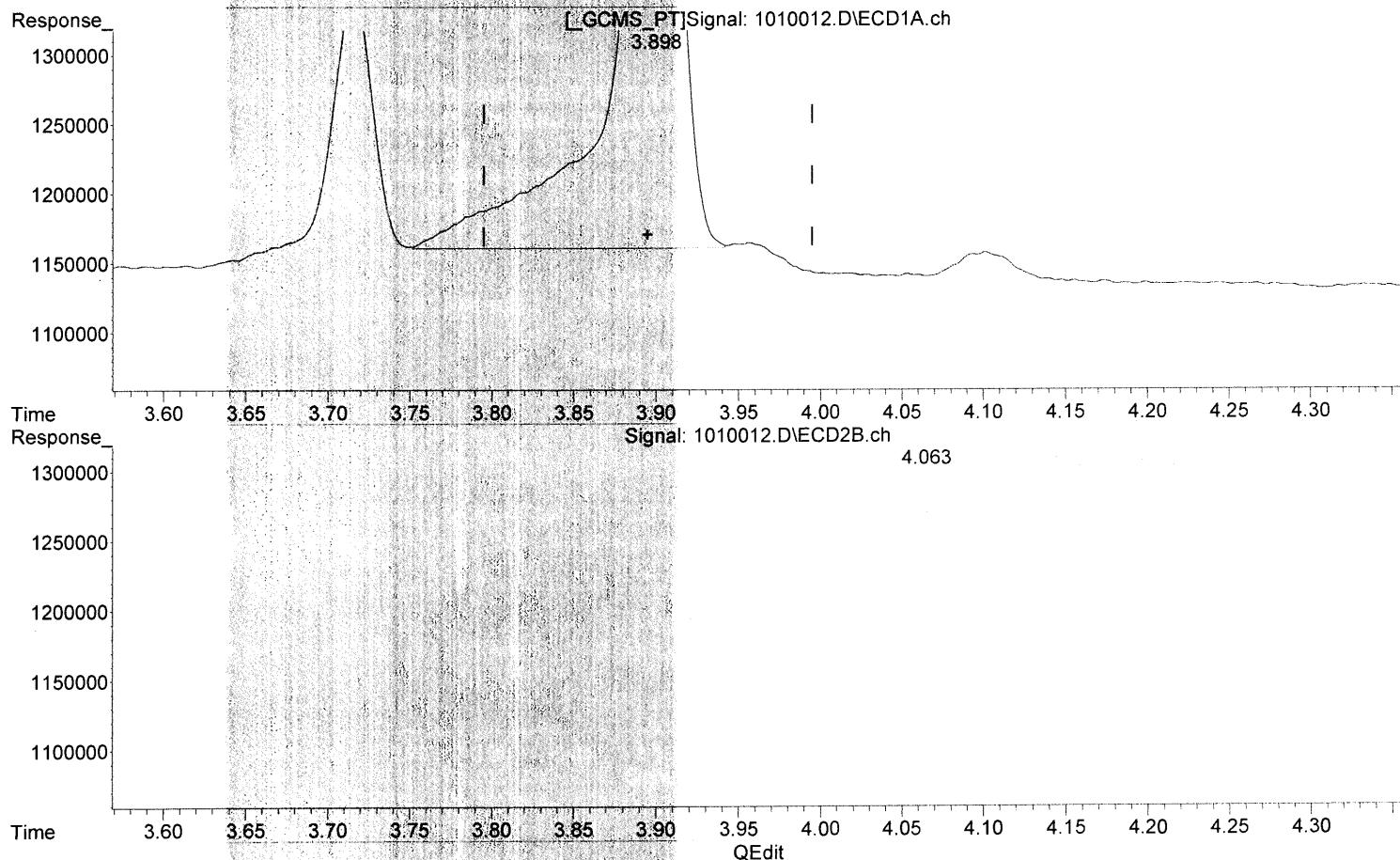
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:41:07 2016

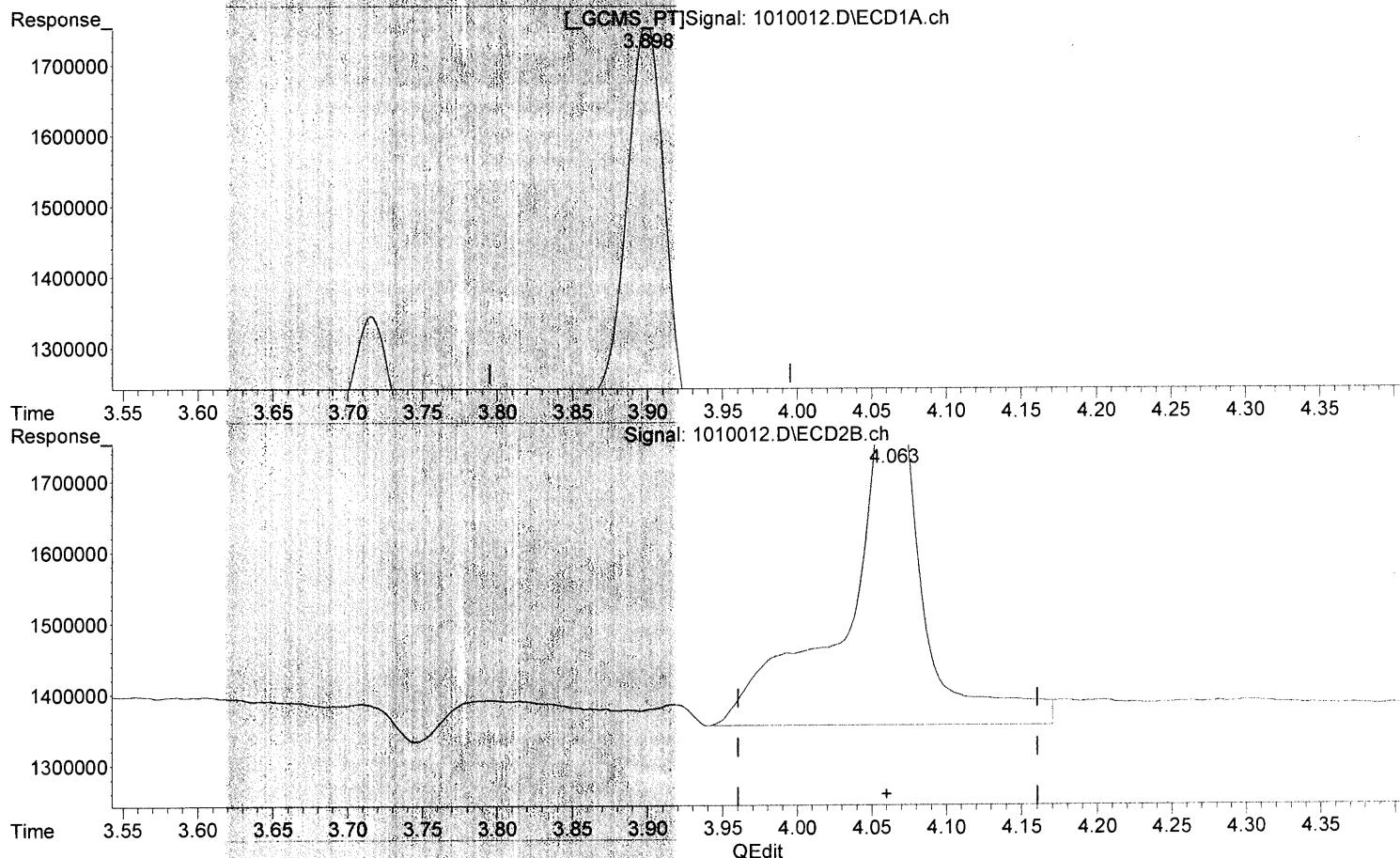
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CALL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

Manual Integration:

Before

10/11/16

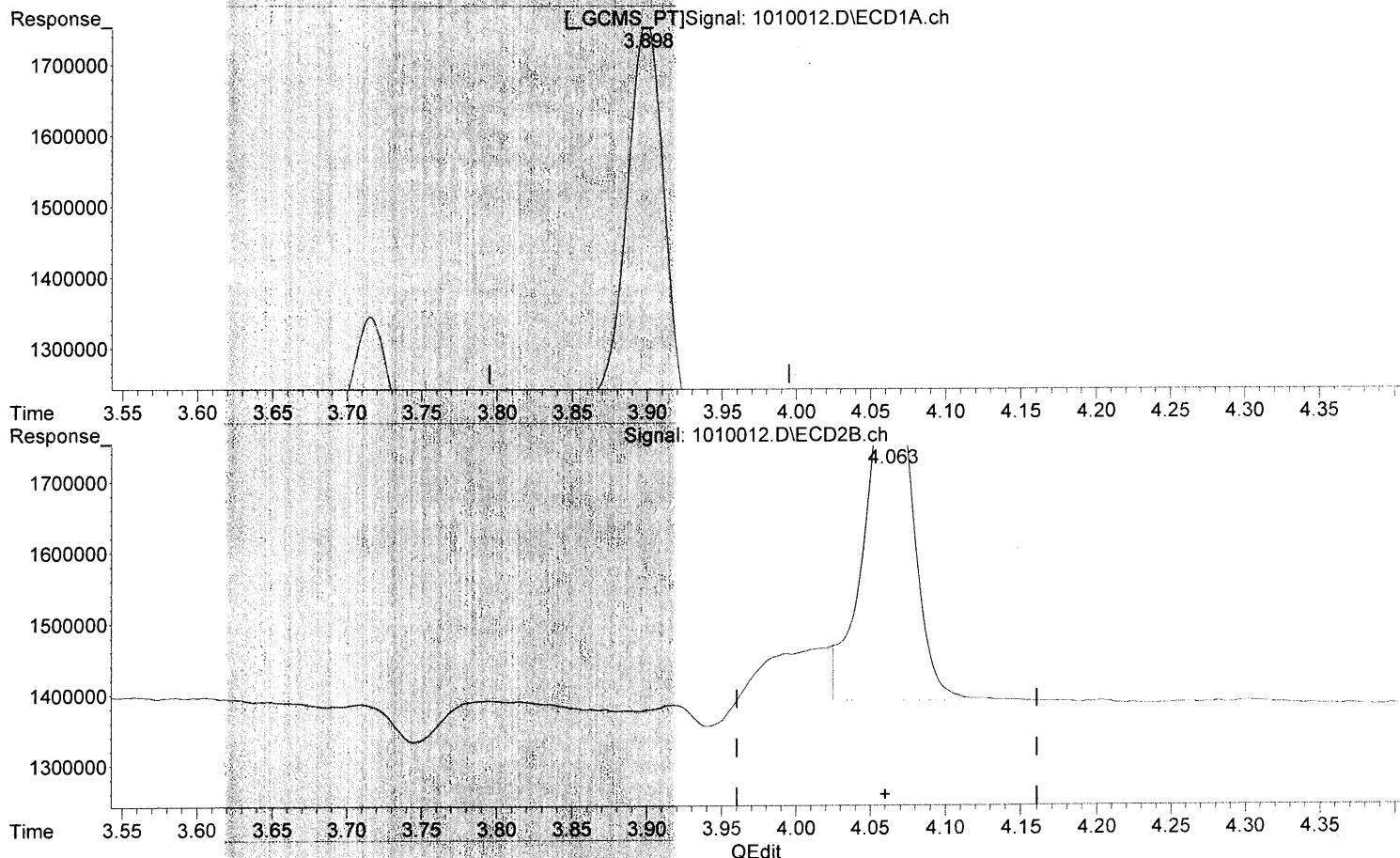


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.128 ppb m

response 1094744

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:41:25 2016

Page: 1

EDB/TCP/DBCP in Water

Serv. Req. IDs:

lcal

Method:

EPA 504.1

BATCH ID: kWG1609129

Comments:

Spike Information		Extract Information	
Matrix Spike ID/Conc:	DWST07-91L 50 ppb	XP 1/27/17	Start Date: 10/10/16
ICV Spike ID/Conc:	DWST07-91H 50 ppb	3/13/17	End Date: 10/10/16
Start / Stop Time:	10:00 13:05		Hexane Lot: OP 775
			NaCl Lot #: 131606
			Balance ID#: E-BALANCE-44
Personnel and Bench Sheet Review			
Started By:	L Muresan	Assisted By:	—
Completed By:	L Muresan	Assisted By:	—
Bench Sheet Reviewed By/Date Reviewed:	 10/11/16		
		Extracts Examined	
		Yes	No

Preparation Information

Group ID:	KWG1609129	Prep Method:	METHOD	Prep Date:	10/10/16 10:00
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1612006-001	16279-GACI	504.1 EDB DBCP 123TCP	WATER	35.6068ml	2ml
K1612006-002	16279-GACE	504.1 EDB DBCP 123TCP	WATER	35.5123ml	2ml
K1612006-003	Trip Blank	504.1 EDB DBCP 123TCP	WATER	35.4477ml	2ml
K1612014-001	PARA SITE 1	504.1 EDB DBCP 123TCP	DRINKING	35.8942ml	2ml
K1612056-001	16272-GACI	504.1 EDB DBCP 123TCP	GROUND	35.5762ml	2ml
K1612056-002	16272-GACE	504.1 EDB DBCP 123TCP	GROUND	35.3232ml	2ml
K1612056-003	Trip Blank	504.1 EDB DBCP 123TCP	WATER	35.3692ml	2ml
K1612057-001	BB63606/GWPWPV09	504.1 EDB DBCP 123TCP	WATER	35.5935ml	2ml
K1612058-001	EL-68	504.1 EDB DBCP 123TCP	WATER	36.6818ml	2ml
K1612058-002	Potholes	504.1 EDB DBCP 123TCP	WATER	36.0507ml	2ml
K1612058-003	Sunrise	504.1 EDB DBCP 123TCP	WATER	35.9323ml	2ml
K1612058-007	Trip Blank	504.1 EDB DBCP 123TCP	WATER	35.8764ml	2ml
KWG1609129-1	Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.4995ml	2ml
KWG1609129-2	Duplicate Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.2273ml	2ml
KWG1609129-3	Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.2645ml	2ml
KWG1609129-4	Duplicate Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.1630ml	2ml
KWG1609129-5	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.0000ml	2ml
KWG1609129-6	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.0000ml	2ml
KWG1609129-7	Method Blank	504.1 EDB DBCP 123TCP	WATER	36.6818ml	2ml

Lab Code	Parent Lab Code	Comments
KWG1609129-1	K1612057-001	
KWG1609129-2	K1612057-001	
KWG1609129-3	K1612058-002	
KWG1609129-4	K1612058-002	

Comments: _____

Started By:	LMuresan	Assisted By:	_____	Training	Yes	No
Completed By:	LMuresan	Assisted By:	_____	Yes	No	
Reviewed By:	_____	Date:	10/10/16	Storage:	_____	_____

Chain of Custody

Relinquished By:	LM	Date:	10/10/16	Extracts Examined	Yes	No
Received By:	ML	Date:	10/10/16	_____	Yes	No

Group ID:	KWG1609129	Prep Method:	METHOD	Prep Date:	10/10/16 10:00
Department:	Semivola GC				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1612006-001	1560600					
K1612006-002	1560601					
K1612006-003	1560602					
K1612014-001	1560603					
K1612056-001	1560604					
K1612056-002	1560605					
K1612056-003	1560606					
K1612057-001	1560607					
K1612058-001	1560608					
K1612058-002	1560609					
K1612058-003	1560599					
K1612058-007	1560852					
KWG1609129-1	1560610					
KWG1609129-2	1560611					
KWG1609129-3	1560612					
KWG1609129-4	1560613					
KWG1609129-5	1560614					
KWG1609129-6	1560615					
KWG1609129-7	1560616					

Comments: _____

Started By:	LMuresan	Assisted By:	_____	Training Yes	Training No
Completed By:	LMuresan	Assisted By:	_____	Yes	No
Reviewed By:	_____	Date:	_____	Storage:	_____

Chain of Custody

Relinquished By:	LM	Date:	10/10/16	Extracts Examined
Received By:	WT	Date:	10/10/16	Yes

EDB/TCP/DBCP in Water

Serv. Req. IDs:

K1612006, 2014, 2056, 2057, 2058

Method: EPA 504.1

Lab Code	#	Comments	Wt. of sample and vial(g)	Wt. of vial (g)	Sample Amount (mL)	Spike Vol.	NaCl added	Final Volume (ml)
K1612006-1	.01		58.9294	23.3226	35.6068	-	7	2
-2	.01		58.6802	23.1679	35.5123	-	7	2
-3	.02		58.7154	23.2677	35.4477	-	7	2
K1612014-1	.09		58.5995	22.7053	35.8942	-	7	2
K1612056-1	.01		58.9622	23.3860	35.5162	-	7	2
-2	.01		58.7733	23.4501	35.3232	-	7	2
-3	.01		58.7094	23.3402	35.3692	-	7	2
K1612057-1	.05	light sediment	58.9974	23.4039	35.5935	-	7	2
K1612058-1	.23		59.4541	22.7723	36.6818	-	7	2
-2*	.49	algae	58.7034	22.6527	36.0509	-	7	2
-3*	.49	algae	57.9857	22.6534	35.9323	-	7	2
K1612057-1 MS	.06	light sediment	59.0069	22.5074	36.4995	175	7	2
-1 DM5	.07	—	58.7239	22.4966	36.2273	175	7	2
K1612058-2 MS*	.50	algae	58.4936	22.2291	36.2645	175	7	2

BATCH ID: kwf-1609129

#272882

Comments: * after extraction samples formed an emulsion -> set them on centrifuge for 5' to achieve solvent layer separation

Spike Information

Matrix Spike ID/Conc:

DWSTD 07-91 L Sop9b

XP

1/27/17

DWSTD 07-91 H Sop9b

3/13/17

Start / Stop Time:

10:00 13:05

Extract Information

Start Date:

10/10/16

End Date:

10/10/16

Hexane Lot #

0P775

NaCl Lot #

131606

Balance ID#

K-13A1ANCE-44

Personnel and Bench Sheet Review

Started By:

LMunesan

Completed By:

LMunesan

Assisted By:

Assisted By:

Bench Sheet Reviewed By/Date Reviewed:

10/11/09

Extracts Examined

Yes

No

EDB/TCP/DBCP in Water

Serv. Req. IDs:

2006, 2014, 2056, 2057, 2058

Method: EPA 504.1

BATCH ID: kwGf609129

Comments:

ments: ~~the~~ sample formed an emulsion after extraction \rightarrow set on centrifuge for 5' to achieve solvent layer separation

Personnel and Bench Sheet Review

Started By:

L Muregan
L Muregan

Completed By:

Assisted By:

Assisted By:

Bench Sheet Reviewed By/Date Reviewed:

Extracts Examined

Yes No

Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
No	1	Vial	94	504-1 PRIMER MeOH	1010001	F:01:01
No	2	Vial	95	504-1 PRIMER Hexane	1010002	F:02:01
No	3	Vial	1	504-1 ICAL BLANK	1010003	F:03:01
No	4	Vial	2	504-1 ICAL LV1 101016	1010004	F:04:01
No	5	Vial	3	504-1 ICAL LV2 101016	1010005	F:05:01
No	6	Vial	4	504-1 ICAL LV3 101016	1010006	F:06:01
No	7	Vial	5	504-1 ICAL LV4 101016	1010007	F:07:01
No	8	Vial	6	504-1 ICAL LV5 101016	1010008	F:08:01
No	9	Vial	7	504-1 ICAL LV6 101016	1010009	F:09:01
No	10	Vial	8	504-1 ICAL LV7 101016	1010010	F:10:01
No	11	Vial	9	504-1 ICAL LV8 101016	1010011	F:11:01
No	12	Vial	10	504-1 ICAL ICV 101016	1010012	F:12:01
No	13	Vial	6	504-1 101016 LV5	1010013	F:13:01
No	14	Vial	1	504-1 IB	1010014	F:14:01
No	15	Vial	11	504-1 KWG1609129-5LCS	1010015	F:15:01
No	16	Vial	12	504-1 KWG1609129-6LCS	1010016	F:16:01
No	17	Vial	13	504-1 KWG1609129-7MB	1010017	F:17:01
No	18	Vial	14	504-1 K1612006-001	1010018	F:18:01
No	19	Vial	15	504-1 K1612006-002	1010019	F:19:01
No	20	Vial	16	504-1 K1612006-003	1010020	F:20:01
No	21	Vial	17	504-1 K1612014-001	1010021	F:21:01
No	22	Vial	18	504-1 K1612056-001	1010022	F:22:01
No	23	Vial	19	504-1 K1612056-002	1010023	F:23:01
No	24	Vial	20	504-1 K1612056-003	1010024	F:24:01
No	25	Vial	7	504-1 101016 504 LV6	1010025	F:25:01
No	26	Vial	1	504-1 IB	1010026	F:26:01
No	27	Vial	21	504-1 K1612057-001	1010027	F:27:01
No	28	Vial	22	504-1 K1612057-001MS	1010028	F:28:01

*Run# 517961**Opn 14943**KWG1609198*

Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	29	Vial 23	504-1 K1612057-001DMS	1010029		F:29:01
No	30	Vial 24	504-1 K1612058-001	1010030		F:30:01
No	31	Vial 25	504-1 K1612058-002	1010031		F:31:01
No	32	Vial 26	504-1 K1612058-002MS	1010032		F:32:01
No	33	Vial 27	504-1 K1612058-002DMS	1010033		F:33:01
No	34	Vial 28	504-1 K1612058-003	1010034		F:34:01
No	35	Vial 29	504-1 K1612058-007	1010035		F:35:01
No	36	Vial 7	504-1 101016 504 LV6	1010036		F:36:01
No	37	Vial 100	504-1 IB	1010037		F:37:01
No	38	Vial 35	504-1 ICAL LV1 3511	1010038		F:38:01
No	39	Vial 36	504-1 ICAL LV2 3511	1010039		F:39:01
No	40	Vial 37	504-1 ICAL LV3 3511	1010040		F:40:01
No	41	Vial 38	504-1 ICAL LV4 3511	1010041		F:41:01
No	42	Vial 39	504-1 ICAL LV5 3511	1010042		F:42:01
No	43	Vial 40	504-1 ICAL LV6 3511	1010043		F:43:01
No	44	Vial 41	504-1 ICAL LV7 3511	1010044		F:44:01
No	45	Vial 42	504-1 ICAL LV8 3511	1010045		F:45:01
No	46	Vial 43	504-1 ICAL ICV 3511	1010046		F:46:01
No	47	Vial 39	504-1 ICAL LV5 3511	1010047		F:47:01
No	48	Vial 100	504-1 IB	1010048		F:48:01
No	49	Vial 44	504-1 KWG1609130-1IPR	1010049		F:49:01
No	50	Vial 45	504-1 KWG1609130-2IPR	1010050		F:50:01
No	51	Vial 46	504-1 KWG1609130-3IPR	1010051		F:51:01
No	52	Vial 47	504-1 KWG1609130-4IPR	1010052		F:52:01
No	53	Vial 48	504-1 KWG1609130-5MB	1010053		F:53:01
No	54	Vial 40	504-1 ICAL LV6 3511	1010054		F:54:01
No	55	Vial 100	504-1 IB	1010055		F:55:01



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November 15, 2016

Analytical Report for Service Request No: K1613584

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory November 04, 2016
For your reference, these analyses have been assigned our service request number **K1613584**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink that reads "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



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Table of Contents

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 - EPA Method 504.1

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.alsglobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialist **Service Request No.:** K1613584
Project: Drexel **Date Received:** 11/04/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

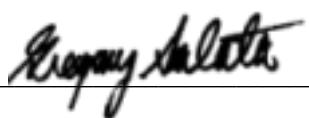
Sample Receipt

Three water samples were received for analysis at ALS Environmental on 11/04/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB by EPA Method 504.1

No anomalies associated with the analysis of these samples were observed.

Approved by





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

K1613584

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

DATE 11/03/16

PAGE 1

OF 1

PROJECT NAME <u>Drexel</u> PROJECT MANAGER <u>Timmerly Bullman</u> COMPANY NAME <u>EPS Inc.</u> ADDRESS <u>1050 Crown Pointe Pkwy Ste. 550</u> <u>Atlanta, GA 30338</u> <u>tbullman@envplanning.com</u> PHONE <u>404-315-9113</u> SAMPLERS SIGNATURE _____					NUMBER OF CONTAINERS	ANALYSIS REQUESTED																			
SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX		EDB (method/Soil)																			
16309GACI	11/03/16	11:15AM	GW(2)		X																				
16309GACE	11/03/16	11:20AM	GW(2)		X																				
Trip Blank	3/16/16		W(2)		X																				
REPORT REQUIREMENTS					INVOICE INFORMATION P.O. # _____ Bill To: _____		Circle which metals are to be analyzed: Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg																		
I. Routine Report: Method Blank, Surrogate, as required II. Report Dup., MS, MSD as required III. CLP Like Summary (no raw data) IV. Data Validation Report V. EDD					TURNAROUND REQUIREMENTS 24 hr. _____ 48 hr. _____ 5 day _____ <input checked="" type="checkbox"/> Standard (10-15 working days) Provide Verbal Preliminary Results Provide FAX preliminary Results Requested Report Date _____		*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)																		
RELINQUISHED BY: <u>Terrence Walker</u> Signature <u>Terrence Walker</u> Printed Name					RECEIVED BY: <u>Caren Synder</u> Signature <u>C-Snyder</u> Printed Name		RELINQUISHED BY: Signature _____ Date/Time _____		RECEIVED BY: Signature _____ Date/Time _____																



PC GS

Cooler Receipt and Preservation Form

Client EPS

Service Request K16 13584

Received: 11-4-16 Opened: 11-4-16 By: EG Unloaded: 11-4-16 By: EG

1. Samples were received via? USPS FedEx UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other _____ NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1-front
- If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected, Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
-0.1	-0.3	4.1	3.9	-0.2	371	NA	7776 2703 1664		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves NA Y N
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below.
If applicable, tissue samples were received: Frozen Partially Thawed Thawed NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Votes, Discrepancies, & Resolutions: _____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client:
Project:

Environmental Planning Specialists
Drexel

Service Request: K1613584

**Cover Page - Organic Analysis Data Package
EPA Method 504.1**

Sample Name	Lab Code	Date Collected	Date Received
16309GACI	K1613584-001	11/03/2016	11/04/2016
16309GACE	K1613584-002	11/03/2016	11/04/2016
Trip Blank	K1613584-003	11/03/2016	11/04/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Collected: 11/03/2016
Date Received: 11/04/2016

EPA Method 504.1

Sample Name: 16309GACI **Units:** ug/L
Lab Code: K1613584-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.21		0.0099	0.00300	1	11/07/16	11/08/16	KWG1610135	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Collected: 11/03/2016
Date Received: 11/04/2016

EPA Method 504.1

Sample Name: 16309GACE **Units:** ug/L
Lab Code: K1613584-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0099	0.00300	1	11/07/16	11/08/16	KWG1610135	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Collected: 11/03/2016
Date Received: 11/04/2016

EPA Method 504.1

Sample Name: Trip Blank **Units:** ug/L
Lab Code: K1613584-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0099	0.00300	1	11/07/16	11/08/16	KWG1610135	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1610135-5 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	0.00300	1	11/07/16	11/08/16	KWG1610135	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Drinking water

Service Request: K1613584
Date Extracted: 11/07/2016
Date Analyzed: 11/07/2016

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	K1612916-001	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1610135

Analyte Name	Sample Result	Batch QCMS KWG1610135-1 Matrix Spike			Batch QCDMS KWG1610135-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
1,2-Dibromoethane (EDB)	ND	0.242	0.247	98	0.233	0.248	94	65-135	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Extracted: 11/07/2016
Date Analyzed: 11/08/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1610135

Lab Control Sample

KWG1610135-3

Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec Limits
		Amount		
1,2-Dibromoethane (EDB)	0.207	0.250	83	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Extracted: 11/07/2016
Date Analyzed: 11/08/2016

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1610135

Lab Control Sample

KWG1610135-4

Lab Control Spike

Analyte Name	Result	Spike	%Rec	%Rec Limits
		Amount		
1,2-Dibromoethane (EDB)	0.219	0.250	88	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Extracted: 11/07/2016
Date Analyzed: 11/08/2016
Time Analyzed: 02:32

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1610135-5	File ID:	J:\GC33\DATA\110716-504\1107000235.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1610135

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QC	K1612916-001	J:\GC33\DATA\110716-504\1107000215.D	11/07/16	18:38
Batch QCMS	KWG1610135-1	J:\GC33\DATA\110716-504\1107000216.D	11/07/16	19:02
Batch QCDMS	KWG1610135-2	J:\GC33\DATA\110716-504\1107000217.D	11/07/16	19:26
16309GACI	K1613584-001	J:\GC33\DATA\110716-504\1107000230.D	11/08/16	00:33
16309GACE	K1613584-002	J:\GC33\DATA\110716-504\1107000231.D	11/08/16	00:57
Trip Blank	K1613584-003	J:\GC33\DATA\110716-504\1107000232.D	11/08/16	01:21
Lab Control Sample	KWG1610135-3	J:\GC33\DATA\110716-504\1107000233.D	11/08/16	01:44
Lab Control Sample	KWG1610135-4	J:\GC33\DATA\110716-504\1107000234.D	11/08/16	02:08

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Extracted: 11/07/2016
Date Analyzed: 11/08/2016
Time Analyzed: 01:44

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1610135-3	File ID:	J:\GC33\DATA\110716-504\1107000233.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1610135

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QC	K1612916-001	J:\GC33\DATA\110716-504\1107000215.D	11/07/16	18:38
Batch QCMS	KWG1610135-1	J:\GC33\DATA\110716-504\1107000216.D	11/07/16	19:02
Batch QCDMS	KWG1610135-2	J:\GC33\DATA\110716-504\1107000217.D	11/07/16	19:26

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Extracted: 11/07/2016
Date Analyzed: 11/08/2016
Time Analyzed: 02:08

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1610135-4	File ID:	J:\GC33\DATA\110716-504\1107000234.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1610135

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
16309GACI	K1613584-001	J:\GC33\DATA\110716-504\1107000230.D	11/08/16	00:33
16309GACE	K1613584-002	J:\GC33\DATA\110716-504\1107000231.D	11/08/16	00:57
Trip Blank	K1613584-003	J:\GC33\DATA\110716-504\1107000232.D	11/08/16	01:21
Method Blank	KWG1610135-5	J:\GC33\DATA\110716-504\1107000235.D	11/08/16	02:32

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D	F	J:\GC33\DATA\101016-504\1010009.D
B	J:\GC33\DATA\101016-504\1010005.D	G	J:\GC33\DATA\101016-504\1010010.D
C	J:\GC33\DATA\101016-504\1010006.D	H	J:\GC33\DATA\101016-504\1010011.D
D	J:\GC33\DATA\101016-504\1010007.D		
E	J:\GC33\DATA\101016-504\1010008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	7.68E+5	B	0.13	8.48E+5	C	0.25	9.56E+5	D	0.63	1.27E+6	E	1.3	1.12E+6
	F	3.8	1.32E+6	G	5.0	1.20E+6	H	10	1.48E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Result	Q	
1,2-Dibromoethane (EDB)	MS	Quadratic	COD	0.998	≥ 0.99	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1613584
Project: Drexel **Calibration Date:** 10/10/2016
 Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14943
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\DATA\101016-504\1010012.D **Column ID:** RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1120000	1110000	NA	-2	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D\1010004c.d	F	J:\GC33\DATA\101016-504\1010009.D\1010009c.d
B	J:\GC33\DATA\101016-504\1010005.D\1010005c.d	G	J:\GC33\DATA\101016-504\1010010.D\1010010c.d
C	J:\GC33\DATA\101016-504\1010006.D\1010006c.d	H	J:\GC33\DATA\101016-504\1010011.D\1010011c.d
D	J:\GC33\DATA\101016-504\1010007.D\1010007c.d		
E	J:\GC33\DATA\101016-504\1010008.D\1010008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	8.73E+5	B	0.13	9.71E+5	C	0.25	1.05E+6	D	0.63	1.09E+6	E	1.3	9.01E+5
	F	3.8	9.65E+5	G	5.0	9.21E+5	H	10	9.89E+5						

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Result	Q	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	7.6	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1613584
Project: Drexel **Calibration Date:** 10/10/2016
 Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14943
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\DATA\101016-504\1010012.D\1010012c.d **Column ID:** RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	970000	876000	-10	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Date Analyzed: 11/07/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\110716-504\1107000213.D	Analysis Lot:	KWG1610188
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1120000	1210000	NA	7	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Date Analyzed: 11/07/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1610188
		Units:	ppb
File ID:	J:\GC33\DATA\110716-504\1107000213.D\1107000213C.	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	970000	989000	2	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Date Analyzed: 11/07/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\110716-504\1107000225.D	Analysis Lot:	KWG1610188
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.0	1120000	1260000	NA	-1	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Date Analyzed: 11/07/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1610188
		Units:	ppb
File ID:	J:\GC33\DATA\110716-504\1107000225.D\1107000225.C.	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.6	970000	897000	-8	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Date Analyzed: 11/08/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\110716-504\1107000236.D	Analysis Lot:	KWG1610188
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	1120000	1250000	NA	10	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584
Date Analyzed: 11/08/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1610188
		Units:	ppb
File ID:	J:\GC33\DATA\110716-504\1107000236.D\1107000236C.	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	970000	975000	1	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1610188
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
07000213.D	Continuing Calibration Verification	KWG1610188-1	11/7/2016	17:51		11/7/2016	18:08
07000214.D	Instrument Blank	KWG1610188-5	11/7/2016	18:15		11/7/2016	18:32
07000215.D	Batch QC	K1612916-001	11/7/2016	18:38		11/7/2016	18:55
07000216.D	Batch QCMS	KWG1610135-1	11/7/2016	19:02		11/7/2016	19:19
07000217.D	Batch QCDMS	KWG1610135-2	11/7/2016	19:26		11/7/2016	19:43
07000218.D	ZZZZZZ	ZZZZZZ	11/7/2016	19:49		11/7/2016	20:06
07000219.D	ZZZZZZ	ZZZZZZ	11/7/2016	20:13		11/7/2016	20:30
07000220.D	ZZZZZZ	ZZZZZZ	11/7/2016	20:37		11/7/2016	20:54
07000221.D	ZZZZZZ	ZZZZZZ	11/7/2016	21:00		11/7/2016	21:17
07000222.D	ZZZZZZ	ZZZZZZ	11/7/2016	21:24		11/7/2016	21:41
07000223.D	ZZZZZZ	ZZZZZZ	11/7/2016	21:48		11/7/2016	22:04
07000224.D	ZZZZZZ	ZZZZZZ	11/7/2016	22:11		11/7/2016	22:28
07000225.D	Continuing Calibration Verification	KWG1610188-2	11/7/2016	22:35		11/7/2016	22:52
07000226.D	Instrument Blank	KWG1610188-6	11/7/2016	22:59		11/7/2016	23:15
07000227.D	ZZZZZZ	ZZZZZZ	11/7/2016	23:22		11/7/2016	23:39
07000228.D	ZZZZZZ	ZZZZZZ	11/7/2016	23:46		11/8/2016	00:03
07000229.D	ZZZZZZ	ZZZZZZ	11/8/2016	00:10		11/8/2016	00:26
07000230.D	16309GACI	K1613584-001	11/8/2016	00:33		11/8/2016	00:50
07000231.D	16309GACE	K1613584-002	11/8/2016	00:57		11/8/2016	01:14
07000232.D	Trip Blank	K1613584-003	11/8/2016	01:21		11/8/2016	01:38
07000233.D	Lab Control Sample	KWG1610135-3	11/8/2016	01:44		11/8/2016	02:01
07000234.D	Lab Control Sample	KWG1610135-4	11/8/2016	02:08		11/8/2016	02:25
07000235.D	Method Blank	KWG1610135-5	11/8/2016	02:32		11/8/2016	02:49
07000236.D	Continuing Calibration Verification	KWG1610188-3	11/8/2016	02:55		11/8/2016	03:12
07000237.D	Instrument Blank	KWG1610188-7	11/8/2016	03:19		11/8/2016	03:36
07000238.D	ZZZZZZ	ZZZZZZ	11/8/2016	03:43		11/8/2016	04:00
07000239.D	ZZZZZZ	ZZZZZZ	11/8/2016	04:06		11/8/2016	04:23
07000240.D	ZZZZZZ	ZZZZZZ	11/8/2016	04:30		11/8/2016	04:47
07000241.D	ZZZZZZ	ZZZZZZ	11/8/2016	04:54		11/8/2016	05:11
07000242.D	ZZZZZZ	ZZZZZZ	11/8/2016	05:17		11/8/2016	05:34
07000243.D	ZZZZZZ	ZZZZZZ	11/8/2016	05:41		11/8/2016	05:58
07000244.D	ZZZZZZ	ZZZZZZ	11/8/2016	06:05		11/8/2016	06:22
07000245.D	ZZZZZZ	ZZZZZZ	11/8/2016	06:28		11/8/2016	06:36
07000246.D	ZZZZZZ	ZZZZZZ	11/8/2016	06:52		11/8/2016	07:09
07000247.D	ZZZZZZ	ZZZZZZ	11/8/2016	07:16		11/8/2016	07:33

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1613584

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1610188

Instrument ID: GC33

Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
07000248.D	ZZZZZZ	ZZZZZZ	11/8/2016	07:39		11/8/2016	07:56
07000249.D	ZZZZZZ	ZZZZZZ	11/8/2016	08:03		11/8/2016	08:20
07000250.D	Continuing Calibration Verification	KWG1610188-4	11/8/2016	08:27		11/8/2016	08:44
07000251.D	Instrument Blank	KWG1610188-8	11/8/2016	08:50		11/8/2016	09:07

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Extracted: 11/07/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1610135
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16309GACI	K1613584-001	11/03/16	11/04/16	35.3154ml	2ml	NA	
16309GACE	K1613584-002	11/03/16	11/04/16	35.3558ml	2ml	NA	
Trip Blank	K1613584-003	11/03/16	11/04/16	35.2190ml	2ml	NA	
Method Blank	KWG1610135-5	NA	NA	36.2402ml	2ml	NA	
Batch QC	K1612916-001	NA	NA	35.2239ml	2ml	NA	
Batch QCMS	KWG1610135-1	NA	NA	35.4908ml	2ml	NA	
Batch QCDMS	KWG1610135-2	NA	NA	35.3512ml	2ml	NA	
Lab Control Sample	KWG1610135-3	NA	NA	35.0000ml	2ml	NA	
Lab Control Sample	KWG1610135-4	NA	NA	35.0000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1613584
Date Collected: 11/03/2016
Date Received: 11/04/2016
Date Extracted: 11/07/2016

EPA Method 504.1

Sample Name:	16309GACI	Units:	ug/L
Lab Code:	K1613584-001	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0099	0.00300	0.21	0.22	4.7		1	11/08/16



Raw Data

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EPA Method 504.1

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www.alsglobal.com

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000230.D
Lab ID: K1613584-001
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2016 00:33
Date Quantitated: 11/08/2016 07:43
Batch ID: KWG1610188
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000230.D\1107000230C.
Lab ID: K1613584-001
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2016 00:33
Date Quantitated: 11/08/2016 07:43
Batch ID: KWG1610188
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000230.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000230.D\1107000230c.d	Vial:	24
Acq Date:	11/08/2016 00:33	Quant Date:	11/08/2016 07:43
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1613584-001	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	11/03/2016
Analysis Lot:	KWG1610188	Prep Lot:	KWG1610135
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1568861	Prep Date:	11/07/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\110716-504\1107000235.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L	ug/L	
1,2-Dibromoethane (EDB)	3.89 ^{-0.01}	4.04	4811492m	3555181m	3.91	3.66	0.22	0.21	0.21
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.3154 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000230.D Vial: 24
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 00:33:38 Operator: SMS
 Sample : K1613584-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:43:24 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

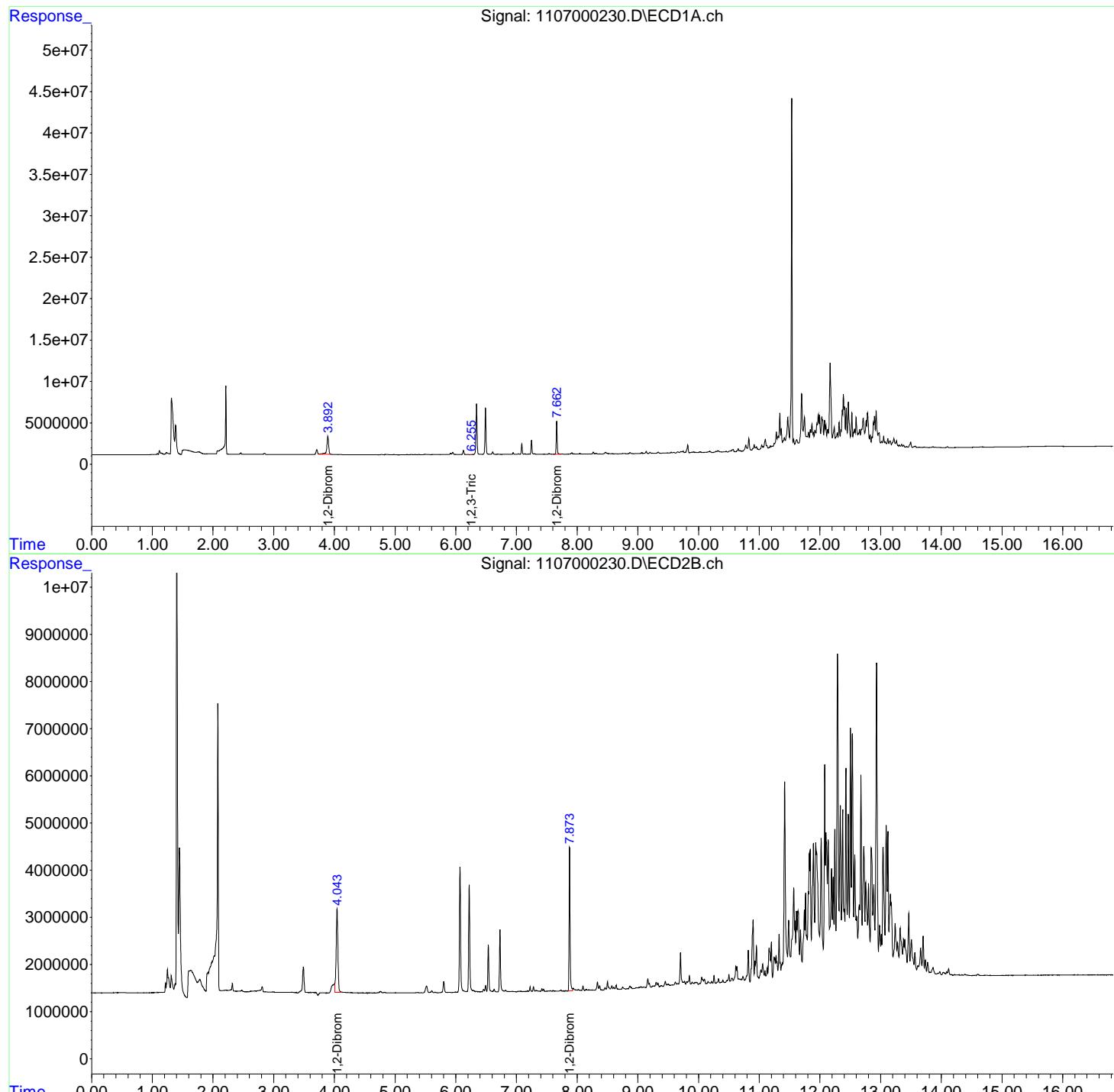
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.892	4.043	4811492	3555181	3.911m	3.664m
2) M 1,2,3-Tri...	6.255	0.000	53078	0	0.364	N.D. #
3) M 1,2-Dibro...	7.662	7.873	4228912	3343263	1.469	1.476

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000230.D Vial: 24
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 00:33:38 Operator: SMS
 Sample : K1613584-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:43:24 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

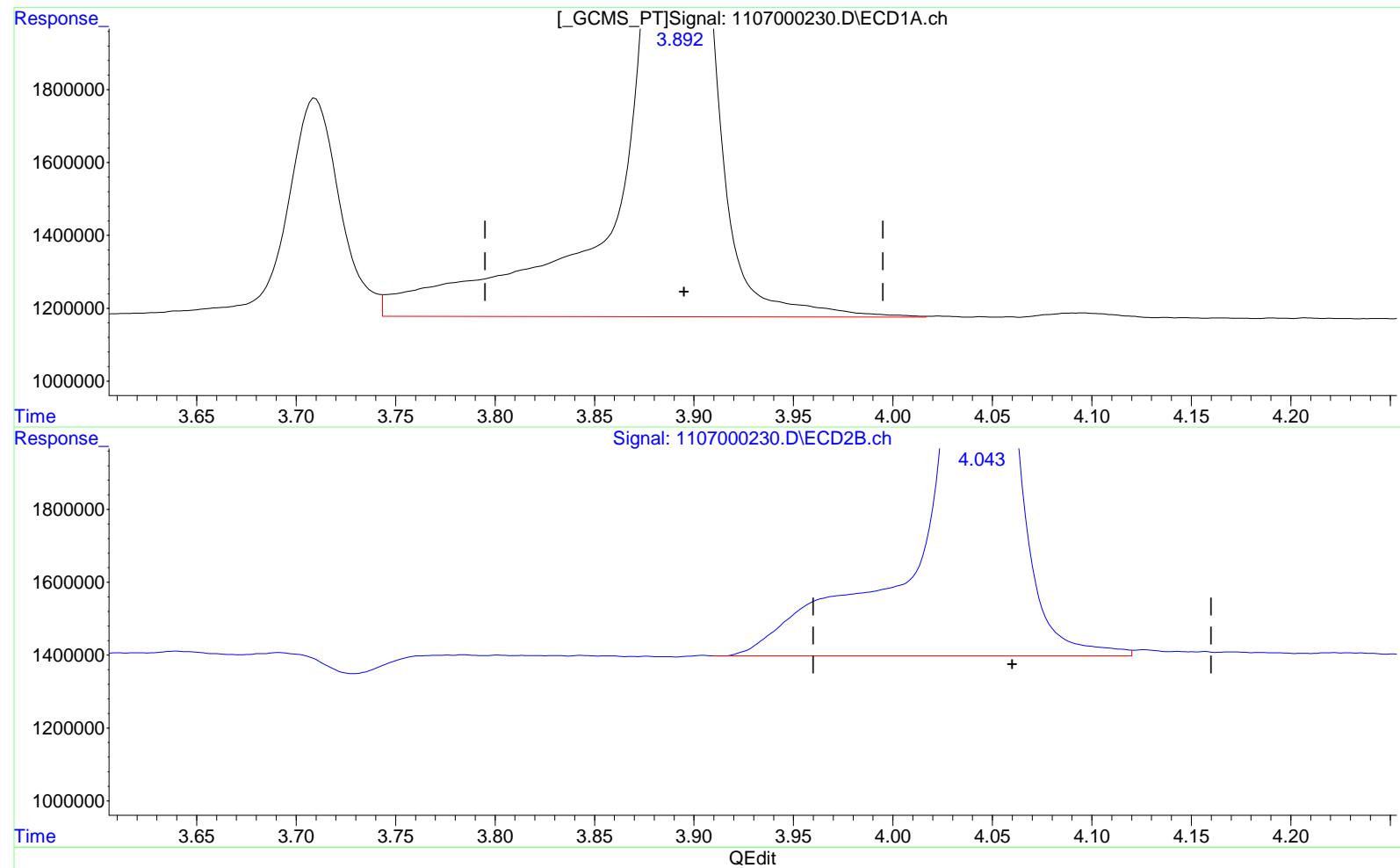
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000230.D Vial: 24
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 00:33:38 Operator: SMS
 Sample : K1613584-001 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:44 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 4.222 ppb

response 5244536

Manual Integration:

Before

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

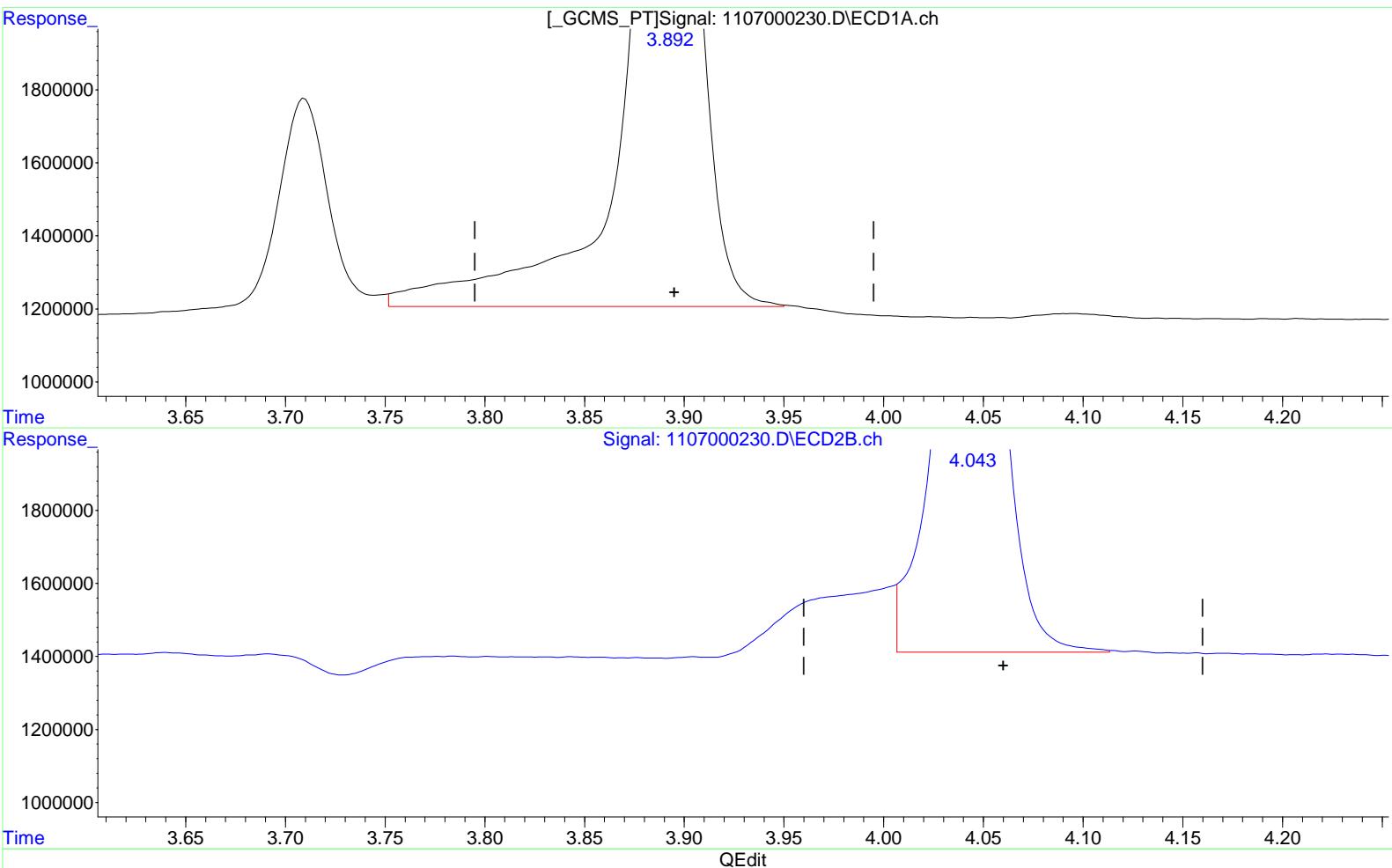
4.043min 4.454 ppb

response 4321581

Data File : J:\GC33\DATA\110716-504\1107000230.D Vial: 24
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 00:33:38 Operator: SMS
 Sample : K1613584-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:44 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.892min 3.911 ppb m
 response 4811492

Manual Integration:
 After
 Baseline/Shoulder
 11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.043min 3.664 ppb m
 response 3555181

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000231.D
Lab ID: K1613584-002
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2016 00:57
Date Quantitated: 11/08/2016 07:44
Batch ID: KWG1610188
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000231.D\1107000231.C.
Lab ID: K1613584-002
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2016 00:57
Date Quantitated: 11/08/2016 07:44
Batch ID: KWG1610188
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000231.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000231.D\1107000231.c.d	Vial:	25
Acq Date:	11/08/2016 00:57	Quant Date:	11/08/2016 07:44
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1613584-002	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	IV	Matrix:	WATER
Prod Code:	504.1 EDB DBCP	Collect Date:	11/03/2016	Receive Date: 11/04/2016

Analysis Lot:	KWG1610188	Prep Lot:	KWG1610135	Report Group:	K1613584
Analysis Method:	504.1	Prep Method:	METHOD		
Prep Ref:	1568862	Prep Date:	11/07/2016		

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\110716-504\1107000235.D	Method ID:	MJ480
Quant based on Report List			

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units: ug/L				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			0d	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.3558 ml	Dilution:	1.0						
Prep Final Vol:	2 ml	Unit Factor:	1						

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000231.D Vial: 25
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Nov-2016, 00:57:23 Operator: SMS
Sample : K1613584-002 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Nov 08 07:44:07 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

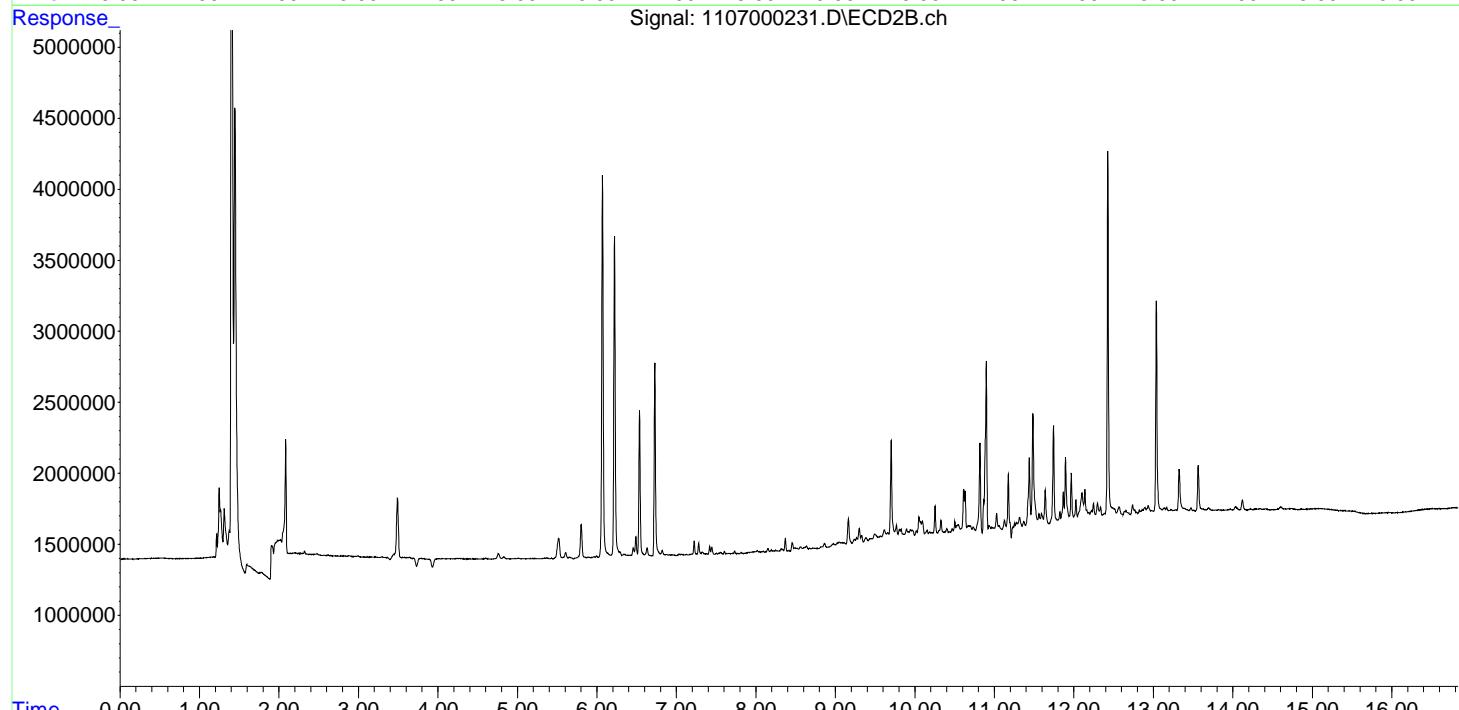
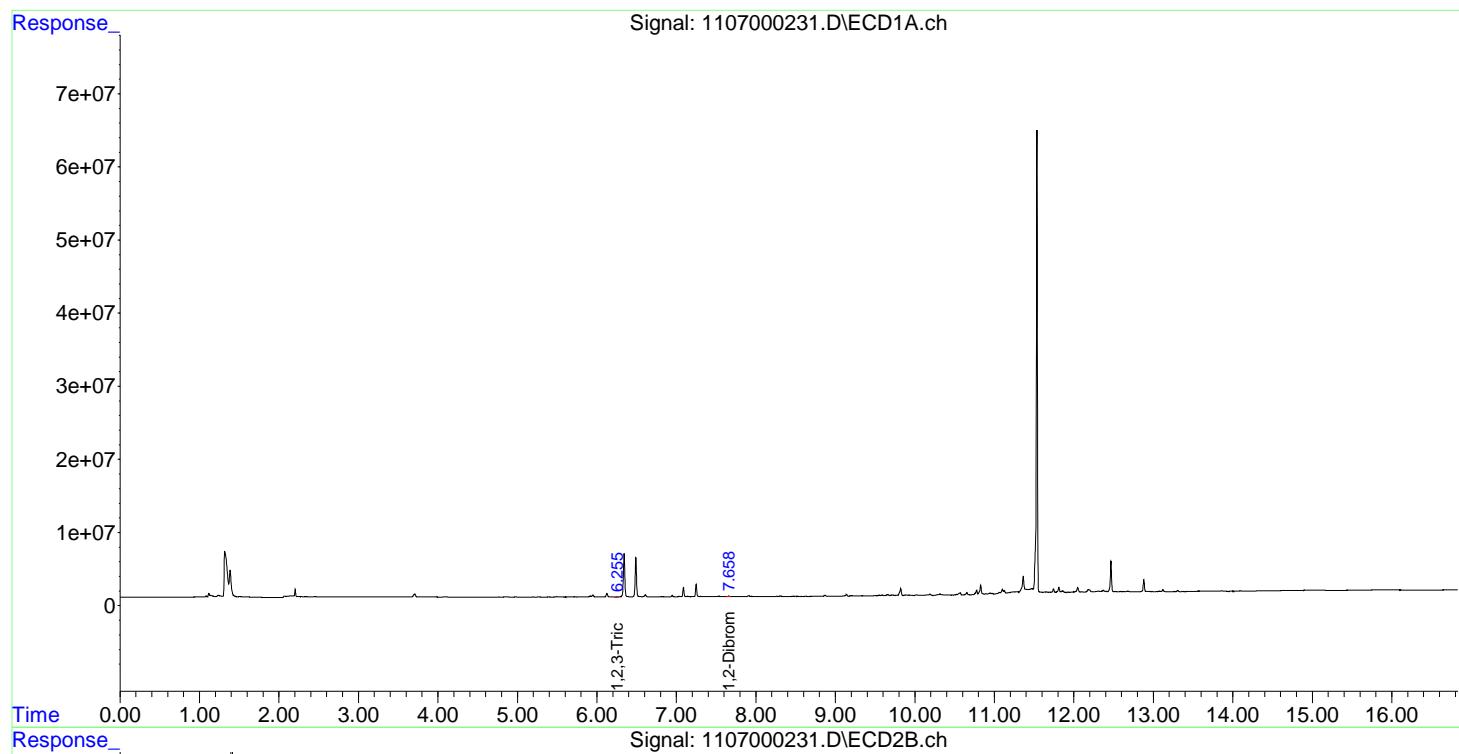
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.255	0.000	67219	0	0.429	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000231.D Vial: 25
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 00:57:23 Operator: SMS
 Sample : K1613584-002 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:44:07 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\110716-504\1107000232.D
Lab ID: K1613584-003
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2016 01:21
Date Quantitated: 11/08/2016 07:44
Batch ID: KWG1610188
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	236	NA	14		x
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000232.D\1107000232.C.
Lab ID: K1613584-003
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2016 01:21
Date Quantitated: 11/08/2016 07:44
Batch ID: KWG1610188
Analysis Method: 504.1
ListJoinID: LJ4310

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	236	NA	14		x
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000232.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000232.D\1107000232.c.d	Vial:	26
Acq Date:	11/08/2016 01:21	Quant Date:	11/08/2016 07:44
Run Type:	SMPL	ListJoinID:	LJ4310
Lab ID:	K1613584-003	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	IV
Prod Code:	504.1 EDB DBCP	Collect Date:	03/16/2016
Analysis Lot:	KWG1610188	Prep Lot:	KWG1610135
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1568860	Prep Date:	11/07/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ4310
MB Ref:	J:\GC33\DATA\110716-504\1107000235.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.94 ^{+0.04}		34605	0d	0.0170	0.0000	0.00300U	0.00300U	0.00300U
The +/- after Retention Time symbolize the direction of the RT shift									
Prep Amount:	35.2190 ml		Dilution:	1.0					
Prep Final Vol:	2 ml		Unit Factor:	1					

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000232.D Vial: 26
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 01:21:17 Operator: SMS
 Sample : K1613584-003 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:44:33 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.942	0.000	34605	0	0.017	N.D. d#
2) M 1,2,3-Tri...	6.255	6.290	48617	54062	0.343	0.160 #
3) M 1,2-Dibro...	7.658	0.000	83300	0	0.029	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

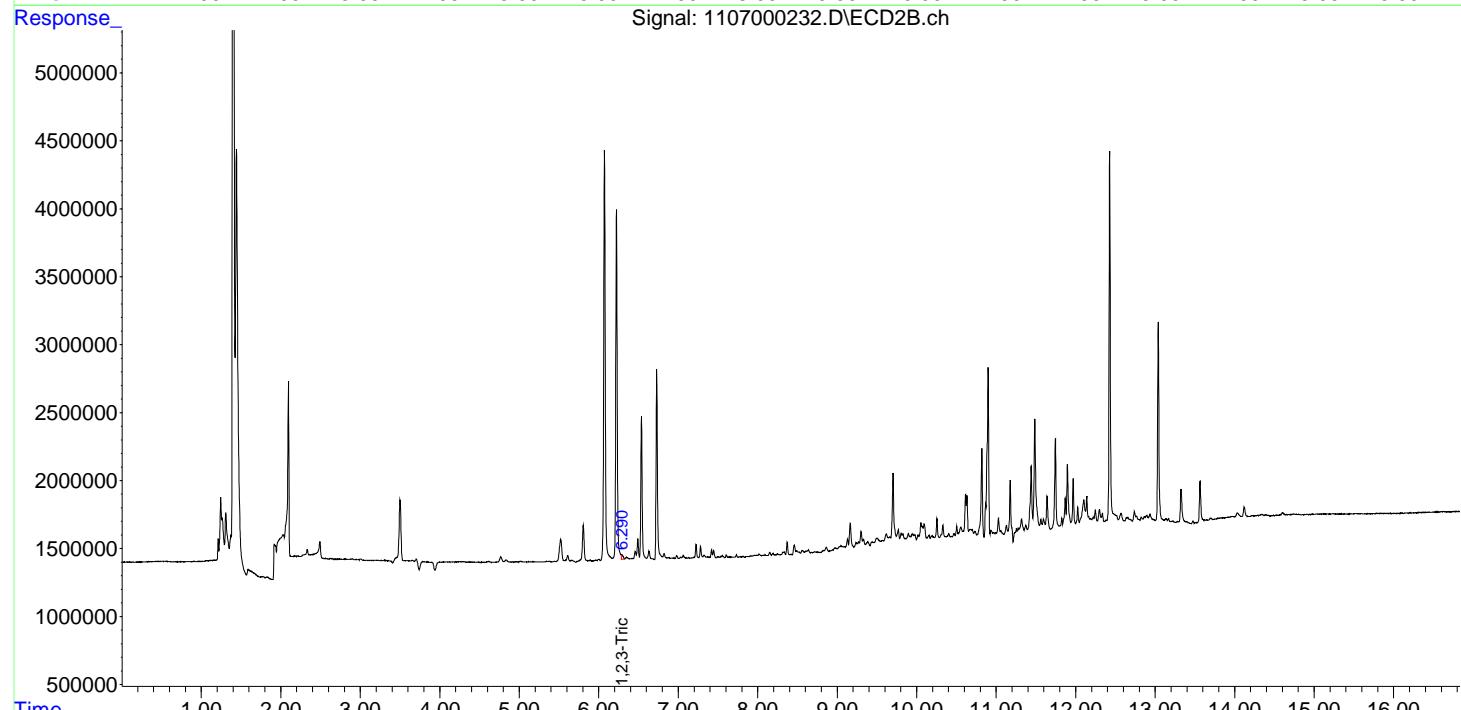
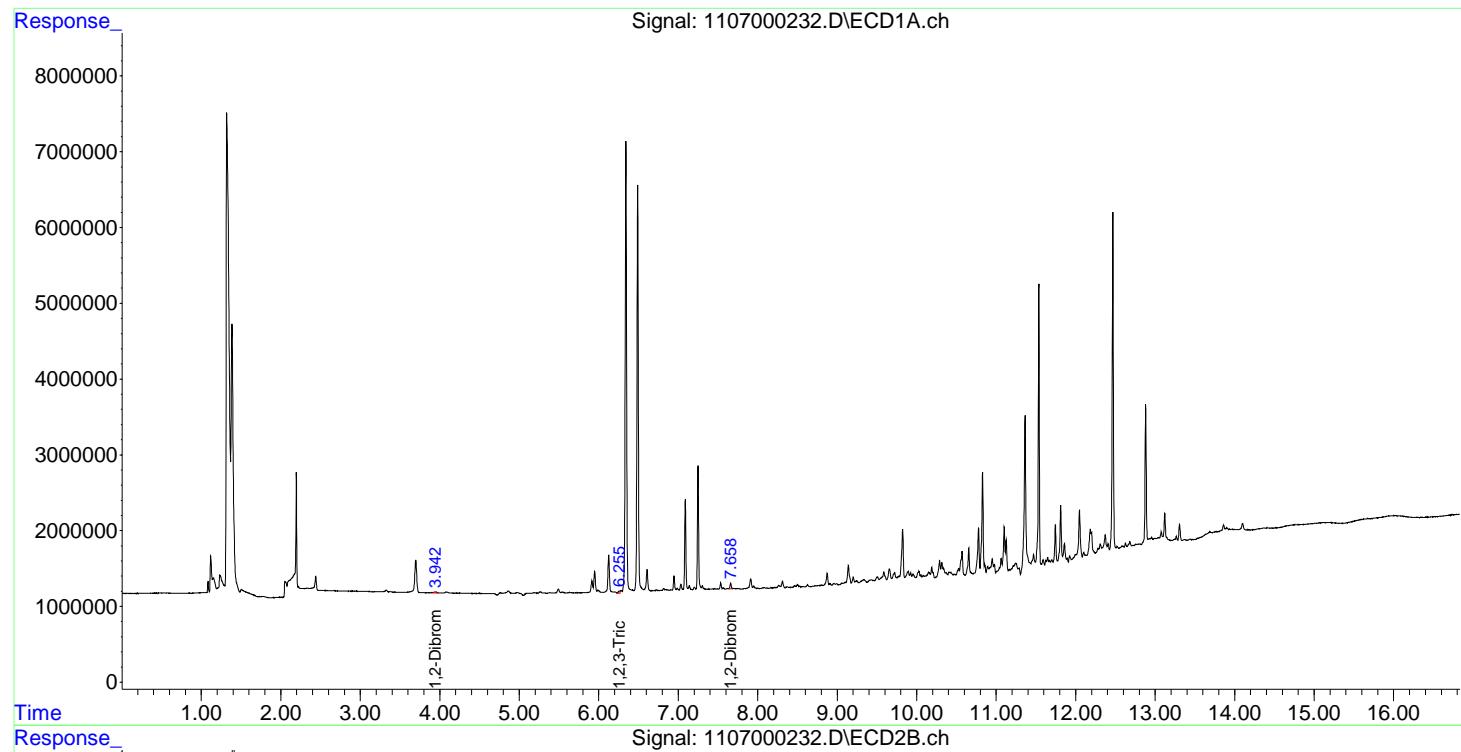
Quantitation Report (QT Reviewed)

