11190 Sunrise Valley Drive
Suite 300
Reston, VA 20191
Main: 703 709 6500
www.wspgroup.com/usa

VIA ELECTRONIC MAIL

October 10, 2013

Karen Cahill
Project Manager
New York State Department of Environmental Conservation
Department of Environmental Remediation
615 Erie Boulevard West
Syracuse, New York 13204-2400

Re: Report of LNAPL Delineation Activities
Order on Consent #A7-0125-87-09
Emerson Power Transmission – Ithaca, New York

Dear Karen:

On behalf of Emerson Electric Co., WSP USA Corp. (WSP) is submitting this letter presenting the results of additional investigation activities conducted around the fire water reservoir at the Emerson Power Transmission (EPT) site in Ithaca, New York. The additional investigation was conducted to further evaluate the extent of light non-aqueous liquid (LNAPL) around the fire water reservoir prior to the excavation of petroleum impacted soil from the location of previously installed TestPit3-4. This report presents a summary of previous investigations west of the fire water reservoir, the investigations conducted to evaluate LNAPL around the reservoir including the methods and results of this work, and next steps based on the investigation findings.

Background

In 2010, a series of test pits were excavated on the western side of the fire water reservoir to locate and assess a drain pipe exiting the base of the south tank. Three test pits were installed and sampled southeast (TestPit1-5), northeast (TestPit2-6), and south (TestPit3-4) of the existing piping and near Outfall 001. Soil at TestPit3-4 was visually impacted by petroleum, and soil samples were collected for petroleum fingerprinting and volatile organic compounds (VOCs) analysis. Only trace levels of VOCs were detected. However, the sample from TestPit3-4 was found to contain Lube Oil (3,180,000 µg/kg) and partially Diesel Fuel #2 (330,000 µg/kg).

In May 2013, WSP provided a final scope of work based on comments received from the New York State Department of Environmental Conservation (NYSDEC). The scope of work included installing and sampling five new LNAPL observation wells around the perimeter of the south tank of the fire water reservoir. The depths of the observation wells were to be screened across the soil-bedrock interface. Once completed, the observation wells were to be sampled for LNAPL, if present, and groundwater samples collected for analysis of petroleum fingerprinting and VOCs. As detailed in the approved scope of work, if LNAPL was not encountered in any of the five new observation wells, the isolated area of petroleum impacted soil around TestPit3-4 (Figure 1) would be excavated and disposed offsite.

Below is a discussion of the scope of work completed and the results of this investigation.

Scope of Work

Five new observation wells, designated MW-33B, MW-34B, MW-35B, MW-36B, and MW-37B, were installed immediately west and south (downgradient) of the fire water reservoir to evaluate whether LNAPL was present at the soil bedrock interface (Figure 1). The wells were screened across the soil/bedrock interface within the highly fractured portion of the upper bedrock zone and the overlying unconsolidated soil.

Boreholes for the observation wells were advanced from the ground surface to the top of bedrock using 4.25-inch inside diameter (ID) hollow-stem augers at MW-36B and MW-37B, or by driving 4-inch diameter steel casing at MW-33B through MW-35B. The overburden soil was continuously-sampled using 2-foot long split spoon samplers and recovered samples were logged for soil type, density, and moisture content, and screened for organic vapors in the field using a photo ionization detector (PID). Upon reaching the top of bedrock, the boreholes were advanced to the termination depths using nominal 4-inch diameter rotary air hammer.

Upon completing each borehole, observation wells were constructed using 2-inch-ID threaded, flush jointed, Schedule 40 PVC. The well screens are 10 feet in length with 0.010-inch horizontal slots. The annular space around each screened interval was backfilled with filter sand, topped with a hydrated bentonite seal, and the remainder of the well annulus was backfilled with a mixture of 95/5 cement-bentonite grout. The lithologic logging results and well construction information are included in the boring logs in Enclosure A.

Well Development

The observation wells were developed by removing groundwater with bailers. Turbidity, pH, temperature, and specific conductance were periodically monitored during the development process (see Enclosure B for well development purge forms). Development continued until the each of the wells was bailed dry (typically within less than three calculated well volumes) or discharge was relatively free of suspended sediments and in-situ readings were stable. No water was added during the drilling and installation activities for the new monitoring wells.

Observation Well Gauging

On August 6, 2013, the depth to water was measured in observation wells MW-33B through MW-37B. The data was used to calculate the groundwater elevations in the newly installed observation wells and evaluate the presence of free-phase product. All measurements were recorded in a field notebook for later calculation of the product thicknesses and groundwater elevations.

Groundwater and LNAPL Sampling

On August 6, 2013, WSP collected groundwater grab samples from the newly installed observation wells. The grab groundwater samples were collected using dedicated high-density polyethylene (HDPE) bailers, and the samples were transferred to appropriate laboratory-supplied glassware and labeled with the sample identification, date and time, sampler's initials, preservatives, and the analyses to be performed. All samples were sealed, labeled, and packed on ice and shipped to Accutest Laboratories

in Marlborough, Massachusetts, under appropriate chain-of-custody procedures in accordance with WSP's Standard Operating Procedure (SOP) 20. The samples were analyzed for VOCs using EPA Method 8260.

Measurable LNAPL was not detected in any of the newly installed observation wells. A visual sheen was observed in MW-37B. Therefore, a sample was collected using a HDPE bailer, and the sample was transferred to appropriate laboratory-supplied glassware and labeled with the sample identification, date and time, sampler's initials, and the analyses to be performed. The sample was analyzed for petroleum constituents using New York State Department of Health Method 310.13.

Quality Assurance/Quality Control

Quality assurance and quality control (QA/QC) procedures included the collection of one blind duplicate sample, designated MW-0813, one site-specific matrix-spike/matrix spike duplicate pair, designated MW-36B-MS/MSD, and a Trip Blank. The data were validated in accordance with the National Functional Guidelines for Organic Data Review. The laboratory data package is included in Enclosure C and the validation report is included in Enclosure D.

Equipment Decontamination, Investigation-Derived Wastes, and Land Surveying

All downhole drilling equipment (augers and rods) were decontaminated between each boring using a portable steam cleaner in accordance with WSP's SOP 15 (Enclosure E). Split-spoon samplers were decontaminated between each use with non-phosphate soap and de-ionized water (DI water) in accordance with WSP's SOP 19 (Enclosure E). All non-dedicated sampling equipment was decontaminated in the field in accordance with procedures outlined in WSP's SOPs 18 and 19 (Enclosure E).

All soil cuttings, purge water, decontamination fluid, and other investigation-derived wastes (IDW) generated during the drilling and sampling activities were contained in 55-gallon DOT approved steel drums. The drums were labeled and moved to an onsite staging area. The IDW will be characterized for disposal at a later time.

Land Surveying

Upon completion of the work, the elevations of the ground surface at each new monitoring well and the top of the PVC well casing were surveyed to the nearest 0.01 foot by a New York State-licensed land surveyor. The horizontal locations of the new wells were determined to the nearest 0.1 foot. All survey data are referenced to the state plane coordinate system and tied into the existing base map for the site (Table 1; Figure 1).

Results

Observation Wells

The soil overburden thickness at the five new observation wells ranged from approximately 4 feet at MW-35B to 14.6 feet at MW-34B, and consisted of brown and gray silt with varying amounts of angular siltstone fragments grading into weathered siltstone with depth. Top of bedrock was determined to be

the refusal depth during split spoon advancement. A petroleum-like odor and visible staining were observed at the overburden/bedrock interface in three of the borings, MW-34B, MW-36B, and MW-37B. The soil at the bedrock interface was also saturated at two locations, MW-34B and MW-37B. Headspace analysis of the recovered soil samples using the PID indicated generally low concentrations of VOCs, except where visible staining was observed at the bedrock soil interface. PID measurements in soils recovered at the soil bedrock interface ranged from 26.4 ppm in MW-34B to 120 ppm in MW-36B. Boring logs, which include the soil descriptions and headspace results, are included in Enclosure A.

Cuttings from the bedrock drilling indicated that the bedrock surrounding the reservoir is a gray siltstone similar to the bedrock encountered elsewhere at the site. The total depths of the new observation wells ranged from 12.6 feet to 21.1 feet below ground surface (bgs), depending on the level of the ground surface relative to the top of the fire water reservoir. All of the wells were completed above grade with a steel protective casing set in concrete and locking expandable caps except MW-37B, which was completed with a flush-mount manhole cover.

Product Thickness Measurements and Water Levels

Water levels were collected from the new observation wells on August 6, 2013. All measured water levels were within the screened intervals (well screens straddle the water table). Groundwater elevations on August 6, 2013, ranged from 568.84 ft above mean seal level (AMSL) in MW-36B to 571.49 ft AMSL in MW-37B (Table 1). Measurable LNAPL was not detected in any of the newly installed observation wells. A visible sheen was observed on the water in MW-37B.

The groundwater flow direction at the soil-bedrock interface surrounding the fire water reservoir is to the southwest based on the groundwater elevation measurements. However, the data are limited to observations in only five wells, and therefore no contours were generated.

Groundwater Sampling Results

VOCs were detected in the samples collected from each of the newly-installed observation wells with total concentrations ranging from 6.5 µg/l at MW-33B to 2,301 µg/l at MW-36B (2,547 µg/l in duplicate sample MW-0813; Table 2). Five VOCs were detected above the New York State Class GA ambient water quality standards and guidance values in one or more samples (Figure 2).

The results of the petroleum fingerprint analysis for the sample collected from MW-37B yielded no match for any petroleum constituent patterns (Table 3).

Next Steps

Measurable LNAPL was not detected in any of the newly installed observation wells. The observation wells will be gauged for three more quarters, and if no measurable LNAPL is identified, the wells will be abandoned in accordance with the approved scope of work.

Based in these findings, Emerson will proceed with the approved scope of work for the excavation and offsite disposal of petroleum affected soil at the TestPit3-4 location.

Sincerely yours,

Erik Reinert
Senior Consultant

Scott P. Haitz
Vice President

Enclosures

ER:sph:rlo
\\ser01caz1us.us.wspgroup.com\es\clients\emerson\ept-ithaca\Proposals\4507_061113_FW Res Drilling Proposa_Bid_Draft_Revised.docx

cc\encl: Derek Chase, Emerson
Justin Deming, New York State Department of Health

Figures

B

LEGEND
EXISTING RESERVOIR PIPING
EXISTING EXTRACTION WELLS
SOIL GRAB SAMPLE
WATER GRAB SAMPLE
LNAPL OBSERVATION WELL
EXCAVATED TEST PIT

IRM BUILDING
EW-1-62C
EW-2-62C
EW-3-60C
EW-4-25B
EW-5-25B
EW-6-60C
EW-7-25B
EW-8-62C
EW-10-25B
EW-9-86C
SPDES OUTFALL #001
FOOT PATH
DRAINAGE DITCH
FOOT BRIDGE
STACK
BOILER HOUSE
NORTH TANK
SOUTH TANK
SEDIMENTATION BASIN
WDITCH-NT-5
WDITCHSOIL-NT
TESTPIT4-8
MW-33B
TESTPIT2-6
MW-34B
SEE DETAILED PLAN VIEW, FIGURE 8
MW-35B
WDITCH-ST-5
CIPIPESLUDGE-5
S5CIPIPE-5
4" VERTICAL STAND PIPE
END OF PIPE
TESTPIT1-5
TESTPIT3-4
MW-36B
MW-37B

0 12 24
SCALE IN FEET

WSP USA Corp.
11190 Sunrise Valley Drive, Suite 300
Reston, Virginia 20191
(703) 709-6500
www.wspgroup.com/usa

Figure 1

FIRE WATER RESERVOIR
TEST PIT LOCATIONS AND
LNAPL OBSERVATION WELLS

EMERSON POWER TRANSMISSION
ITHACA, NEW YORK

PREPARED FOR
EMERSON POWER TRANSMISSION

Drawn By: EGC
Checked: 9/18/2013
Approved:
DWG Name: 00004507-101

B

IRM BUILDING

EW-1-62C

LEGEND

EXISTING RESERVOIR PIPING
EXISTING EXTRACTION WELLS
SOIL GRAB SAMPLE
WATER GRAB SAMPLE
LNAPL OBSERVATION WELL
EXCAVATED TEST PIT

1,1-DCE	1,1-DICHLOROETHENE
cis-1,2-DCE	cis-1,2-DICHLOROETHENE
trans-1,2-DCE	TRANS-1,2-DICHLOROETHENE
TCE	TRICHLOROETHENE
ND	NOT DETECTED
J	ESTIMATED CONCENTRATION BELOW LABORATORY REPORTING LIMITS

STACK

BOILER HOUSE

NOTES:
1. CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS REPORTED IN MICROGRAMS PER LITER (ug/l).
2. CONCENTRATIONS IN BOLD EXCEED THE EVALUATION CRITERIA LISTED IN THE NEW YORK STATE DIVISION OF WATER TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1, TABLE 5: NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES (JUNE 1998).
3. COMPOUNDS SHOWN IN FIGURE EXCEED EVALUATION CRITERIA IN 1 OR MORE SAMPLES. FOR A FULL LIST OF RESULTS SEE TABLE 2.

WDITCH-NT-5
WDITCHSOIL-NT
TESTPIT4-8
NORTH TANK
EW-2-62C
FOOT PATH
DRAINAGE DITCH

Sample ID	MW-33B
Date	8/6/2013
Benzene	ND
1,1-DCE	ND
cis-1,2-DCE	0.8 J
trans-1,2-DCE	ND
TCE	**5.7 J**
Vinyl chloride	ND

Sample ID	MW-34B
Date Sampled:	8/6/2013
Benzene	ND
1,1-DCE	1.6
cis-1,2-DCE	**374**
trans-1,2-DCE	1.8
TCE	**28.3**
Vinyl chloride	**25.1**

MW-33B
MW-34B
SEDIMENTATION BASIN
SOUTH TANK
EW-3-60C
EW-4-25B
TESTPIT2-6
SEE DETAILED PLAN VIEW, FIGURE 8
MW-35B
WDITCH-ST-5
CIPIPESLUDGE-5
S5CIPIPE-5
4" VERTICAL STAND PIPE
END OF PIPE
TESTPIT1-5
EW-5-25B
EW-6-60C
TESTPIT3-4

Sample ID	MW-35B
Date Sampled:	8/6/2013
Benzene	ND
1,1-DCE	ND
cis-1,2-DCE	3.1
trans-1,2-DCE	ND
TCE	**6.6**
Vinyl chloride	ND

MW-36B
MW-37B

Sample ID	MW-36B
Date Sampled:	8/6/2013
Benzene	**1.6**
1,1-DCE	2.5
cis-1,2-DCE	**1,320 J**
trans-1,2-DCE	**19.4**
TCE	**700**
Vinyl chloride	**157**

Sample ID	MW-37B
Date Sampled:	8/6/2013
Benzene	ND
1,1-DCE	2.7
cis-1,2-DCE	**546**
trans-1,2-DCE	**7.1**
TCE	**358**
Vinyl chloride	**122**

EW-9-86C
SPDES OUTFALL #001
EW-7-25B
EW-8-62C
EW-10-25B
FOOT BRIDGE

N

0 12 24
SCALE IN FEET

WSP USA Corp.
11190 Sunrise Valley Drive, Suite 300
Reston, Virginia 20191
(703) 709-6500
www.wspgroup.com/usa

Figure 2

FIRE WATER RESERVOIR
VOC SAMPLING RESULTS

EMERSON POWER TRANSMISSION
ITHACA, NEW YORK

PREPARED FOR
EMERSON POWER TRANSMISSION

Drawn By: EGC
Checked: 9/18/2013
Approved:
DWG Name: 00004507-101

Tables

Table 1

Observation Well Gauging Results
Emerson Power Transmission
Ithaca, New York
August 6, 2013 (a)

Well ID	Top of Casing Elevation (ft AMSL)	Depth to Product (ft btoc)	Depth to Water (ft btoc)	Total Depth (ft btoc)	Water Column Height (ft)	Groundwater Elevation (ft AMSL)	Depth to Water Below top of Reservoir (ft)	Comments
MW-33B	586.56	ND	15.63	18.3	2.69	570.93	17.0	
MW-34B	584.85	ND	13.94	16.2	2.26	570.91	17.0	
MW-35B	583.52	ND	13.32	15.1	1.78	570.2	17.7	
MW-36B	588.78	ND	19.94	21.6	1.66	568.84	19.1	
MW-37B	586.65	ND	15.16	19.7	4.54	571.49	16.4	LNAPL sheen, no measurable thickness.

a/ NM = not measured; ND = not detected; ft = feet; AMSL = above mean sea level; btoc = feet below top of casing; LNAPL = light non-aqueous phase liquid.

Table 2

VOC Groundwater Sampling Results
Emerson Power Transmission
Ithaca, New York (a)

Client Sample ID:	Evaluation	**MW-33B**	**MW-34B**	**MW-35B**	**MW-36B**	**MW-0813**	**MW-37B**
Date Sampled:	Criteria	8/6/2013	8/6/2013	8/6/2013	8/6/2013	8/6/2013	8/6/2013
Matrix:	(b)	Ground Water	Ground Water	Ground Water	Ground Water	Ground	Ground Water
VOCs (µg/l)							
Acetone	50	10 UJ	10 U	10 U	10 U	10 U	4.5 J
Benzene	1	0.5 UJ	0.5 U	0.5 U	**1.6**	**1.5**	0.5 U
1,1-Dichloroethene	5	1 UJ	1.6	1 U	2.5	2.3	2.7
cis-1,2-Dichloroethene	5	0.8 J	**374**	3.1	**1,320 J**	**1,570 J**	**546**
trans-1,2-Dichloroethene	5	1 UJ	1.8	1 U	**19.4**	**17.3**	**7.1**
Tetrachloroethene	5	1 UJ	1 U	1 U	0.81 J	0.81 J	1.2
Toluene	5	1 UJ	1 U	1 U	1 U	1 U	4.3
Trichloroethene	5	**5.7 J**	**28.3**	**6.6**	**700**	**828**	**358**
Vinyl chloride	2	1 UJ	**25.1**	1 U	**157**	**127**	**122**
Total	**-**	**6.5 J**	**430.8**	**9.7**	**2,201**	**2,547**	**1,045.8**

a/ VOCs = volatile organic compounds; µg/l = micrograms per liter; NVL = no value listed; U = concentration not detected at or above laboratory reporting limit; UJ = quantitation limit may be inaccurate or imprecise; J = Reported value may not be accurate or precise.

b/ Concentrations in **bold** text exceed the New York State Class GA ambient water quality standards and guidance values as provided in the New York State Department of Environmental Conservation Division of Water Technical & Operational Guidance Series (1.1.1) dated June 1998.

c/ MW-0813 is a blind duplicate of MW-36B.

Table 3

Petroleum Fingerprinting Results
Emerson Power Transmission
Ithaca, New York (a)

Client Sample ID:	**MW-37B**
Date Sampled:	8/6/2013
Matrix:	Ground Water
SVOCs	
Gasoline (C4-C12)	No Match
Turpentine (C9-C11)	No Match
Mineral Spirits (C9-C12)	No Match
Kerosene (C9-C18)	No Match
Diesel Fuel (C9-C22)	No Match
Fuel Oil #2 (C11-C22)	No Match
Fuel Oil #4 (C11-C24)	No Match
Fuel Oil #6 (C11-C26)	No Match
Lubricating Oil (C14-C40)	No Match
Other Patterns	No Match

a/ SVOCs = Semi-volatile organic compounds.

Enclosure A

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035 (315) 655-3900 • Fax (315) 655-3907

Observation Well Monitoring Form

Well ID	**MW-33B**	**Site:**	**EPT - Ithaca, NY**	**Sample Date:**	7/19/2013
Well Diameter	2 in	**Sampling Event**	**Firewater Reservoir LNAPL Delineation Well Installation Activities**		
Depth to Water (btoc)	15.9 ft	**Samplers**	Erik Reinert		
Total Well Depth (btoc)	18.32 ft	**Weather Conditions:**	Clear, hot, humid, 90 degrees		
Height of Water Column	2.5 ft	**Notes:**			
Well Volume	0.4 gal				

Instrument Calibration Information

pH Meter Calibration			Notes on calibration: Horiba U-52 water quality meter calibrated to manufacturer's specifications using auto-calibration solution.
pH of Stand. 1	pH of Stand. 2	Slope	

Well Purging Information

Purge Volume (gal)	D.O. (mg/L)	T (ºC)	ORP (mV)	S.C. (mS/cm)	Turb. (NTU)	pH	Notes
Init	7.36	29.21	NM	1.34	198	11.27	
0.5	11.73	24.12	NM	1.22	ERR	11.63	Well purged dry at about 1 gallon. Will allow recharge and attempt to continue development at a later time.
Minimal Recharge 2 hours after suspending purge. 0.3 feet of clear water in well. End development.							

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035 (315) 655-3900 • Fax (315) 655-3907

Observation Well Monitoring Form

Well ID	**MW-34B**	**Site:**	**EPT - Ithaca, NY**	**Sample Date:**	7/19/2013
Well Diameter	2 in	**Sampling Event**	**Firewater Reservoir LNAPL Delineation Well Installation Activities**		
Depth to Water (btoc)	14.2 ft	**Samplers**	Erik Reinert		
Total Well Depth (btoc)	18.32 ft	**Weather Conditions:**	Clear, hot, humid, 90 degrees		
Height of Water Column	4.1 ft	**Notes:**			
Well Volume	0.7 gal				

Instrument Calibration Information

pH Meter Calibration			Notes on calibration: Horiba U-52 water quality meter calibrated to manufacturer's specifications using auto-calibration solution.
pH of Stand. 1	pH of Stand. 2	Slope	

Well Purging Information

Purge Volume (gal)	D.O. (mg/L)	T (ºC)	ORP (mV)	S.C. (mS/cm)	Turb. (NTU)	pH	Notes
Init	6.11	22.5	NM	1.31	1000	9.98	
0.5	6.76	21.45	NM	1.17	1000	9.67	
1.5	10.62	20.42	NM	1.02	1000	10.88	Well purged dry at about 2 gallons. Will allow recharge and attempt to continue development at a later time.
No recharge 1.75 hours after suspending purge. End development							

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035 (315) 655-3900 • Fax (315) 655-3907

Observation Well Monitoring Form

Well ID	**MW-35B**	**Site:**	**EPT - Ithaca, NY**	**Sample Date:**	7/19/2013
Well Diameter	2 in	**Sampling Event**	**Firewater Reservoir LNAPL Delineation Well Installation Activities**		
Depth to Water (btoc)	13.4 ft	**Samplers**	Erik Reinert		
Total Well Depth (btoc)	15.1 ft	**Weather Conditions:**	Clear, hot, humid, 90 degrees		
Height of Water Column	1.7 ft	**Notes:**			
Well Volume	0.3 gal				

Instrument Calibration Information

pH Meter Calibration		
pH of Stand. 1	pH of Stand. 2	Slope

Notes on calibration: Horiba U-52 water quality meter calibrated to manufacturer's specifications using auto-calibration solution.

Well Purging Information

Purge Volume (gal)	D.O. (mg/L)	T (ºC)	ORP (mV)	S.C. (mS/cm)	Turb. (NTU)	pH	Notes
Init	8.75	20.38	NM	0.938	ERR	9.51	
0.5	5.86	19.88	NM	0.758	ERR	9.79	
1.0	9.71	19.81	NM	0.695	ERR	9.68	
1.5	6.79	19.99	NM	0.705	ERR	9.50	Well purged dry at about 1.75 gallons. Will allow recharge and attempt to continue development at a later time.
2.0	4.70	23.18	NM	0.705	ERR	9.70	
2.5	10.40	21.09	NM	0.779	ERR	9.79	Well purged dry. End development.

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035 (315) 655-3900 • Fax (315) 655-3907

Observation Well Monitoring Form

Well ID	**MW-36B**	**Site:**	**EPT - Ithaca, NY**	**Sample Date:**	7/18/13 and 7/19/13
Well Diameter	2 in	**Sampling Event**	**Firewater Reservoir LNAPL Delineation Well Installation Activities**		
Depth to Water (btoc)	19.8 ft	**Samplers**	Erik Reinert		
Total Well Depth (btoc)	21.37 ft	**Weather Conditions:**	Clear, hot, humid, 80 degrees		
Height of Water Column	1.6 ft	**Notes:**			
Well Volume	0.3 gal				

Instrument Calibration Information

pH Meter Calibration			Notes on calibration: Horiba U-52 water quality meter calibrated to manufacturer's specifications using auto-calibration solution.
pH of Stand. 1	pH of Stand. 2	Slope	

Well Purging Information

Purge Volume (gal)	D.O. (mg/L)	T (ºC)	ORP (mV)	S.C. (mS/cm)	Turb. (NTU)	pH	Notes
Init	11.52	26.33	-75	2.43	ERR	7.98	Suspend purge at <0.5 gallons. Well went dry. Will allow recharge and attempt to continue development at a later time.
No recharge 3 hours later. End development.							

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035 (315) 655-3900 • Fax (315) 655-3907

Observation Well Monitoring Form

Well ID	**MW-37B**	**Site:**	**EPT - Ithaca, NY**	**Sample Date:**	7/18/13 and 7/19/13
Well Diameter	2 in	**Sampling Event**	**Firewater Reservoir LNAPL Delineation Well Installation Activities**		
Depth to Water (btoc)	19.8 ft	**Samplers**	Erik Reinert		
Total Well Depth (btoc)	21.37 ft	**Weather Conditions:**	Clear, hot, humid, 80 degrees		
Height of Water Column	1.6 ft	**Notes:**			
Well Volume	0.3 gal				

Instrument Calibration Information

pH Meter Calibration			Notes on calibration: Horiba U-52 water quality meter calibrated to manufacturer's specifications using auto-calibration solution.
pH of Stand. 1	pH of Stand. 2	Slope	

Well Purging Information

Purge Volume (gal)	D.O. (mg/L)	T (ºC)	ORP (mV)	S.C. (mS/cm)	Turb. (NTU)	pH	Notes
Init	7.05	NM	NM	4.81	822	7.79	
1 gal	9.78	20.78	NM	5.71	ERR	7.66	Well purged dry at 1 gallon. End development.

Enclosure B

Boring Log: MW-33B

Project: Emerson Power Transmission
Project No.: 4507/Legacy 127491
Location: Ithaca, New York
Completion Date: 7/19/2013

Surface Elevation (feet AMSL*): 584.0
TOC Elevation (feet AMSL*): 586.56
Total Depth (feet): 16
Borehole Diameter (inches): 4

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	
	1	9.4	4 8 5 3	60		***Silt with Gravel (ML)*** Black (10YR 2/1) silt, little fine to coarse-grained sand, trace gravel and broken grass, trace organics and rootlets; loose; dry.	
2	2	0.5	2 7 8 5	75		***Poorly-Graded Gravel (GP)*** Grayish-brown (10YR 5/2) concrete rubble and cinders; loose; dry.	
4	3	10.7	7 8 18 6	25			
6	4	12.6	10 6 12 12	50			
8	5	6.1	19 12 12 12	10		***Silt with Gravel (ML)*** Yellowish-brown (10YR 5/6) silt, trace rootlets, little sub-angular gravel; very dense; dry.	
10						***Siltstone*** Gray siltstone.	
12							
14							
16						Bottom of Boring at 16 feet	
18							
20							

Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Joe Percey
Method: Driven Case/Air Rotary

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035
(315) 655-3900

Boring Log: MW-34B

Project: Emerson Power Transmission
Project No.: 4507/Legacy 127491
Location: Ithaca, New York
Completion Date: 7/18/2013

Surface Elevation (feet AMSL*): 582.7
TOC Elevation (feet AMSL*): 584.85
Total Depth (feet): 14.6
Borehole Diameter (inches): 4

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	
2	1	0.6	3 3 3 5	25		***Silt with Sand (ML)*** Dark brown (10YR 3/3) silt, little fine to medium-grained sand, little organics and rootlets, little gravel; loose; dry.	
4	2	2.1	5 7 7 6	25			
6	3	3.2	12 20 17 20	75		***Silt with Gravel (ML)*** Black (10YR 2/1) silt, little gravel, some organics; loose; dry.	
8	4	0.0	14 5 7 14	15		***Gravelly Silt (ML)*** Dark yellowish-brown (10YR 4/6) silt, some angular weathered bedrock fragments; loose; dry.	
10	5	0.1	11 11 12 25	40		***Poorly-Graded Gravel (GP)*** Brown (10YR 4/3) siltstone fragments; dry.	
12	6	0.4	20 23 22 16	25		***Gravelly Silt (ML)*** Grayish-brown (10YR 5/2) silt and siltstone fragments; loose; dry.	
14	7	26.4	15 10 15 16	50		***Silt with Gravel (ML)*** Black (10YR 2/1) and yellow (10YR 7/8) silt, little clay, little gravel; dense; moist.	
16	8	NA	8 50/0.1	0		***Gravelly Silt (ML)*** Light olive brown (2.5Y 5/4) silt, little clay, little to some gravel, soft to medium soft; wet; faint petroleum odor and sheen.	
18						Bottom of Boring at 14.6 feet	
20							

Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Joe Percey
Method: Driven Case/Air Rotary

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035
(315) 655-3900

Boring Log: MW-35B

Project: Emerson Power Transmission
Project No.: 4507/Legacy 127491
Location: Ithaca, New York
Completion Date: 7/16/2013

Surface Elevation (feet AMSL*): 581.0
TOC Elevation (feet AMSL*): 583.52
Total Depth (feet): 13
Borehole Diameter (inches): 4

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	
2	1	1.7	1 1 2 2	10		***Well-Graded Sand with Gravel (SW)*** Very dark grayish brown (10YR 3/2) to brown (10YR 4/4) fine to coarse-grained sand, little angular gravel; loose; dry.	
4	2	6.2	8 25 35 29	25			
6						***Siltstone*** Gray siltstone.	
8							
10							
12							
14						Bottom of Boring at 13 feet	
16							
18							
20							

Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Joe Percey
Method: Driven Case/Air Rotary

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035
(315) 655-3900

Boring Log: MW-36B

Project: Emerson Power Transmission
Project No.: 4507/Legacy 127491
Location: Ithaca, New York
Completion Date: 7/15/2013

Surface Elevation (feet AMSL*): 586.3
TOC Elevation (feet AMSL*): 588.78
Total Depth (feet): 19
Borehole Diameter (inches): 8.25/4

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	
						Concrete	
2	1	0.0	4 9 7 4	50		***Gravel*** Gravel Sub-base.	
4	2	0.0	9 5 8 5	25		***Well-Graded Gravel (GW)*** Light brownish-gray (10YR 6/2) siltstone fragments up to 2-inches in diameter; loose; dry.	
6	3	0.0	8 11 7 6	25		***Gravelly Silt (ML)*** Dark yellowish-brown (10YR 4/6) silt, some siltstone fragments; dense; dry.	
8	4	0.0	5 4 4 4	25			
10	5	0.0	4 5 6 3	25			
12	6	120	9 50/0.3 - -	40		***Well-Graded Gravel with Silt and Sand (GW-GM)*** Grayish-brown (10YR 5/2) siltstone fragments, little silt and sand; dry; oil-like substance between cobbles.	
14						***Siltstone*** Gray siltstone (not sampled).	
16							
18							
20						Bottom of Boring at 19 feet	

Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Joe Percey
Method: Hollow Stem Auger/Air Rotary

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035
(315) 655-3900

Boring Log: MW-37B

Project: Emerson Power Transmission
Project No.: 4507/Legacy 127491
Location: Ithaca, New York
Completion Date: 7/17/2013

Surface Elevation (feet AMSL*): 587.0
TOC Elevation (feet AMSL*): 586.65
Total Depth (feet): 20
Borehole Diameter (inches): 8.25/4

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	
						Concrete	
2						***Poorly-Graded Gravel (GP)*** Concrete and brick rubble; loose; dry.	
4	1	2.6	2 2 5 8	25			
6	2	2.0	1 4 3 3	15		***Silt with Gravel (ML)*** Yellowish-brown (10YR 5/1) silt, little clay, little coarse-grained sand and gravel, some brick fragments between 6 and 8 feet; loose; dry.	
8	3	-	- - - -	0			
10	4	10.5	2 2 2 50/0.4	95		***Silt (ML)*** Dark yellowish-brown (10YR 4/6), light brownish gray (10YR 6/2) and black (10YR 2/1) silt; dense; dry, mottled.	
12						***Silt with Sand (ML)*** Brown (10YR 9/3) silt, little clay, little coarse-grained sand and gravel; soft, wet; faint petroleum-like odor and possible petroleum sheen.	
14						***Siltstone*** Gray siltstone.	
16							
18							
20							

Bottom of Boring at 20 feet

Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Joe Percey
Method: Hollow Stem Auger/Air Rotary

WSP USA Corp.
5 Sullivan Street
Cazenovia, NY 13035
(315) 655-3900

Enclosure C

New England ACCUTEST LABORATORIES

09/03/13

Technical Report for

WSP Environmental & Energy

EPT Ithaca, Ithica, NY

4507/34

Accutest Job Number: MC23378

Sampling Date: 08/06/13

Report to:

WSP Environmental & Energy

Erik.Reinert@WSPGroup.com

ATTN: Erik Reinert

Total number of pages in report: **230**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) ISO 17025:2005 (L2235)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

Sample Summary

WSP Environmental & Energy

Job No: MC23378

EPT Ithaca, Ithica, NY
Project No: 4507/34

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC23378-1	08/06/13	15:00	ER	08/08/13	AQ	Ground Water	MW-37B
MC23378-2	08/06/13	15:05	ER	08/08/13	AQ	Ground Water	MW-36B
MC23378-2D	08/06/13	15:05	ER	08/08/13	AQ	Water Dup/MSD	MW-36B
MC23378-2S	08/06/13	15:05	ER	08/08/13	AQ	Water Matrix Spike	MW-36B
MC23378-3	08/06/13	15:10	ER	08/08/13	AQ	Ground Water	MW-0813
MC23378-4	08/06/13	15:11	ER	08/08/13	AQ	Ground Water	MW-33B
MC23378-5	08/06/13	15:15	ER	08/08/13	AQ	Ground Water	MW-34B
MC23378-6	08/06/13	15:20	ER	08/08/13	AQ	Ground Water	MW-35B
MC23378-7	08/06/13	00:00	ER	08/08/13	AQ	Trip Blank Water	TB080613

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	WSP Environmental & Energy	**Job No**	MC23378
Site:	EPT Ithaca, Ithica, NY	**Report Date**	8/26/2013 12:10:13 PM

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 08/06/2013 and were received at Accutest on 08/08/2013 properly preserved, at 1.5 Deg. C and intact. These Samples received an Accutest job number of MC23378. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** MSV845

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC23378-2MS, MC23378-2MSD were used as the QC samples indicated.
- MC23378-2MS for Bromodichloromethane, Bromomethane, Carbon tetrachloride, Chloroethane, Methylcyclohexane, Styrene are outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC23378-2MSD for 2-Butanone (MEK), Acetone, Bromomethane, Chloroethane are outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC23378-2MS/MSD for cis-1,2-Dichloroethene are outside control limits due to high level in sample relative to spike amount.