1st *JMS* 11/08/16
2nd *JEP* 11/12/16

Data File : J:\GC33\DATA\110716-504\1107000232.D Vial: 26
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Nov-2016, 01:21:17 Operator: SMS
Sample : K1613584-003 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Nov 08 07:44:33 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\110716-504\1107000235.D
Lab ID: KWG1610135-5
RunType: MB
Matrix: WATER

Date Acquired: 11/08/2016 02:32
Date Quantitated: 11/08/2016 07:24
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000235.D\1107000235C.
Lab ID: KWG1610135-5
RunType: MB
Matrix: WATER

Date Acquired: 11/08/2016 02:32
Date Quantitated: 11/08/2016 07:24
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000235.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\110716-504\1107000235.D\1107000235.c.d	Vial:	29	
Acq Date:	11/08/2016 02:32	Quant Date:	11/08/2016 07:24	
Run Type:	MB	MethodJoinID:	MJ480	
Lab ID:	KWG1610135-5	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/07/2016	
Analysis Lot:	KWG1610188	Prep Lot:	KWG1610135	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1568865	Prep Date:	11/07/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:		Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:		ug/L		Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.96 ^{+0.06}		35685	0	0.0180	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane	6.26 ^{+0.03}		59786	0	0.3950	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropan	7.66		98799	0	0.0340	0.0000	0.00360U	0.00360U	0.00360U

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 36.2402 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000235.D Vial: 29
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:32:15 Operator: SMS
 Sample : KWG1610135-5MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:55 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

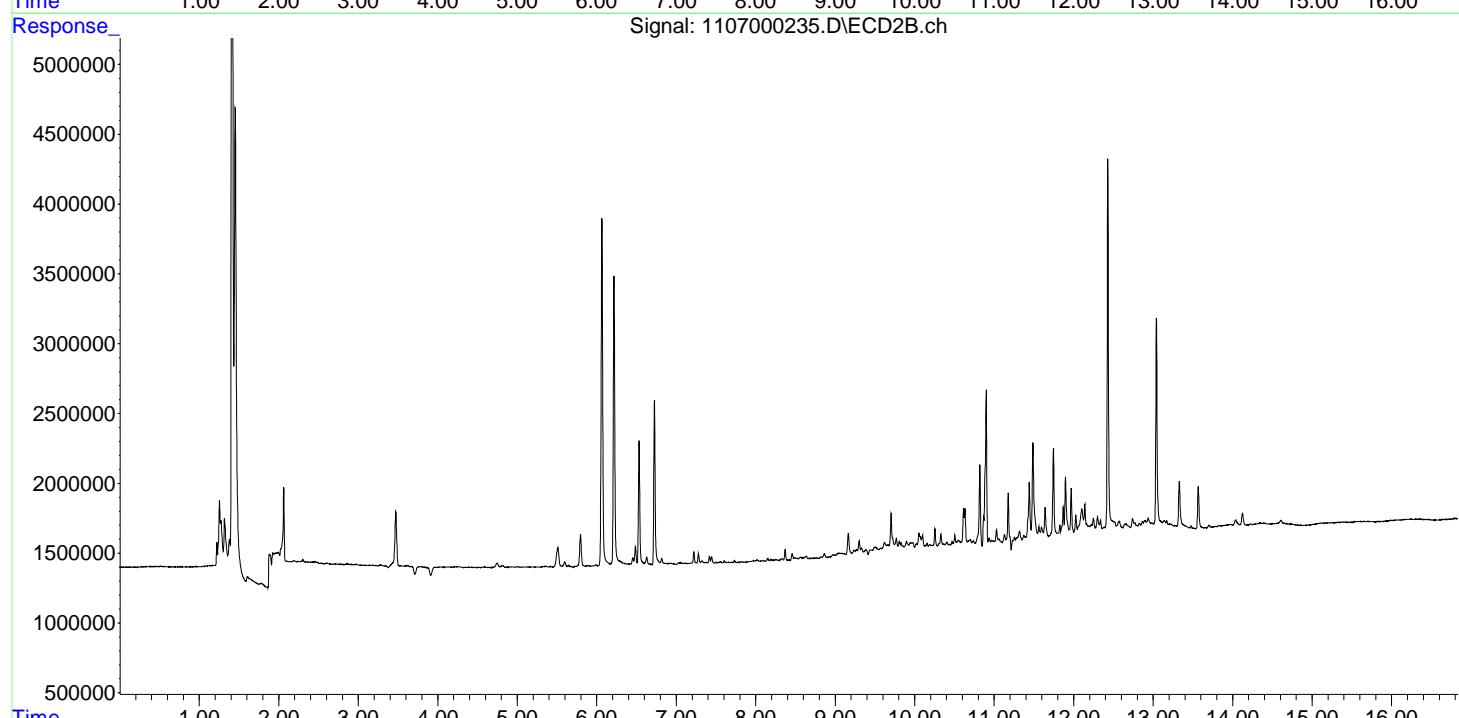
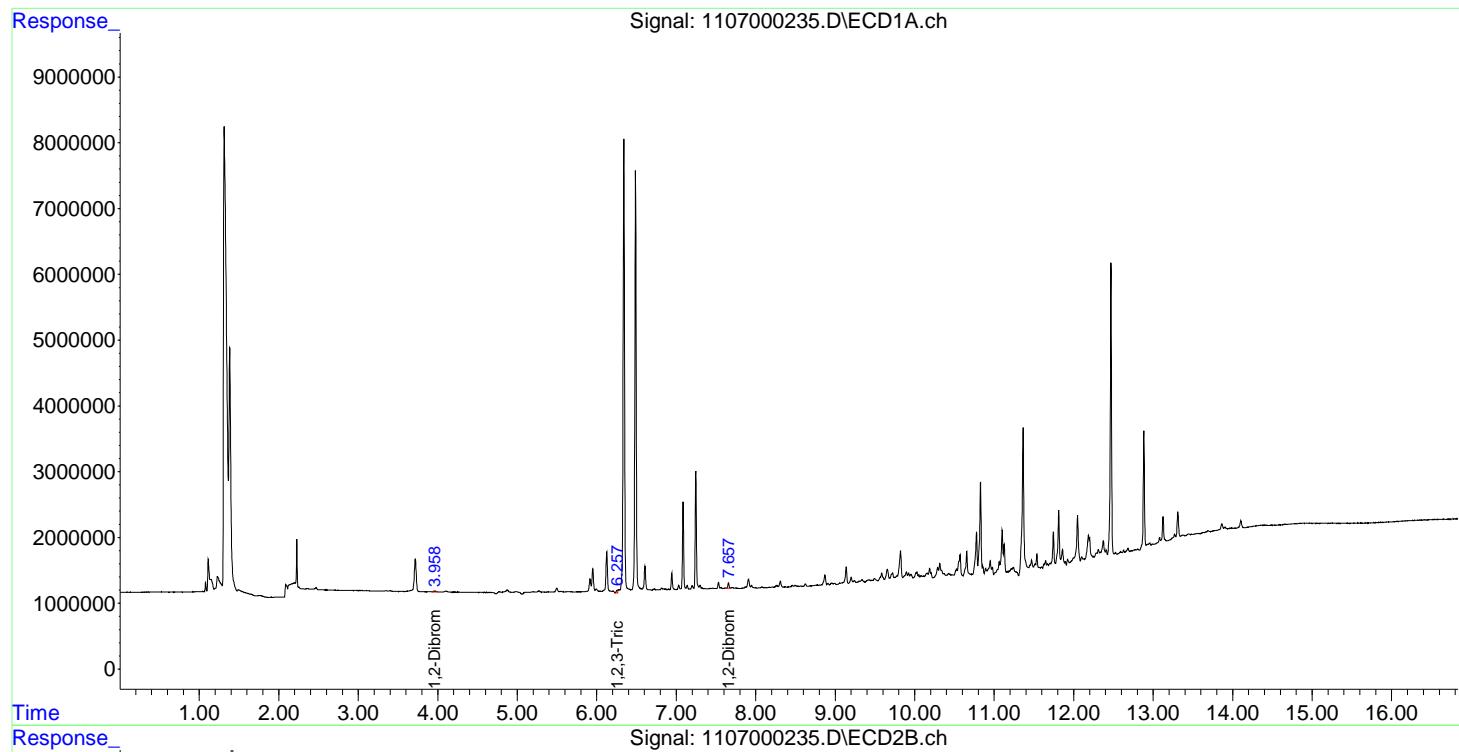
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.958f	0.000	35685	0	0.018	N.D. #
2) M 1,2,3-Tri...	6.257	0.000	59786	0	0.395	N.D. #
3) M 1,2-Dibro...	7.657	0.000	98799	0	0.034	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000235.D Vial: 29
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:32:15 Operator: SMS
 Sample : KWG1610135-5MB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:55 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\110716-504\1107000215.D
Lab ID: K1612916-001
RunType: SMPL
Matrix: DRINKING WATER

Date Acquired: 11/07/2016 18:38
Date Quantitated: 11/08/2016 07:28
Batch ID: KWG1610188
Analysis Method: 504.1
ListJoinID: LJ14598

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000215.D\1107000215.C.
Lab ID: K1612916-001
RunType: SMPL
Matrix: DRINKING WATER

Date Acquired: 11/07/2016 18:38
Date Quantitated: 11/08/2016 07:28
Batch ID: KWG1610188
Analysis Method: 504.1
ListJoinID: LJ14598

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
Preparation Holding Time	NA	NA	NA	X	
Pre-Preparation Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Method Blank	NA	NA	NA	X	
MB Surrogate Recovery	NA	NA	NA	X	
Lab Control Spike	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000215.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000215.D\1107000215.c.d	Vial:	11
Acq Date:	11/07/2016 18:38	Quant Date:	11/08/2016 07:28
Run Type:	SMPL	ListJoinID:	LJ14598
Lab ID:	K1612916-001	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	II
Prod Code:	504.1 EDB DBCP	Collect Date:	10/24/2016
Analysis Lot:	KWG1610188	Prep Lot:	KWG1610135
Analysis Method:	504.1	Prep Method:	METHOD
Prep Ref:	1568848	Prep Date:	11/07/2016
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:	EPA Method 504.1	Report List ID:	LJ14598
MB Ref:	J:\GC33\DATA\110716-504\1107000235.D	Method ID:	MJ480
		Quant based on Report List	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.95 ^{+0.06}		34976	0d	0.0170	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane	6.25 ^{+0.02}		26646	0d	0.2420	0.0000	0.037U	0.037U	0.037U
1,2-Dibromo-3-chloropropan	7.66		90547	0	0.0310	0.0000	0.00360U	0.00360U	0.00360U

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.2239 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000215.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 18:38:54 Operator: SMS
 Sample : K1612916-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:28:34 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

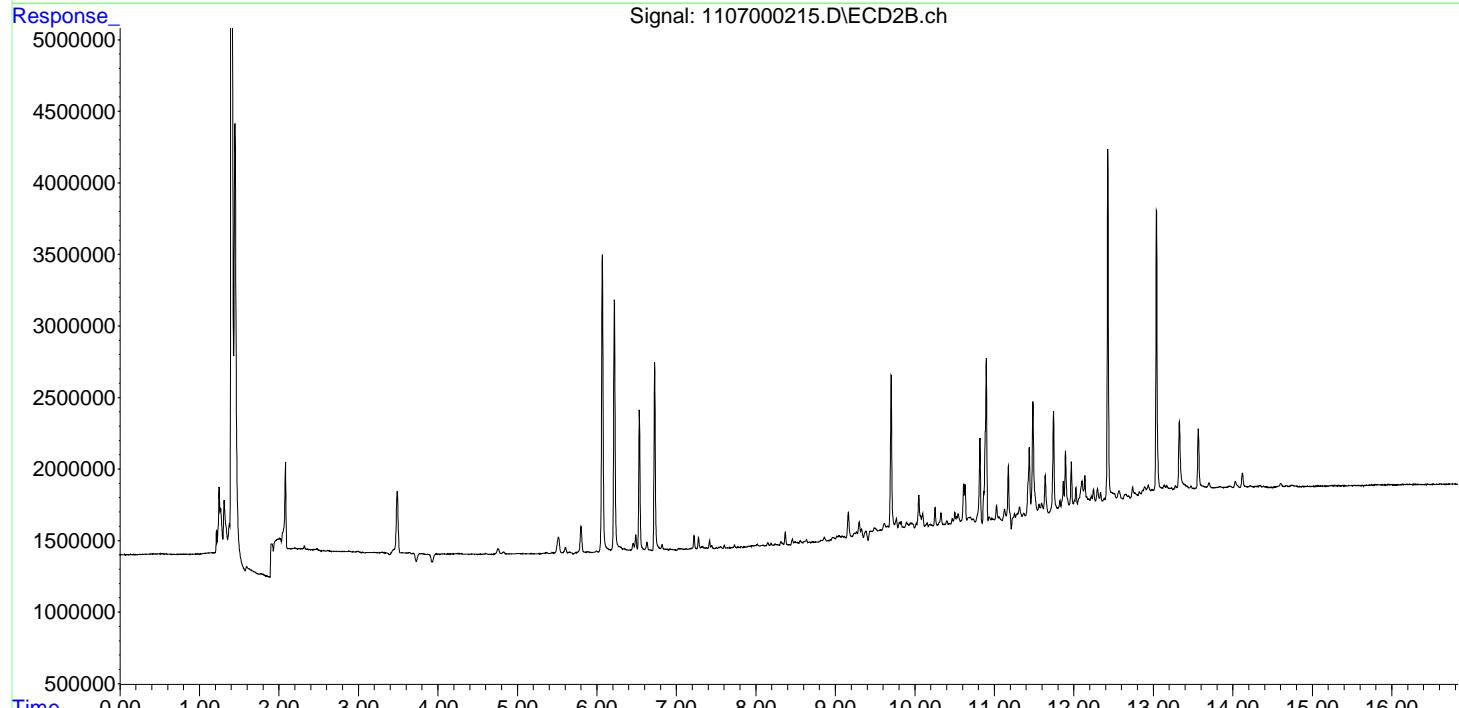
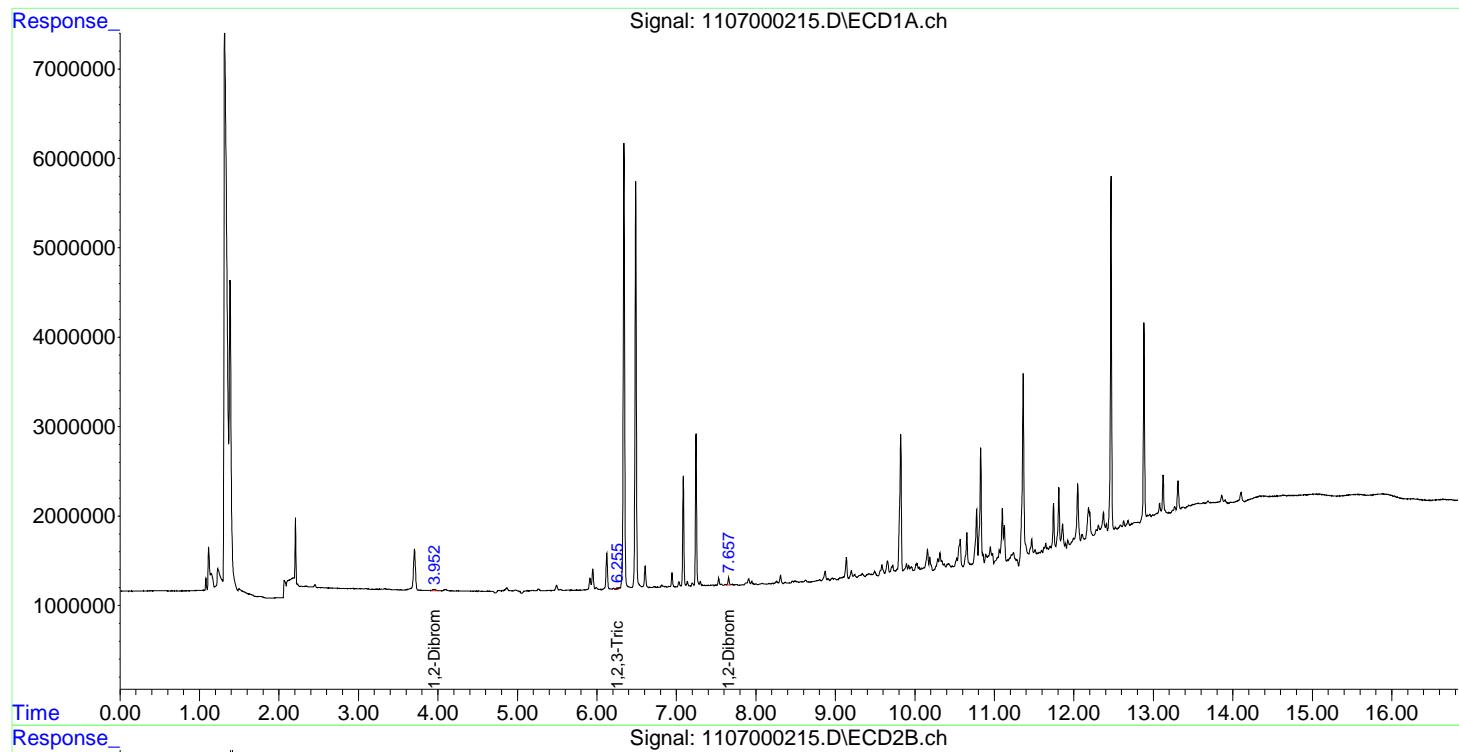
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.952f	0.000	34976	0	0.017	N.D. d#
2) M 1,2,3-Tri...	6.255	0.000	26646	0	0.242	N.D. d#
3) M 1,2-Dibro...	7.657	0.000	90547	0	0.031	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000215.D Vial: 11
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 18:38:54 Operator: SMS
 Sample : K1612916-001 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:28:34 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Exception Report

Data File: J:\GC33\DATA\110716-504\1107000216.D
Lab ID: KWG1610135-1 -- K1612916-001MS
RunType: MS
Matrix: DRINKING WATER

Date Acquired: 11/07/2016 19:02
Date Quantitated: 11/08/2016 07:29
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000216.D\1107000216.C.
Lab ID: KWG1610135-1 -- K1612916-001MS
RunType: MS
Matrix: DRINKING WATER

Date Acquired: 11/07/2016 19:02
Date Quantitated: 11/08/2016 07:29
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000216.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000216.D\1107000216.c.d	Vial:	12
Acq Date:	11/07/2016 19:02	Quant Date:	11/08/2016 07:29
Run Type:	MS	MethodJoinID:	MJ480
Lab ID:	KWG1610135-1 -- K1612916-001MS	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	Matrix:	DRINKING WATE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/07/2016

Analysis Lot:	KWG1610188	Prep Lot:	KWG1610135	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1568858	Prep Date:	11/07/2016	

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:			
MB Ref:	J:\GC33\DATA\110716-504\1107000235.D	Method ID:	MJ480
			Quant based on Method

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89	4.04	5459967m	4170519m	4.37	4.30	0.246	0.242	0.242
1,2,3-Trichloropropane	6.23	6.29	856594	788432m	4.07	3.81	0.229	0.215	0.215
1,2-Dibromo-3-chloropropan	7.66	7.87	10963924	8497500	3.81	3.75	0.215	0.211	0.211

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.4908 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000216.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:02:38 Operator: SMS
 Sample : K1612916-001MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:29:27 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

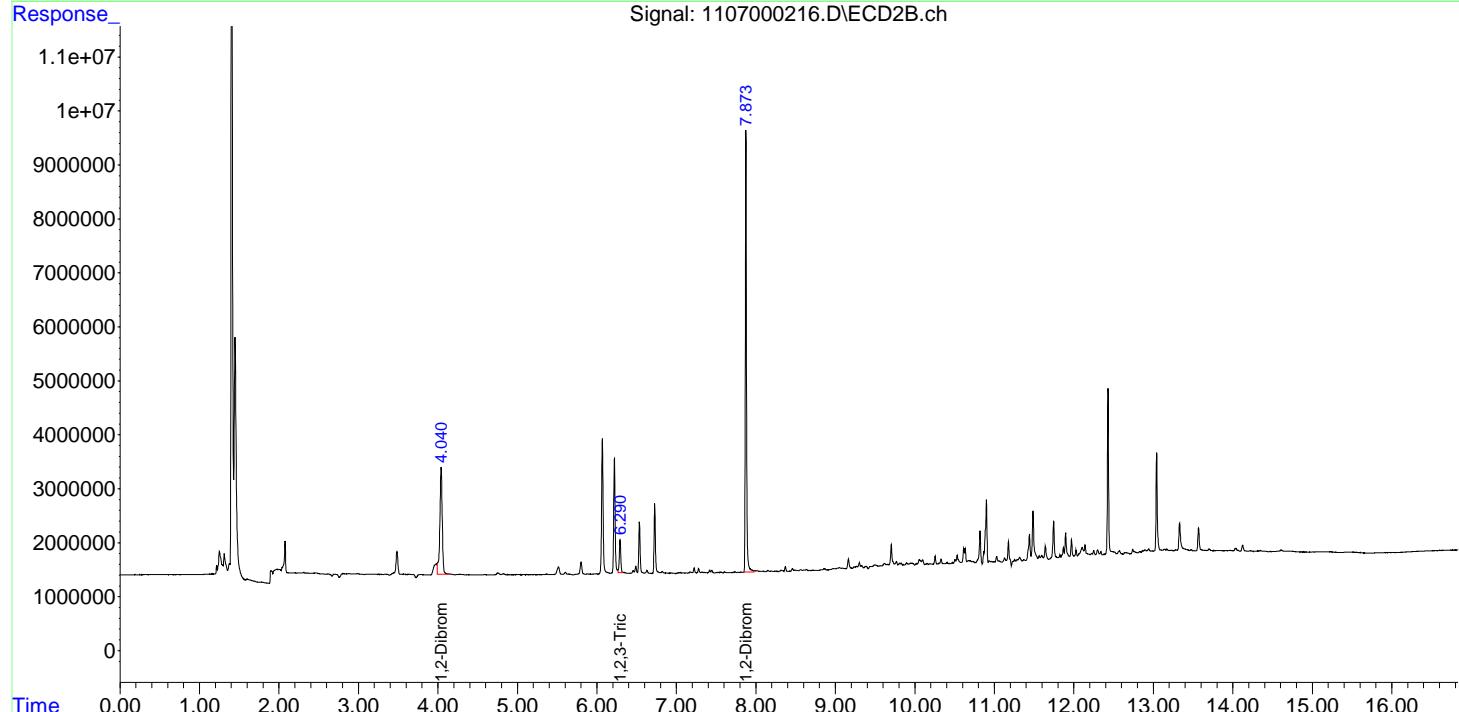
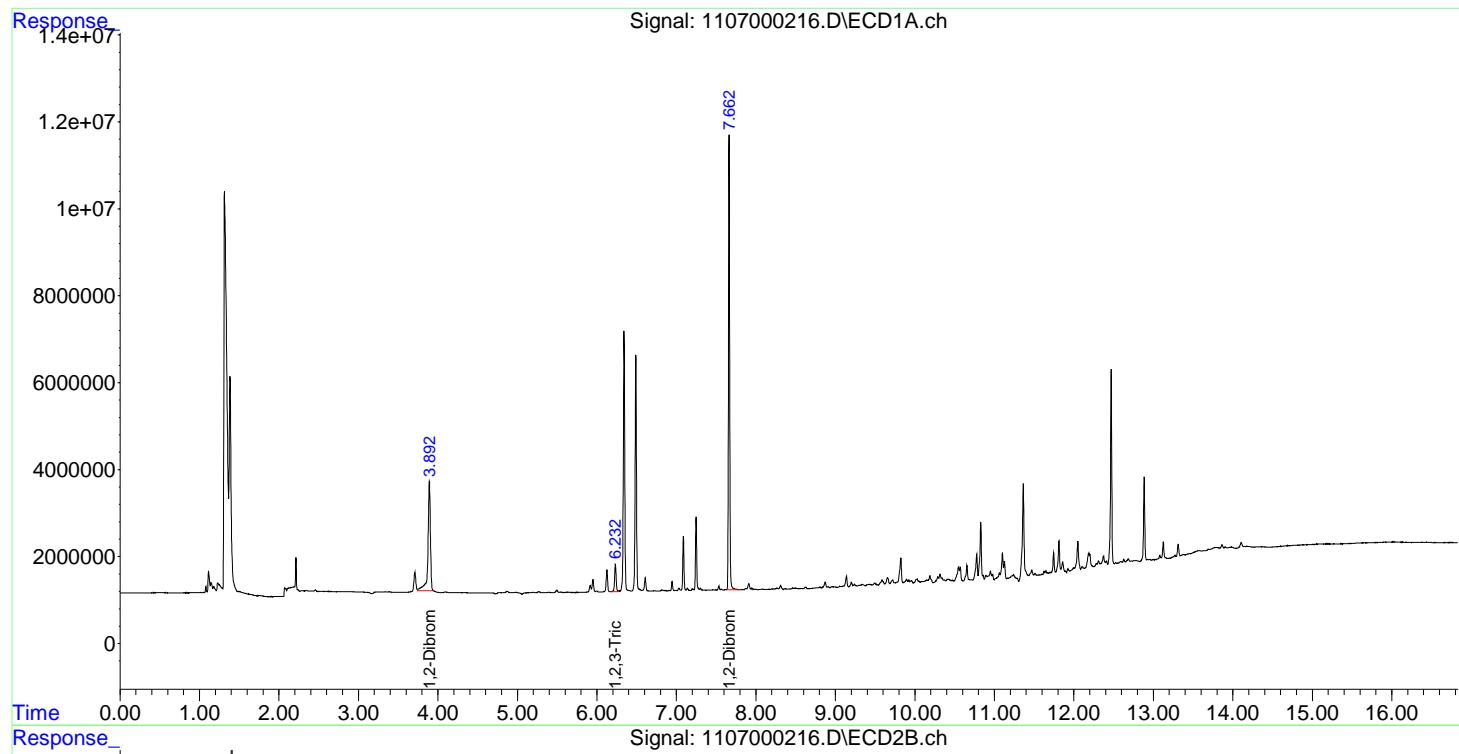
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.892	4.040	5459967	4170519	4.374m	4.298m
2) M 1,2,3-Tri...	6.232	6.290	856594	788432	4.071	3.813m
3) M 1,2-Dibro...	7.662	7.873	10963924	8497500	3.808	3.752

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000216.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:02:38 Operator: SMS
 Sample : K1612916-001MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:29:27 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

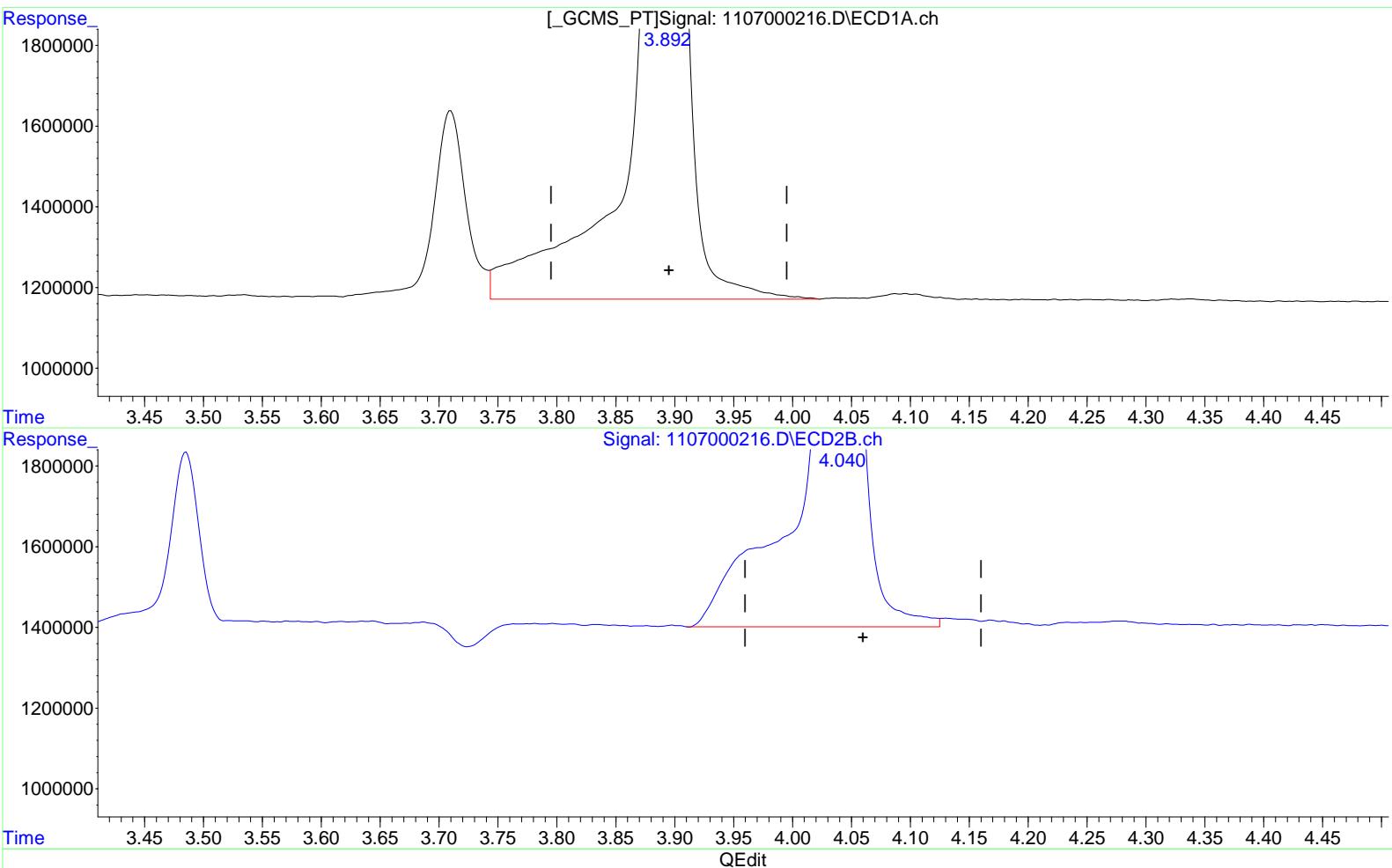
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000216.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:02:38 Operator: SMS
 Sample : K1612916-001MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:18 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 4.776 ppb

response 6036665

Manual Integration:

Before

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

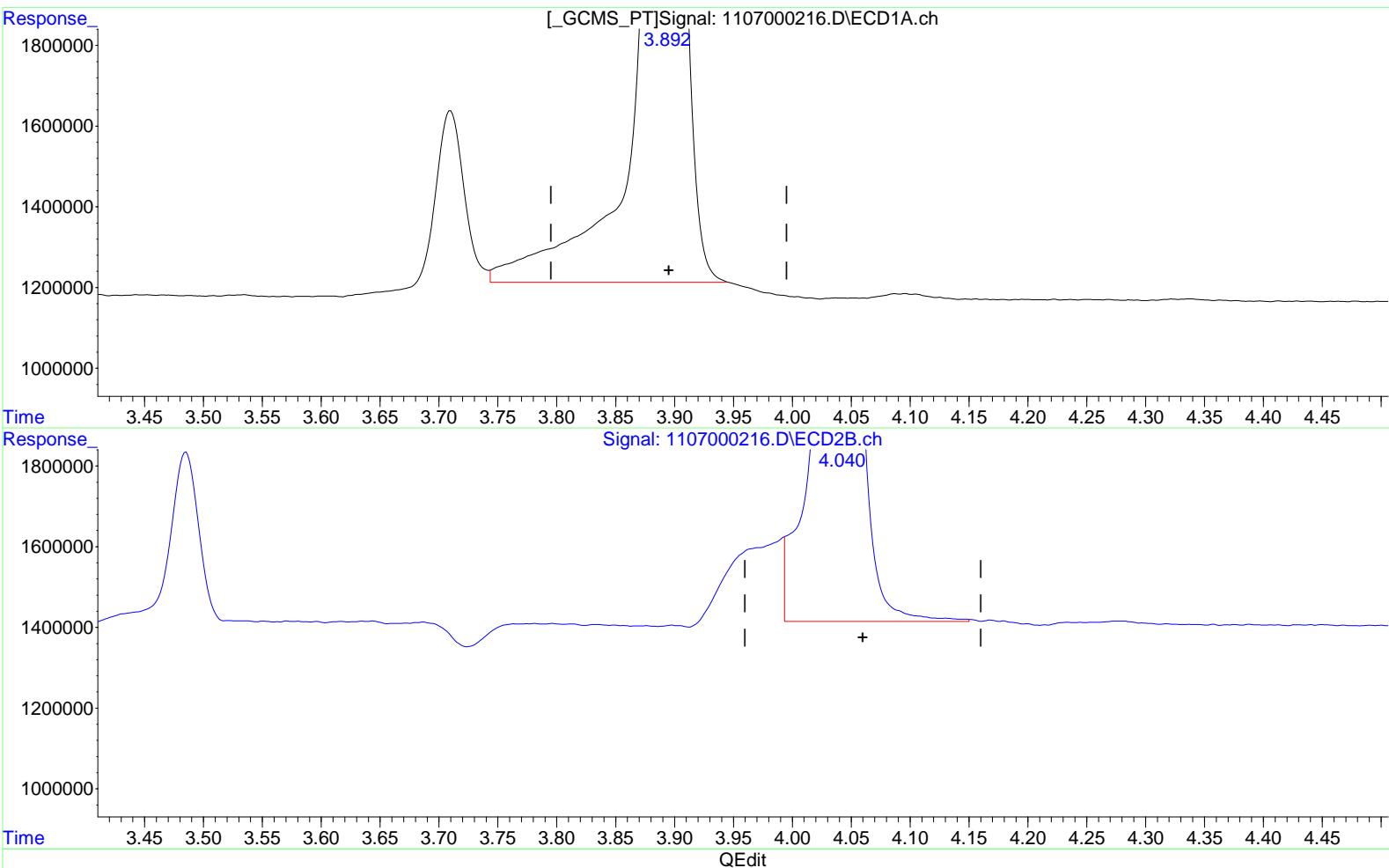
4.040min 5.091 ppb

response 4940429

Data File : J:\GC33\DATA\110716-504\1107000216.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:02:38 Operator: SMS
 Sample : K1612916-001MS Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:18 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 4.374 ppb m

response 5459967

Manual Integration:

After

Baseline/Shoulder

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

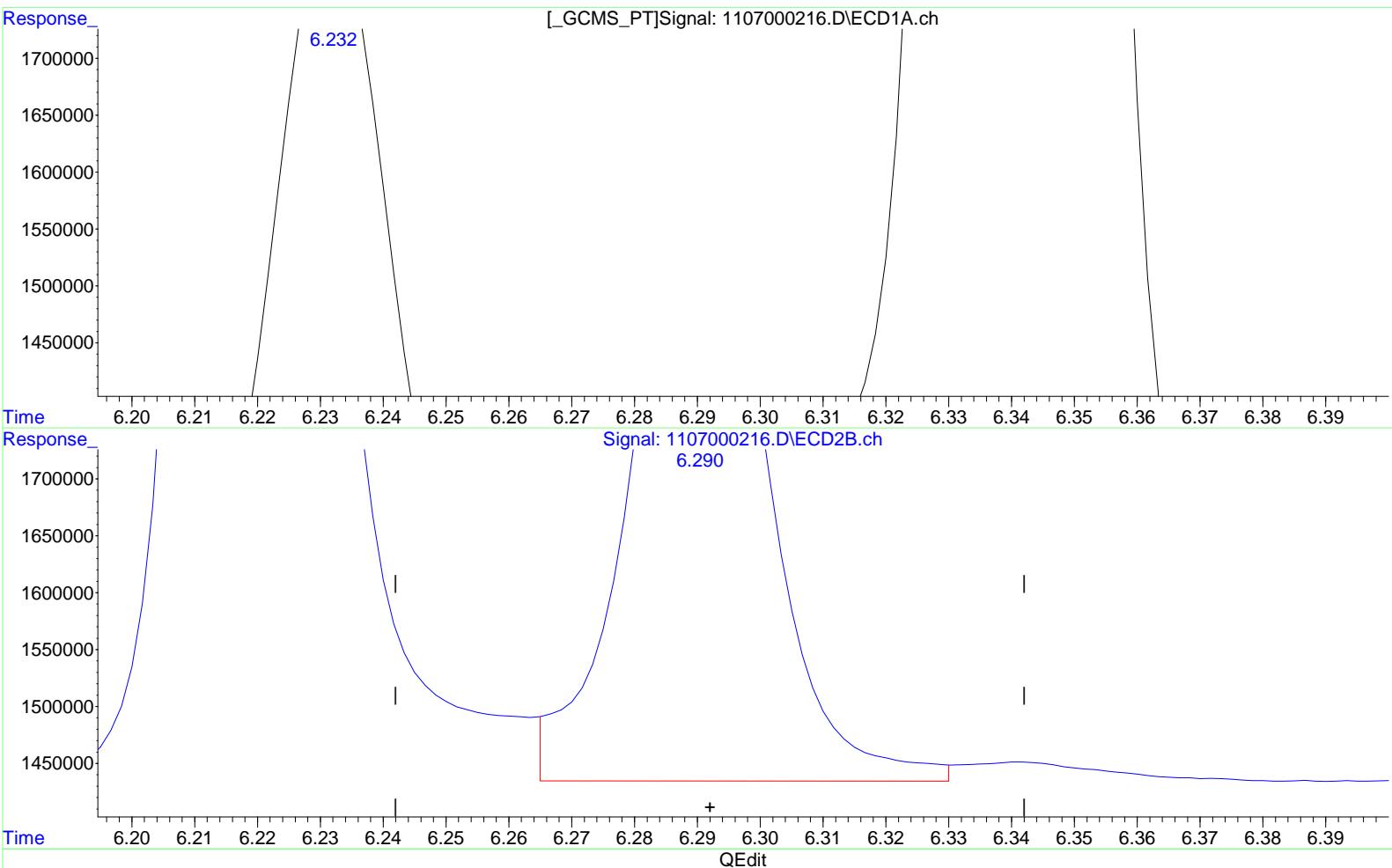
4.040min 4.298 ppb m

response 4170519

Data File : J:\GC33\DATA\110716-504\1107000216.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:02:38 Operator: SMS
 Sample : K1612916-001MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:18 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.232min 4.071 ppb

response 856594

Manual Integration:

Before

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

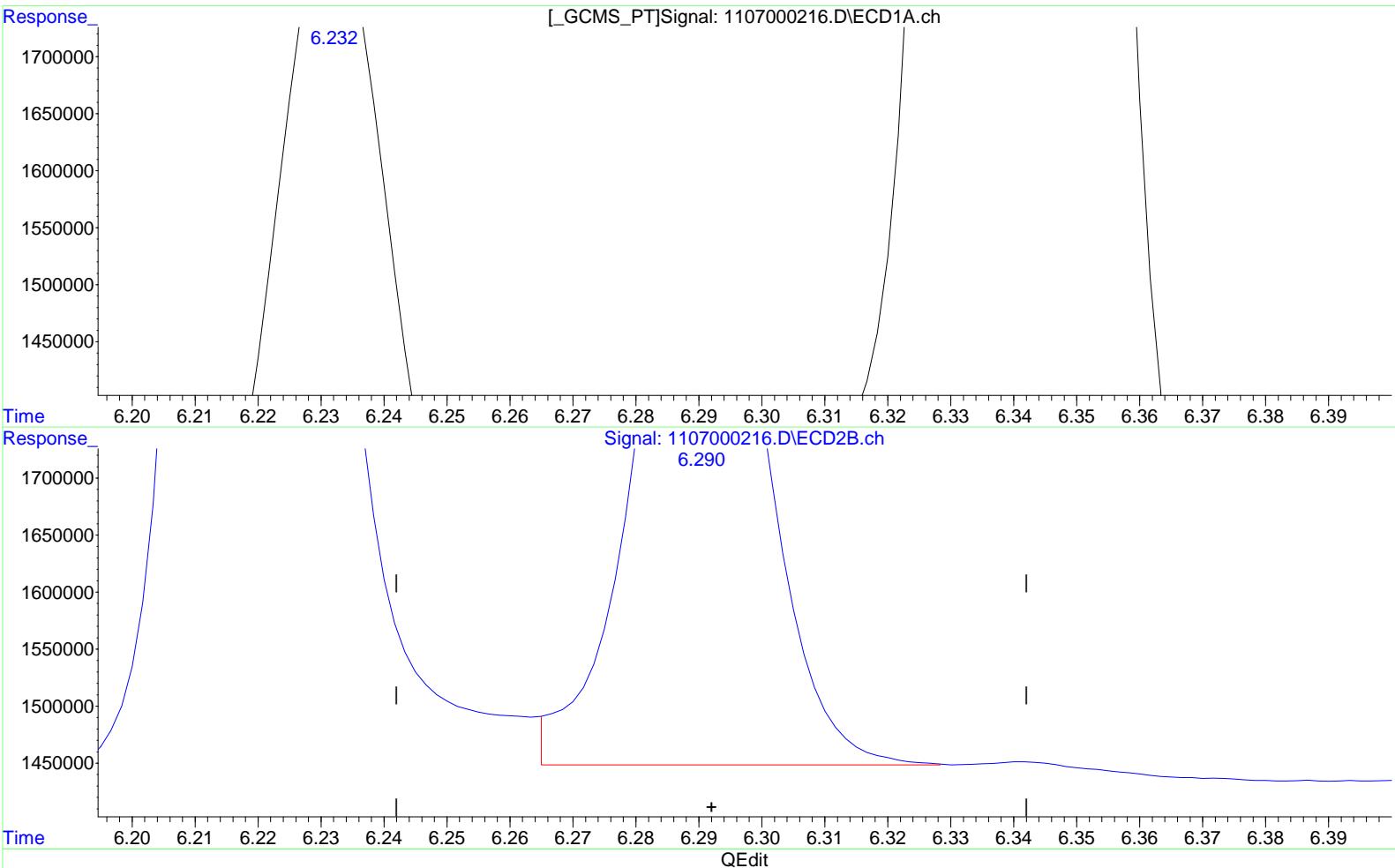
6.290min 4.084 ppb

response 842724

Data File : J:\GC33\DATA\110716-504\1107000216.D Vial: 12
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:02:38 Operator: SMS
 Sample : K1612916-001MS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:18 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.232min 4.071 ppb

response 856594

Manual Integration:

After

Baseline/Shoulder

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

6.290min 3.813 ppb m

response 788432

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000217.D
Lab ID: KWG1610135-2 -- K1612916-001DMS
RunType: DMS
Matrix: DRINKING WATER

Date Acquired: 11/07/2016 19:26
Date Quantitated: 11/08/2016 07:29
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000217.D\1107000217.C.
Lab ID: KWG1610135-2 -- K1612916-001DMS
RunType: DMS
Matrix: DRINKING WATER

Date Acquired: 11/07/2016 19:26
Date Quantitated: 11/08/2016 07:29
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000217.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000217.D\1107000217.c.d	Vial:	13
Acq Date:	11/07/2016 19:26	Quant Date:	11/08/2016 07:29
Run Type:	DMS	MethodJoinID:	MJ480
Lab ID:	KWG1610135-2 -- K1612916-001DMS	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2

Bottle ID:	Tier:	Matrix:	DRINKING WATE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/07/2016

Analysis Lot:	KWG1610188	Prep Lot:	KWG1610135	Report Group:
Analysis Method:	504.1		Prep Method: METHOD	
Prep Ref:	1568859		Prep Date: 11/07/2016	

Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:			
MB Ref:	J:\GC33\DATA\110716-504\1107000235.D	Method ID:	MJ480
			Quant based on Method

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89	4.05 ^{+0.01}	5088109m	4149485m	4.11	4.28	0.233	0.242	0.233
1,2,3-Trichloropropane	6.23	6.29	780325	789409	3.72	3.82	0.210	0.216	0.210
1,2-Dibromo-3-chloropropan	7.66	7.87	10484833	8719775	3.64	3.85	0.206	0.218	0.206

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.3512 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000217.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:26:16 Operator: SMS
 Sample : K1612916-001DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:29:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

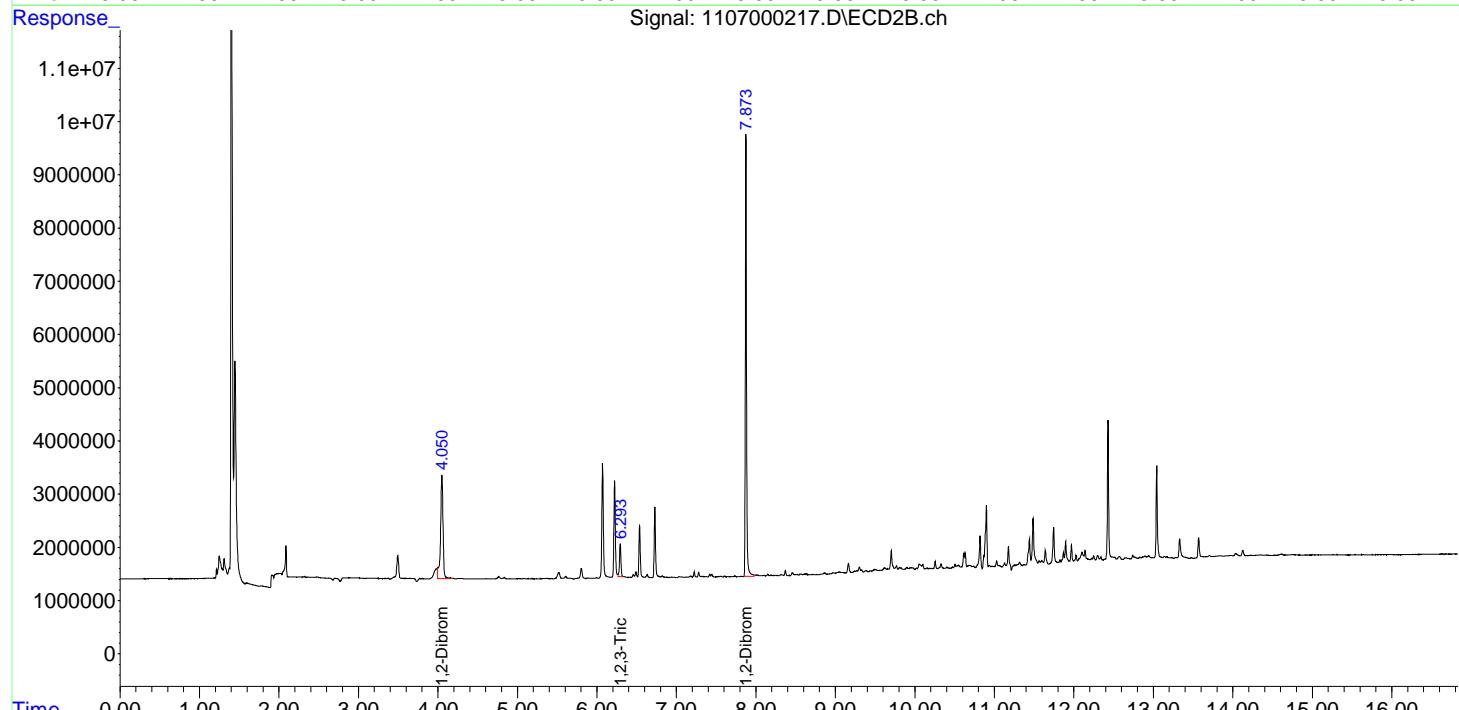
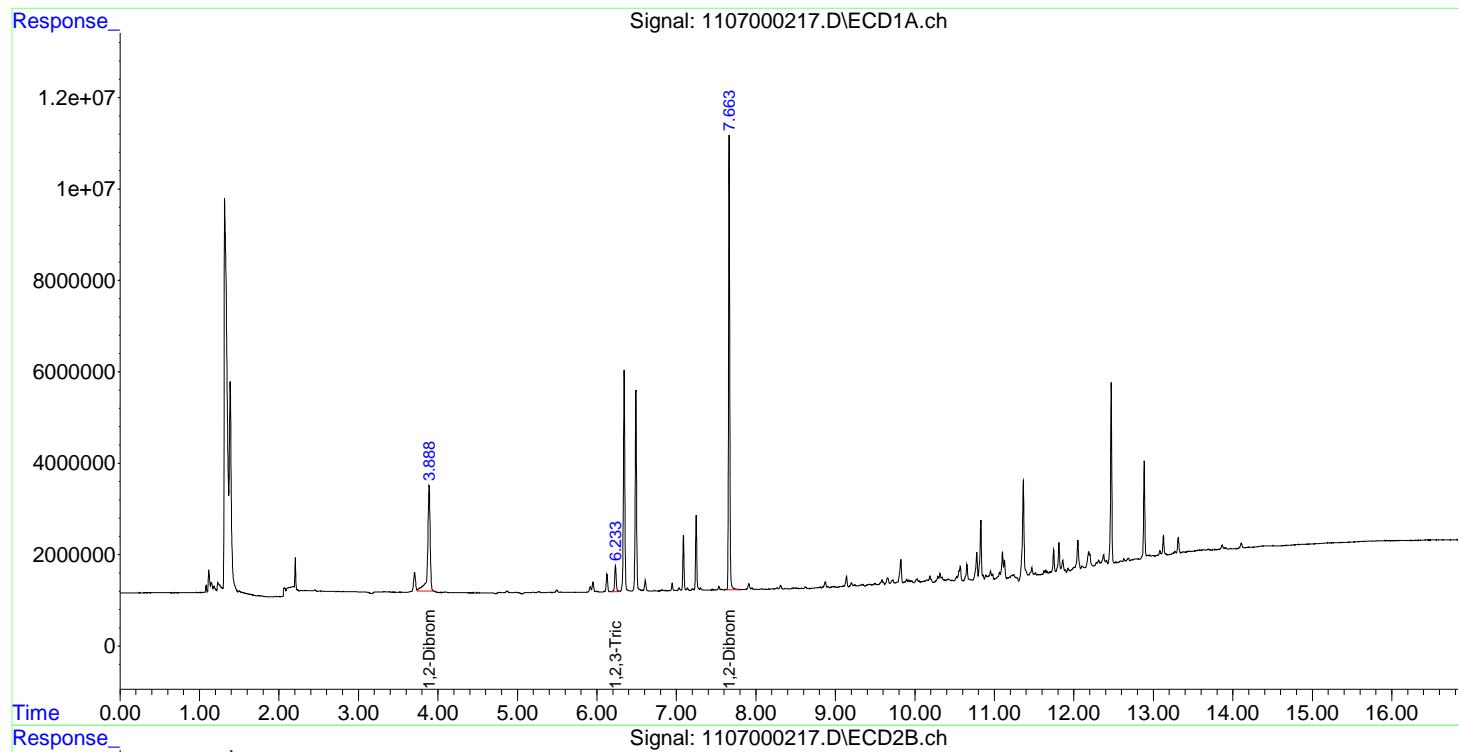
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.888	4.050	5088109	4149485	4.110m	4.276m
2) M 1,2,3-Tri...	6.233	6.293	780325	789409	3.719	3.818
3) M 1,2-Dibro...	7.663	7.873	10484833	8719775	3.642	3.850

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000217.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:26:16 Operator: SMS
 Sample : K1612916-001DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:29:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

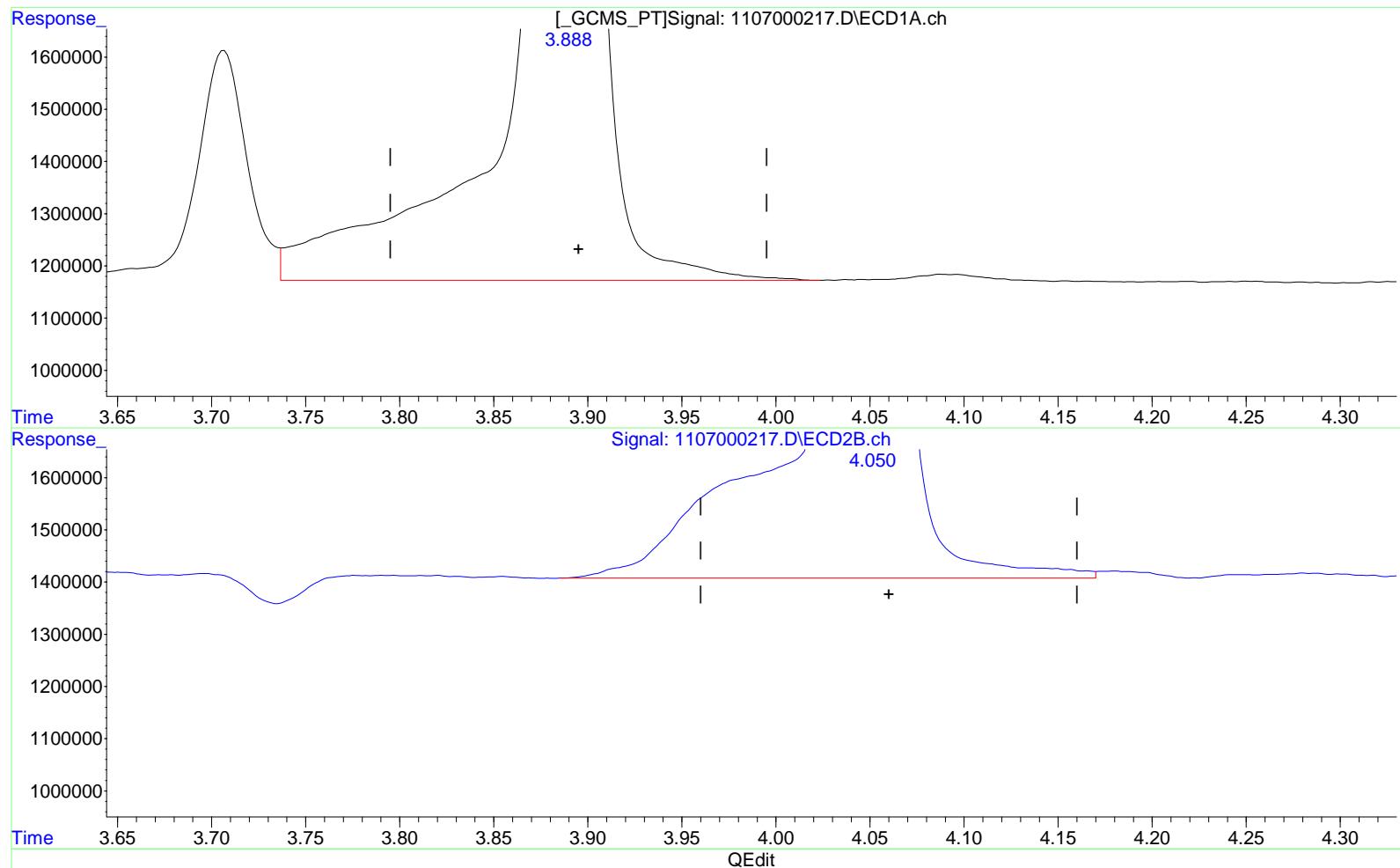
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000217.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:26:16 Operator: SMS
 Sample : K1612916-001DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:20 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.888min 4.462 ppb

response 5584898

Manual Integration:

Before

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

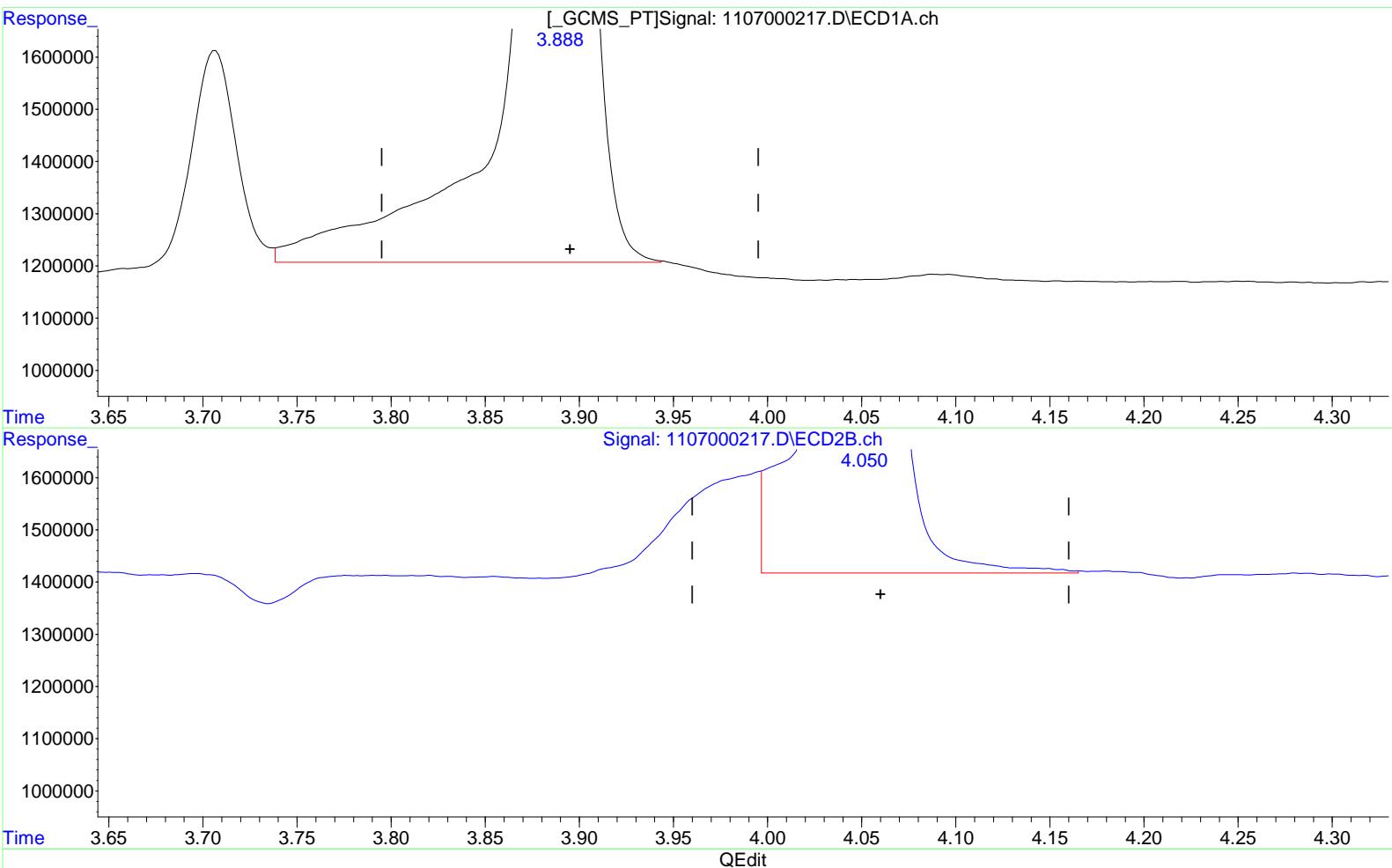
4.050min 5.029 ppb

response 4879613

Data File : J:\GC33\DATA\110716-504\1107000217.D Vial: 13
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 19:26:16 Operator: SMS
 Sample : K1612916-001DMS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:20 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.888min 4.110 ppb m

response 5088109

Manual Integration:

After

Baseline/Shoulder

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.050min 4.276 ppb m

response 4149485

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000233.D
Lab ID: KWG1610135-3
RunType: LCS
Matrix: WATER

Date Acquired: 11/08/2016 01:44
Date Quantitated: 11/08/2016 07:45
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000233.D\1107000233.C.
Lab ID: KWG1610135-3
RunType: LCS
Matrix: WATER

Date Acquired: 11/08/2016 01:44
Date Quantitated: 11/08/2016 07:45
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000233.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\110716-504\1107000233.D\1107000233c.d	Vial:	27	
Acq Date:	11/08/2016 01:44	Quant Date:	11/08/2016 07:45	
Run Type:	LCS	MethodJoinID:	MJ480	
Lab ID:	KWG1610135-3	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/07/2016	
Analysis Lot:	KWG1610188	Prep Lot:	KWG1610135	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1568863	Prep Date:	11/07/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:	J:\GC33\DATA\110716-504\1107000235.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89 ^{-0.01}	4.04	4874002m	3511742m	3.96	3.62	0.226	0.207	0.207
1,2,3-Trichloropropane	6.23	6.29	819383	703451m	3.90	3.39	0.223	0.194	0.194
1,2-Dibromo-3-chloropropan	7.66	7.87 ^{-0.01}	10770281	7880910	3.74	3.48	0.214	0.199	0.199

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.0000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000233.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 01:44:55 Operator: SMS
 Sample : KWG1610135-3LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:45:35 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

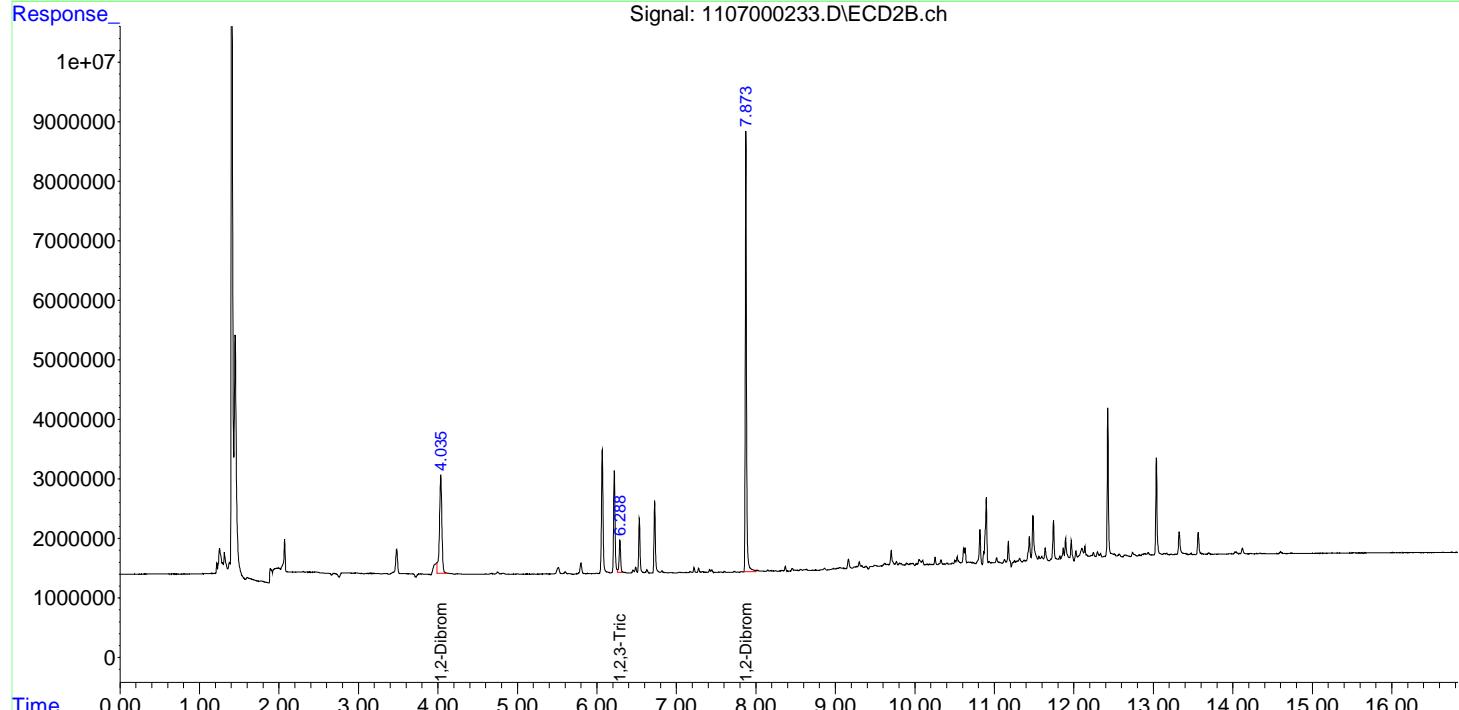
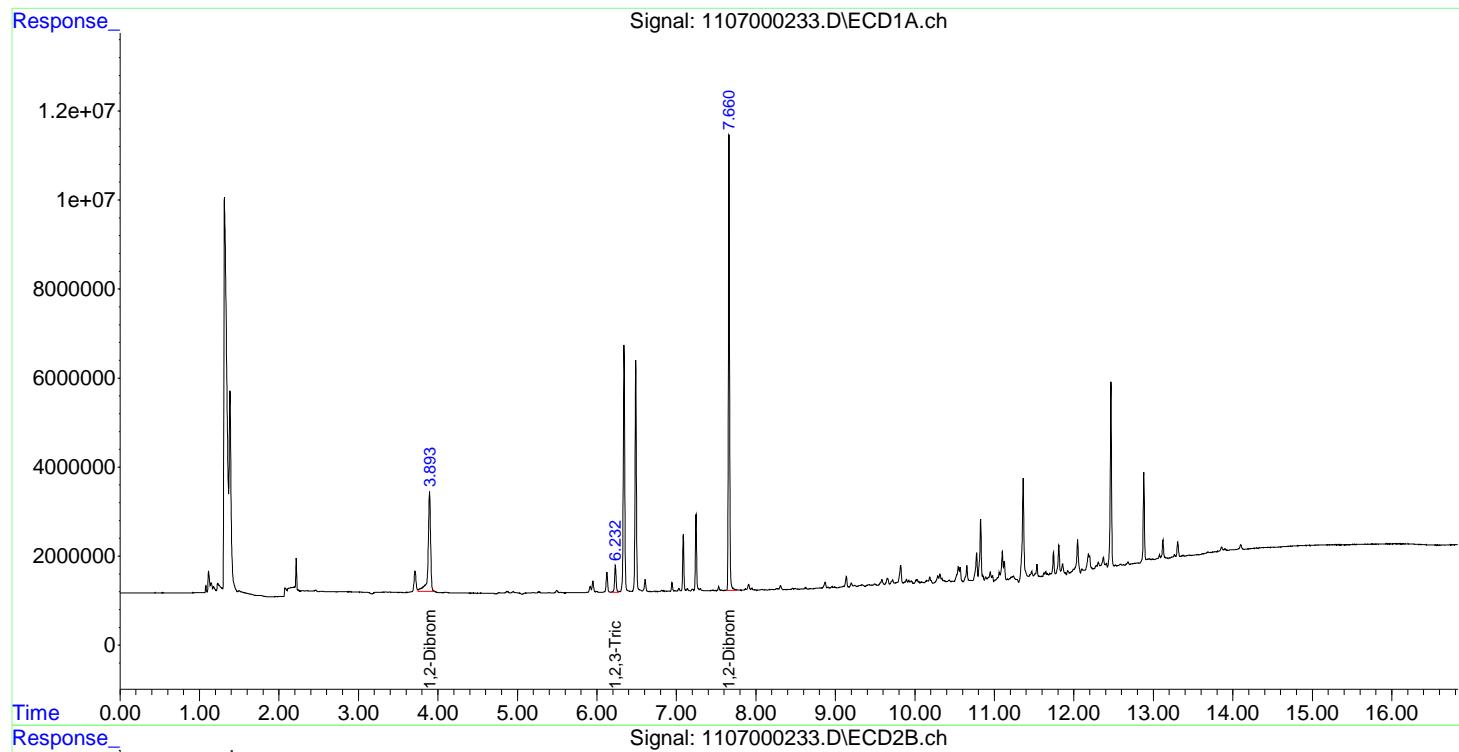
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.893	4.035	4874002	3511742	3.956m	3.619m
2) M 1,2,3-Tri...	6.232	6.288	819383	703451	3.899	3.391m
3) M 1,2-Dibro...	7.660	7.873	10770281	7880910	3.741	3.479

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000233.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 01:44:55 Operator: SMS
 Sample : KWG1610135-3LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:45:35 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

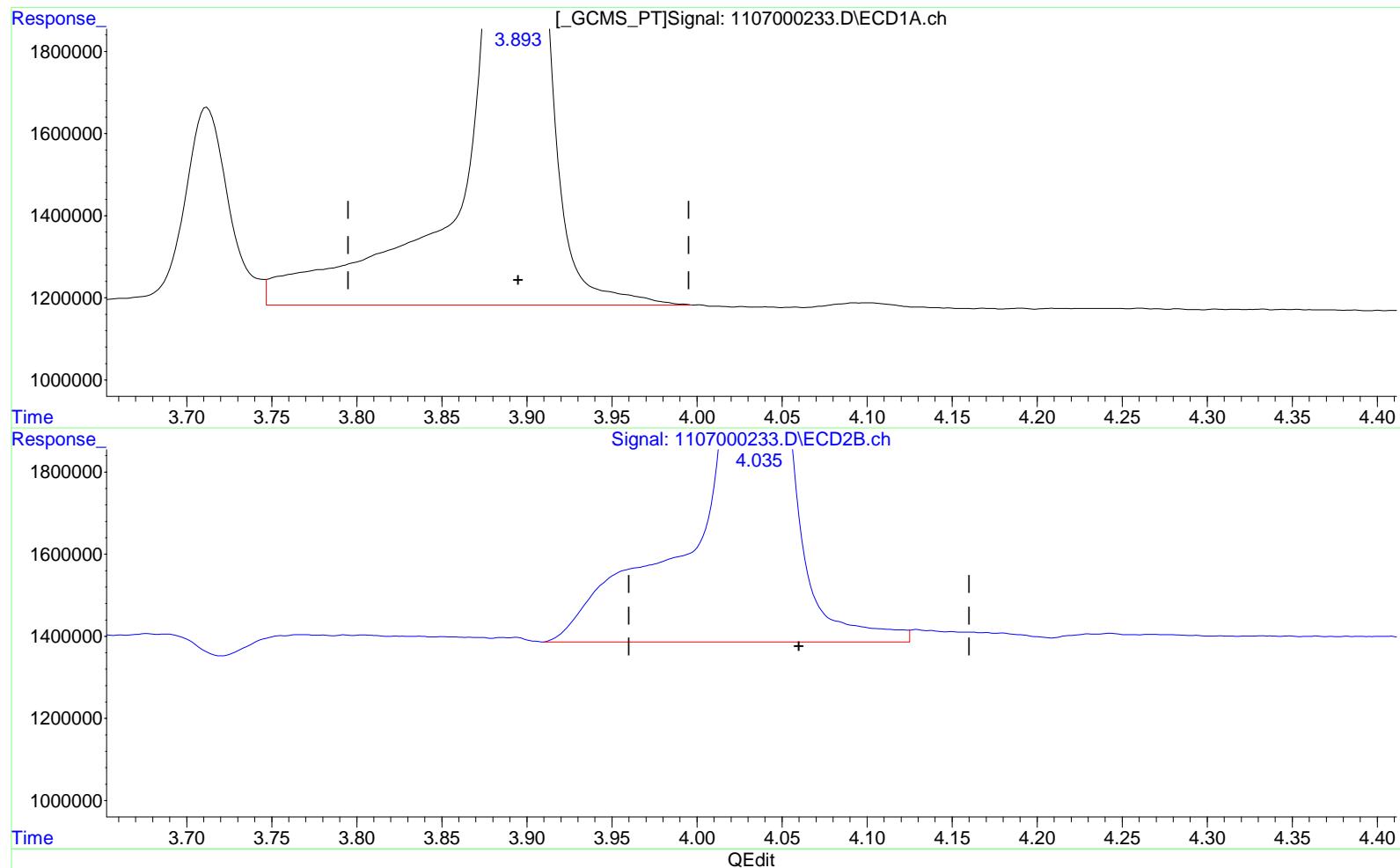
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000233.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 01:44:55 Operator: SMS
 Sample : KWG1610135-3LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:51 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.893min 4.244 ppb

response 5276626

Manual Integration:

Before

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

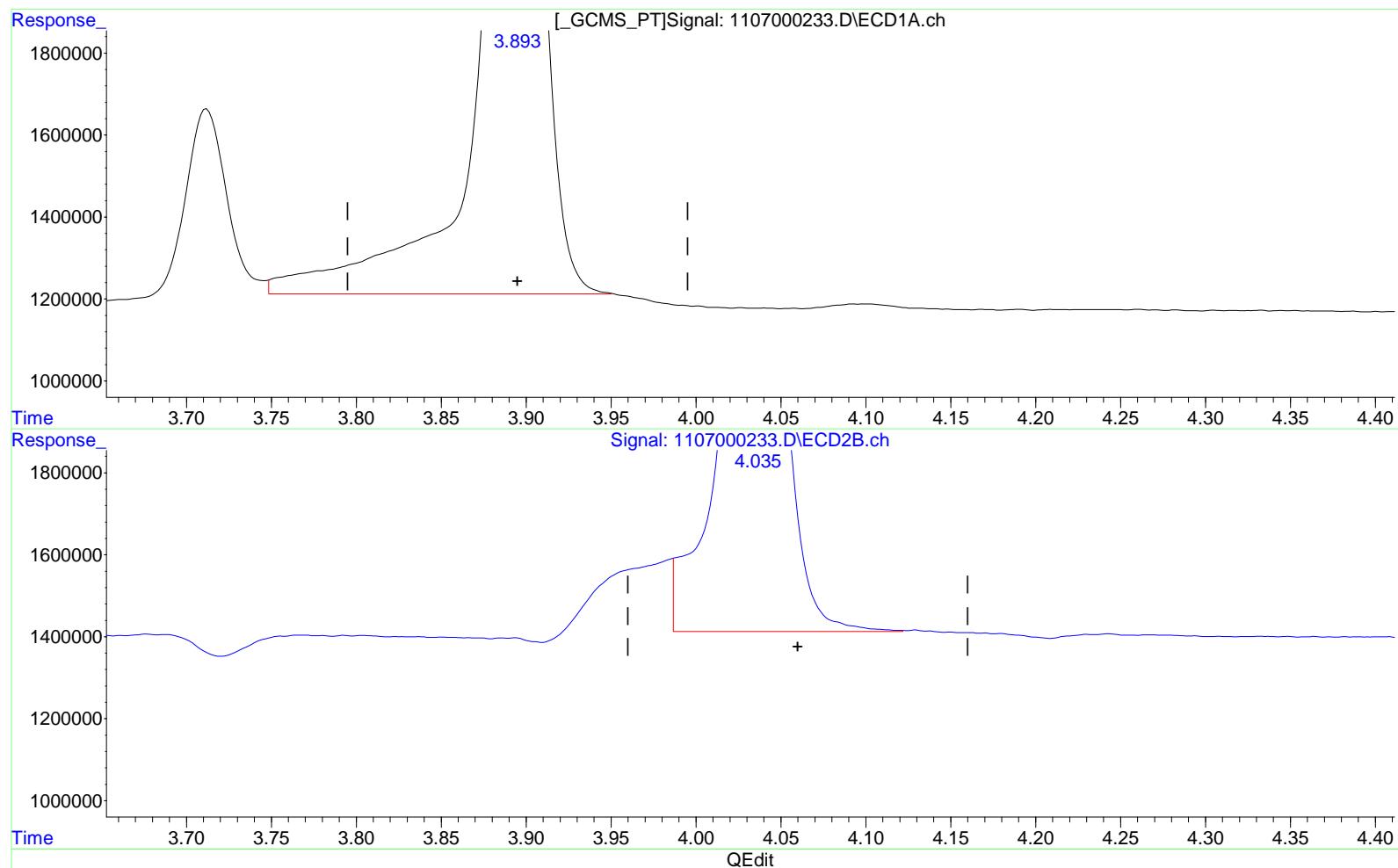
4.035min 4.454 ppb

response 4321595

Data File : J:\GC33\DATA\110716-504\1107000233.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 01:44:55 Operator: SMS
 Sample : KWG1610135-3LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:51 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.893min 3.956 ppb m

response 4874002

Manual Integration:

After

Baseline/Shoulder

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

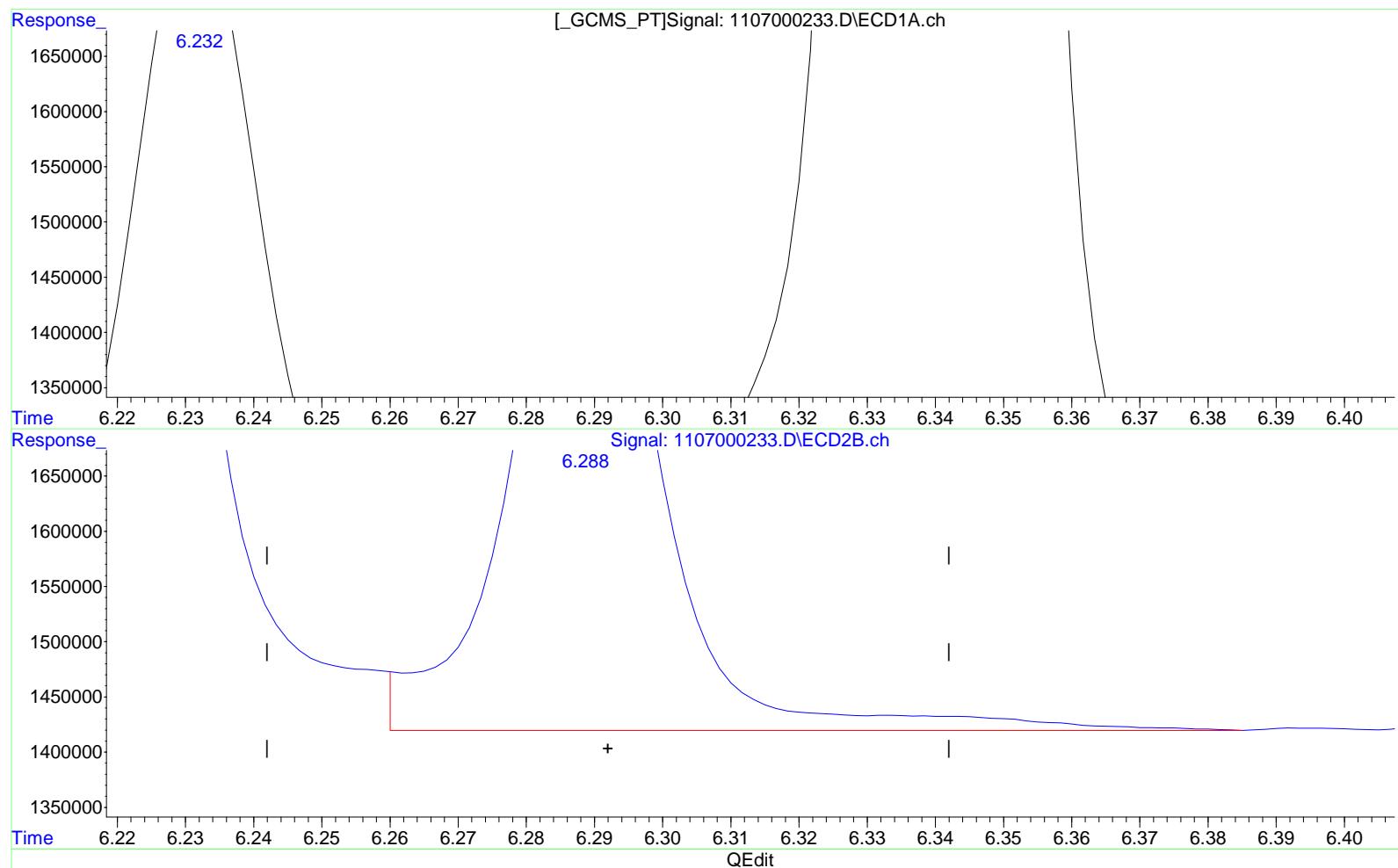
4.035min 3.619 ppb m

response 3511742

Data File : J:\GC33\DATA\110716-504\1107000233.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 01:44:55 Operator: SMS
 Sample : KWG1610135-3LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:51 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.232min 3.899 ppb

response 819383

Manual Integration:

Before

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

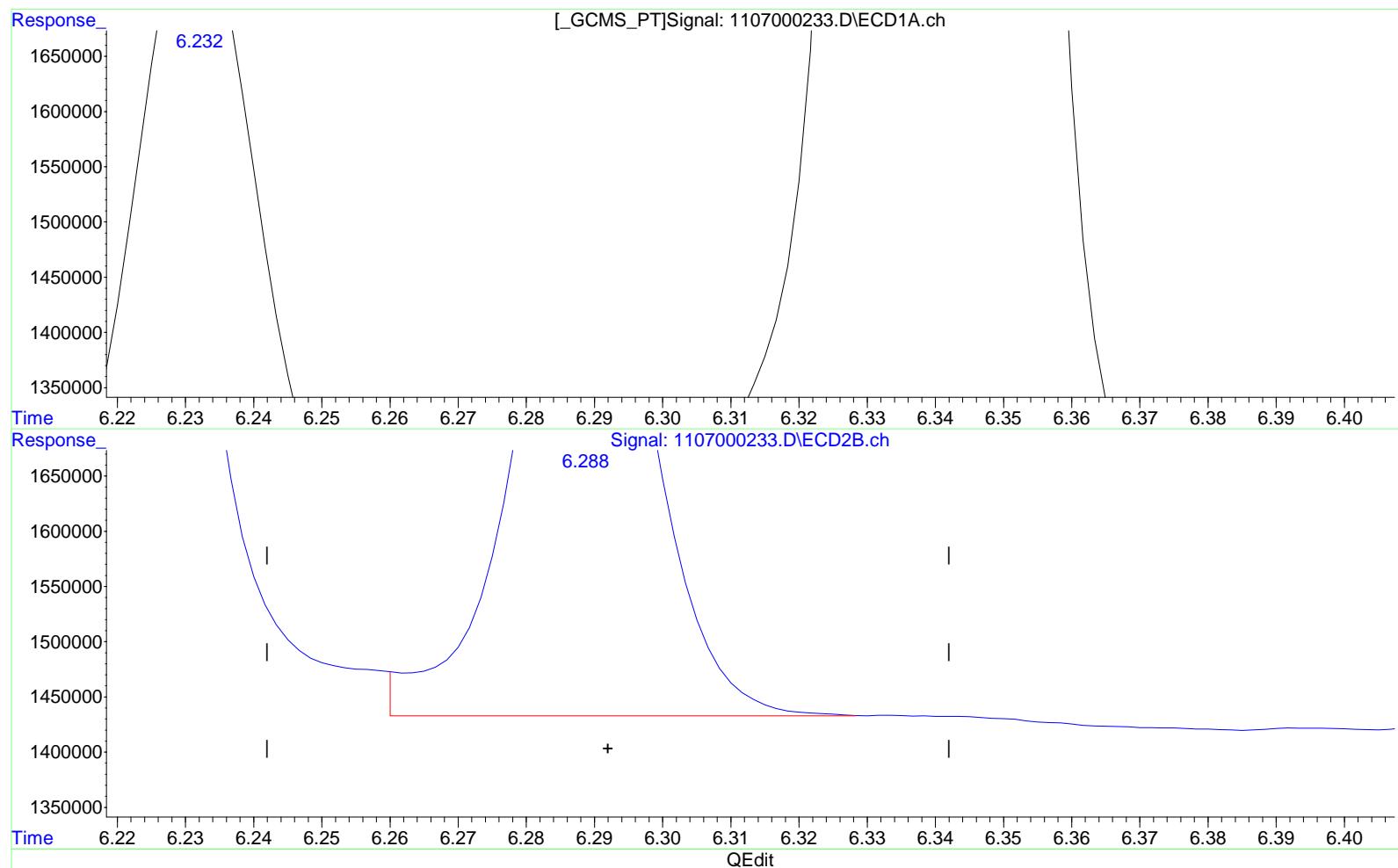
6.288min 3.780 ppb

response 781690

Data File : J:\GC33\DATA\110716-504\1107000233.D Vial: 27
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 01:44:55 Operator: SMS
 Sample : KWG1610135-3LCS Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:51 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.232min 3.899 ppb

response 819383

Manual Integration:

After

Baseline/Shoulder

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

6.288min 3.391 ppb m

response 703451

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000234.D
Lab ID: KWG1610135-4
RunType: LCS
Matrix: WATER

Date Acquired: 11/08/2016 02:08
Date Quantitated: 11/08/2016 07:46
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000234.D\1107000234C.
Lab ID: KWG1610135-4
RunType: LCS
Matrix: WATER

Date Acquired: 11/08/2016 02:08
Date Quantitated: 11/08/2016 07:46
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	X	
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Calibration Verification Pass/Fail	NA	NA	NA	X	
Continuing Calibration Recovery	NA	NA	NA	X	
Continuing Calibration Recovery (Closing)	NA	NA	NA	X	
Surrogates	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Retention Time	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Std MRL Unsupported by ICAL	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	
Overdiluted Analysis	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000234.D	Instrument:	GC33	
Data File #2:	J:\GC33\DATA\110716-504\1107000234.D\1107000234.c.d	Vial:	28	
Acq Date:	11/08/2016 02:08	Quant Date:	11/08/2016 07:46	
Run Type:	LCS	MethodJoinID:	MJ480	
Lab ID:	KWG1610135-4	Soln Conc. Units:	ppb	
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2	
Bottle ID:		Tier:	WATER	
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/07/2016	
Analysis Lot:	KWG1610188	Prep Lot:	KWG1610135	Report Group:
Analysis Method:	504.1	Prep Method:	METHOD	
Prep Ref:	1568864	Prep Date:	11/07/2016	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943	
Title:		Method ID:	MJ480	
MB Ref:	J:\GC33\DATA\110716-504\1107000235.D	Quant based on Method		

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	Final Conc. Units:		Rpt
							ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89 ^{-0.01}	4.04	5163577m	3722196m	4.16	3.84	0.238	0.219	0.219
1,2,3-Trichloropropane	6.23	6.29	852217	765775	4.05	3.70	0.231	0.211	0.211
1,2-Dibromo-3-chloropropan	7.66	7.87 ^{-0.01}	10758727	8379821	3.74	3.70	0.214	0.211	0.211

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 35.0000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000234.D Vial: 28
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:08:39 Operator: SMS
 Sample : KWG1610135-4LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:46:09 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

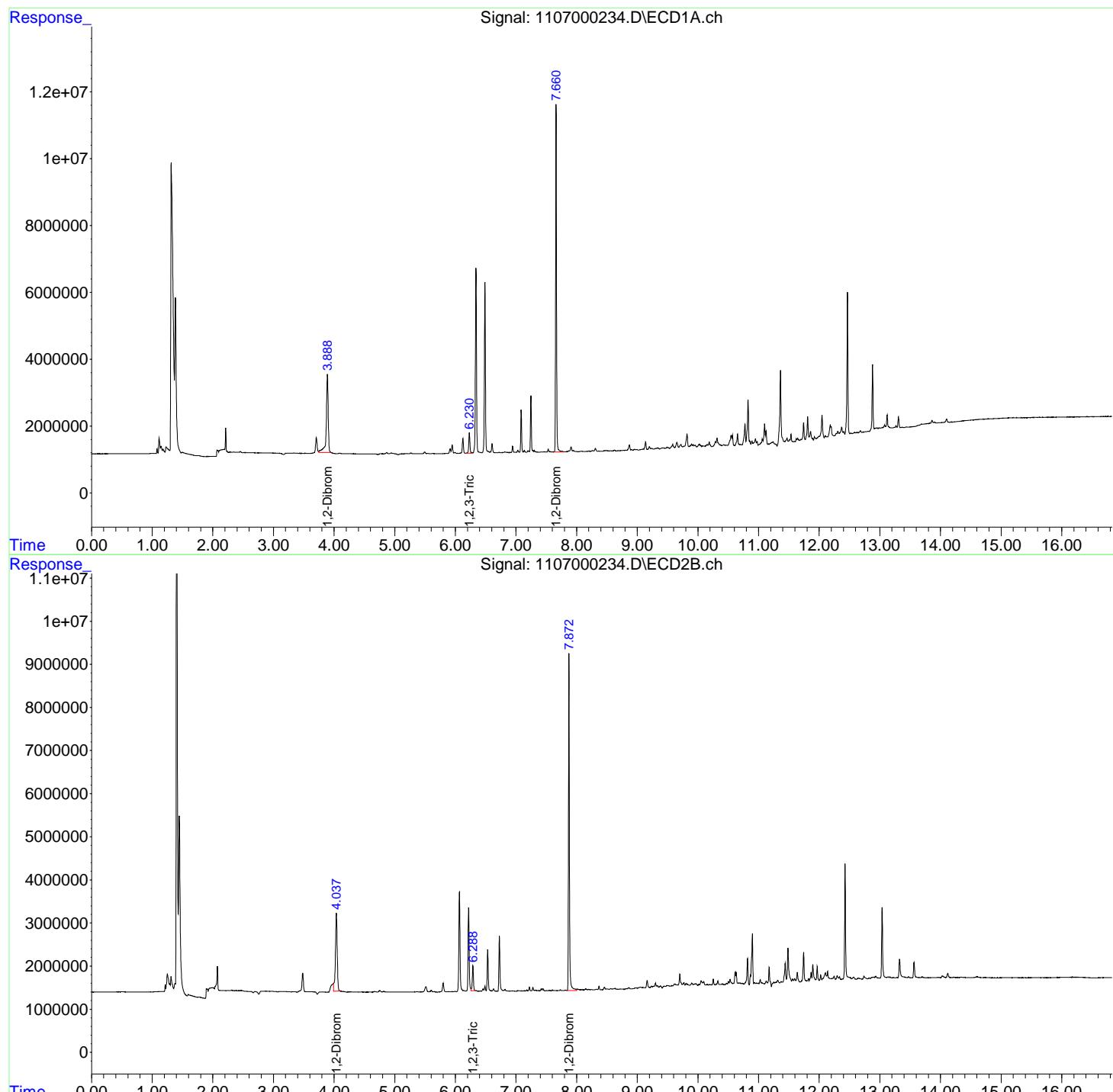
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.888	4.037	5163577	3722196	4.164m	3.836m
2) M 1,2,3-Tri...	6.230	6.288	852217	765775	4.051	3.701
3) M 1,2-Dibro...	7.660	7.872	10758727	8379821	3.737	3.700

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000234.D Vial: 28
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:08:39 Operator: SMS
 Sample : KWG1610135-4LCS Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:46:09 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

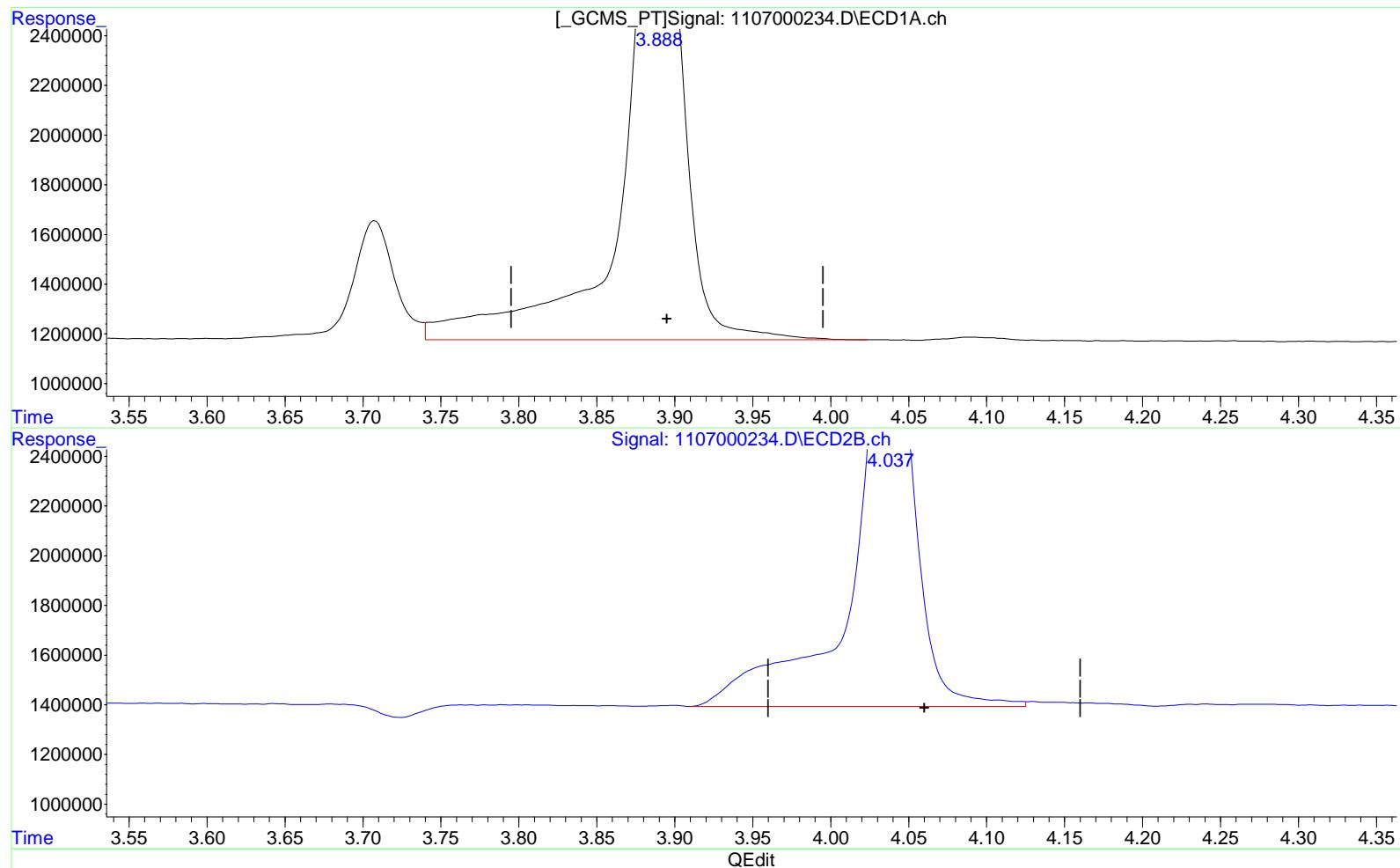
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000234.D Vial: 28
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:08:39 Operator: SMS
 Sample : KWG1610135-4LCS Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:53 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.888min 4.491 ppb

response 5626178

Manual Integration:

Before

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

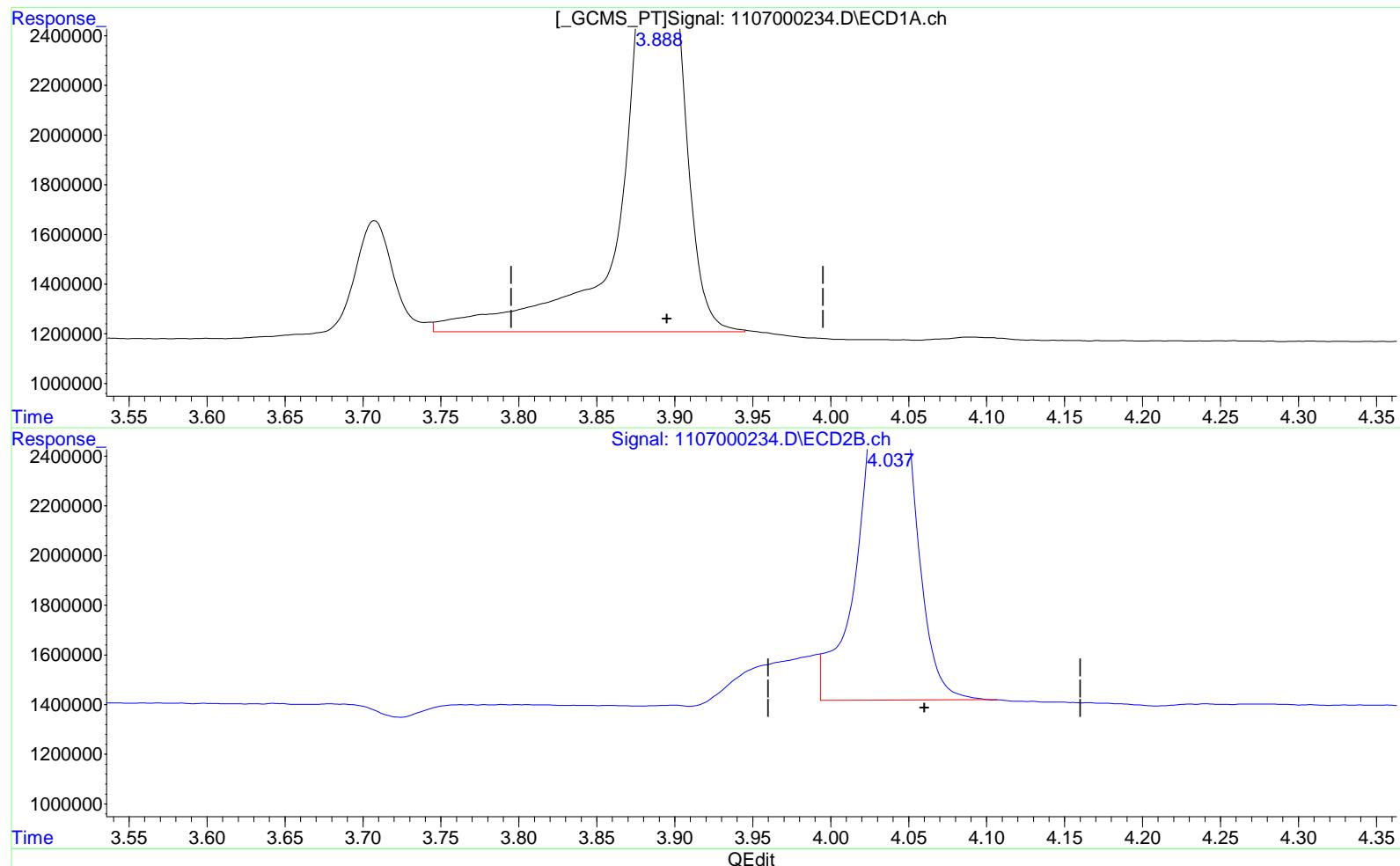
4.037min 4.704 ppb

response 4564046

Data File : J:\GC33\DATA\110716-504\1107000234.D Vial: 28
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:08:39 Operator: SMS
 Sample : KWG1610135-4LCS Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:53 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.888min 4.164 ppb m
 response 5163577

Manual Integration:
 After
 Baseline/Shoulder
 11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.037min 3.836 ppb m
 response 3722196

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000213.D
Lab ID: KWG1610188-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/07/2016 17:51
Date Quantitated: 11/08/2016 07:27
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000213.D\1107000213C.
Lab ID: KWG1610188-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/07/2016 17:51
Date Quantitated: 11/08/2016 07:27
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000213.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000213.D\1107000213c.d	Vial:	6
Acq Date:	11/07/2016 17:51	Quant Date:	11/08/2016 07:27
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1610188-1	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	11/08/2016
Analysis Lot:	KWG1610188	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89	4.04	1512866m	1235789m	1.33	1.27			
1,2,3-Trichloropropane	6.23	6.29	253651	264250m	1.29	1.21			
1,2-Dibromo-3-chloropropan	7.66	7.87	3154861	2537280	1.10	1.12			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 17:51:39 Operator: SMS
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:27:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

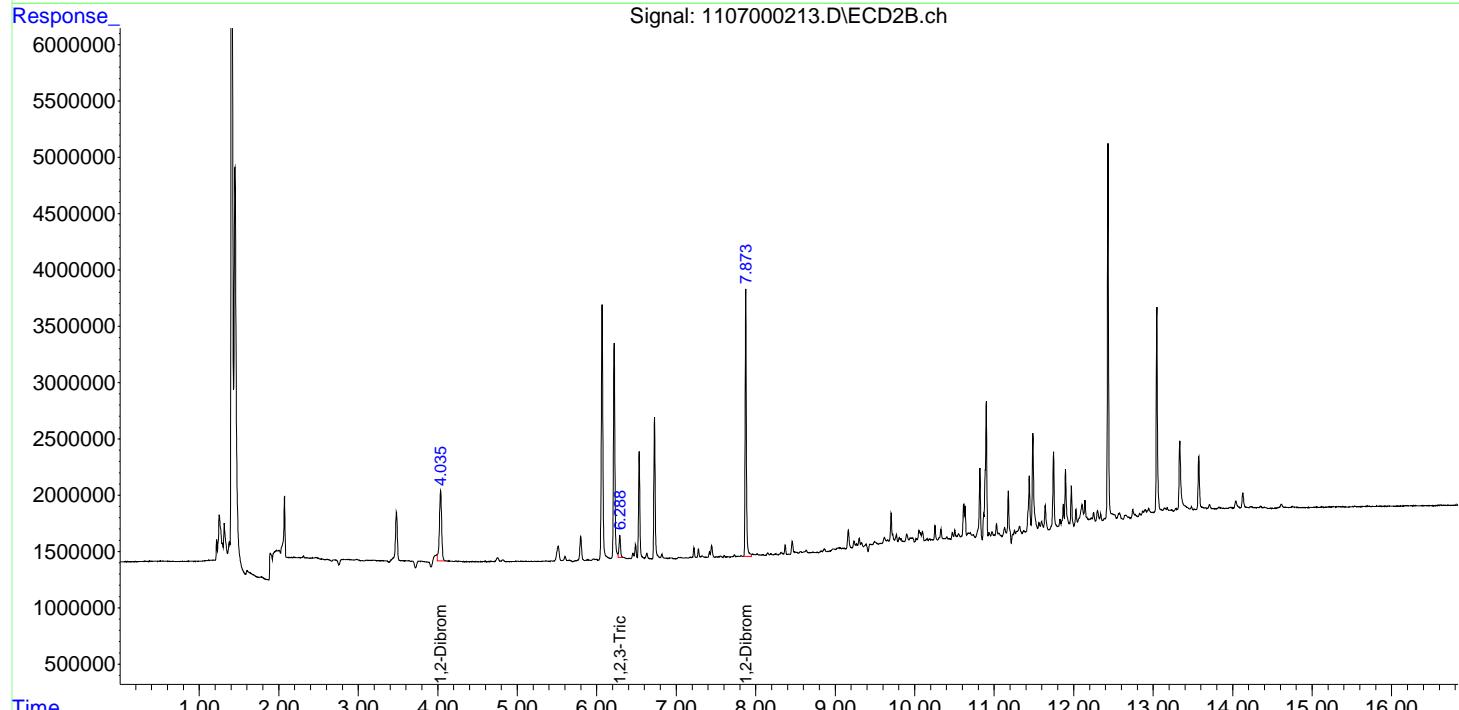
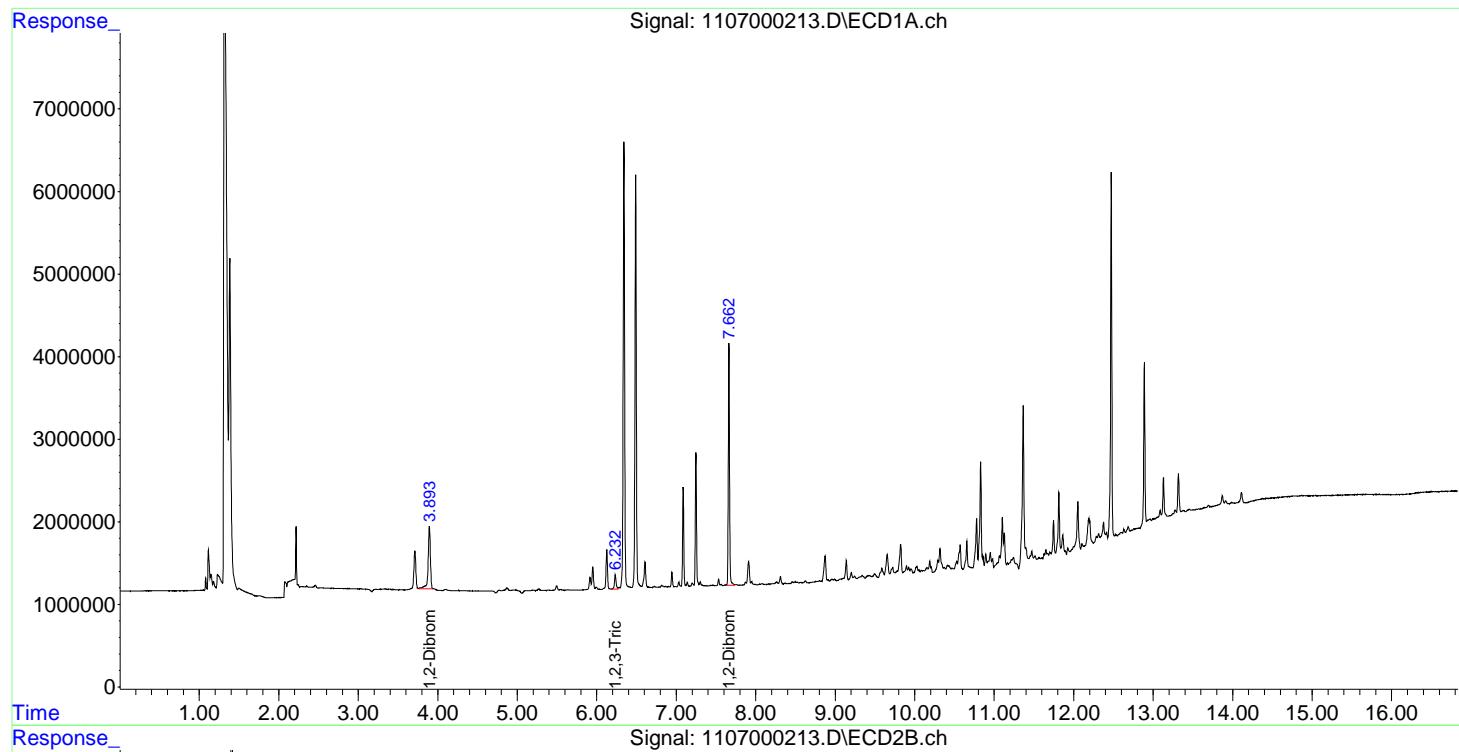
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.893	4.035	1512866	1235789	1.333m	1.274m
2) M 1,2,3-Tri...	6.232	6.288	253651	264250	1.289	1.205m
3) M 1,2-Dibro...	7.662	7.873	3154861	2537280	1.096	1.120

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 17:51:39 Operator: SMS
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:27:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

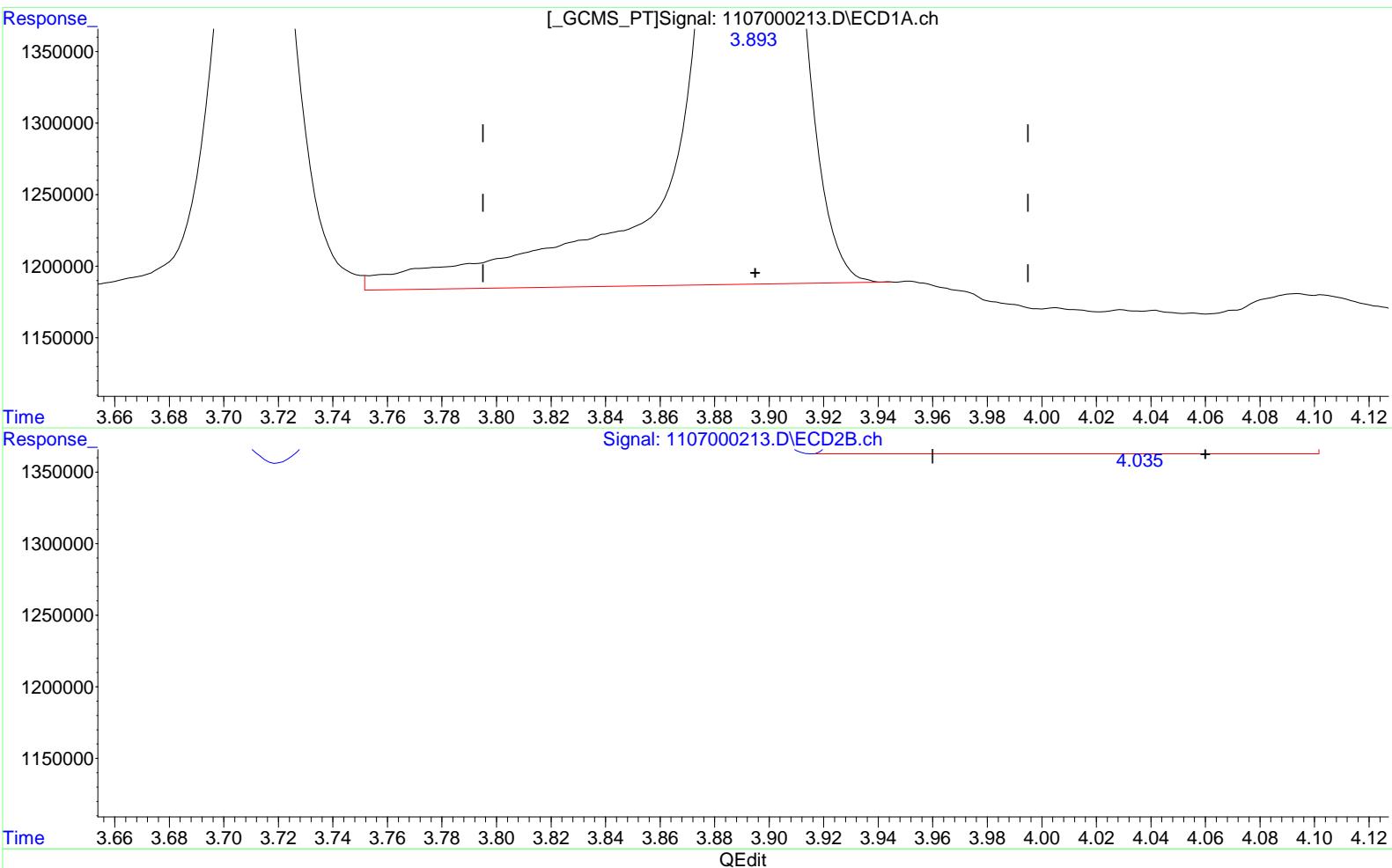
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 17:51:39 Operator: SMS
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:08:52 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.893min 1.363 ppb

response 1549138

Manual Integration:

Before

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

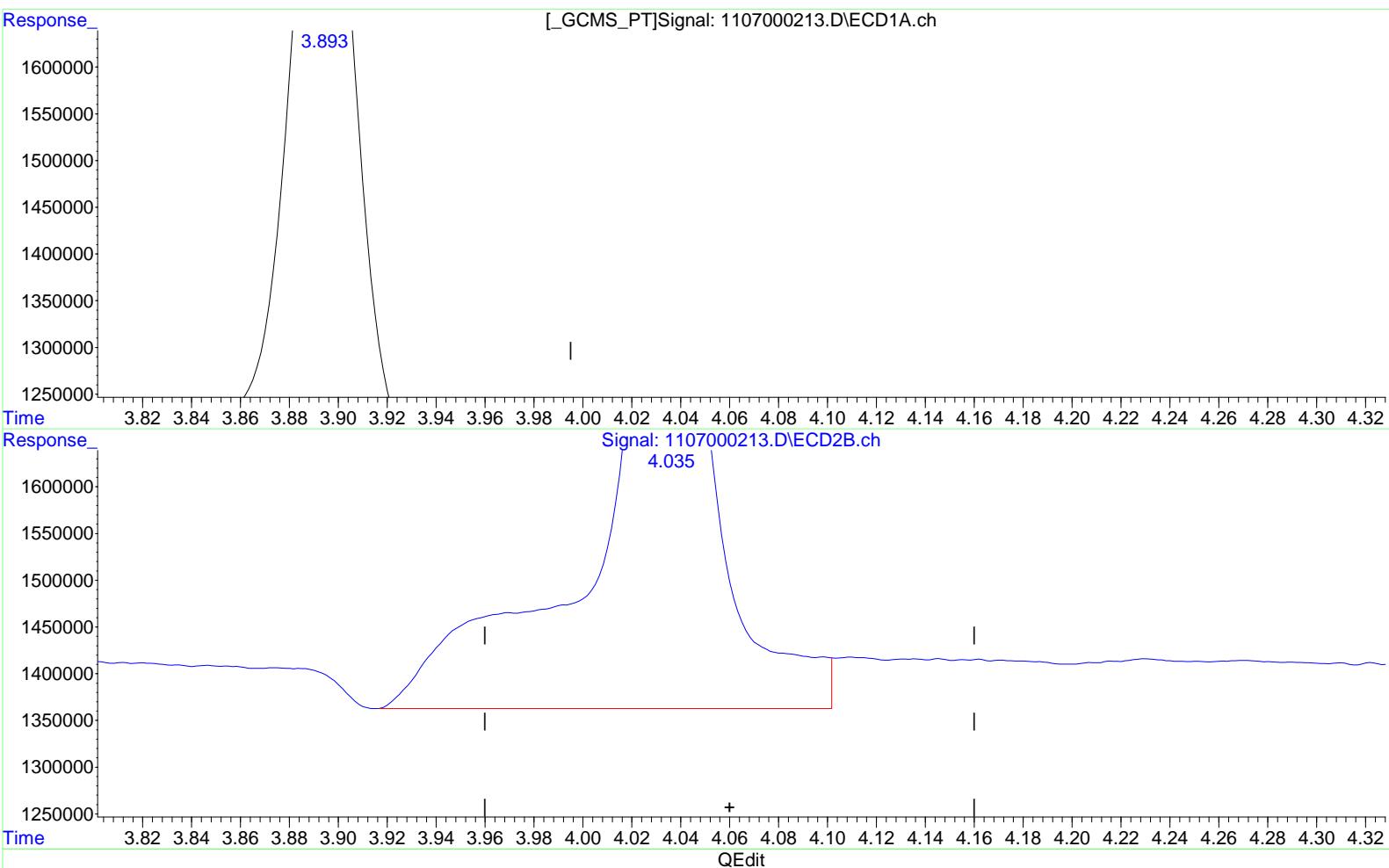
4.035min 2.002 ppb

response 1942963

Data File : J:\GC33\DATA\110716-504\1107000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 17:51:39 Operator: SMS
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:08:52 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.893min 1.333 ppb m
 response 1512866

Manual Integration:

Before

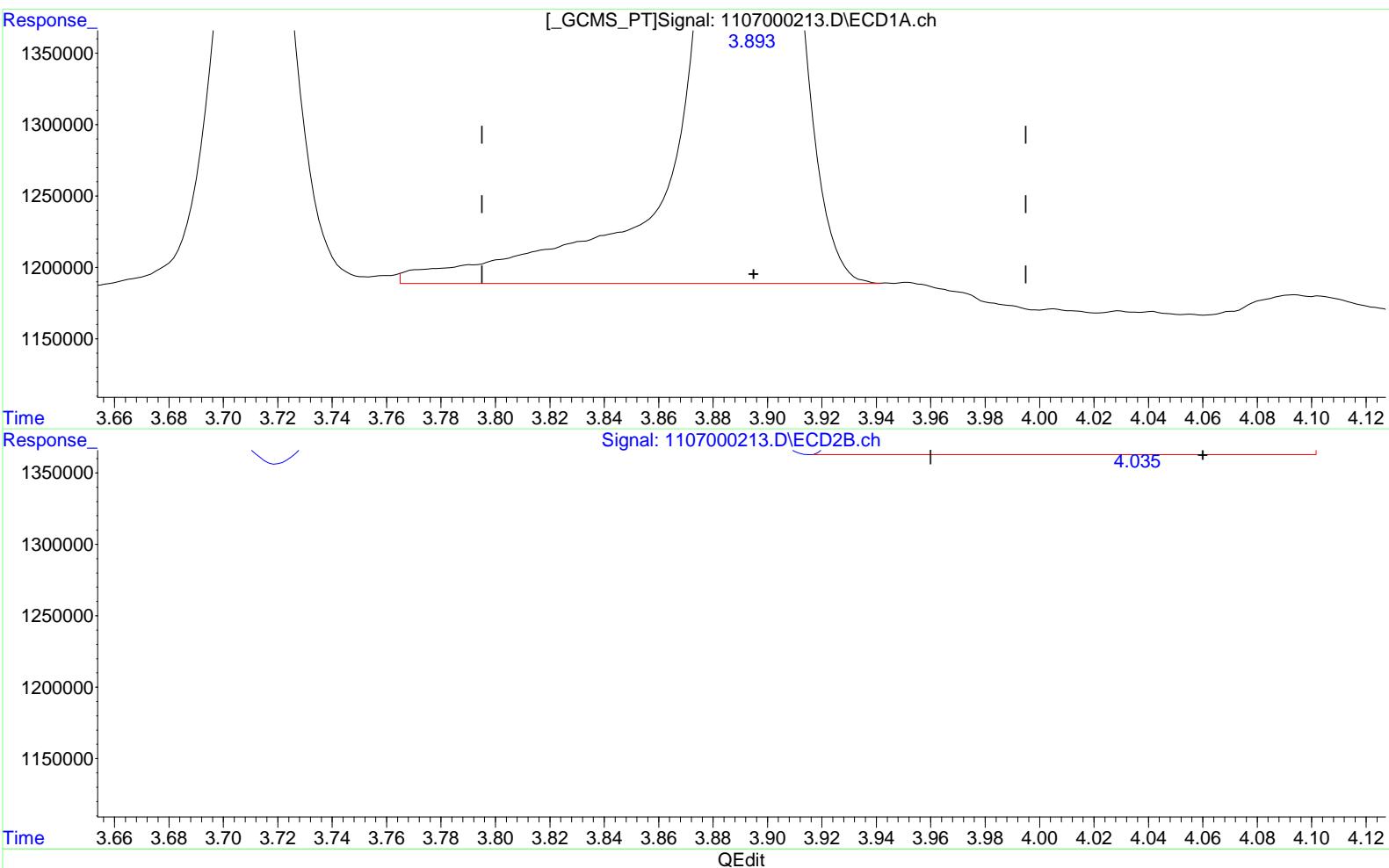
11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.035min 2.002 ppb
 response 1942963

Data File : J:\GC33\DATA\110716-504\1107000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 17:51:39 Operator: SMS
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:08:52 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.893min 1.333 ppb m

response 1512866

Manual Integration:

After

Baseline/Shoulder

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

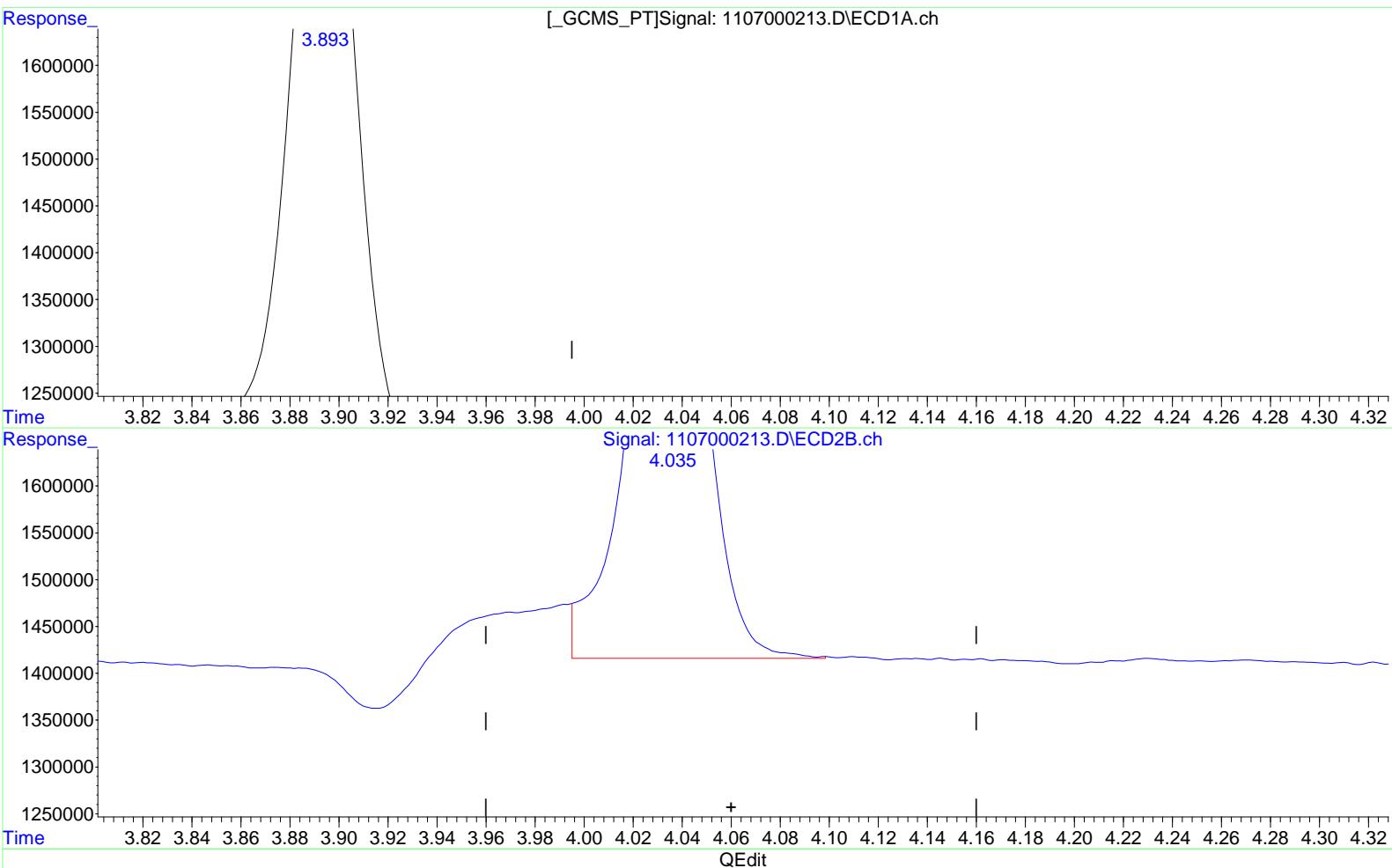
4.035min 2.002 ppb

response 1942963

Data File : J:\GC33\DATA\110716-504\1107000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 17:51:39 Operator: SMS
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:08:52 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.893min 1.333 ppb m
 response 1512866

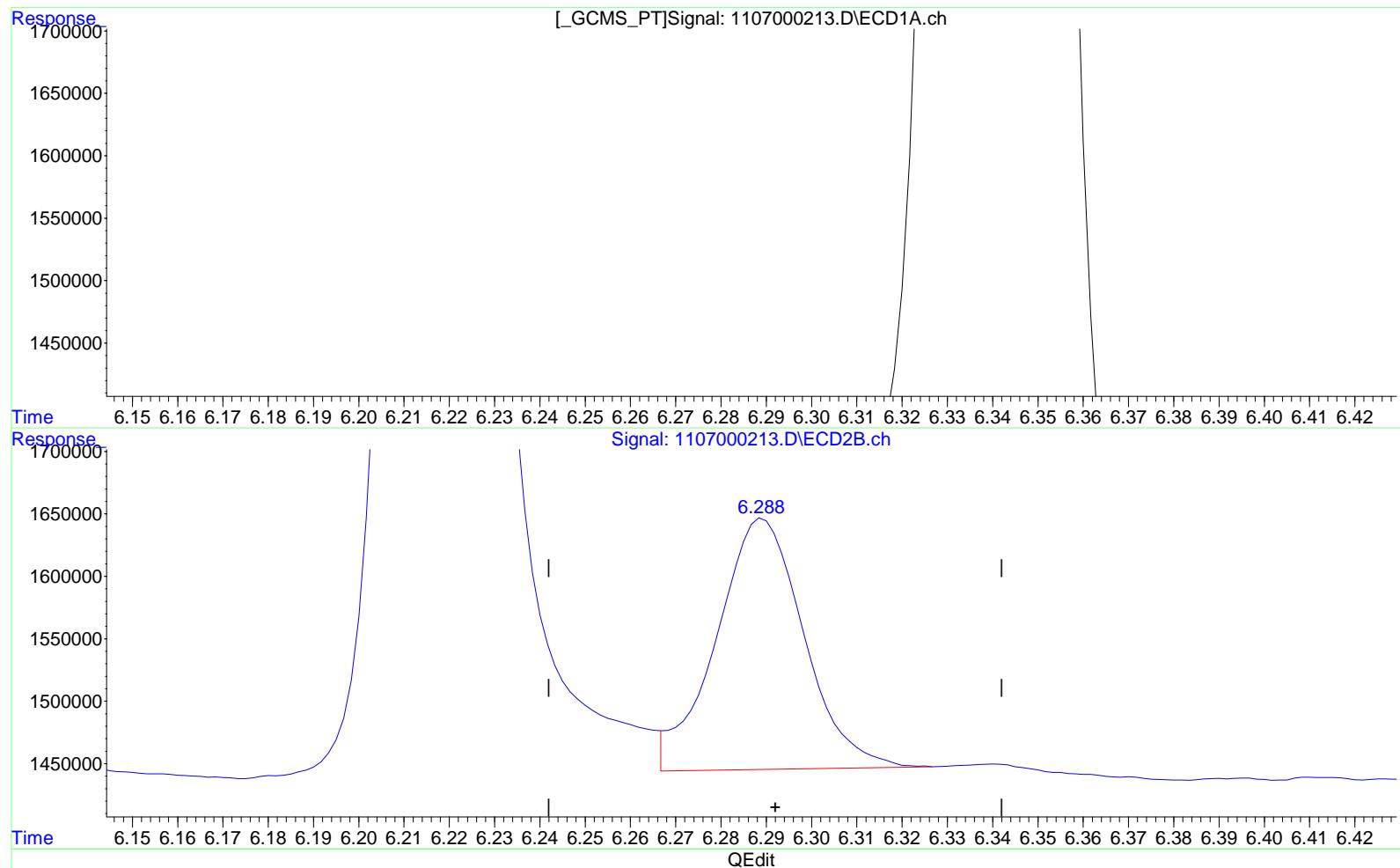
Manual Integration:
 After
 Baseline/Shoulder
 11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.035min 1.274 ppb m
 response 1235789

Data File : J:\GC33\DATA\110716-504\1107000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 17:51:39 Operator: SMS
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:08:52 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.232min 1.289 ppb

response 253651

Manual Integration:

Before

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

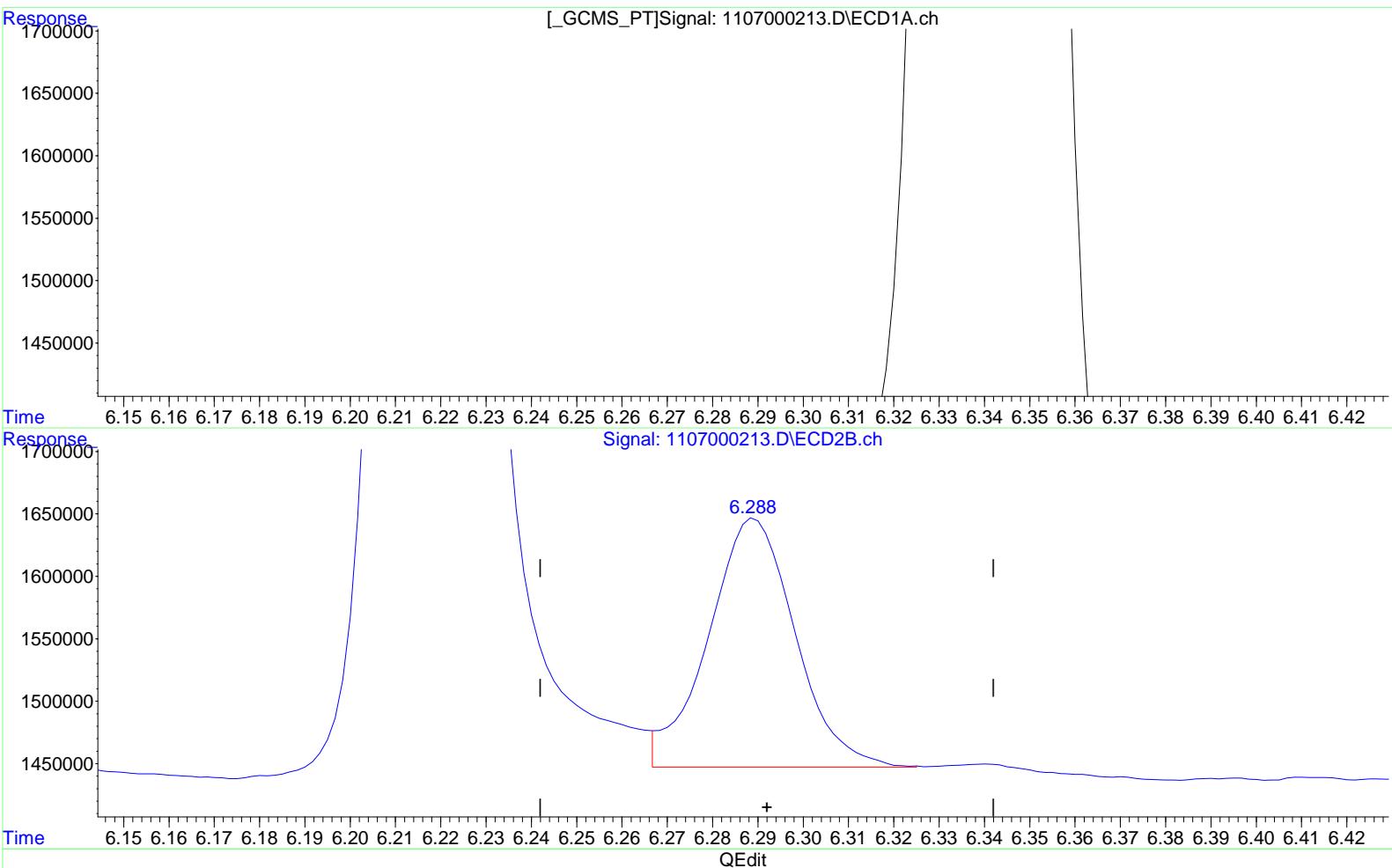
6.288min 1.230 ppb

response 269216

Data File : J:\GC33\DATA\110716-504\1107000213.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 17:51:39 Operator: SMS
 Sample : CCV LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:08:52 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.232min 1.289 ppb

response 253651

Manual Integration:

After

Baseline/Shoulder

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

6.288min 1.205 ppb m

response 264250

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000225.D
Lab ID: KWG1610188-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/07/2016 22:35
Date Quantitated: 11/08/2016 07:39
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000225.D\1107000225C.
Lab ID: KWG1610188-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/07/2016 22:35
Date Quantitated: 11/08/2016 07:39
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000225.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000225.D\1107000225c.d	Vial:	8
Acq Date:	11/07/2016 22:35	Quant Date:	11/08/2016 07:39
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1610188-2	Dilution:	1.0
Signal #1:	RTX-CLP	Soln Conc. Units:	ppb
Signal #2:	RTX-CLP2		
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	11/08/2016
Analysis Lot:	KWG1610188	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.90	4.04	6309717m	4483330m	4.96	4.62			
1,2,3-Trichloropropane	6.23	6.29	970704	894611m	4.60	4.34			
1,2-Dibromo-3-chloropropan	7.66	7.88	12973245	9876609	4.51	4.36			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000225.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:35:21 Operator: SMS
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:39:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