Matrix: AQ **Batch ID:** MSV846

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC23458-4MS, MC23458-4MSD were used as the QC samples indicated.
- MC23378-4: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.

Extractables by GC By Method NYDOH 310-13

Matrix: AQ **Batch ID:** OP34506

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- The following samples were extracted outside of holding time for method NYDOH 310-13: MC23378-1

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC23378).

Summary of Hits

Job Number: MC23378
Account: WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY
Collected: 08/06/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC23378-1	**MW-37B**					
Acetone		4.5 J	10	2.8	ug/l	SW846 8260B
1,1-Dichloroethene		2.7	1.0	0.67	ug/l	SW846 8260B
cis-1,2-Dichloroethene		546	10	5.4	ug/l	SW846 8260B
trans-1,2-Dichloroethene		7.1	1.0	0.54	ug/l	SW846 8260B
Tetrachloroethene		1.2	1.0	0.61	ug/l	SW846 8260B
Toluene		4.3	1.0	0.46	ug/l	SW846 8260B
Trichloroethene		358	10	4.5	ug/l	SW846 8260B
Vinyl chloride		122	1.0	0.61	ug/l	SW846 8260B
MC23378-2	**MW-36B**					
Benzene		1.6	0.50	0.45	ug/l	SW846 8260B
1,1-Dichloroethene		2.5	1.0	0.67	ug/l	SW846 8260B
cis-1,2-Dichloroethene		1320	50	27	ug/l	SW846 8260B
trans-1,2-Dichloroethene		19.4	1.0	0.54	ug/l	SW846 8260B
Tetrachloroethene		0.81 J	1.0	0.61	ug/l	SW846 8260B
Trichloroethene		700	50	22	ug/l	SW846 8260B
Vinyl chloride		157	1.0	0.61	ug/l	SW846 8260B
MC23378-3	**MW-0813**					
Benzene		1.5	0.50	0.45	ug/l	SW846 8260B
1,1-Dichloroethene		2.3	1.0	0.67	ug/l	SW846 8260B
cis-1,2-Dichloroethene		1570	20	11	ug/l	SW846 8260B
trans-1,2-Dichloroethene		17.3	1.0	0.54	ug/l	SW846 8260B
Tetrachloroethene		0.81 J	1.0	0.61	ug/l	SW846 8260B
Trichloroethene		828	20	9.0	ug/l	SW846 8260B
Vinyl chloride		127	1.0	0.61	ug/l	SW846 8260B
MC23378-4	**MW-33B**					
cis-1,2-Dichloroethene [a]		0.80 J	1.0	0.54	ug/l	SW846 8260B
Trichloroethene [a]		5.7	1.0	0.45	ug/l	SW846 8260B
MC23378-5	**MW-34B**					
1,1-Dichloroethene		1.6	1.0	0.67	ug/l	SW846 8260B
cis-1,2-Dichloroethene		374	1.0	0.54	ug/l	SW846 8260B
trans-1,2-Dichloroethene		1.8	1.0	0.54	ug/l	SW846 8260B
Trichloroethene		28.3	1.0	0.45	ug/l	SW846 8260B
Vinyl chloride		25.1	1.0	0.61	ug/l	SW846 8260B

Summary of Hits

Job Number: MC23378
Account: WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY
Collected: 08/06/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC23378-6	**MW-35B**					
cis-1,2-Dichloroethene		3.1	1.0	0.54	ug/l	SW846 8260B
Trichloroethene		6.6	1.0	0.45	ug/l	SW846 8260B
MC23378-7	**TB080613**					
Methylene chloride		0.58 J	2.0	0.41	ug/l	SW846 8260B

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest LabLink@141027 08:37 03-Sep-2013

Report of Analysis

Client Sample ID:	MW-37B		
Lab Sample ID:	MC23378-1	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V21904.D	1	08/14/13	AMY	n/a	n/a	MSV846
Run #2	V21910.D	10	08/14/13	AMY	n/a	n/a	MSV846

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	4.5	10	2.8	ug/l	J
71-43-2	Benzene	ND	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
110-82-7	Cyclohexane	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.7	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	2.7	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	546 [a]	10	5.4	ug/l	
156-60-5	trans-1,2-Dichloroethene	7.1	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-37B		
Lab Sample ID:	MC23378-1	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-20-9	Methyl Acetate	ND	5.0	2.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.87	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	1.2	1.0	0.61	ug/l	
108-88-3	Toluene	4.3	1.0	0.46	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	358 [a]	10	4.5	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
75-01-4	Vinyl chloride	122	1.0	0.61	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	102%	70-130%
2037-26-5	Toluene-D8	101%	102%	70-130%
460-00-4	4-Bromofluorobenzene	92%	95%	70-130%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@141027 08:37 03-Sep-2013

Report of Analysis

Client Sample ID:	MW-37B		
Lab Sample ID:	MC23378-1	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	NYDOH 310-13 SW846 3580A	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BG40983.D	1	08/21/13	KN	08/21/13	OP34506	GBG1547
Run #2							

	Initial Volume	Final Volume
Run #1	10.0 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	Gasoline (C4-C12)	No Match			
	Turpentine (C9-C11)	No Match			
	Mineral Spirits (C9-C12)	No Match			
	Kerosene (C9-C18)	No Match			
	Diesel Fuel (C9-C22)	No Match			
	Fuel Oil #2 (C11-C22)	No Match			
	Fuel Oil #4 (C11-C24)	No Match			
	Fuel Oil #6 (C11-C26)	No Match			
	Lubricating Oil (C14-C40)	No Match			
	Other Patterns	No Match			

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@141027 08:37 03-Sep-2013

Report of Analysis

Client Sample ID:	MW-36B		
Lab Sample ID:	MC23378-2	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V21881.D	1	08/13/13	AMY	n/a	n/a	MSV845
Run #2	V21901.D	50	08/14/13	AMY	n/a	n/a	MSV846

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
71-43-2	Benzene	1.6	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
110-82-7	Cyclohexane	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.7	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	2.5	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	1320 [a]	50	27	ug/l	
156-60-5	trans-1,2-Dichloroethene	19.4	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-36B		
Lab Sample ID:	MC23378-2	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-20-9	Methyl Acetate	ND	5.0	2.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.87	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	0.81	1.0	0.61	ug/l	J
108-88-3	Toluene	ND	1.0	0.46	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	700 [a]	50	22	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
75-01-4	Vinyl chloride	157	1.0	0.61	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	97%	70-130%
2037-26-5	Toluene-D8	108%	101%	70-130%
460-00-4	4-Bromofluorobenzene	93%	93%	70-130%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@141027 08:37 03-Sep-2013

Report of Analysis

Client Sample ID:	MW-0813		
Lab Sample ID:	MC23378-3	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V21905.D	1	08/14/13	AMY	n/a	n/a	MSV846
Run #2	V21911.D	20	08/14/13	AMY	n/a	n/a	MSV846

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
71-43-2	Benzene	1.5	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
110-82-7	Cyclohexane	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.7	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	2.3	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	1570 [a]	20	11	ug/l	
156-60-5	trans-1,2-Dichloroethene	17.3	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-0813		
Lab Sample ID:	MC23378-3	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-20-9	Methyl Acetate	ND	5.0	2.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.87	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	0.81	1.0	0.61	ug/l	J
108-88-3	Toluene	ND	1.0	0.46	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	828 [a]	20	9.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
75-01-4	Vinyl chloride	127	1.0	0.61	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	102%	70-130%
2037-26-5	Toluene-D8	101%	101%	70-130%
460-00-4	4-Bromofluorobenzene	93%	95%	70-130%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@141027 08:37 03-Sep-2013

Report of Analysis

Client Sample ID:	MW-33B		
Lab Sample ID:	MC23378-4	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	V21912.D	1	08/14/13	AMY	n/a	n/a	MSV846
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
110-82-7	Cyclohexane	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.7	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.80	1.0	0.54	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-33B		
Lab Sample ID:	MC23378-4	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-20-9	Methyl Acetate	ND	5.0	2.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.87	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	5.7	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@141027 08:37 03-Sep-2013

Report of Analysis

Client Sample ID:	MW-34B		
Lab Sample ID:	MC23378-5	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V21907.D	1	08/14/13	AMY	n/a	n/a	MSV846
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
110-82-7	Cyclohexane	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.7	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	1.6	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	374	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.8	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-34B		
Lab Sample ID:	MC23378-5	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-20-9	Methyl Acetate	ND	5.0	2.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.87	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	28.3	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
75-01-4	Vinyl chloride	25.1	1.0	0.61	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@141027 08:37 03-Sep-2013

Report of Analysis

Client Sample ID:	MW-35B		
Lab Sample ID:	MC23378-6	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V21908.D	1	08/14/13	AMY	n/a	n/a	MSV846
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
110-82-7	Cyclohexane	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.7	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	3.1	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-35B		
Lab Sample ID:	MC23378-6	**Date Sampled:**	08/06/13
Matrix:	AQ - Ground Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-20-9	Methyl Acetate	ND	5.0	2.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.87	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	6.6	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@141027 08:37 03-Sep-2013

Report of Analysis

Client Sample ID:	TB080613		
Lab Sample ID:	MC23378-7	**Date Sampled:**	08/06/13
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V21879.D	1	08/13/13	AMY	n/a	n/a	MSV845
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
110-82-7	Cyclohexane	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.7	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB080613		
Lab Sample ID:	MC23378-7	**Date Sampled:**	08/06/13
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/08/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	EPT Ithaca, Ithica, NY		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-20-9	Methyl Acetate	ND	5.0	2.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.87	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
75-09-2	Methylene chloride	0.58	2.0	0.41	ug/l	J
100-42-5	Styrene	ND	5.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-130%
2037-26-5	Toluene-D8	130%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

CHAIN OF CUSTODY RECORD

Project Number:	Site and Location:
4507/34	EPT Ithaca
Contact Name: Erik Reinert	**Contact Email:**
Sampler's Name: Erik Reinert	**Sampler's Signature:**

Matrices: S = Soil; Aq = Water; A = Air; Bu = Bulk; W = Wipe; Bi = Biota; OW = Oily Waste; O = Other

Requested Analyses: 8260 TCL+TX 310.13

N° 01005

Deliverable: NYS Cat B

mc23378

Sample Identification:	Depth	Date	Time	Matrix	Number of Containers	8260 TCL+TX	310.13	Remarks
MW-37B -1	—	8/6/13	1500	Aq	5	X	X	
MW-36B -2SD	—	8/6/13	1505	Aq	9	X		Run MS/MSD
MW-08B -3	—	8/6/13	1510	Aq	3	X		
MW-33B -4	—	8/6/13	1511	Aq	3	X		
MW-34B -5	—	8/6/13	1515	Aq	3	X		
MW-35B -6	—	8/6/13	1520	Aq	3	X		
TB 080613 -7	—	8/6/13	—	Aq	2	X		

19A, 2J1,

Relinquished by (Signature):	8/6/13 1700 Date | Time	**Received by (Signature):**	**Laboratory Name:** Accutest
Relinquished by (Signature): FX	8-8-13 930 Date | Time	**Received by (Signature):** 1.0°	**Laboratory Location:** Marlborough MA
Turn-Around Time: Standard (1-week)		**Tracking Number:**	**Custody Seal Numbers:**
			Method of Shipment: Fedex

WSP Environment & Energy

- ☐ Reston Office: 11190 Sunrise Valley Dr., #300, Reston, VA 20191 / Tel: 703-709-6500
- ☐ Pittsburgh Office: 750 Holiday Dr., #410, Pittsburgh, PA 15220 / Tel: 412-604-1040
- ☐ San Jose Office: 2025 Gateway Place, #435, San Jose, CA 95110 / Tel: 408-453-6100
- ☐ New Jersey Office: 334 Elizabeth Ave., Somerset, NJ 08873 / Tel: 732-564-0888
- ☐ Denver Office: 4600 South Ulster, #930, Denver, CO 80237 / Tel: 303-850-9200
- ☐ Minneapolis Office: 123 North 3rd St., #808, Minneapolis, MN 55401 / Tel: 612-343-0510
- ☐ Boxborough Office: 1740 Massachusetts Ave., Boxborough, MA 01719 / Tel: 978-635-9600
- ☒ Cazenovia Office: 5 Sullivan St., Cazenovia, NY 13035 / Tel: 315-655-3900

MC23378: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC23378 **Client:** WSP **Immediate Client Services Action Required:** No

Date / Time Received: 8/8/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 4507/34 **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control -Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC23378: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

WSP Environmental & Energy

Job No: MC23378

EPT Ithaca, Ithica, NY
Project No: 4507/34

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC23378-1	Collected: 06-AUG-13 15:00 By: ER		Received: 08-AUG-13 By:			
MW-37B						
MC23378-1	SW846 8260B	14-AUG-13 15:27	AMY			V8260TCL42
MC23378-1	SW846 8260B	14-AUG-13 18:06	AMY			V8260TCL42
MC23378-1	NYDOH 310-13	21-AUG-13 22:20	KN	21-AUG-13	BJ	BNY310TPH
MC23378-2	Collected: 06-AUG-13 15:05 By: ER		Received: 08-AUG-13 By:			
MW-36B						
MC23378-2	SW846 8260B	13-AUG-13 16:32	AMY			V8260TCL42
MC23378-2	SW846 8260B	14-AUG-13 14:07	AMY			V8260TCL42
MC23378-3	Collected: 06-AUG-13 15:10 By: ER		Received: 08-AUG-13 By:			
MW-0813						
MC23378-3	SW846 8260B	14-AUG-13 15:53	AMY			V8260TCL42
MC23378-3	SW846 8260B	14-AUG-13 18:32	AMY			V8260TCL42
MC23378-4	Collected: 06-AUG-13 15:11 By: ER		Received: 08-AUG-13 By:			
MW-33B						
MC23378-4	SW846 8260B	14-AUG-13 18:59	AMY			V8260TCL42
MC23378-5	Collected: 06-AUG-13 15:15 By: ER		Received: 08-AUG-13 By:			
MW-34B						
MC23378-5	SW846 8260B	14-AUG-13 16:47	AMY			V8260TCL42
MC23378-6	Collected: 06-AUG-13 15:20 By: ER		Received: 08-AUG-13 By:			
MW-35B						
MC23378-6	SW846 8260B	14-AUG-13 17:13	AMY			V8260TCL42
MC23378-7	Collected: 06-AUG-13 00:00 By: ER		Received: 08-AUG-13 By:			
TB080613						
MC23378-7	SW846 8260B	13-AUG-13 15:39	AMY			V8260TCL42

Accutest Internal Chain of Custody

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY
Received: 08/08/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC23378-1.2	Walk In Ref #22	Bijan Jafari	08/21/13 11:49	Retrieve from Storage
MC23378-1.2	Bijan Jafari	Walk In Ref #22	08/21/13 16:09	Return to Storage
MC23378-1.4	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage
MC23378-1.4	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-1.4	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-1.4	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-2.1	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage
MC23378-2.1	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-2.1	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-2.1	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-2.6	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage
MC23378-2.6	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-2.6	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-2.6	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-2.7	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage
MC23378-2.7	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-2.7	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-2.7	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-2.8	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage
MC23378-2.8	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-2.8	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-2.8	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-3.1	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage
MC23378-3.1	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-3.1	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-3.1	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-4.1	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage
MC23378-4.1	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-4.1	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-4.1	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-4.2	VOC Ref #2	Amy Min Yang	08/14/13 17:40	Retrieve from Storage
MC23378-4.2	Amy Min Yang	GCMSV	08/14/13 17:40	Load on Instrument
MC23378-4.2	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-4.2	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-5.1	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY
Received: 08/08/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC23378-5.1	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-5.1	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-5.1	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-6.1	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage
MC23378-6.1	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-6.1	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-6.1	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage
MC23378-7.1	VOC Ref #2	Amy Min Yang	08/13/13 14:44	Retrieve from Storage
MC23378-7.1	Amy Min Yang	GCMSV	08/13/13 14:44	Load on Instrument
MC23378-7.1	GCMSV	Amy Min Yang	08/15/13 11:38	Unload from Instrument
MC23378-7.1	Amy Min Yang	VOC Ref #2	08/15/13 11:38	Return to Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV845-MB	V21871.D	1	08/13/13	AMY	n/a	n/a	MSV845

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-2, MC23378-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
110-82-7	Cyclohexane	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.7	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
79-20-9	Methyl Acetate	ND	5.0	2.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.87	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	

Method Blank Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV845-MB	V21871.D	1	08/13/13	AMY	n/a	n/a	MSV845

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-2, MC23378-7

CAS No.	Compound	Result	RL	MDL	Units	Q
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	95%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV846-MB	V21893.D	1	08/14/13	AMY	n/a	n/a	MSV846

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-1, MC23378-2, MC23378-3, MC23378-4, MC23378-5, MC23378-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
110-82-7	Cyclohexane	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.7	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
79-20-9	Methyl Acetate	ND	5.0	2.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.87	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	

Method Blank Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV846-MB	V21893.D	1	08/14/13	AMY	n/a	n/a	MSV846

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-1, MC23378-2, MC23378-3, MC23378-4, MC23378-5, MC23378-6

CAS No.	Compound	Result	RL	MDL	Units	Q
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	94%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV845-BS	V21868.D	1	08/13/13	AMY	n/a	n/a	MSV845

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-2, MC23378-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	49.3	99	70-130
71-43-2	Benzene	50	46.3	93	70-130
75-27-4	Bromodichloromethane	50	51.8	104	70-130
75-25-2	Bromoform	50	47.7	95	70-130
74-83-9	Bromomethane	50	61.2	122	70-130
78-93-3	2-Butanone (MEK)	50	50.1	100	70-130
75-15-0	Carbon disulfide	50	57.5	115	70-130
56-23-5	Carbon tetrachloride	50	47.7	95	70-130
108-90-7	Chlorobenzene	50	47.0	94	70-130
75-00-3	Chloroethane	50	61.5	123	70-130
67-66-3	Chloroform	50	53.6	107	70-130
74-87-3	Chloromethane	50	54.3	109	70-130
110-82-7	Cyclohexane	50	43.7	87	71-145
96-12-8	1,2-Dibromo-3-chloropropane	50	44.9	90	70-130
124-48-1	Dibromochloromethane	50	47.2	94	70-130
106-93-4	1,2-Dibromoethane	50	51.8	104	70-130
95-50-1	1,2-Dichlorobenzene	50	43.9	88	70-130
541-73-1	1,3-Dichlorobenzene	50	45.9	92	70-130
106-46-7	1,4-Dichlorobenzene	50	44.8	90	70-130
75-71-8	Dichlorodifluoromethane	50	43.5	87	70-130
75-34-3	1,1-Dichloroethane	50	57.4	115	70-130
107-06-2	1,2-Dichloroethane	50	40.6	81	70-130
75-35-4	1,1-Dichloroethene	50	59.0	118	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.8	108	70-130
156-60-5	trans-1,2-Dichloroethene	50	53.5	107	70-130
78-87-5	1,2-Dichloropropane	50	54.4	109	70-130
10061-01-5	cis-1,3-Dichloropropene	50	47.6	95	70-130
10061-02-6	trans-1,3-Dichloropropene	50	48.5	97	70-130
100-41-4	Ethylbenzene	50	50.1	100	70-130
76-13-1	Freon 113	50	58.8	118	70-130
591-78-6	2-Hexanone	50	51.8	104	70-130
98-82-8	Isopropylbenzene	50	52.9	106	70-130
79-20-9	Methyl Acetate	50	40.2	80	40-137
108-87-2	Methylcyclohexane	50	61.5	123	74-143
1634-04-4	Methyl Tert Butyl Ether	50	52.1	104	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	54.2	108	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV845-BS	V21868.D	1	08/13/13	AMY	n/a	n/a	MSV845

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-2, MC23378-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-09-2	Methylene chloride	50	53.7	107	70-130
100-42-5	Styrene	50	55.5	111	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.6	103	70-130
127-18-4	Tetrachloroethene	50	55.8	112	70-130
108-88-3	Toluene	50	53.4	107	70-130
120-82-1	1,2,4-Trichlorobenzene	50	48.1	96	70-130
71-55-6	1,1,1-Trichloroethane	50	59.0	118	70-130
79-00-5	1,1,2-Trichloroethane	50	52.1	104	70-130
79-01-6	Trichloroethene	50	49.3	99	70-130
75-69-4	Trichlorofluoromethane	50	55.0	110	70-130
75-01-4	Vinyl chloride	50	43.3	87	70-130
1330-20-7	Xylene (total)	150	150	100	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	98%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV846-BS	V21889.D	1	08/14/13	AMY	n/a	n/a	MSV846
MSV846-BSD	V21890.D	1	08/14/13	AMY	n/a	n/a	MSV846

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-1, MC23378-2, MC23378-3, MC23378-4, MC23378-5, MC23378-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	65.1	130	64.3	129	1	70-130/25
71-43-2	Benzene	50	51.2	102	50.9	102	1	70-130/25
75-27-4	Bromodichloromethane	50	52.1	104	51.6	103	1	70-130/25
75-25-2	Bromoform	50	47.1	94	47.7	95	1	70-130/25
74-83-9	Bromomethane	50	50.6	101	48.5	97	4	70-130/25
78-93-3	2-Butanone (MEK)	50	56.0	112	57.6	115	3	70-130/25
75-15-0	Carbon disulfide	50	59.4	119	57.4	115	3	70-130/25
56-23-5	Carbon tetrachloride	50	57.1	114	55.4	111	3	70-130/25
108-90-7	Chlorobenzene	50	45.7	91	45.0	90	2	70-130/25
75-00-3	Chloroethane	50	50.4	101	48.7	97	3	70-130/25
67-66-3	Chloroform	50	53.5	107	52.2	104	2	70-130/25
74-87-3	Chloromethane	50	52.4	105	51.1	102	3	70-130/25
110-82-7	Cyclohexane	50	56.1	112	54.0	108	4	71-145/25
96-12-8	1,2-Dibromo-3-chloropropane	50	42.1	84	44.0	88	4	70-130/25
124-48-1	Dibromochloromethane	50	46.2	92	46.2	92	0	70-130/25
106-93-4	1,2-Dibromoethane	50	49.0	98	50.0	100	2	70-130/25
95-50-1	1,2-Dichlorobenzene	50	44.8	90	45.1	90	1	70-130/25
541-73-1	1,3-Dichlorobenzene	50	45.4	91	45.2	90	0	70-130/25
106-46-7	1,4-Dichlorobenzene	50	45.2	90	45.6	91	1	70-130/25
75-71-8	Dichlorodifluoromethane	50	39.8	80	39.8	80	0	70-130/25
75-34-3	1,1-Dichloroethane	50	58.9	118	58.2	116	1	70-130/25
107-06-2	1,2-Dichloroethane	50	45.7	91	45.3	91	1	70-130/25
75-35-4	1,1-Dichloroethene	50	60.2	120	58.1	116	4	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	54.2	108	53.7	107	1	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	54.0	108	53.1	106	2	70-130/25
78-87-5	1,2-Dichloropropane	50	53.7	107	54.0	108	1	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	47.7	95	47.4	95	1	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	48.7	97	48.6	97	0	70-130/25
100-41-4	Ethylbenzene	50	49.5	99	48.7	97	2	70-130/25
76-13-1	Freon 113	50	60.9	122	58.5	117	4	70-130/25
591-78-6	2-Hexanone	50	55.7	111	57.0	114	2	70-130/25
98-82-8	Isopropylbenzene	50	49.1	98	49.0	98	0	70-130/25
79-20-9	Methyl Acetate	50	39.9	80	41.6	83	4	40-137/25
108-87-2	Methylcyclohexane	50	61.9	124	60.3	121	3	74-143/25
1634-04-4	Methyl Tert Butyl Ether	50	49.1	98	50.4	101	3	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	52.5	105	55.1	110	5	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV846-BS	V21889.D	1	08/14/13	AMY	n/a	n/a	MSV846
MSV846-BSD	V21890.D	1	08/14/13	AMY	n/a	n/a	MSV846

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-1, MC23378-2, MC23378-3, MC23378-4, MC23378-5, MC23378-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
75-09-2	Methylene chloride	50	54.7	109	54.6	109	0	70-130/25
100-42-5	Styrene	50	54.5	109	54.3	109	0	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	48.3	97	50.3	101	4	70-130/25
127-18-4	Tetrachloroethene	50	54.6	109	53.5	107	2	70-130/25
108-88-3	Toluene	50	53.2	106	52.5	105	1	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	48.8	98	50.0	100	2	70-130/25
71-55-6	1,1,1-Trichloroethane	50	58.4	117	56.9	114	3	70-130/25
79-00-5	1,1,2-Trichloroethane	50	51.1	102	52.1	104	2	70-130/25
79-01-6	Trichloroethene	50	48.6	97	48.0	96	1	70-130/25
75-69-4	Trichlorofluoromethane	50	48.1	96	45.9	92	5	70-130/25
75-01-4	Vinyl chloride	50	38.7	77	37.2	74	4	70-130/25
1330-20-7	Xylene (total)	150	148	99	146	97	1	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	95%	70-130%
2037-26-5	Toluene-D8	102%	102%	70-130%
460-00-4	4-Bromofluorobenzene	95%	96%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23378-2MS	V21883.D	10	08/13/13	AMY	n/a	n/a	MSV845
MC23378-2MSD	V21884.D	10	08/13/13	AMY	n/a	n/a	MSV845
MC23378-2	V21881.D	1	08/13/13	AMY	n/a	n/a	MSV845

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-2, MC23378-7

CAS No.	Compound	MC23378-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		500	352	70	341	68* [a]	3	70-130/30
71-43-2	Benzene	1.6		500	516	103	614	122	17	70-130/30
75-27-4	Bromodichloromethane	ND		500	681	136* [a]	547	109	22	70-130/30
75-25-2	Bromoform	ND		500	529	106	484	97	9	70-130/30
74-83-9	Bromomethane	ND		500	676	135* [a]	694	139* [a]	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		500	650	130	670	134* [a]	3	70-130/30
75-15-0	Carbon disulfide	ND		500	561	112	571	114	2	70-130/30
56-23-5	Carbon tetrachloride	ND		500	665	133* [a]	580	116	14	70-130/30
108-90-7	Chlorobenzene	ND		500	459	92	472	94	3	70-130/30
75-00-3	Chloroethane	ND		500	675	135* [a]	692	138* [a]	2	70-130/30
67-66-3	Chloroform	ND		500	559	112	571	114	2	70-130/30
74-87-3	Chloromethane	ND		500	624	125	625	125	0	70-130/30
110-82-7	Cyclohexane	ND		500	564	113	491	98	14	60-160/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	409	82	441	88	8	70-130/30
124-48-1	Dibromochloromethane	ND		500	471	94	474	95	1	70-130/30
106-93-4	1,2-Dibromoethane	ND		500	572	114	514	103	11	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		500	524	105	470	94	11	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		500	488	98	475	95	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		500	466	93	473	95	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		500	453	91	481	96	6	70-130/30
75-34-3	1,1-Dichloroethane	ND		500	586	117	595	119	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		500	532	106	530	106	0	70-130/30
75-35-4	1,1-Dichloroethene	2.5		500	584	116	588	117	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	2280	E	500	2470	38* [b]	2520	48* [b]	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	19.4		500	545	105	557	108	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		500	639	128	552	110	15	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		500	596	119	510	102	16	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		500	587	117	592	118	1	70-130/30
100-41-4	Ethylbenzene	ND		500	518	104	511	102	1	70-130/30
76-13-1	Freon 113	ND		500	613	123	620	124	1	70-130/30
591-78-6	2-Hexanone	ND		500	460	92	498	100	8	70-130/30
98-82-8	Isopropylbenzene	ND		500	518	104	519	104	0	70-130/30
79-20-9	Methyl Acetate	ND		500	387	77	407	81	5	34-145/30
108-87-2	Methylcyclohexane	ND		500	683	137* [a]	650	130	5	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		500	501	100	526	105	5	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		500	646	129	560	112	14	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23378-2MS	V21883.D	10	08/13/13	AMY	n/a	n/a	MSV845
MC23378-2MSD	V21884.D	10	08/13/13	AMY	n/a	n/a	MSV845
MC23378-2	V21881.D	1	08/13/13	AMY	n/a	n/a	MSV845

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-2, MC23378-7

CAS No.	Compound	MC23378-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-09-2	Methylene chloride	ND		500	526	105	545	109	4	70-130/30
100-42-5	Styrene	ND		500	661	132* [a]	570	114	15	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	491	98	519	104	6	70-130/30
127-18-4	Tetrachloroethene	0.81	J	500	576	115	559	112	3	70-130/30
108-88-3	Toluene	ND		500	621	124	559	112	11	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		500	436	87	507	101	15	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		500	631	126	636	127	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		500	649	130	636	127	2	70-130/30
79-01-6	Trichloroethene	1230	E	500	1680	90	1840	122	9	70-130/30
75-69-4	Trichlorofluoromethane	ND		500	645	129	645	129	0	70-130/30
75-01-4	Vinyl chloride	157		500	611	91	630	95	3	70-130/30
1330-20-7	Xylene (total)	ND		1500	1570	105	1530	102	3	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC23378-2	Limits
1868-53-7	Dibromofluoromethane	96%	97%	102%	70-130%
2037-26-5	Toluene-D8	124%	112%	108%	70-130%
460-00-4	4-Bromofluorobenzene	92%	95%	93%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23458-4MS	V21899.D	5	08/14/13	AMY	n/a	n/a	MSV846
MC23458-4MSD	V21900.D	5	08/14/13	AMY	n/a	n/a	MSV846
MC23458-4	V21894.D	1	08/14/13	AMY	n/a	n/a	MSV846

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-1, MC23378-2, MC23378-3, MC23378-4, MC23378-5, MC23378-6

CAS No.	Compound	MC23458-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	216	86	209	84	3	70-130/30
71-43-2	Benzene	ND		250	268	107	263	105	2	70-130/30
75-27-4	Bromodichloromethane	ND		250	269	108	266	106	1	70-130/30
75-25-2	Bromoform	ND		250	246	98	248	99	1	70-130/30
74-83-9	Bromomethane	ND		250	253	101	244	98	4	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	230	92	237	95	3	70-130/30
75-15-0	Carbon disulfide	ND		250	311	124	299	120	4	70-130/30
56-23-5	Carbon tetrachloride	ND		250	301	120	291	116	3	70-130/30
108-90-7	Chlorobenzene	ND		250	240	96	234	94	3	70-130/30
75-00-3	Chloroethane	ND		250	258	103	247	99	4	70-130/30
67-66-3	Chloroform	ND		250	279	112	269	108	4	70-130/30
74-87-3	Chloromethane	ND		250	265	106	251	100	5	70-130/30
110-82-7	Cyclohexane	ND		250	293	117	280	112	5	60-160/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	210	84	230	92	9	70-130/30
124-48-1	Dibromochloromethane	ND		250	240	96	239	96	0	70-130/30
106-93-4	1,2-Dibromoethane	ND		250	260	104	260	104	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	231	92	232	93	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	232	93	228	91	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	230	92	227	91	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	206	82	189	76	9	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	309	124	297	119	4	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	240	96	236	94	2	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	316	126	302	121	5	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	281	112	275	110	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	283	113	272	109	4	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	282	113	276	110	2	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		250	221	88	221	88	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	232	93	231	92	0	70-130/30
100-41-4	Ethylbenzene	ND		250	258	103	252	101	2	70-130/30
76-13-1	Freon 113	ND		250	313	125	293	117	7	70-130/30
591-78-6	2-Hexanone	ND		250	247	99	256	102	4	70-130/30
98-82-8	Isopropylbenzene	ND		250	256	102	252	101	2	70-130/30
79-20-9	Methyl Acetate	ND		250	203	81	205	82	1	34-145/30
108-87-2	Methylcyclohexane	ND		250	313	125	296	118	6	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	259	104	259	104	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	278	111	287	115	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23458-4MS	V21899.D	5	08/14/13	AMY	n/a	n/a	MSV846
MC23458-4MSD	V21900.D	5	08/14/13	AMY	n/a	n/a	MSV846
MC23458-4	V21894.D	1	08/14/13	AMY	n/a	n/a	MSV846

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC23378-1, MC23378-2, MC23378-3, MC23378-4, MC23378-5, MC23378-6