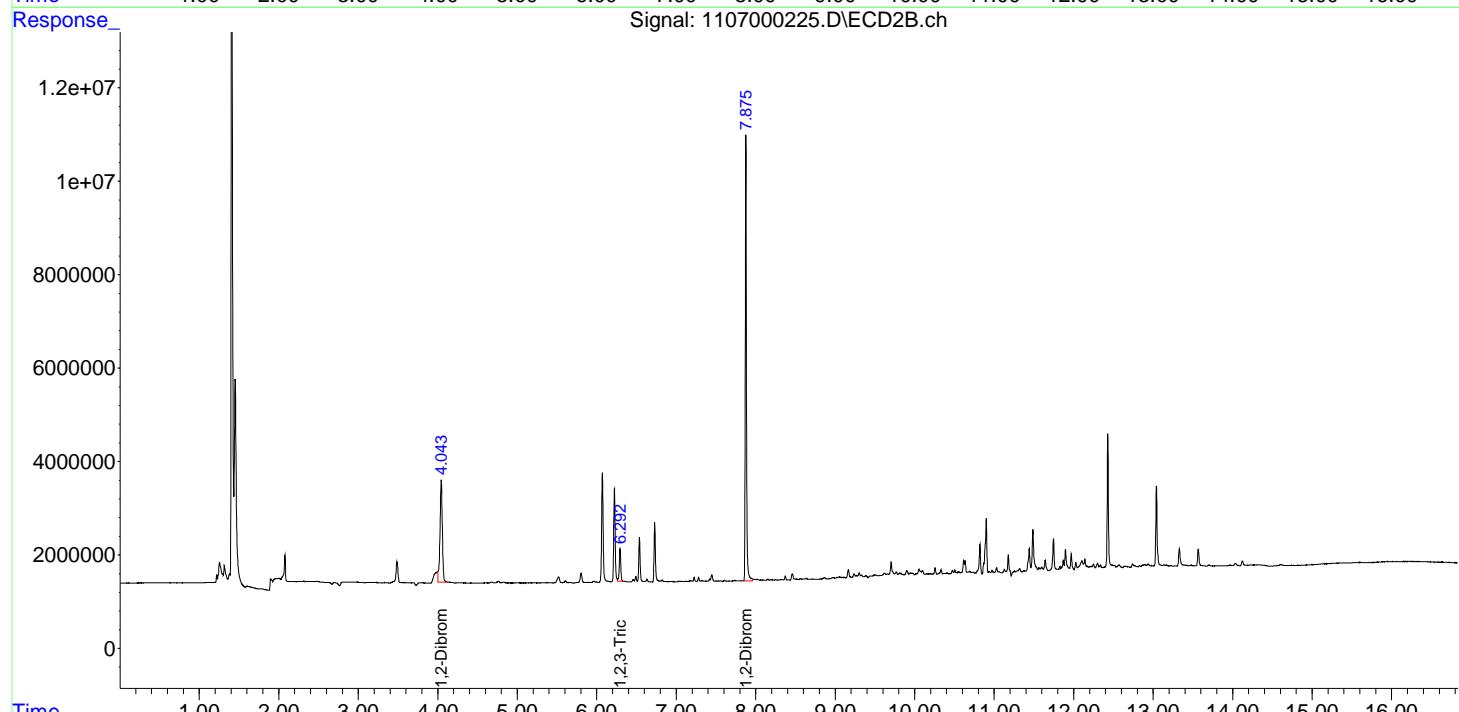
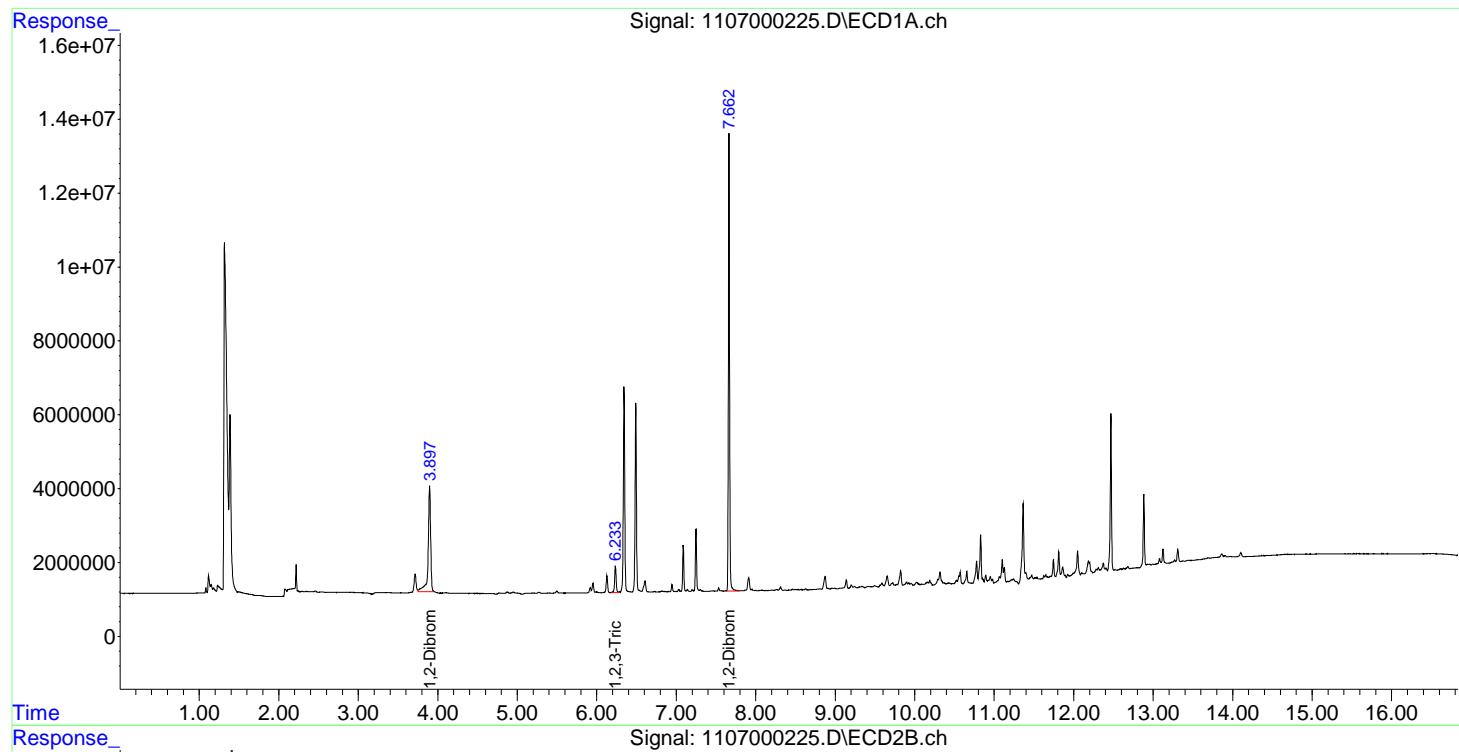
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.897	4.043	6309717	4483330	4.963m	4.620m
2) M 1,2,3-Tribromoethane	6.233	6.292	970704	894611	4.597	4.342m
3) M 1,2-Dibromoethane	7.662	7.875	12973245	9876609	4.506	4.360

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000225.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:35:21 Operator: SMS
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:39:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

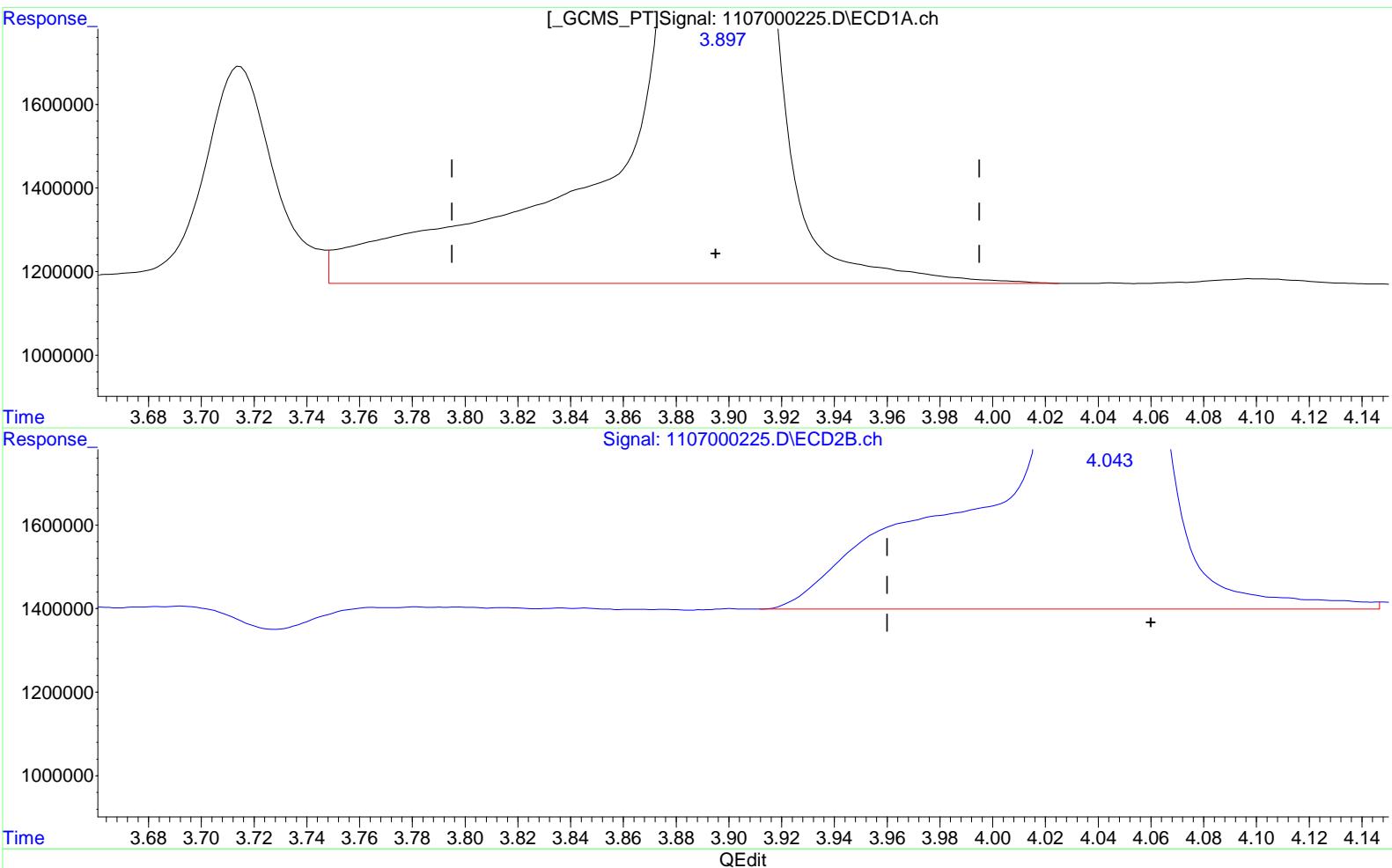
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000225.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:35:21 Operator: SMS
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:20:44 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.327 ppb

response 6849703

Manual Integration:

Before

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

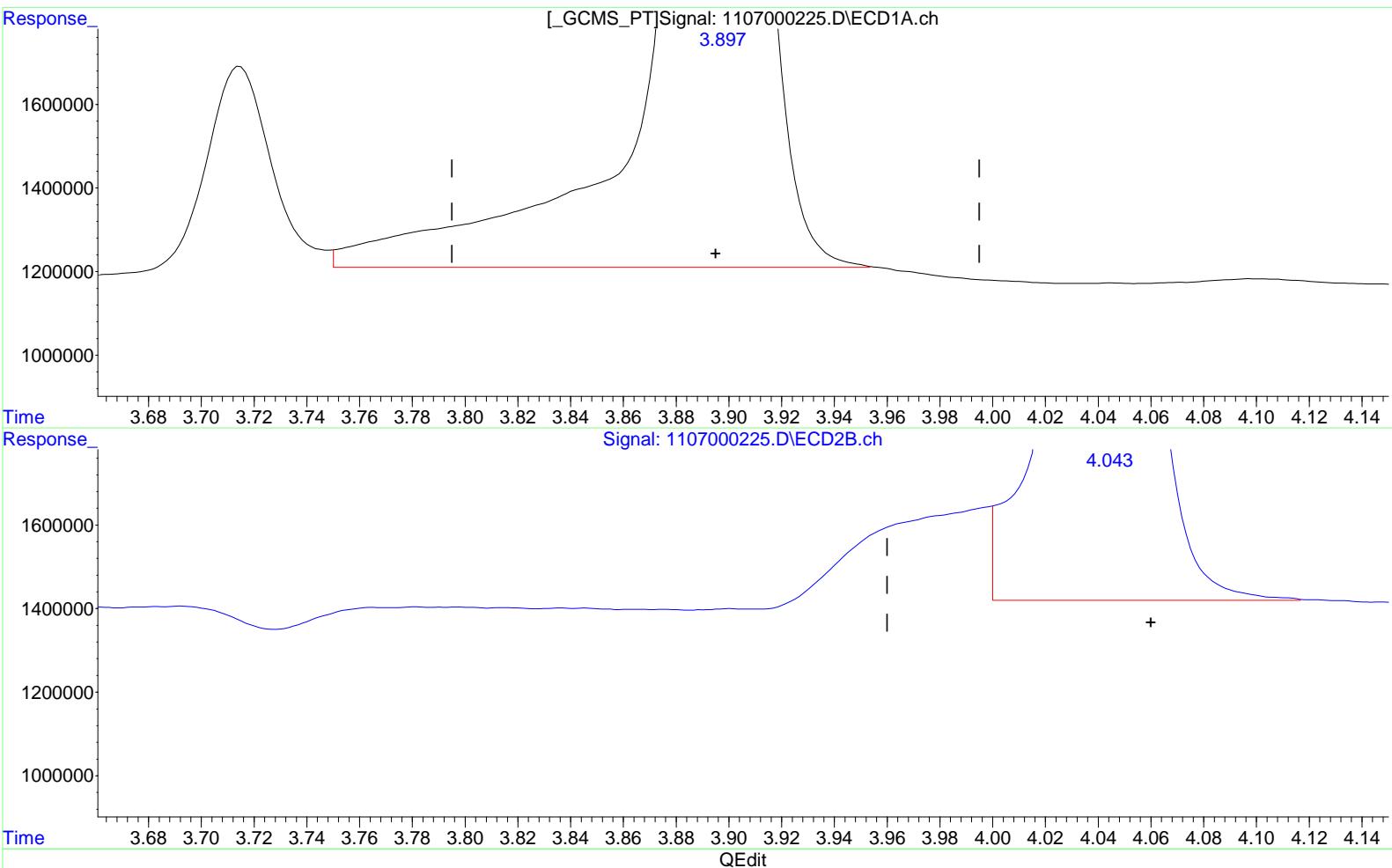
4.043min 5.626 ppb

response 5459193

Data File : J:\GC33\DATA\110716-504\1107000225.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:35:21 Operator: SMS
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:20:44 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.963 ppb m

response 6309717

Manual Integration:

After

Baseline/Shoulder

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

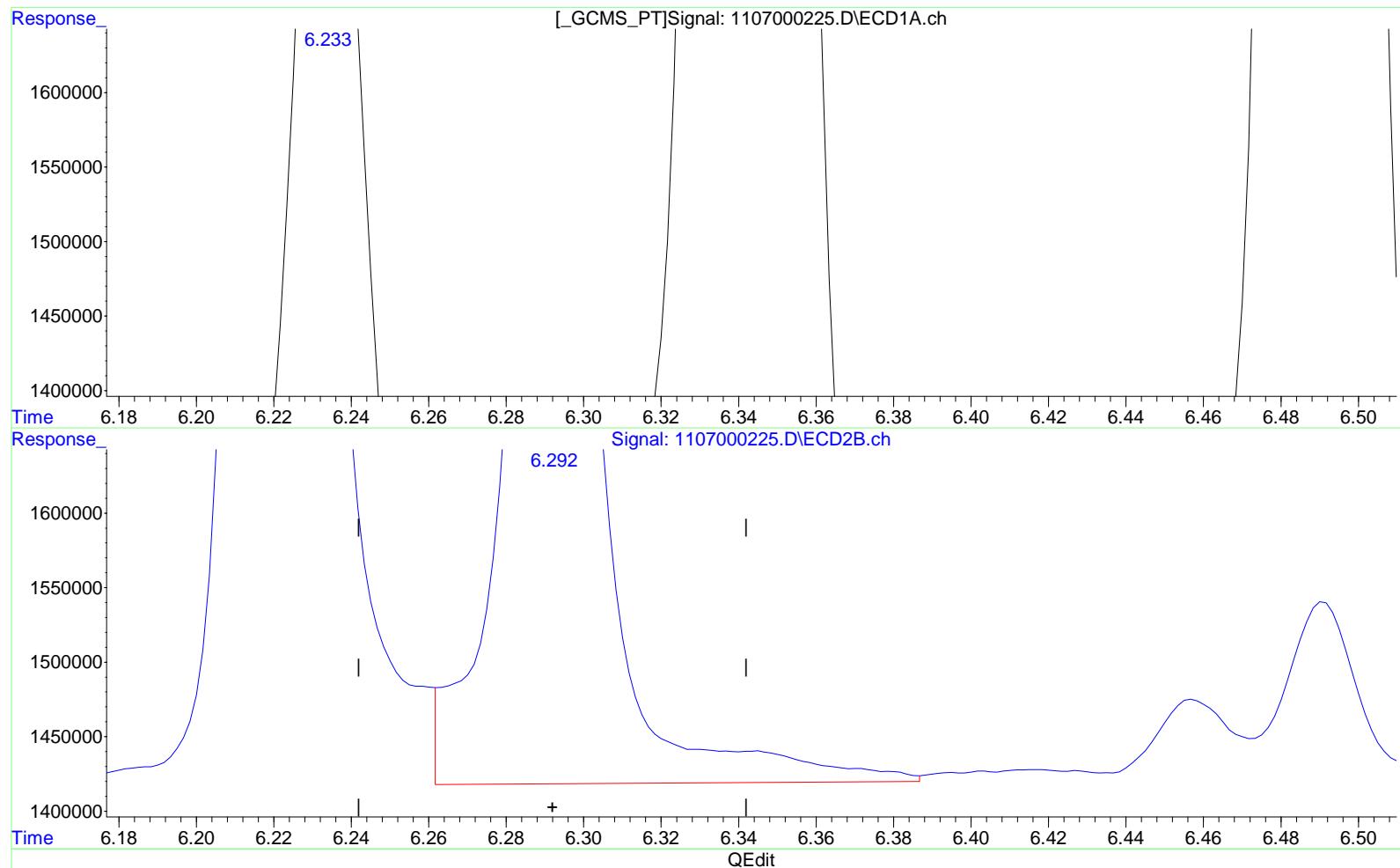
4.043min 4.620 ppb m

response 4483330

Data File : J:\GC33\DATA\110716-504\1107000225.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:35:21 Operator: SMS
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:20:44 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.233min 4.597 ppb

response 970704

Manual Integration:

Before

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

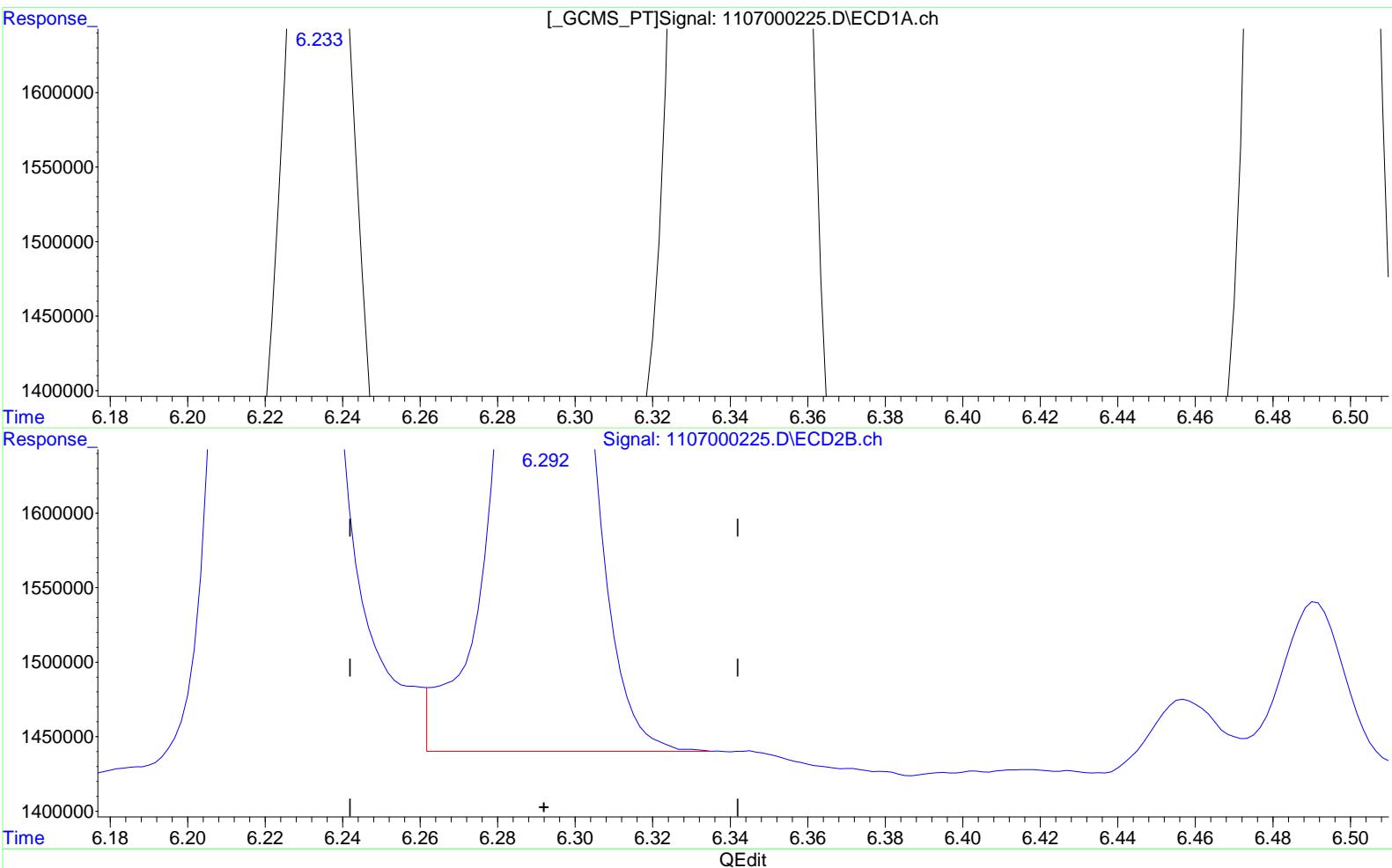
6.292min 5.011 ppb

response 1029144

Data File : J:\GC33\DATA\110716-504\1107000225.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:35:21 Operator: SMS
 Sample : 110716 504 LV7 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:20:44 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
 6.233min 4.597 ppb
 response 970704

Manual Integration:
 After
 Baseline/Shoulder
 11/08/16

(2) 1,2,3-Trichloropropane #2 (M)
 6.292min 4.342 ppb m
 response 894611

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000236.D
Lab ID: KWG1610188-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/08/2016 02:55
Date Quantitated: 11/08/2016 07:49
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000236.D\1107000236C.
Lab ID: KWG1610188-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/08/2016 02:55
Date Quantitated: 11/08/2016 07:49
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000236.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000236.D\1107000236c.d	Vial:	6
Acq Date:	11/08/2016 02:55	Quant Date:	11/08/2016 07:49
Run Type:	CCV	MethodJoinID:	MJ480
Lab ID:	KWG1610188-3	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/08/2016
Analysis Lot:	KWG1610188	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	Final Conc. Units: ug/L								Rpt
	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)	3.89	4.03	1563751	1219116m	1.38	1.26			
1,2,3-Trichloropropane	6.23	6.29	258744	264958m	1.31	1.21			
1,2-Dibromo-3-chloropropan	7.66	7.87	3415030	2497746	1.19	1.10			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000236.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:55:52 Operator: SMS
 Sample : 110716 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:49:33 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

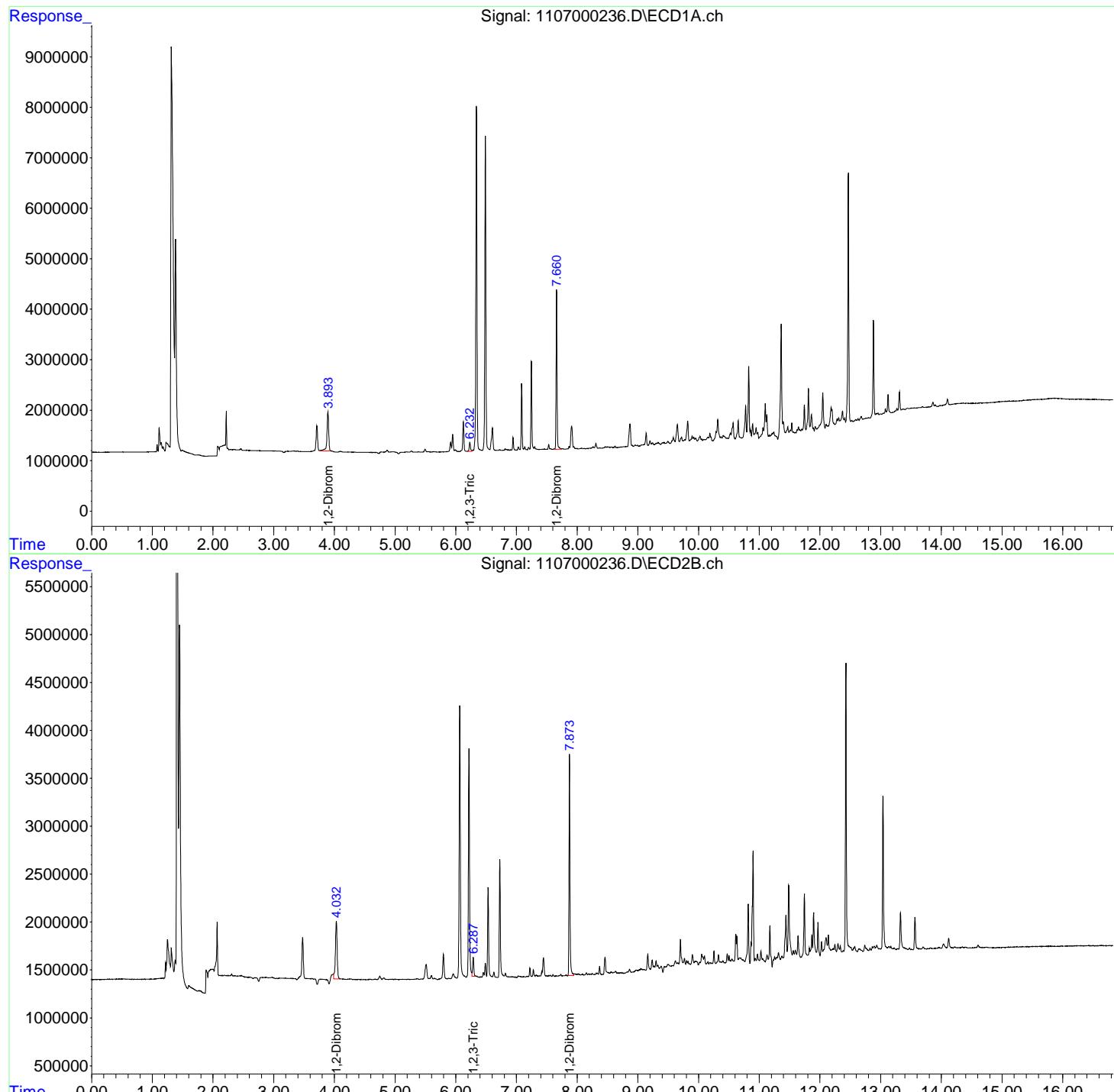
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.893	4.032	1563751	1219116	1.376	1.256m
2) M 1,2,3-Tri...	6.232	6.287	258744	264958	1.313	1.209m
3) M 1,2-Dibro...	7.660	7.873	3415030	2497746	1.186	1.103

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000236.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:55:52 Operator: SMS
 Sample : 110716 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:49:33 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

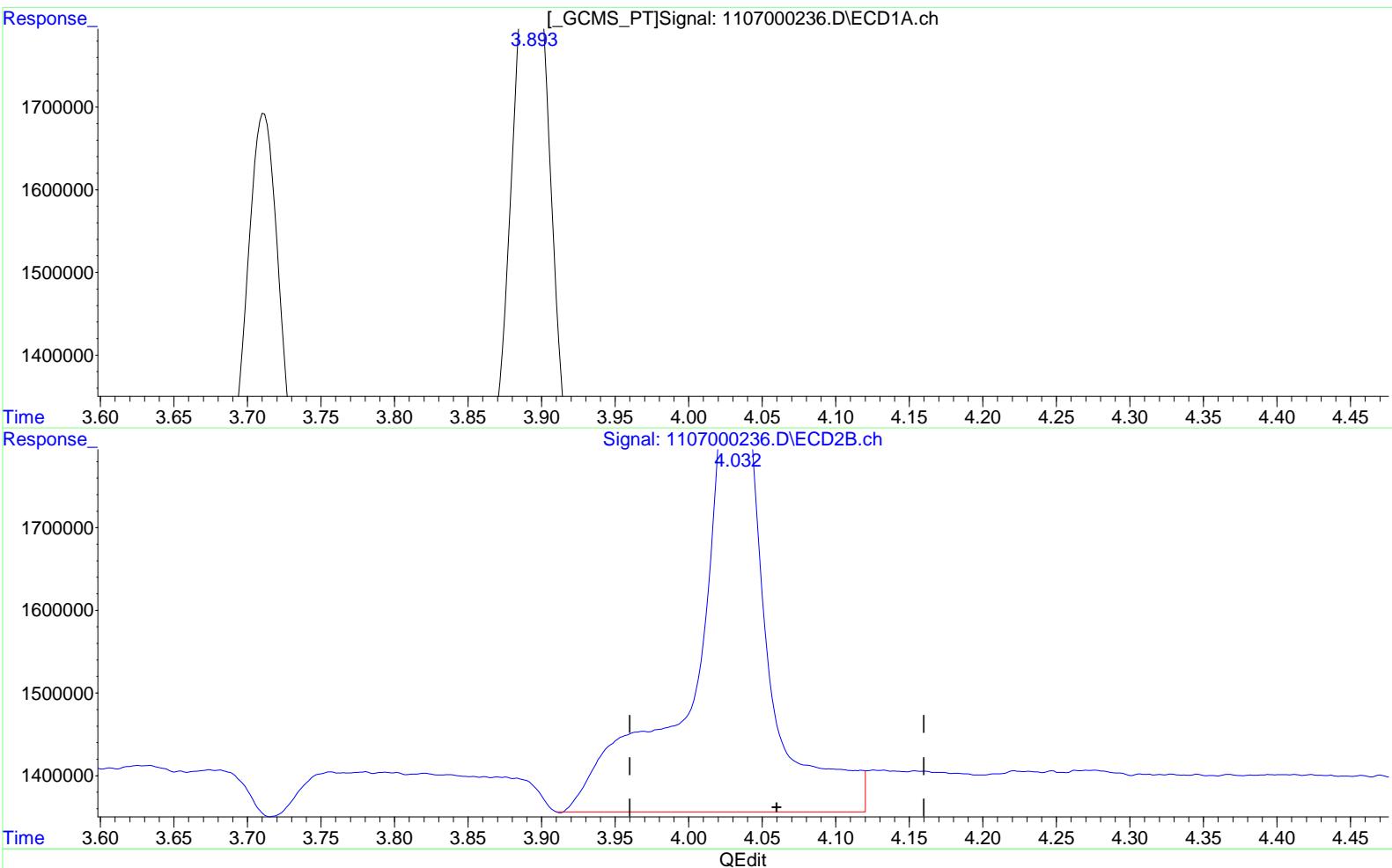
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000236.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:55:52 Operator: SMS
 Sample : 110716 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:57 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.893min 1.376 ppb

response 1563751

Manual Integration:

Before

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

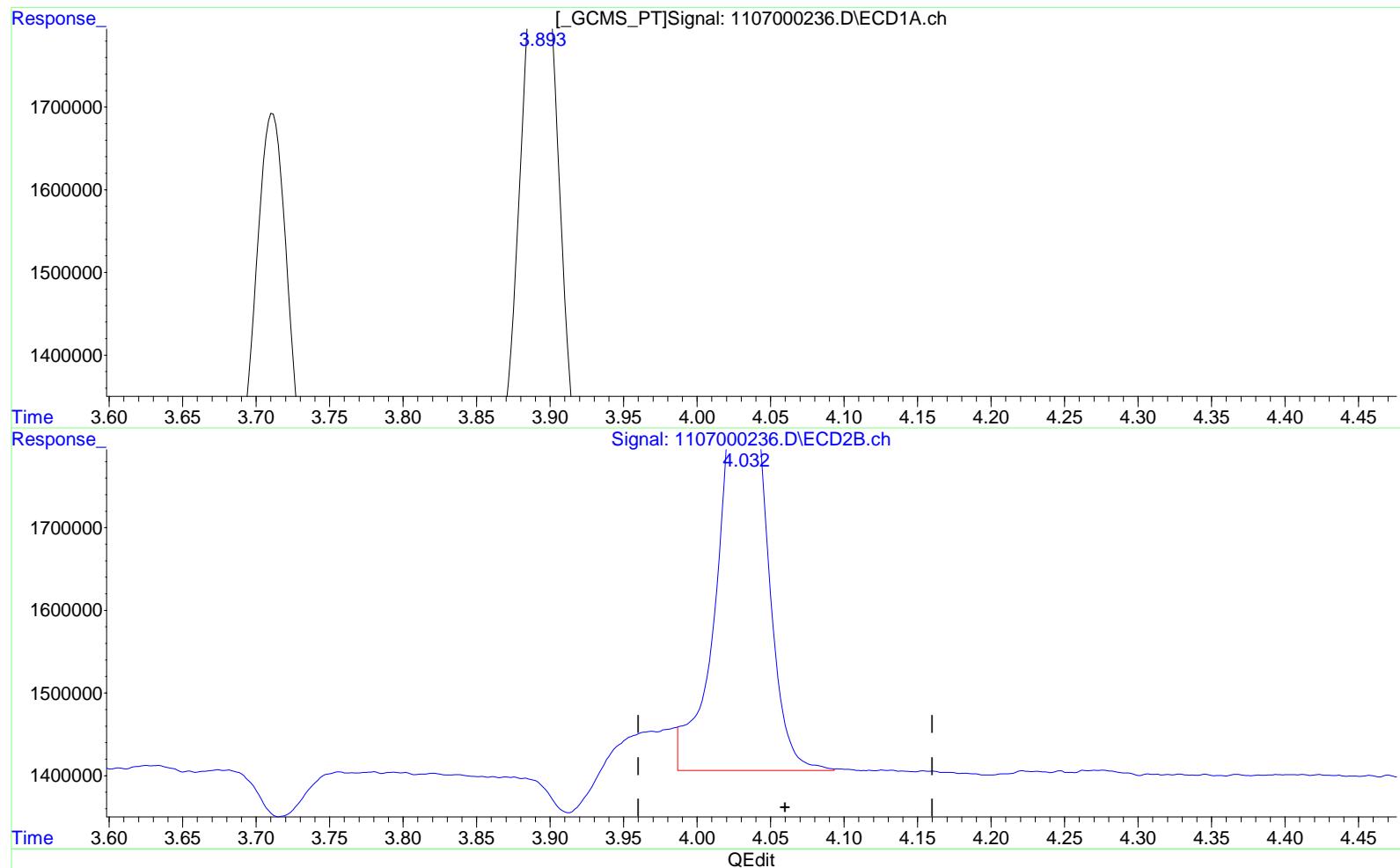
4.032min 1.991 ppb

response 1932322

Data File : J:\GC33\DATA\110716-504\1107000236.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:55:52 Operator: SMS
 Sample : 110716 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:57 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.893min 1.376 ppb

response 1563751

Manual Integration:

After

Baseline/Shoulder

11/08/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

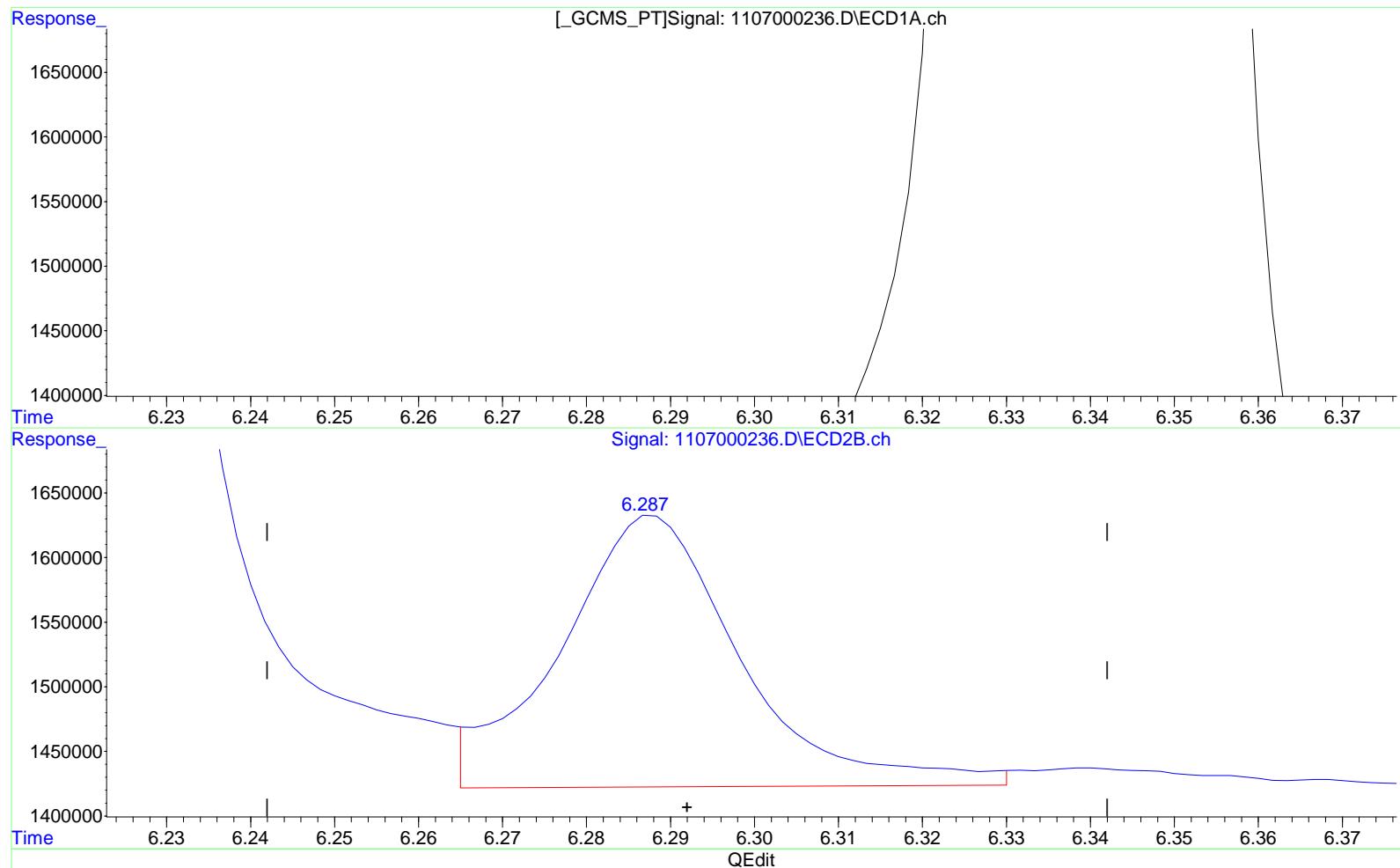
4.032min 1.256 ppb m

response 1219116

Data File : J:\GC33\DATA\110716-504\1107000236.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:55:52 Operator: SMS
 Sample : 110716 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:57 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.232min 1.313 ppb

response 258744

Manual Integration:

Before

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

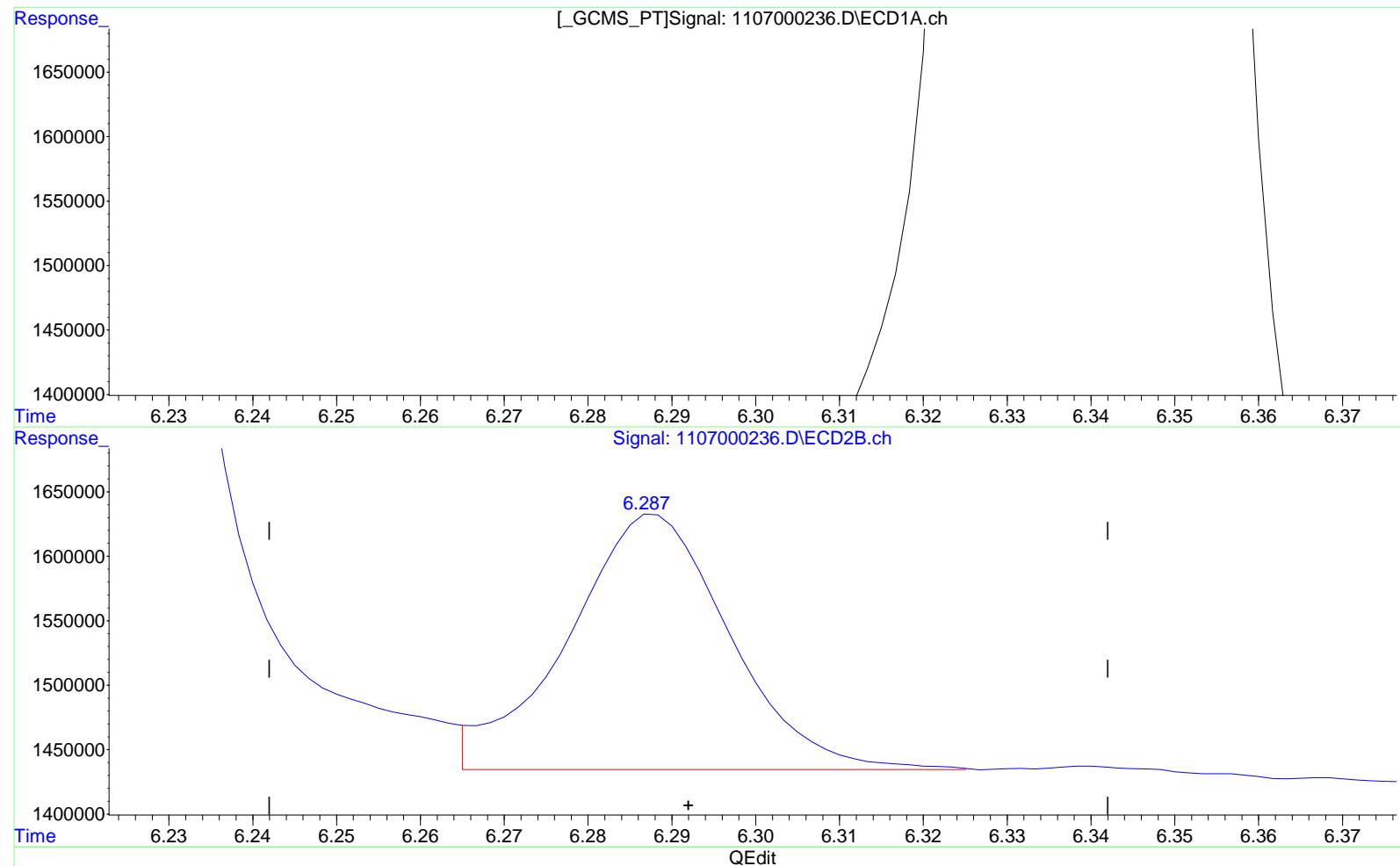
6.287min 1.437 ppb

response 310861

Data File : J:\GC33\DATA\110716-504\1107000236.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 02:55:52 Operator: SMS
 Sample : 110716 504 LV5 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:57 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.232min 1.313 ppb

response 258744

Manual Integration:

After

Baseline/Shoulder

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

6.287min 1.209 ppb m

response 264958

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000214.D
Lab ID: KWG1610188-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/07/2016 18:15
Date Quantitated: 11/08/2016 07:28
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000214.D\1107000214C.
Lab ID: KWG1610188-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/07/2016 18:15
Date Quantitated: 11/08/2016 07:28
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000214.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000214.D\1107000214.c.d	Vial:	1
Acq Date:	11/07/2016 18:15	Quant Date:	11/08/2016 07:28
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1610188-5	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/08/2016
Analysis Lot:	KWG1610188	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:		ug/L		Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)			5192	0d	0.0000	0.0000			
1,2,3-Trichloropropane	6.25	6.30	52493	175522m	0.3610	0.7640			
1,2-Dibromo-3-chloropropano	7.66		104202	0d	0.0360	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000214.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 18:15:16 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:28:13 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

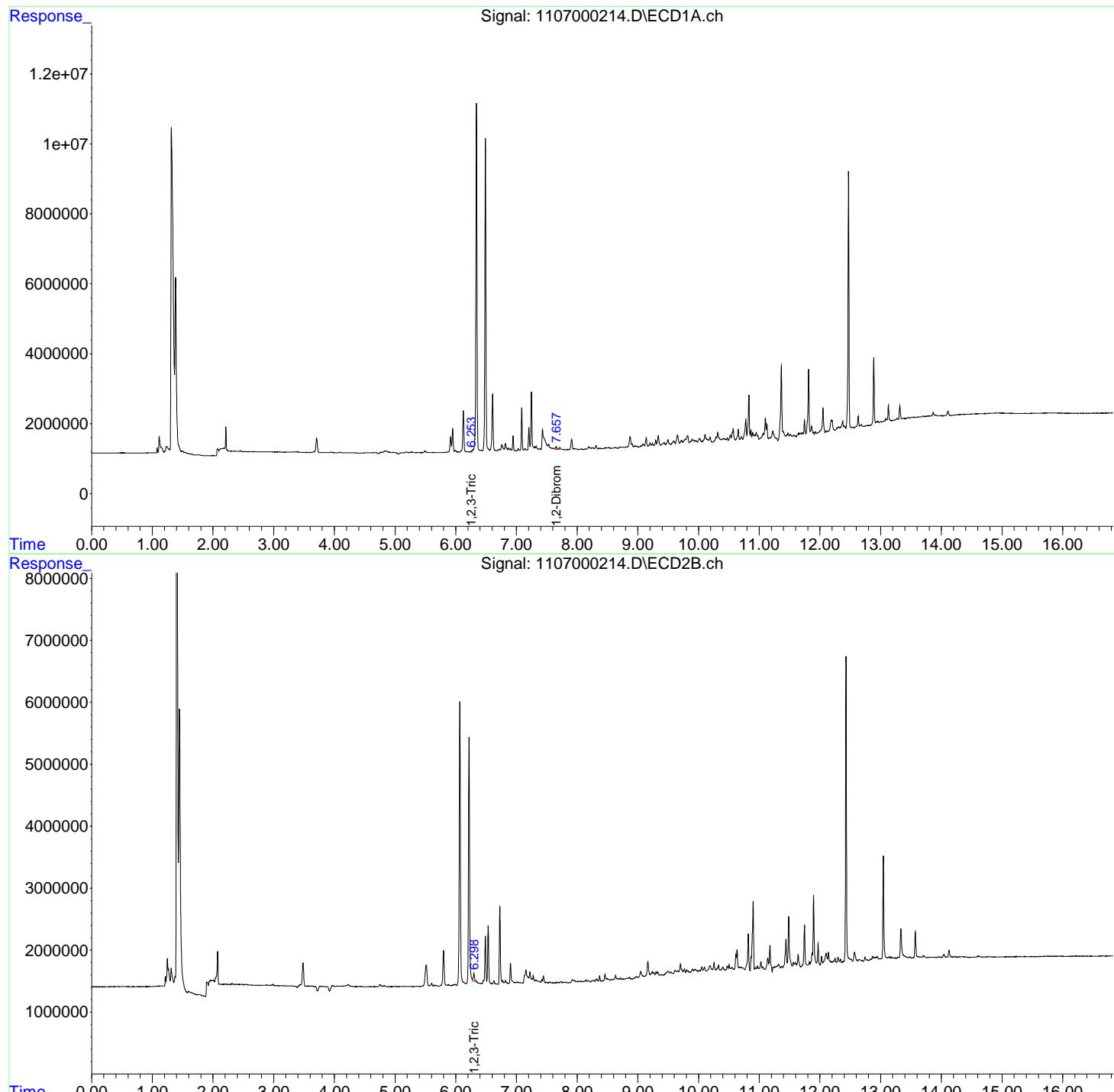
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.253	6.298	52493	175522	0.361	0.764m#
3) M 1,2-Dibro...	7.657	0.000	104202	0	0.036	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000214.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 18:15:16 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:28:13 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

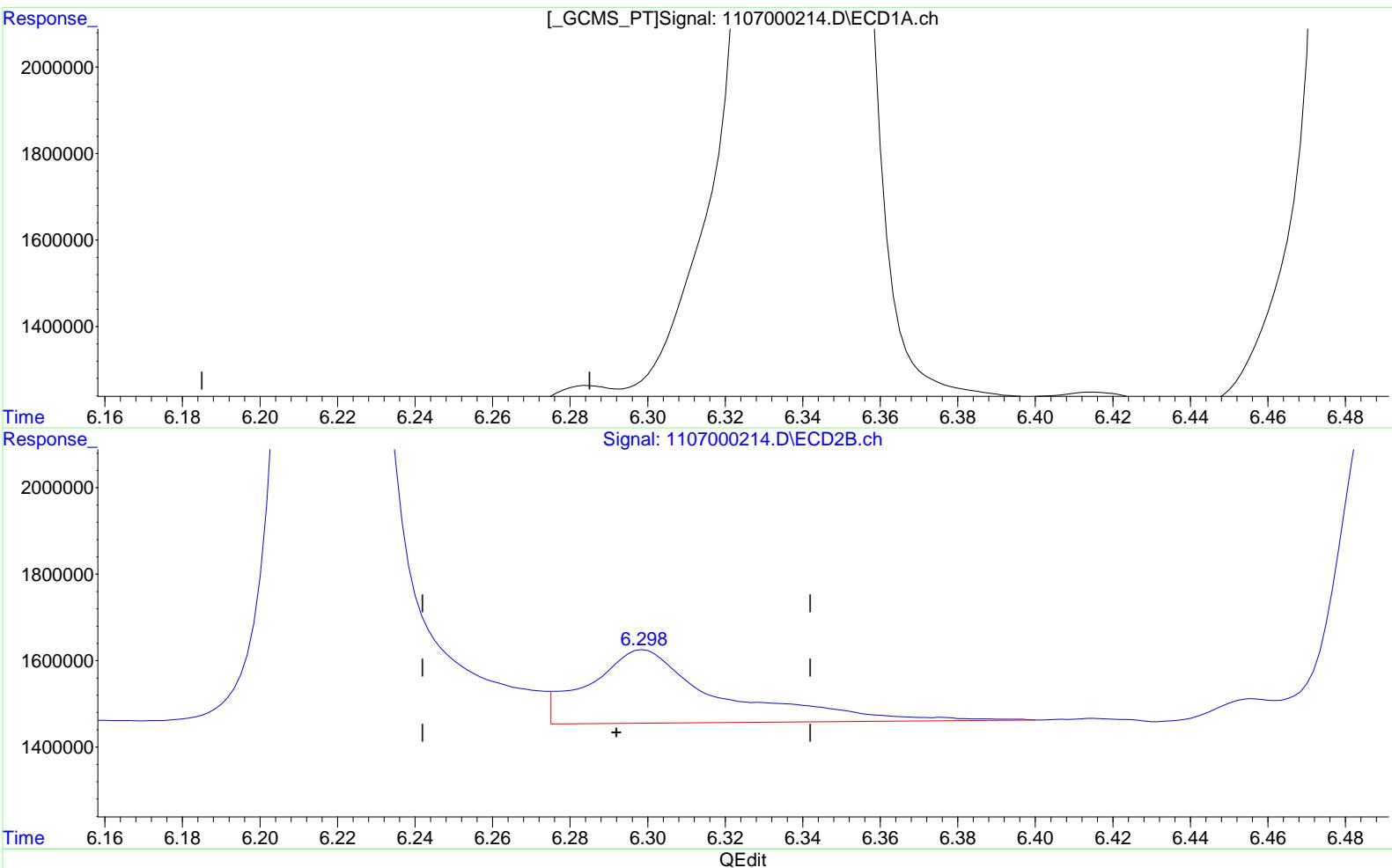
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000214.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 18:15:16 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.253min 0.361 ppb

response 52493

Manual Integration:

Before

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

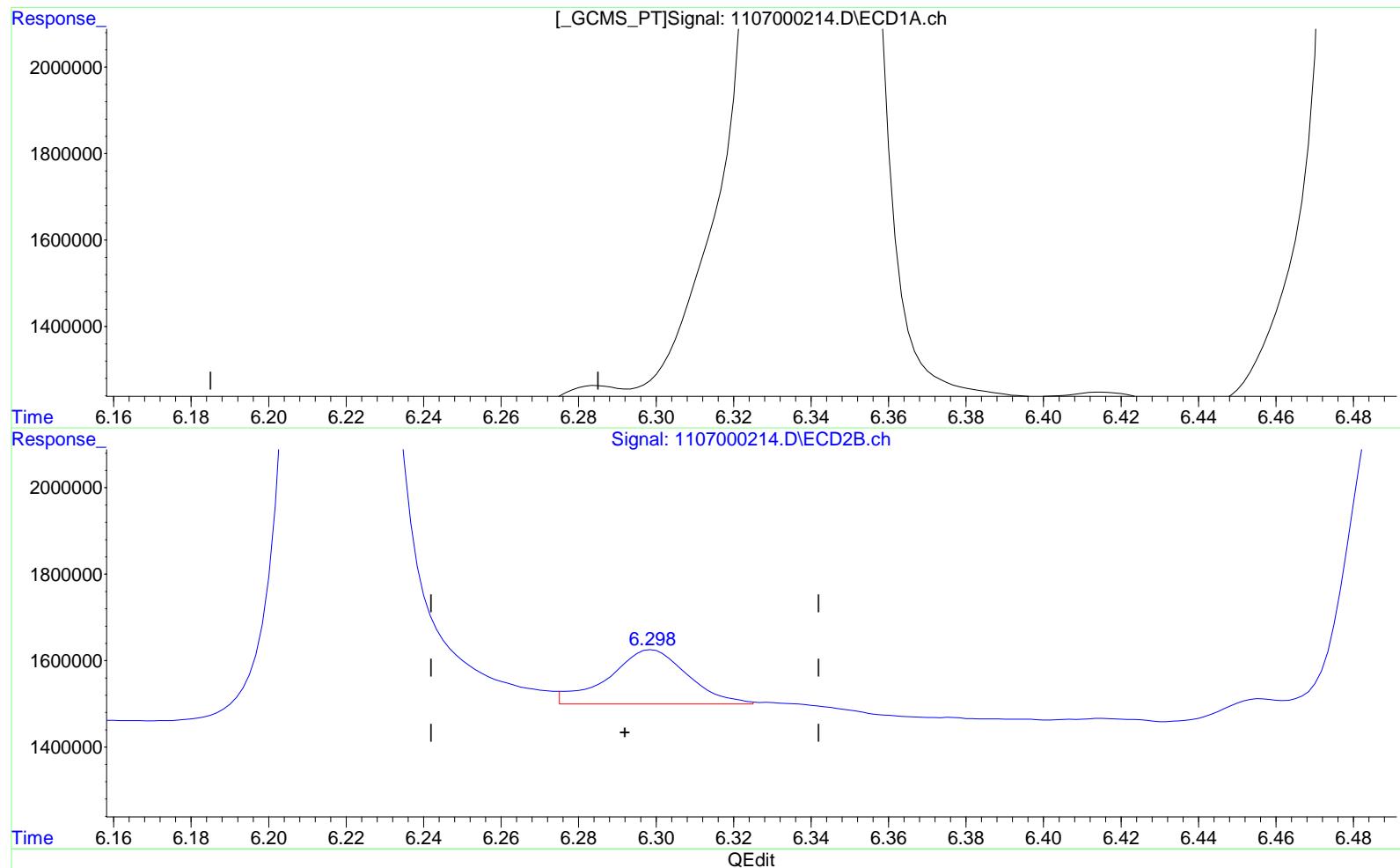
6.298min 1.834 ppb

response 390634

Data File : J:\GC33\DATA\110716-504\1107000214.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 18:15:16 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.253min 0.361 ppb

response 52493

Manual Integration:

After

Baseline/Shoulder

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.764 ppb m

response 175522

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000226.D
Lab ID: KWG1610188-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/07/2016 22:59
Date Quantitated: 11/08/2016 07:40
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000226.D\1107000226C.
Lab ID: KWG1610188-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/07/2016 22:59
Date Quantitated: 11/08/2016 07:40
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000226.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000226.D\1107000226c.d	Vial:	1
Acq Date:	11/07/2016 22:59	Quant Date:	11/08/2016 07:40
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1610188-6	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/08/2016
Analysis Lot:	KWG1610188	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)				0d	0d	0.0000	0.0000		
1,2,3-Trichloropropane	6.26	6.30	54101	156913m	0.3690	0.6710			
1,2-Dibromo-3-chloropropano	7.66		109753	0d	0.0380	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000226.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:59:00 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:40:38 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

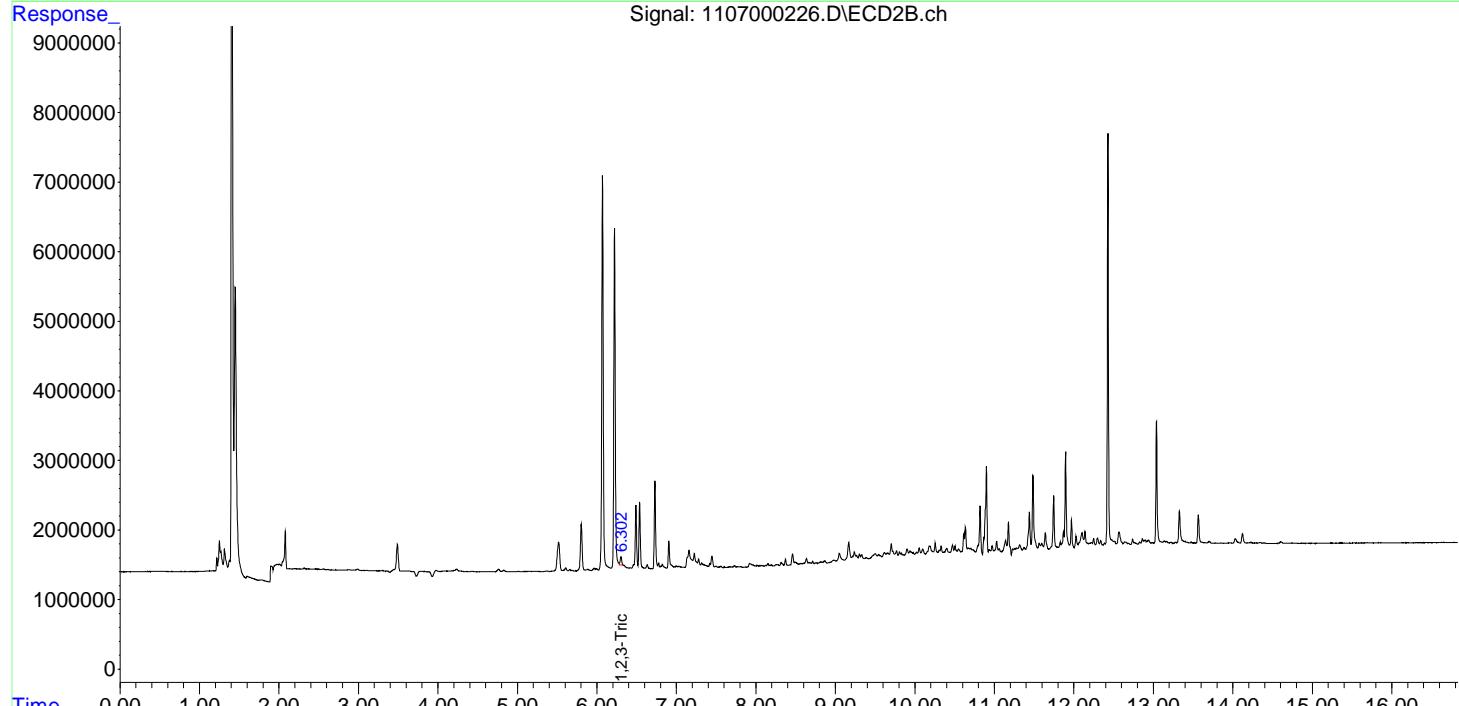
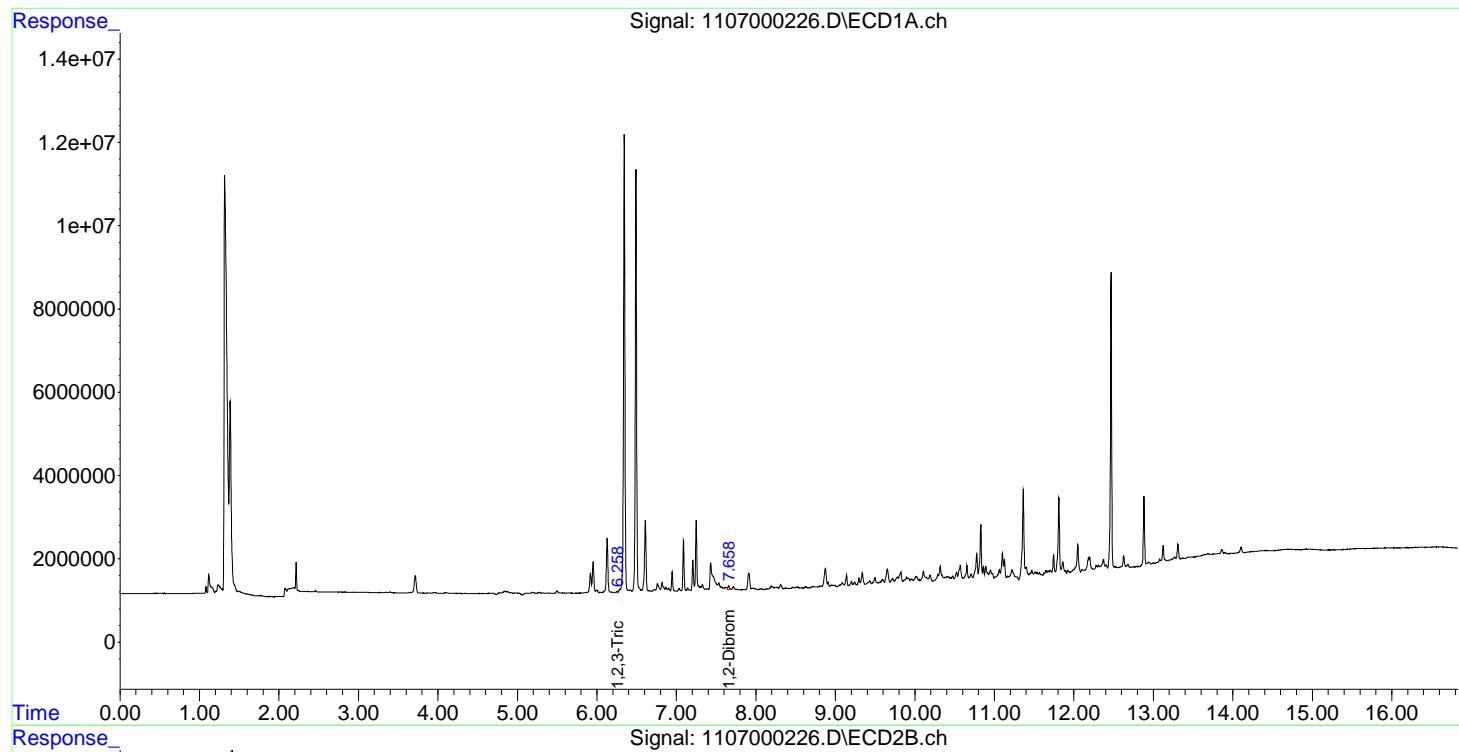
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.258	6.302	54101	156913	0.369	0.671m#
3) M 1,2-Dibro...	7.658	0.000	109753	0	0.038	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000226.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:59:00 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:40:38 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

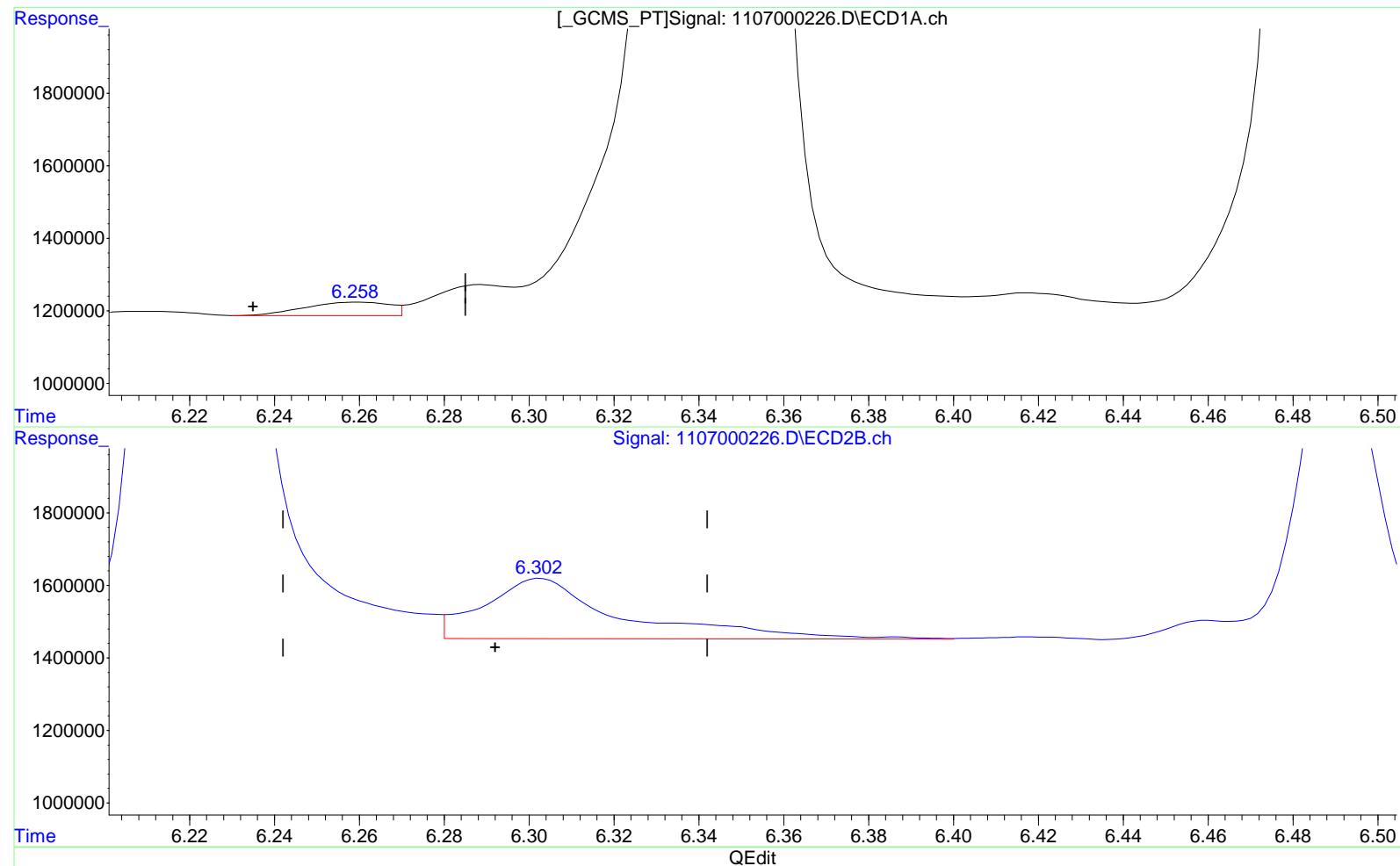
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000226.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:59:00 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:36 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.258min 0.369 ppb

response 54101

Manual Integration:

Before

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

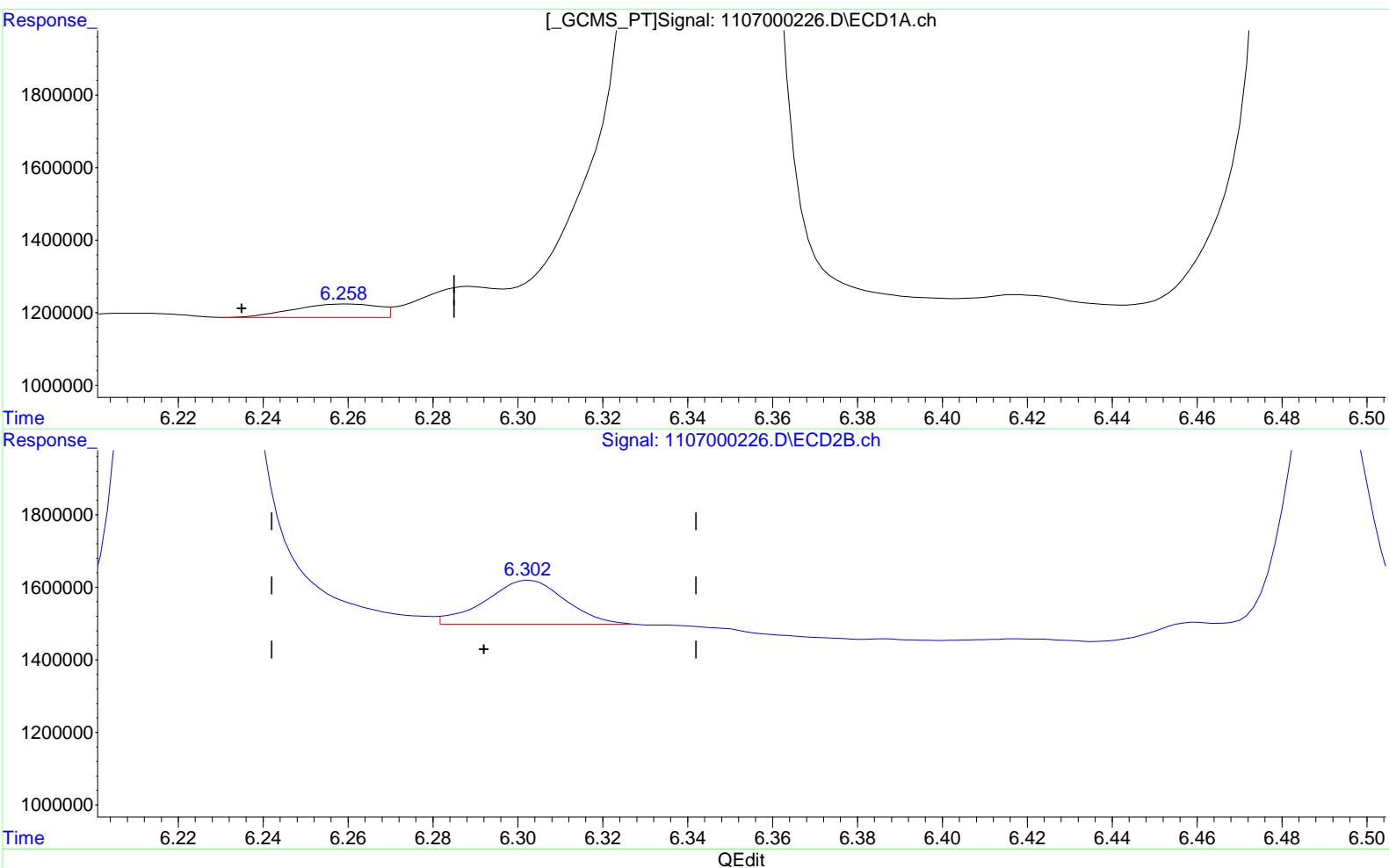
6.302min 1.740 ppb

response 371634

Data File : J:\GC33\DATA\110716-504\1107000226.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 07-Nov-2016, 22:59:00 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multipllr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:36 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.258min 0.369 ppb

response 54101

Manual Integration:

After

Baseline/Shoulder

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

6.302min 0.671 ppb m

response 156913

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000237.D
Lab ID: KWG1610188-7
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/08/2016 03:19
Date Quantitated: 11/08/2016 07:51
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000237.D\1107000237C.
Lab ID: KWG1610188-7
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/08/2016 03:19
Date Quantitated: 11/08/2016 07:51
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000237.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000237.D\1107000237.c.d	Vial:	1
Acq Date:	11/08/2016 03:19	Quant Date:	11/08/2016 07:51
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1610188-7	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/08/2016
Analysis Lot:	KWG1610188	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:		ug/L		Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)				0d	0d	0.0000	0.0000		
1,2,3-Trichloropropane	6.25	6.30	55662	167865m	0.3760	0.7260			
1,2-Dibromo-3-chloropropano	7.66		114406	0d	0.0400	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000237.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 03:19:37 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:51:33 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

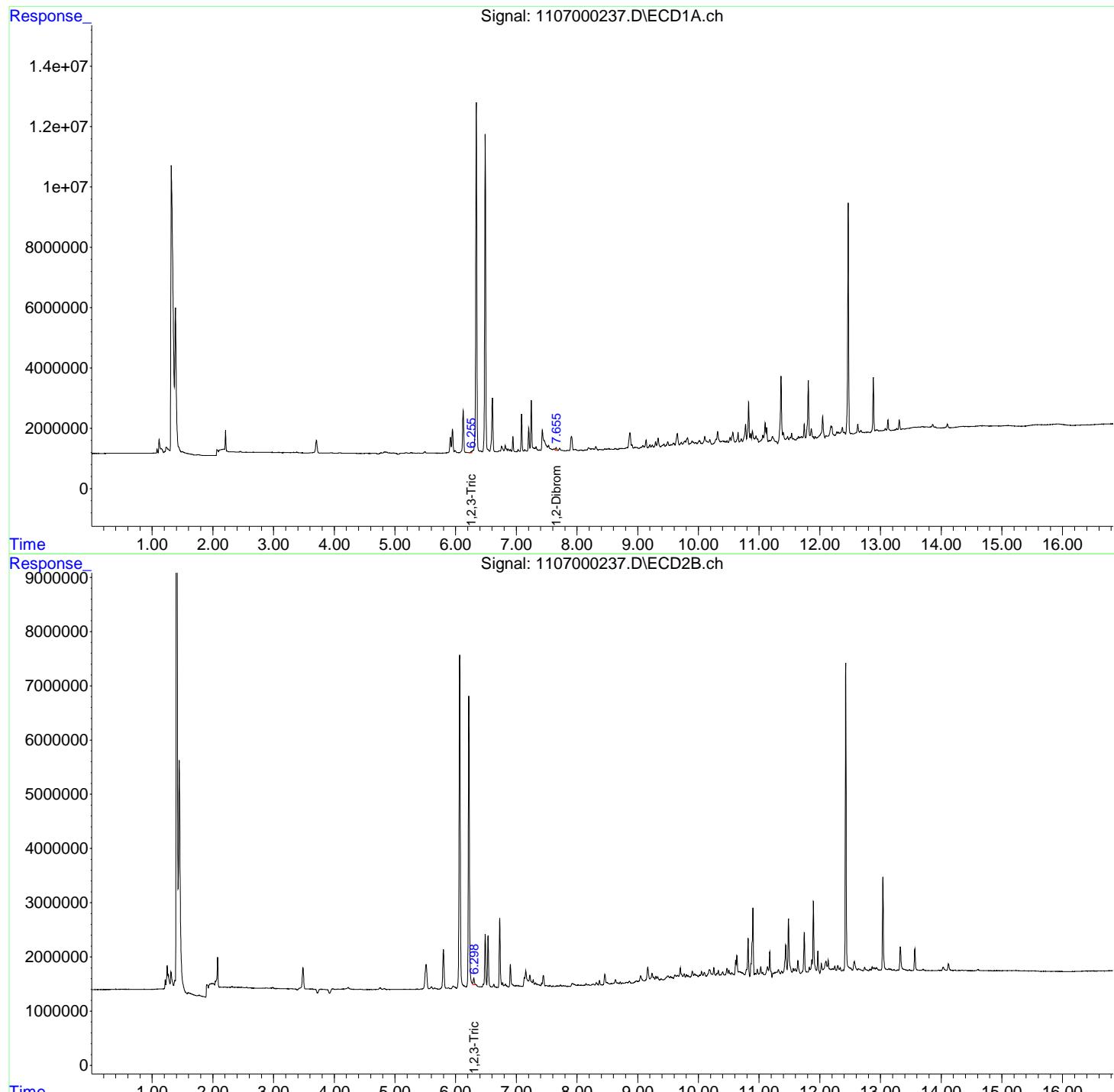
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.255	6.298	55662	167865	0.376	0.726m#
3) M 1,2-Dibro...	7.655	0.000	114406	0	0.040	N.D. d#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000237.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 03:19:37 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:51:33 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

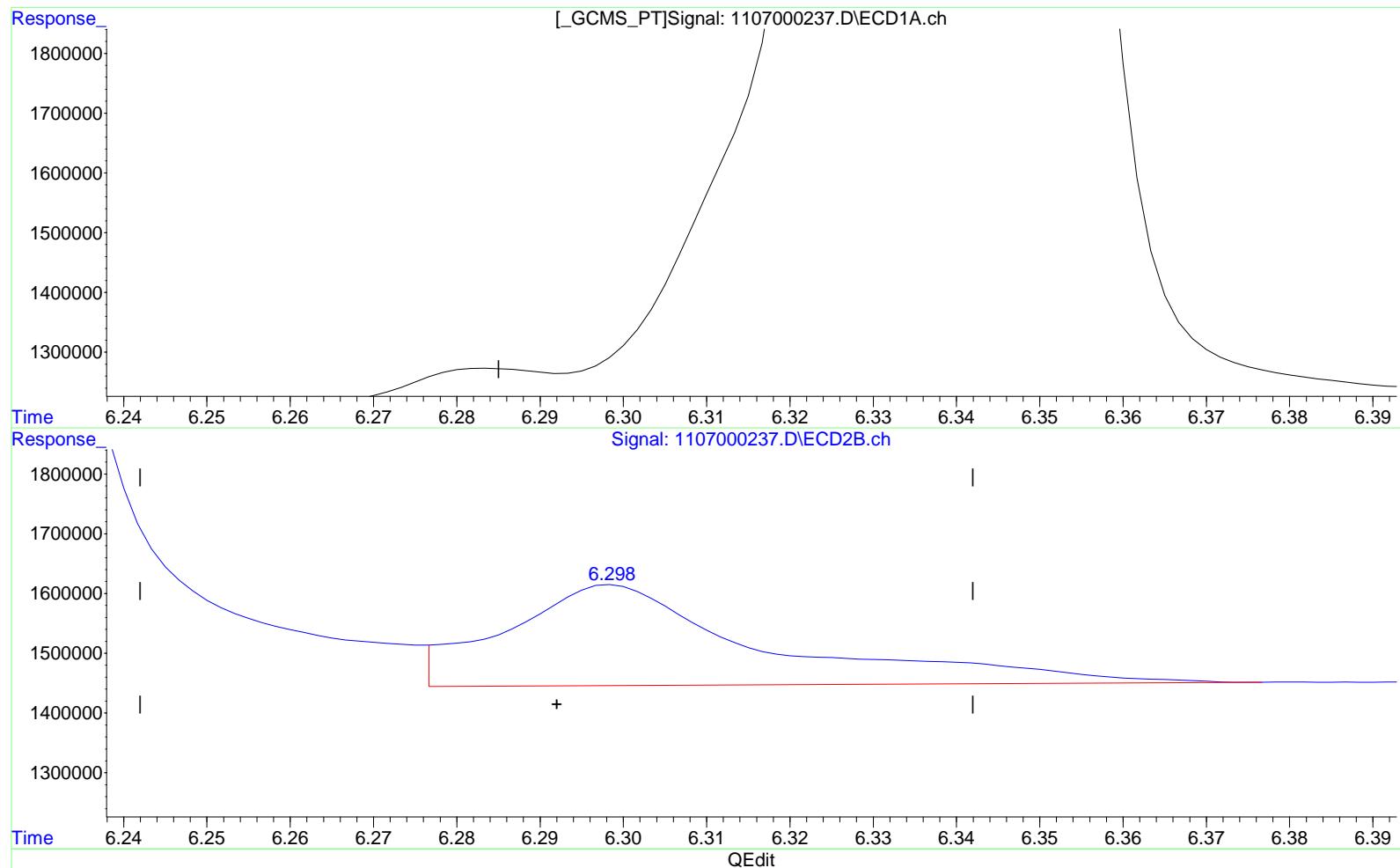
Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Data File : J:\GC33\DATA\110716-504\1107000237.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 03:19:37 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.255min 0.376 ppb

response 55662

Manual Integration:

Before

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

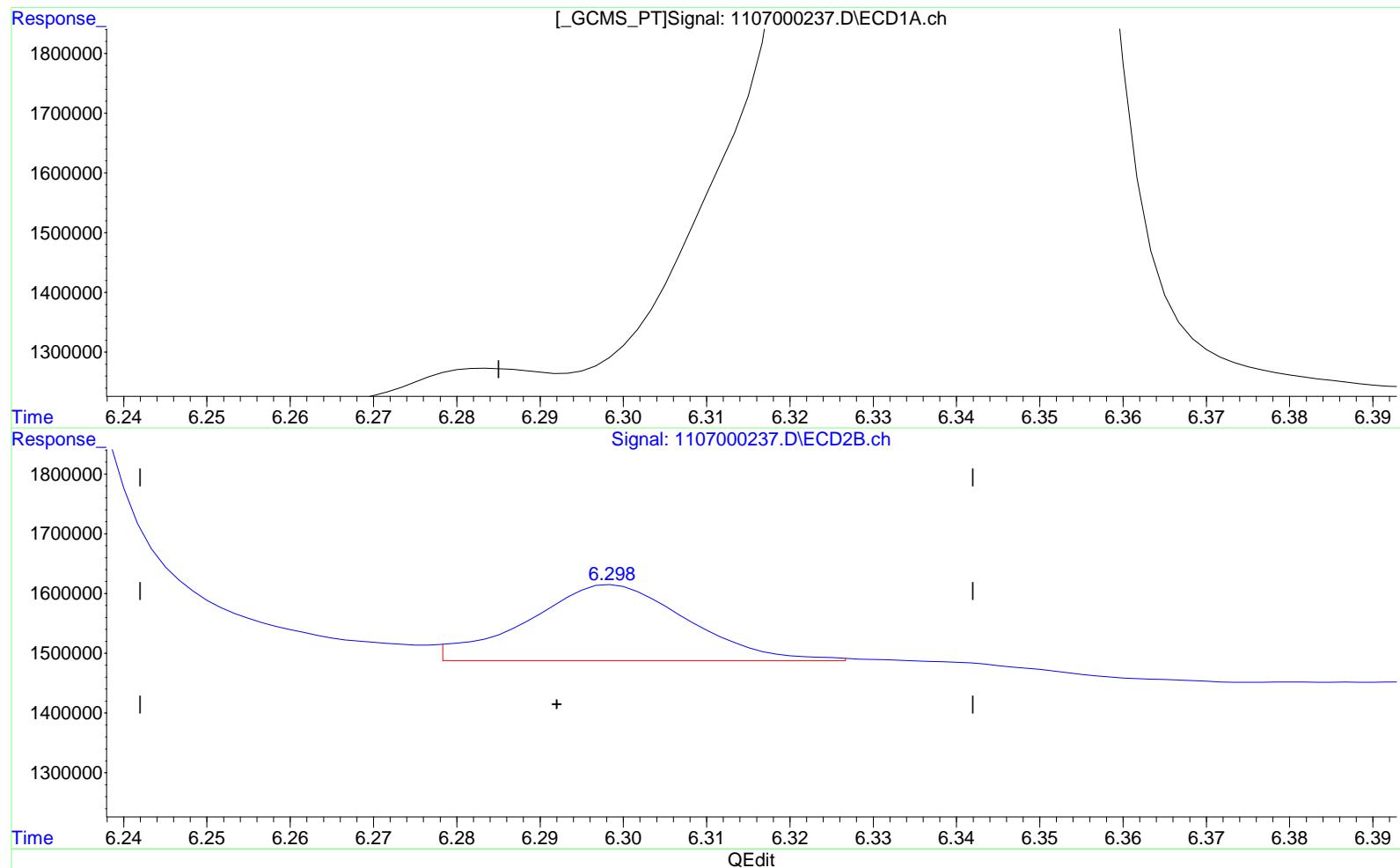
6.298min 1.658 ppb

response 355219

Data File : J:\GC33\DATA\110716-504\1107000237.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 03:19:37 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 07:24:59 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.255min 0.376 ppb

response 55662

Manual Integration:

After

Baseline/Shoulder

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.726 ppb m

response 167865

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000251.D
Lab ID: KWG1610188-8
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/08/2016 08:50
Date Quantitated: 11/08/2016 09:48
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\110716-504\1107000251.D\1107000251.C.
Lab ID: KWG1610188-8
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/08/2016 08:50
Date Quantitated: 11/08/2016 09:48
Batch ID: KWG1610188
Analysis Method: 504.1
MethodJoinID: MJ480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	X	
Second Source ICAL Verification	NA	NA	NA	X	
Analyte Co-elution	NA	NA	NA	X	
Below Lowest ICAL Level	NA	NA	NA	X	
Above Highest ICAL Level	NA	NA	NA	X	
Enviroquant/Stealth Calibration Check	NA	NA	NA	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\110716-504\1107000251.D	Instrument:	GC33
Data File #2:	J:\GC33\DATA\110716-504\1107000251.D\1107000251.c.d	Vial:	1
Acq Date:	11/08/2016 08:50	Quant Date:	11/08/2016 09:48
Run Type:	IB	MethodJoinID:	MJ480
Lab ID:	KWG1610188-8	Soln Conc. Units:	ppb
Signal #1:	RTX-CLP	Signal #2:	RTX-CLP2
Bottle ID:		Tier:	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	Collect Date:	Receive Date: 11/08/2016
Analysis Lot:	KWG1610188	Prep Lot:	Report Group:
Analysis Method:	504.1	Prep Method:	
Prep Ref:		Prep Date:	
Quant Method:	J:\GC33\METHODS\101116_504.M	Calibration ID:	CAL14943
Title:		Method ID:	MJ480
MB Ref:		Quant based on Method	

Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:				Rpt
					ppb #1	ppb #2	ug/L #1	ug/L #2	
1,2-Dibromoethane (EDB)				0d	0d	0.0000	0.0000		
1,2,3-Trichloropropane	6.26	6.30	52252	166653m	0.3600	0.7200			
1,2-Dibromo-3-chloropropano	7.66		111882	0d	0.0390	0.0000			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC33\DATA\110716-504\1107000251.D Vial: 1
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Nov-2016, 08:50:44 Operator: SMS
Sample : IB Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Nov 08 09:48:38 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

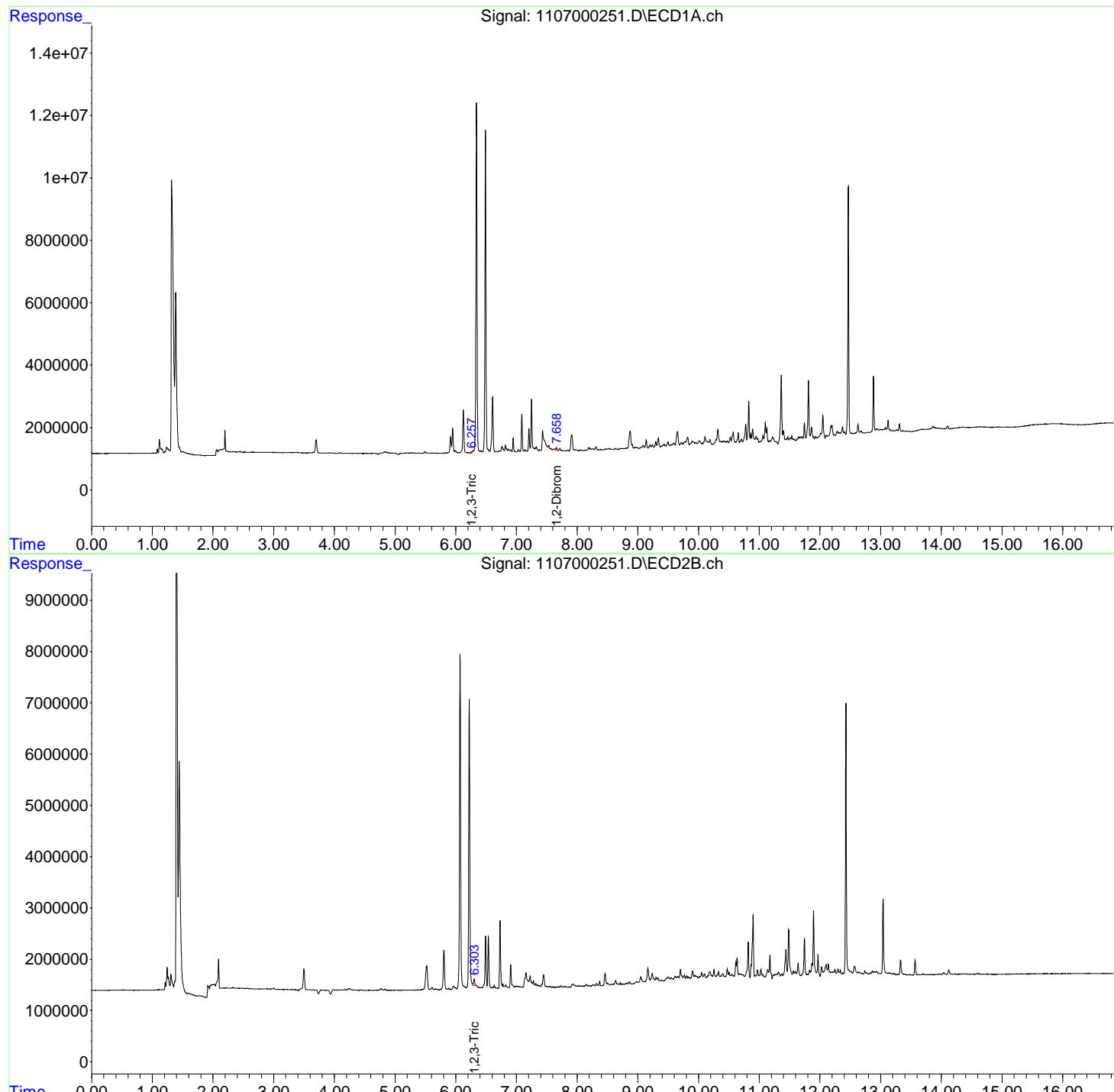
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	6.257	6.303	52252	166653	0.360	0.720m#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : J:\GC33\DATA\110716-504\1107000251.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 08:50:44 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 09:48:38 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



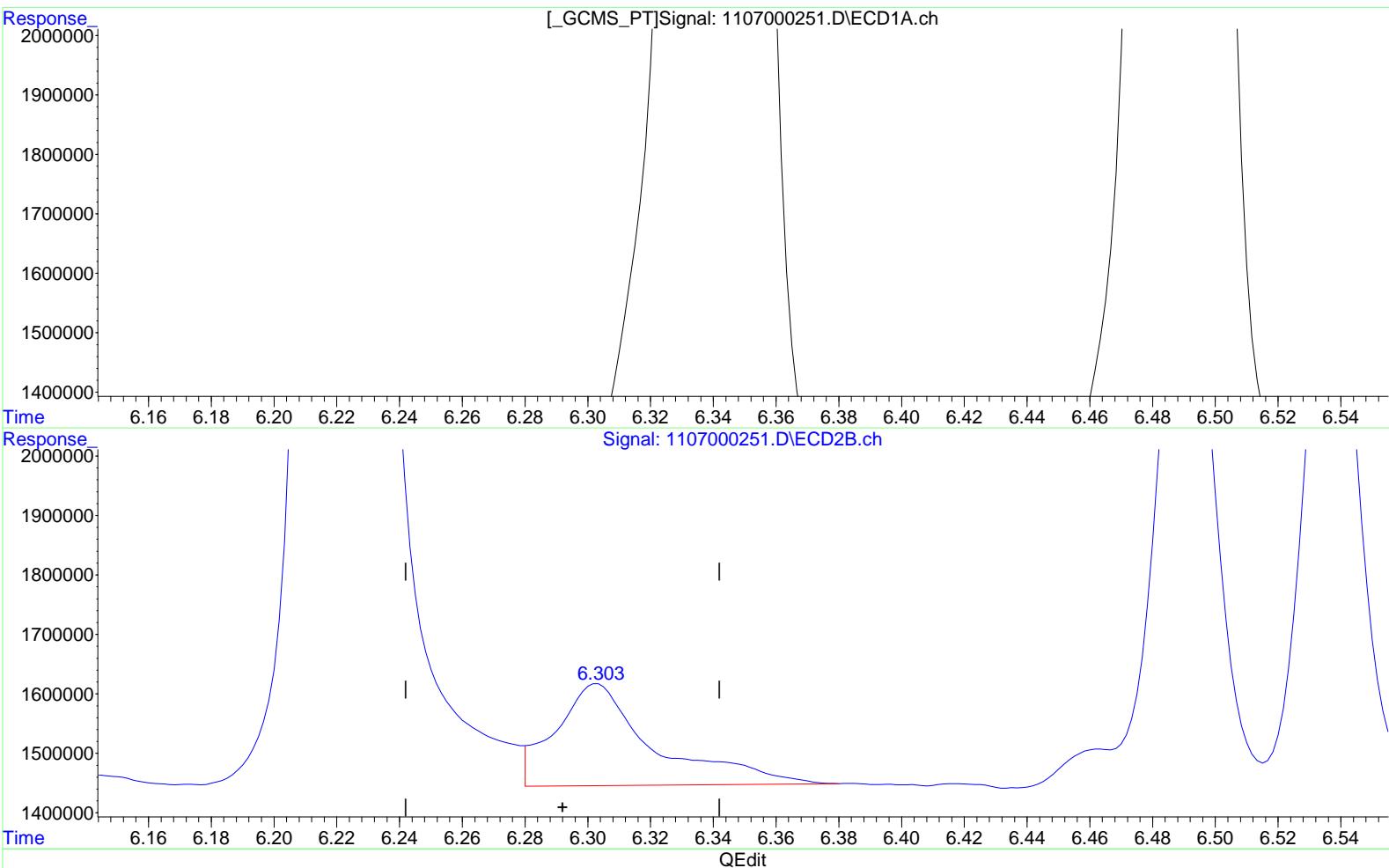
Quantitation Report (Qedit)

1st *JMS* 11/08/16
 2nd *JEP* 11/12/16

Data File : J:\GC33\DATA\110716-504\1107000251.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 08:50:44 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 09:48:10 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.257min 0.360 ppb

response 52252

Manual Integration:

Before

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

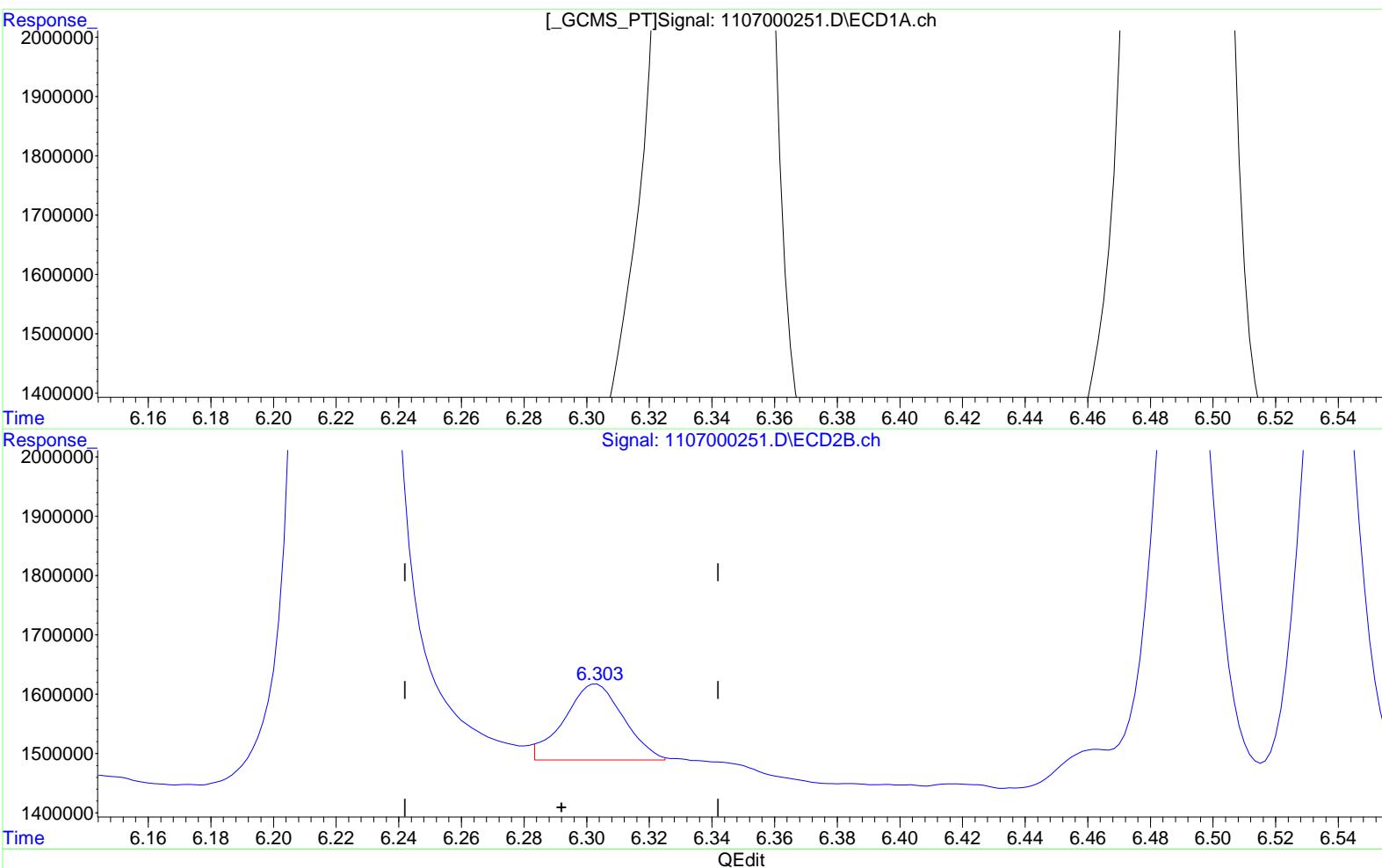
6.303min 1.716 ppb

response 366835

Data File : J:\GC33\DATA\110716-504\1107000251.D Vial: 1
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08-Nov-2016, 08:50:44 Operator: SMS
 Sample : IB Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Nov 08 09:48:10 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:26:44 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.257min 0.360 ppb

response 52252

Manual Integration:

After

Baseline/Shoulder

11/08/16

(2) 1,2,3-Trichloropropane #2 (M)

6.303min 0.720 ppb m

response 166653

Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
No	1	Vial	94	504-1 PRIMER MeOH	1010001	F:01:01
No	2	Vial	95	504-1 PRIMER Hexane	1010002	F:02:01
No	3	Vial	1	504-1 ICAL BLANK	1010003	F:03:01
No	4	Vial	2	504-1 ICAL LV1 101016	1010004	F:04:01
No	5	Vial	3	504-1 ICAL LV2 101016	1010005	F:05:01
No	6	Vial	4	504-1 ICAL LV3 101016	1010006	F:06:01
No	7	Vial	5	504-1 ICAL LV4 101016	1010007	F:07:01
No	8	Vial	6	504-1 ICAL LV5 101016	1010008	F:08:01
No	9	Vial	7	504-1 ICAL LV6 101016	1010009	F:09:01
No	10	Vial	8	504-1 ICAL LV7 101016	1010010	F:10:01
No	11	Vial	9	504-1 ICAL LV8 101016	1010011	F:11:01
No	12	Vial	10	504-1 ICAL ICV 101016	1010012	F:12:01
No	13	Vial	6	504-1 101016 LV5	1010013	F:13:01
No	14	Vial	1	504-1 IB	1010014	F:14:01
No	15	Vial	11	504-1 KWG1609129-5LCS	1010015	F:15:01
No	16	Vial	12	504-1 KWG1609129-6LCS	1010016	F:16:01
No	17	Vial	13	504-1 KWG1609129-7MB	1010017	F:17:01
No	18	Vial	14	504-1 K1612006-001	1010018	F:18:01
No	19	Vial	15	504-1 K1612006-002	1010019	F:19:01
No	20	Vial	16	504-1 K1612006-003	1010020	F:20:01
No	21	Vial	17	504-1 K1612014-001	1010021	F:21:01
No	22	Vial	18	504-1 K1612056-001	1010022	F:22:01
No	23	Vial	19	504-1 K1612056-002	1010023	F:23:01
No	24	Vial	20	504-1 K1612056-003	1010024	F:24:01
No	25	Vial	7	504-1 101016 504 LV6	1010025	F:25:01
No	26	Vial	1	504-1 IB	1010026	F:26:01
No	27	Vial	21	504-1 K1612057-001	1010027	F:27:01
No	28	Vial	22	504-1 K1612057-001MS	1010028	F:28:01

Run#517961
CHL 14943

MS 10/11/14

PRO
Sep

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010003.D Vial: 1
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 15:42:57 Operator: BS
Sample : ICAL BLANK Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:55:18 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
2) M 1,2,3-Tri...	0.000	6.305	0	349661	N.D.	d 1.630
3) M 1,2-Dibro...	7.663	0.000	94406	0	0.033	N.D. d#

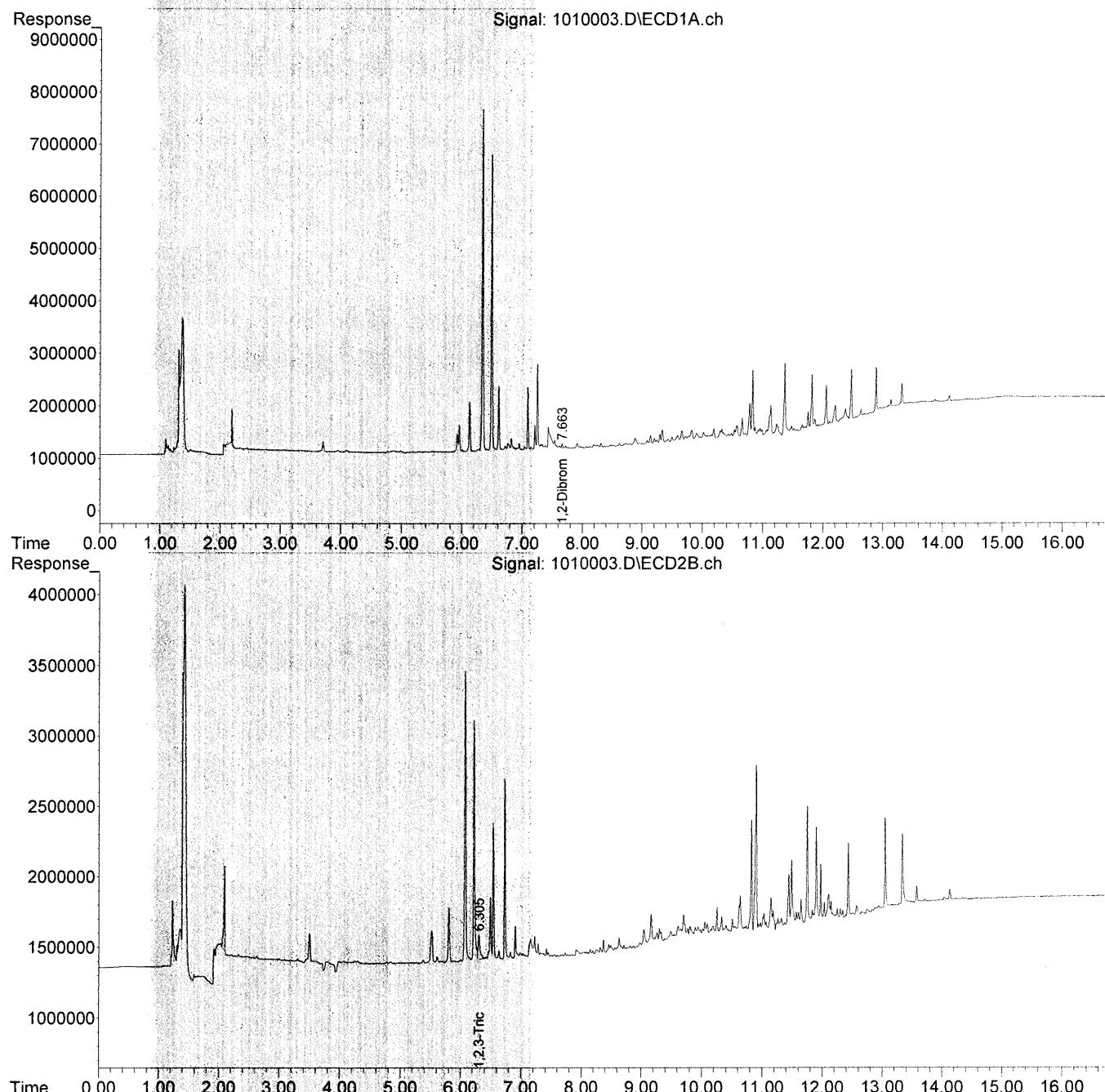
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010003.D Vial: 1
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 15:42:57 Operator: BS
Sample : ICAL BLANK Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:55:18 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:26:44 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:06:36 Operator: BS
Sample : ICAL LV1 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:07:51 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.895	4.060	57594	65501	0.096m	0.047 #
3) M 1,2-Dibromoethane	7.667	7.877	261537	162902	0.116m	0.052 #

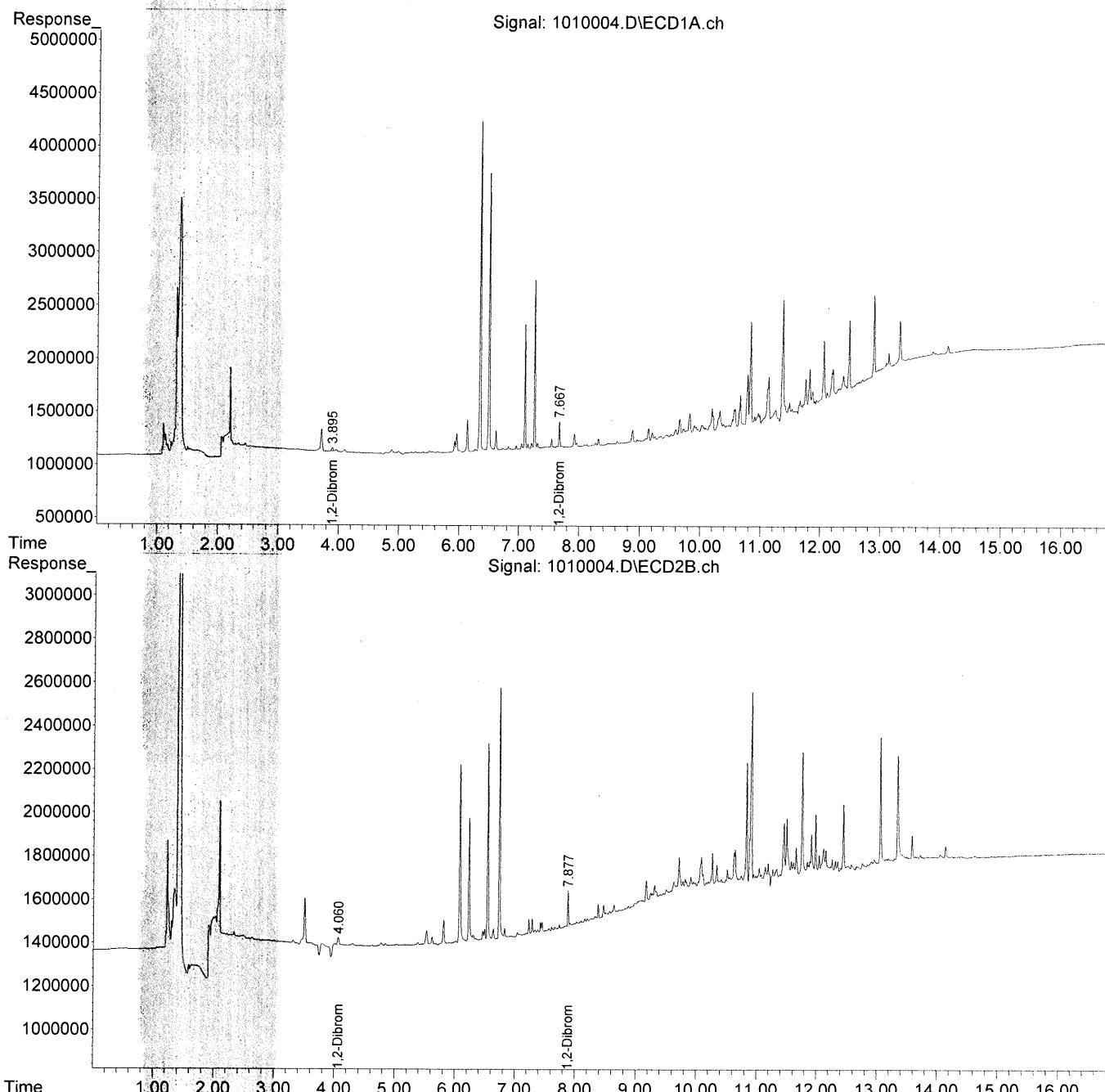
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:06:36 Operator: BS
Sample : ICAL LV1 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:07:51 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

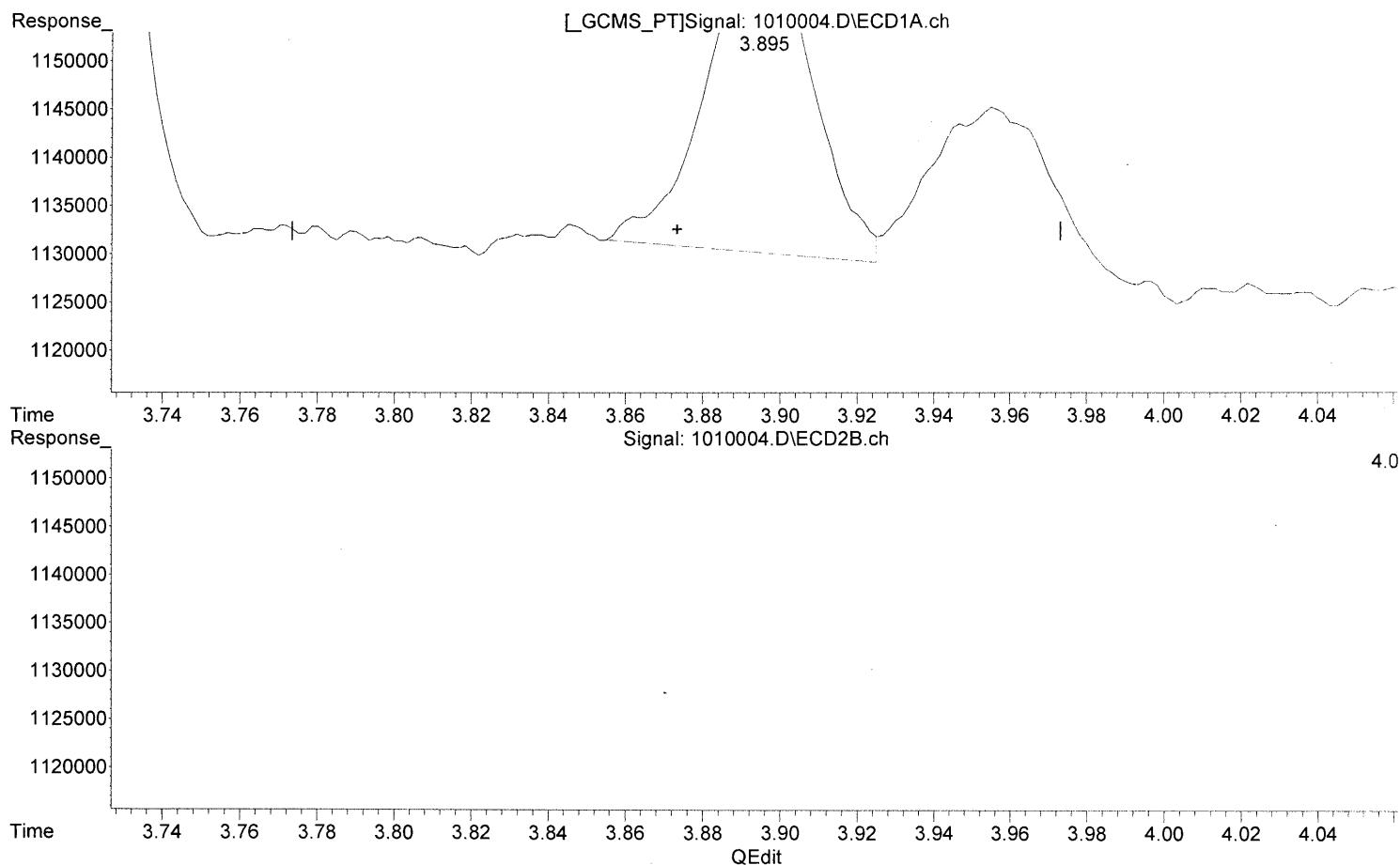


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.100 ppb

response 62200

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.047 ppb

response 65501

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:07:22 2016

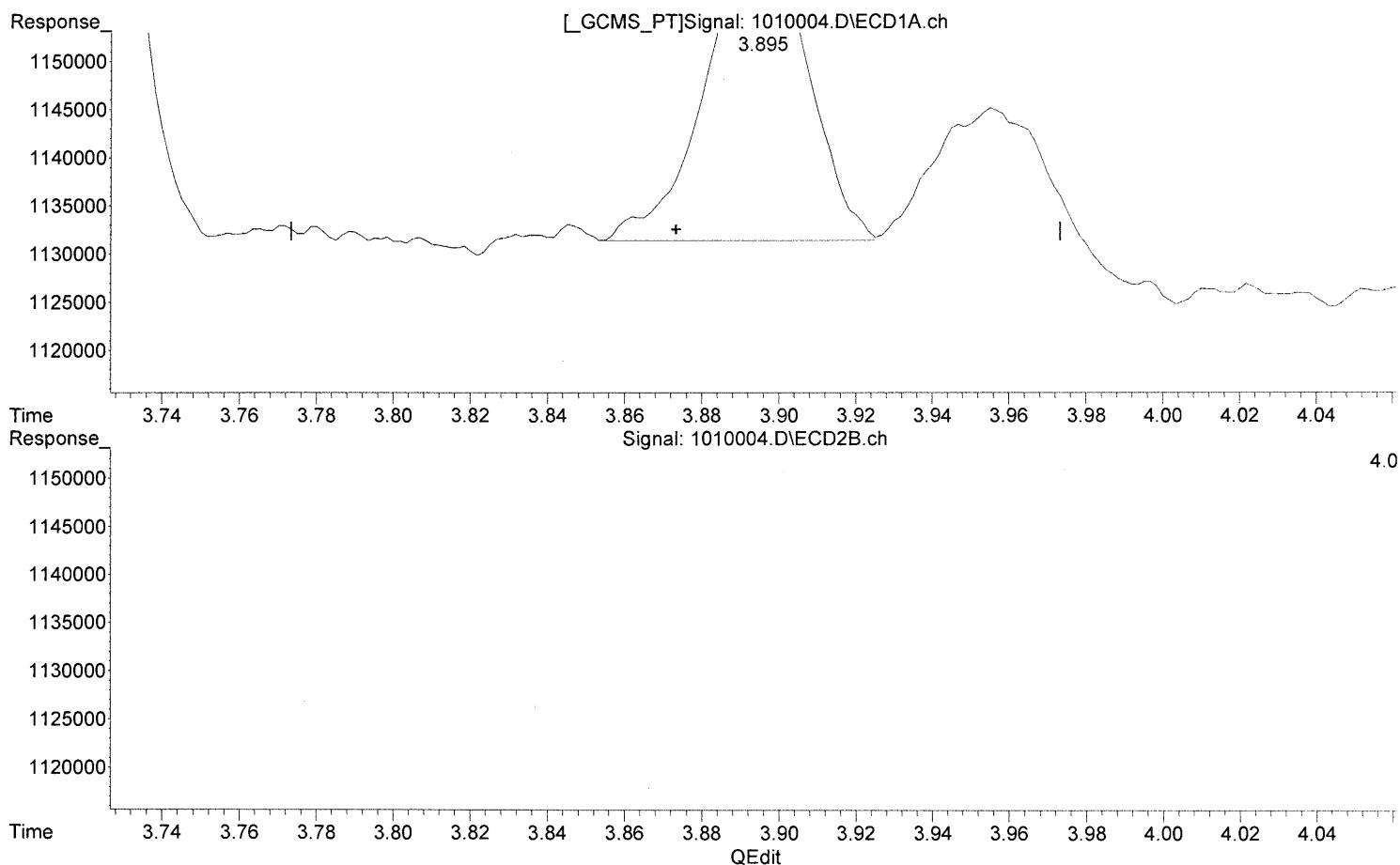
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.096 ppb m

response 57594

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.047 ppb

response 65501



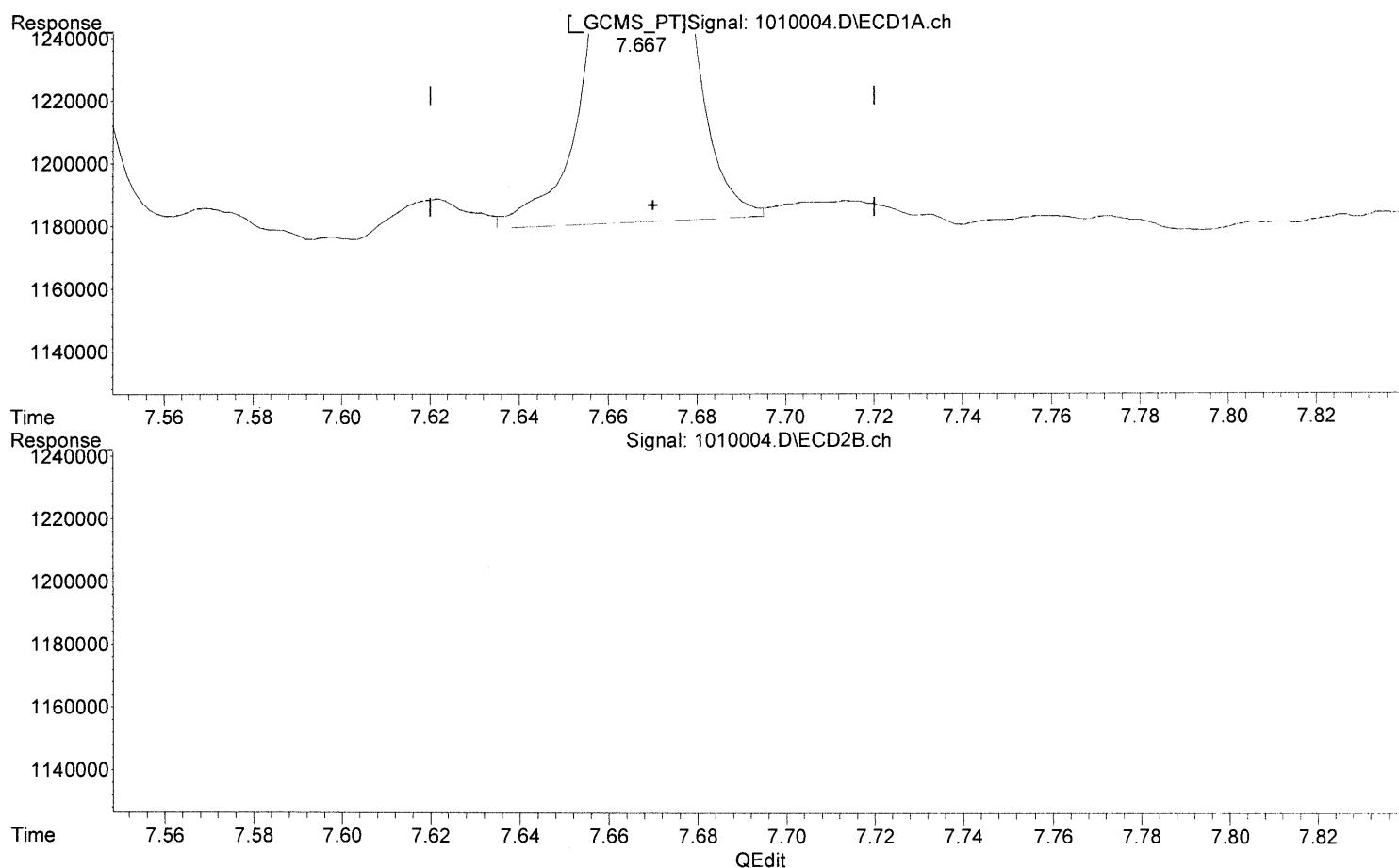
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:07:31 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.667min 0.120 ppb

response 268810

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.052 ppb

response 162902

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:07:46 2016

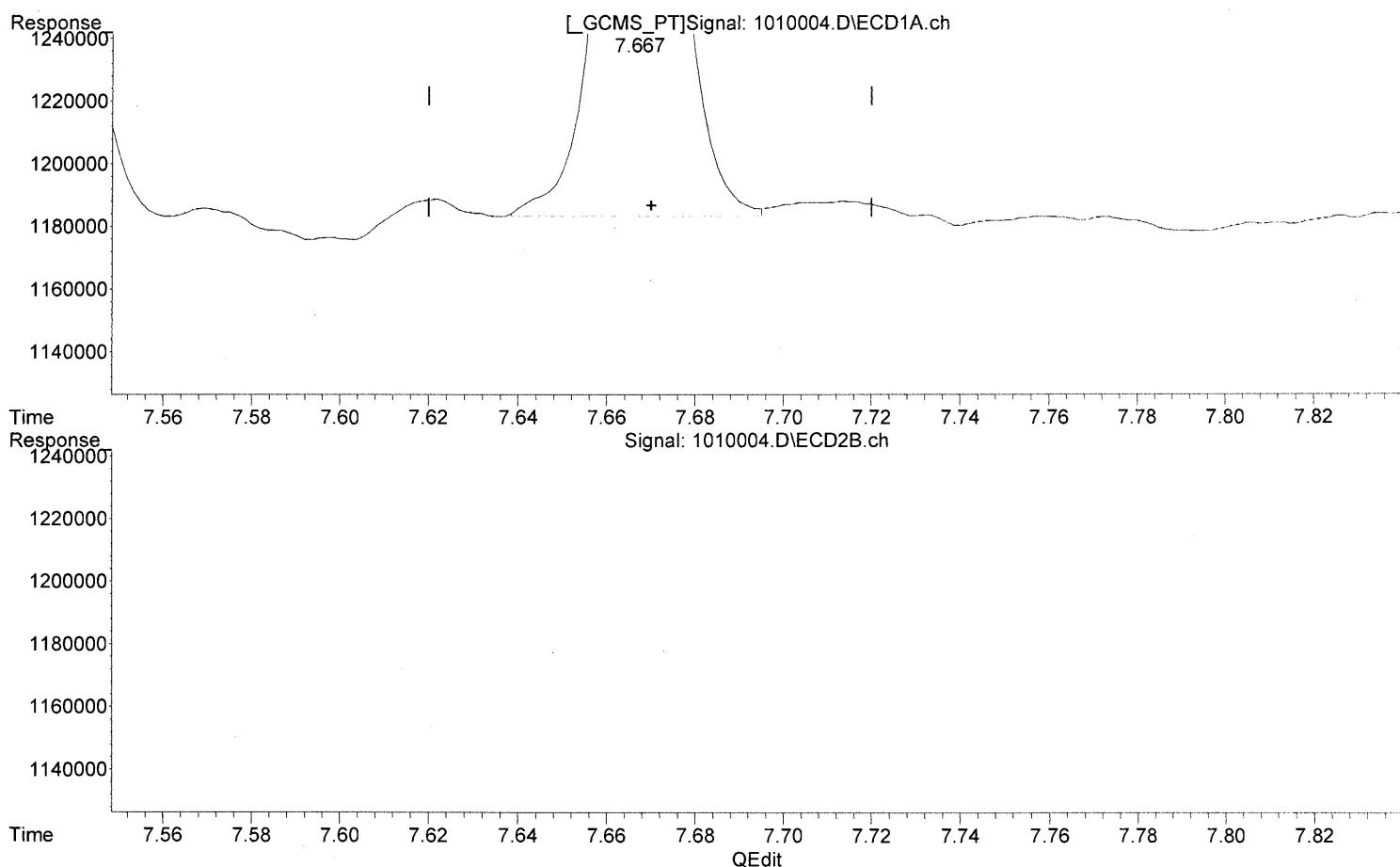
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010004.D Vial: 2
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:06:36 Operator: BS
 Sample : ICAL LV1 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:07:06 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)
 7.667min 0.116 ppb m
 response 261537

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)
 7.877min 0.052 ppb
 response 162902

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:07:56 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:30:07 Operator: BS
Sample : ICAL LV2 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:11:15 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.895	4.062	106012	121390	0.137m	0.088 #
3) M 1,2-Dibromoethane	7.668	7.877	389497	297791	0.173m	0.095 #

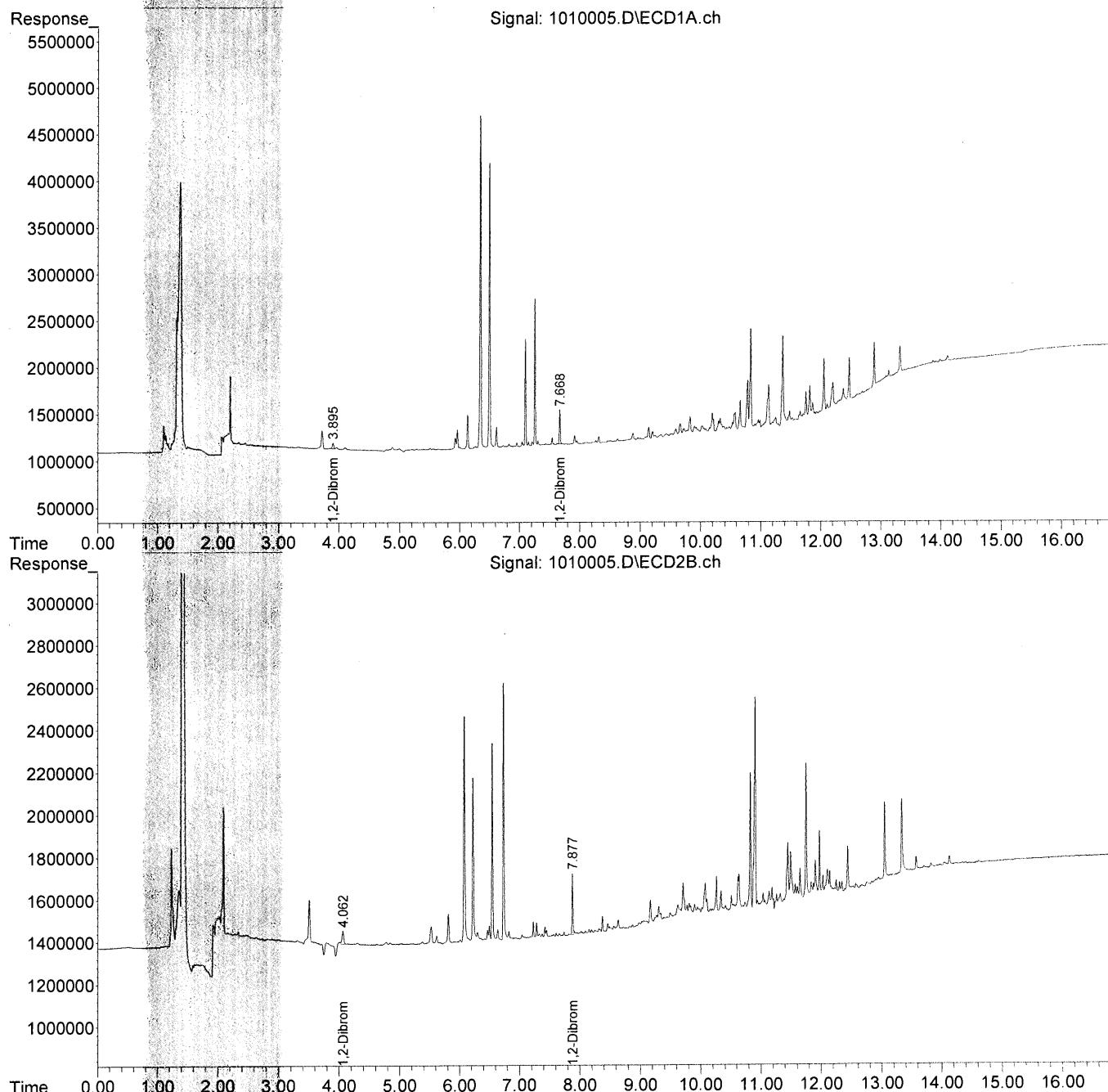
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:30:07 Operator: BS
Sample : ICAL LV2 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:11:15 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

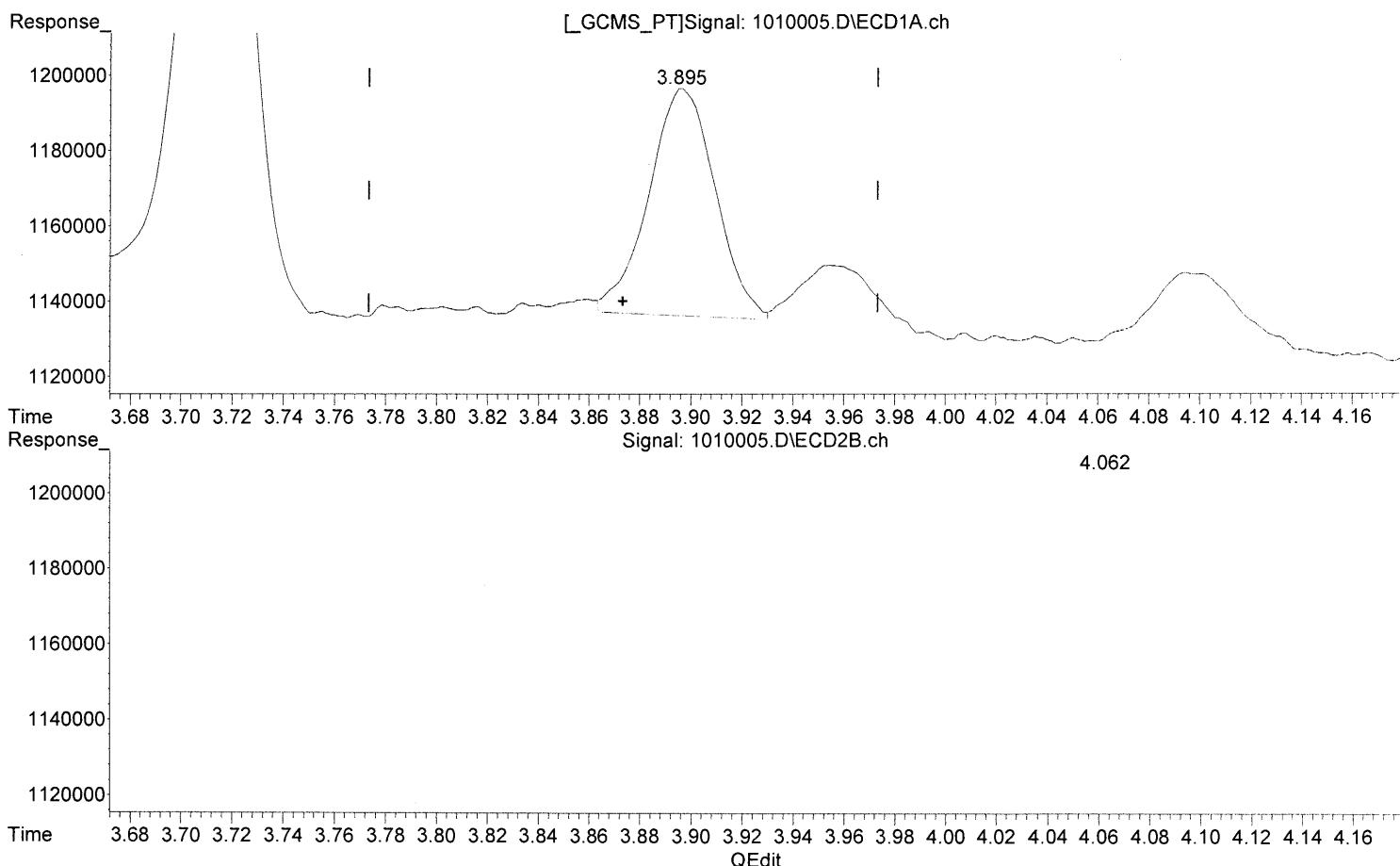


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.895min 0.139 ppb

response 109098

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 0.088 ppb

response 121390



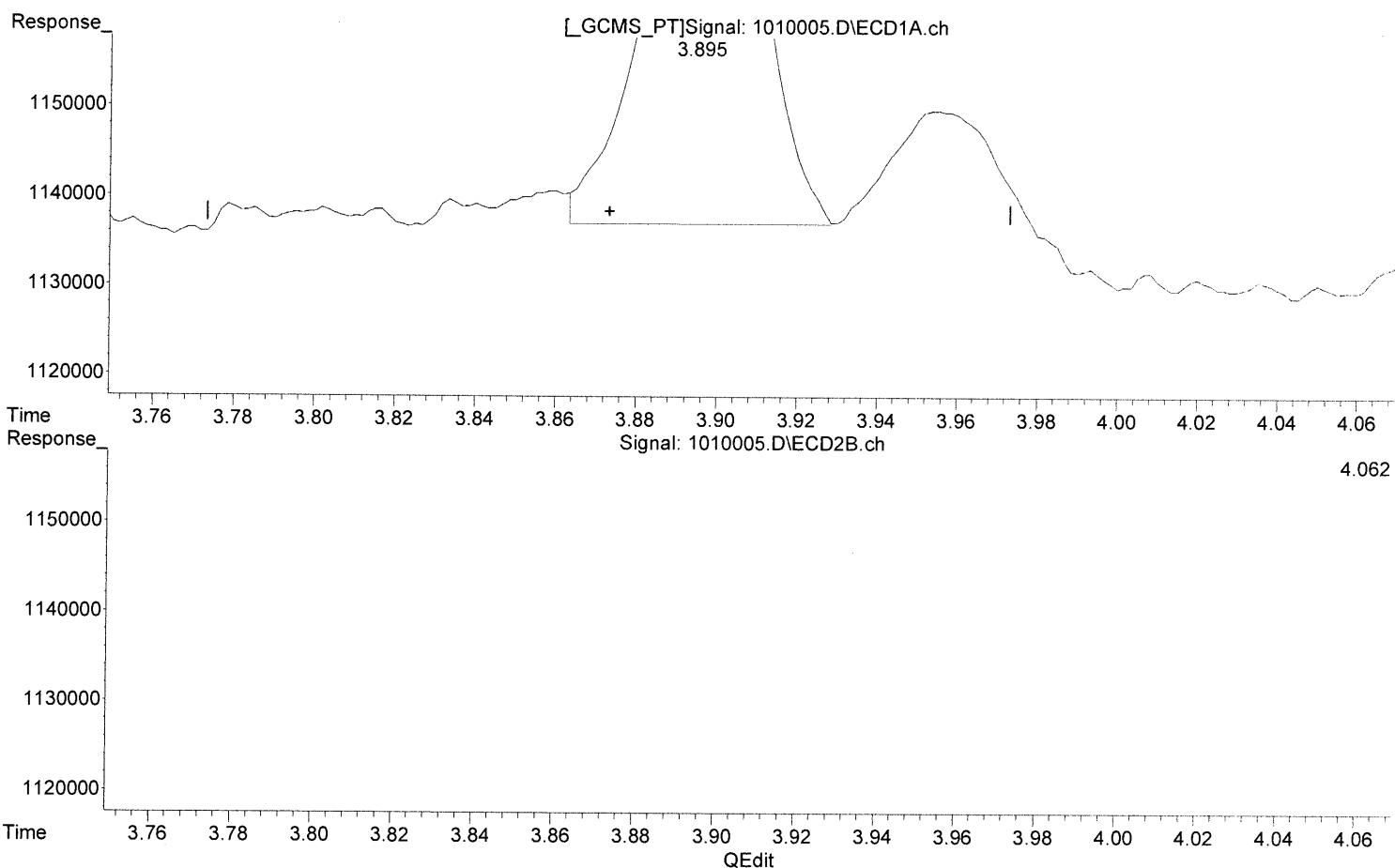
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:08:34 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
 3.895min 0.137 ppb m
 response 106012