CAS No.	Compound	MC23458-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-09-2	Methylene chloride	ND		250	286	114	281	112	2	70-130/30
100-42-5	Styrene	ND		250	284	114	279	112	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	254	102	260	104	2	70-130/30
127-18-4	Tetrachloroethene	ND		250	280	112	272	109	3	70-130/30
108-88-3	Toluene	ND		250	278	111	271	108	3	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	235	94	248	99	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	305	122	294	118	4	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	272	109	271	108	0	70-130/30
79-01-6	Trichloroethene	ND		250	254	102	248	99	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	249	100	234	94	6	70-130/30
75-01-4	Vinyl chloride	ND		250	199	80	189	76	5	70-130/30
1330-20-7	Xylene (total)	ND		750	768	102	755	101	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC23458-4	Limits
1868-53-7	Dibromofluoromethane	96%	95%	101%	70-130%
2037-26-5	Toluene-D8	103%	103%	102%	70-130%
460-00-4	4-Bromofluorobenzene	95%	95%	95%	70-130%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-BFB
Lab File ID: V21482.D
Instrument ID: GCMSV
Injection Date: 08/01/13
Injection Time: 19:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	4285	19.6		Pass
75	30.0 - 60.0% of mass 95	10074	46.0		Pass
95	Base peak, 100% relative abundance	21904	100.0		Pass
96	5.0 - 9.0% of mass 95	1361	6.21		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	17960	82.0		Pass
175	5.0 - 9.0% of mass 174	1360	6.21	(7.57) [a]	Pass
176	95.0 - 101.0% of mass 174	17568	80.2	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	1291	5.89	(7.35) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSV832-IC832	V21486.D	08/01/13	21:00	01:47	Initial cal 0.25
MSV832-IC832	V21487.D	08/01/13	21:26	02:13	Initial cal 0.5
MSV832-IC832	V21488.D	08/01/13	21:52	02:39	Initial cal 1
MSV832-IC832	V21489.D	08/01/13	22:19	03:06	Initial cal 2
MSV832-IC832	V21490.D	08/01/13	22:46	03:33	Initial cal 5
MSV832-IC832	V21491.D	08/01/13	23:12	03:59	Initial cal 25
MSV832-ICC832	V21492.D	08/01/13	23:39	04:26	Initial cal 50
MSV832-IC832	V21493.D	08/02/13	00:05	04:52	Initial cal 100
MSV832-IC832	V21494.D	08/02/13	00:32	05:19	Initial cal 200
MSV832-IC832	V21495.D	08/02/13	00:58	05:45	Initial cal 400

Instrument Performance Check (BFB)

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV845-BFB
Lab File ID: V21867.D
Instrument ID: GCMSV
Injection Date: 08/13/13
Injection Time: 10:16

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	24632	18.6		Pass
75	30.0 - 60.0% of mass 95	64040	48.2		Pass
95	Base peak, 100% relative abundance	132736	100.0		Pass
96	5.0 - 9.0% of mass 95	9593	7.23		Pass
173	Less than 2.0% of mass 174	1022	0.77	(0.95) [a]	Pass
174	50.0 - 100.0% of mass 95	107856	81.3		Pass
175	5.0 - 9.0% of mass 174	8251	6.22	(7.65) [a]	Pass
176	95.0 - 101.0% of mass 174	104880	79.0	(97.2) [a]	Pass
177	5.0 - 9.0% of mass 176	7525	5.67	(7.17) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSV845-CC832	V21867.D	08/13/13	10:16	00:00	Continuing cal 50
MSV845-BS	V21868.D	08/13/13	10:42	00:26	Blank Spike
MSV845-MB	V21871.D	08/13/13	12:01	01:45	Method Blank
ZZZZZZ	V21872.D	08/13/13	12:28	02:12	(unrelated sample)
ZZZZZZ	V21873.D	08/13/13	12:55	02:39	(unrelated sample)
ZZZZZZ	V21874.D	08/13/13	13:21	03:05	(unrelated sample)
ZZZZZZ	V21875.D	08/13/13	13:48	03:32	(unrelated sample)
ZZZZZZ	V21876.D	08/13/13	14:14	03:58	(unrelated sample)
ZZZZZZ	V21877.D	08/13/13	14:40	04:24	(unrelated sample)
ZZZZZZ	V21878.D	08/13/13	15:07	04:51	(unrelated sample)
MC23378-7	V21879.D	08/13/13	15:39	05:23	TB080613
ZZZZZZ	V21880.D	08/13/13	16:06	05:50	(unrelated sample)
MC23378-2	V21881.D	08/13/13	16:32	06:16	MW-36B
MC23378-2MS	V21883.D	08/13/13	17:28	07:12	Matrix Spike
MC23378-2MSD	V21884.D	08/13/13	17:54	07:38	Matrix Spike Duplicate
ZZZZZZ	V21885.D	08/13/13	18:21	08:05	(unrelated sample)
ZZZZZZ	V21886.D	08/13/13	18:48	08:32	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV846-BFB
Lab File ID: V21888.D
Instrument ID: GCMSV
Injection Date: 08/14/13
Injection Time: 08:24

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	19200	20.4		Pass
75	30.0 - 60.0% of mass 95	45392	48.2		Pass
95	Base peak, 100% relative abundance	94197	100.0		Pass
96	5.0 - 9.0% of mass 95	6624	7.03		Pass
173	Less than 2.0% of mass 174	664	0.70	(0.99) [a]	Pass
174	50.0 - 100.0% of mass 95	67304	71.5		Pass
175	5.0 - 9.0% of mass 174	5516	5.86	(8.20) [a]	Pass
176	95.0 - 101.0% of mass 174	66464	70.6	(98.8) [a]	Pass
177	5.0 - 9.0% of mass 176	4970	5.28	(7.48) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSV846-CC832	V21888.D	08/14/13	08:24	00:00	Continuing cal 50
MSV846-BS	V21889.D	08/14/13	08:50	00:26	Blank Spike
MSV846-BSD	V21890.D	08/14/13	09:17	00:53	Blank Spike Duplicate
MSV846-MB	V21893.D	08/14/13	10:36	02:12	Method Blank
MC23458-4	V21894.D	08/14/13	11:03	02:39	(used for QC only; not part of job MC23378)
ZZZZZZ	V21895.D	08/14/13	11:29	03:05	(unrelated sample)
ZZZZZZ	V21896.D	08/14/13	11:56	03:32	(unrelated sample)
ZZZZZZ	V21897.D	08/14/13	12:22	03:58	(unrelated sample)
ZZZZZZ	V21898.D	08/14/13	12:48	04:24	(unrelated sample)
MC23458-4MS	V21899.D	08/14/13	13:15	04:51	Matrix Spike
MC23458-4MSD	V21900.D	08/14/13	13:41	05:17	Matrix Spike Duplicate
MC23378-2	V21901.D	08/14/13	14:07	05:43	MW-36B
ZZZZZZ	V21902.D	08/14/13	14:33	06:09	(unrelated sample)
ZZZZZZ	V21903.D	08/14/13	15:00	06:36	(unrelated sample)
MC23378-1	V21904.D	08/14/13	15:27	07:03	MW-37B
MC23378-3	V21905.D	08/14/13	15:53	07:29	MW-0813
MC23378-5	V21907.D	08/14/13	16:47	08:23	MW-34B
MC23378-6	V21908.D	08/14/13	17:13	08:49	MW-35B
ZZZZZZ	V21909.D	08/14/13	17:40	09:16	(unrelated sample)
MC23378-1	V21910.D	08/14/13	18:06	09:42	MW-37B
MC23378-3	V21911.D	08/14/13	18:32	10:08	MW-0813
MC23378-4	V21912.D	08/14/13	18:59	10:35	MW-33B
ZZZZZZ	V21913.D	08/14/13	19:26	11:02	(unrelated sample)
ZZZZZZ	V21914.D	08/14/13	19:52	11:28	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample:	MSV846-BFB	**Injection Date:**	08/14/13
Lab File ID:	V21888.D	**Injection Time:**	08:24
Instrument ID:	GCMSV		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	V21915.D	08/14/13	20:19	11:55	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Check Std:	MSV845-CC832	**Injection Date:**	08/13/13
Lab File ID:	V21867.D	**Injection Time:**	10:16
Instrument ID:	GCMSV	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	374056	6.58	648858	7.76	274720	11.09	337563	13.30	91071	3.52
Upper Limit [a]	748112	7.08	1297716	8.26	549440	11.59	675126	13.80	182142	4.02
Lower Limit [b]	187028	6.08	324429	7.26	137360	10.59	168782	12.80	45536	3.02

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV845-BS	375460	6.58	649953	7.76	328410	11.09	351782	13.30	91207	3.51
MSV845-MB	372762	6.59	518226	7.77	264261	11.09	292057	13.30	87013	3.52
ZZZZZZ	338040	6.58	586670	7.76	298003	11.09	324441	13.30	82190	3.52
ZZZZZZ	381238	6.59	567068	7.77	293812	11.09	318495	13.30	100139	3.52
ZZZZZZ	365215	6.59	518595	7.77	271553	11.09	288461	13.30	88766	3.52
ZZZZZZ	351045	6.59	510902	7.77	274899	11.09	300309	13.30	81063	3.52
ZZZZZZ	330557	6.59	487435	7.77	256572	11.09	284749	13.30	78100	3.53
ZZZZZZ	325557	6.59	530032	7.77	265321	11.09	275939	13.30	73715	3.52
ZZZZZZ	320780	6.59	462179	7.77	255446	11.09	264831	13.30	75345	3.52
MC23378-7	298743	6.59	431987	7.77	254773	11.09	248307	13.30	71966	3.53
ZZZZZZ	349076	6.60	546135	7.77	260236	11.10	270276	13.30	70757	3.53
MC23378-2	296420	6.60	511757	7.77	255448	11.10	281675	13.31	70585	3.54
MC23378-2MS	326432	6.59	440536	7.77	260814	11.10	303064	13.31	72153	3.53
MC23378-2MSD	327008	6.59	509390	7.77	312892	11.10	351598	13.30	78956	3.52
ZZZZZZ	310154	6.60	446563	7.77	253784	11.10	344257	13.31	99529	3.53
ZZZZZZ	325663	6.59	469659	7.77	269108	11.10	256942	13.31	72035	3.52

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Check Std:	MSV846-CC832	**Injection Date:**	08/14/13
Lab File ID:	V21888.D	**Injection Time:**	08:24
Instrument ID:	GCMSV	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	337380	6.59	525391	7.77	328524	11.10	381652	13.30	76412	3.53
Upper Limit [a]	674760	7.09	1050782	8.27	657048	11.60	763304	13.80	152824	4.03
Lower Limit [b]	168690	6.09	262696	7.27	164262	10.60	190826	12.80	38206	3.03

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV846-BS	435992	6.58	623182	7.76	324109	11.09	370027	13.30	103265	3.51
MSV846-BSD	436419	6.59	620905	7.77	324333	11.09	366322	13.30	108724	3.52
MSV846-MB	388946	6.59	581990	7.77	306552	11.09	335196	13.30	106407	3.52
MC23458-4	375681	6.59	566349	7.77	299127	11.09	325663	13.30	102053	3.53
ZZZZZZ	376511	6.59	566153	7.77	299347	11.09	328693	13.30	99173	3.52
ZZZZZZ	424579	6.59	621987	7.77	327929	11.09	369984	13.30	89439	3.52
ZZZZZZ	364952	6.59	552454	7.77	294476	11.09	323127	13.30	87426	3.53
ZZZZZZ	396359	6.59	564658	7.77	298860	11.09	343305	13.30	93966	3.52
MC23458-4MS	423681	6.58	604661	7.76	315623	11.09	361116	13.30	100051	3.51
MC23458-4MSD	432098	6.59	611788	7.77	319552	11.09	365196	13.30	108240	3.52
MC23378-2	402863	6.59	591891	7.77	307536	11.09	341017	13.30	98356	3.52
ZZZZZZ	383743	6.59	583981	7.77	302852	11.09	329644	13.30	97536	3.53
ZZZZZZ	385492	6.59	562558	7.77	295053	11.09	322581	13.30	96452	3.52
MC23378-1	375086	6.59	548600	7.77	294254	11.09	330647	13.30	96115	3.54
MC23378-3	382574	6.59	552145	7.77	290215	11.09	325231	13.30	80523	3.52
MC23378-5	372541	6.58	540120	7.76	286416	11.09	318640	13.30	85864	3.52
MC23378-6	361999	6.59	542727	7.77	287744	11.09	317781	13.30	86240	3.52
ZZZZZZ	351756	6.58	527109	7.76	280341	11.09	304034	13.30	80178	3.52
MC23378-1	355509	6.59	526381	7.77	280852	11.09	307847	13.30	81822	3.52
MC23378-3	354045	6.59	522394	7.77	277744	11.09	302811	13.30	81903	3.52
MC23378-4 [c]	334811	6.58	507494	7.76	275257	11.09	299853	13.30	83620	3.52
ZZZZZZ	331030	6.58	505954	7.76	270356	11.09	294865	13.30	77552	3.51
ZZZZZZ	331789	6.59	505917	7.76	272629	11.09	301581	13.30	85752	3.52
ZZZZZZ	342744	6.58	515706	7.76	276125	11.09	307107	13.30	92226	3.52

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

Volatile Surrogate Recovery Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC23378-1	V21910.D	102.0	102.0	95.0
MC23378-1	V21904.D	100.0	101.0	92.0
MC23378-2	V21901.D	97.0	101.0	93.0
MC23378-2	V21881.D	102.0	108.0	93.0
MC23378-3	V21905.D	98.0	101.0	93.0
MC23378-3	V21911.D	102.0	101.0	95.0
MC23378-4	V21912.D	105.0	103.0	94.0
MC23378-5	V21907.D	99.0	102.0	95.0
MC23378-6	V21908.D	101.0	101.0	93.0
MC23378-7	V21879.D	102.0	130.0	99.0
MC23378-2MS	V21883.D	96.0	124.0	92.0
MC23378-2MSD	V21884.D	97.0	112.0	95.0
MC23458-4MS	V21899.D	96.0	103.0	95.0
MC23458-4MSD	V21900.D	95.0	103.0	95.0
MSV845-BS	V21868.D	94.0	102.0	98.0
MSV845-MB	V21871.D	95.0	102.0	95.0
MSV846-BS	V21889.D	96.0	102.0	95.0
MSV846-BSD	V21890.D	95.0	102.0	96.0
MSV846-MB	V21893.D	100.0	102.0	94.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

Initial Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-ICC832
Lab FileID: V21492.D

Response Factor Report MSV

Method : C:\msdchem\1\METHODS\v130801w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Calibration Files
0.25=v21486.D 0.5 =v21487.D 1 =v21488.D 2 =v21489.D
5 =v21490.D 25 =v21491.D 50 =v21492.D 100 =v21493.D
200 =v21494.D 400 =v21495.D = =

Compound	0.25	0.5	1	2	5	25	50	100	200	400	Avg	%RSD
1) tert butyl alcohol-d9	----------ISTD----------											
2) tertiary butyl alcohol			1.167	1.057	1.229	1.279	1.265	1.306	1.299		1.229	7.27
3) Ethanol			0.105	0.089	0.089	0.093	0.090	0.089	0.089		0.092	6.73
4) I pentafluorobenzene	----------ISTD----------											
5) dichlorodifluoromethane			0.796	0.657	0.572	0.507	0.648	0.646	0.644		0.639	13.86
6) chloromethane		0.458	0.470	0.413	0.405	0.370	0.425	0.436	0.429		0.426	7.36
7) vinyl chloride		0.566	0.593	0.494	0.467	0.445	0.504	0.516	0.509		0.512	9.43
8) bromomethane		0.359	0.384	0.327	0.320	0.306	0.318	0.320	0.297		0.329	8.73
9) chloroethane			0.282	0.230	0.208	0.200	0.212	0.216	0.206		0.222	12.55
10) ethyl ether		0.377	0.335	0.306	0.275	0.274	0.310	0.305	0.279		0.308	11.33
11) acetonitrile		0.497	0.513	0.474	0.509	0.514	0.550	0.571	0.546		0.522	6.09
12) trichlorofluoromethane	0.818	0.863	0.923	0.756	0.678	0.626	0.772	0.778	0.739		0.773	11.63
13) freon-113		0.421	0.494	0.382	0.355	0.338	0.432	0.444	0.434		0.413	12.40
14) acrolein			0.025	0.024	0.026	0.029	0.029	0.030	0.030		0.028	9.52
15) 1,1-dichloroethene	0.310	0.407	0.427	0.340	0.343	0.331	0.372	0.385	0.377		0.366	10.36
16) acetone				0.042	0.052	0.042	0.044	0.036	0.032		0.041	16.87
---- Quadratic regression ---- Coefficient = 0.9976												
Response Ratio = 0.00371 + 0.04130 *A + -0.00129 *A^2												
17) Methyl Acetate			0.393	0.337	0.353	0.354	0.365	0.371	0.351		0.360	5.04
18) methylene chloride			0.677	0.506	0.435	0.421	0.434	0.447	0.438		0.480	19.06
---- Linear regression ---- Coefficient = 0.9998												
Response Ratio = 0.00133 + 0.43885 *A												
19) methyl tert butyl ether	1.077	1.028	1.067	0.929	0.986	1.005	1.075	1.119	1.100		1.043	5.83
20) acrylonitrile												

Initial Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-ICC832
Lab FileID: V21492.D

```
                                0.106 0.130 0.128 0.136 0.139 0.135  0.129    9.29
21)  allyl chloride
                        0.497 0.513 0.474 0.509 0.514 0.551 0.571 0.546  0.522    6.09
22)  trans-1,2-dichloroethene
                    0.479 0.454 0.497 0.419 0.416 0.403 0.428 0.442 0.428  0.441    7.00
23)  iodomethane
                    0.974 0.920 0.957 0.805 0.819 0.809 0.855 0.880 0.854  0.875    7.21
24)  carbon disulfide
                    1.326 1.219 1.199 1.064 1.079 1.076 1.210 1.278 1.271  1.191    8.14
25)  propionitrile
                                0.025 0.044 0.050 0.052 0.054 0.053  0.046   23.44
             ---- Linear regression ----  Coefficient =  0.9997
               Response Ratio = -0.00266 + 0.05351 *A

26)  vinyl acetate
                                1.099 1.166 1.208 1.266 1.316 1.253  1.218    6.37
27)  chloroprene
                    0.497 0.551 0.605 0.541 0.580 0.578 0.636 0.646 0.618  0.584    8.25
28)  di-isopropyl ether
                    1.159 1.139 1.214 1.115 1.181 1.178 1.232 1.254 1.182  1.184    3.71
29)  methacrylonitrile
                              0.187 0.196 0.219 0.225 0.238 0.243 0.233  0.220    9.62
30)  2-butanone
                                0.023 0.044 0.040 0.043 0.039 0.037  0.038   20.64
             ---- Linear regression ----  Coefficient =  0.9983
               Response Ratio = 0.00400 + 0.03739 *A

31)  Hexane
                        0.347 0.381 0.307 0.278 0.285 0.339 0.345 0.331  0.327   10.61
32)  1,1-dichloroethane
                        0.754 0.771 0.670 0.686 0.669 0.703 0.728 0.705  0.711    5.29
33)  tert-butyl ethyl ether
                        1.032 1.093 0.965 1.085 1.120 1.214 1.280 1.267  1.132    9.92
34)  isobutyl alcohol
                                0.220 0.233 0.242 0.253 0.263 0.251  0.244    6.37
35)  2,2-dichloropropane
                              0.465 0.396 0.428 0.431 0.475 0.498 0.489  0.455    8.22
36)  cis-1,2-dichloroethene
                    0.467 0.460 0.490 0.448 0.459 0.449 0.476 0.493 0.482  0.469    3.58
37)  ethyl acetate
                                1.099 1.165 1.206 1.264 1.314 1.251  1.217    6.32
38)  bromochloromethane
                        0.224 0.252 0.217 0.235 0.232 0.243 0.251 0.244  0.237    5.27
39)  chloroform
                    0.937 0.916 0.896 0.778 0.785 0.765 0.800 0.823 0.800  0.833    7.81
40)  dibromofluoromethane (s)
                                0.466 0.476 0.531 0.535 0.511 0.508  0.504    5.59
41)  Tetrahydrofuran
                                0.066 0.083 0.083 0.090 0.090 0.086  0.083   10.65
42)  1,1,1-trichloroethane
           0.495 0.738 0.641 0.687 0.607 0.642 0.635 0.715 0.747 0.728  0.664   11.57

43) I   1,4-difluorobenzene   ----------------ISTD---------------------
44)  Cyclohexane
                                0.499 0.400 0.391 0.479 0.492 0.475  0.456   10.41
45)  carbon tetrachloride
                    0.446 0.397 0.439 0.408 0.411 0.404 0.475 0.497 0.481  0.440    8.54
46)  1,1-dichloropropene
                    0.469 0.466 0.458 0.402 0.394 0.387 0.431 0.443 0.421  0.430    7.26
47)  benzene
```

Initial Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-ICC832
Lab FileID: V21492.D


```
                1.453 1.300 1.263 1.106 1.117 1.090 1.144 1.174 1.128  1.197   10.01
48)  1,2-dichloroethane
                      0.571 0.554 0.492 0.495 0.487 0.498 0.503 0.470  0.509    6.88
49)  tert-amyl methyl ether
                      0.620 0.627 0.578 0.660 0.680 0.734 0.782 0.770  0.681   10.90
50)  heptane
                      0.239 0.276 0.233 0.227 0.250 0.289 0.292 0.273  0.260    9.87
51)  trichloroethene
           0.328 0.433 0.409 0.413 0.347 0.354 0.345 0.368 0.381 0.367  0.374    9.12
52)  1,2-dichloropropane
                      0.306 0.355 0.315 0.323 0.316 0.333 0.343 0.326  0.327    4.92
53)  dibromomethane
                      0.196 0.212 0.191 0.199 0.200 0.207 0.212 0.202  0.203    3.69
54)  bromodichloromethane
                0.423 0.428 0.421 0.385 0.430 0.439 0.474 0.498 0.483  0.442    8.06
55)  Methylcyclohexane
                      0.373 0.417 0.346 0.347 0.367 0.446 0.466 0.451  0.402   12.23
56)  2-chloroethyl vinyl ether
                                  0.065 0.077 0.085 0.096 0.104 0.100  0.088   16.76
             ---- Linear regression ----  Coefficient =  0.9992
               Response Ratio = -0.00896 + 0.10206 *A

57)  methyl methacrylate
                      0.128 0.142 0.128 0.153 0.164 0.174 0.184 0.178  0.156   14.24
58)  1,4-dioxane
                                        0.002 0.003 0.003 0.003 0.003  0.003   15.27
             ---- Linear regression ----  Coefficient =  0.9998
               Response Ratio = -0.00252 + 0.00301 *A

59)  cis-1,3-dichloropropene
                0.406 0.373 0.418 0.379 0.474 0.494 0.539 0.569 0.550  0.467   16.24
             ---- Linear regression ----  Coefficient =  0.9995
               Response Ratio = -0.01658 + 0.55534 *A

60)  toluene-d8 (s)
                                  1.011 1.104 1.245 1.238 1.179 1.152  1.155    7.64
61)  4-methyl-2-pentanone
                      0.183 0.199 0.184 0.220 0.233 0.245 0.252 0.237  0.219   12.49
62)  toluene
                      0.944 0.843 0.779 0.798 0.769 0.799 0.821 0.775  0.816    7.02
63)  trans-1,3-dichloropropene
                0.282 0.312 0.324 0.314 0.396 0.424 0.468 0.500 0.483  0.389   21.48
             ---- Linear regression ----  Coefficient =  0.9994
               Response Ratio = -0.01907 + 0.48784 *A

64)  1,1,2-trichloroethane
                0.260 0.270 0.269 0.242 0.254 0.250 0.259 0.265 0.253  0.258    3.52
65)  ethyl methacrylate
                                  0.234 0.321 0.342 0.368 0.387 0.372  0.337   16.52
             ---- Linear regression ----  Coefficient =  0.9993
               Response Ratio = -0.01554 + 0.37656 *A


66) I   chlorobenzene-d5      ----------------ISTD---------------------
67)  tetrachloroethene
           0.759 0.943 0.851 0.857 0.742 0.740 0.715 0.786 0.789 0.752  0.793    8.86
68)  1,3-dichloropropane
                1.022 0.984 1.067 0.915 0.935 0.924 0.975 0.982 0.924  0.970    5.28
69)  dibromochloromethane
                      0.561 0.625 0.568 0.698 0.728 0.802 0.856 0.838  0.710   16.49
```

Initial Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-ICC832
Lab FileID: V21492.D

```
            ---- Linear regression ----  Coefficient =  0.9995
              Response Ratio = -0.04259 + 0.84542 *A

70)  1,2-dibromoethane
                0.593 0.638 0.642 0.576 0.630 0.635 0.669 0.685 0.662  0.637    5.45
71)  2-hexanone
                      0.272 0.356 0.307 0.387 0.353 0.375 0.355 0.332  0.342   10.94
72)  chlorobenzene
                2.805 2.508 2.479 2.111 2.106 2.006 2.104 2.079 1.913  2.234   13.13
73)  1,1,1,2-tetrachloroethane
                0.740 0.718 0.715 0.664 0.738 0.726 0.783 0.786 0.722  0.733    5.03
74)  ethylbenzene
                4.069 3.515 3.497 3.046 3.223 3.117 3.304 3.290 2.999  3.340    9.79
75)  m,p-xylene
                1.617 1.420 1.389 1.224 1.281 1.224 1.278 1.276 1.167  1.320   10.38
76)  o-xylene
                1.377 1.244 1.220 1.136 1.279 1.223 1.305 1.303 1.213  1.256    5.52
77)  styrene
                1.659 1.687 1.864 1.834 2.068 2.036 2.134 2.165 2.023  1.941    9.65
78)  bromoform
                      0.307 0.301 0.297 0.363 0.395 0.459 0.506 0.514  0.393   23.12
            ---- Linear regression ----  Coefficient =  0.9990
              Response Ratio = -0.05409 + 0.51803 *A

79)  trans-1,4-dichloro-2-butene
                                  0.103 0.153 0.174 0.199 0.215 0.209  0.175   24.04
            ---- Linear regression ----  Coefficient =  0.9993
              Response Ratio = -0.02258 + 0.21310 *A


80) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
81)  isopropylbenzene
                2.884 2.679 2.807 2.604 2.926 2.918 3.119 3.203 3.051  2.910    6.74
82)  bromofluorobenzene (s)
                                  0.838 0.880 0.973 0.971 0.925 0.924  0.919    5.70
83)  bromobenzene
                0.926 0.903 0.891 0.852 0.875 0.869 0.904 0.927 0.876  0.891    2.91
84)  1,1,2,2-tetrachloroethane
                0.725 0.677 0.719 0.619 0.659 0.675 0.684 0.699 0.665  0.680    4.77
85)  1,2,3-trichloropropane
                0.588 0.615 0.719 0.679 0.745 0.771 0.813 0.859 0.840  0.737   13.01
86)  n-propylbenzene
                3.340 2.954 3.243 3.130 3.422 3.386 3.578 3.641 3.444  3.349    6.41
87)  2-chlorotoluene
                2.387 2.276 2.356 2.119 2.231 2.170 2.247 2.287 2.186  2.251    3.86
88)  4-chlorotoluene
                2.566 2.503 2.713 2.572 2.573 2.519 2.599 2.647 2.490  2.576    2.76
89)  1,3,5-trimethylbenzene
                2.371 2.247 2.517 2.358 2.583 2.575 2.694 2.729 2.582  2.517    6.40
90)  tert-butylbenzene
                1.303 1.262 1.421 1.299 1.448 1.448 1.539 1.563 1.474  1.417    7.57
91)  1,2,4-trimethylbenzene
                2.771 2.571 2.695 2.506 2.684 2.645 2.736 2.793 2.649  2.672    3.45
92)  sec-butylbenzene
                2.701 2.631 3.008 2.716 2.934 2.962 3.162 3.258 3.085  2.940    7.40
93)  1,3-dichlorobenzene
                1.858 1.807 1.814 1.618 1.643 1.613 1.669 1.708 1.633  1.707    5.56
94)  p-isopropyltoluene
                2.034 1.883 2.278 2.137 2.386 2.423 2.544 2.602 2.455  2.305   10.50
95)  1,4-dichlorobenzene
```

Initial Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-ICC832
Lab FileID: V21492.D

```
                2.155 2.013 1.929 1.651 1.614 1.588 1.638 1.671 1.590  1.761   12.09
 96)  1,2-dichlorobenzene
                1.761 1.797 1.814 1.598 1.594 1.572 1.590 1.612 1.511  1.650    6.67
 97)  n-butylbenzene
                2.071 1.959 2.038 1.911 2.125 2.223 2.322 2.391 2.208  2.139    7.55
 98)  1,2-dibromo-3-chloropropane
                                0.070 0.086 0.100 0.108 0.119 0.122  0.101   19.74
            ---- Linear regression ----  Coefficient =  0.9994
              Response Ratio = -0.01916 + 0.12373 *A

 99)  1,3,5-trichlorobenzene
                1.147 1.109 1.137 0.985 1.039 1.067 1.125 1.174 1.100  1.098    5.36
100)  1,2,4-trichlorobenzene
                1.042 1.028 1.006 0.928 1.032 1.095 1.157 1.220 1.133  1.071    8.29
101)  hexachlorobutadiene
                0.505 0.510 0.517 0.426 0.432 0.461 0.483 0.511 0.470  0.480    7.21
102)  naphthalene
                                1.305 1.756 2.013 2.121 2.231 2.140  1.928   17.96
            ---- Linear regression ----  Coefficient =  0.9993
              Response Ratio = -0.09120 + 2.17009 *A

103)  1,2,3-trichlorobenzene
                0.931 0.971 0.935 0.837 0.907 0.961 0.997 1.043 0.968  0.950    6.11
104)  2-Methylnaphthalene
                                0.320 0.500 0.753 0.892 1.027 0.986  0.746   37.89
            ---- Linear regression ----  Coefficient =  0.9982
              Response Ratio = -0.08792 + 1.01740 *A

105)  1-Methylnaphthalene
                                0.270 0.453 0.639 0.725 0.798 0.758  0.607   33.85
            ---- Linear regression ----  Coefficient =  0.9984
              Response Ratio = -0.04497 + 0.77786 *A

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

           v130801w.m        Fri Aug 02 13:08:31 2013
```

Initial Calibration Verification

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-ICV832
Lab FileID: V21506.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V130802\v21506.D Vial: 5
Acq On : 2 Aug 2013 10:17 am Operator: amym
Sample : icv832-50 Inst : MSV
Misc : MS29563,MSV832,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\v130801w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Aug 02 11:17:48 2013
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	95	0.00	3.52
2		tertiary butyl alcohol	1.229	1.291	-5.0	96	0.00	3.63
3	T	Ethanol	0.092	0.078	15.2	79	-0.01	2.51
4	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	6.58
5	M	dichlorodifluoromethane	0.639	0.738	-15.5	148	0.00	1.49
6	P	chloromethane	0.426	0.534	-25.4#	147	-0.02	1.64
7	c	vinyl chloride	0.512	0.459	10.4	105	0.00	1.74
8	M	bromomethane	0.329	0.379	-15.2	126	0.00	2.03
9	M	chloroethane	0.222	0.246	-10.8	125	0.00	2.12
10	M	ethyl ether	0.308	0.279	9.4	104	0.00	2.61
11	M	acetonitrile	0.522	0.594	-13.8	118	0.00	3.31
12	M	trichlorofluoromethane	0.773	0.855	-10.6	139	0.00	2.35
13	M	freon-113	0.413	0.506	-22.5#	152	0.00	2.92
14	M	acrolein	0.028	0.048	-71.4#	171	0.00	2.77
15	c	1,1-dichloroethene	0.366	0.434	-18.6	133	0.00	2.88
		----------	Amount	Calc.	%Drift	----------		
16	M	acetone	50.000	65.220	-30.4#	133	0.00	2.92
		----------	AvgRF	CCRF	%Dev	----------		
17	M	Methyl Acetate	0.360	0.275	23.6#	79	0.00	3.29
		----------	Amount	Calc.	%Drift	----------		
18	M	methylene chloride	50.000	52.548	-5.1	112	0.00	3.48
		----------	AvgRF	CCRF	%Dev	----------		
19	M	methyl tert butyl ether	1.043	1.064	-2.0	108	0.00	3.85
20	M	acrylonitrile	0.129	0.131	-1.6	103	0.00	3.79
21	M	allyl chloride	0.522	0.594	-13.8	118	0.00	3.31
22	M	trans-1,2-dichloroethene	0.441	0.469	-6.3	118	0.00	3.85
23	M	iodomethane	0.875	0.933	-6.6	117	0.00	3.05
24	M	carbon disulfide	1.191	1.366	-14.7	129	0.00	3.13
		----------	Amount	Calc.	%Drift	----------		
25	M	propionitrile	50.000	46.872	6.3	97	0.00	5.67
		----------	AvgRF	CCRF	%Dev	----------		
26	M	vinyl acetate	1.218	1.125	7.6	95	0.00	4.60
27	M	chloroprene	0.584	0.745	-27.6#	131	0.00	4.64
28	M	di-isopropyl ether	1.184	1.254	-5.9	108	0.00	4.62
29	M	methacrylonitrile	0.220	0.227	-3.2	102	0.00	5.94

Initial Calibration Verification

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-ICV832
Lab FileID: V21506.D

			Amount	Calc.	%Drift			
30	M	2-butanone	50.000	57.074	-14.1	118	0.00	5.56

			AvgRF	CCRF	%Dev			
31	M	Hexane	0.327	0.395	-20.8#	141	0.00	4.27
32	P	1,1-dichloroethane	0.711	0.826	-16.2	126	0.00	4.53
33	M	tert-butyl ethyl ether	1.132	1.243	-9.8	113	0.00	5.30
34	M	isobutyl alcohol	0.244	0.225	7.8	95	0.00	4.60
35	M	2,2-dichloropropane	0.455	0.627	-37.8#	148	0.00	5.57
36	M	cis-1,2-dichloroethene	0.469	0.501	-6.8	113	0.00	5.55
37		ethyl acetate	1.217	1.123	7.7	95	0.00	4.60
38	M	bromochloromethane	0.237	0.274	-15.6	120	0.00	5.97
39	c	chloroform	0.833	0.907	-8.9	121	0.00	6.19
40	S	dibromofluoromethane (s)	0.504	0.479	5.0	92	0.00	6.46
41	M	Tetrahydrofuran	0.083	0.081	2.4	99	0.00	5.98
42	M	1,1,1-trichloroethane	0.664	0.836	-25.9#	134	0.00	6.43
43	I	1,4-difluorobenzene	1.000	1.000	0.0	102	0.00	7.76
44	M	Cyclohexane	0.456	0.510	-11.8	133	0.00	6.54
45	M	carbon tetrachloride	0.440	0.555	-26.1#	140	0.00	6.69
46	M	1,1-dichloropropene	0.430	0.470	-9.3	124	0.00	6.71
47	M	benzene	1.197	1.218	-1.8	114	0.00	7.03
48	M	1,2-dichloroethane	0.509	0.515	-1.2	108	0.00	7.15
49	M	tert-amyl methyl ether	0.681	0.735	-7.9	110	0.00	7.31
50	M	heptane	0.260	0.323	-24.2#	132	0.00	7.58
51	M	trichloroethene	0.374	0.384	-2.7	114	0.00	8.05
52	c	1,2-dichloropropane	0.327	0.344	-5.2	111	0.00	8.40
53	M	dibromomethane	0.203	0.227	-11.8	116	0.00	8.51
54	M	bromodichloromethane	0.442	0.486	-10.0	113	0.00	8.75
55	M	Methylcyclohexane	0.402	0.489	-21.6#	136	0.00	8.35

			Amount	Calc.	%Drift			
56	M	2-chloroethyl vinyl ether	50.000	32.720	34.6#	69	0.00	9.13

			AvgRF	CCRF	%Dev			
57	M	methyl methacrylate	0.156	0.165	-5.8	103	0.00	8.53

			Amount	Calc.	%Drift			
58	M	1,4-dioxane	250.000	227.365	9.1	85	0.00	8.51
59	M	cis-1,3-dichloropropene	50.000	48.212	3.6	107	0.00	9.28

			AvgRF	CCRF	%Dev			
60	S	toluene-d8 (s)	1.155	1.160	-0.4	95	0.00	9.57
61	M	4-methyl-2-pentanone	0.219	0.230	-5.0	100	0.00	9.46
62	c	toluene	0.816	0.866	-6.1	115	0.00	9.64

			Amount	Calc.	%Drift			
63	M	trans-1,3-dichloropropene	50.000	50.673	-1.3	115	0.00	9.93

			AvgRF	CCRF	%Dev			
64	M	1,1,2-trichloroethane	0.258	0.259	-0.4	106	0.00	10.14

			Amount	Calc.	%Drift			
65	M	ethyl methacrylate	50.000	47.932	4.1	103	0.00	10.01

			AvgRF	CCRF	%Dev			
66	I	chlorobenzene-d5	1.000	1.000	0.0	104	0.00	11.09
67	M	tetrachloroethene	0.793	0.906	-14.2	131	0.00	10.19

Initial Calibration Verification

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-ICV832
Lab FileID: V21506.D

68	M	1,3-dichloropropane	0.970	0.947	2.4	106	0.00	10.30
		----------	Amount	Calc.	%Drift	----------		
69	M	dibromochloromethane	50.000	48.397	3.2	110	0.00	10.52
		----------	AvgRF	CCRF	%Dev	----------		
70	M	1,2-dibromoethane	0.637	0.651	-2.2	106	0.00	10.63
71	M	2-hexanone	0.342	0.406	-18.7	119	0.00	10.37
72	P	chlorobenzene	2.234	2.106	5.7	109	0.00	11.12
73	M	1,1,1,2-tetrachloroethane	0.733	0.787	-7.4	112	0.00	11.22
74	c	ethylbenzene	3.340	3.446	-3.2	114	0.00	11.22
75	M	m,p-xylene	1.320	1.314	0.5	111	0.00	11.36
76	M	o-xylene	1.256	1.299	-3.4	110	0.00	11.72
77	M	styrene	1.941	2.158	-11.2	110	0.00	11.74
		----------	Amount	Calc.	%Drift	----------		
78	P	bromoform	50.000	49.716	0.6	121	0.00	11.92
79	M	trans-1,4-dichloro-2-bute	50.000	51.100	-2.2	116	0.00	12.13
		----------	AvgRF	CCRF	%Dev	----------		
80	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	105	0.00	13.30
81	M	isopropylbenzene	2.910	3.149	-8.2	113	0.00	12.07
82	S	bromofluorobenzene (s)	0.919	0.889	3.3	96	0.00	12.24
83	M	bromobenzene	0.891	0.929	-4.3	112	0.00	12.36
84	P	1,1,2,2-tetrachloroethane	0.680	0.653	4.0	102	0.00	12.37
85	M	1,2,3-trichloropropane	0.737	0.785	-6.5	107	0.00	12.41
86	M	n-propylbenzene	3.349	3.569	-6.6	111	0.00	12.46
87	M	2-chlorotoluene	2.251	2.236	0.7	108	0.00	12.54
88	M	4-chlorotoluene	2.576	2.654	-3.0	111	0.00	12.65
89	M	1,3,5-trimethylbenzene	2.517	2.717	-7.9	111	0.00	12.63
90	M	tert-butylbenzene	1.417	1.528	-7.8	111	0.00	12.92
91	M	1,2,4-trimethylbenzene	2.672	2.764	-3.4	110	0.00	12.97
92	M	sec-butylbenzene	2.940	3.176	-8.0	113	0.00	13.12
93	M	1,3-dichlorobenzene	1.707	1.648	3.5	107	0.00	13.23
94	M	p-isopropyltoluene	2.305	2.748	-19.2	119	0.00	13.26
95	M	1,4-dichlorobenzene	1.761	1.693	3.9	112	0.00	13.32
96	M	1,2-dichlorobenzene	1.650	1.553	5.9	104	0.00	13.64
97	M	n-butylbenzene	2.139	2.413	-12.8	114	0.00	13.62
		----------	Amount	Calc.	%Drift	----------		
98	M	1,2-dibromo-3-chloropropa	50.000	44.206	11.6	95	0.00	14.34
		----------	AvgRF	CCRF	%Dev	----------		
99	M	1,3,5-trichlorobenzene	1.098	1.220	-11.1	120	0.00	14.50
100	M	1,2,4-trichlorobenzene	1.071	1.105	-3.2	106	0.00	15.06
101	M	hexachlorobutadiene	0.480	0.512	-6.7	117	0.00	15.18
		----------	Amount	Calc.	%Drift	----------		
102	M	naphthalene	50.000	42.309	15.4	91	0.00	15.29
		----------	AvgRF	CCRF	%Dev	----------		
103	M	1,2,3-trichlorobenzene	0.950	0.889	6.4	97	0.00	15.48
		----------	Amount	Calc.	%Drift	----------		
104		2-Methylnaphthalene	25.000	17.139	31.4#	73	0.00	16.29
105		1-Methylnaphthalene	25.000	5.894	76.4#	15	0.00	16.46

Initial Calibration Verification

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV832-ICV832
Lab FileID: V21506.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 v21492.D   v130801w.m       Fri Aug 02 13:02:22 2013
```

Continuing Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV845-CC832
Lab FileID: V21867.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V130813\v21867.D Vial: 1
Acq On : 13 Aug 2013 10:16 am Operator: amym
Sample : cc832-50 Inst : MSV
Misc : MS29644,MSV845,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\v130801w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Aug 02 11:17:48 2013
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	108	0.00	3.52
2		tertiary butyl alcohol	1.229	1.204	2.0	102	0.00	3.63
3	T	Ethanol	0.092	0.112	-21.7#	130	0.00	2.51
4	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	6.58
5	M	dichlorodifluoromethane	0.639	0.649	-1.6	137	0.00	1.50
6	P	chloromethane	0.426	0.418	1.9	121	-0.01	1.64
7	c	vinyl chloride	0.512	0.549	-7.2	132	0.00	1.74
8	M	bromomethane	0.329	0.384	-16.7	134	0.00	2.04
9	M	chloroethane	0.222	0.263	-18.5	141	0.00	2.13
10	M	ethyl ether	0.308	0.318	-3.2	124	0.00	2.62
11	M	acetonitrile	0.522	0.578	-10.7	120	0.00	3.31
12	M	trichlorofluoromethane	0.773	0.866	-12.0	148	0.00	2.36
13	M	freon-113	0.413	0.459	-11.1	145	0.00	2.94
14	M	acrolein	0.028	0.030	-7.1	113	0.00	2.77
15	c	1,1-dichloroethene	0.366	0.397	-8.5	128	0.00	2.89
			Amount	Calc.	%Drift			
16	M	acetone	50.000	73.353	-46.7#	155	0.00	2.92
			AvgRF	CCRF	%Dev			
17	M	Methyl Acetate	0.360	0.373	-3.6	113	0.00	3.30
			Amount	Calc.	%Drift			
18	M	methylene chloride	50.000	53.132	-6.3	119	0.00	3.49
			AvgRF	CCRF	%Dev			
19	M	methyl tert butyl ether	1.043	1.086	-4.1	116	0.00	3.86
20	M	acrylonitrile	0.129	0.137	-6.2	114	0.00	3.80
21	M	allyl chloride	0.522	0.578	-10.7	120	0.00	3.31
22	M	trans-1,2-dichloroethene	0.441	0.457	-3.6	121	0.00	3.86
23	M	iodomethane	0.875	0.890	-1.7	118	0.00	3.06
24	M	carbon disulfide	1.191	1.297	-8.9	129	0.00	3.14
			Amount	Calc.	%Drift			
25	M	propionitrile	50.000	51.599	-3.2	113	0.00	5.67
			AvgRF	CCRF	%Dev			
26	M	vinyl acetate	1.218	1.309	-7.5	116	0.00	4.60
27	M	chloroprene	0.584	0.645	-10.4	119	0.00	4.65
28	M	di-isopropyl ether	1.184	1.293	-9.2	117	0.00	4.63
29	M	methacrylonitrile	0.220	0.232	-5.5	110	0.00	5.95

Continuing Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV845-CC832
Lab FileID: V21867.D

			Amount	Calc.	%Drift			
30	M	2-butanone	50.000	61.817	-23.6#	133	0.00	5.56

			AvgRF	CCRF	%Dev			
31	M	Hexane	0.327	0.358	-9.5	135	0.00	4.28
32	P	1,1-dichloroethane	0.711	0.735	-3.4	117	0.00	4.54
33	M	tert-butyl ethyl ether	1.132	1.222	-8.0	117	0.00	5.30
34	M	isobutyl alcohol	0.244	0.262	-7.4	116	0.00	4.60
35	M	2,2-dichloropropane	0.455	0.561	-23.3#	139	0.00	5.57
36	M	cis-1,2-dichloroethene	0.469	0.504	-7.5	120	0.00	5.56
37		ethyl acetate	1.217	1.308	-7.5	116	0.00	4.60
38	M	bromochloromethane	0.237	0.254	-7.2	117	0.00	5.98
39	c	chloroform	0.833	0.826	0.8	116	0.00	6.19
40	S	dibromofluoromethane (s)	0.504	0.475	5.8	96	0.00	6.46
41	M	Tetrahydrofuran	0.083	0.087	-4.8	112	0.00	5.98
42	M	1,1,1-trichloroethane	0.664	0.721	-8.6	121	0.00	6.44
43	I	1,4-difluorobenzene	1.000	1.000	0.0	135	0.00	7.76
44	M	Cyclohexane	0.456	0.403	11.6	139	0.00	6.54
45	M	carbon tetrachloride	0.440	0.381	13.4	127	0.00	6.69
46	M	1,1-dichloropropene	0.430	0.357	17.0	125	0.00	6.71
47	M	benzene	1.197	0.980	18.1	121	0.00	7.03
48	M	1,2-dichloroethane	0.509	0.393	22.8#	109	0.00	7.15
49	M	tert-amyl methyl ether	0.681	0.592	13.1	117	0.00	7.31
50	M	heptane	0.260	0.283	-8.8	153	0.00	7.58
51	M	trichloroethene	0.374	0.370	1.1	145	0.00	8.05
52	c	1,2-dichloropropane	0.327	0.356	-8.9	152	0.00	8.40
53	M	dibromomethane	0.203	0.203	0.0	137	0.00	8.51
54	M	bromodichloromethane	0.442	0.447	-1.1	137	0.00	8.75
55	M	Methylcyclohexane	0.402	0.474	-17.9	174	0.00	8.35

			Amount	Calc.	%Drift			
56	M	2-chloroethyl vinyl ether	50.000	55.421	-10.8	165	0.00	9.13

			AvgRF	CCRF	%Dev			
57	M	methyl methacrylate	0.156	0.173	-10.9	142	0.00	8.53

			Amount	Calc.	%Drift			
58	M	1,4-dioxane	250.000	252.847	-1.1	128	0.00	8.51
59	M	cis-1,3-dichloropropene	50.000	49.316	1.4	145	0.00	9.28

			AvgRF	CCRF	%Dev			
60	S	toluene-d8 (s)	1.155	1.056	8.6	114	0.00	9.57
61	M	4-methyl-2-pentanone	0.219	0.218	0.5	126	0.00	9.46
62	c	toluene	0.816	0.759	7.0	133	0.00	9.64

			Amount	Calc.	%Drift			
63	M	trans-1,3-dichloropropene	50.000	43.445	13.1	129	0.00	9.93

			AvgRF	CCRF	%Dev			
64	M	1,1,2-trichloroethane	0.258	0.239	7.4	129	0.00	10.13

			Amount	Calc.	%Drift			
65	M	ethyl methacrylate	50.000	51.194	-2.4	146	0.00	10.01

			AvgRF	CCRF	%Dev			
66	I	chlorobenzene-d5	1.000	1.000	0.0	113	0.00	11.09
67	M	tetrachloroethene	0.793	0.853	-7.6	135	0.00	10.19

Continuing Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV845-CC832
Lab FileID: V21867.D

68	M	1,3-dichloropropane	0.970	1.027	-5.9	126	0.00	10.30
			Amount	Calc.	%Drift			
69	M	dibromochloromethane	50.000	48.869	2.3	122	0.00	10.52
			AvgRF	CCRF	%Dev			
70	M	1,2-dibromoethane	0.637	0.674	-5.8	120	0.00	10.62
71	M	2-hexanone	0.342	0.438	-28.1#	140	0.00	10.37
72	P	chlorobenzene	2.234	2.148	3.8	121	0.00	11.12
73	M	1,1,1,2-tetrachloroethane	0.733	0.765	-4.4	119	0.00	11.22
74	c	ethylbenzene	3.340	3.316	0.7	120	0.00	11.22
75	M	m,p-xylene	1.320	1.316	0.3	122	0.00	11.36
76	M	o-xylene	1.256	1.333	-6.1	123	0.00	11.72
77	M	styrene	1.941	2.206	-13.7	123	0.00	11.74
			Amount	Calc.	%Drift			
78	P	bromoform	50.000	46.109	7.8	121	0.00	11.92
79	M	trans-1,4-dichloro-2-bute	50.000	37.740	24.5#	90	0.00	12.13
			AvgRF	CCRF	%Dev			
80	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	128	0.00	13.30
81	M	isopropylbenzene	2.910	2.817	3.2	124	0.00	12.07
82	S	bromofluorobenzene (s)	0.919	0.806	12.3	106	0.00	12.24
83	M	bromobenzene	0.891	0.816	8.4	120	0.00	12.36
84	P	1,1,2,2-tetrachloroethane	0.680	0.615	9.6	117	0.00	12.37
85	M	1,2,3-trichloropropane	0.737	0.674	8.5	112	0.00	12.41
86	M	n-propylbenzene	3.349	3.299	1.5	125	0.00	12.46
87	M	2-chlorotoluene	2.251	2.089	7.2	123	0.00	12.54
88	M	4-chlorotoluene	2.576	2.463	4.4	125	0.00	12.65
89	M	1,3,5-trimethylbenzene	2.517	2.505	0.5	125	0.00	12.63
90	M	tert-butylbenzene	1.417	1.615	-14.0	143	0.00	12.92
91	M	1,2,4-trimethylbenzene	2.672	2.980	-11.5	144	0.00	12.97
92	M	sec-butylbenzene	2.940	3.437	-16.9	148	0.00	13.12
93	M	1,3-dichlorobenzene	1.707	1.708	-0.1	136	0.00	13.23
94	M	p-isopropyltoluene	2.305	2.598	-12.7	137	0.00	13.26
95	M	1,4-dichlorobenzene	1.761	1.635	7.2	132	0.00	13.32
96	M	1,2-dichlorobenzene	1.650	1.591	3.6	129	0.00	13.64
97	M	n-butylbenzene	2.139	2.351	-9.9	135	0.00	13.62
			Amount	Calc.	%Drift			
98	M	1,2-dibromo-3-chloropropa	50.000	44.095	11.8	115	0.00	14.34
			AvgRF	CCRF	%Dev			
99	M	1,3,5-trichlorobenzene	1.098	1.100	-0.2	132	0.00	14.50
100	M	1,2,4-trichlorobenzene	1.071	1.249	-16.6	146	0.00	15.06
101	M	hexachlorobutadiene	0.480	0.475	1.0	132	0.00	15.18
			Amount	Calc.	%Drift			
102	M	naphthalene	50.000	48.512	3.0	128	0.00	15.29
			AvgRF	CCRF	%Dev			
103	M	1,2,3-trichlorobenzene	0.950	0.960	-1.1	128	0.00	15.48
			Amount	Calc.	%Drift			
104		2-Methylnaphthalene	25.000	24.809	0.8	142	0.00	16.29
105		1-Methylnaphthalene	25.000	18.020	27.9#	94	0.00	16.46

6.8.3

Continuing Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV845-CC832
Lab FileID: V21867.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 v21492.D   v130801w.m       Tue Aug 13 15:32:12 2013
```

Continuing Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV846-CC832
Lab FileID: V21888.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V130814\v21888.D Vial: 2
Acq On : 14 Aug 2013 8:24 am Operator: amym
Sample : cc832-50 Inst : MSV
Misc : MS29650,MSV846,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\v130801w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Aug 02 11:17:48 2013
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	91	0.00	3.53
2		tertiary butyl alcohol	1.229	1.240	-0.9	88	0.00	3.64
3	T	Ethanol	0.092	0.127	-38.0#	124	0.00	2.52
4	I	pentafluorobenzene	1.000	1.000	0.0	96	0.01	6.59
5	M	dichlorodifluoromethane	0.639	0.699	-9.4	133	0.00	1.50
6	P	chloromethane	0.426	0.492	-15.5	128	0.00	1.65
7	c	vinyl chloride	0.512	0.594	-16.0	129	0.00	1.75
8	M	bromomethane	0.329	0.389	-18.2	123	0.00	2.04
9	M	chloroethane	0.222	0.268	-20.7#	129	0.01	2.14
10	M	ethyl ether	0.308	0.350	-13.6	123	0.00	2.63
11	M	acetonitrile	0.522	0.555	-6.3	104	0.01	3.32
12	M	trichlorofluoromethane	0.773	1.031	-33.4#	159	0.01	2.37
13	M	freon-113	0.413	0.464	-12.3	133	0.00	2.94
14	M	acrolein	0.028	0.036	-28.6#	120	0.01	2.78
15	c	1,1-dichloroethene	0.366	0.406	-10.9	118	0.01	2.90
		----------	Amount	Calc.	%Drift	----------		
16	M	acetone	50.000	43.000	14.0	87	0.00	2.93
		----------	AvgRF	CCRF	%Dev	----------		
17	M	Methyl Acetate	0.360	0.362	-0.6	99	0.01	3.31
		----------	Amount	Calc.	%Drift	----------		
18	M	methylene chloride	50.000	50.439	-0.9	102	0.01	3.50
		----------	AvgRF	CCRF	%Dev	----------		
19	M	methyl tert butyl ether	1.043	1.065	-2.1	102	0.00	3.87
20	M	acrylonitrile	0.129	0.134	-3.9	100	0.01	3.81
21	M	allyl chloride	0.522	0.555	-6.3	104	0.01	3.32
22	M	trans-1,2-dichloroethene	0.441	0.442	-0.2	106	0.01	3.87
23	M	iodomethane	0.875	0.856	2.2	102	0.01	3.07
24	M	carbon disulfide	1.191	1.243	-4.4	111	0.02	3.15
		----------	Amount	Calc.	%Drift	----------		
25	M	propionitrile	50.000	48.458	3.1	95	0.02	5.68
		----------	AvgRF	CCRF	%Dev	----------		
26	M	vinyl acetate	1.218	1.290	-5.9	103	0.02	4.61
27	M	chloroprene	0.584	0.686	-17.5	114	0.01	4.66
28	M	di-isopropyl ether	1.184	1.358	-14.7	111	0.00	4.64
29	M	methacrylonitrile	0.220	0.262	-19.1	112	0.02	5.96

Continuing Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV846-CC832
Lab FileID: V21888.D

			Amount	Calc.	%Drift			
30	M	2-butanone	50.000	44.148	11.7	89	0.02	5.57

			AvgRF	CCRF	%Dev			
31	M	Hexane	0.327	0.335	-2.4	113	0.02	4.29
32	P	1,1-dichloroethane	0.711	0.741	-4.2	107	0.01	4.55
33	M	tert-butyl ethyl ether	1.132	1.212	-7.1	104	0.00	5.31
34	M	isobutyl alcohol	0.244	0.258	-5.7	103	0.02	4.61
35	M	2,2-dichloropropane	0.455	0.409	10.1	92	0.01	5.58
36	M	cis-1,2-dichloroethene	0.469	0.483	-3.0	104	0.01	5.57
37		ethyl acetate	1.217	1.290	-6.0	103	0.02	4.61
38	M	bromochloromethane	0.237	0.280	-18.1	116	0.01	5.99
39	c	chloroform	0.833	0.858	-3.0	108	0.01	6.20
40	S	dibromofluoromethane (s)	0.504	0.494	2.0	90	0.01	6.47
41	M	Tetrahydrofuran	0.083	0.097	-16.9	112	0.02	5.99
42	M	1,1,1-trichloroethane	0.664	0.769	-15.8	117	0.01	6.45
43	I	1,4-difluorobenzene	1.000	1.000	0.0	109	0.01	7.77
44	M	Cyclohexane	0.456	0.446	2.2	125	0.01	6.55
45	M	carbon tetrachloride	0.440	0.474	-7.7	128	0.01	6.70
46	M	1,1-dichloropropene	0.430	0.401	6.7	113	0.01	6.72
47	M	benzene	1.197	1.288	-7.6	129	0.01	7.04
48	M	1,2-dichloroethane	0.509	0.515	-1.2	116	0.01	7.16
49	M	tert-amyl methyl ether	0.681	0.834	-22.5#	134	0.00	7.32
50	M	heptane	0.260	0.272	-4.6	119	0.01	7.59
51	M	trichloroethene	0.374	0.336	10.2	107	0.01	8.06
52	c	1,2-dichloropropane	0.327	0.309	5.5	107	0.00	8.41
53	M	dibromomethane	0.203	0.190	6.4	104	0.00	8.51
54	M	bromodichloromethane	0.442	0.450	-1.8	112	0.00	8.76
55	M	Methylcyclohexane	0.402	0.400	0.5	119	0.00	8.36

			Amount	Calc.	%Drift			
56	M	2-chloroethyl vinyl ether	50.000	55.216	-10.4	133	0.00	9.13

			AvgRF	CCRF	%Dev			
57	M	methyl methacrylate	0.156	0.146	6.4	97	0.00	8.54

			Amount	Calc.	%Drift			
58	M	1,4-dioxane	250.000	212.867	14.9	84	0.00	8.52
59	M	cis-1,3-dichloropropene	50.000	47.678	4.6	114	0.00	9.29

			AvgRF	CCRF	%Dev			
60	S	toluene-d8 (s)	1.155	1.145	0.9	101	0.00	9.57
61	M	4-methyl-2-pentanone	0.219	0.227	-3.7	106	0.00	9.47
62	c	toluene	0.816	0.868	-6.4	123	0.00	9.65

			Amount	Calc.	%Drift			
63	M	trans-1,3-dichloropropene	50.000	48.036	3.9	116	0.00	9.93

			AvgRF	CCRF	%Dev			
64	M	1,1,2-trichloroethane	0.258	0.331	-28.3#	144	0.00	10.14

			Amount	Calc.	%Drift			
65	M	ethyl methacrylate	50.000	47.606	4.8	109	0.00	10.01

			AvgRF	CCRF	%Dev			
66	I	chlorobenzene-d5	1.000	1.000	0.0	135	0.00	11.10
67	M	tetrachloroethene	0.793	0.780	1.6	148	0.00	10.20

Continuing Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV846-CC832
Lab FileID: V21888.D

68	M	1,3-dichloropropane	0.970	0.964	0.6	141	0.00	10.30
			Amount	Calc.	%Drift			
69	M	dibromochloromethane	50.000	47.889	4.2	143	0.00	10.52
			AvgRF	CCRF	%Dev			
70	M	1,2-dibromoethane	0.637	0.641	-0.6	136	0.00	10.63
71	M	2-hexanone	0.342	0.325	5.0	125	0.00	10.37
72	P	chlorobenzene	2.234	2.131	4.6	144	0.00	11.12
73	M	1,1,1,2-tetrachloroethane	0.733	0.755	-3.0	141	0.00	11.22
74	c	ethylbenzene	3.340	3.290	1.5	143	0.00	11.23
75	M	m,p-xylene	1.320	1.312	0.6	145	0.00	11.36
76	M	o-xylene	1.256	1.306	-4.0	144	0.00	11.73
77	M	styrene	1.941	2.177	-12.2	145	0.00	11.75
			Amount	Calc.	%Drift			
78	P	bromoform	50.000	45.845	8.3	144	0.00	11.92
79	M	trans-1,4-dichloro-2-bute	50.000	42.941	14.1	124	0.00	12.14
			AvgRF	CCRF	%Dev			
80	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	145	0.00	13.30
81	M	isopropylbenzene	2.910	2.913	-0.1	144	0.00	12.08
82	S	bromofluorobenzene (s)	0.919	0.868	5.5	129	0.00	12.24
83	M	bromobenzene	0.891	0.841	5.6	140	0.00	12.37
84	P	1,1,2,2-tetrachloroethane	0.680	0.645	5.1	138	0.00	12.37
85	M	1,2,3-trichloropropane	0.737	0.721	2.2	135	0.00	12.41
86	M	n-propylbenzene	3.349	3.431	-2.4	147	0.00	12.47
87	M	2-chlorotoluene	2.251	2.125	5.6	142	0.00	12.54
88	M	4-chlorotoluene	2.576	2.454	4.7	141	0.00	12.66
89	M	1,3,5-trimethylbenzene	2.517	2.494	0.9	140	0.00	12.63
90	M	tert-butylbenzene	1.417	1.390	1.9	139	0.00	12.92
91	M	1,2,4-trimethylbenzene	2.672	2.566	4.0	140	0.00	12.97
92	M	sec-butylbenzene	2.940	3.025	-2.9	148	0.00	13.12
93	M	1,3-dichlorobenzene	1.707	1.573	7.9	141	0.00	13.23
94	M	p-isopropyltoluene	2.305	2.352	-2.0	140	0.00	13.26
95	M	1,4-dichlorobenzene	1.761	1.555	11.7	142	0.00	13.33
96	M	1,2-dichlorobenzene	1.650	1.523	7.7	140	0.00	13.64
97	M	n-butylbenzene	2.139	2.170	-1.4	141	0.00	13.63
			Amount	Calc.	%Drift			
98	M	1,2-dibromo-3-chloropropa	50.000	41.051	17.9	119	0.00	14.34
			AvgRF	CCRF	%Dev			
99	M	1,3,5-trichlorobenzene	1.098	0.979	10.8	133	0.00	14.51
100	M	1,2,4-trichlorobenzene	1.071	0.972	9.2	128	0.00	15.06
101	M	hexachlorobutadiene	0.480	0.406	15.4	127	0.00	15.19
			Amount	Calc.	%Drift			
102	M	naphthalene	50.000	40.904	18.2	121	0.00	15.30
			AvgRF	CCRF	%Dev			
103	M	1,2,3-trichlorobenzene	0.950	0.810	14.7	122	0.00	15.49
			Amount	Calc.	%Drift			
104		2-Methylnaphthalene	25.000	15.098	39.6#	84	0.00	16.30
105		1-Methylnaphthalene	25.000	14.723	41.1#	83	0.00	16.47