Manual Integration:
 After
 Baseline/Shoulder
 10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)
 4.062min 0.088 ppb
 response 121390



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:09:07 2016

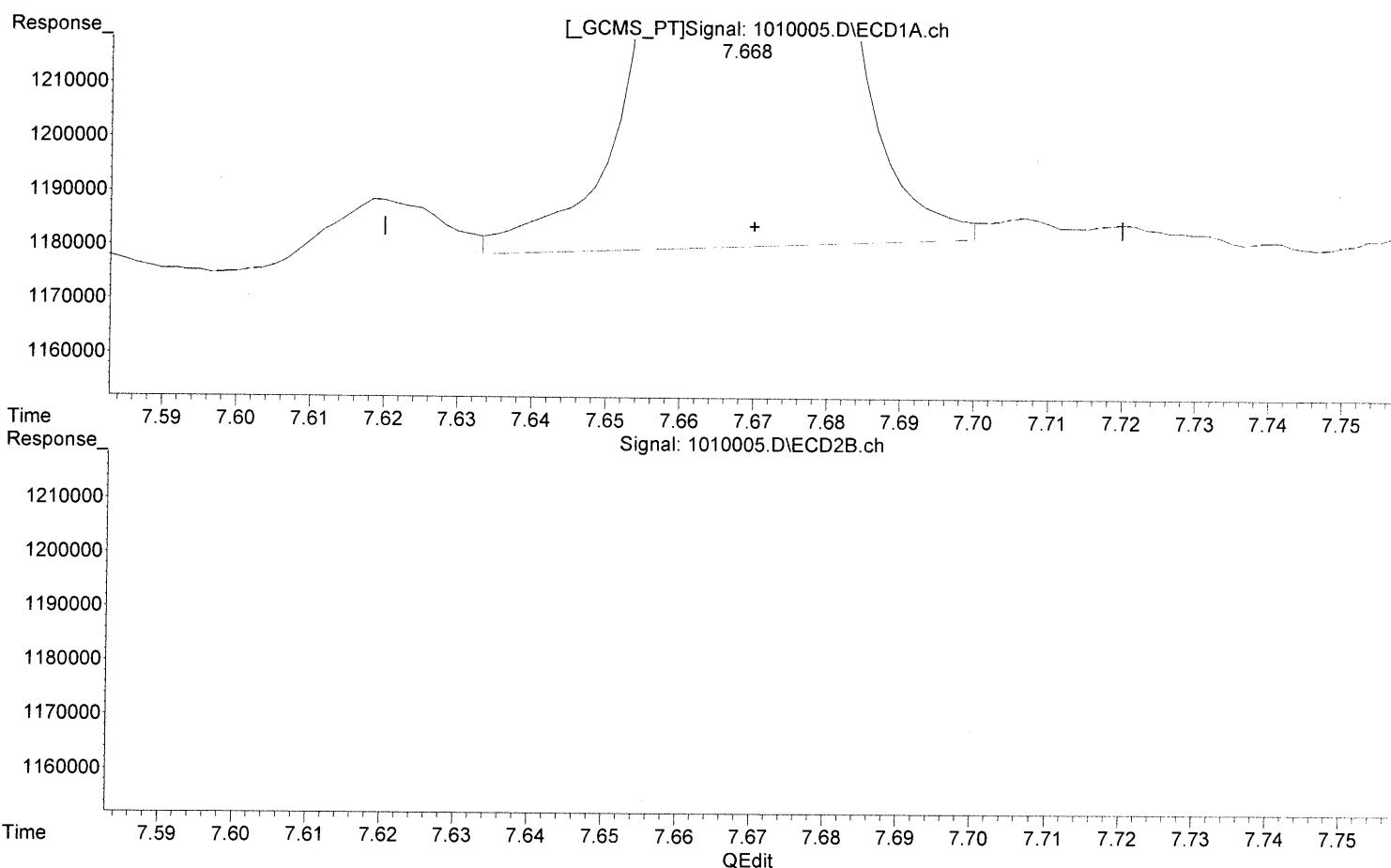
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.668min 0.176 ppb

response 396019

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.095 ppb

response 297791

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:08 2016

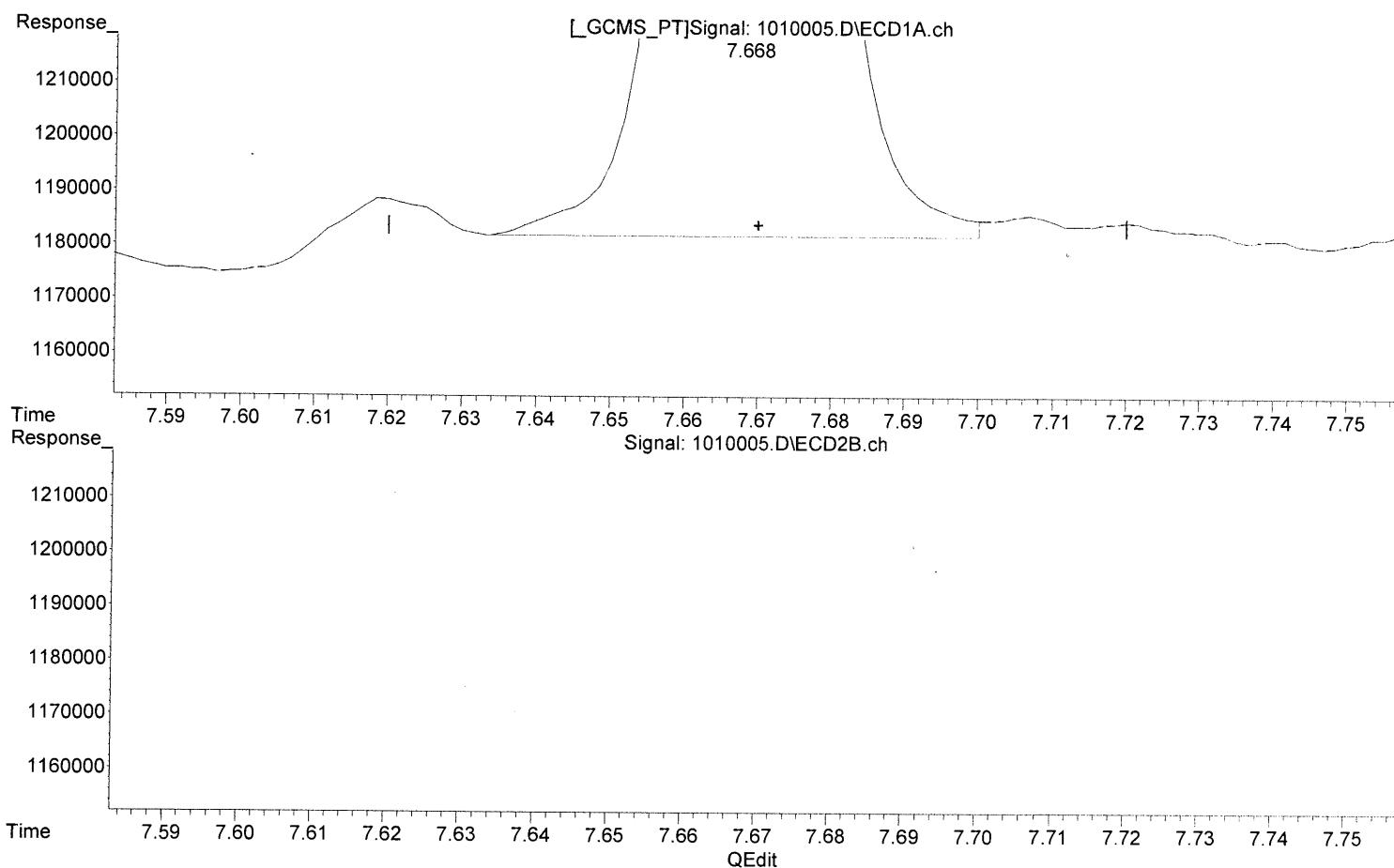


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010005.D Vial: 3
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:30:07 Operator: BS
 Sample : ICAL LV2 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:08:22 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.668min 0.173 ppb m

response 389497

Manual Integration:

After

Baseline/Shoulder

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.095 ppb

response 297791



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:17 2016

Page: 1

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:53:42 Operator: BS
Sample : ICAL LV3 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:12:35 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.885	4.073	239042	262600	0.249m	0.190m
2) M 1,2,3-Tri...	6.240	6.300	33031	73436	0.204	0.123 #
3) M 1,2-Dibro...	7.670	7.877	701491	613475	0.312m	0.195 #

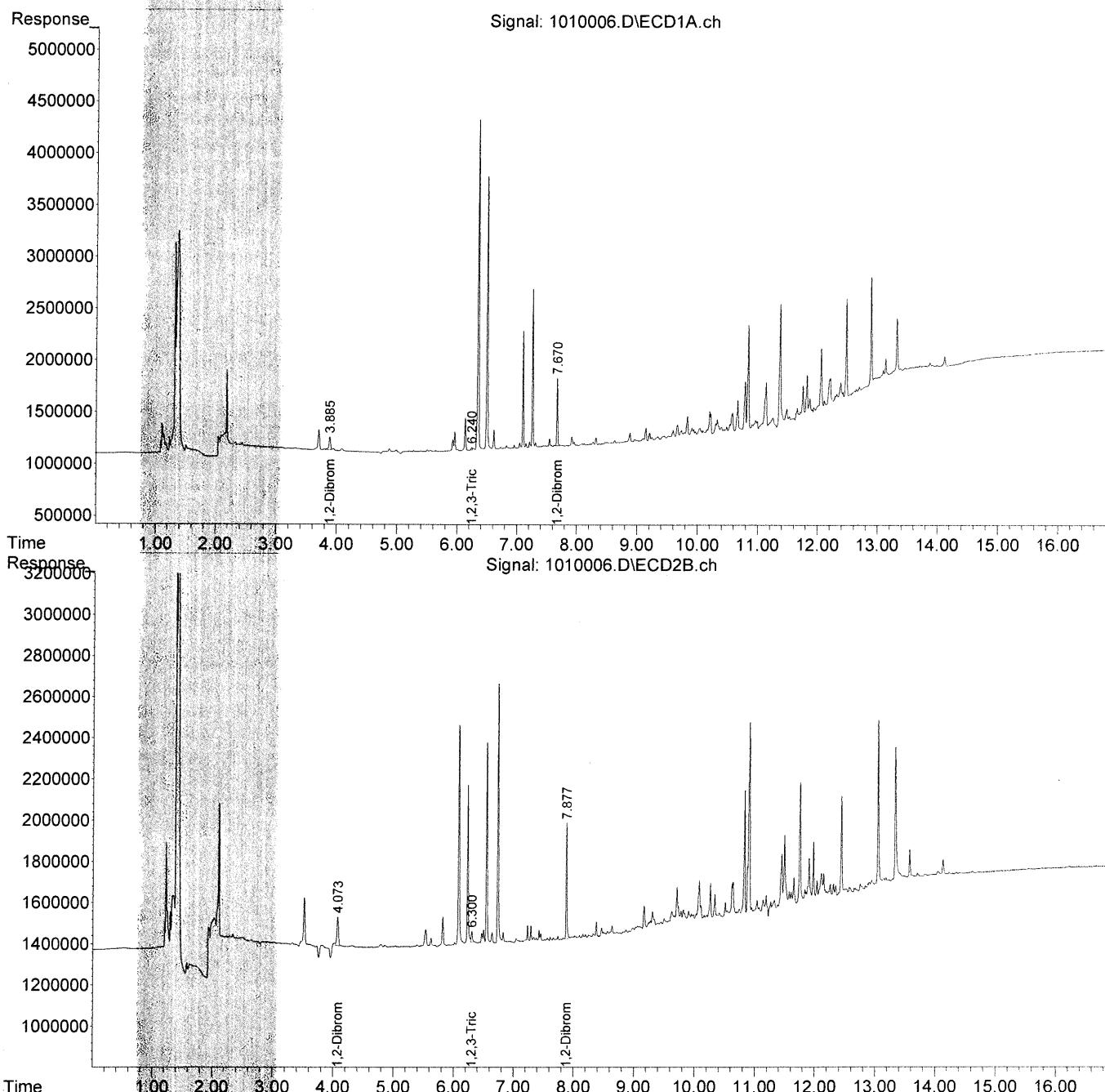
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 16:53:42 Operator: BS
Sample : ICAL LV3 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:12:35 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

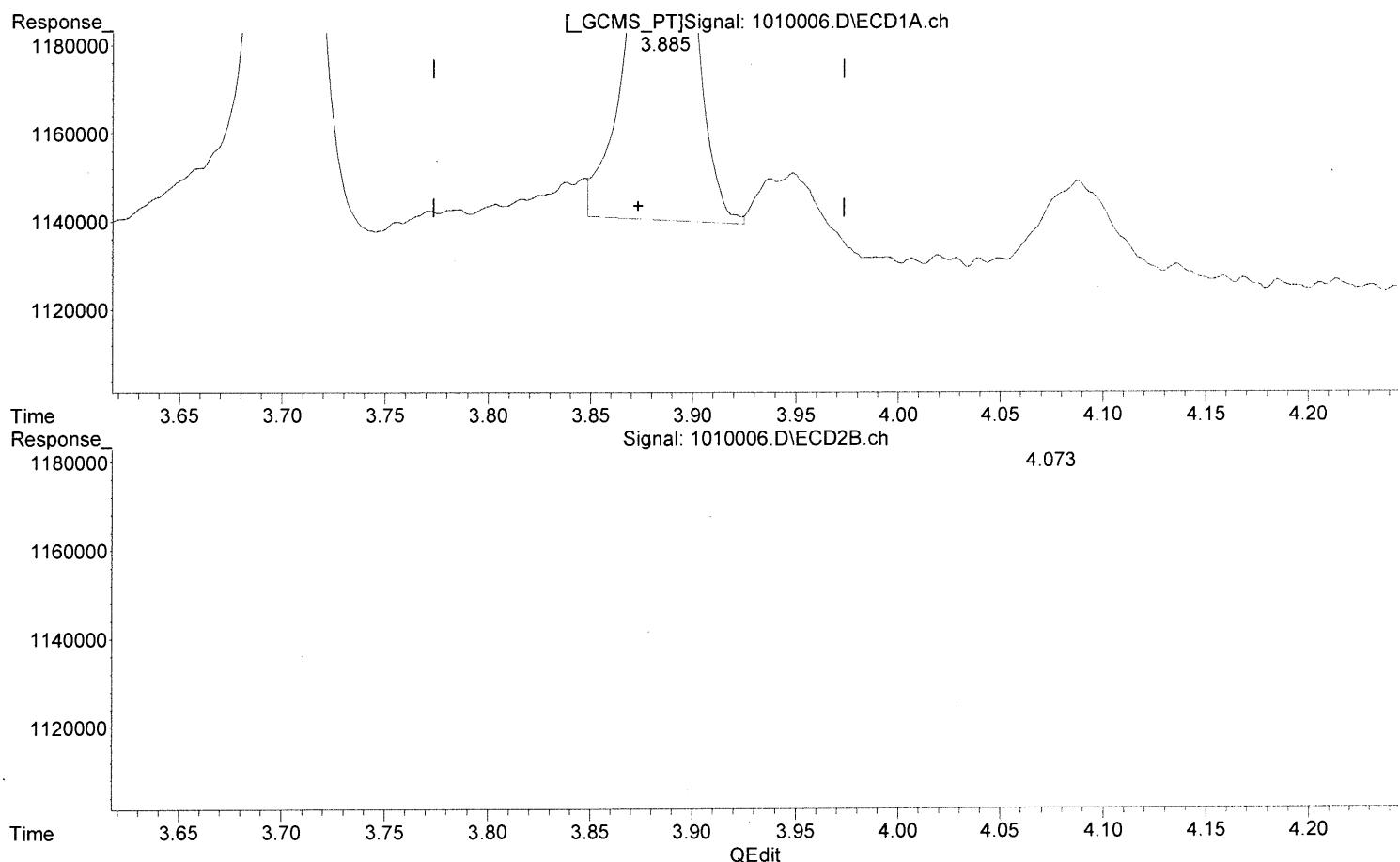


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.238 ppb

response 226147

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:11:47 2016

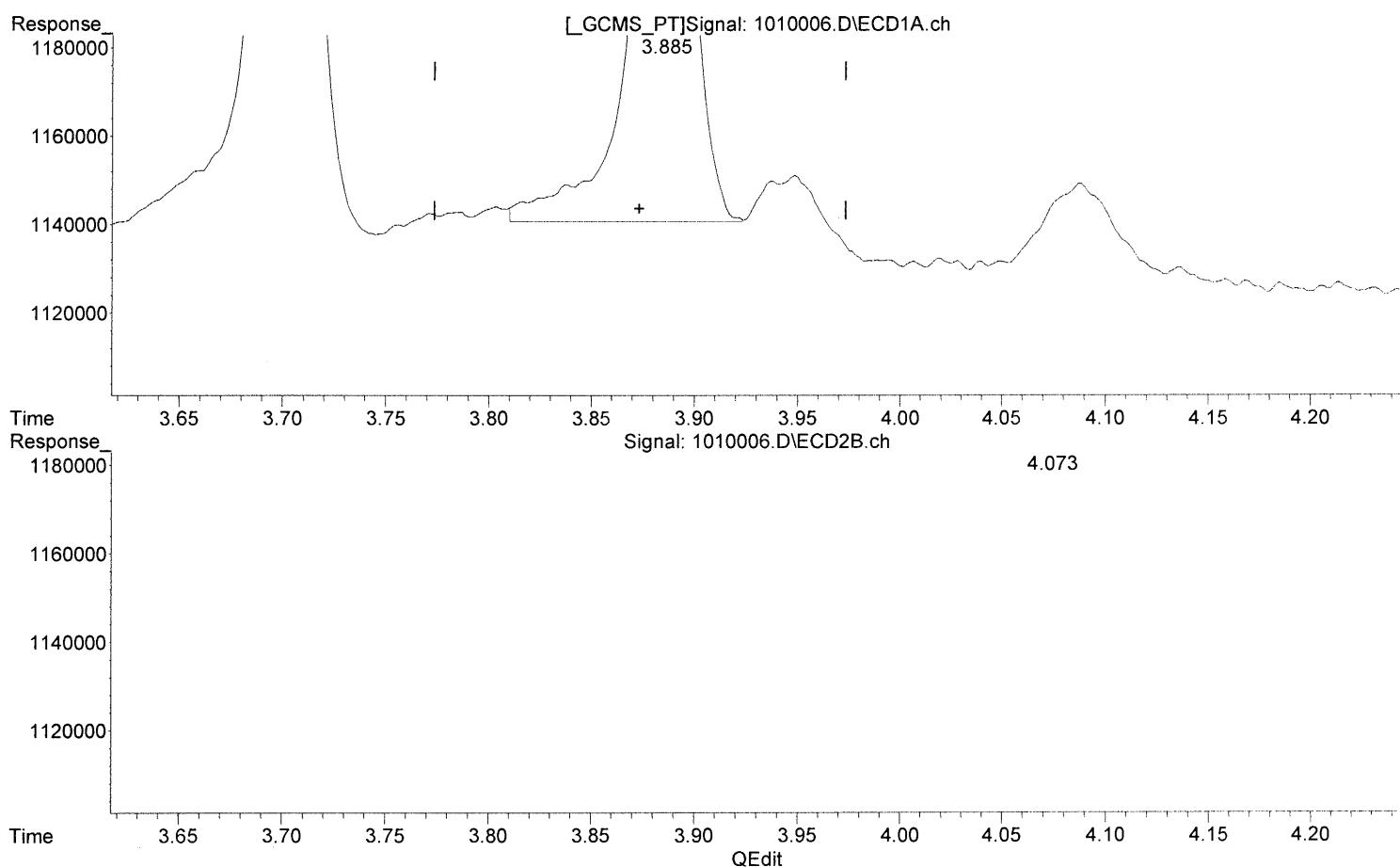
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:11:55 2016

Page: 1

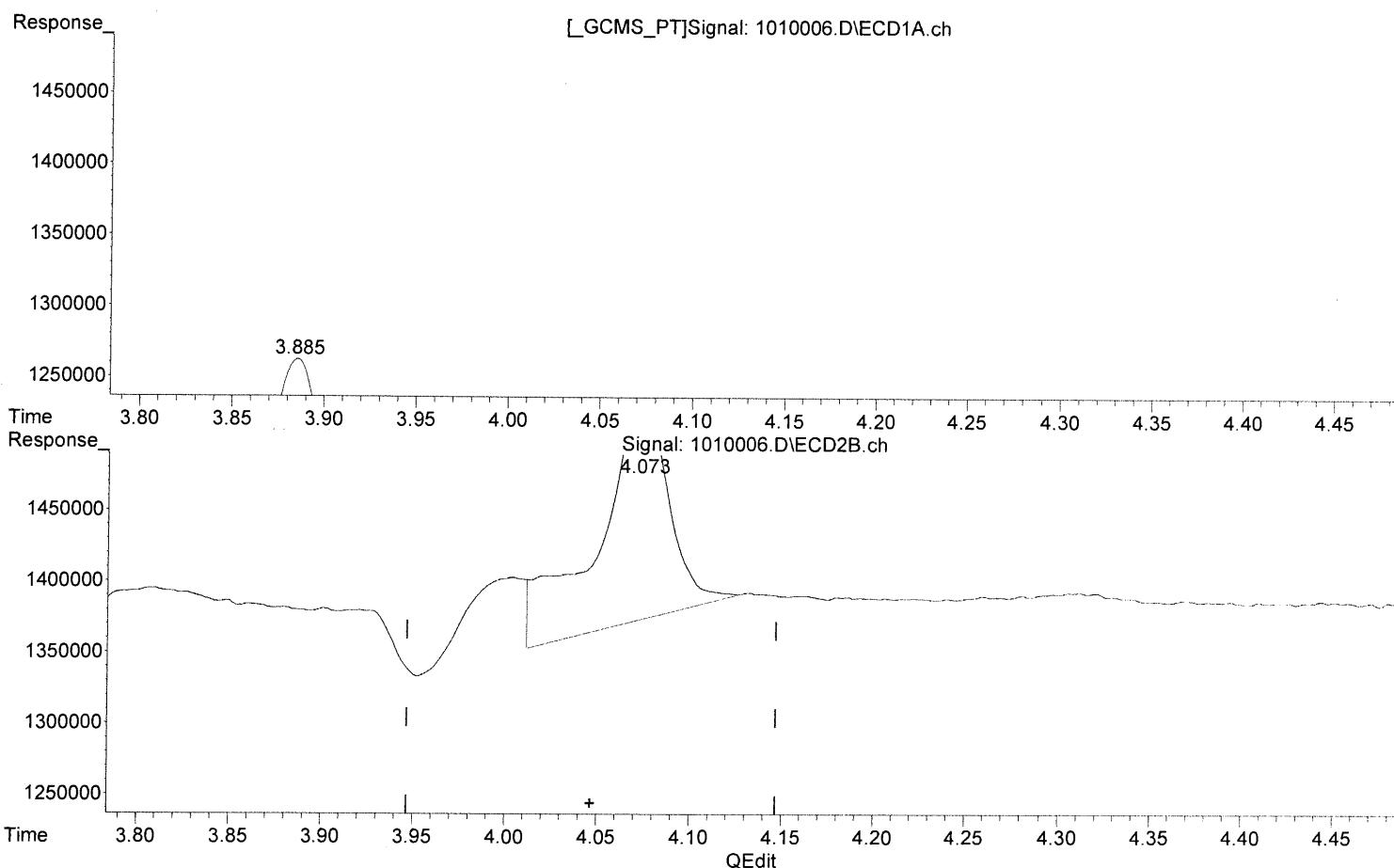


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.300 ppb

response 414132



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:12:02 2016

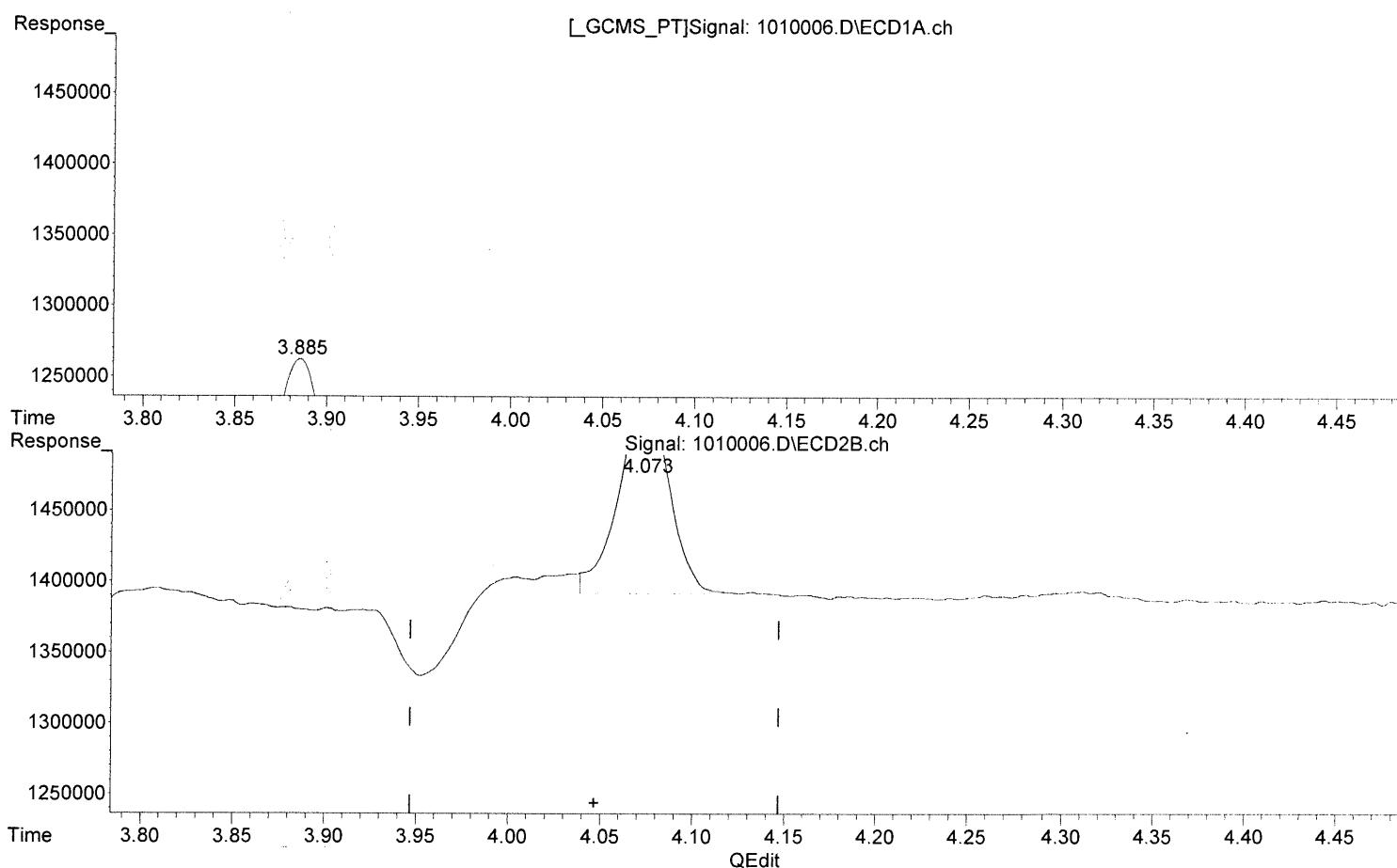
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.885min 0.249 ppb m

response 239042

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.073min 0.190 ppb m

response 262600



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:12 2016

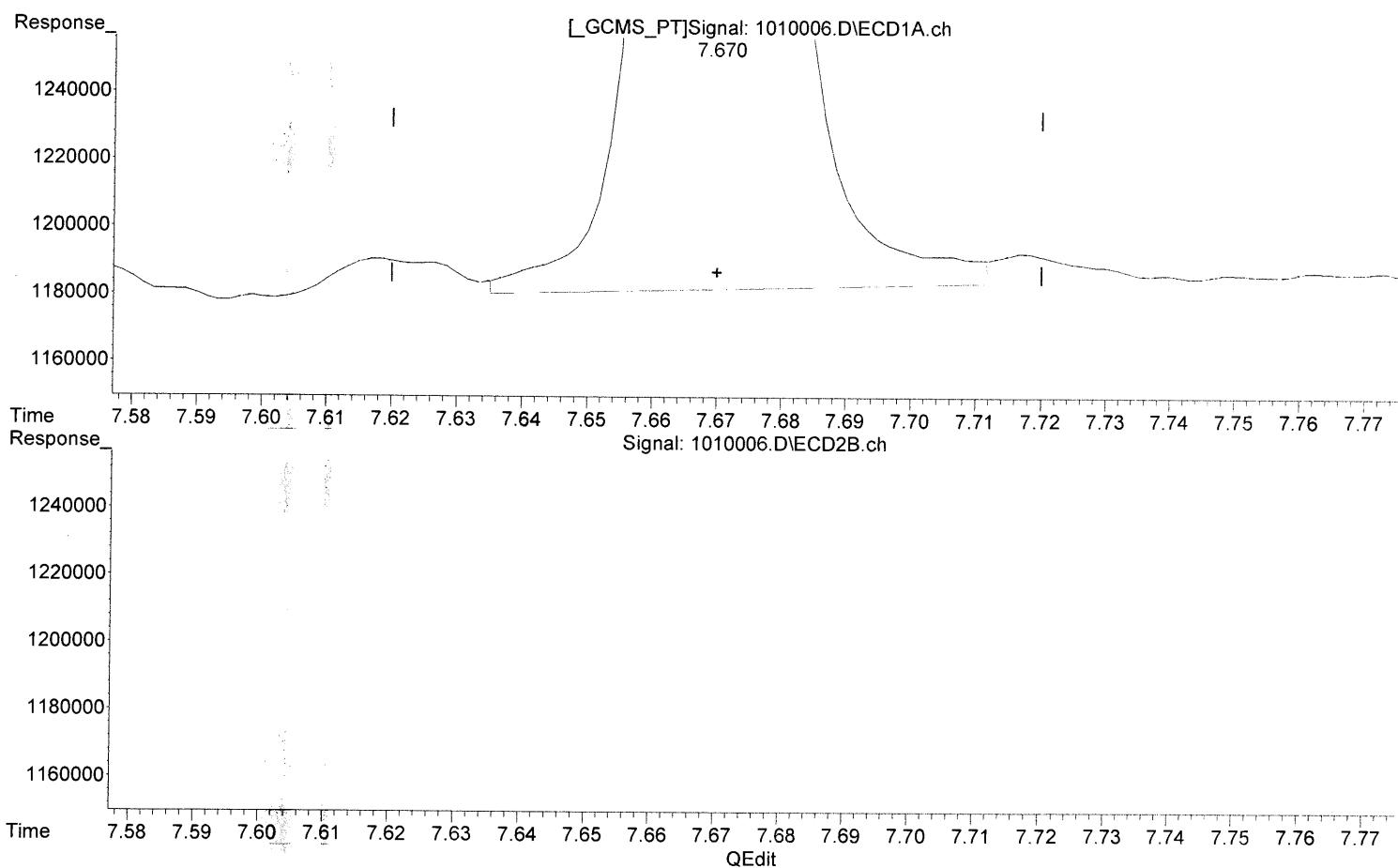
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.670min 0.316 ppb

response 710176

Manual Integration:

Before

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.195 ppb

response 613475



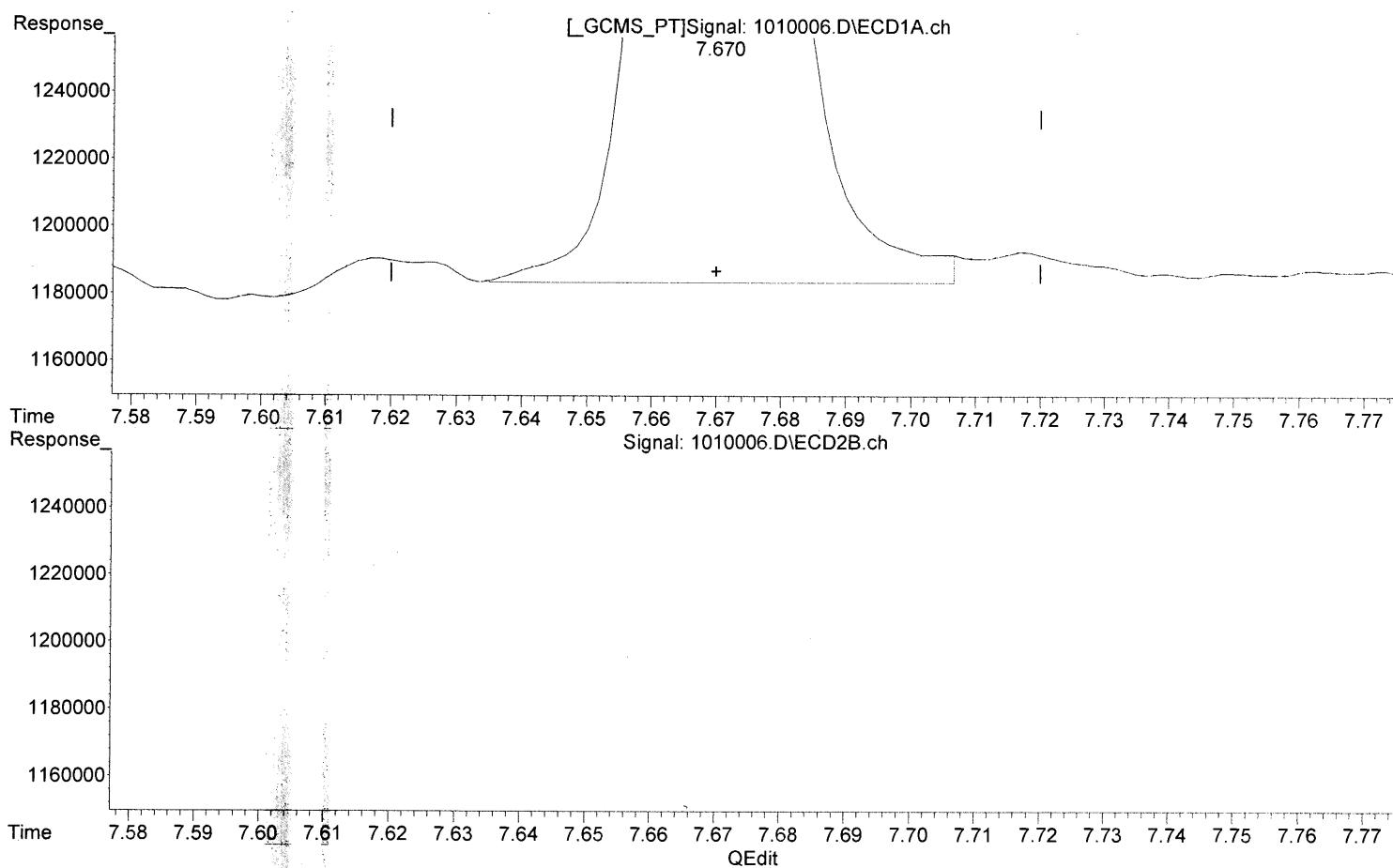
(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:30 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010006.D Vial: 4
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 16:53:42 Operator: BS
 Sample : ICAL LV3 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:11:32 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(3) 1,2-Dibromo-3-chloropropane (DBCP) (M)

7.670min 0.312 ppb m

response 701491

Manual Integration:

After

Baseline/Shoulder

10/11/16

(3) 1,2-Dibromo-3-chloropropane (DBCP) #2 (M)

7.877min 0.195 ppb

response 613475

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:12:38 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:17:23 Operator: BS
Sample : ICAL LV4 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:13:38 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth: 504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.892	4.065	795089	682200	0.717m	0.494 #
2) M 1,2,3-Triiodopropane	6.240	6.300	138223	157791	0.854m	0.466 #
3) M 1,2-Dibromoethane	7.670	7.877	1755563	1454249	0.781	0.463 #

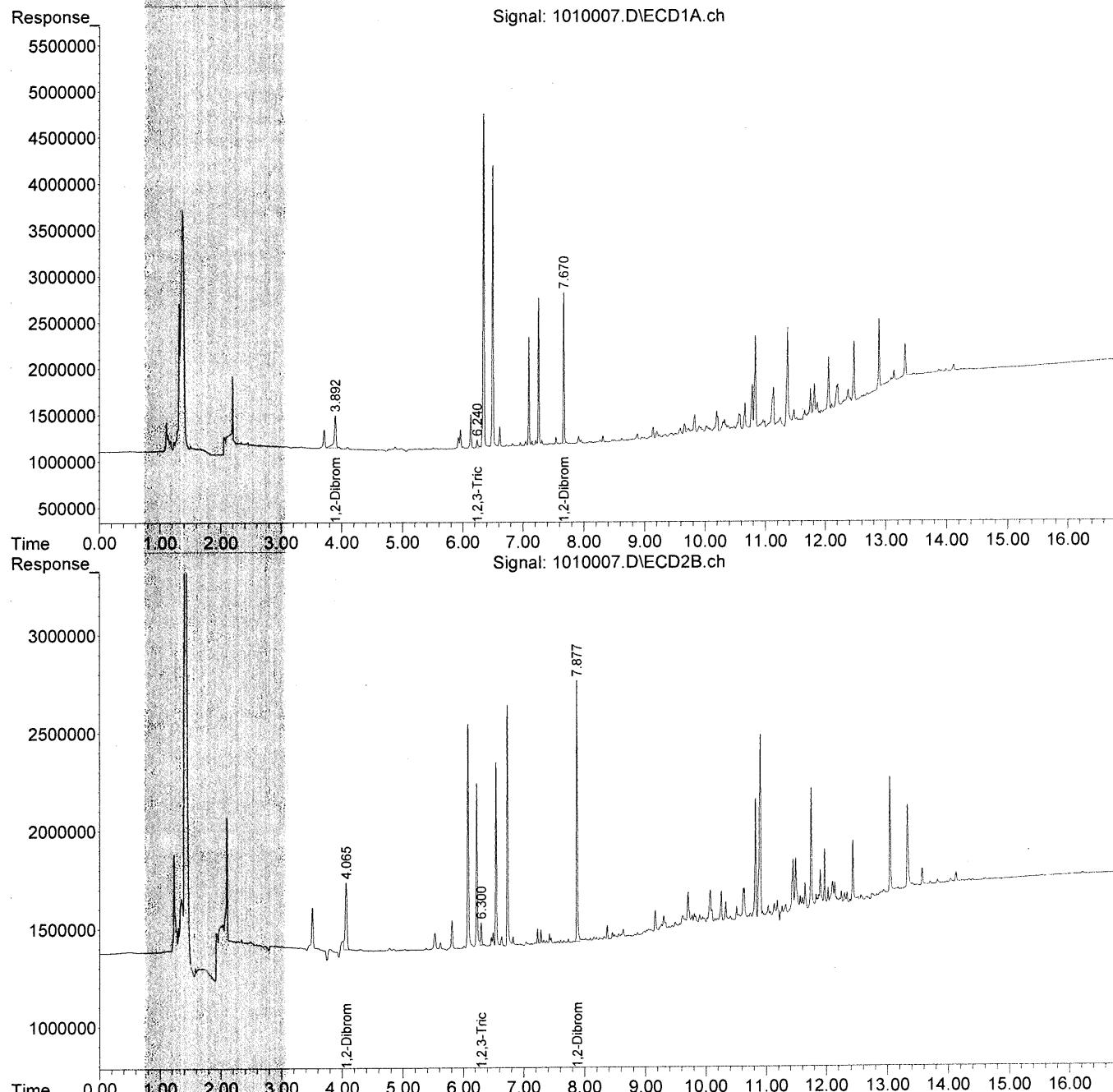
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:17:23 Operator: BS
Sample : ICAL LV4 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:13:38 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

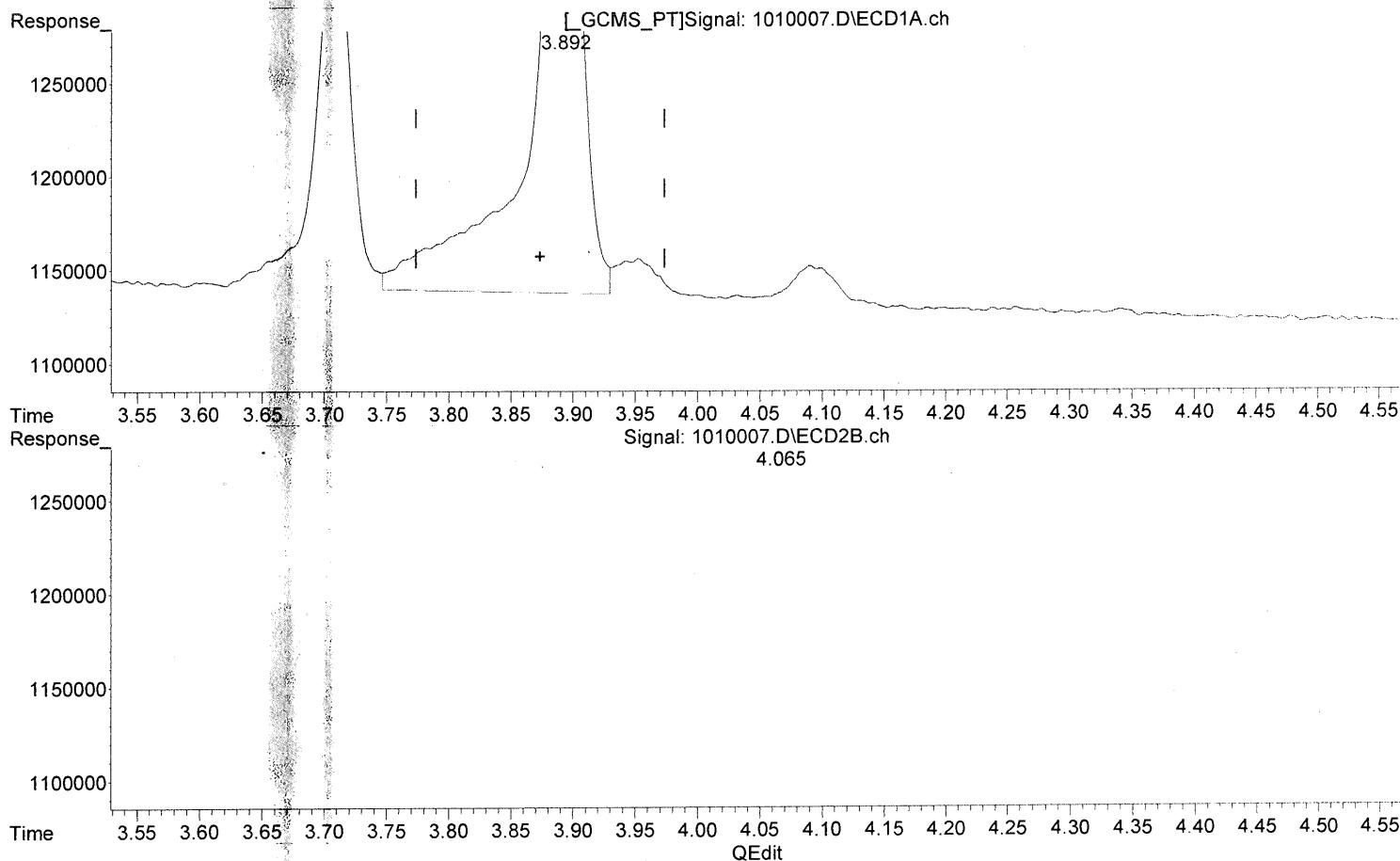


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 0.803 ppb

response 897642

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 0.494 ppb

response 682200

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:13:14 2016

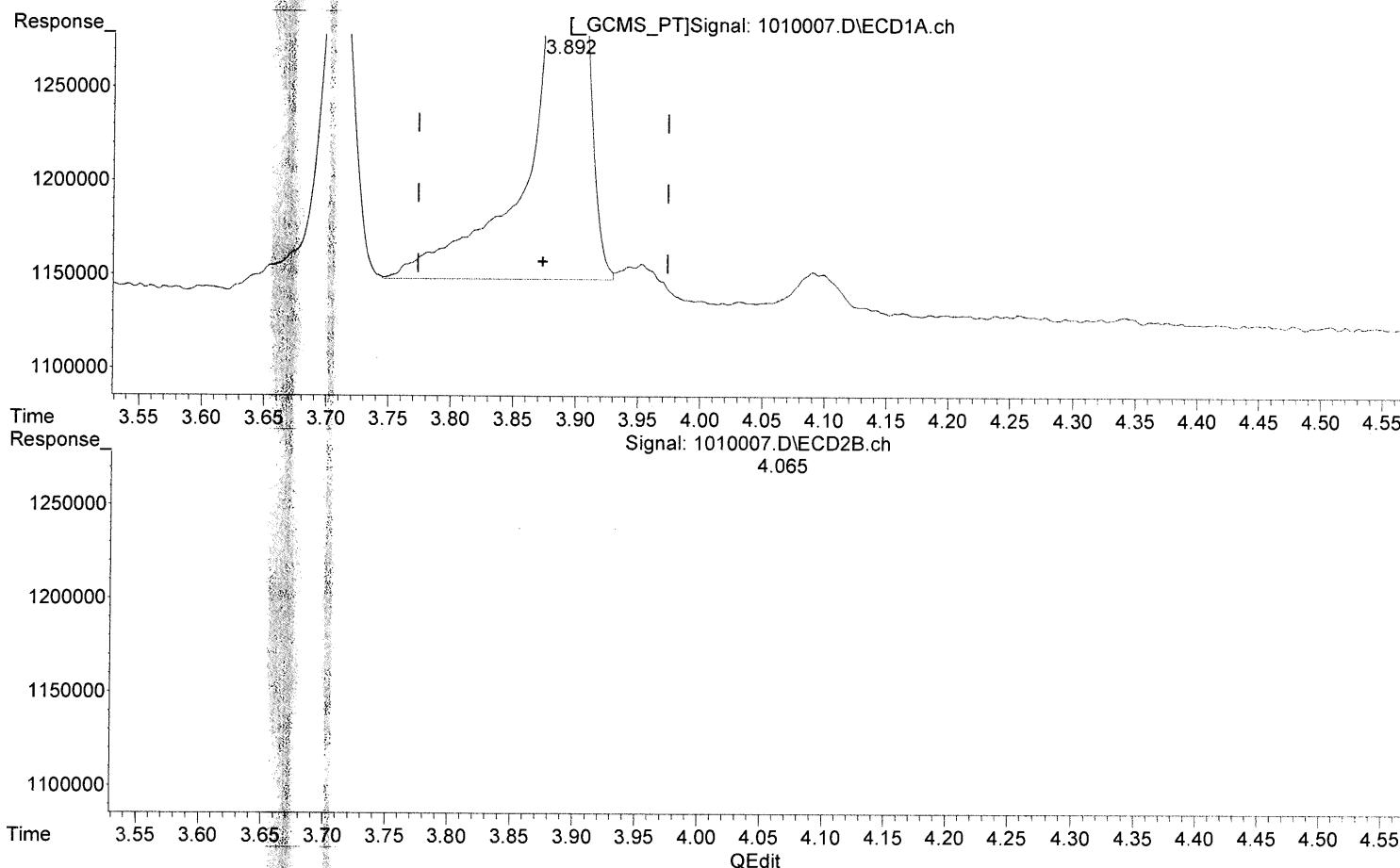
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.892min 0.717 ppb m

response 795089

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.065min 0.494 ppb

response 682200

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:13:21 2016

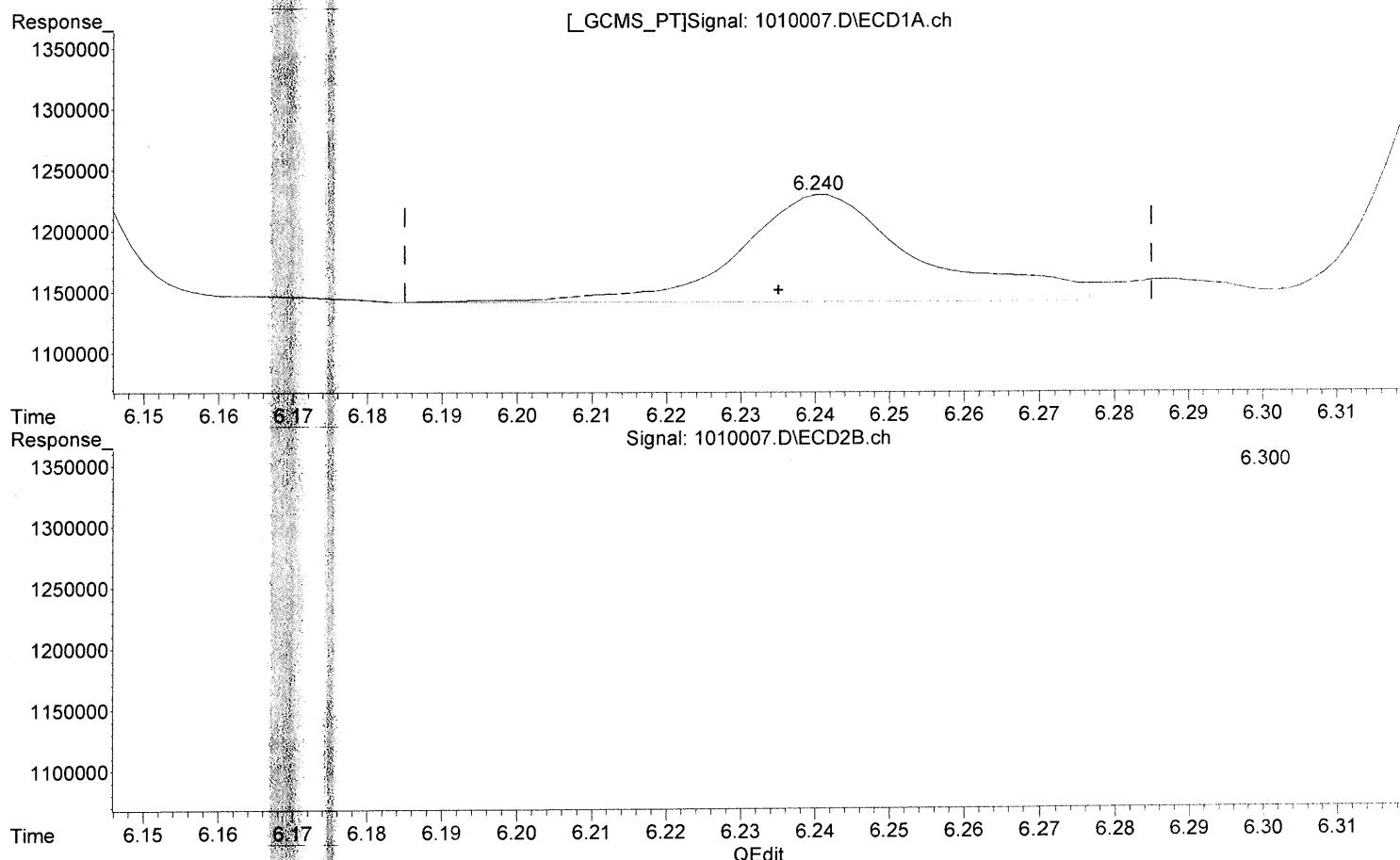
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

Manual Integration:

6.240min 0.921 ppb

Before

response 149093

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.300min 0.466 ppb

response 157791

Page: 1

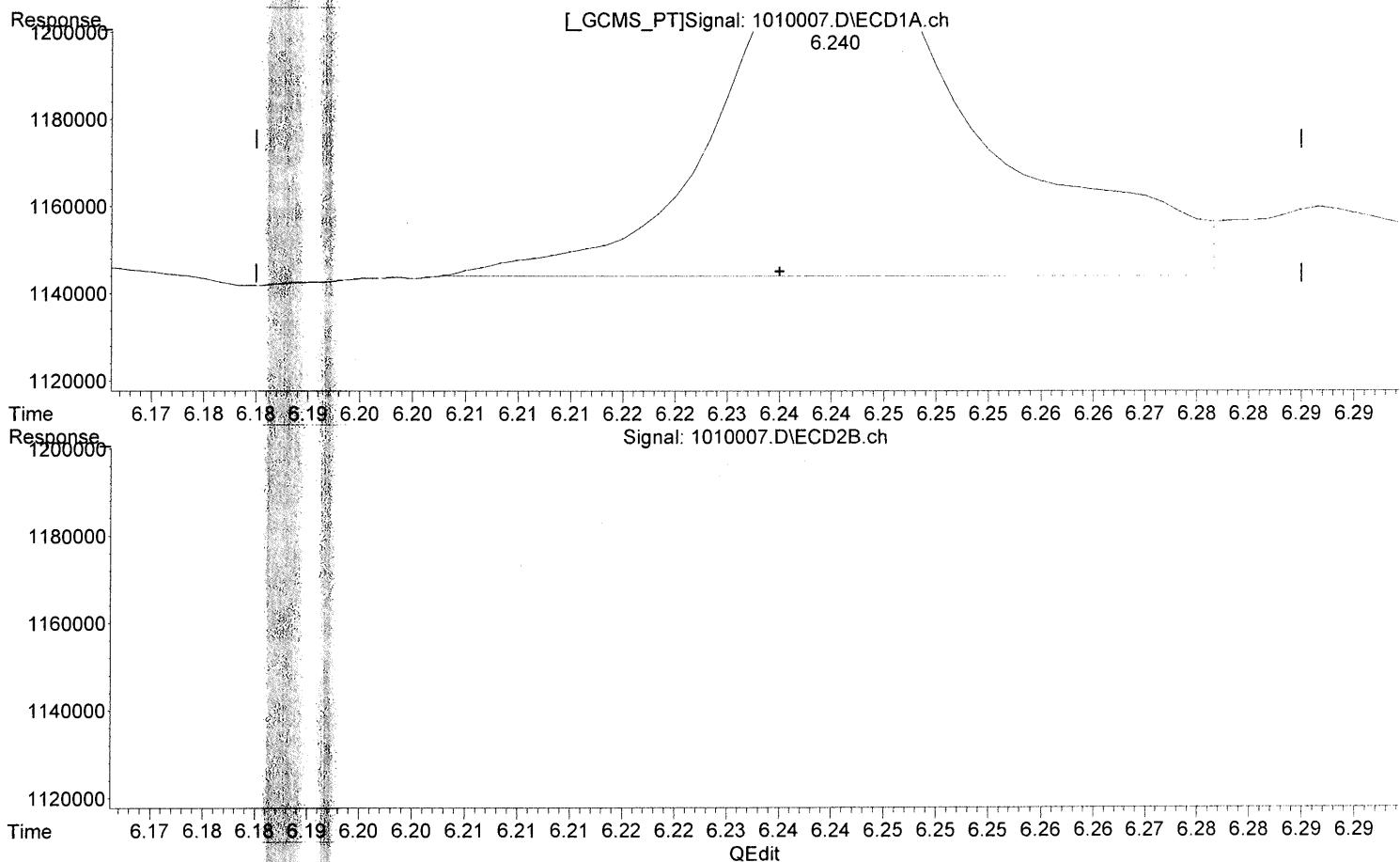
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:13:31 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010007.D Vial: 5
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:17:23 Operator: BS
 Sample : ICAL LV4 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:12:56 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.240min 0.854 ppb m

response 138223

Manual Integration:

After

Baseline/Shoulder

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.300min 0.466 ppb

response 157791

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:13:41 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:40:57 Operator: BS
Sample : ICAL LV5 101016 Inst : GCI
Misc : Multiplr: 1.00

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:14:58 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.898	4.060	1401531	1125916	1.228m	0.815m#
2) M 1,2,3-Triiodopropane	6.242	6.298	245184	246237	1.515m	0.822 #
3) M 1,2-Dibromoethane	7.670	7.877	3219717	2577549	1.431	0.820 #

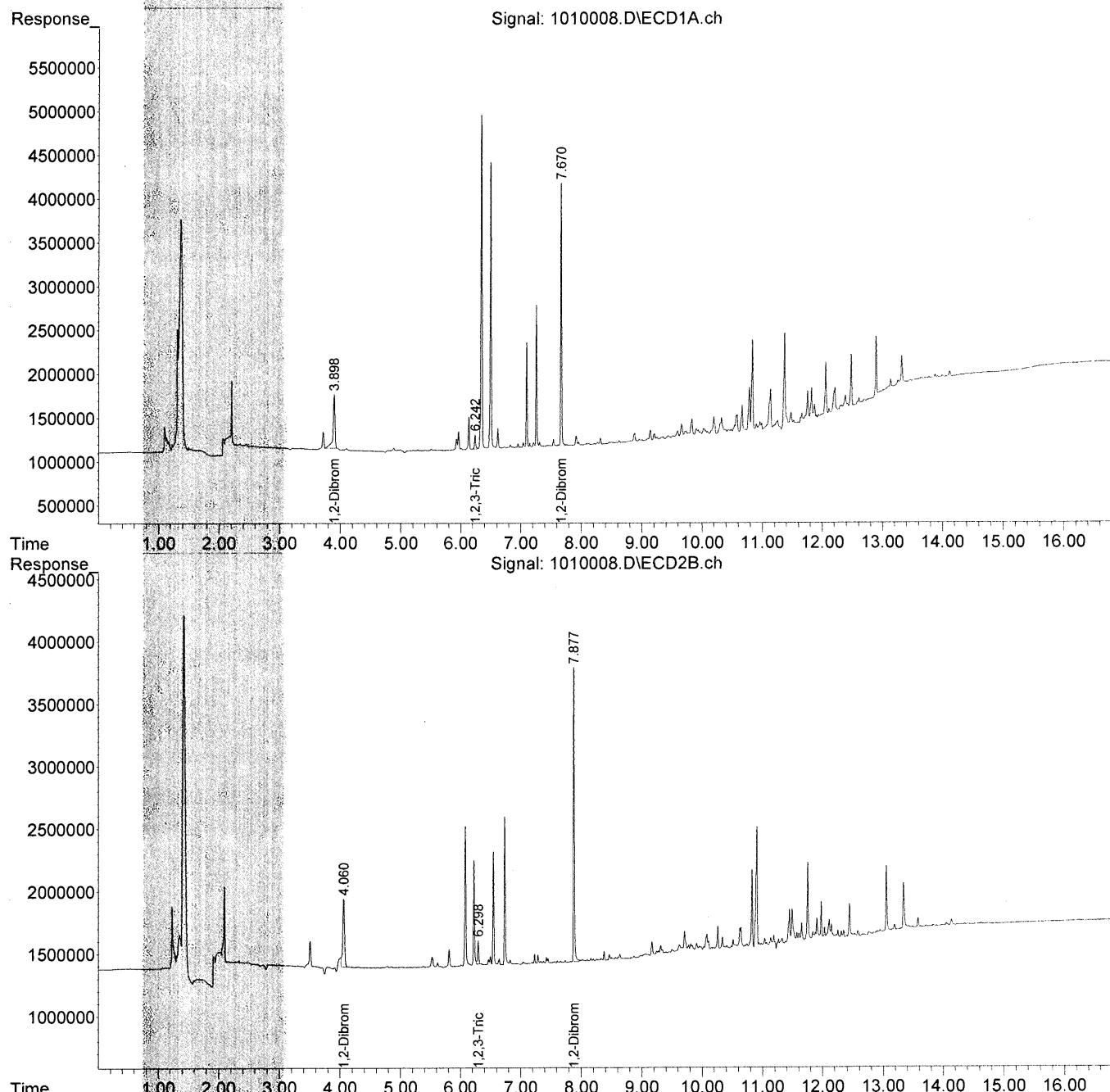
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 17:40:57 Operator: BS
Sample : ICAL LV5 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:14:58 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via: Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

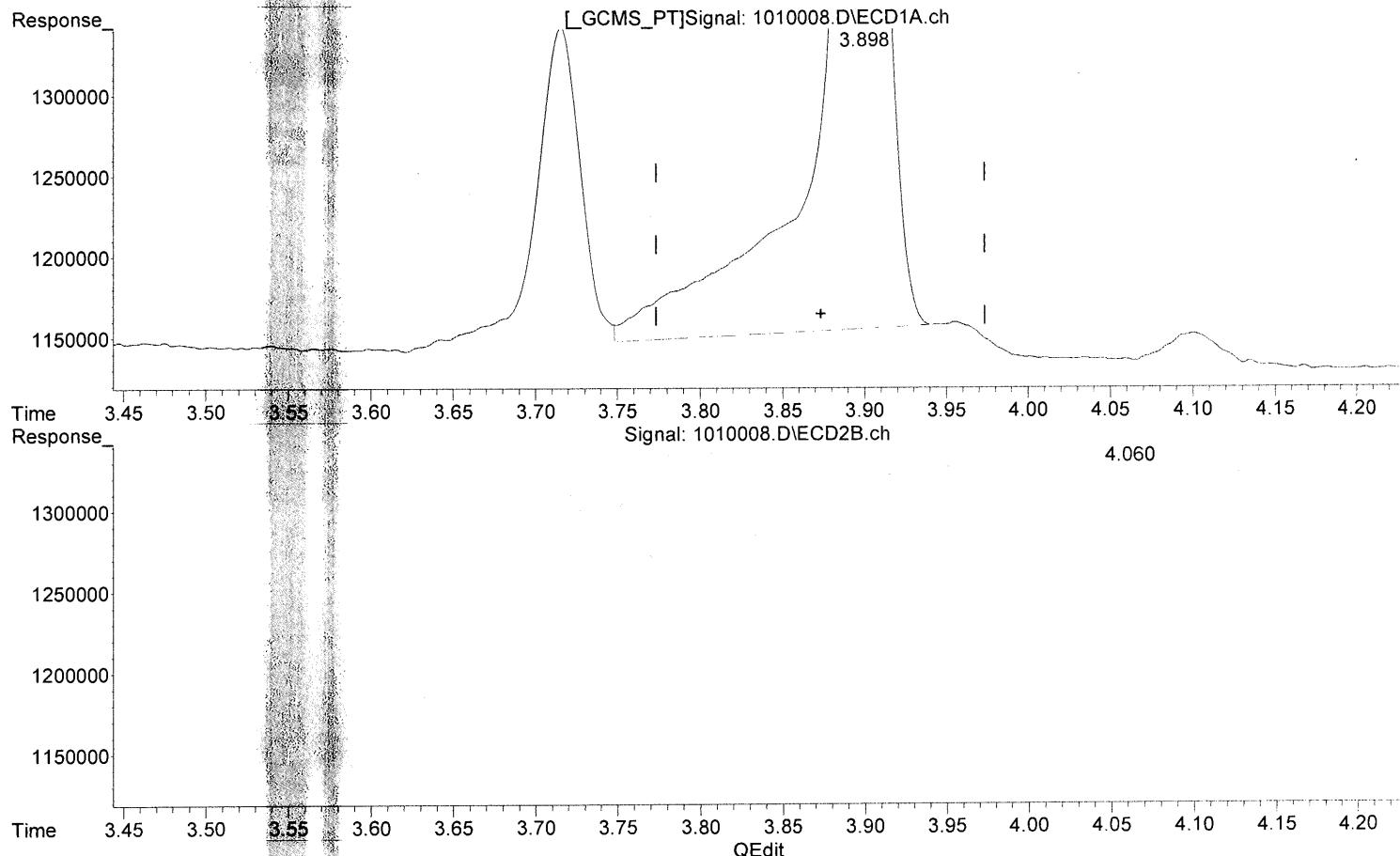


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.266 ppb

response 1446490

Manual Integration:

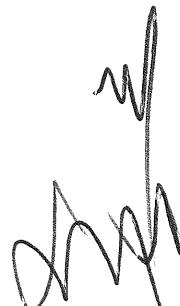
Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:15 2016

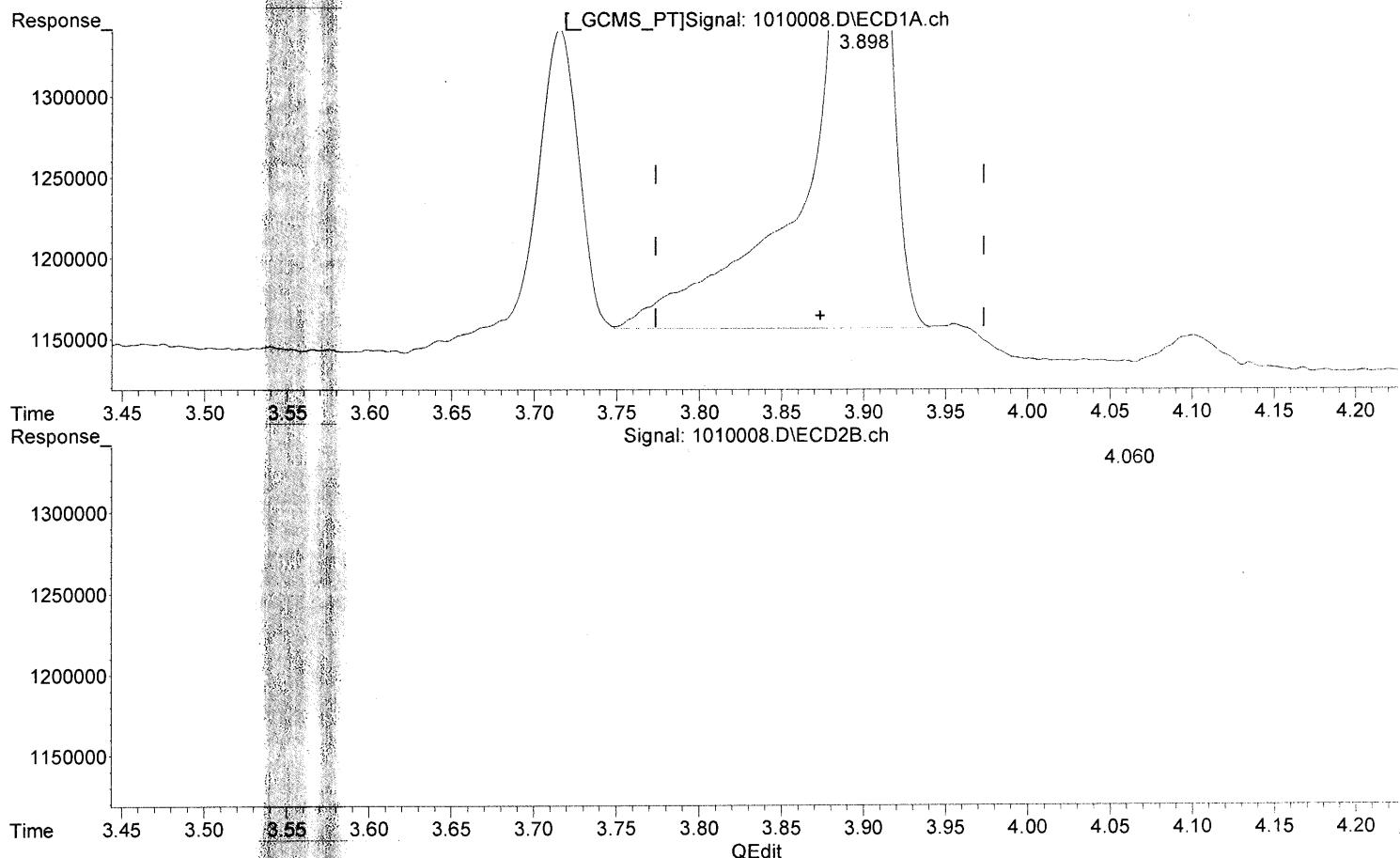
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:14:27 2016