Continuing Calibration Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample: MSV846-CC832
Lab FileID: V21888.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 v21492.D   v130801w.m       Wed Aug 14 15:49:52 2013
```

New England ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21904.D
Acq On : 14 Aug 2013 3:27 pm
Operator : amym
Sample : mc23378-1
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 14 16:05:35 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

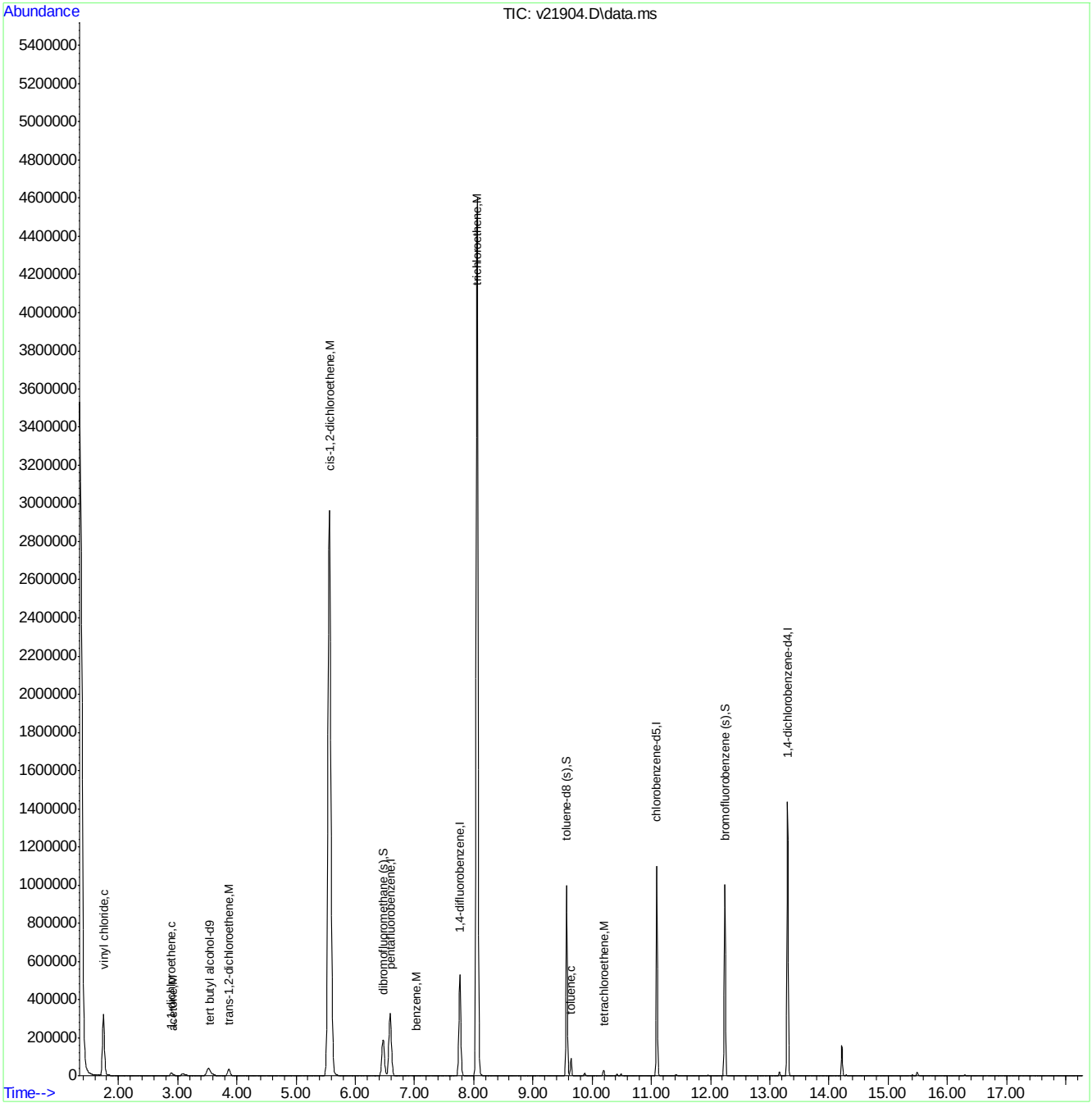
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.537	65	96115	500.00	ug/L	# 0.02
4) pentafluorobenzene	6.591	168	375086	50.00	ug/L	0.01
43) 1,4-difluorobenzene	7.767	114	548600	50.00	ug/L	0.00
66) chlorobenzene-d5	11.093	82	294254	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.303	152	330647	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.472	113	189140	49.99	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.98%			
60) toluene-d8 (s)	9.570	98	643017	50.75	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.50%			
82) bromofluorobenzene (s)	12.241	95	278929	45.91	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 91.82%			
Target Compounds						Qvalue
7) vinyl chloride	1.748	62	468818	122.11	ug/L	98
15) 1,1-dichloroethene	2.892	96	7352	2.68	ug/L	90
16) acetone	2.928	58	2793	4.54	ug/L #	57
22) trans-1,2-dichloroethene	3.864	96	23387	7.07	ug/L	95
36) cis-1,2-dichloroethene	5.565	96	2410669	684.67	ug/L	96
47) benzene	7.034	78	4110	0.31	ug/L	91
51) trichloroethene	8.058	95	1874615	456.38	ug/L	99
62) toluene	9.645	92	38051	4.25	ug/L	100
67) tetrachloroethene	10.196	166	5820	1.25	ug/L	99

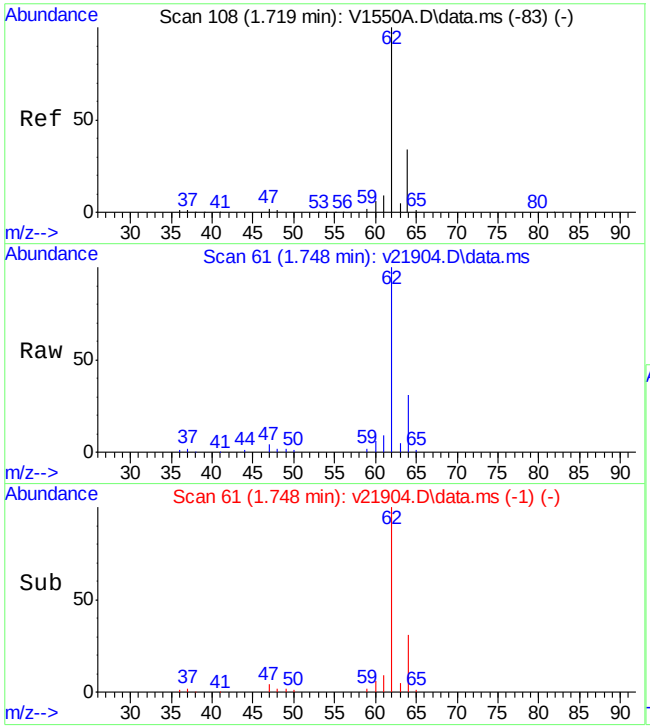
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21904.D
Acq On : 14 Aug 2013 3:27 pm
Operator : amym
Sample : mc23378-1
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 14 16:05:35 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

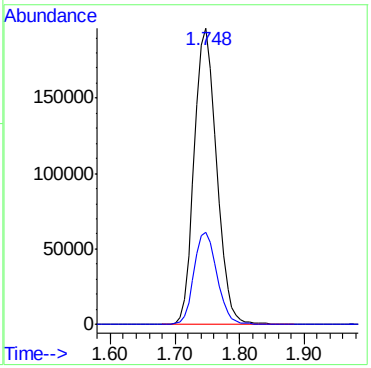


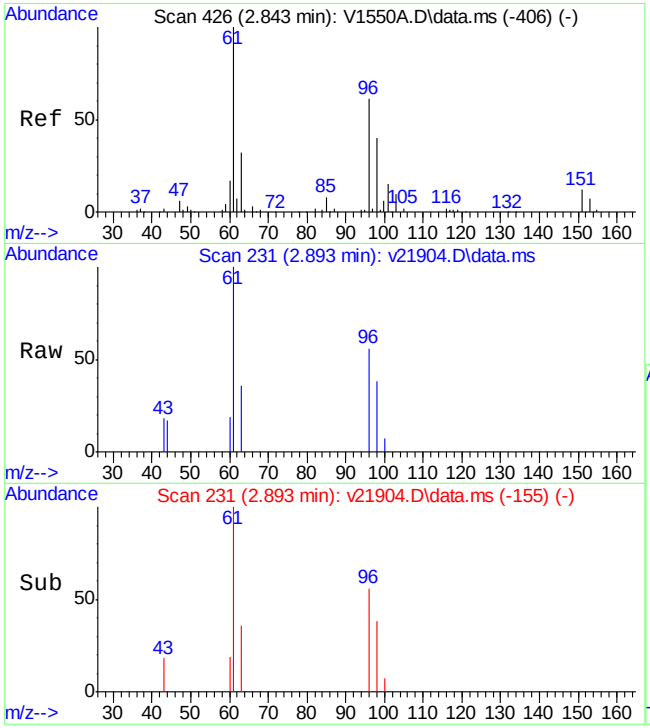


#7
vinyl chloride
Concen: 122.11 ug/L
RT: 1.748 min Scan# 61
Delta R.T. 0.006 min
Lab File: v21904.D
Acq: 14 Aug 2013 3:27 pm

Tgt Ion: 62 Resp: 468818

Ion	Ratio	Lower	Upper
62	100		
64	31.2	2.2	62.2

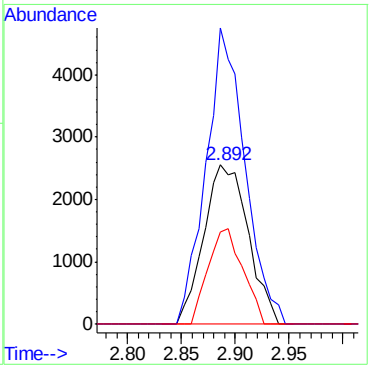


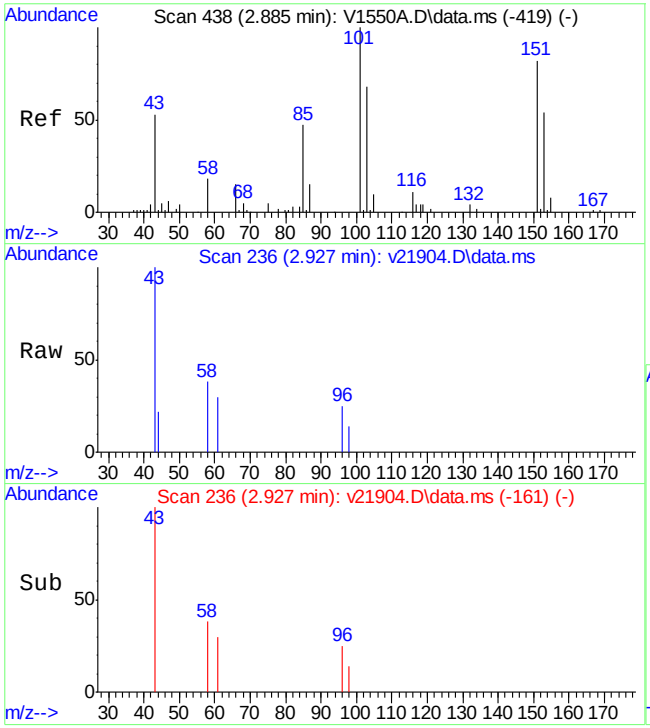


#15
1,1-dichloroethene
Concen: 2.68 ug/L
RT: 2.892 min Scan# 231
Delta R.T. 0.010 min
Lab File: v21904.D
Acq: 14 Aug 2013 3:27 pm

Tgt Ion: 96 Resp: 7352

Ion	Ratio	Lower	Upper
96	100		
61	177.7	136.6	196.6
63	64.3	23.9	83.9

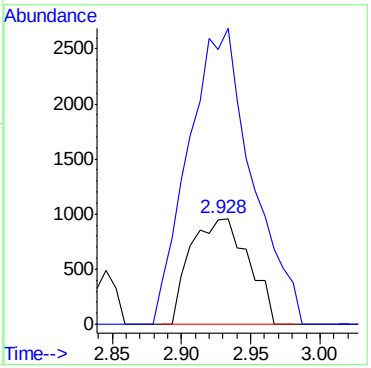


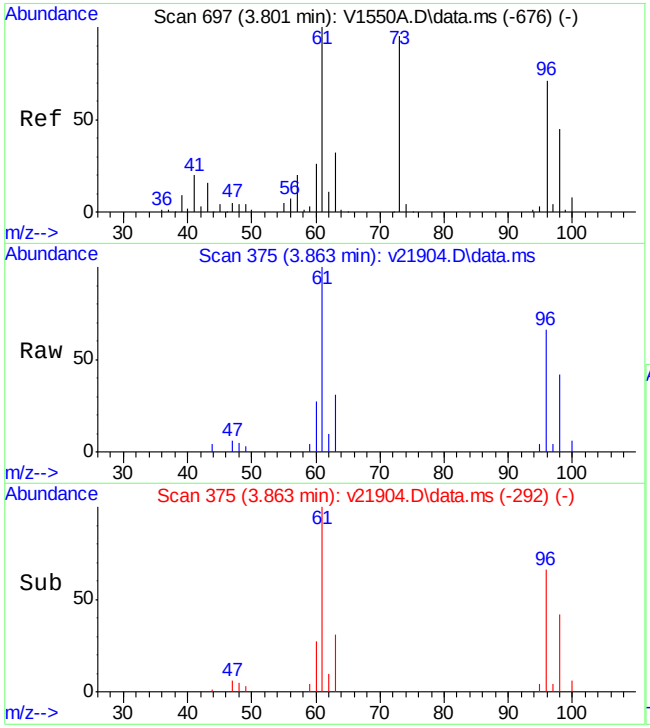


#16
acetone
Concen: 4.54 ug/L
RT: 2.928 min Scan# 236
Delta R.T. 0.007 min
Lab File: v21904.D
Acq: 14 Aug 2013 3:27 pm

Tgt Ion: 58 Resp: 2793

Ion	Ratio	Lower	Upper
58	100		
43	224.4	280.0	340.0#

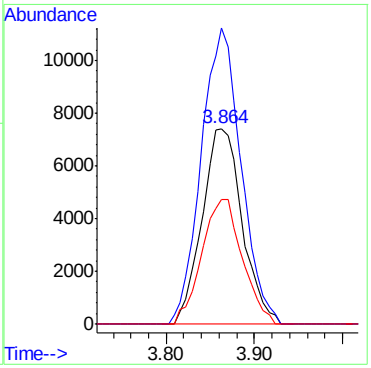


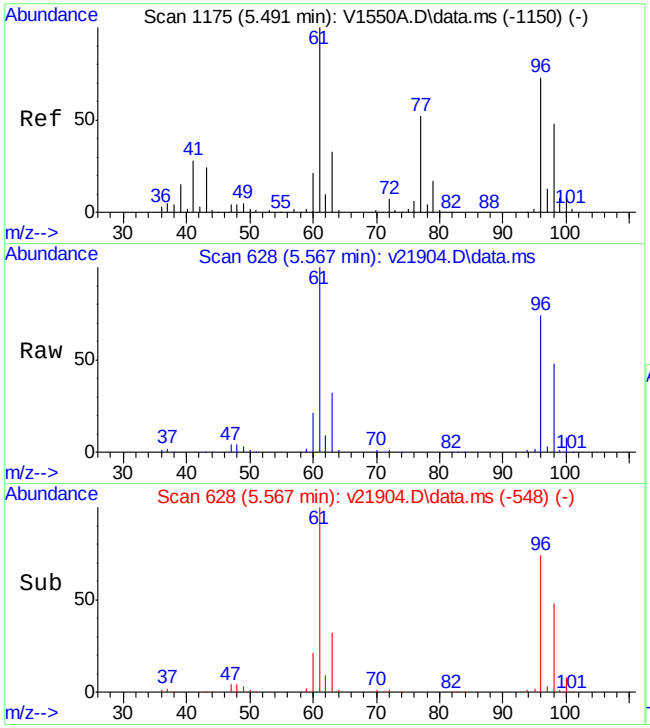


#22
trans-1,2-dichloroethene
Concen: 7.07 ug/L
RT: 3.864 min Scan# 375
Delta R.T. 0.008 min
Lab File: v21904.D
Acq: 14 Aug 2013 3:27 pm

Tgt Ion: 96 Resp: 23387

Ion	Ratio	Lower	Upper
96	100		
61	151.3	113.0	173.0
98	63.7	33.1	93.1

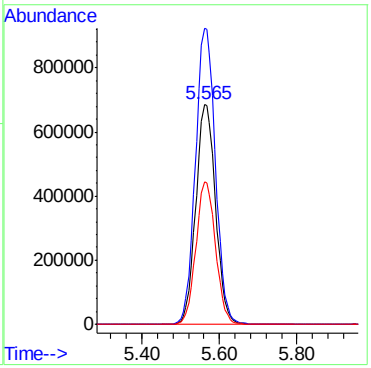


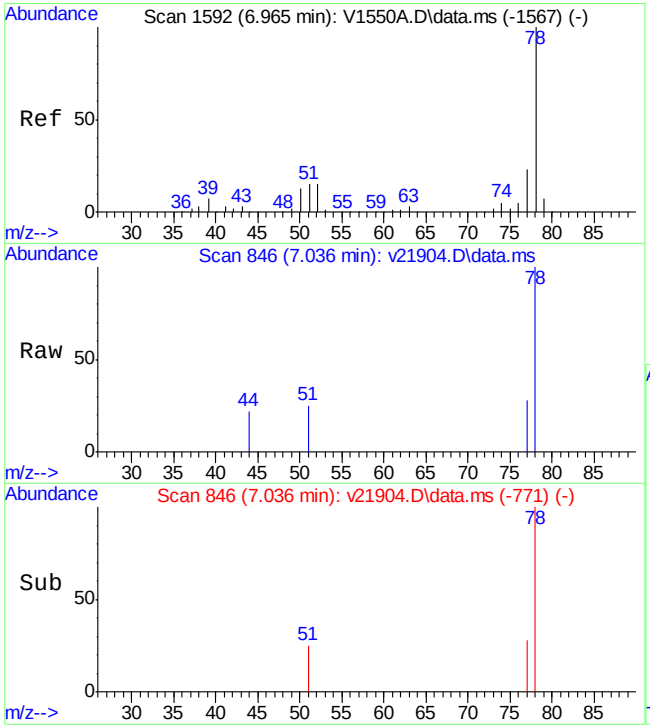


#36
cis-1,2-dichloroethene
Concen: 684.67 ug/L
RT: 5.565 min Scan# 628
Delta R.T. 0.010 min
Lab File: v21904.D
Acq: 14 Aug 2013 3:27 pm

Tgt Ion: 96 Resp: 2410669

Ion	Ratio	Lower	Upper
96	100		
61	134.9	112.2	172.2
98	64.4	33.6	93.6

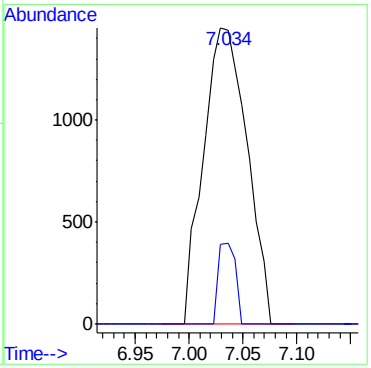


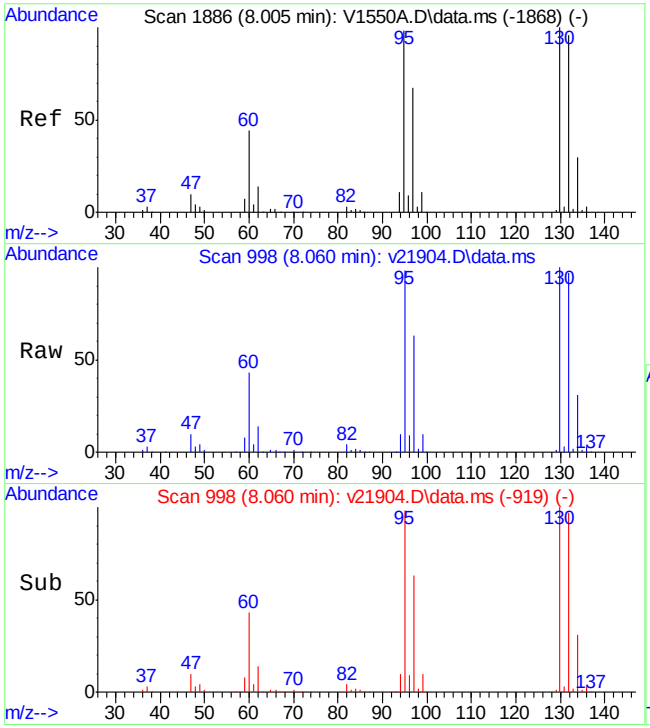


#47
benzene
Concen: 0.31 ug/L
RT: 7.034 min Scan# 846
Delta R.T. 0.011 min
Lab File: v21904.D
Acq: 14 Aug 2013 3:27 pm

Tgt Ion: 78 Resp: 4110

Ion	Ratio	Lower	Upper
78	100		
77	27.6	0.0	53.1

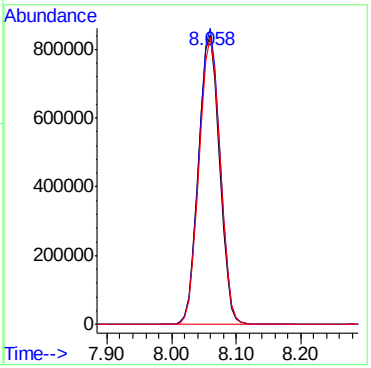


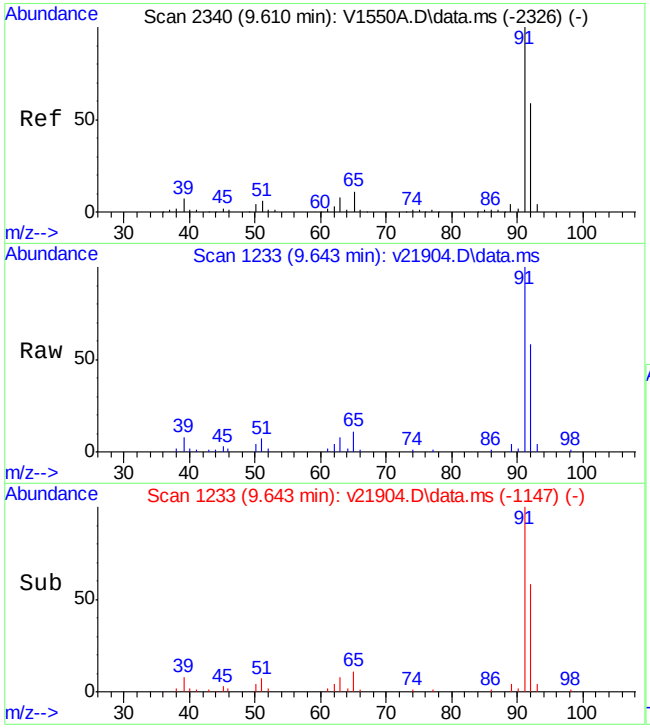


#51
trichloroethene
Concen: 456.38 ug/L
RT: 8.058 min Scan# 998
Delta R.T. 0.008 min
Lab File: v21904.D
Acq: 14 Aug 2013 3:27 pm

Tgt Ion: 95 Resp: 1874615

Ion	Ratio	Lower	Upper
95	100		
130	102.2	74.4	134.4
132	99.0	69.6	129.6

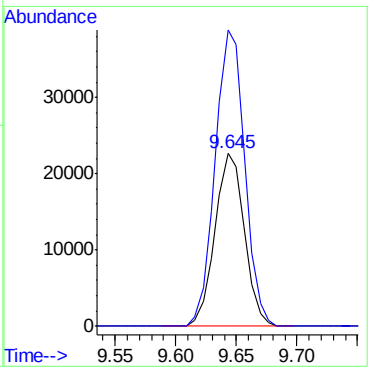


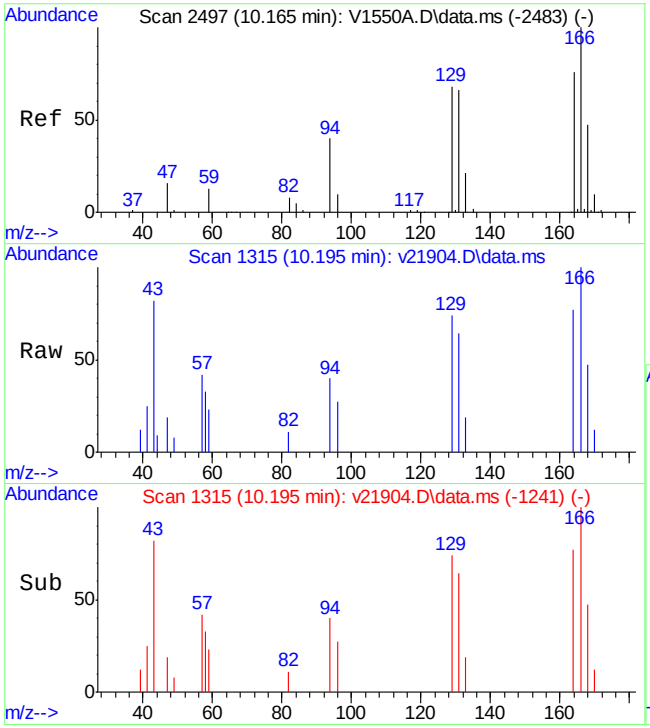


#62
toluene
Concen: 4.25 ug/L
RT: 9.645 min Scan# 1233
Delta R.T. 0.002 min
Lab File: v21904.D
Acq: 14 Aug 2013 3:27 pm

Tgt Ion: 92 Resp: 38051

Ion	Ratio	Lower	Upper
92	100		
91	171.4	141.2	201.2

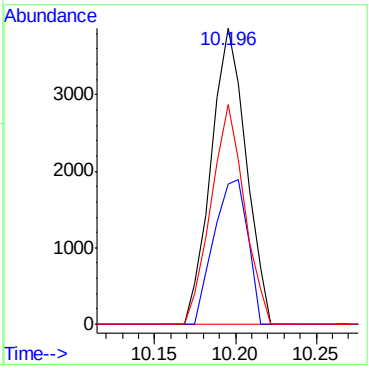




#67
tetrachloroethene
Concen: 1.25 ug/L
RT: 10.196 min Scan# 1315
Delta R.T. 0.001 min
Lab File: v21904.D
Acq: 14 Aug 2013 3:27 pm

Tgt Ion:166 Resp: 5820

Ion	Ratio	Lower	Upper
166	100		
168	47.4	17.6	77.6
129	74.4	42.6	102.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21910.D
Acq On : 14 Aug 2013 6:06 pm
Operator : amym
Sample : mc23378-1
Misc : MS29650,MSV846,,,,5,10
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 15 08:40:45 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

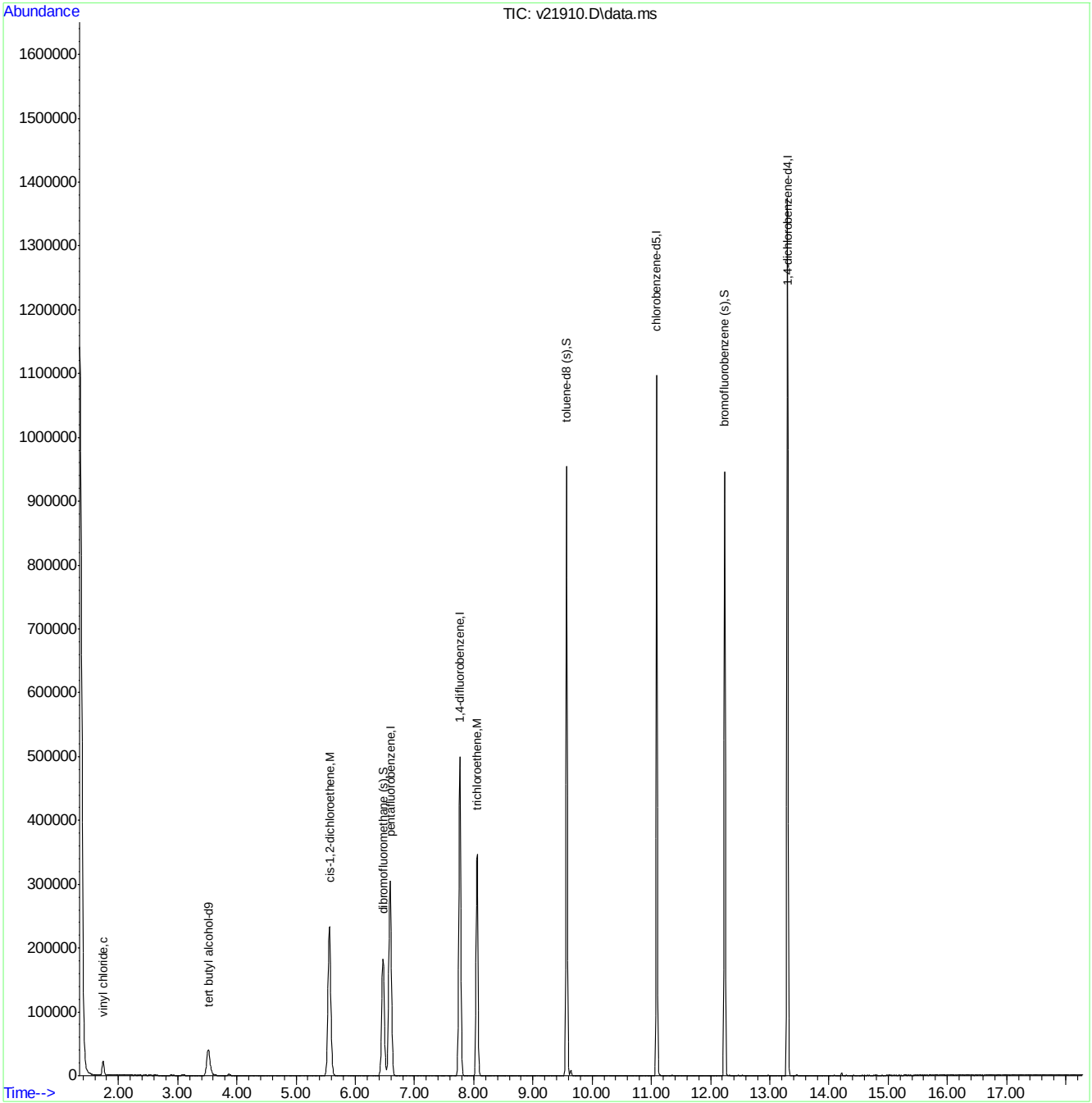
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.524	65	81822	500.00	ug/L	# 0.00
4) pentafluorobenzene	6.589	168	355509	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.767	114	526381	50.00	ug/L	0.00
66) chlorobenzene-d5	11.091	82	280852	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.301	152	307847	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.469	113	183326	51.12	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.24%			
60) toluene-d8 (s)	9.569	98	621470	51.12	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.24%			
82) bromofluorobenzene (s)	12.239	95	267814	47.35	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.70%			
Target Compounds						Qvalue
7) vinyl chloride	1.742	62	31579	8.68	ug/L	98
30) 2-butanone	5.566	72	1191	Below Cal	#	1
36) cis-1,2-dichloroethene	5.564	96	182284	54.62	ug/L	97
51) trichloroethene	8.057	95	140947	35.76	ug/L	97

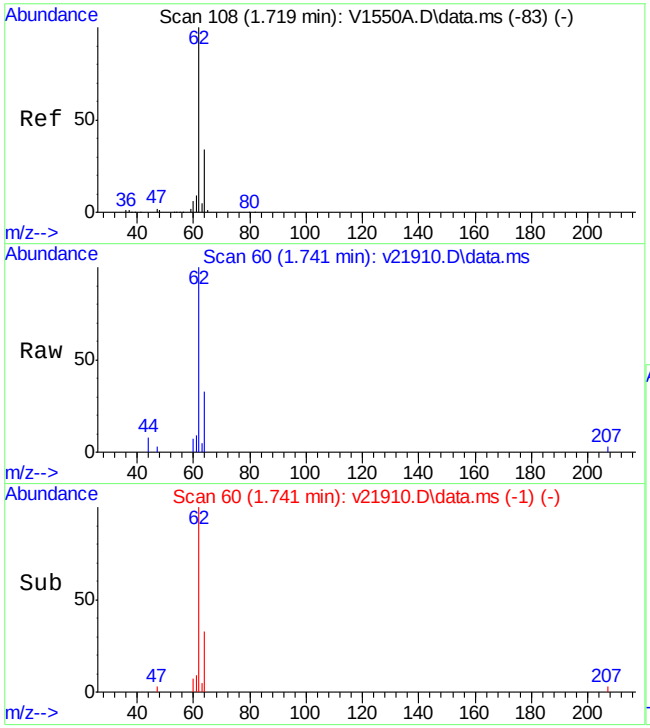
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21910.D
Acq On : 14 Aug 2013 6:06 pm
Operator : amym
Sample : mc23378-1
Misc : MS29650,MSV846,,,,5,10
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 15 08:40:45 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

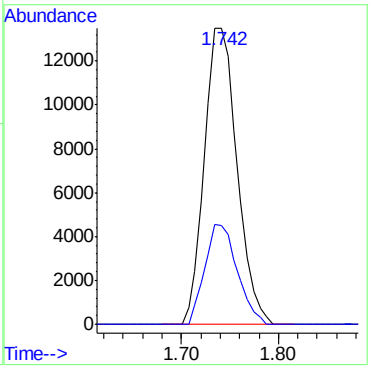


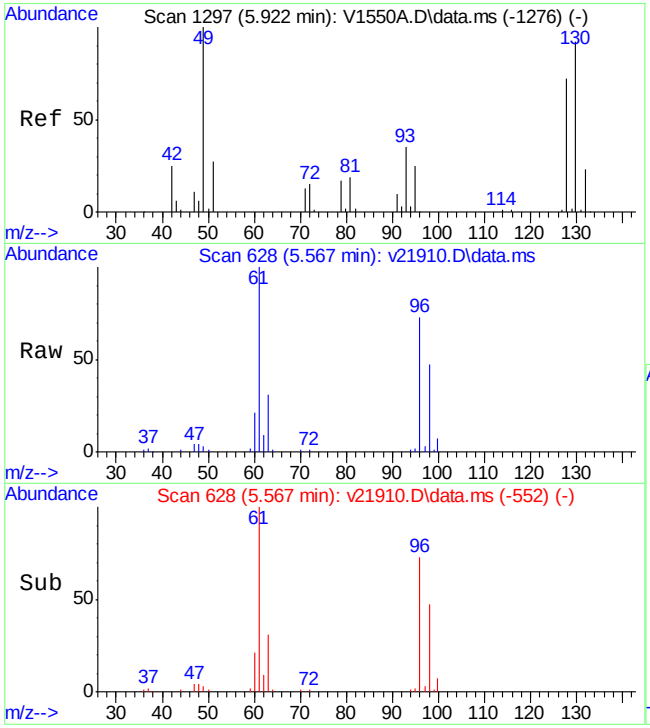


#7
vinyl chloride
Concen: 8.68 ug/L
RT: 1.742 min Scan# 60
Delta R.T. -0.000 min
Lab File: v21910.D
Acq: 14 Aug 2013 6:06 pm

Tgt Ion: 62 Resp: 31579

Ion	Ratio	Lower	Upper
62	100		
64	33.3	2.2	62.2