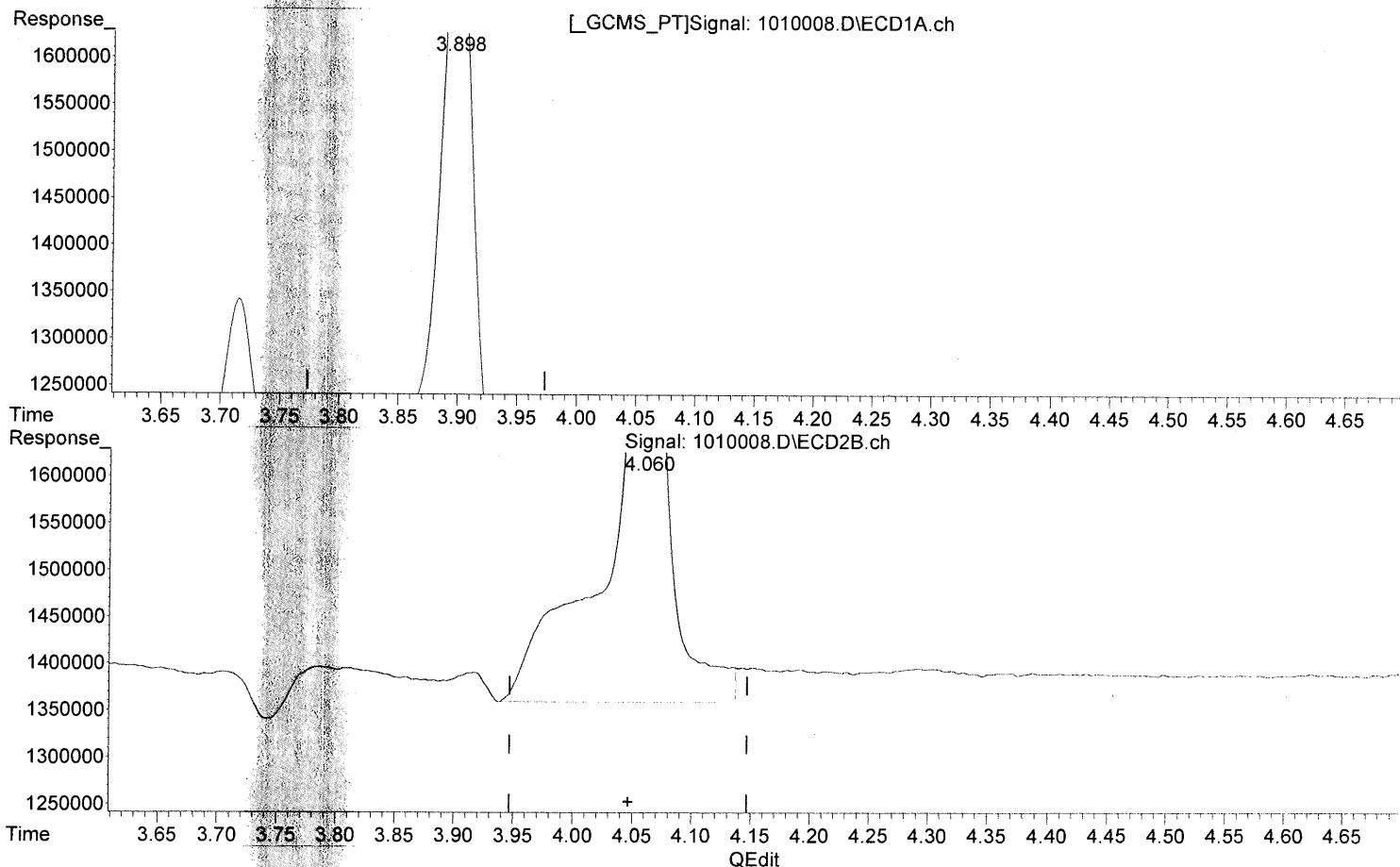
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 1.275 ppb

response 1761626



(+) = Expected Retention Time

101116_504.M Tue Oct 11 08:14:32 2016

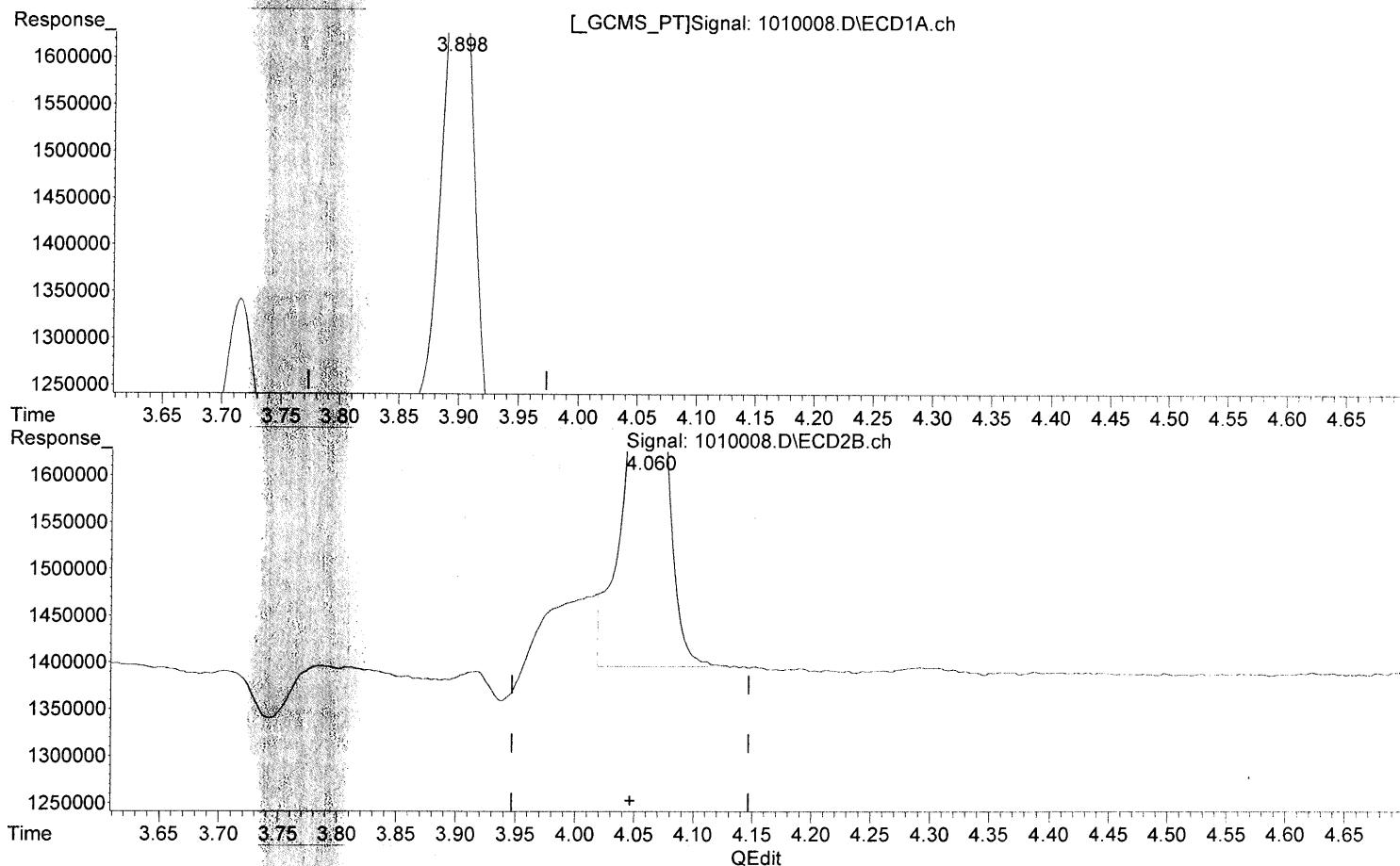
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LVS 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.228 ppb m

response 1401531

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.060min 0.815 ppb m

response 1125916



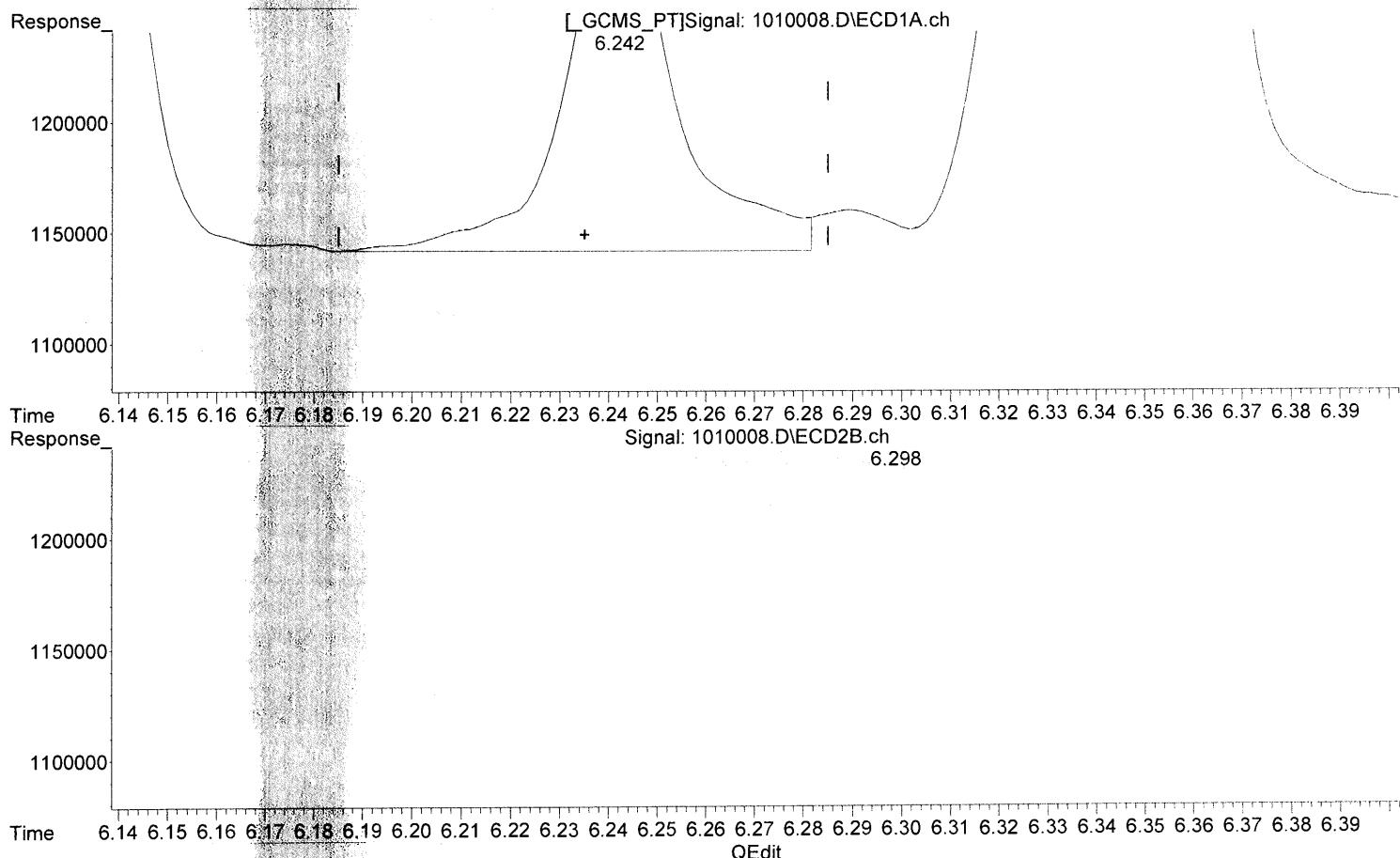
(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:14:43 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LV5 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.242min 1.603 ppb

response 259440

Manual Integration:

Before

10/11/16



(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.822 ppb

response 246237

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:14:53 2016

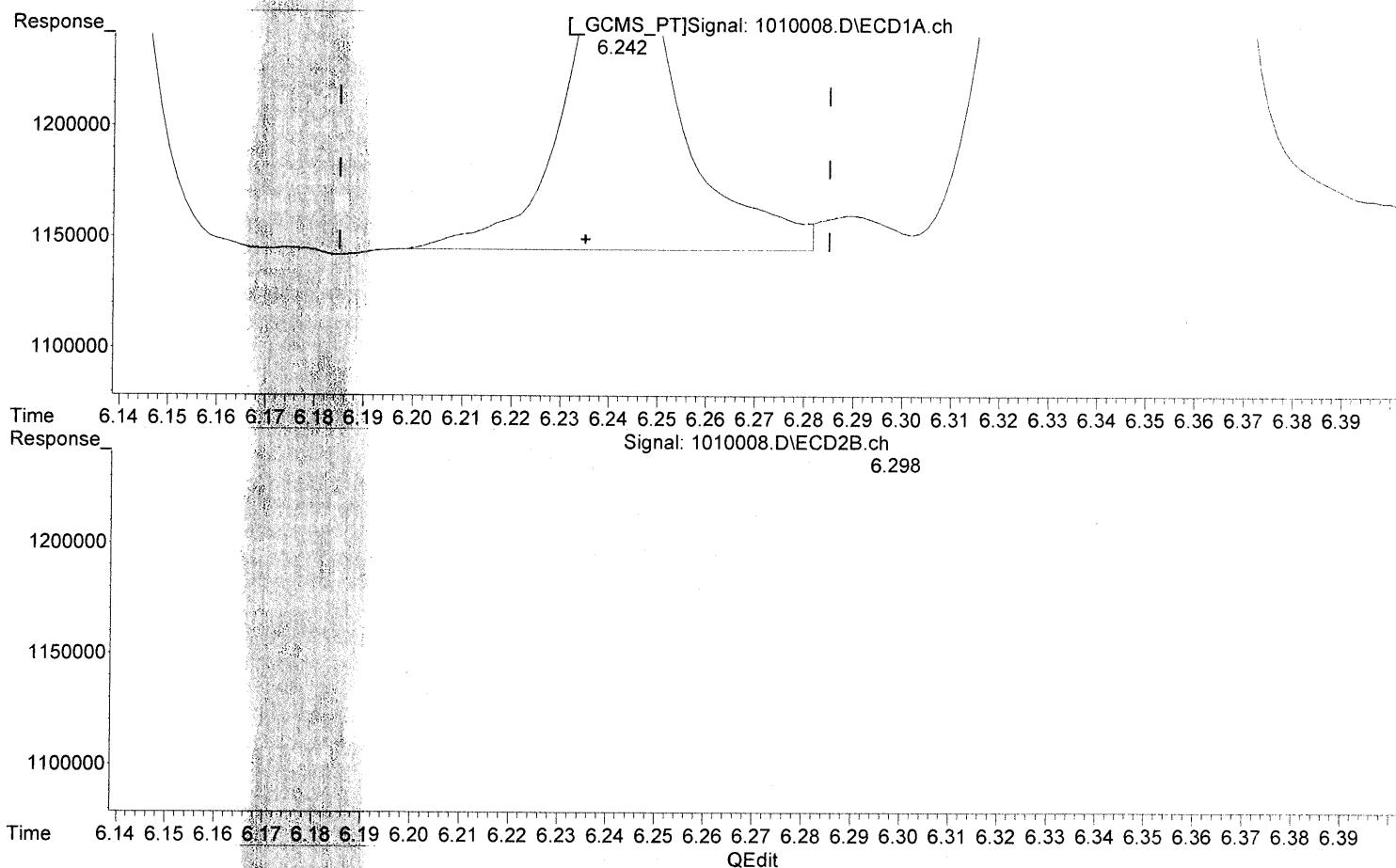
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010008.D Vial: 6
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 17:40:57 Operator: BS
 Sample : ICAL LVS 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:13:58 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

6.242min 1.515 ppb m

response 245184

Manual Integration:

After

Baseline/Shoulder

10/11/16

(2) 1,2,3-Trichloropropane #2 (M)

6.298min 0.822 ppb

response 246237

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:00 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:04:33 Operator: BS
Sample : ICAL LV6 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:15:49 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.897	4.062	4963671	3617450	4.246m	2.618m#
2) M 1,2,3-Tribromoethane	6.240	6.298	804323	798984	4.971	2.980 #
3) M 1,2-Dibromoethane	7.668	7.877	10079049	8377811	4.481	2.665 #

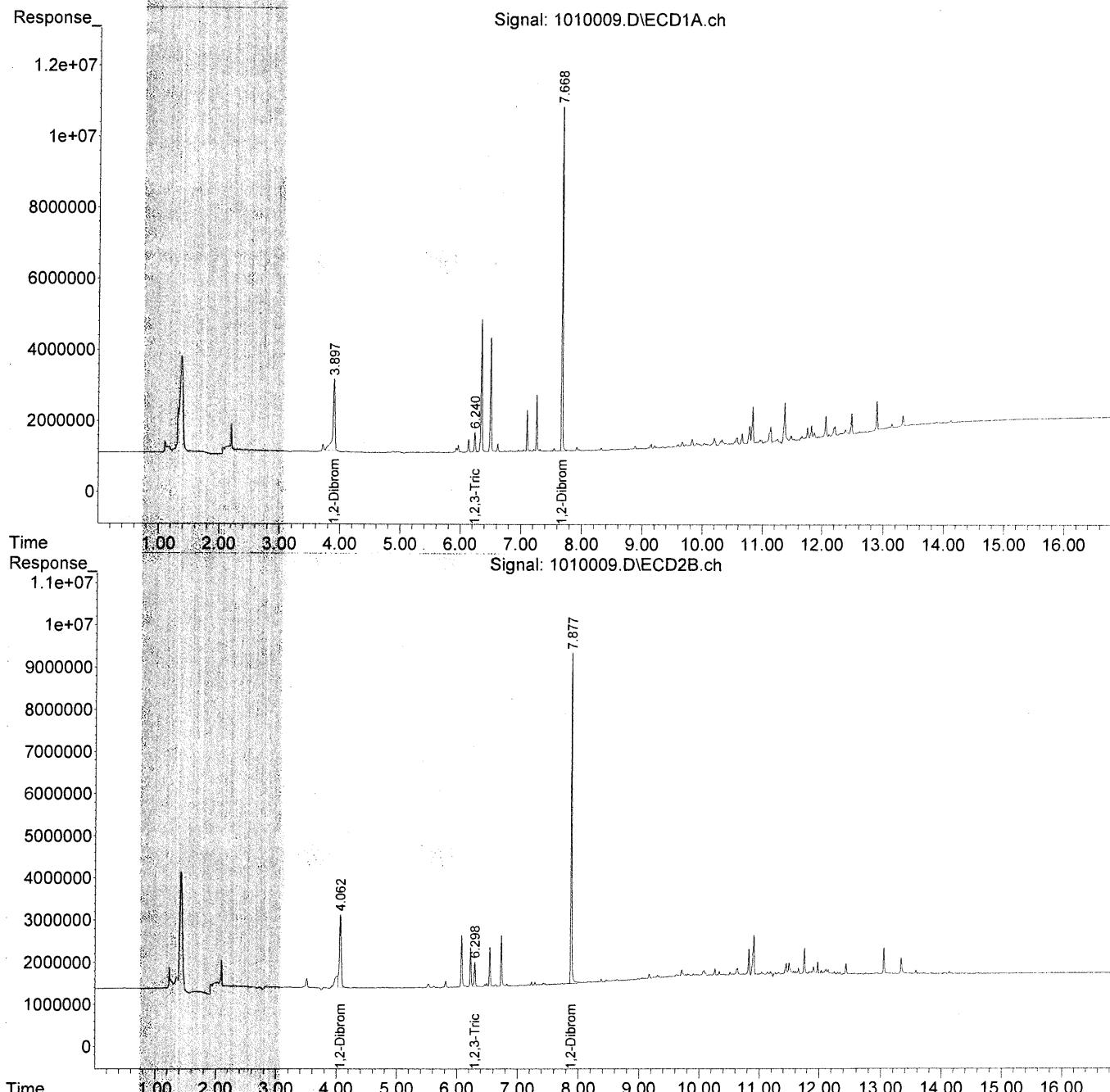
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:04:33 Operator: BS
Sample : ICAL LV6 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:15:49 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m

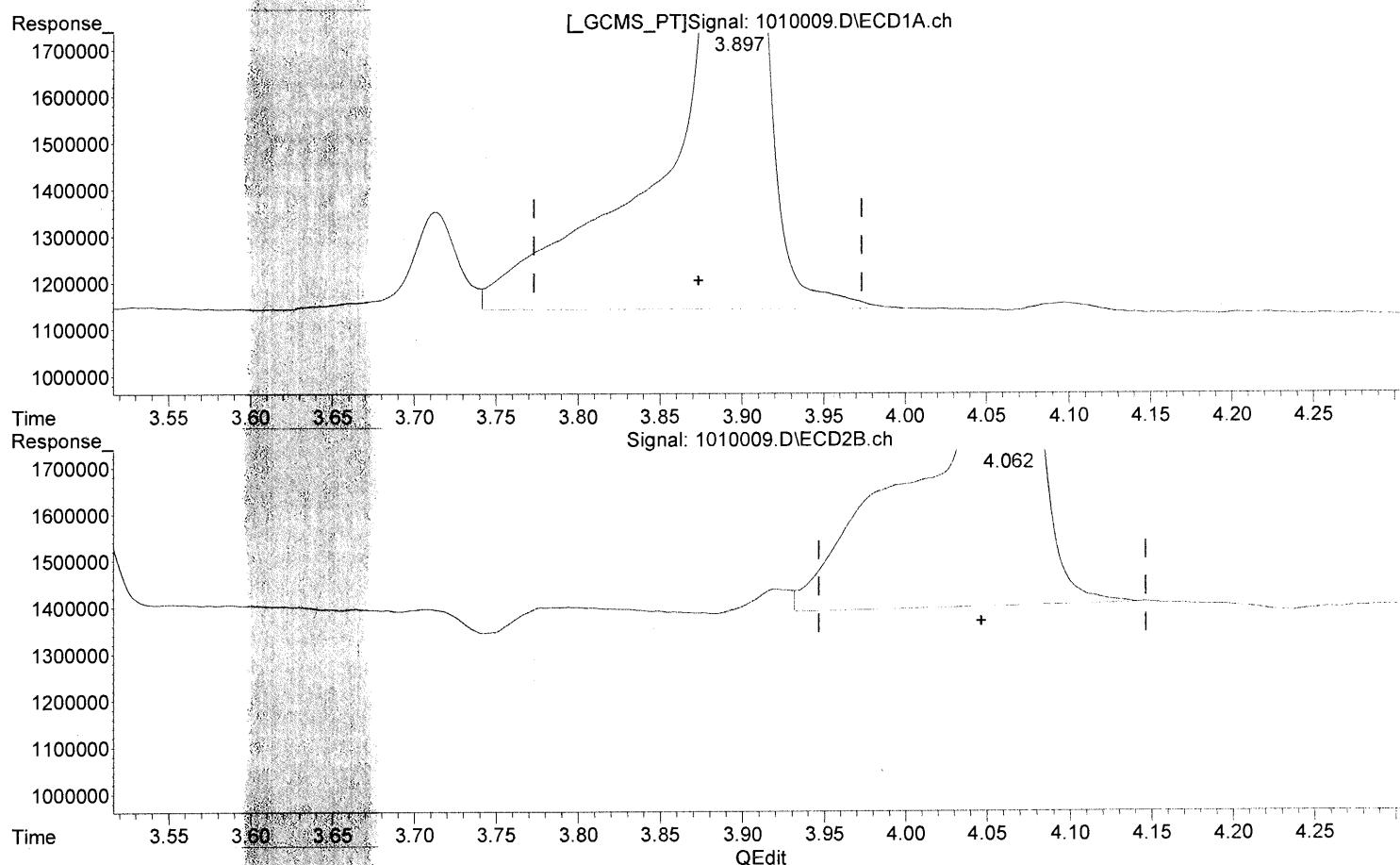


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.696 ppb

response 5492984

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:24 2016

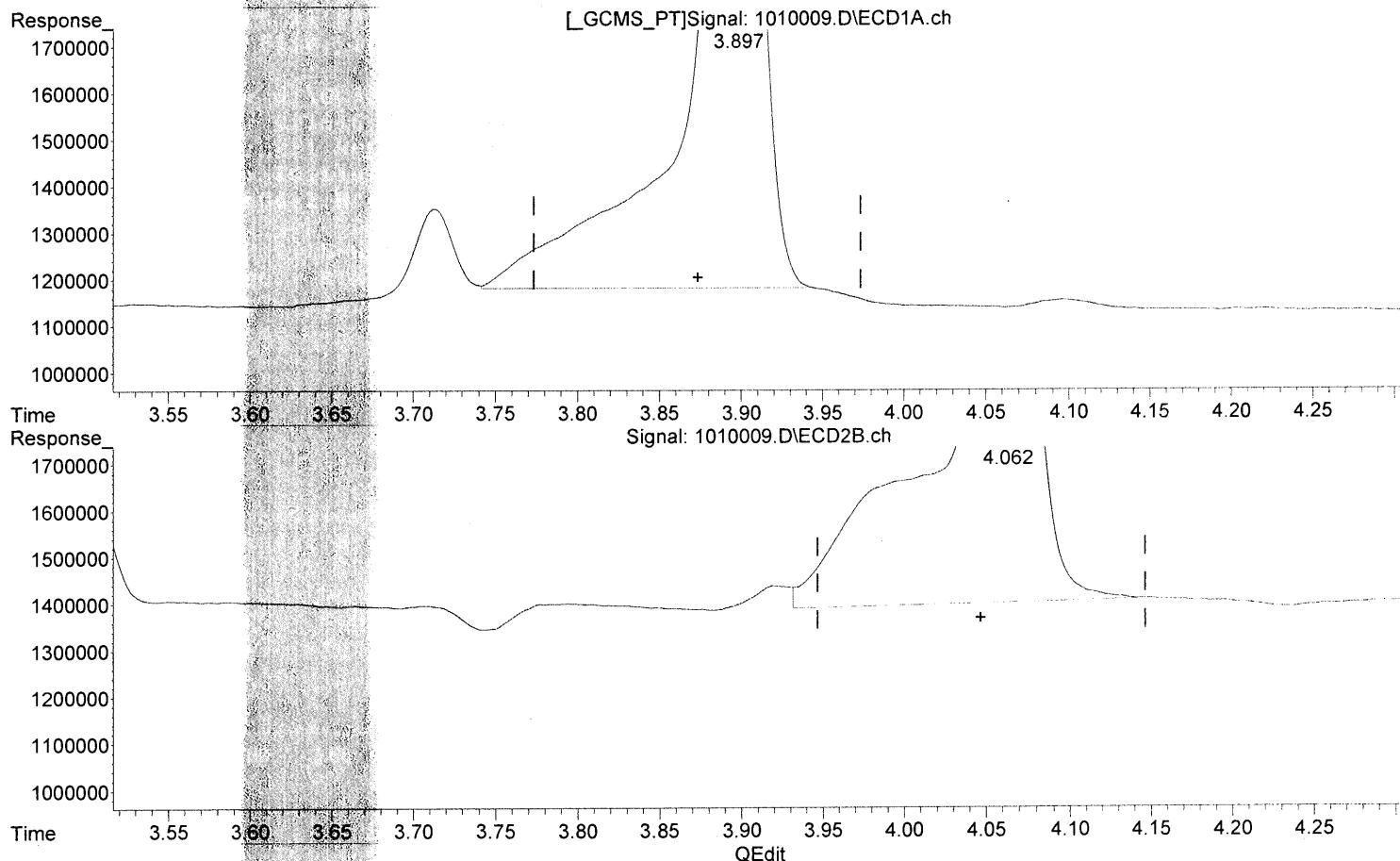
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb.m

response 4963671

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:15:30 2016

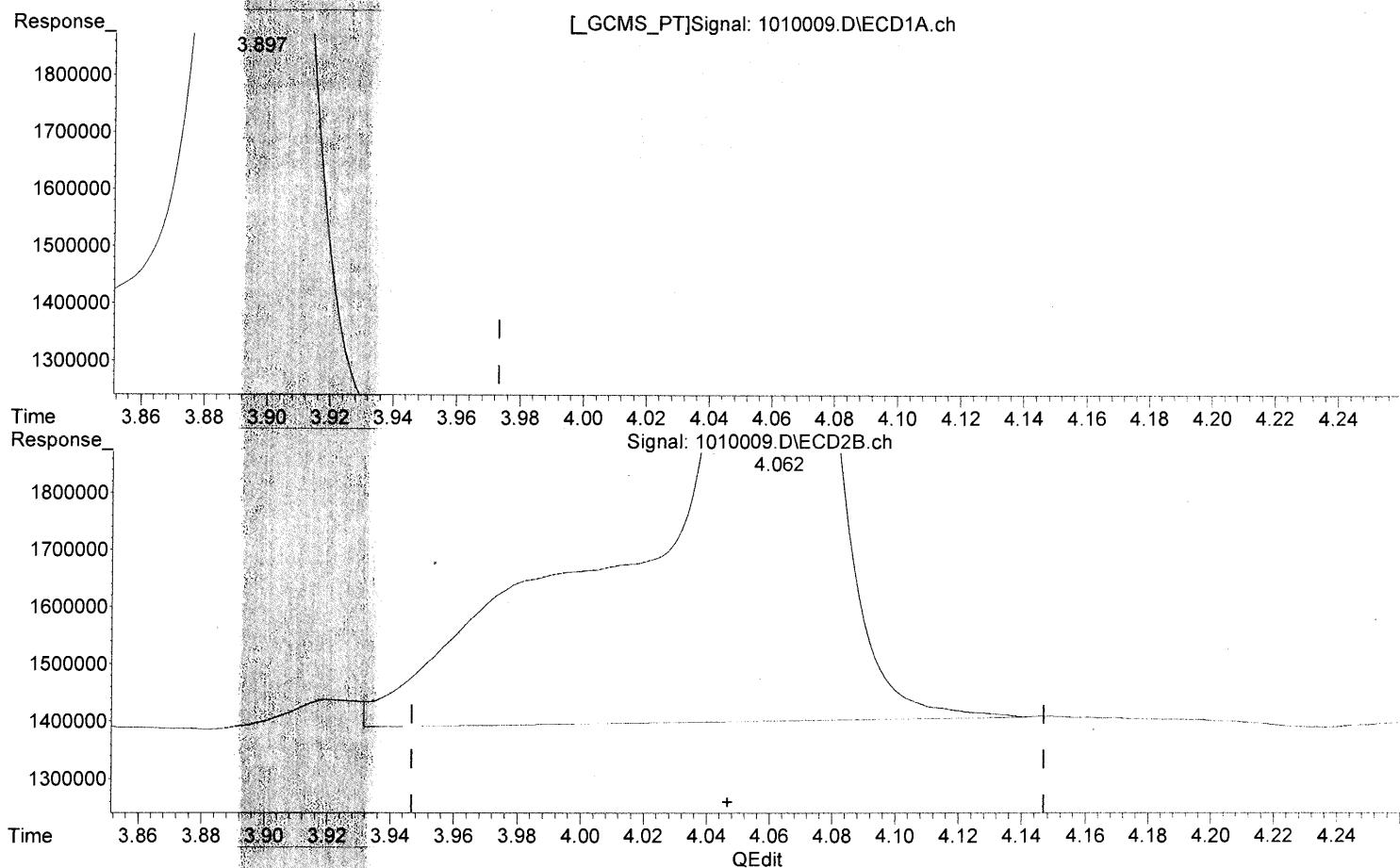
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb m

response 4963671

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 3.428 ppb

response 4737649

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:38 2016

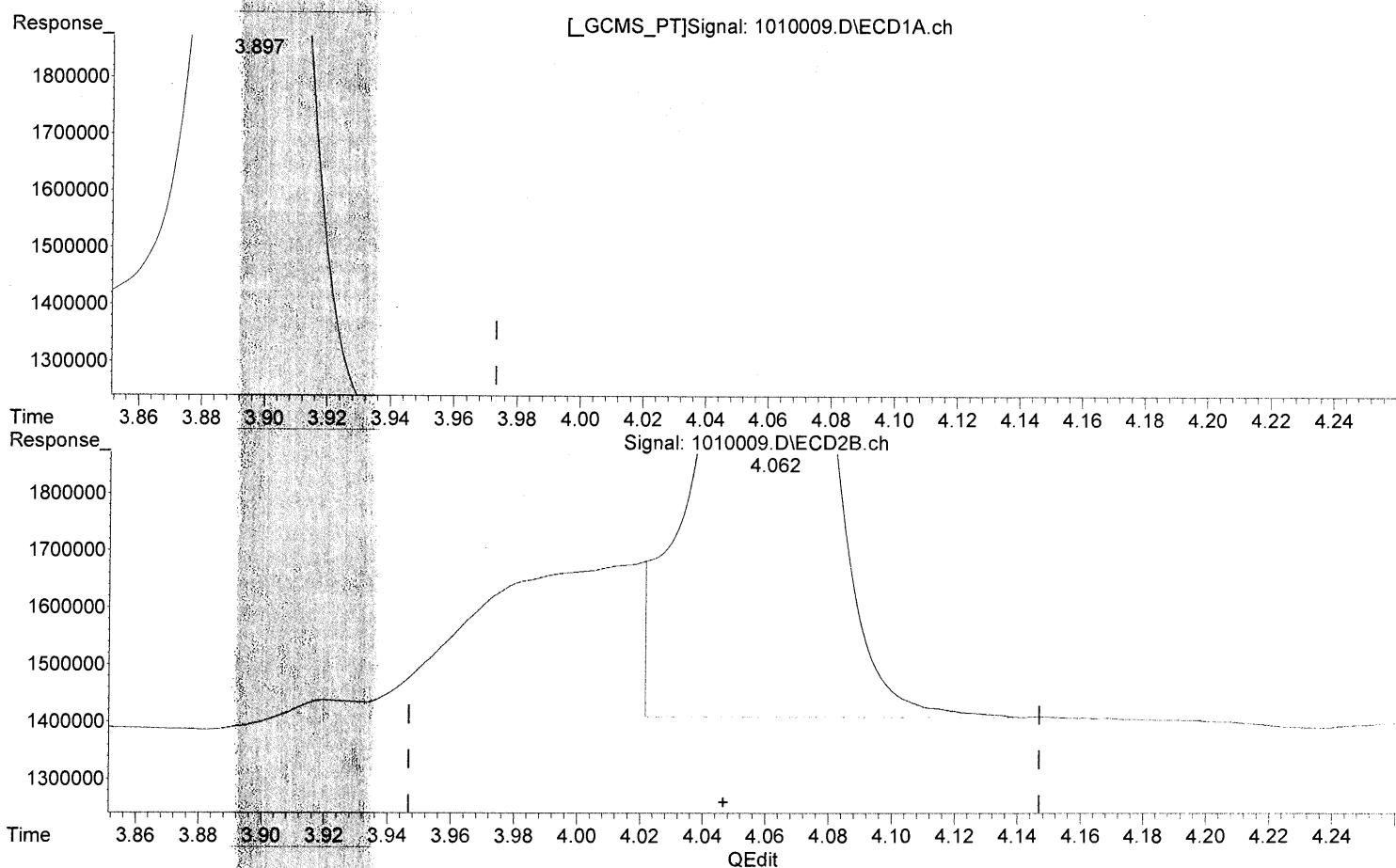
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010009.D Vial: 7
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:04:33 Operator: BS
 Sample : ICAL LV6 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:15:14 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 4.246 ppb m

response 4963671

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.062min 2.618 ppb m

response 3617450



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:15:52 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:28:17 Operator: BS
Sample : ICAL LV7 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:16:52 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibro...	3.897	4.063	6005701	4607340	5.133m	3.334m#
2) M 1,2,3-Tri...	6.240	6.298	973722	1023621	6.018	3.827 #
3) M 1,2-Dibro...	7.668	7.875	12908190	10815899	5.739	3.440 #

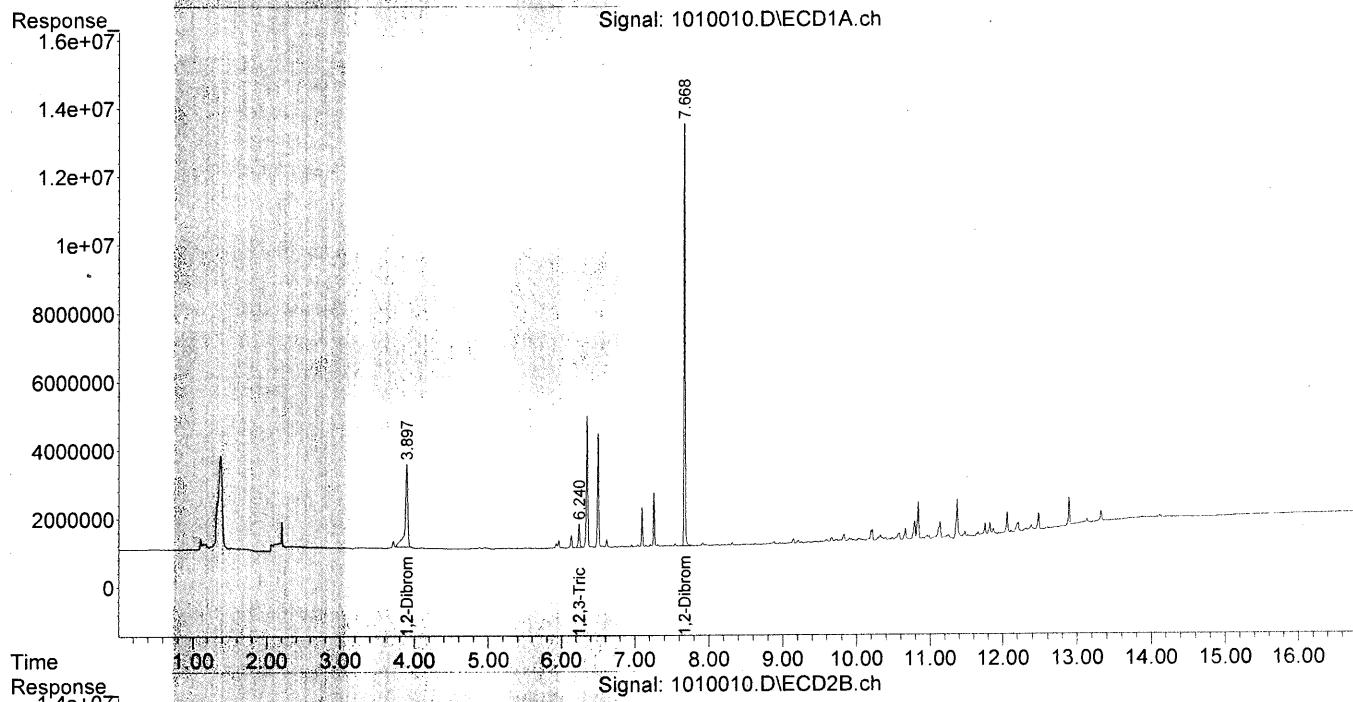
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:28:17 Operator: BS
Sample : ICAL LV7 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:16:52 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

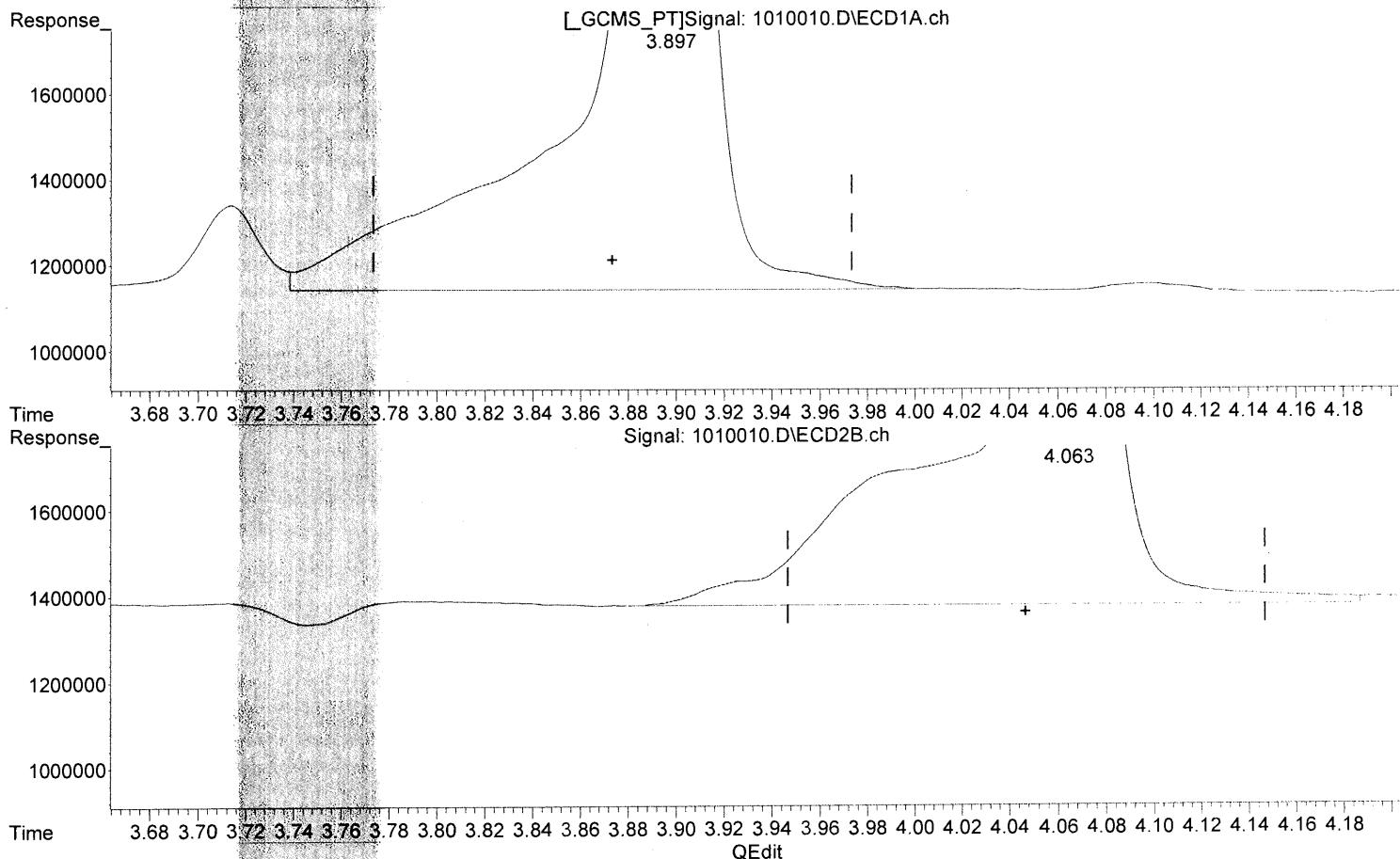


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.593 ppb

response 6545020

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939



(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:16:30 2016

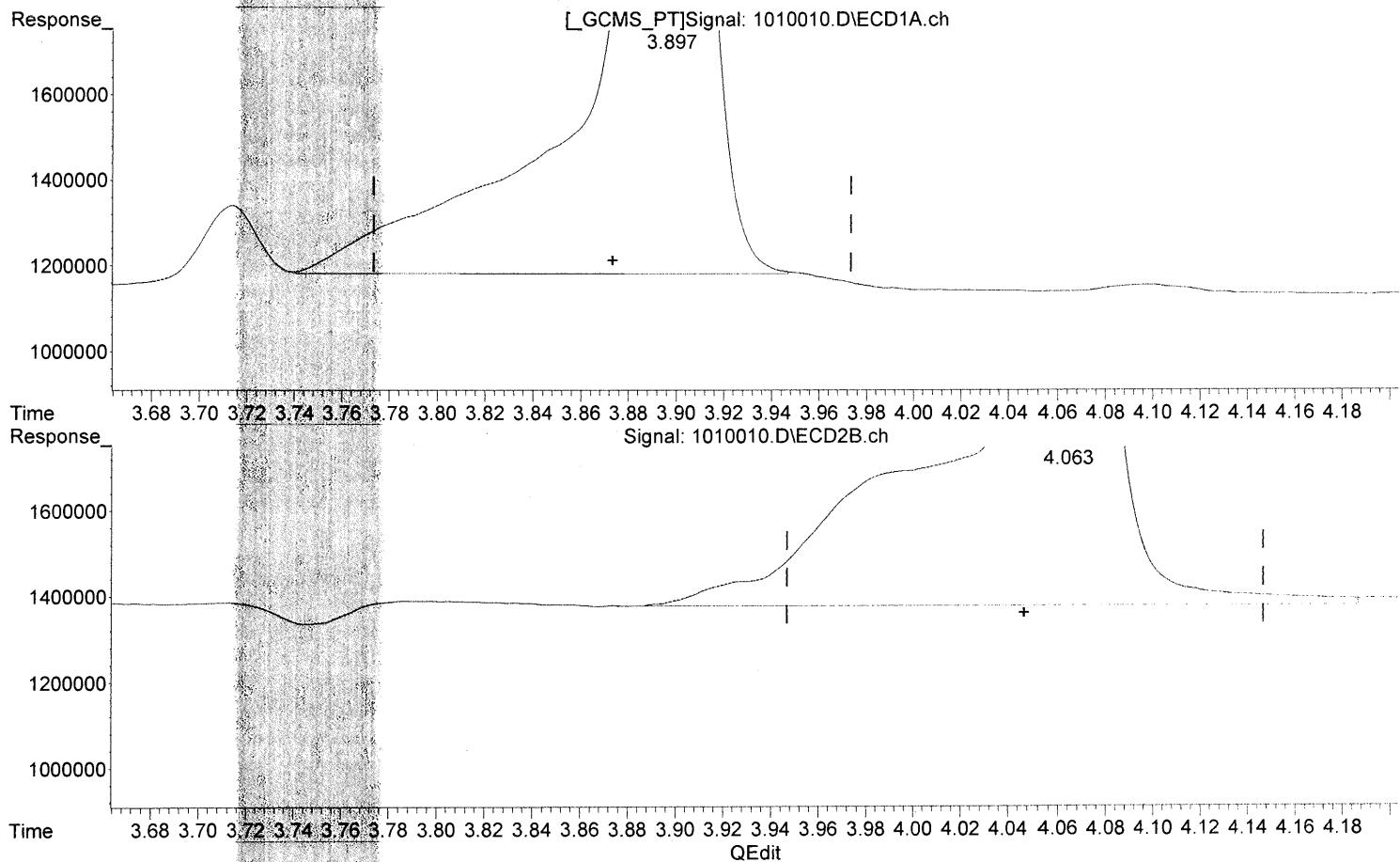
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.133 ppb m

response 6005701

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939



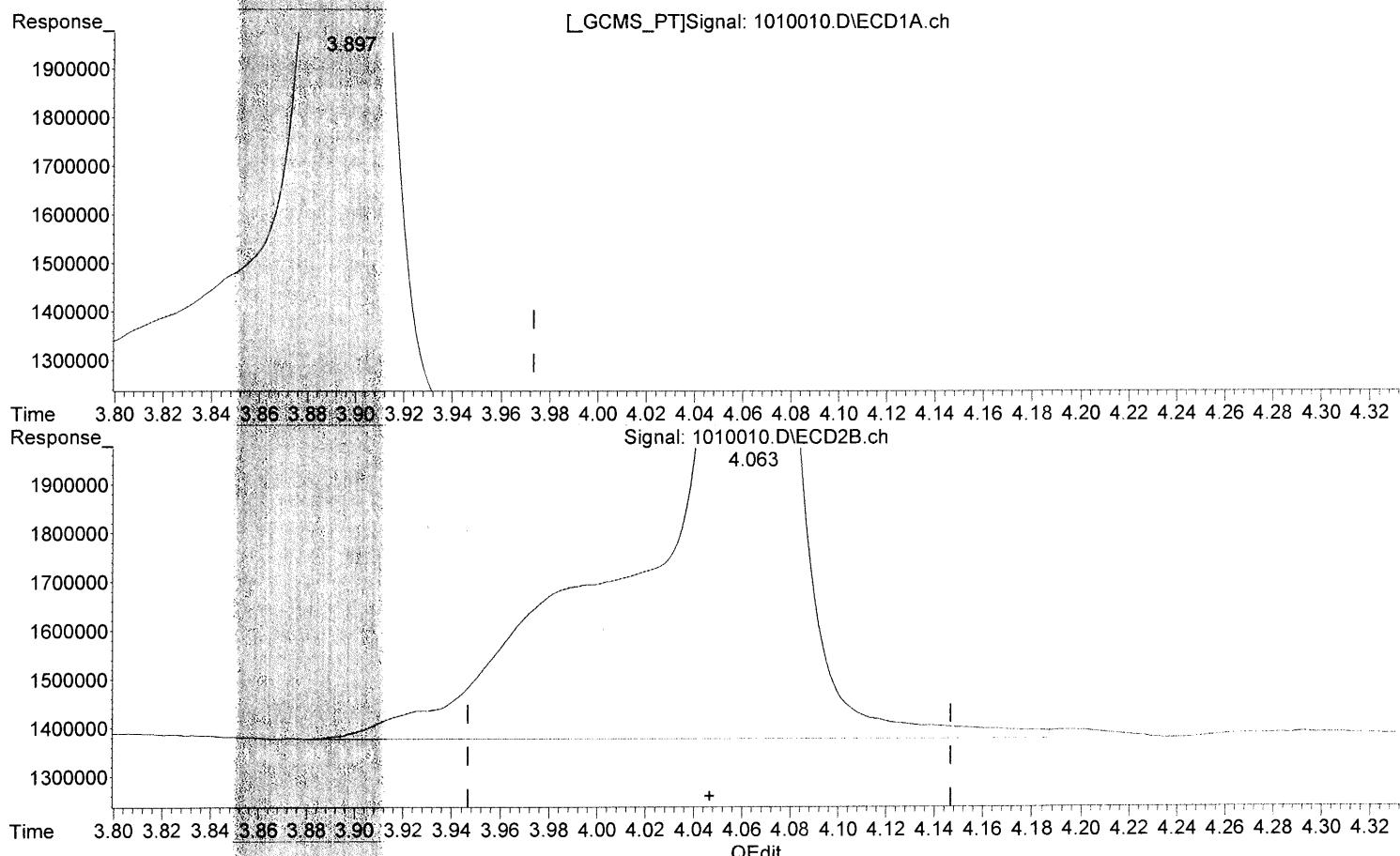
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:16:39 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.133 ppb m

response 6005701

Manual Integration:

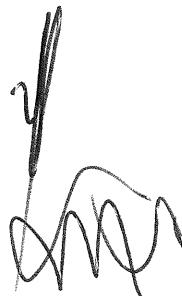
Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 4.311 ppb

response 5957939



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:16:46 2016

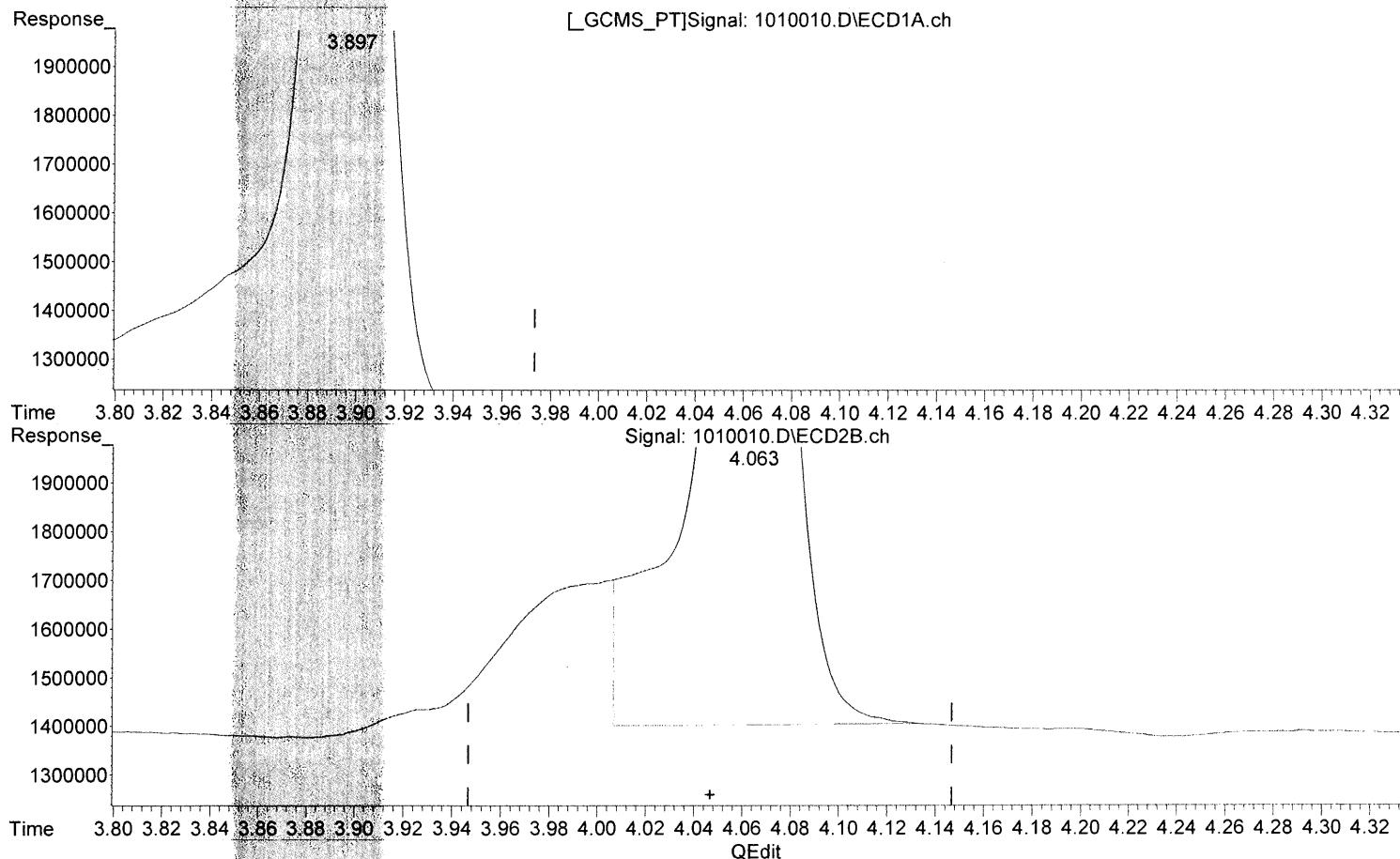
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010010.D Vial: 8
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:28:17 Operator: BS
 Sample : ICAL LV7 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:16:19 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.897min 5.133 ppb m

response 6005701

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 3.334 ppb m

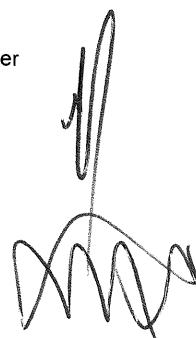
response 4607340

Manual Integration:

After

Baseline/Shoulder

10/11/16



(+) = Expected Retention Time

101116_504.M Tue Oct 11 08:16:56 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:51:51 Operator: BS
Sample : ICAL LV8 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:18:12 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CAL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.908	4.068	14751554	9894375	12.661m	7.160m#
2) M 1,2,3-Triiodopropane	6.247	6.303	2175504	2027409	13.445	7.424 #
3) M 1,2-Dibromoethane	7.672	7.880	29684327	23263534	13.197	7.399 #
<hr/>						

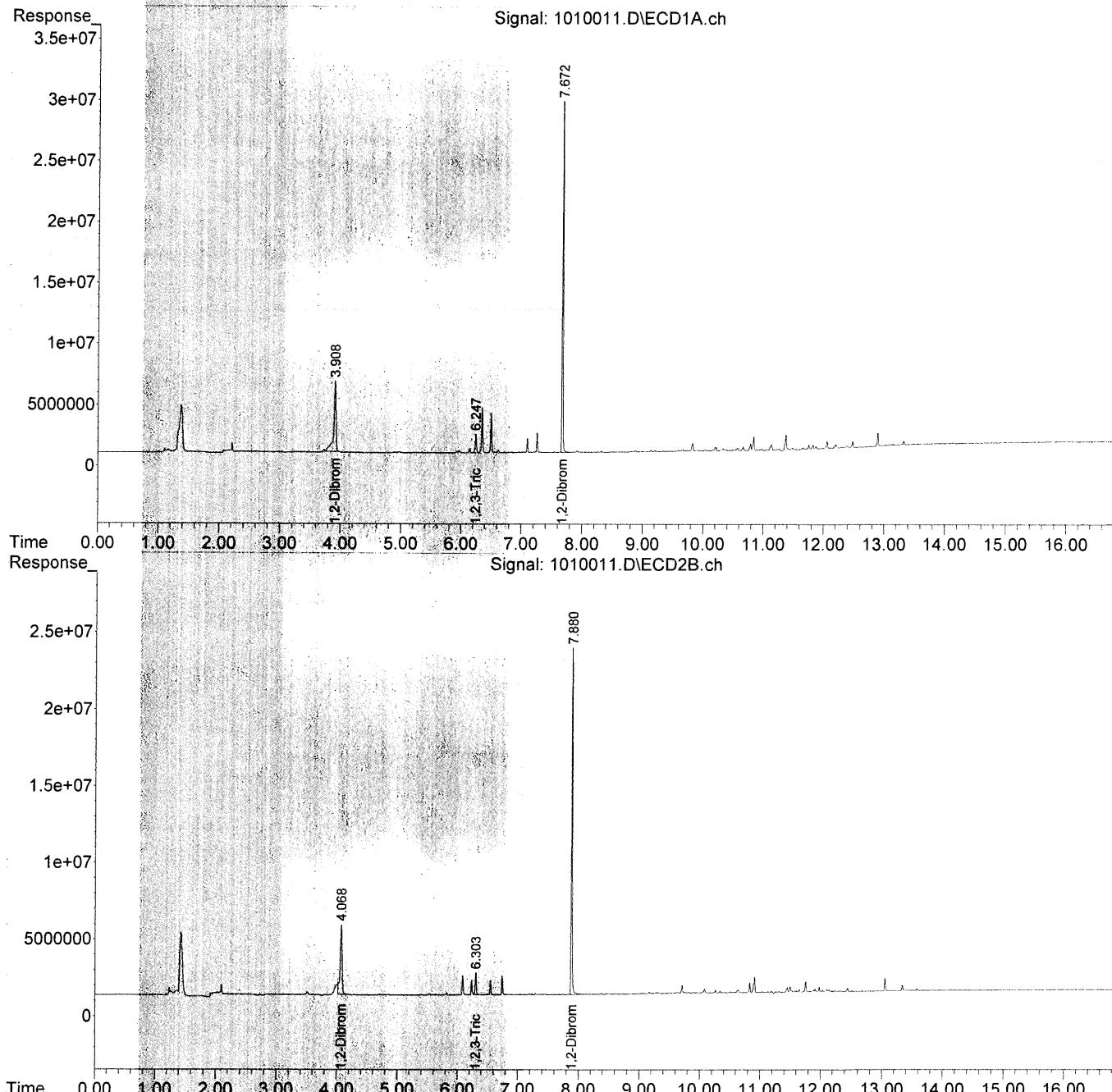
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 18:51:51 Operator: BS
Sample : ICAL LV8 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:18:12 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 091616_504.M MJ480 CALL14916
QLast Update : Fri Sep 16 09:42:15 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

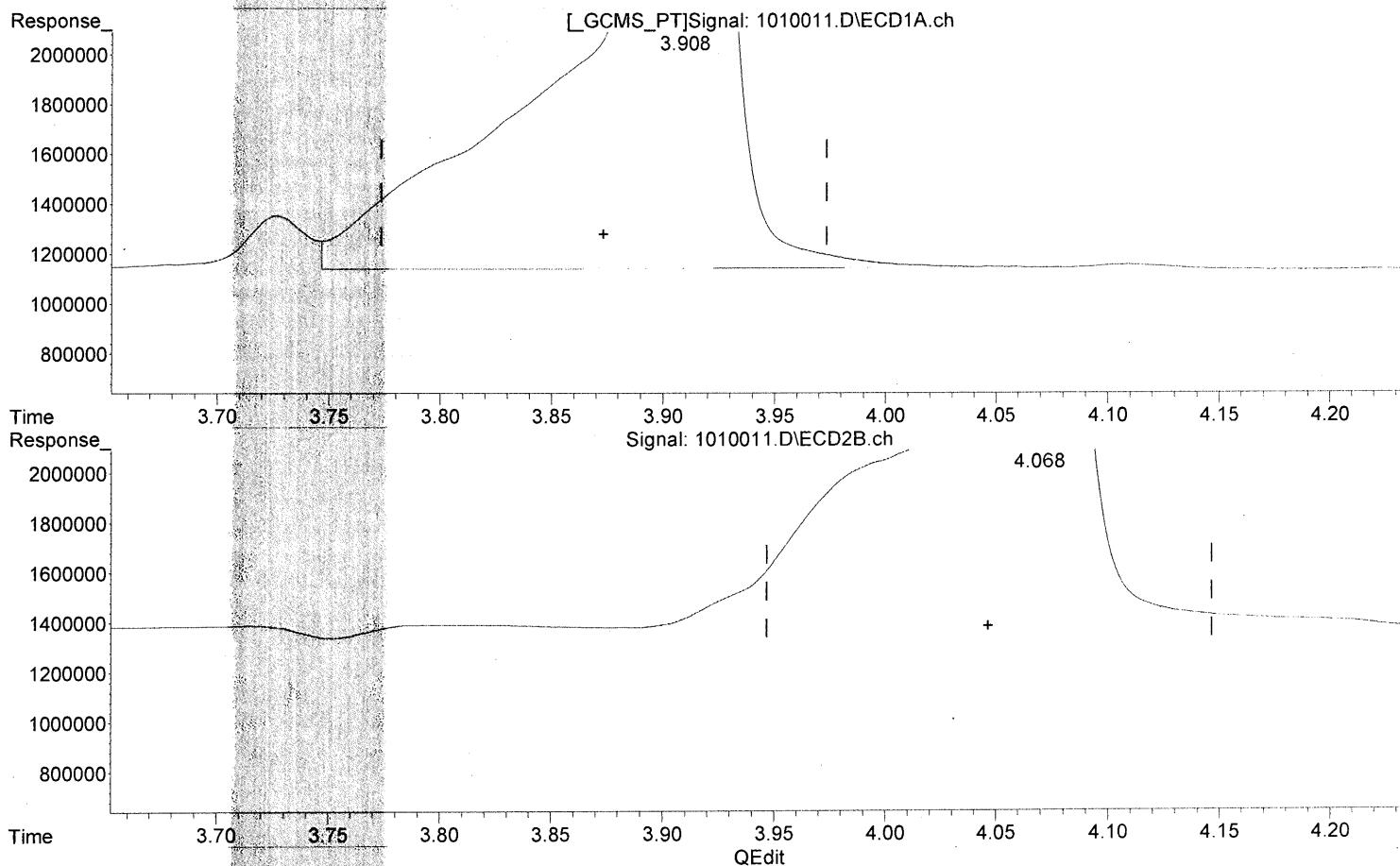


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

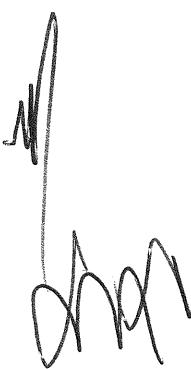
3.908min 13.407 ppb

response 15609023

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013

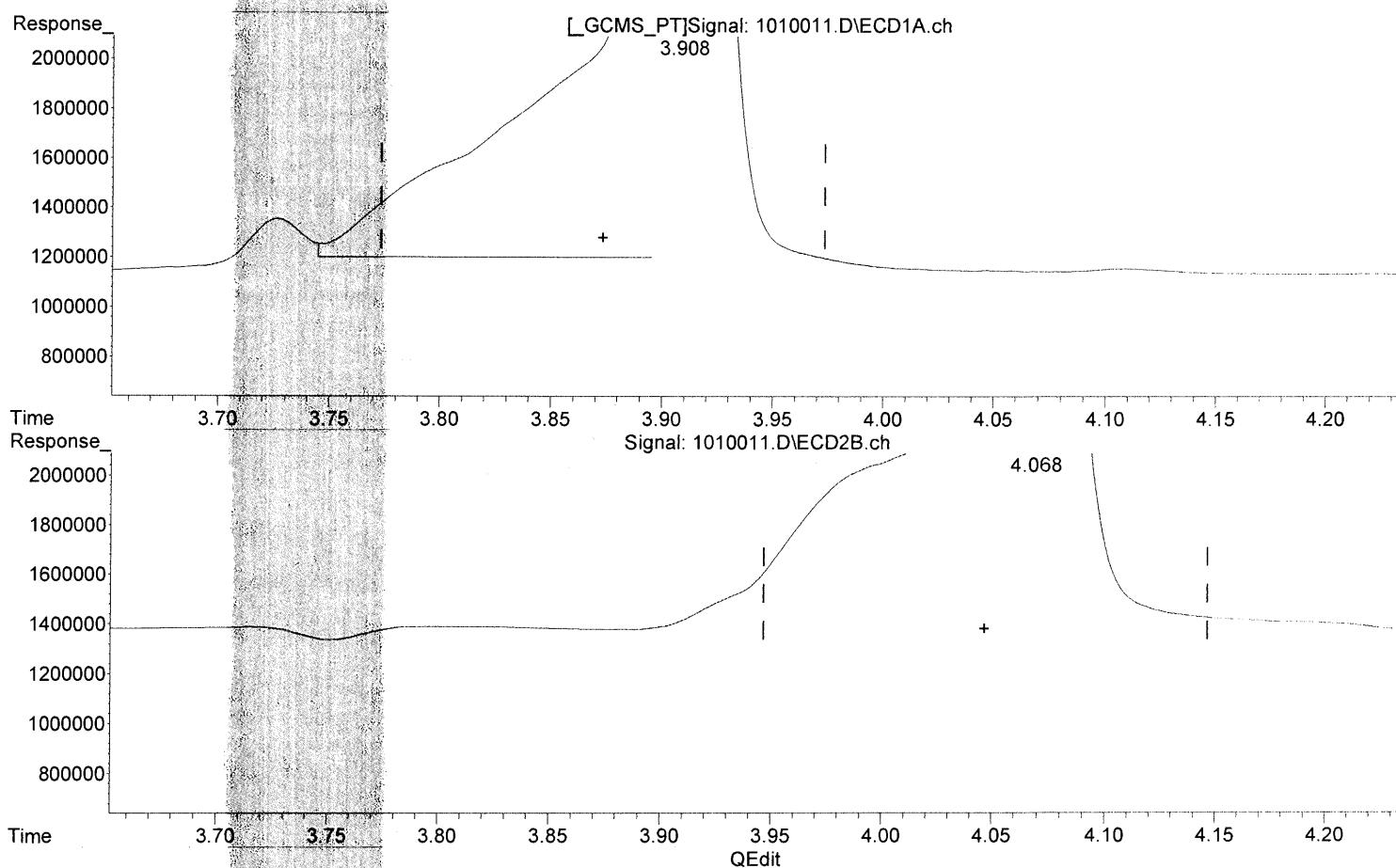
(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:17:43 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12,661 ppb m

response 14751554

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013



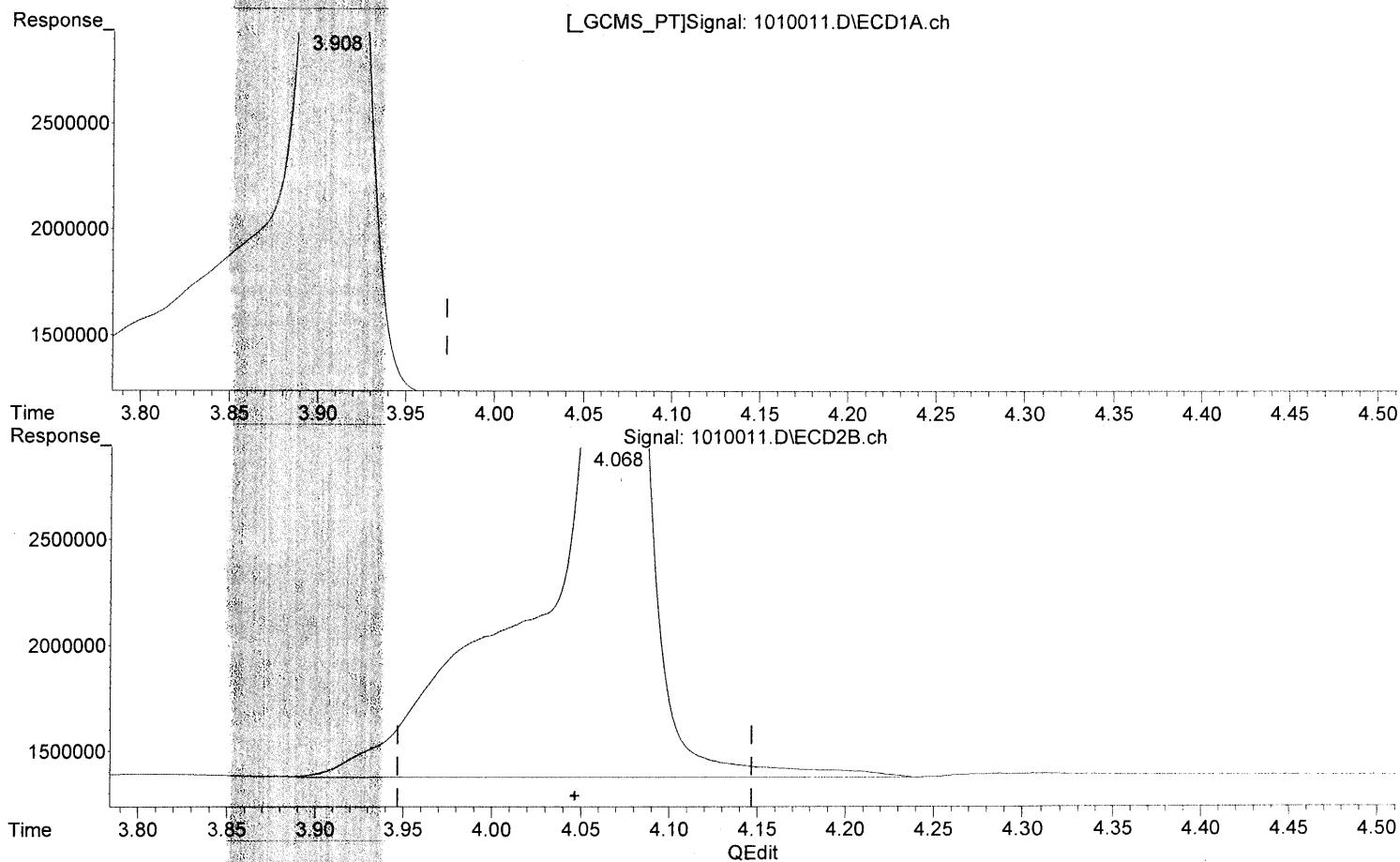
(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:17:58 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12.661 ppb m

response 14751554

Manual Integration:

Before

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 9.482 ppb

response 13104013

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:18:08 2016

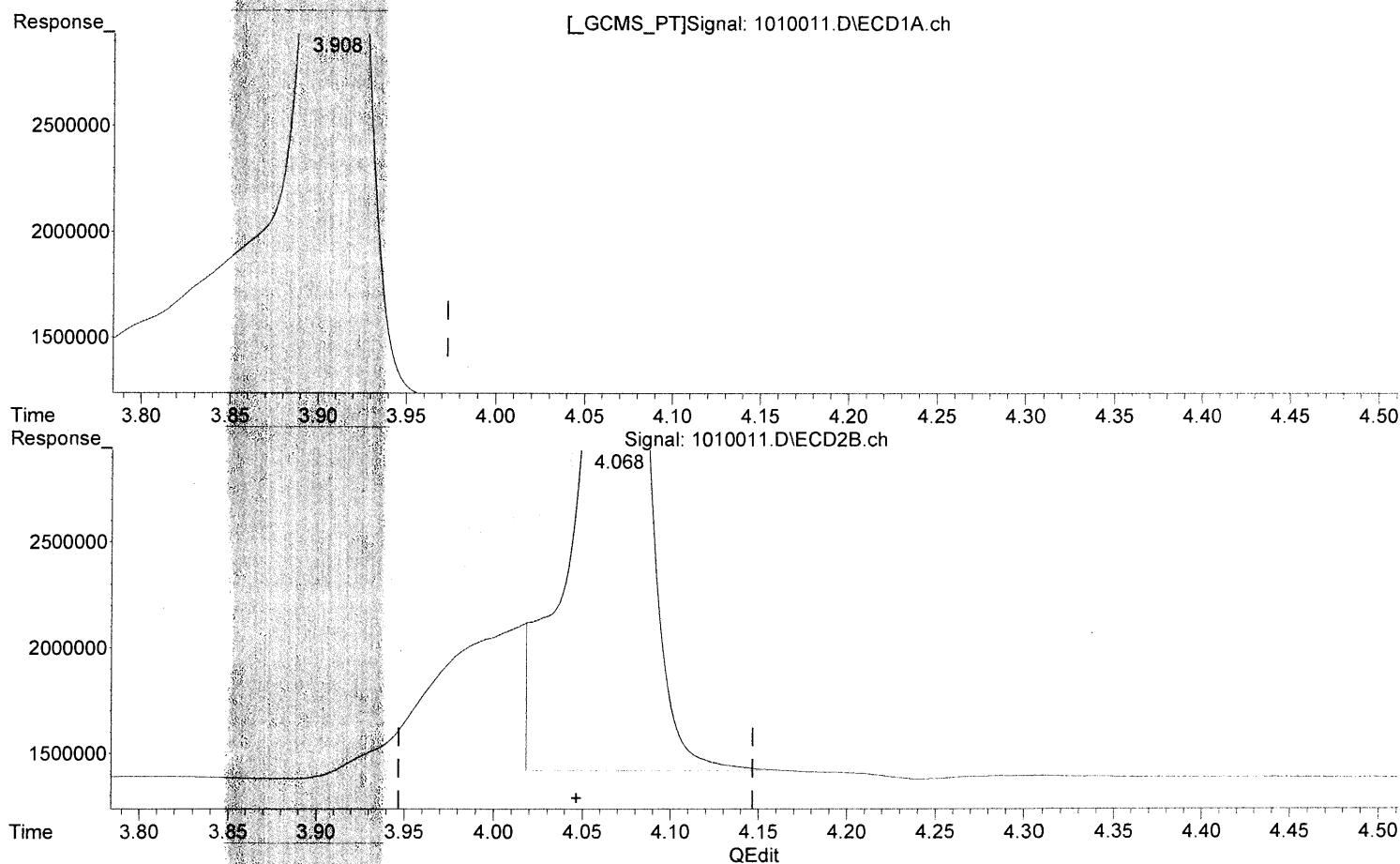
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010011.D Vial: 9
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 18:51:51 Operator: BS
 Sample : ICAL LV8 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:17:16 2016
 Quant Results File: 101116_504.RES

Quant Method: J:\GC33\Methods\101116_504.M
 Quant Title : 091616_504.M MJ480 CAL14916
 QLast Update : Fri Sep 16 09:42:15 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 μ L
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 μ m Signal #2 Info : 320 x 0.25 μ m



(1) 1,2-Dibromoethane (EDB) (M)

3.908min 12.661 ppb m

response 14751554

Manual Integration:

After

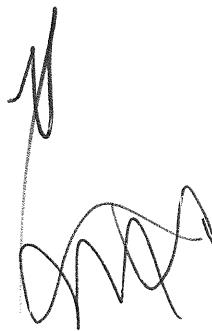
Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.068min 7.160 ppb m

response 9894375



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:18:16 2016

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 19:15:26 Operator: BS
Sample : ICAL ICV 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:41:21 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:19:10 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX^CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
Target Compounds						
1) M 1,2-Dibromoethane	3.898	4.063	1383314	1094744	1.222m	1.128m
2) M 1,2,3-Triiodopropane	6.243	6.300	227282	242192	1.168	1.096
3) M 1,2-Dibromoethane	7.670	7.878	3199031	2515344	1.111	1.110

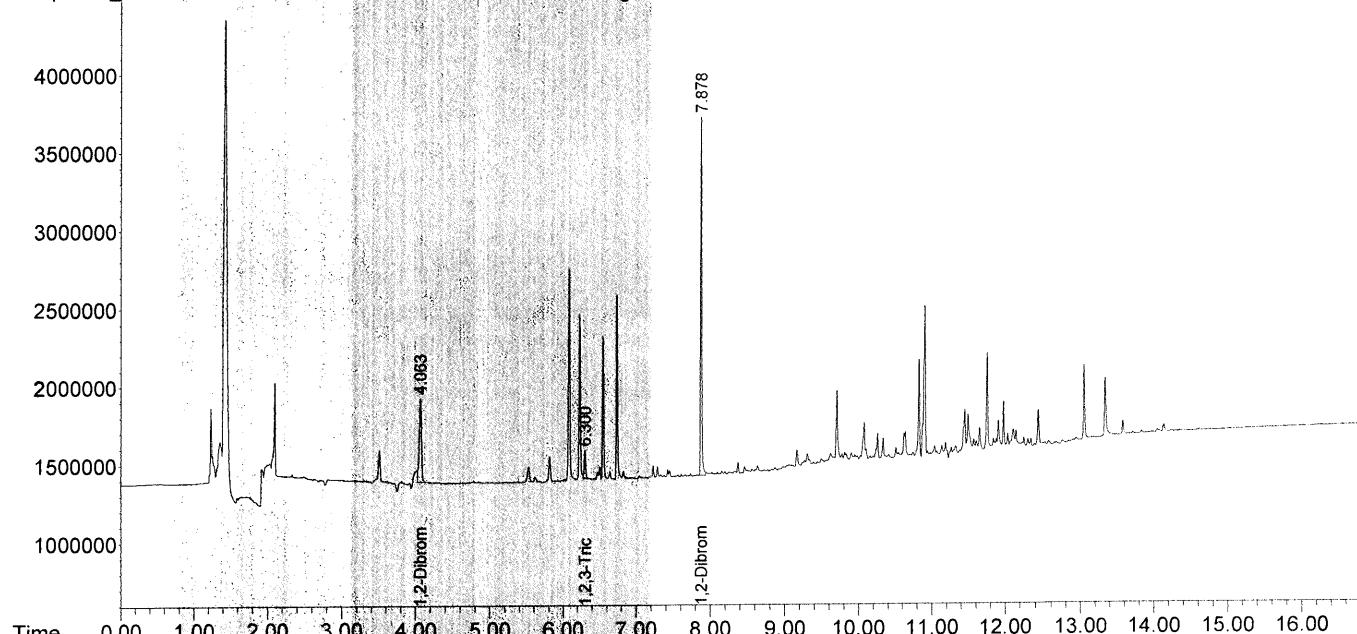
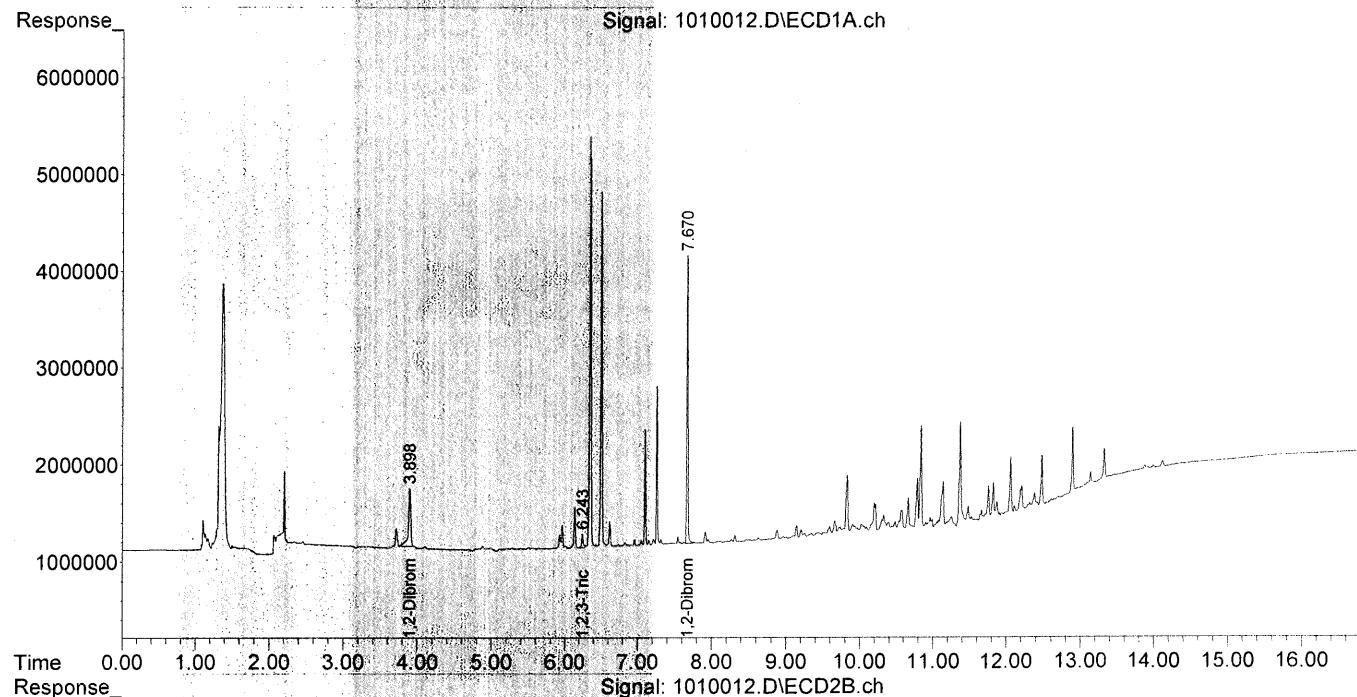
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 10-Oct-2016, 19:15:26 Operator: BS
Sample : ICAL ICV 101016 Inst : GCI
Misc : Multiplr: 1.00
Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 11 08:41:21 2016
Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
Quant Title : 101116_504.M MJ480 CAL14943
QLast Update : Tue Oct 11 08:19:10 2016
Response via : Initial Calibration
DataAcq Meth:504-1.M

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

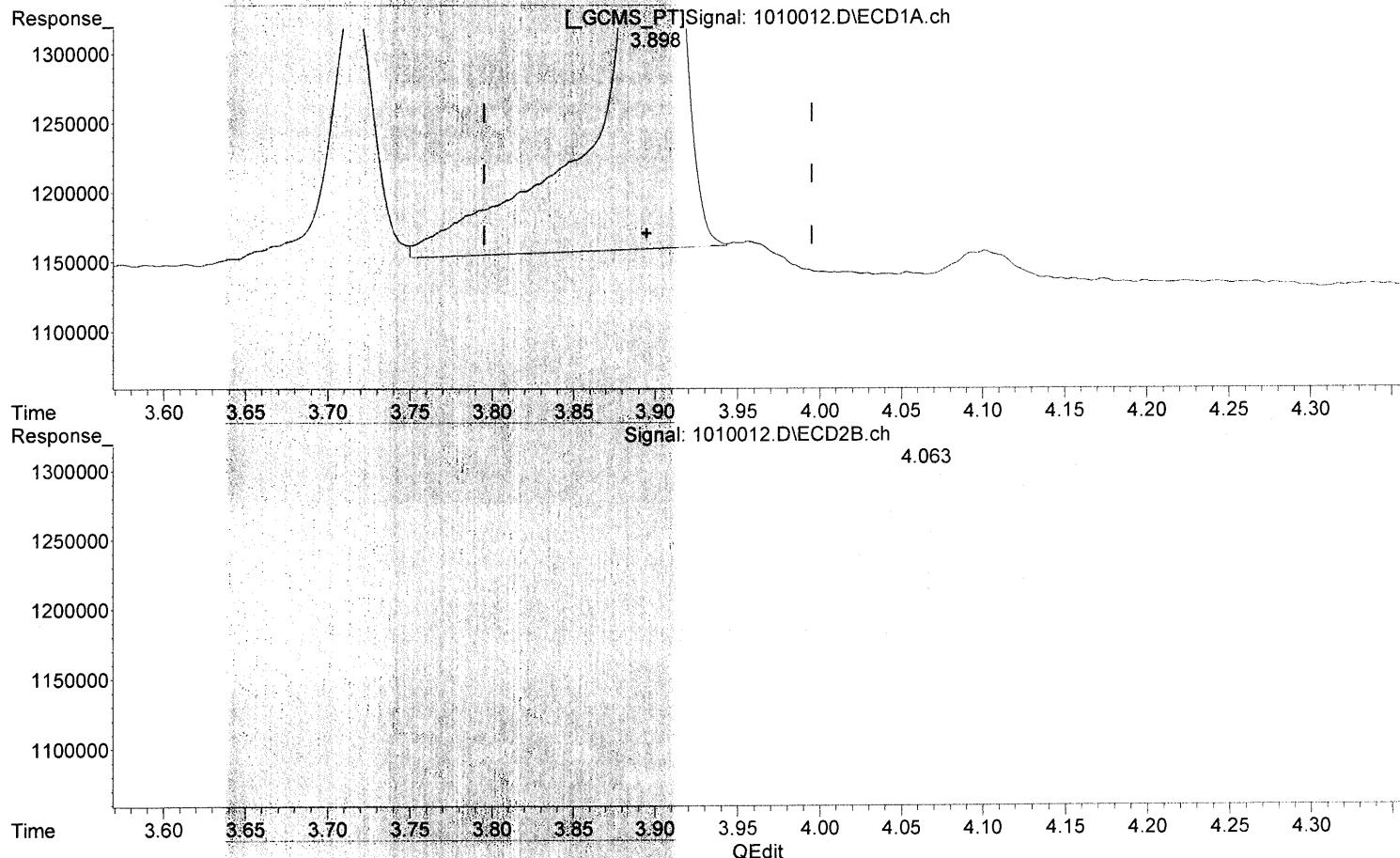


Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.253 ppb

response 1419678

Manual Integration:

Before

10/11/16



(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:40:48 2016

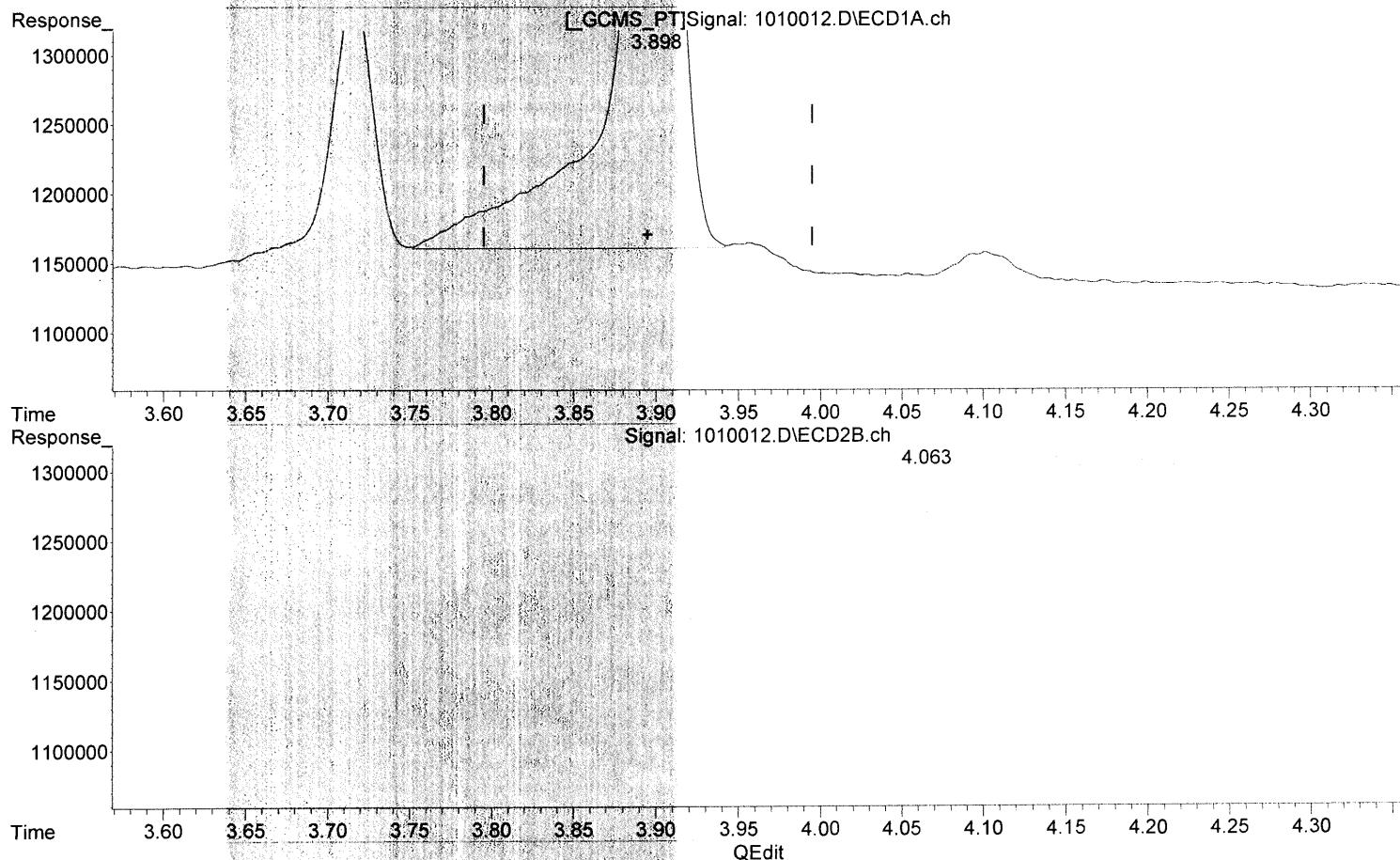
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

Manual Integration:

After

Baseline/Shoulder

10/11/16

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:41:07 2016

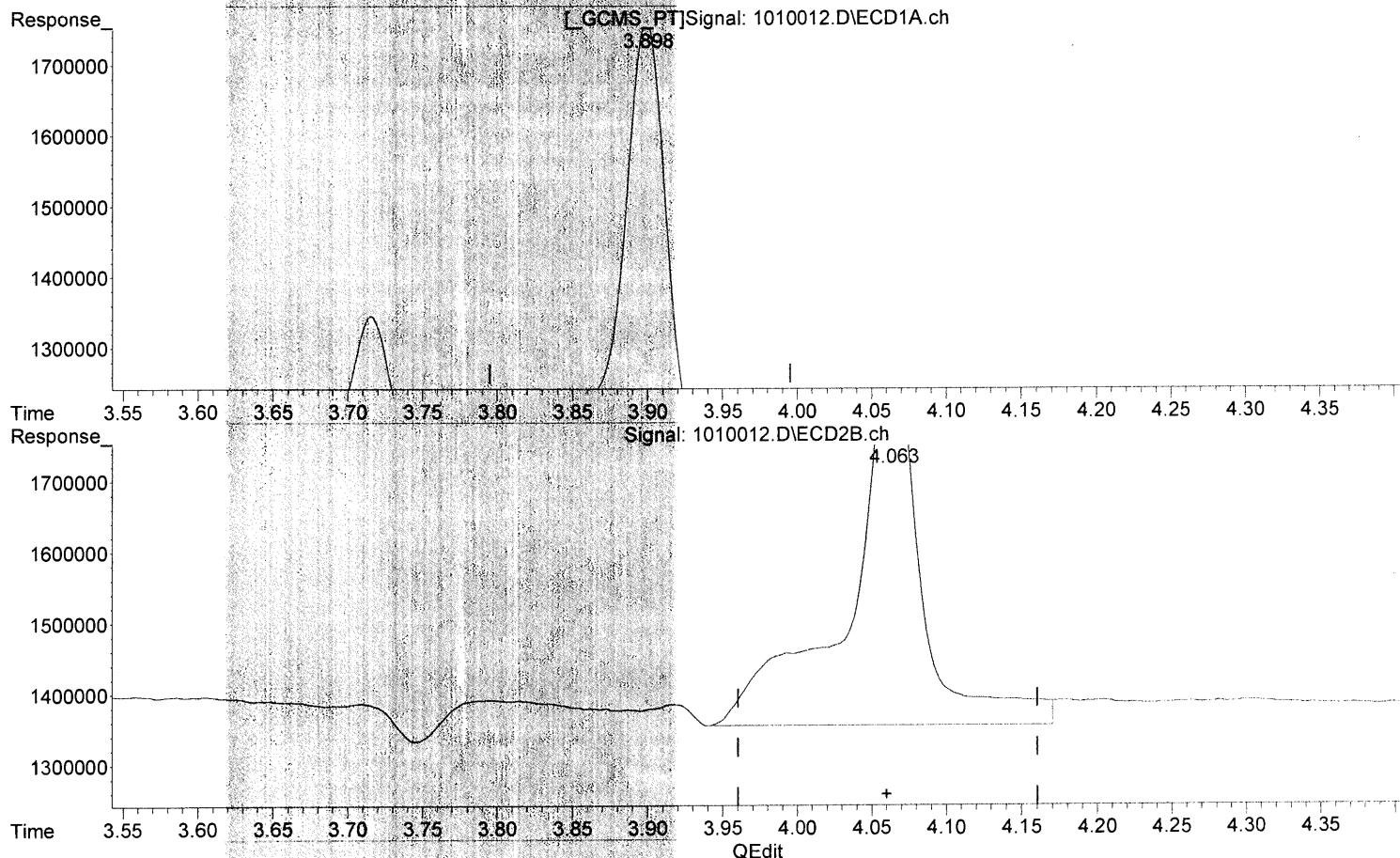
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CALL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.848 ppb

response 1793378

Manual Integration:

Before

10/11/16



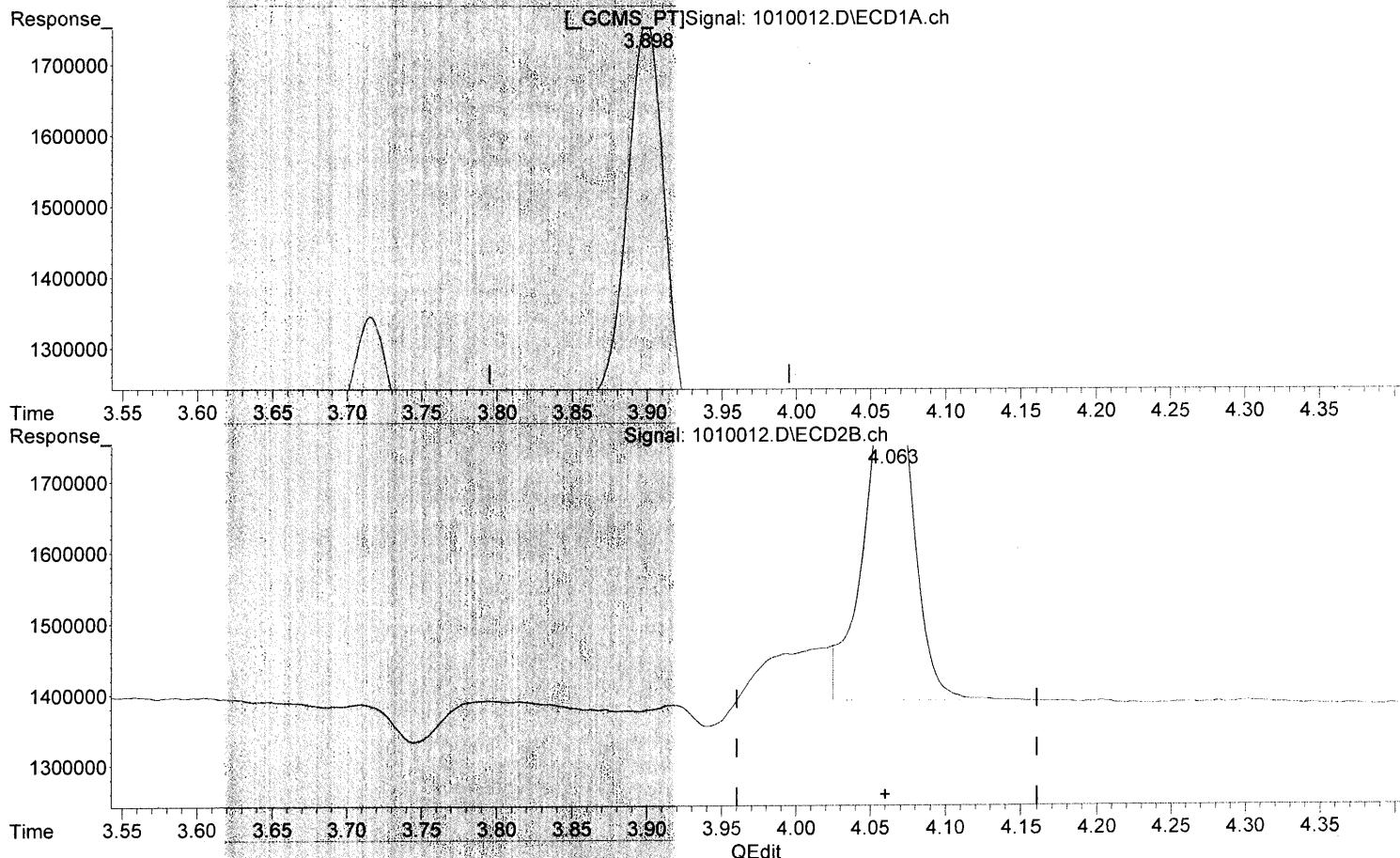
(+) = Expected Retention Time
 101116_504.M Tue Oct 11 08:41:13 2016

Quantitation Report (Qedit)

Data File : J:\GC33\DATA\101016-504\1010012.D Vial: 10
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 10-Oct-2016, 19:15:26 Operator: BS
 Sample : ICAL ICV 101016 Inst : GCI
 Misc : Multiplr: 1.00
 Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p
 Quant Time: Oct 11 08:39:41 2016
 Quant Results File: 101116_504.RES

Quant Method : J:\GC33\Methods\101116_504.M
 Quant Title : 101116_504.M MJ480 CAL14943
 QLast Update : Tue Oct 11 08:19:10 2016
 Response via : Initial Calibration
 DataAcq Meth:504-1.M

Volume Inj. : 5 uL
 Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
 Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

3.898min 1.222 ppb m

response 1383314

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.063min 1.128 ppb m

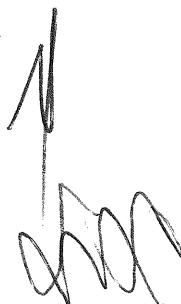
response 1094744

Manual Integration:

After

Baseline/Shoulder

10/11/16



(+) = Expected Retention Time
101116_504.M Tue Oct 11 08:41:25 2016

Page: 1

EDB/TCP/DBCP in Water

Serv. Req. IDs:

lca

Method:

EPA 504.1

BATCH ID: kWG1609129

Comments:

Spike Information		Extract Information	
Matrix Spike ID/Conc:	DWST07-91L 50 ppb	XP 1/27/17	Start Date: 10/10/16
ICV Spike ID/Conc:	DWST07-91H 50 ppb	3/13/17	End Date: 10/10/16
Start / Stop Time:	10:00 13:05		Hexane Lot: OP 775
			NaCl Lot #: 131606
			Balance ID#: E-BALANCE-44
Personnel and Bench Sheet Review			
Started By:	L Muresan	Assisted By:	—
Completed By:	L Muresan	Assisted By:	—
Bench Sheet Reviewed By/Date Reviewed:	 10/11/16		
		Extracts Examined	
		Yes	No

Preparation Information

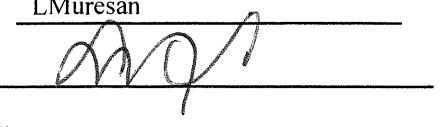
Group ID:	KWG1610135	Prep Method:	METHOD	Prep Date:	11/07/16 08:30
Department:	Semivoa GC				

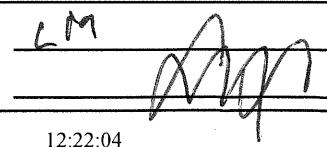
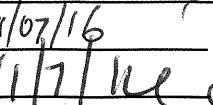
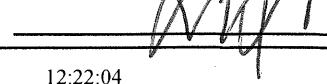
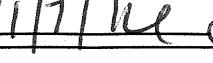
Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1612916-001	Well #1	504.1 EDB DBCP 123TCP	DRINKING	35.2239ml	2ml
K1612920-001	DW #2	504.1 EDB DBCP 123TCP	DRINKING	35.2089ml	2ml
K1612921-001	DW #5	504.1 EDB DBCP 123TCP	DRINKING	35.7706ml	2ml
K1612922-001	DW #9	504.1 EDB DBCP 123TCP	DRINKING	35.8085ml	2ml
K1612982-001	Well #2	504.1 EDB DBCP 123TCP	DRINKING	35.5157ml	2ml
K1612983-001	DW #6	504.1 EDB DBCP 123TCP	DRINKING	35.7200ml	2ml
K1612984-001	DW #7	504.1 EDB DBCP 123TCP	DRINKING	35.8040ml	2ml
K1613055-001	Well #3	504.1 EDB DBCP 123TCP	DRINKING	35.2443ml	2ml
K1613062-001	DW #1	504.1 EDB DBCP 123TCP	DRINKING	35.4221ml	2ml
K1613064-001	Well #4	504.1 EDB DBCP 123TCP	DRINKING	35.5666ml	2ml
K1613077-001	Distribution Tank/EP-B	504.1 EDB DBCP 123TCP	DRINKING	35.2402ml	2ml
K1613584-001	16309GACI	504.1 EDB DBCP 123TCP	WATER	35.3154ml	2ml
K1613584-002	16309GACE	504.1 EDB DBCP 123TCP	WATER	35.3558ml	2ml
K1613584-003	Trip Blank	504.1 EDB DBCP 123TCP	WATER	35.2190ml	2ml
KWG1610135-1	Matrix Spike	504.1 EDB DBCP 123TCP	DRINKING	35.4908ml	2ml
KWG1610135-2	Duplicate Matrix Spike	504.1 EDB DBCP 123TCP	DRINKING	35.3512ml	2ml
KWG1610135-3	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.0000ml	2ml
KWG1610135-4	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.0000ml	2ml
KWG1610135-5	Method Blank	504.1 EDB DBCP 123TCP	WATER	36.2402ml	2ml

Lab Code	Parent Lab Code	Comments
KWG1610135-1	K1612916-001	
KWG1610135-2	K1612916-001	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
----------	---------------	-----------------------	--------------	-------------------	--------------	---------

Comments: _____

Started By:	LMuresan	Assisted By:	<hr/>	Training
Completed By:	LMuresan	Assisted By:	<hr/>	Yes <input type="radio"/> No <input checked="" type="radio"/>
Reviewed By:		Date:	11/8/16	Storage:

Relinquished By:		Date:	 11/07/16	Extracts Examined
Received By:		Date:	 11/7/16	Yes <input type="radio"/> No <input checked="" type="radio"/>

Printed: 11/07/2016 12:22:04

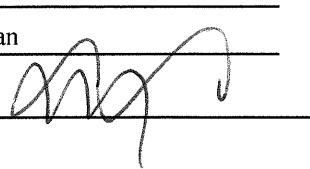
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Preparation Information

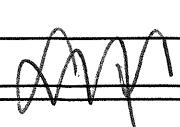
Group ID:	KWG1610135	Prep Method:	METHOD	Prep Date:	11/07/16 08:30
Department:	Semivoa GC				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1612916-001	1568848					
K1612920-001	1568849					
K1612921-001	1568850					
K1612922-001	1568851					
K1612982-001	1568852					
K1612983-001	1568853					
K1612984-001	1568854					
K1613055-001	1568855					
K1613062-001	1568856					
K1613064-001	1568857					
K1613077-001	1568847					
K1613584-001	1568861					
K1613584-002	1568862					
K1613584-003	1568860					
KWG1610135-1	1568858					
KWG1610135-2	1568859					
KWG1610135-3	1568863					
KWG1610135-4	1568864					
KWG1610135-5	1568865					

Comments: _____

Started By:	LMuresan	Assisted By:	_____	Training
Completed By:	LMuresan	Assisted By:	_____	Yes <input type="radio"/> No <input checked="" type="radio"/>
Reviewed By:		Date:	11/8/16	Storage: _____

Chain of Custody

Relinquished By:	LM	Date:	11/07/16	Extracts Examined
Received By:		Date:	11/7/16	Yes <input type="radio"/> No <input checked="" type="radio"/>

EDB/TCP/DBCP in Water

Serv. Req. IDs: K1612916, 2920, 2921, 2922, 2982, 2983, 2984, 3055 Method: EPA 504.1
3062, 3064, 3077, 3584

Lab Code	#	Comments	Wt. of sample and vial(g)	Wt. of vial (g)	Sample Amount (mL)	Spike Vol.	NaCl added	Final Volume (ml)
K1612916-001	.02	light sediment	58.5782	23.3543	35.2239	-	7	2
K1612920-001	.02		58.4434	23.2345	35.2089	-	7	2
K1612921-001	.02		58.6942	22.9236	35.1706	-	7	2
K1612922-001	.02		58.5575	22.7490	35.8085	-	7	2
K1612982-001	.02	light sediment	58.7434	23.2277	35.5157	-	7	2
K1612983-001	.02	— 11 —	58.7799	23.0599	35.7200	-	7	2
K1612984-001	.02	— 11 —	58.6745	22.8705	35.8040	-	7	2
K1613055-001	.02	— 11 —	58.5128	23.2685	35.2443	-	7	2
K1613062-001	.02	— 11 —	58.6170	23.1949	35.4221	-	7	2
K1613064-001	.02	— 11 —	58.9039	23.3373	35.5666	-	7	2
K1613077-001	.09	— 11 —	59.0822	22.8420	36.2402	-	7	2
K1613584-001	.05		58.5452	23.2298	35.3154	-	7	2
—002	.05		58.8492	23.4934	35.3558	-	7	2
—003	.06		58.7432	23.5242	35.2190	-	7	2

BATCH ID: KWG160135

Comments:

275209

Spike Information

Matrix Spike ID/Conc:
ICV Spike ID/Conc:

DNSTD07-94D, Sopph	XP
DNSTD07-911, Sopph	1/27/17
	3/13/17

Start / Stop Time:

0830 1150

Extract Information

Start Date: 11/07/16
End Date: 11/07/16
Hexane Lot # DP775
NaCl Lot # 131606
Balance ID# K-BALANCE-44

Personnel and Bench Sheet Review

Started By:
Completed By:

L Muresan
L Muresan

Assisted By:
Assisted By:

Bench Sheet Reviewed By/Date Reviewed:

11/08/11e

Extracts Examined
Yes No

EDB/TCP/DBCP in Water

Serv. Req. IDs:

Method: EPA 504.1

BATCH ID: *kwGt610135*

Comments:

Personnel and Bench Sheet Review

Started By:

L. M. Ferguson

Completed By:

I Muresan

Assisted By:

Assisted By:

Bench Sheet Reviewed By/Date Reviewed:

Extracts Examined

Yes No

Sel	Run	Location	Method	Datafile	SeqTable	Calib:RF:RT
			Sample Name			
No	1	Vial 94	504-1 PRIMER MeOH	1107000201	F:01:01	11/10
No	2	Vial 95	504-1 PRIMER Hexane	1107000202	F:02:01	
No	3	Vial 1	504-1 ICAL BLANK	1107000203	F:03:01	
No	4	Vial 2	504-1 ICAL LV1 110716	1107000204	F:04:01	
No	5	Vial 3	504-1 ICAL LV2 110716	1107000205	F:05:01	<i>NR NEVER</i>
No	6	Vial 4	504-1 ICAL LV3 110716	1107000206	F:06:01	
No	7	Vial 5	504-1 ICAL LV4 110716	1107000207	F:07:01	
No	8	Vial 6	504-1 ICAL LV5 110716	1107000208	F:08:01	
No	9	Vial 7	504-1 ICAL LV6 110716	1107000209	F:09:01	
No	10	Vial 8	504-1 ICAL LV7 110716	1107000210	F:10:01	
No	11	Vial 9	504-1 ICAL LV8 110716	1107000211	F:11:01	
No	12	Vial 10	504-1 1CAL ICV 110716	1107000212	F:12:01	
No	13	Vial 6	504-1 CCV LV5	1107000213	F:13:01	
No	14	Vial 1	504-1 IB	1107000214	F:14:01	
No	15	Vial 11	504-1 K1612916-001	1107000215	F:15:01	
No	16	Vial 12	504-1 K1612916-001MS	1107000216	F:16:01	
No	17	Vial 13	504-1 K1612916-001DMS	1107000217	F:17:01	
No	18	Vial 14	504-1 K1612920-001	1107000218	F:18:01	
No	19	Vial 15	504-1 K1612921-001	1107000219	F:19:01	
No	20	Vial 16	504-1 K1612922-001	1107000220	F:20:01	
No	21	Vial 17	504-1 K1612982-001	1107000221	F:21:01	
No	22	Vial 18	504-1 K1612983-001	1107000222	F:22:01	
No	23	Vial 19	504-1 K1612984-001	1107000223	F:23:01	
No	24	Vial 20	504-1 K1613055-001	1107000224	F:24:01	
No	25	Vial 8	504-1 110716 504 LV7	1107000225	F:25:01	<i>kng11/10/88</i>
No	26	Vial 1	504-1 IB	1107000226	F:26:01	
No	27	Vial 21	504-1 K1613062-001	1107000227	F:27:01	
No	28	Vial 22	504-1 K1613064-001	1107000228	F:28:01	

Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	29	Vial 23	504-1 K1613077-001	1107000229		F:29:01
No	30	Vial 24	504-1 K1613584-001	1107000230		F:30:01
No	31	Vial 25	504-1 K1613584-002	1107000231		F:31:01
No	32	Vial 26	504-1 K1613584-003	1107000232		F:32:01
No	33	Vial 27	504-1 KWG1610135-3LCS	1107000233		F:33:01
No	34	Vial 28	504-1 KWG1610135-4LCS	1107000234		F:34:01
No	35	Vial 29	504-1 KWG1610135-5MB	1107000235		F:35:01
No	36	Vial 6	504-1 110716 504 LV5	1107000236		F:36:01
No	37	Vial 1	504-1 IB	1107000237		F:37:01
No	38	Vial 30	504-1 K1613310-001	1107000238		F:38:01
No	39	Vial 31	504-1 K1613310-002	1107000239		F:39:01
No	40	Vial 32	504-1 K1613310-003	1107000240		F:40:01
No	41	Vial 33	504-1 K1613310-004	1107000241		F:41:01
No	42	Vial 34	504-1 K1613310-005	1107000242		F:42:01
No	43	Vial 35	504-1 K1613396-001	1107000243		F:43:01
No	44	Vial 36	504-1 K1613396-002	1107000244		F:44:01
No	45	Vial 37	504-1 K1613396-003	1107000245		F:45:01
No	46	Vial 38	504-1 K1613310-003MS	1107000246		F:46:01
No	47	Vial 39	504-1 K1613310-003DMS	1107000247		F:47:01
No	48	Vial 40	504-1 KWG1610136-3LCS	1107000248		F:48:01
No	49	Vial 41	504-1 KWG1610136-4MB	1107000249		F:49:01
No	50	Vial 8	504-1 110716 LV7	1107000250		F:50:01
No	51	Vial 1	504-1 IB	1107000251		F:51:01
No	52	none	PARK STILL	1107000252		F:52:01

EDB/TCP/DBCP in Water

Serv. Req. IDs:

lcal

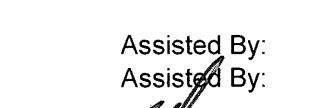
Method:

EPA 504.1

BATCH ID: *kWG1610135*

Comments:

35 USED for CCV's only 11/11/14

Spike Information		Extract Information	
Matrix Spike ID/Conc:	DWSTD 07-94D 50ppb	XP 1/27/17	Start Date: 1/07/16
ICV Spike ID/Conc:	DWSTD 07-91H 50 ppb	3/13/17	End Date: 1/07/16
Start / Stop Time:	0830 - 1500		Hexane Lot # 0P775
			NaCl Lot # 131606
			Balance ID# K-BALANCE-44
Personnel and Bench Sheet Review			
Started By:	L Munesan	Assisted By:	—
Completed By:	L Munesan	Assisted By:	—
Bench Sheet Reviewed By/Date Reviewed:	 Extracts Examined <input checked="" type="radio"/> Yes <input type="radio"/> No		



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F : +1 360 636 1068
www.alsglobal.com

December 15, 2016

Analytical Report for Service Request No: K1614812

Timmerly Bullman
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Timmerly,

Enclosed are the results of the sample(s) submitted to our laboratory December 08, 2016
For your reference, these analyses have been assigned our service request number **K1614812**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink that reads "Gregory Salata".

Gregory Salata, Ph.D.
Senior Project
Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

- Acronyms
- Qualifiers
- State Certifications, Accreditations, And Licenses
- Case Narrative
- Chain of Custody
- EPA Method 504.1
- Raw Data
 - EPA Method 504.1

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdpb.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.alsglobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Environmental Planning Specialist **Service Request No.:** K1614812
Project: Drexel **Date Received:** 12/08/16
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three water samples were received for analysis at ALS Environmental on 12/08/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

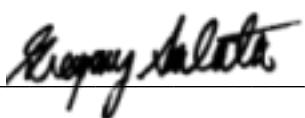
EDB by EPA Method 504.1

Sample Notes and Discussion:

Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

DATE 12/07/16 PAGE 1 OF 1

PROJECT NAME <u>Drexel</u> # _____					NUMBER OF CONTAINERS <i>EDB (Method 504.1)</i>	ANALYSIS REQUESTED <u>V1604812</u>																				
PROJECT MANAGER <u>Timmerly Bullman</u>																										
COMPANY NAME <u>EPS Inc.</u>																										
ADDRESS <u>1050 Crown Pointe Pkwy Ste. 550 Atlanta, GA 30338</u> <u>tbullman@envplanning.com</u> PHONE <u>704-315-9113</u>																										
SAMPLERS SIGNATURE _____																										
SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX		REMARKS																				
<u>16342 GACI</u>	<u>12/07/16</u>	<u>2:40pm</u>	<u>GW(2)</u>	X																						
<u>16342 GACE</u>	<u>12/07/16</u>	<u>2:45pm</u>	<u>GW(2)</u>	X																						
<u>Trip Blank</u>	<u>12/07/16</u>		<u>W(2)</u>	X																						
REPORT REQUIREMENTS					INVOICE INFORMATION		Circle which metals are to be analyzed:																			
<ul style="list-style-type: none"> — I. Routine Report: Method Blank, Surrogate, as required — II. Report Dup., MS, MSD as required — III. CLP Like Summary (no raw data) — IV. Data Validation Report — V. EDD 					P.O. # _____ Bill To: _____		Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg																			
							*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: (CIRCLE ONE)																			
					TURNAROUND REQUIREMENTS <input checked="" type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input type="checkbox"/> Standard (10-15 working days) <input type="checkbox"/> Provide Verbal Preliminary Results <input type="checkbox"/> Provide FAX preliminary Results		SPECIAL INSTRUCTIONS/COMMENTS: <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)																			
					Requested Report Date _____																					
RELINQUISHED BY: <u>Terrence Wilker</u> Signature <u>Terrence Wilker</u> Printed Name					RECEIVED BY: <u>K. Smith</u> Signature <u>K. Smith</u> Printed Name		RELINQUISHED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____										RECEIVED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____									



PC Sheg

Cooler Receipt and Preservation Form

Client ERS

Received: 12/8/16 Opened: 12/8/16 By: PD Unloaded: 12/8/16 By: PD

Service Request K16 14812

1. Samples were received via? Mail Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1/FRONT
- If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
-5	-6	2.22.1	-1	356		NA	77788914 Old 5		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____ NA Y N
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? Indicate in the table below. NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below. NA Y N
11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

RUSH Page ____ of ____



EPA Method 504.1

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client:
Project:

Environmental Planning Specialists
Drexel

Service Request: K1614812

**Cover Page - Organic Analysis Data Package
EPA Method 504.1**

Sample Name	Lab Code	Date Collected	Date Received
16342 GACI	K1614812-001	12/07/2016	12/08/2016
16342 GACE	K1614812-002	12/07/2016	12/08/2016
TRIP BLANK	K1614812-003	12/07/2016	12/08/2016

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614812
Date Collected: 12/07/2016
Date Received: 12/08/2016

EPA Method 504.1

Sample Name: 16342 GACI **Units:** ug/L
Lab Code: K1614812-001 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	0.24		0.0099	0.00300	1	12/08/16	12/08/16	KWG1611064	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614812
Date Collected: 12/07/2016
Date Received: 12/08/2016

EPA Method 504.1

Sample Name: 16342 GACE **Units:** ug/L
Lab Code: K1614812-002 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0098	0.00300	1	12/08/16	12/08/16	KWG1611064	

Comments: _____

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614812
Date Collected: 12/07/2016
Date Received: 12/08/2016

EPA Method 504.1

Sample Name: TRIP BLANK **Units:** ug/L
Lab Code: K1614812-003 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0098	0.00300	1	12/08/16	12/08/16	KWG1611064	

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614812
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank **Units:** ug/L
Lab Code: KWG1611064-3 **Basis:** NA
Extraction Method: METHOD **Level:** Low
Analysis Method: 504.1

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0098	0.00300	1	12/08/16	12/08/16	KWG1611064	

Comments: _____

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614812
Date Extracted: 12/08/2016
Date Analyzed: 12/08/2016

Lab Control Spike/Duplicate Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Extraction Lot: KWG1611064

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			%Rec Limits	RPD	RPD Limit			
	KWG1611064-1			KWG1611064-2								
	Lab Control Spike			Duplicate Lab Control Spike								
Result	Spike Amount	%Rec	Result	Spike Amount	%Rec							
1,2-Dibromoethane (EDB)	0.279	0.250	112	0.281	0.250	112	70-130	1	20			

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614812
Date Extracted: 12/08/2016
Date Analyzed: 12/08/2016
Time Analyzed: 22:43

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	Instrument ID:	GC33
Lab Code:	KWG1611064-3	File ID:	J:\GC33\DATA\120816-504\1208020.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1611064

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
16342 GACI	K1614812-001	J:\GC33\DATA\120816-504\1208015.D	12/08/16	20:44
16342 GACE	K1614812-002	J:\GC33\DATA\120816-504\1208016.D	12/08/16	21:08
TRIP BLANK	K1614812-003	J:\GC33\DATA\120816-504\1208017.D	12/08/16	21:32
Lab Control Sample	KWG1611064-1	J:\GC33\DATA\120816-504\1208018.D	12/08/16	21:55
Duplicate Lab Control Sample	KWG1611064-2	J:\GC33\DATA\120816-504\1208019.D	12/08/16	22:19

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614812
Date Extracted: 12/08/2016
Date Analyzed: 12/08/2016
Time Analyzed: 21:55

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	Instrument ID:	GC33
Lab Code:	KWG1611064-1	File ID:	J:\GC33\DATA\120816-504\1208018.D
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1	Extraction Lot:	KWG1611064

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
16342 GACI	K1614812-001	J:\GC33\DATA\120816-504\1208015.D	12/08/16	20:44
16342 GACE	K1614812-002	J:\GC33\DATA\120816-504\1208016.D	12/08/16	21:08
TRIP BLANK	K1614812-003	J:\GC33\DATA\120816-504\1208017.D	12/08/16	21:32
Method Blank	KWG1611064-3	J:\GC33\DATA\120816-504\1208020.D	12/08/16	22:43

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614812
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D	F	J:\GC33\DATA\101016-504\1010009.D
B	J:\GC33\DATA\101016-504\1010005.D	G	J:\GC33\DATA\101016-504\1010010.D
C	J:\GC33\DATA\101016-504\1010006.D	H	J:\GC33\DATA\101016-504\1010011.D
D	J:\GC33\DATA\101016-504\1010007.D		
E	J:\GC33\DATA\101016-504\1010008.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	7.68E+5	B	0.13	8.48E+5	C	0.25	9.56E+5	D	0.63	1.27E+6	E	1.3	1.12E+6
	F	3.8	1.32E+6	G	5.0	1.20E+6	H	10	1.48E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614812
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Result	Q	
1,2-Dibromoethane (EDB)	MS	Quadratic	COD	0.998	≥ 0.99	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1614812
Project: Drexel **Calibration Date:** 10/10/2016
 Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14943
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\DATA\101016-504\1010012.D **Column ID:** RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	1120000	1110000	NA	-2	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614812
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID	Level ID	File ID
A	J:\GC33\DATA\101016-504\1010004.D\1010004c.d	F	J:\GC33\DATA\101016-504\1010009.D\1010009c.d
B	J:\GC33\DATA\101016-504\1010005.D\1010005c.d	G	J:\GC33\DATA\101016-504\1010010.D\1010010c.d
C	J:\GC33\DATA\101016-504\1010006.D\1010006c.d	H	J:\GC33\DATA\101016-504\1010011.D\1010011c.d
D	J:\GC33\DATA\101016-504\1010007.D\1010007c.d		
E	J:\GC33\DATA\101016-504\1010008.D\1010008c.d		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	8.73E+5	B	0.13	9.71E+5	C	0.25	1.05E+6	D	0.63	1.09E+6	E	1.3	9.01E+5
	F	3.8	9.65E+5	G	5.0	9.21E+5	H	10	9.89E+5						

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614812
Calibration Date: 10/10/2016

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL14943
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Result	Q	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	7.6	≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1614812
Project: Drexel **Calibration Date:** 10/10/2016
 Date Analyzed: 10/10/2016

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard **Calibration ID:** CAL14943
Analysis Method: 504.1 **Units:** ppb

File ID: J:\GC33\DATA\101016-504\1010012.D\1010012.c.d **Column ID:** RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	970000	876000	-10	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614812
Date Analyzed: 12/08/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\120816-504\1208013.D	Analysis Lot:	KWG1611078
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	1120000	1150000	NA	1	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614812
Date Analyzed: 12/08/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1611078
		Units:	ppb
File ID:	J:\GC33\DATA\120816-504\1208013.D\1208013C.D	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	970000	1080000	12	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614812
Date Analyzed: 12/08/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
File ID:	J:\GC33\DATA\120816-504\1208021.D	Analysis Lot:	KWG1611078
		Units:	ppb
		Column ID:	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.7	1120000	1480000	NA	14	± 30	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614812
Date Analyzed: 12/08/2016

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	Calibration Date:	10/10/2016
Analysis Method:	504.1	Calibration ID:	CAL14943
		Analysis Lot:	KWG1611078
		Units:	ppb
File ID:	J:\GC33\DATA\120816-504\1208021.D\1208021C.D	Column ID:	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.5	970000	1060000	9	NA	± 30	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1614812

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1611078

Instrument ID: GC33

Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\1208013.D	Continuing Calibration Verification	KWG1611078-1	12/8/2016	19:57		12/8/2016	20:14
\1208014.D	Instrument Blank	KWG1611078-3	12/8/2016	20:21		12/8/2016	20:38
\1208015.D	16342 GACI	K1614812-001	12/8/2016	20:44		12/8/2016	21:01
\1208016.D	16342 GACE	K1614812-002	12/8/2016	21:08		12/8/2016	21:25
\1208017.D	TRIP BLANK	K1614812-003	12/8/2016	21:32		12/8/2016	21:49
\1208018.D	Lab Control Sample	KWG1611064-1	12/8/2016	21:55		12/8/2016	22:12
\1208019.D	Duplicate Lab Control Sample	KWG1611064-2	12/8/2016	22:19		12/8/2016	22:36
\1208020.D	Method Blank	KWG1611064-3	12/8/2016	22:43		12/8/2016	23:00
\1208021.D	Continuing Calibration Verification	KWG1611078-2	12/8/2016	23:06		12/8/2016	23:23
\1208022.D	Instrument Blank	KWG1611078-4	12/8/2016	23:30		12/8/2016	23:47

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614812
Date Extracted: 12/08/2016

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1611064
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
16342 GACI	K1614812-001	12/07/16	12/08/16	35.305ml	2ml	NA	
16342 GACE	K1614812-002	12/07/16	12/08/16	35.497ml	2ml	NA	
TRIP BLANK	K1614812-003	12/07/16	12/08/16	35.615ml	2ml	NA	
Method Blank	KWG1611064-3	NA	NA	35.615ml	2ml	NA	
Lab Control Sample	KWG1611064-1	NA	NA	35.000ml	2ml	NA	
Duplicate Lab Control Sample	KWG1611064-2	NA	NA	35.000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1614812
Date Collected: 12/07/2016
Date Received: 12/08/2016
Date Extracted: 12/08/2016

EPA Method 504.1

Sample Name:	16342 GACI	Units:	ug/L
Lab Code:	K1614812-001	Basis:	NA
Extraction Method:	METHOD	Level:	Low
Analysis Method:	504.1		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0099	0.00300	0.24	0.26	8.0		1	12/08/16

APPENDIX B
Groundwater Sampling Forms



Monitoring W^WS Sampling Form



Monitoring w Sampling Form



Monitoring w/Sampling Form

EPS Project: Drexel Chemical Company								Date:	
Well ID:	B2-5							11/17/14	
Sampling Performed By:	A. Testbeck, B. Crowley, A. Hume							Field Conditions: Sunny, 70°	
Well Construction:	3" thick - up							General Condition of Well: Good	
Well Labeled:	No							Condition of surrounding area: Good	
Well depth from TOC:	174.34							Depth to Water from TOC: 49.36	
Well Diameter (in):	2-1/2"							Method of measurement: Water Level Meter	
Height (Ht) of water in well (Ht = Well depth from TOC - Static level from TOC):	25.04							Three Well Volumes (gal): 12,02	
Volume of water in well (Ht x .16 for 2"(.653 for 4")(.1469 for 6")):	4.01							Time @ Start of Purge: 10:40	
Purging Method:	Downhole pump							Sample Parameters: EDR 504.	
Sample Method:									
Time	Volume (gal)	Temp (°C)	pH	ORP (mV)	Cond. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Depth to Water (ft)	Comments
11/13	12.25	23.37	9.12	204	0.209	17.8	3.24	151.25	
11/14	14	25.10	9.12	305	0.209	16.8	3.21	151.25	
11/15	15.5	25.43	9.13	306	0.209	12.0	3.15	151.25	
11/16	17	25.60	9.12	291	0.209	9.4	3.10	151.25	



Monitoring Water Sampling Form

EPS Project: Drexel Chemical Company

Date: 11/12/16

Well ID: BW-6-1
Sampling Performed By:

Field Conditions: Sunny, 73° F

Well Construction: Flute Well Well Cap: Well Locked:

General Condition of Well: Good
Condition of surrounding area: Good

Well depth from TOC: _____
Well Diameter (in): _____

Depth to Water from TOC:
Method of measure: Water Level Meter

Height (Ht) of water in well (Well depth from TOC - Static level from TOC):

Three Well Volumes

Volume of Water in well (ml.): 10.101 \pm 0.003 for 1st
Purging Method: Air Lift (Nitrogen)

Sample Parameters: ES AK 1550 EPR

Time	Volume (gal)	Temp (°C)	pH	ORP (mV)	Cond. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Depth to Water (ft)	Comments
1605	0.23	25.29	7.22	46	0.2921	1.9	8.02		
1615	1.0								
1630	1.5	24.65	7.29	107	0.389	2.3	7.60		

Honiba No.:

Sample ID: 16322-BW-5r-1

Time Collected: 1635

Technician Signature



Monitoring w/Sampling Form

EPS Project: Drexel Chemical Company

Date: 11/2/14

Well ID: GACI / EW-1
Sampling Performed By:

Field Conditions:

Well Construction:

Well Labeled: _____ **Well Cap:** _____ **Well Locked:** _____

Well depth from TOC

Well Diameter (in):

卷之三

Height (H_T) of Water in Well (Well depth from IOC - Static level from IOC):

Volume of water in well (Ht. x(.16 for 2";)(.653 for 4";)(1.469 for 6";)

Purgung Method:

Sample Method:

卷之三

Time	Volume (gal)	Temp (°C)	pH	ORP (mV)	Cond. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Depth to Water (ft)	Comments
24.3 ±	7.40	154	0.71	0.7	6.91	Influent, clear well pump	Gemular Activated Carbon System		

Horiba No. :

Pressure gauge inoperative
1336549 gallons (meter reading)
4.4 gpm

Sample ID: 16322-GACG
16322-GACE

Time Collected: 1700
1705



Monitoring W^WS Sampling Form

EPS Project: Drexel Chemical Company

Date: 11/17/16

Well ID: Well - P Sampling Performed By: A

Field Conditions:

Well Construction: Snick - ref

General Condition of Well:

Well Labeled: W3 Well Cap: Yes Well Locked: Yes
Well depth from TROC: 195.19 ft

Condition of surrounding area: Depth to Water from TOC:

Well Diameter (in): 2-1/2
Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 2-1/2 in
Volume of water in well (Ht. x (16 for 2")(.653 for 4") (1.469 for 6"): _____
Purging Method: Down-hole pump
Sample Method: difficult

Method or measure: Water lever meter
Time @ Start of Purge: 0456
Sample Parameters: F123

Time	Volume (gal)	Temp (°C)	pH	ORP (mV)	Cond. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Depth to Water (ft)	Comments
0935	10	19.88	6.21	179	0.349	0.9	3.64		
0936	20	20.94	6.21	160	0.309	2.1	Submersible pump connected to above ground float		
0938	25	21.17	7.11	153	0.306	0.9	3.74		
0939	35	21.46	7.78	154	0.304	1.2	3.45		
1000	45	21.57	7.27	159	0.303	0.6	3.70		
1001	45	21.87	7.78	163	0.302	0.1	3.07		
1004	55	21.87	7.30	155	0.302	0.3	3.08		
1007	70	21.73	7.31	154	0.302	0.4	4.99		

Calibration Log - 2KUVHXM

11/12 Pt (Conc(mM))_{turbent} DO_{mL} 10.03
3.99 4.49 0.2_{A1t} 0.0

Calibration Log - T6WFPVFG

Calibration Log		
Pt	conc turb(mM)	DO(mg/L)
11/17	4.50	0.00
11/18	4.50	0.00
		10.08

EPS

APPENDIX C

FLUTe Well Sampling Diagrams

Figure C-1. Water FLUTE pump system

(Single port system shown for clarity)

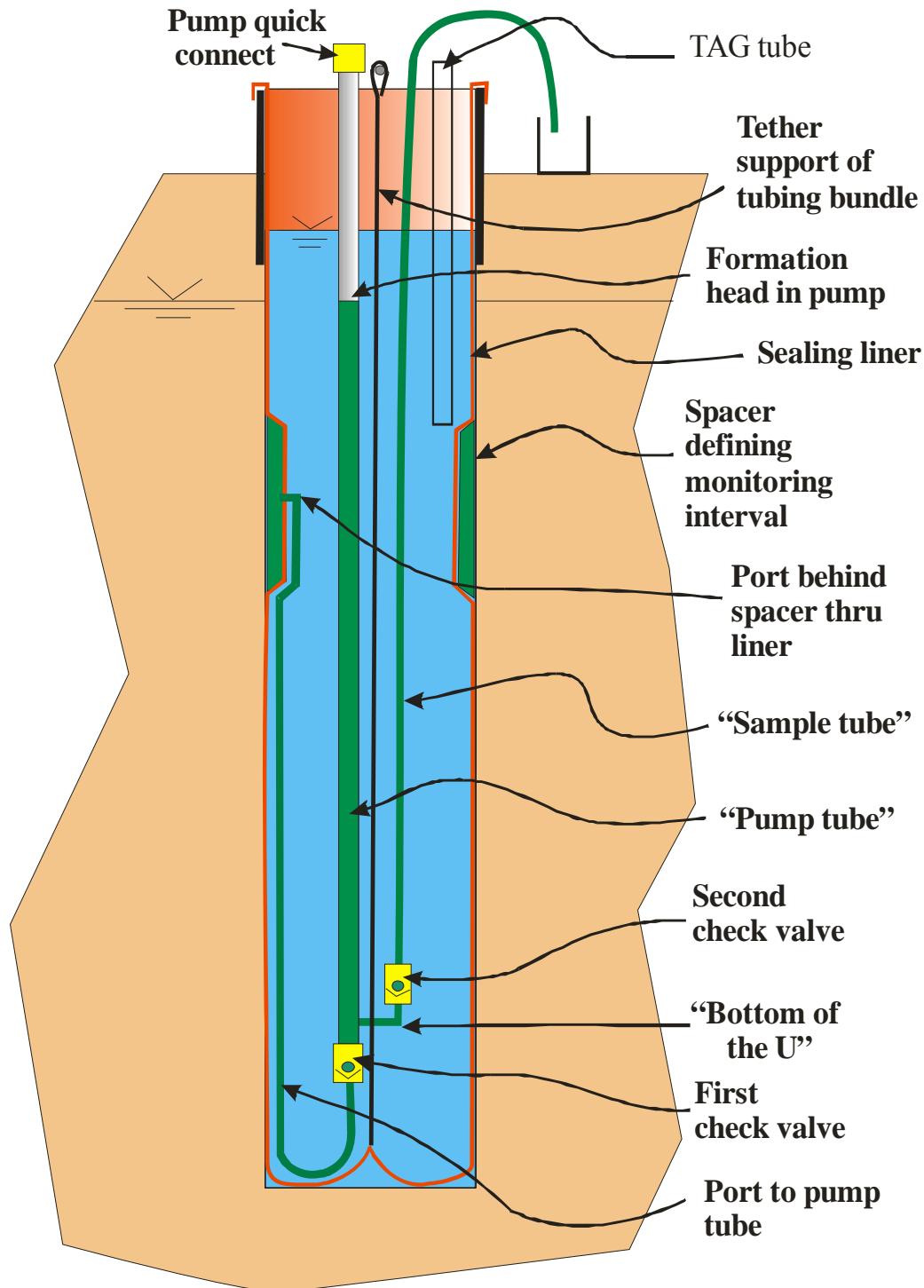


Figure C-2. FLUTE Pumping Procedure