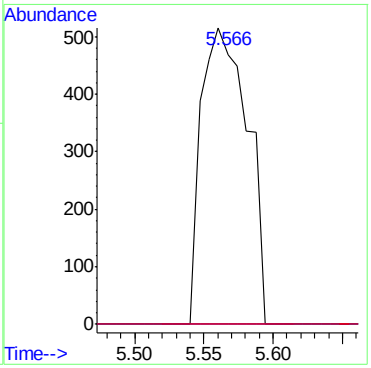


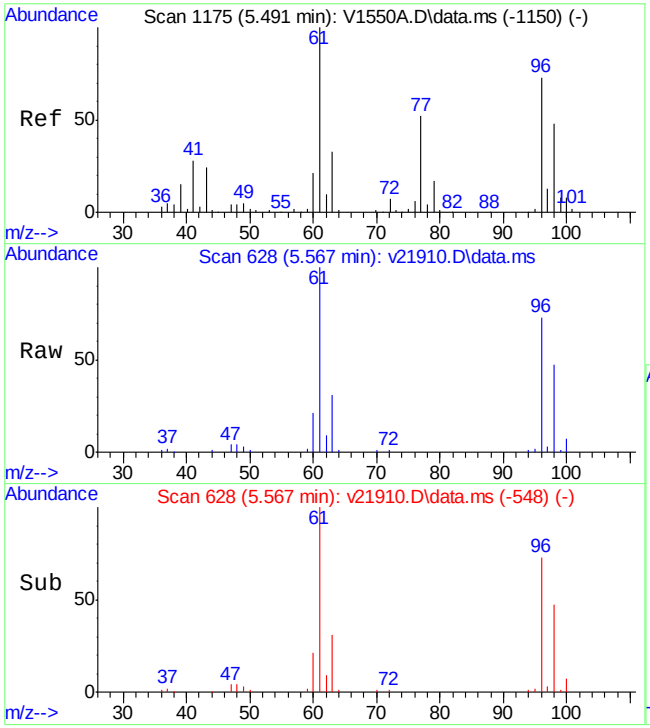


#30
2-butanone
Concen: Below Cal
RT: 5.566 min Scan# 628
Delta R.T. 0.011 min
Lab File: v21910.D
Acq: 14 Aug 2013 6:06 pm

Tgt Ion: 72 Resp: 1191

Ion	Ratio	Lower	Upper
72	100		
43	0.0	312.0	372.0#
57	0.0	1.2	61.2#

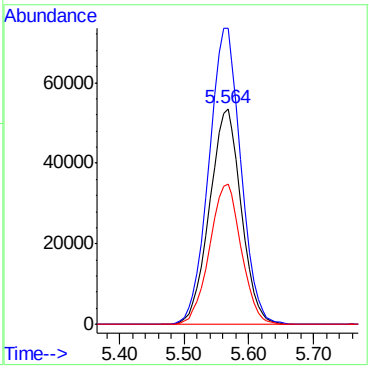


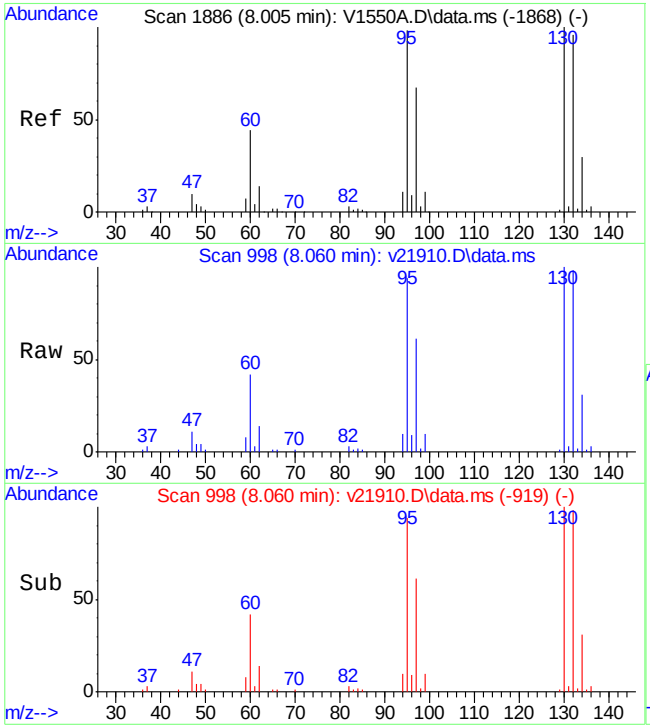


#36
cis-1,2-dichloroethene
Concen: 54.62 ug/L
RT: 5.564 min Scan# 628
Delta R.T. 0.009 min
Lab File: v21910.D
Acq: 14 Aug 2013 6:06 pm

Tgt Ion: 96 Resp: 182284

Ion	Ratio	Lower	Upper
96	100		
61	137.2	112.2	172.2
98	65.1	33.6	93.6

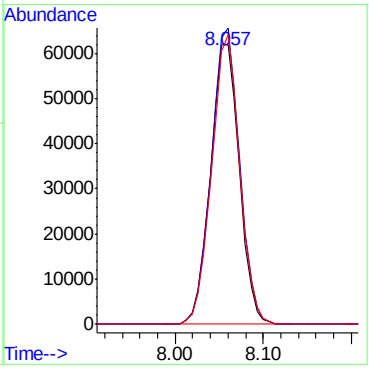




#51
trichloroethene
Concen: 35.76 ug/L
RT: 8.057 min Scan# 998
Delta R.T. 0.007 min
Lab File: v21910.D
Acq: 14 Aug 2013 6:06 pm

Tgt Ion: 95 Resp: 140947

Ion	Ratio	Lower	Upper
95	100		
130	105.9	74.4	134.4
132	103.5	69.6	129.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21881.D
Acq On : 13 Aug 2013 4:32 pm
Operator : amym
Sample : mc23378-2
Misc : MS29650,MSV845,,,,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 13 17:00:12 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

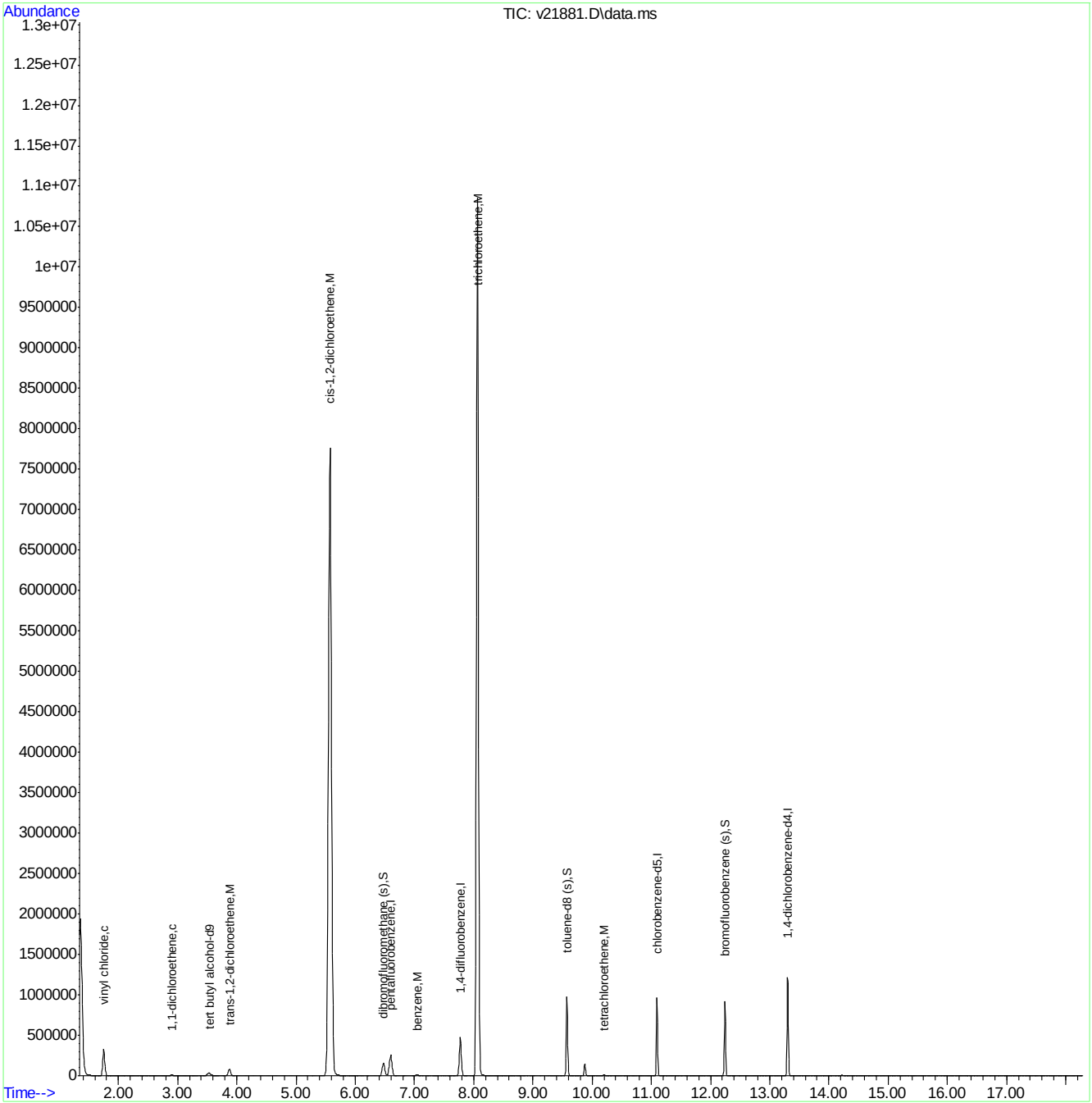
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.535	65	70585	500.00	ug/L	# 0.01
4) pentafluorobenzene	6.598	168	296420	50.00	ug/L	0.02
43) 1,4-difluorobenzene	7.774	114	511757	50.00	ug/L	0.02
66) chlorobenzene-d5	11.096	82	255448	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.305	152	281675	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.477	113	152323	50.94	ug/L	0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.88%			
60) toluene-d8 (s)	9.574	98	637623	53.95	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 107.90%			
82) bromofluorobenzene (s)	12.243	95	241904	46.74	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.48%			
Target Compounds						Qvalue
7) vinyl chloride	1.753	62	477817	157.48	ug/L	99
15) 1,1-dichloroethene	2.899	96	5391	2.49	ug/L	89
22) trans-1,2-dichloroethene	3.873	96	50582	19.36	ug/L	96
36) cis-1,2-dichloroethene	5.573	96	6353402	2283.34	ug/L	94
47) benzene	7.040	78	19361	1.58	ug/L	98
51) trichloroethene	8.065	95	4703093	1227.42	ug/L	96
67) tetrachloroethene	10.200	166	3291	0.81	ug/L	95

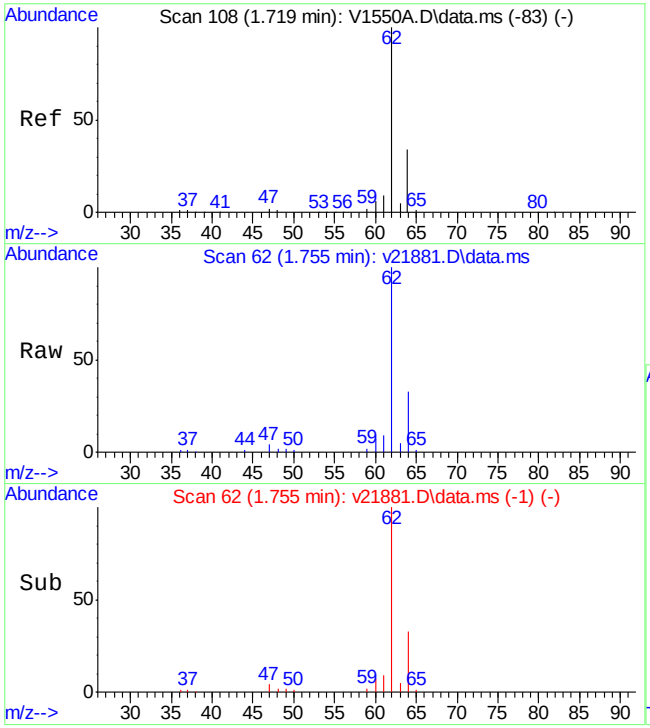
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21881.D
Acq On : 13 Aug 2013 4:32 pm
Operator : amym
Sample : mc23378-2
Misc : MS29650,MSV845,,,,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 13 17:00:12 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

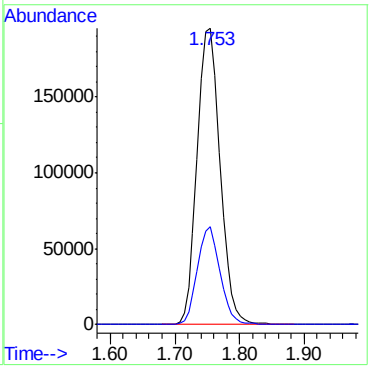


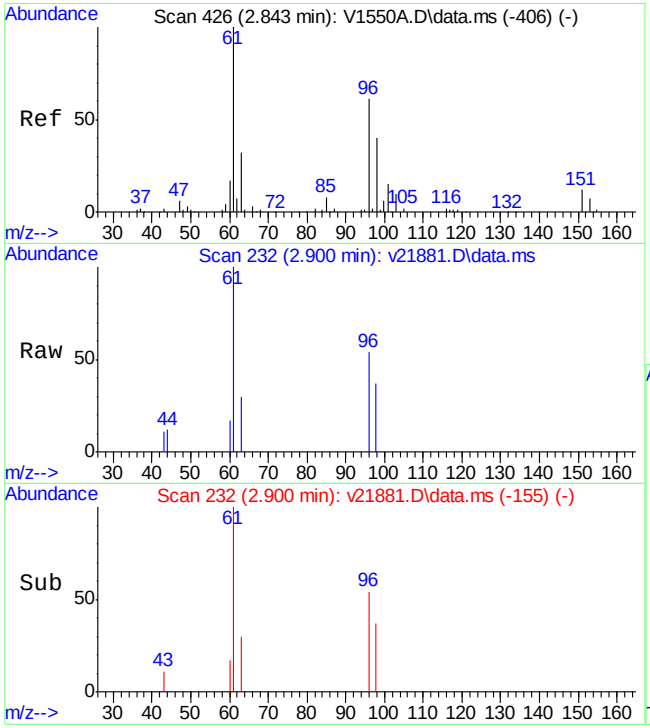


#7
vinyl chloride
Concen: 157.48 ug/L
RT: 1.753 min Scan# 62
Delta R.T. 0.011 min
Lab File: v21881.D
Acq: 13 Aug 2013 4:32 pm

Tgt Ion: 62 Resp: 477817

Ion	Ratio	Lower	Upper
62	100		
64	32.8	2.2	62.2

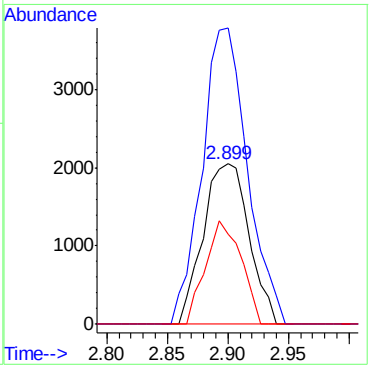


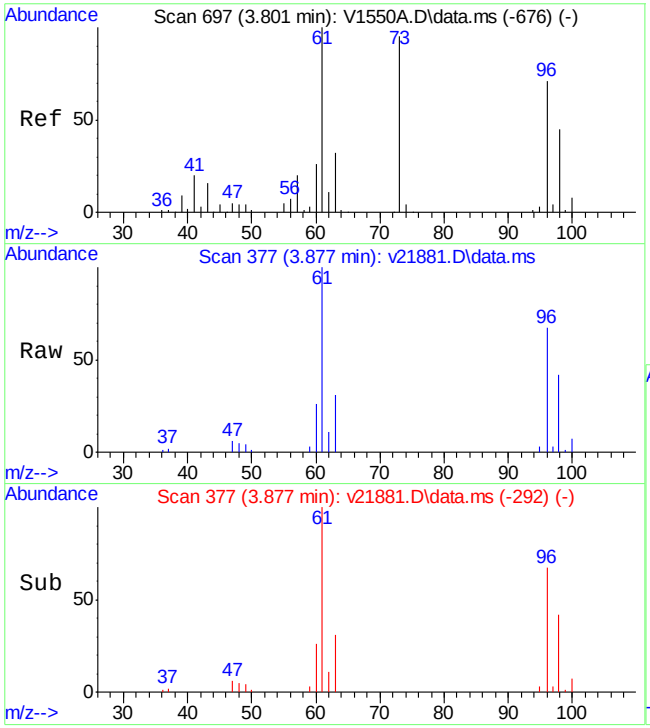


#15
1,1-dichloroethene
Concen: 2.49 ug/L
RT: 2.899 min Scan# 232
Delta R.T. 0.017 min
Lab File: v21881.D
Acq: 13 Aug 2013 4:32 pm

Tgt Ion: 96 Resp: 5391

Ion	Ratio	Lower	Upper
96	100		
61	184.7	136.6	196.6
63	55.9	23.9	83.9

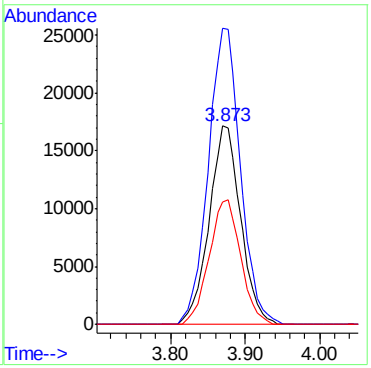


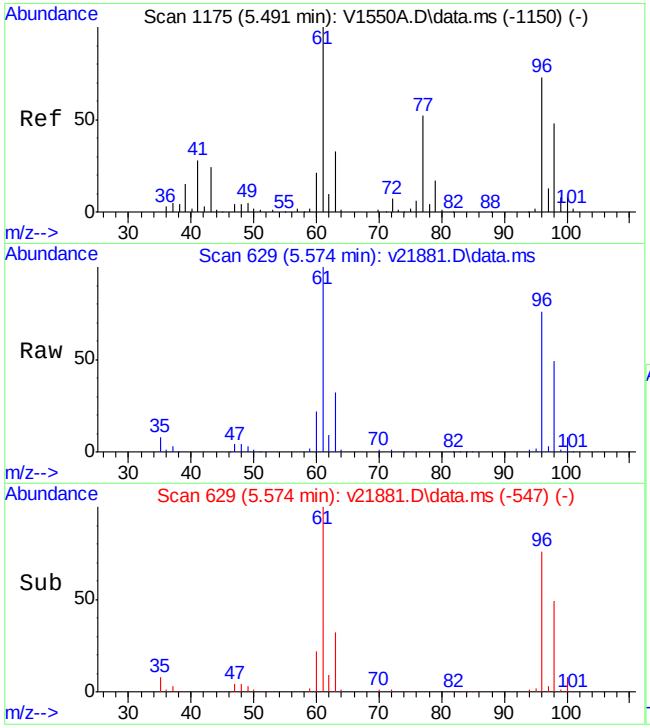


#22
trans-1,2-dichloroethene
Concen: 19.36 ug/L
RT: 3.873 min Scan# 377
Delta R.T. 0.017 min
Lab File: v21881.D
Acq: 13 Aug 2013 4:32 pm

Tgt Ion: 96 Resp: 50582

Ion	Ratio	Lower	Upper
96	100		
61	150.1	113.0	173.0
98	63.5	33.1	93.1

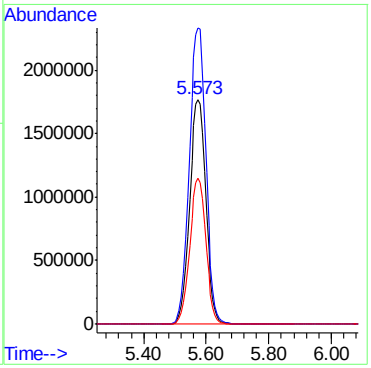


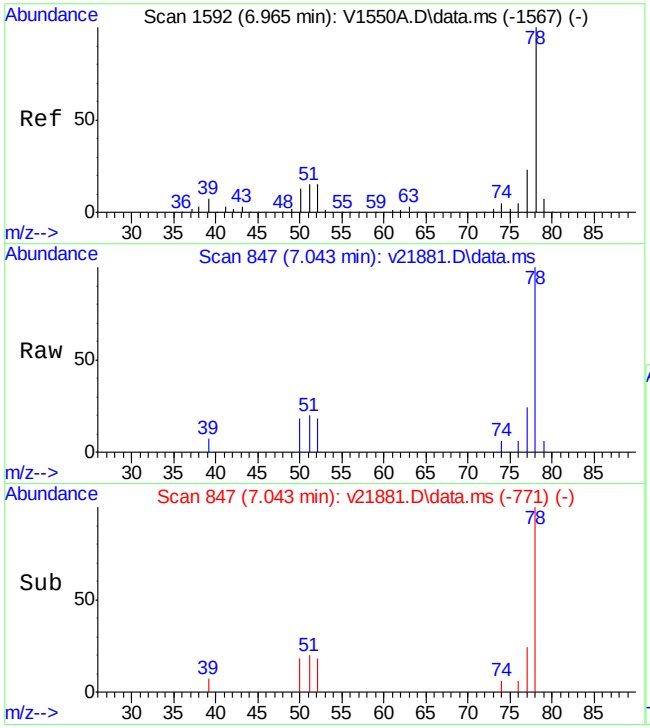


#36
cis-1,2-dichloroethene
Concen: 2283.34 ug/L
RT: 5.573 min Scan# 629
Delta R.T. 0.018 min
Lab File: v21881.D
Acq: 13 Aug 2013 4:32 pm

Tgt Ion: 96 Resp: 6353402

Ion	Ratio	Lower	Upper
96	100		
61	131.8	112.2	172.2
98	65.1	33.6	93.6

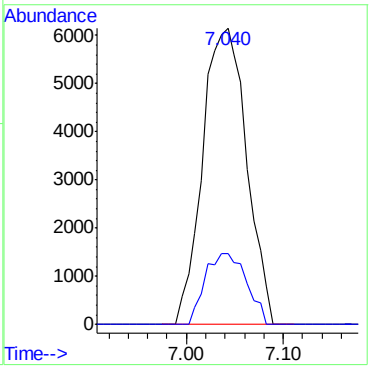


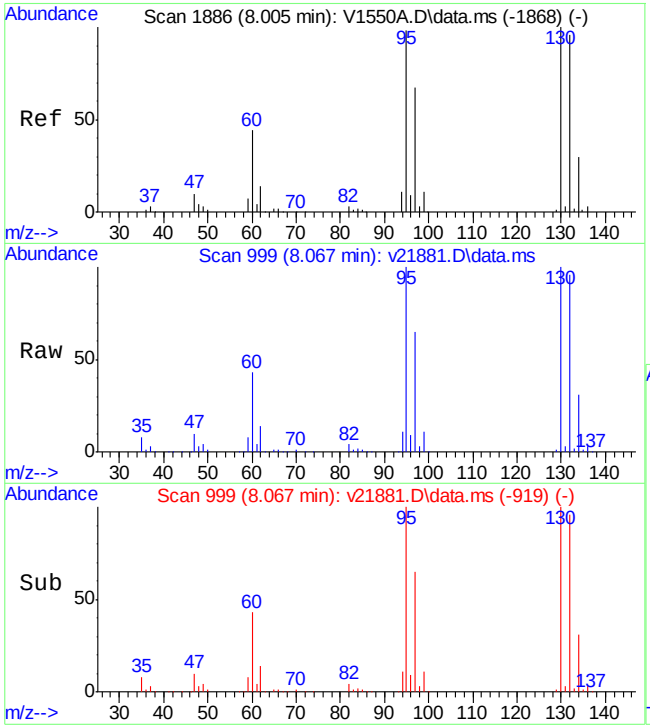


#47
benzene
Concen: 1.58 ug/L
RT: 7.040 min Scan# 847
Delta R.T. 0.017 min
Lab File: v21881.D
Acq: 13 Aug 2013 4:32 pm

Tgt Ion: 78 Resp: 19361

Ion	Ratio	Lower	Upper
78	100		
77	24.0	0.0	53.1

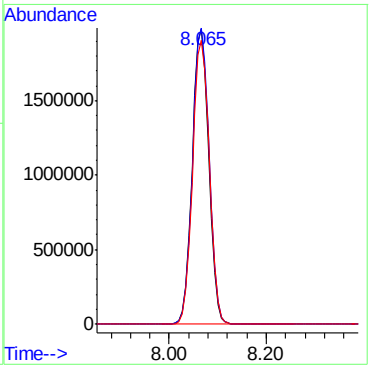


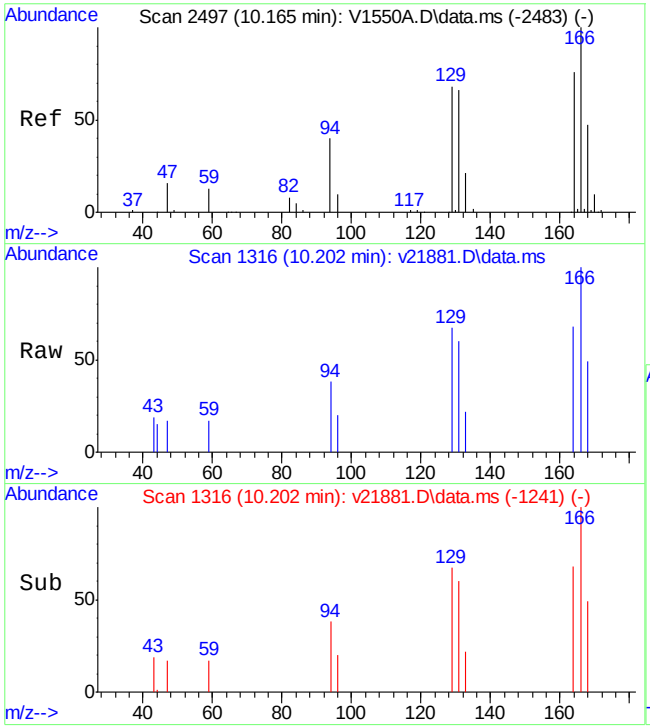


#51
trichloroethene
Concen: 1227.42 ug/L
RT: 8.065 min Scan# 999
Delta R.T. 0.015 min
Lab File: v21881.D
Acq: 13 Aug 2013 4:32 pm

Tgt Ion: 95 Resp: 4703093

Ion	Ratio	Lower	Upper
95	100		
130	100.3	74.4	134.4
132	96.1	69.6	129.6

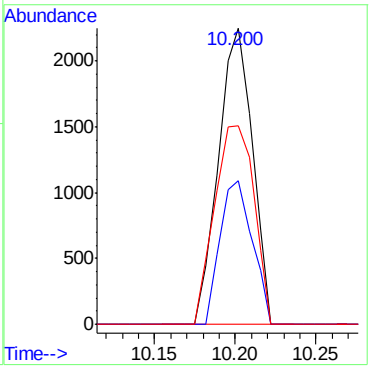




#67
tetrachloroethene
Concen: 0.81 ug/L
RT: 10.200 min Scan# 1316
Delta R.T. 0.005 min
Lab File: v21881.D
Acq: 13 Aug 2013 4:32 pm

Tgt Ion:166 Resp: 3291

Ion	Ratio	Lower	Upper
166	100		
168	48.7	17.6	77.6
129	66.9	42.6	102.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21901.D
Acq On : 14 Aug 2013 2:07 pm
Operator : amym
Sample : mc23378-2
Misc : MS29650,MSV846,,,,5,50
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 14 16:02:05 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

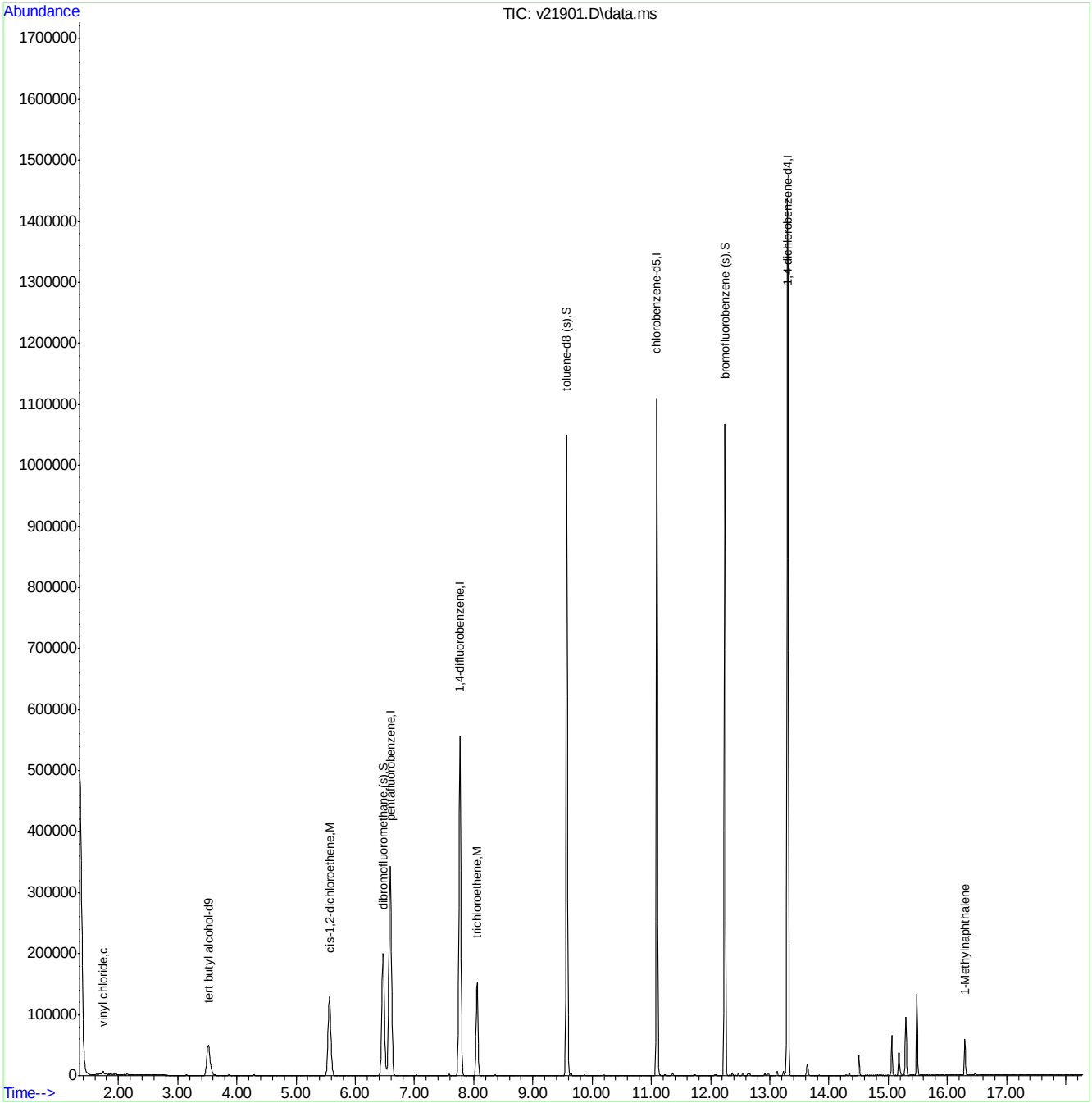
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.525	65	98356	500.00	ug/L	0.00
4) pentafluorobenzene	6.591	168	402863	50.00	ug/L	0.01
43) 1,4-difluorobenzene	7.769	114	591891	50.00	ug/L	0.00
66) chlorobenzene-d5	11.094	82	307536	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.304	152	341017	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.471	113	197894	48.70	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 97.40%			
60) toluene-d8 (s)	9.571	98	689182	50.41	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 100.82%			
82) bromofluorobenzene (s)	12.241	95	290381	46.34	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 92.68%			
Target Compounds						Qvalue
7) vinyl chloride	1.741	62	6907	1.67	ug/L	97
36) cis-1,2-dichloroethene	5.565	96	100009	26.45	ug/L	94
51) trichloroethene	8.059	95	62006	13.99	ug/L	99
105) 1-Methylnaphthalene	16.298	142	27468	8.07	ug/L	97

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

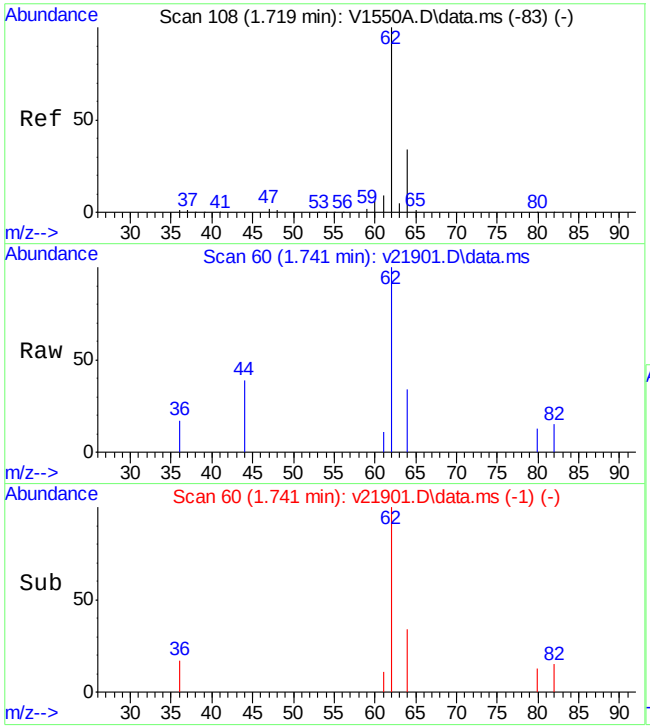
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21901.D
Acq On : 14 Aug 2013 2:07 pm
Operator : amym
Sample : mc23378-2
Misc : MS29650,MSV846,,,,5,50
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 14 16:02:05 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



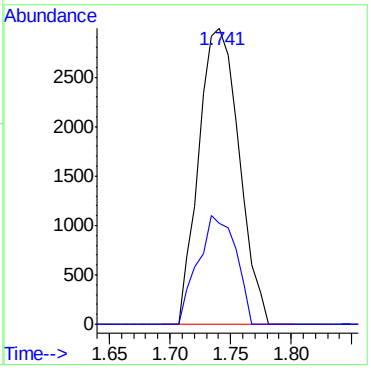
v130801w.m Wed Aug 14 16:02:10 2013 Page: 2

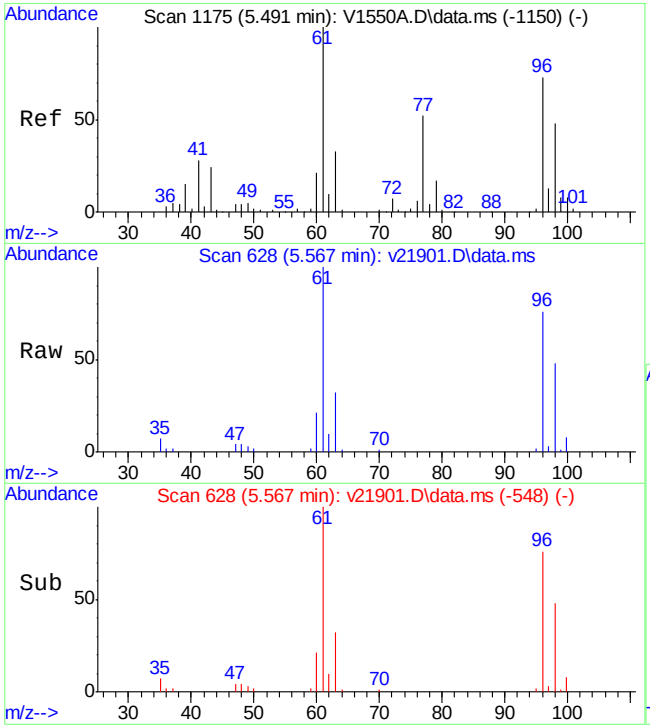


#7
vinyl chloride
Concen: 1.67 ug/L
RT: 1.741 min Scan# 60
Delta R.T. -0.001 min
Lab File: v21901.D
Acq: 14 Aug 2013 2:07 pm

Tgt Ion: 62 Resp: 6907

Ion	Ratio	Lower	Upper
62	100		
64	34.1	2.2	62.2

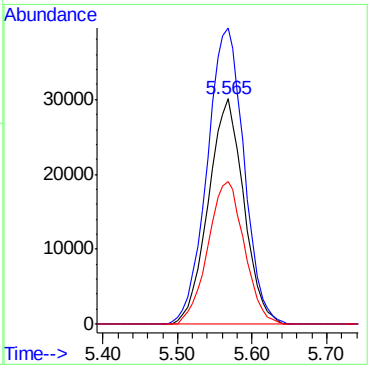


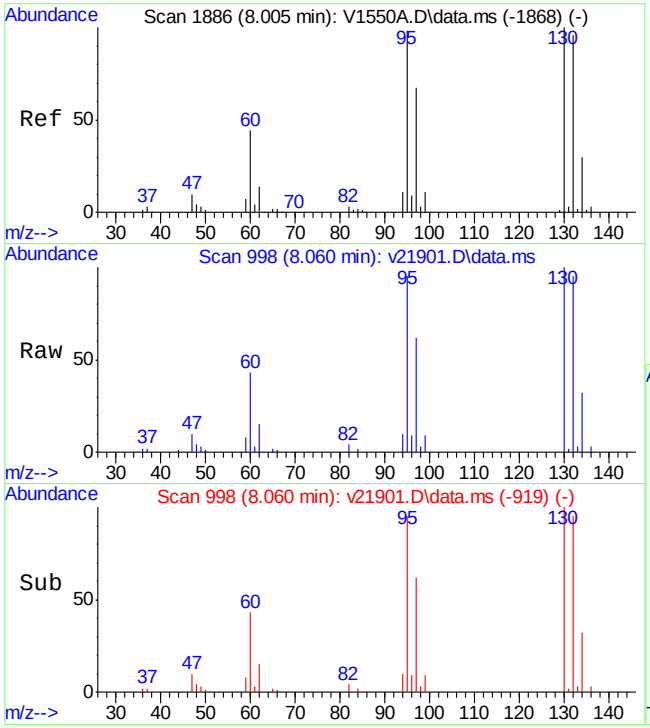


#36
cis-1,2-dichloroethene
Concen: 26.45 ug/L
RT: 5.565 min Scan# 628
Delta R.T. 0.010 min
Lab File: v21901.D
Acq: 14 Aug 2013 2:07 pm

Tgt Ion: 96 Resp: 100009

Ion	Ratio	Lower	Upper
96	100		
61	131.3	112.2	172.2
98	63.2	33.6	93.6

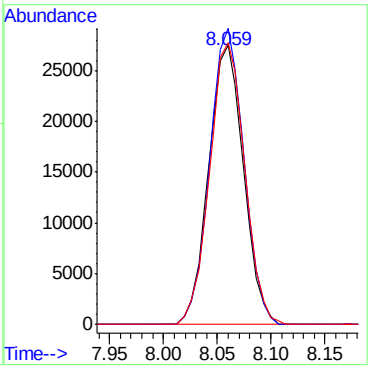


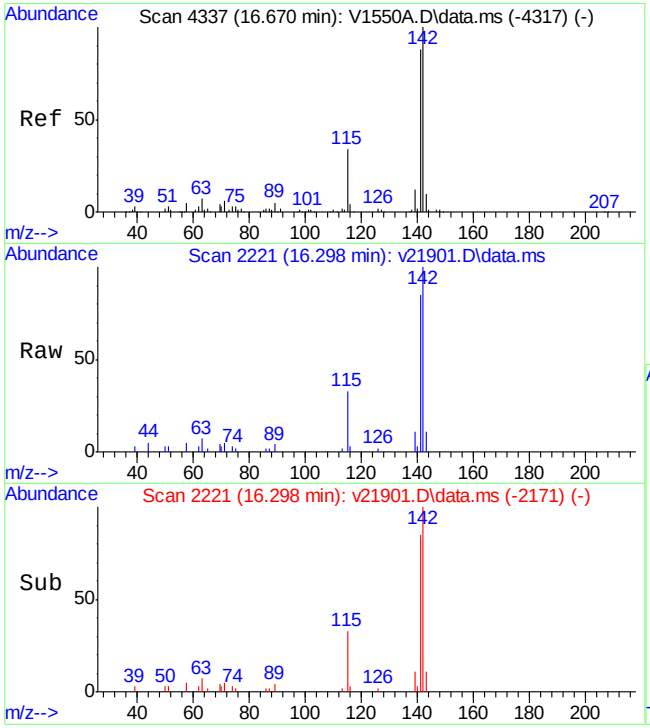


#51
trichloroethene
Concen: 13.99 ug/L
RT: 8.059 min Scan# 998
Delta R.T. 0.008 min
Lab File: v21901.D
Acq: 14 Aug 2013 2:07 pm

Tgt Ion: 95 Resp: 62006

Ion	Ratio	Lower	Upper
95	100		
130	105.8	74.4	134.4
132	100.7	69.6	129.6

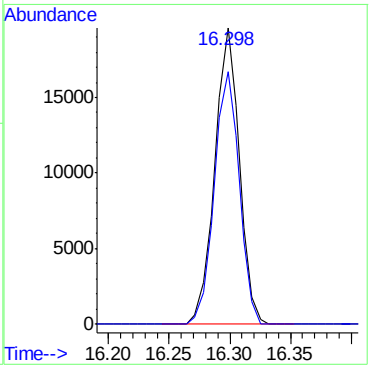




#105
1-Methylnaphthalene
Concen: 8.07 ug/L
RT: 16.298 min Scan# 2221
Delta R.T. -0.164 min
Lab File: v21901.D
Acq: 14 Aug 2013 2:07 pm

Tgt Ion:142 Resp: 27468

Ion	Ratio	Lower	Upper
142	100		
141	86.7	69.4	109.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21905.D
Acq On : 14 Aug 2013 3:53 pm
Operator : amym
Sample : mc23378-3
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 15 08:59:30 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

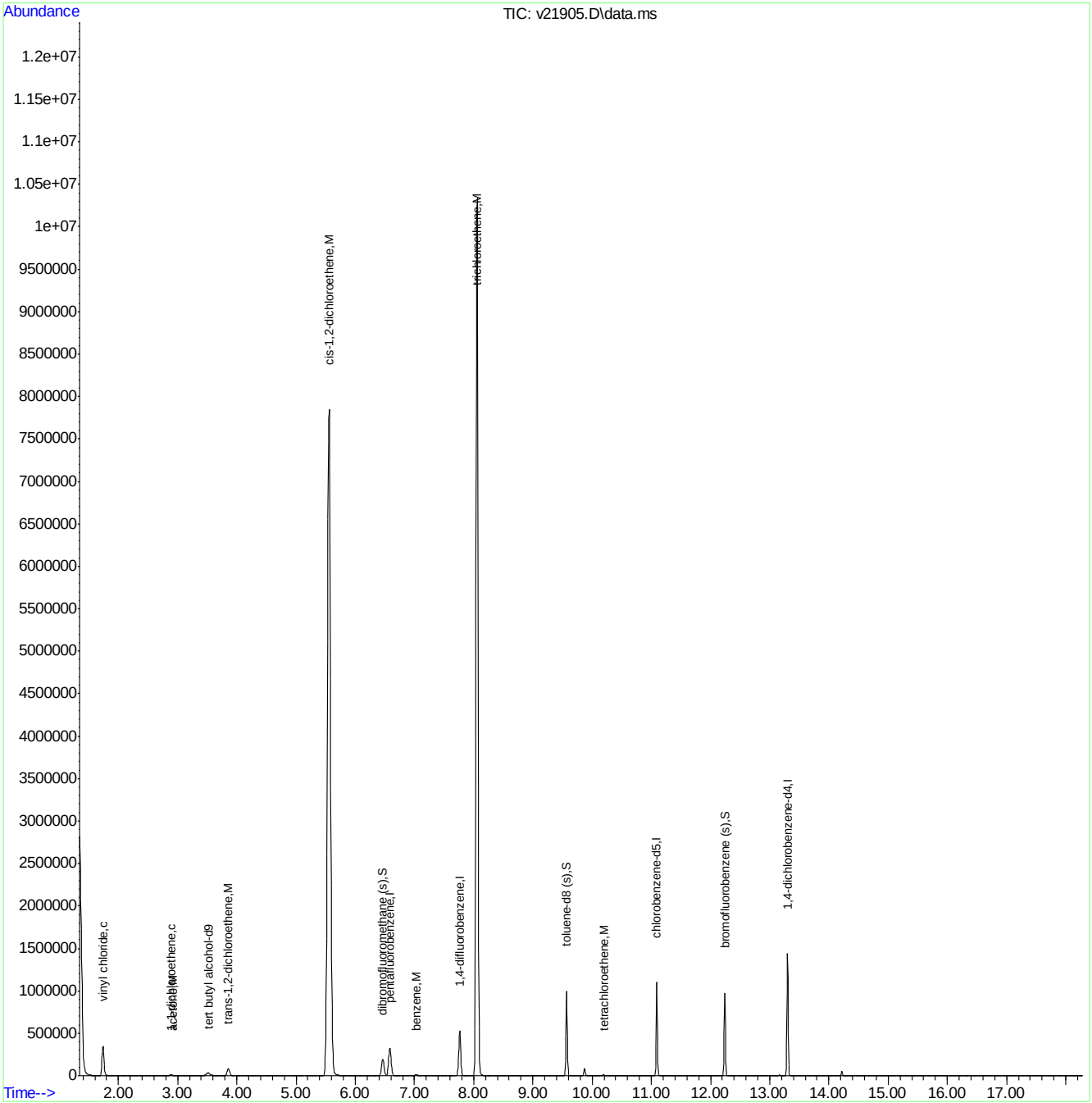
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.521	65	80523	500.00	ug/L	# 0.00
4) pentafluorobenzene	6.586	168	382574	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.766	114	552145	50.00	ug/L	0.00
66) chlorobenzene-d5	11.092	82	290215	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.302	152	325231	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.465	113	188549	48.86	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 97.72%			
60) toluene-d8 (s)	9.569	98	646791	50.72	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.44%			
82) bromofluorobenzene (s)	12.240	95	278303	46.57	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.14%			
Target Compounds						Qvalue
7) vinyl chloride	1.740	62	499122	127.46	ug/L	100
15) 1,1-dichloroethene	2.883	96	6517	2.33	ug/L	91
16) acetone	2.914	58	2255	2.65	ug/L	92
22) trans-1,2-dichloroethene	3.856	96	58368	17.31	ug/L	92
36) cis-1,2-dichloroethene	5.557	96	6670603	1857.47	ug/L	93
47) benzene	7.029	78	19602	1.48	ug/L	99
51) trichloroethene	8.057	95	4450521	1076.54	ug/L	97
67) tetrachloroethene	10.195	166	3723	0.81	ug/L	93

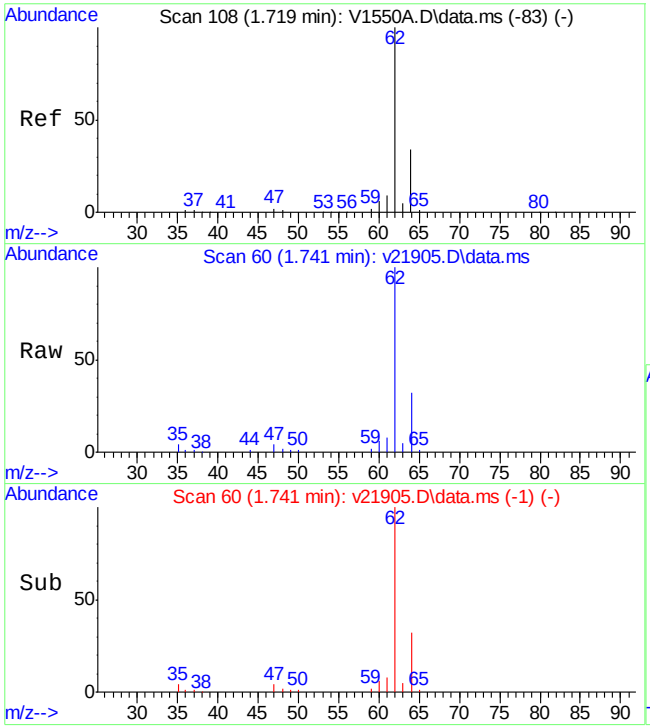
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21905.D
Acq On : 14 Aug 2013 3:53 pm
Operator : amym
Sample : mc23378-3
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 15 08:59:30 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

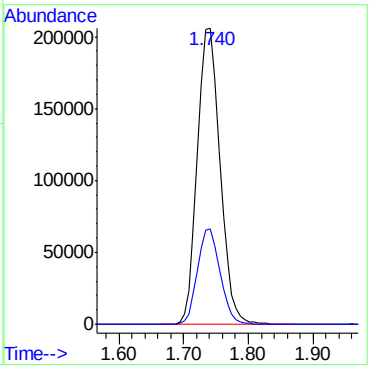


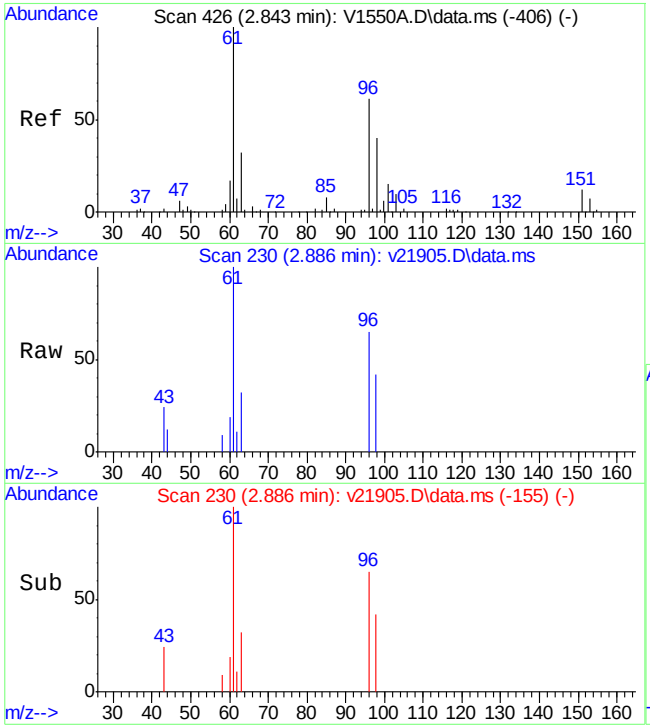


#7
vinyl chloride
Concen: 127.46 ug/L
RT: 1.740 min Scan# 60
Delta R.T. -0.002 min
Lab File: v21905.D
Acq: 14 Aug 2013 3:53 pm

Tgt Ion: 62 Resp: 499122

Ion	Ratio	Lower	Upper
62	100		
64	32.1	2.2	62.2

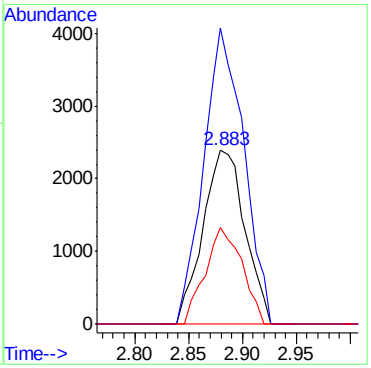


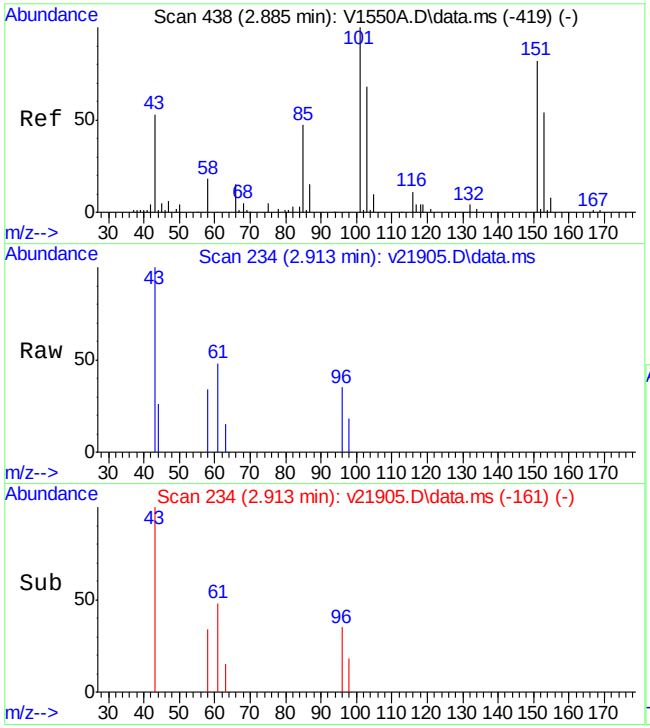


#15
1,1-dichloroethene
Concen: 2.33 ug/L
RT: 2.883 min Scan# 230
Delta R.T. 0.001 min
Lab File: v21905.D
Acq: 14 Aug 2013 3:53 pm

Tgt Ion: 96 Resp: 6517

Ion	Ratio	Lower	Upper
96	100		
61	152.9	136.6	196.6
63	49.7	23.9	83.9

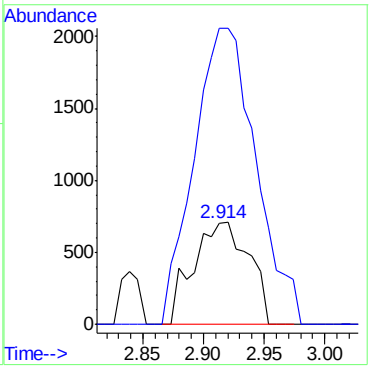


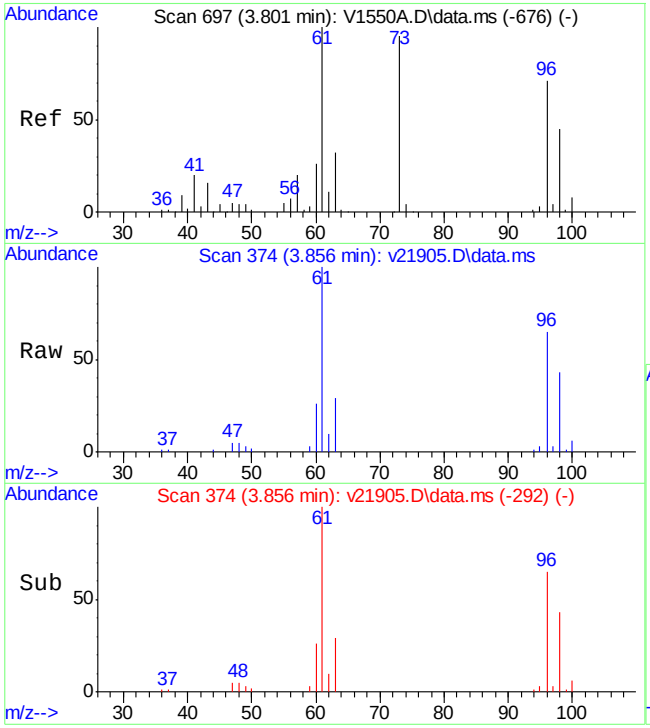


#16
acetone
Concen: 2.65 ug/L
RT: 2.914 min Scan# 234
Delta R.T. -0.007 min
Lab File: v21905.D
Acq: 14 Aug 2013 3:53 pm

Tgt Ion: 58 Resp: 2255

Ion	Ratio	Lower	Upper
58	100		
43	293.4	280.0	340.0

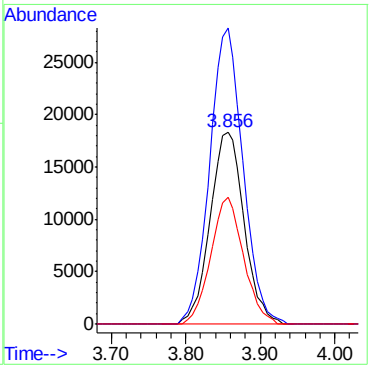


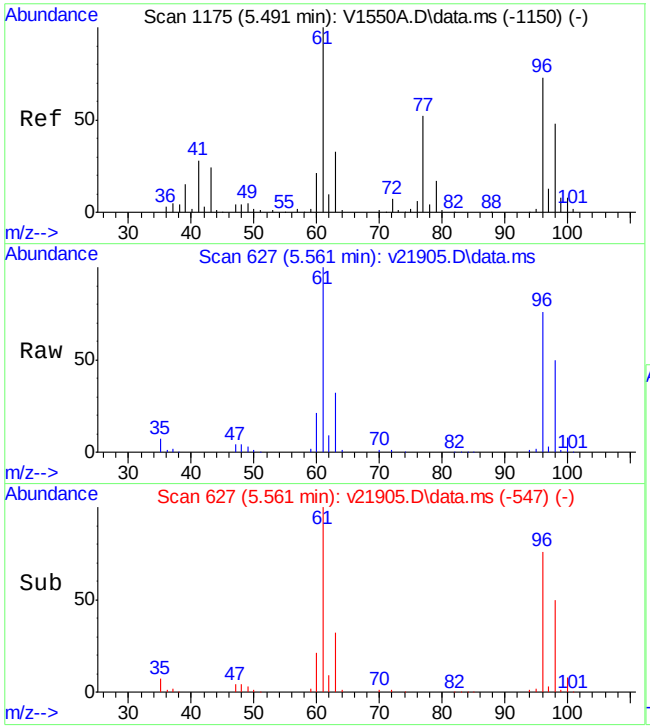


#22
trans-1,2-dichloroethene
Concen: 17.31 ug/L
RT: 3.856 min Scan# 374
Delta R.T. 0.000 min
Lab File: v21905.D
Acq: 14 Aug 2013 3:53 pm

Tgt Ion: 96 Resp: 58368

Ion	Ratio	Lower	Upper
96	100		
61	154.3	113.0	173.0
98	66.3	33.1	93.1

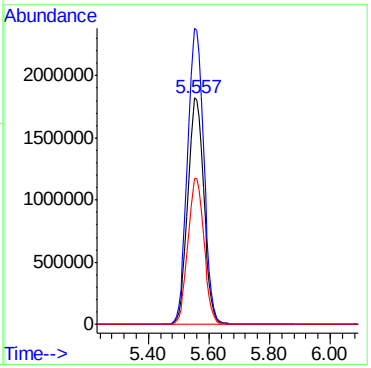


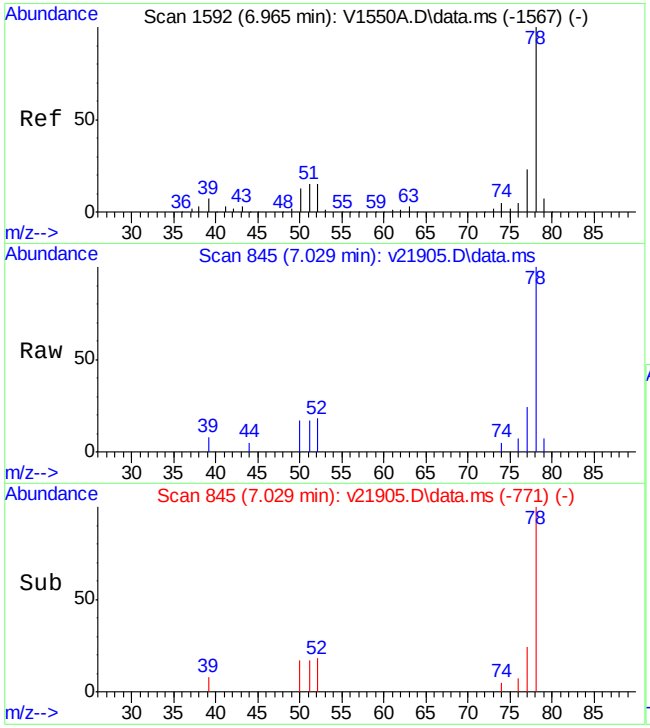


#36
cis-1,2-dichloroethene
Concen: 1857.47 ug/L
RT: 5.557 min Scan# 627
Delta R.T. 0.002 min
Lab File: v21905.D
Acq: 14 Aug 2013 3:53 pm

Tgt Ion: 96 Resp: 6670603

Ion	Ratio	Lower	Upper
96	100		
61	130.9	112.2	172.2
98	64.8	33.6	93.6

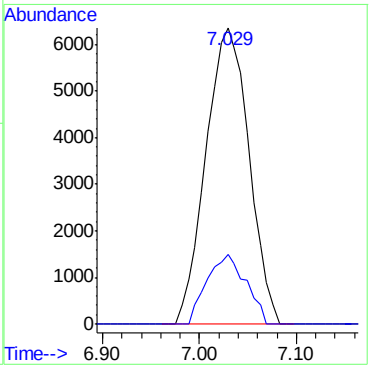


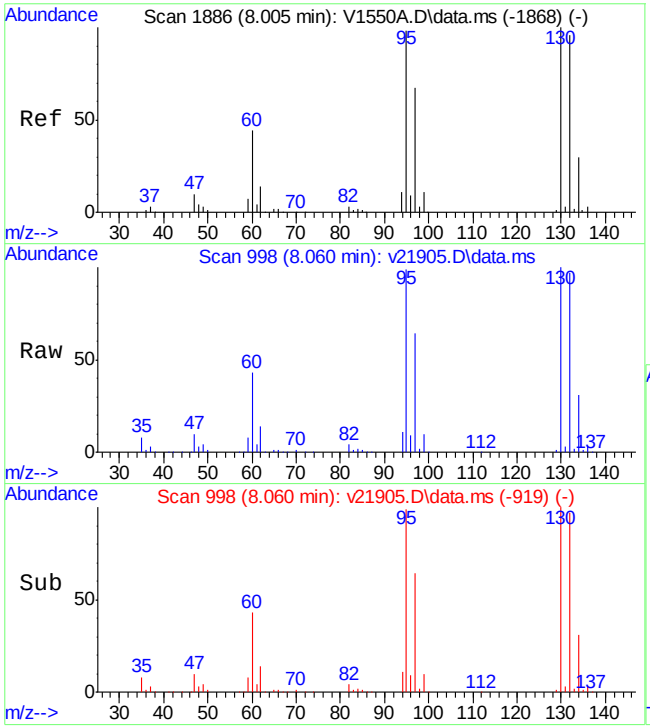


#47
benzene
Concen: 1.48 ug/L
RT: 7.029 min Scan# 845
Delta R.T. 0.006 min
Lab File: v21905.D
Acq: 14 Aug 2013 3:53 pm

Tgt Ion: 78 Resp: 19602

Ion	Ratio	Lower	Upper
78	100		
77	23.6	0.0	53.1

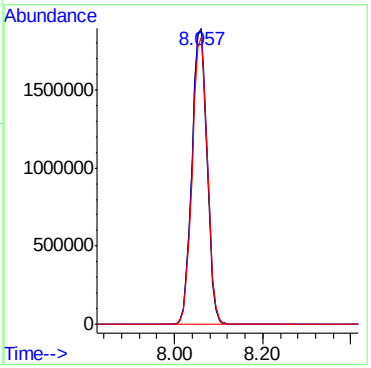


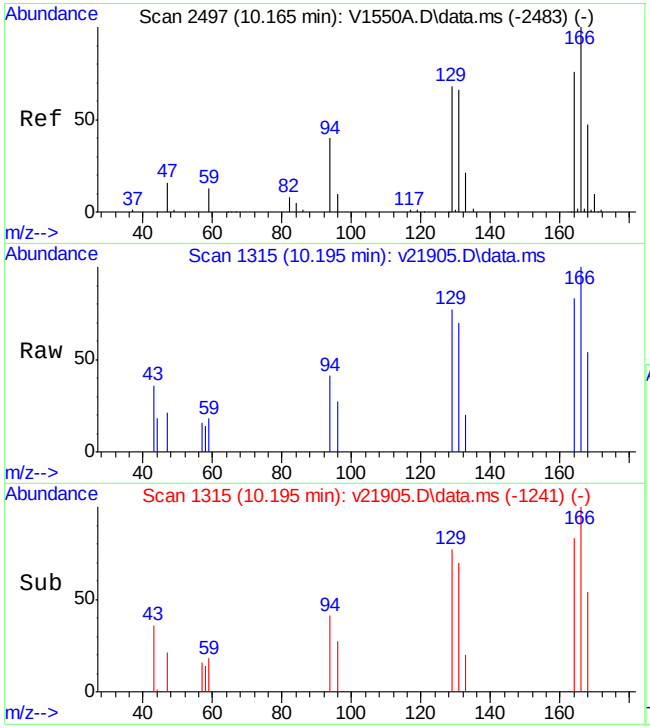


#51
trichloroethene
Concen: 1076.54 ug/L
RT: 8.057 min Scan# 998
Delta R.T. 0.007 min
Lab File: v21905.D
Acq: 14 Aug 2013 3:53 pm

Tgt Ion: 95 Resp: 4450521

Ion	Ratio	Lower	Upper
95	100		
130	100.7	74.4	134.4
132	97.7	69.6	129.6

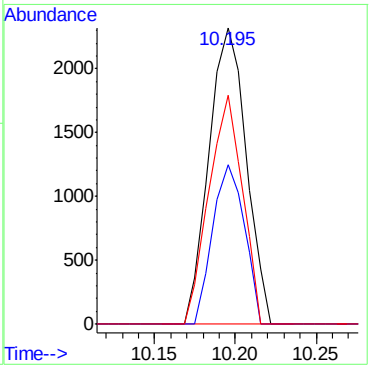




#67
tetrachloroethene
Concen: 0.81 ug/L
RT: 10.195 min Scan# 1315
Delta R.T. 0.000 min
Lab File: v21905.D
Acq: 14 Aug 2013 3:53 pm

Tgt Ion:166 Resp: 3723

Ion	Ratio	Lower	Upper
166	100		
168	53.9	17.6	77.6
129	77.1	42.6	102.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21911.D
Acq On : 14 Aug 2013 6:32 pm
Operator : amym
Sample : mc23378-3
Misc : MS29650,MSV846,,,,5,20
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 15 08:41:36 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

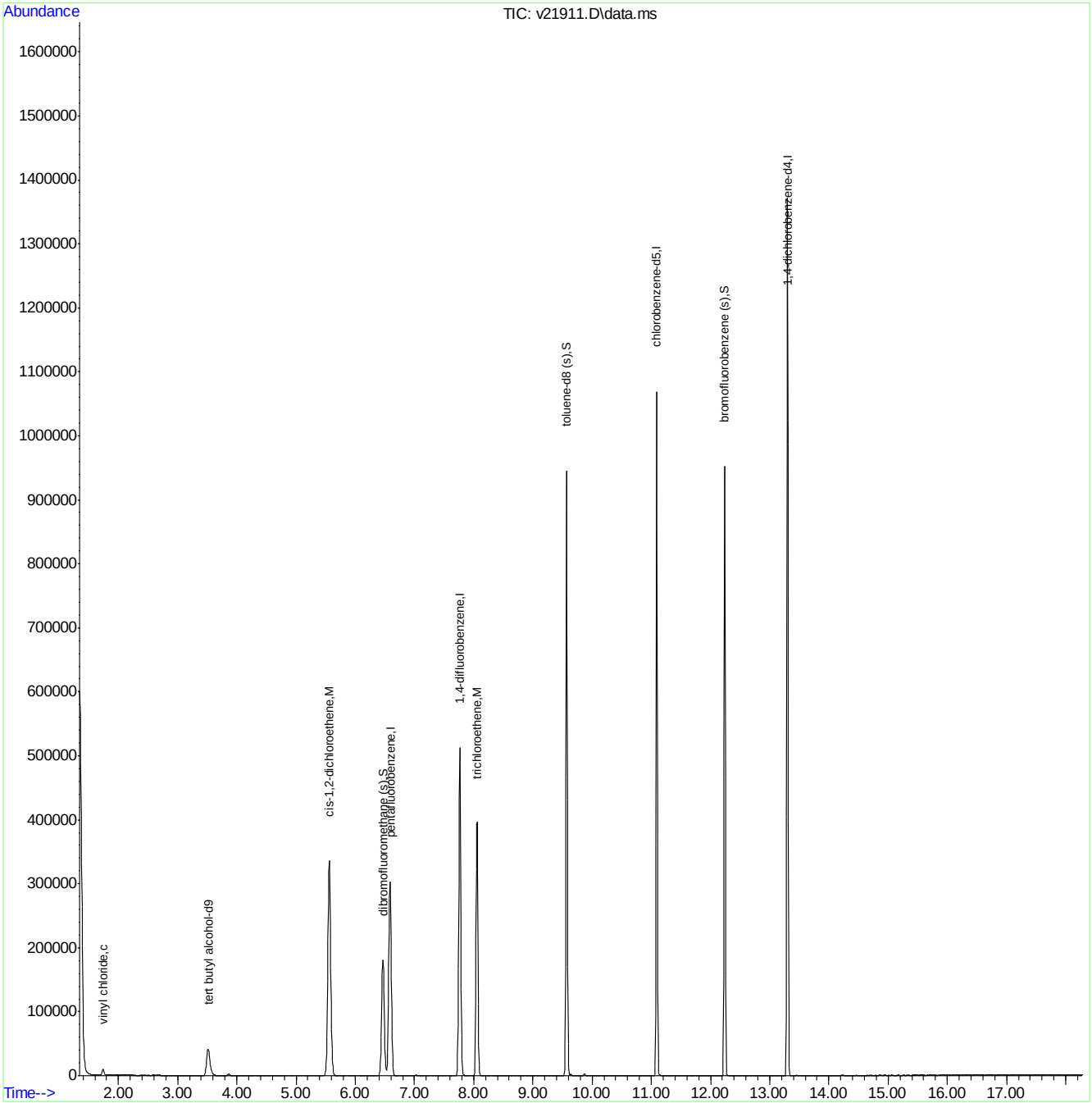
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.522	65	81903	500.00	ug/L	# 0.00
4) pentafluorobenzene	6.588	168	354045	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.766	114	522394	50.00	ug/L	0.00
66) chlorobenzene-d5	11.092	82	277744	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.301	152	302811	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.468	113	181264	50.76	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.52%			
60) toluene-d8 (s)	9.569	98	611594	50.69	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.38%			
82) bromofluorobenzene (s)	12.239	95	263445	47.35	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.70%			
Target Compounds						Qvalue
7) vinyl chloride	1.740	62	14503	4.00	ug/L	96
36) cis-1,2-dichloroethene	5.562	96	260201	78.29	ug/L	98
51) trichloroethene	8.056	95	161987	41.41	ug/L	99

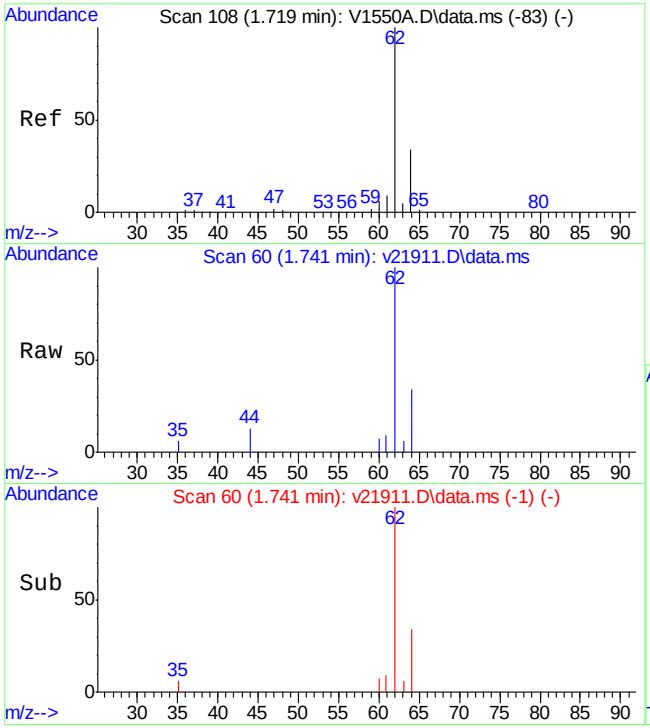
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21911.D
Acq On : 14 Aug 2013 6:32 pm
Operator : amym
Sample : mc23378-3
Misc : MS29650,MSV846,,,,5,20
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 15 08:41:36 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

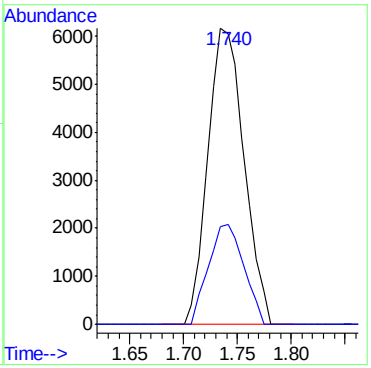


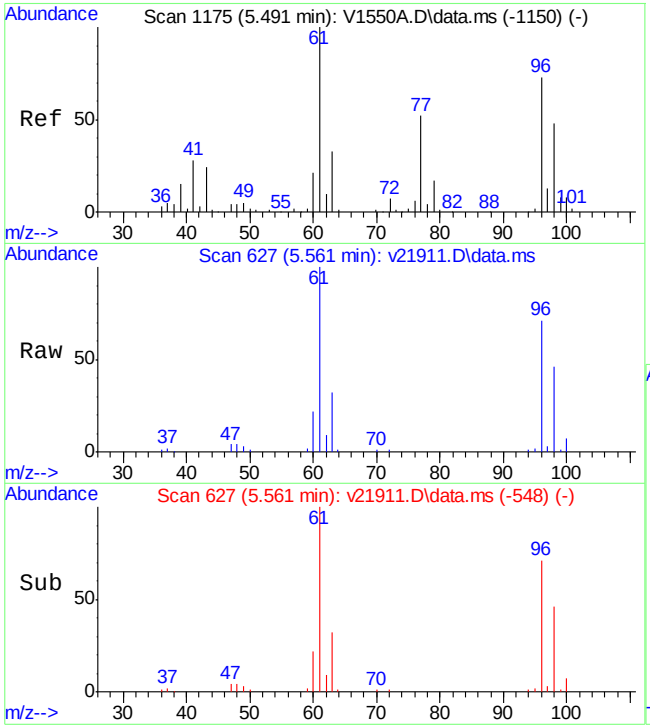


#7
vinyl chloride
Concen: 4.00 ug/L
RT: 1.740 min Scan# 60
Delta R.T. -0.002 min
Lab File: v21911.D
Acq: 14 Aug 2013 6:32 pm

Tgt Ion: 62 Resp: 14503

Ion	Ratio	Lower	Upper
62	100		
64	34.2	2.2	62.2

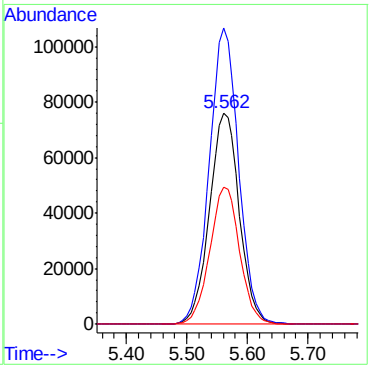


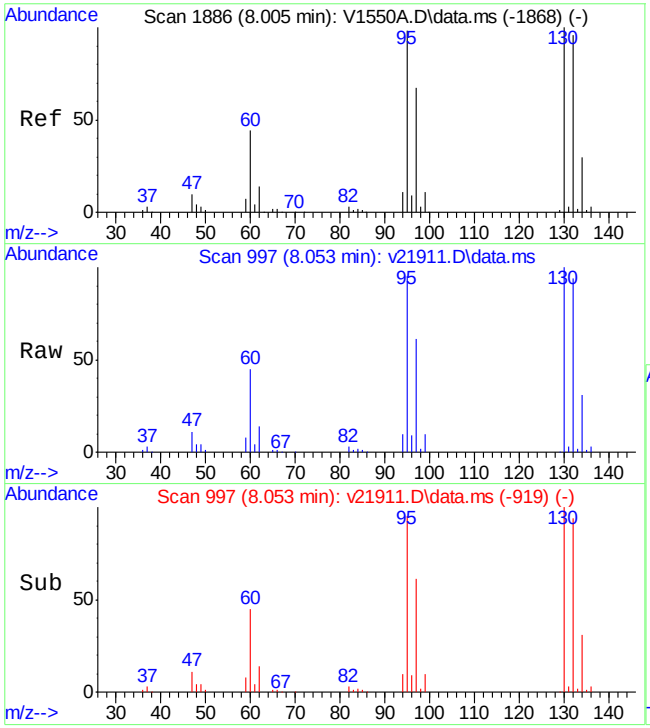


#36
cis-1,2-dichloroethene
Concen: 78.29 ug/L
RT: 5.562 min Scan# 627
Delta R.T. 0.007 min
Lab File: v21911.D
Acq: 14 Aug 2013 6:32 pm

Tgt Ion: 96 Resp: 260201

Ion	Ratio	Lower	Upper
96	100		
61	140.2	112.2	172.2
98	64.7	33.6	93.6

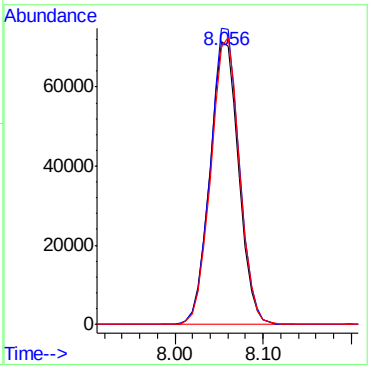




#51
trichloroethene
Concen: 41.41 ug/L
RT: 8.056 min Scan# 997
Delta R.T. 0.006 min
Lab File: v21911.D
Acq: 14 Aug 2013 6:32 pm

Tgt Ion: 95 Resp: 161987

Ion	Ratio	Lower	Upper
95	100		
130	104.8	74.4	134.4
132	98.1	69.6	129.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21912.D
Acq On : 14 Aug 2013 6:59 pm
Operator : amym
Sample : mc23378-4
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Aug 15 08:46:03 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

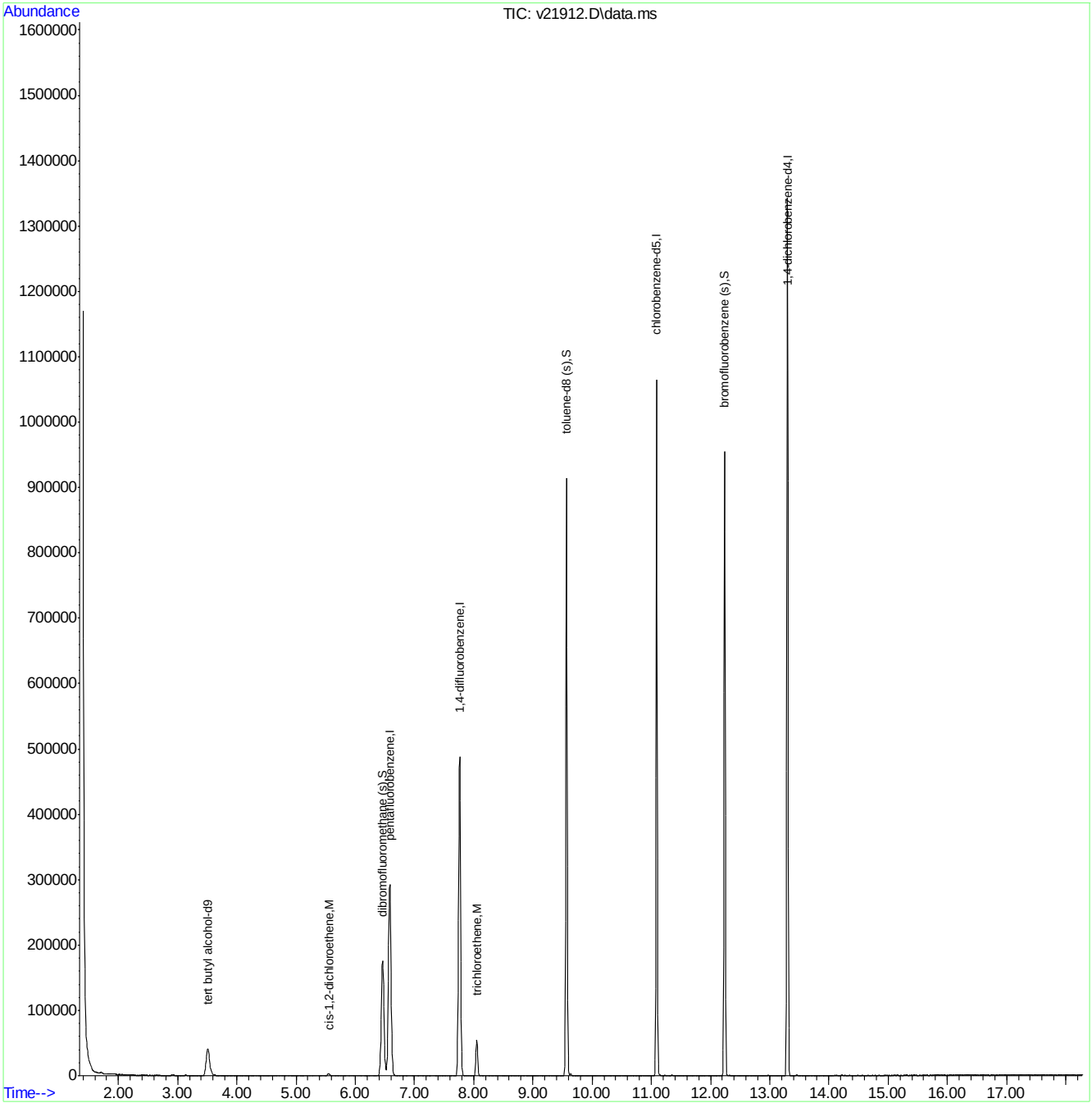
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.515	65	83620	500.00	ug/L	# 0.00
4) pentafluorobenzene	6.583	168	334811	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.762	114	507494	50.00	ug/L	0.00
66) chlorobenzene-d5	11.090	82	275257	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.300	152	299853	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.462	113	177234	52.48	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 104.96%			
60) toluene-d8 (s)	9.567	98	602321	51.39	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.78%			
82) bromofluorobenzene (s)	12.238	95	258296	46.88	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.76%			
Target Compounds						Qvalue
36) cis-1,2-dichloroethene	5.554	96	2503	0.80	ug/L	95
51) trichloroethene	8.052	95	21552	5.67	ug/L	98

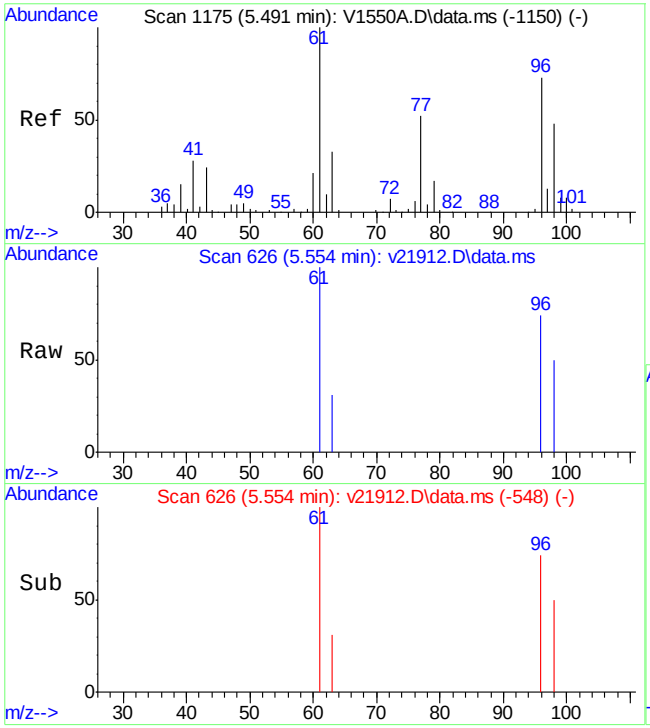
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21912.D
Acq On : 14 Aug 2013 6:59 pm
Operator : amym
Sample : mc23378-4
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Aug 15 08:46:03 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

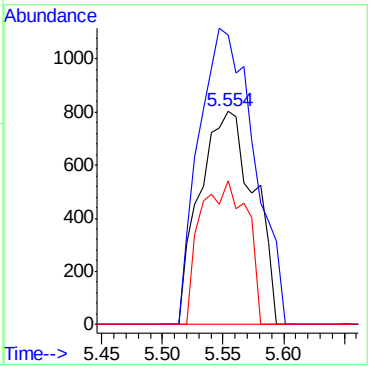


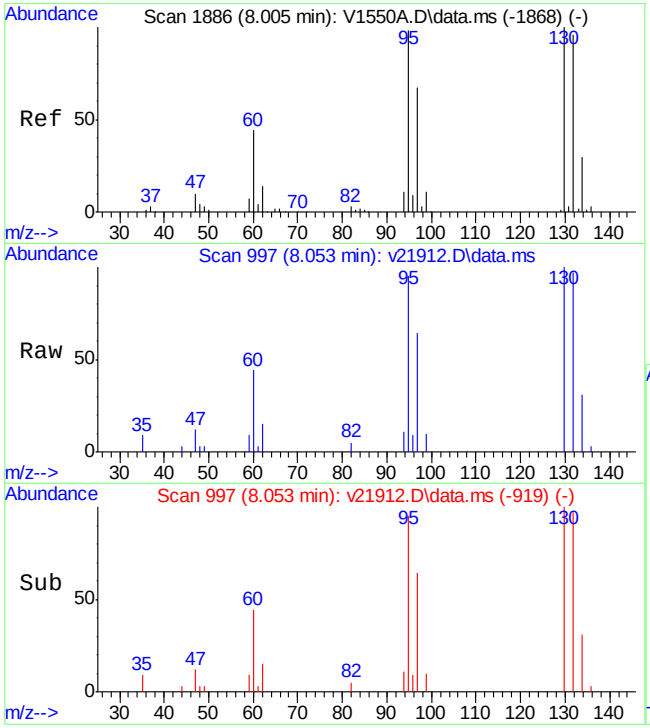


#36
cis-1,2-dichloroethene
Concen: 0.80 ug/L
RT: 5.554 min Scan# 626
Delta R.T. -0.001 min
Lab File: v21912.D
Acq: 14 Aug 2013 6:59 pm

Tgt Ion: 96 Resp: 2503

Ion	Ratio	Lower	Upper
96	100		
61	135.6	112.2	172.2
98	67.5	33.6	93.6

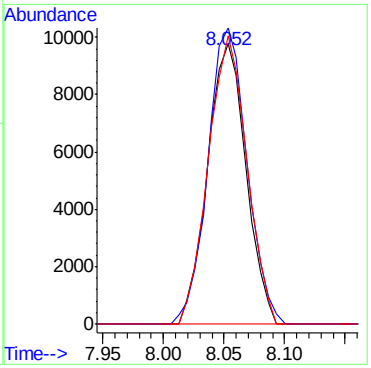




#51
trichloroethene
Concen: 5.67 ug/L
RT: 8.052 min Scan# 997
Delta R.T. 0.002 min
Lab File: v21912.D
Acq: 14 Aug 2013 6:59 pm

Tgt Ion: 95 Resp: 21552

Ion	Ratio	Lower	Upper
95	100		
130	105.5	74.4	134.4
132	102.7	69.6	129.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21907.D
Acq On : 14 Aug 2013 4:47 pm
Operator : amym
Sample : mc23378-5
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 14 17:15:34 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

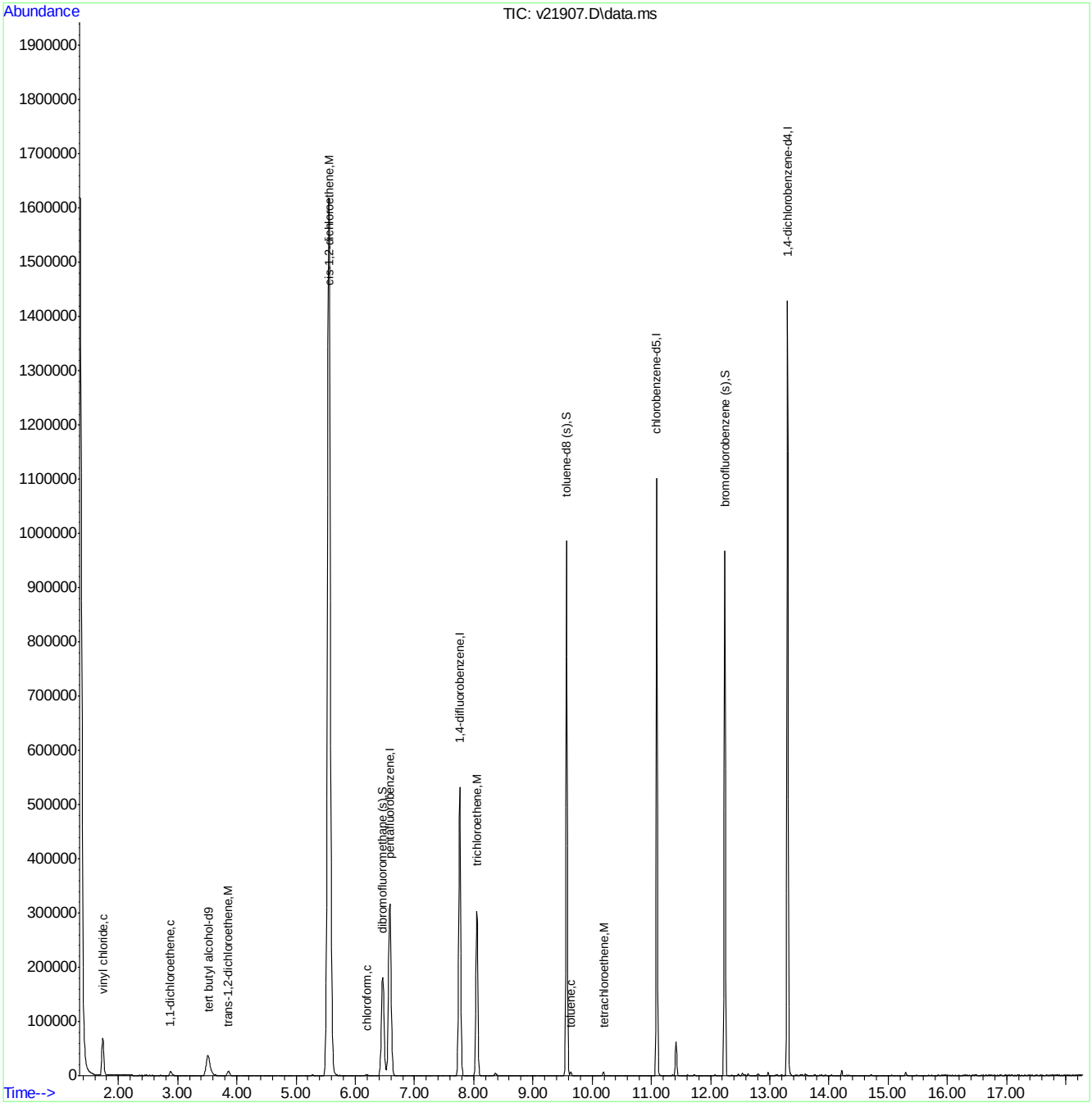
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.522	65	85864	500.00	ug/L	# 0.00
4) pentafluorobenzene	6.585	168	372541	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.765	114	540120	50.00	ug/L	0.00
66) chlorobenzene-d5	11.092	82	286416	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.302	152	318640	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.464	113	186509	49.63	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.26%			
60) toluene-d8 (s)	9.569	98	636966	51.06	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.12%			
82) bromofluorobenzene (s)	12.240	95	278523	47.57	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.14%			
Target Compounds						Qvalue
7) vinyl chloride	1.736	62	95712	25.10	ug/L	97
15) 1,1-dichloroethene	2.882	96	4248	1.56	ug/L	96
22) trans-1,2-dichloroethene	3.856	96	5966	1.82	ug/L	93
36) cis-1,2-dichloroethene	5.556	96	1308810	374.26	ug/L	97
39) chloroform	6.192	83	2583	0.42	ug/L	80
51) trichloroethene	8.055	95	114471	28.31	ug/L	98
62) toluene	9.643	92	3263	0.37	ug/L	99
67) tetrachloroethene	10.195	166	1025	0.23	ug/L	90

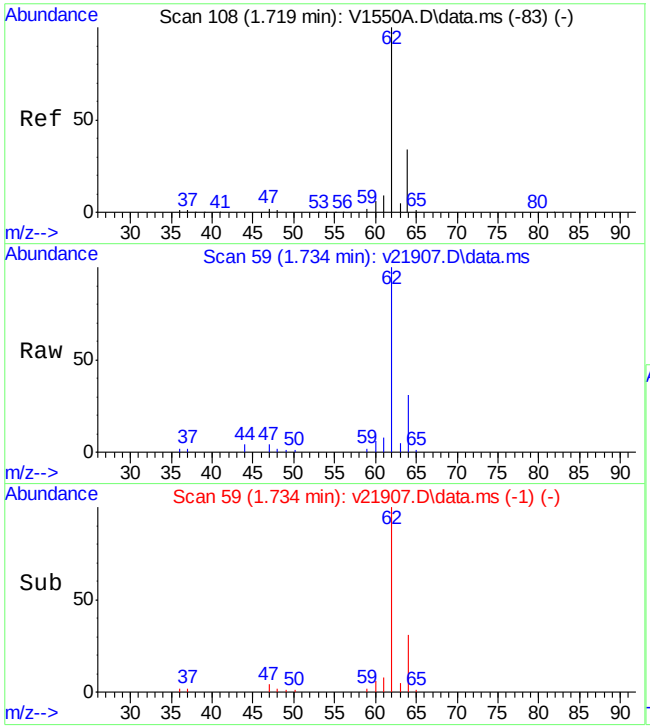
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21907.D
Acq On : 14 Aug 2013 4:47 pm
Operator : amym
Sample : mc23378-5
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 14 17:15:34 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

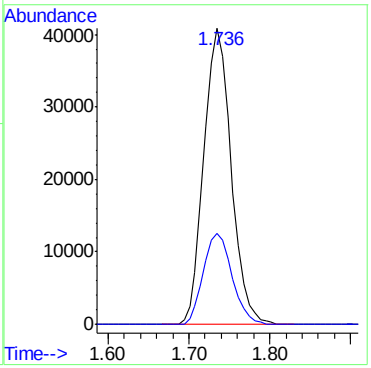


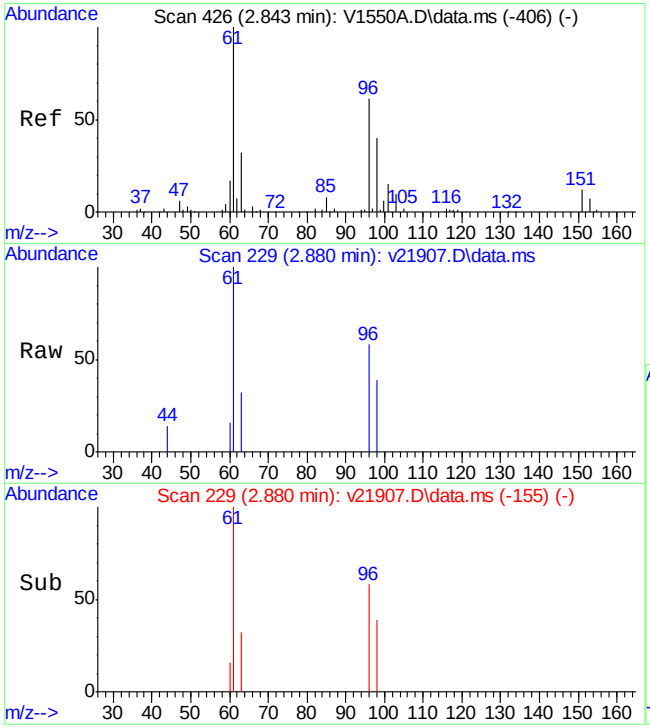


#7
vinyl chloride
Concen: 25.10 ug/L
RT: 1.736 min Scan# 59
Delta R.T. -0.006 min
Lab File: v21907.D
Acq: 14 Aug 2013 4:47 pm

Tgt Ion: 62 Resp: 95712

Ion	Ratio	Lower	Upper
62	100		
64	30.8	2.2	62.2

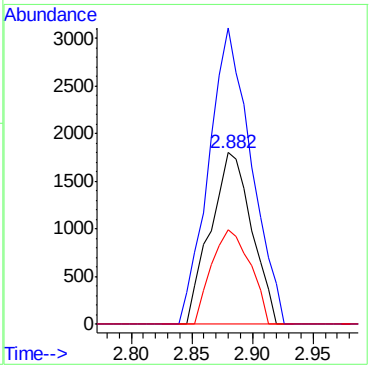


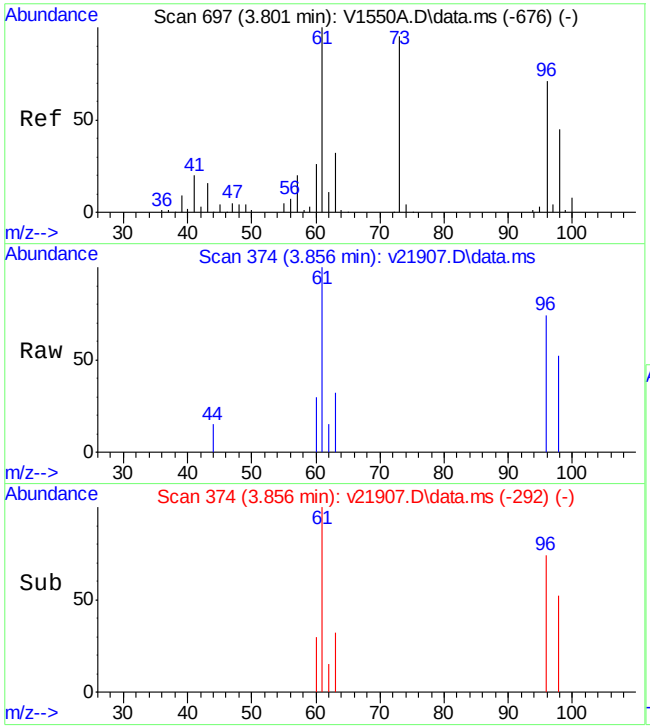


#15
1,1-dichloroethene
Concen: 1.56 ug/L
RT: 2.882 min Scan# 229
Delta R.T. 0.000 min
Lab File: v21907.D
Acq: 14 Aug 2013 4:47 pm

Tgt Ion: 96 Resp: 4248

Ion	Ratio	Lower	Upper
96	100		
61	172.9	136.6	196.6
63	55.0	23.9	83.9

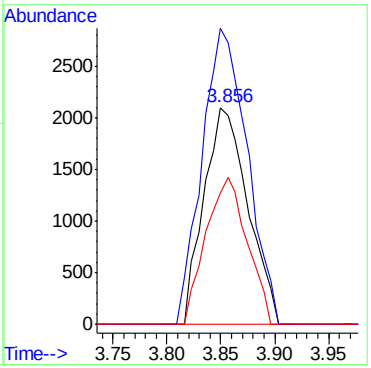


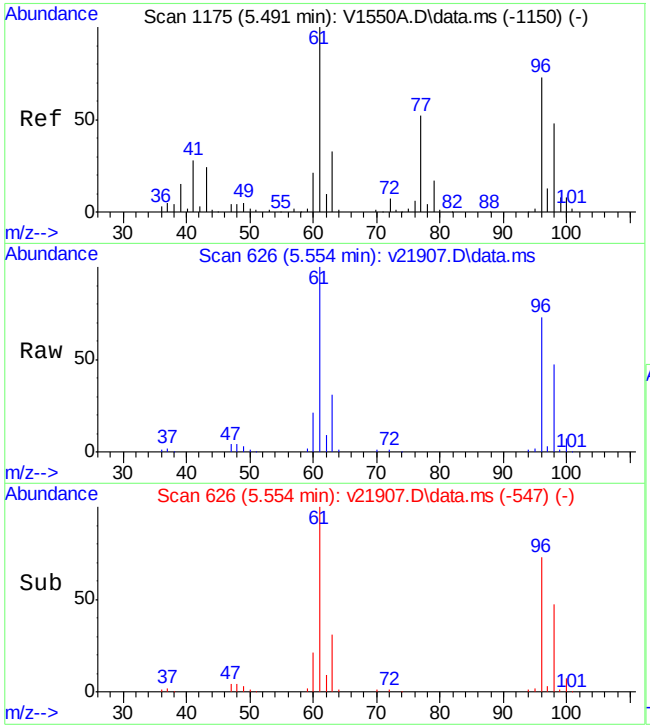


#22
trans-1,2-dichloroethene
Concen: 1.82 ug/L
RT: 3.856 min Scan# 374
Delta R.T. 0.000 min
Lab File: v21907.D
Acq: 14 Aug 2013 4:47 pm

Tgt Ion: 96 Resp: 5966

Ion	Ratio	Lower	Upper
96	100		
61	134.8	113.0	173.0
98	70.2	33.1	93.1

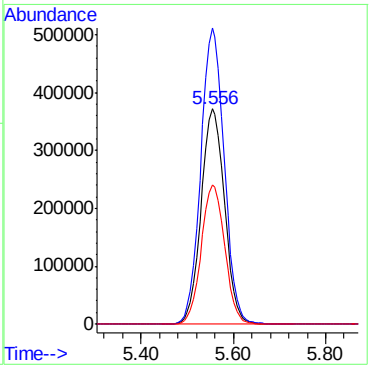


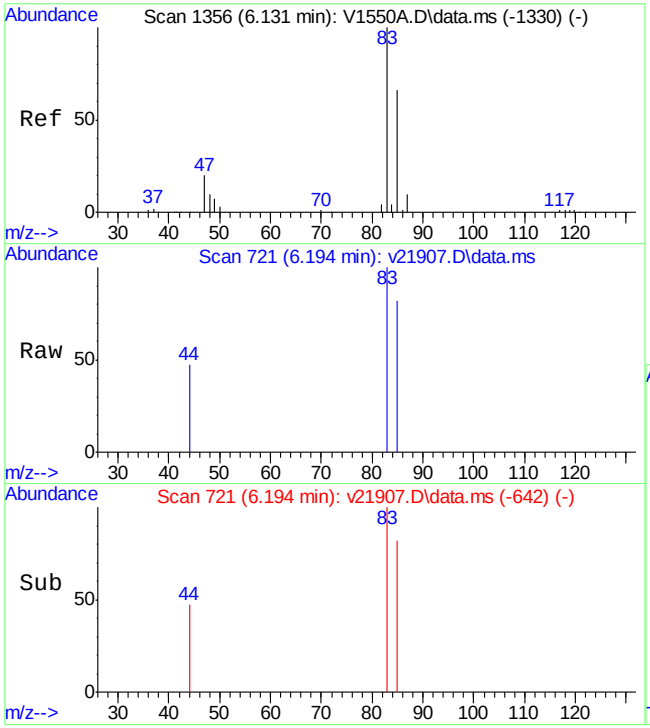


#36
cis-1,2-dichloroethene
Concen: 374.26 ug/L
RT: 5.556 min Scan# 626
Delta R.T. 0.001 min
Lab File: v21907.D
Acq: 14 Aug 2013 4:47 pm

Tgt Ion: 96 Resp: 1308810

Ion	Ratio	Lower	Upper
96	100		
61	137.7	112.2	172.2
98	64.7	33.6	93.6

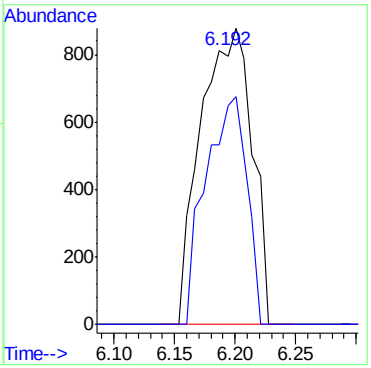


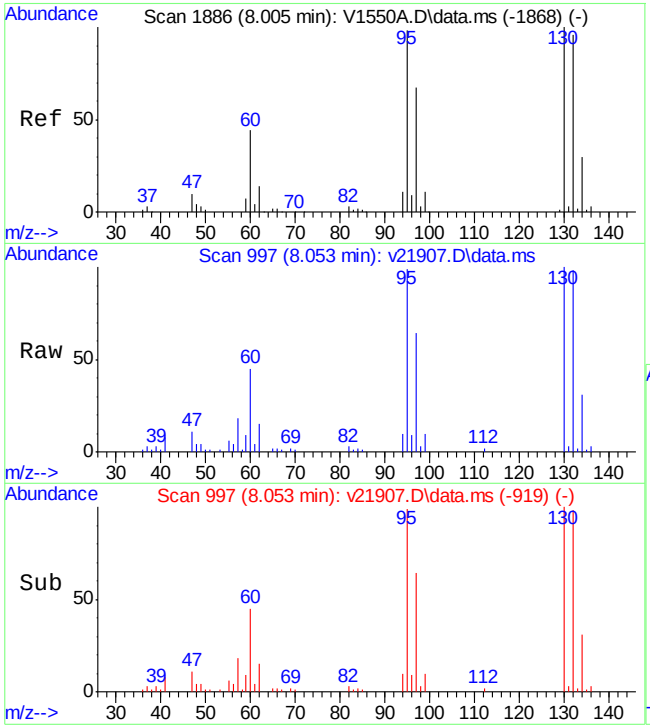


#39
chloroform
Concen: 0.42 ug/L
RT: 6.192 min Scan# 721
Delta R.T. 0.001 min
Lab File: v21907.D
Acq: 14 Aug 2013 4:47 pm

Tgt Ion: 83 Resp: 2583

Ion	Ratio	Lower	Upper
83	100		
85	81.5	35.4	95.4

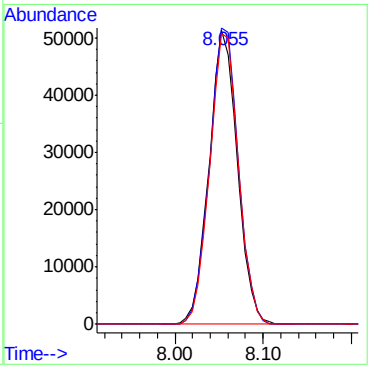


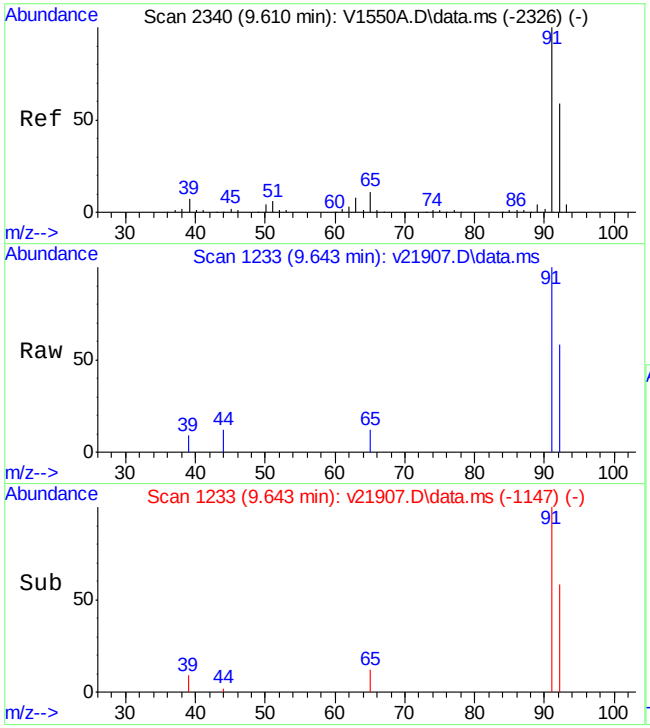


#51
trichloroethene
Concen: 28.31 ug/L
RT: 8.055 min Scan# 997
Delta R.T. 0.005 min
Lab File: v21907.D
Acq: 14 Aug 2013 4:47 pm

Tgt Ion: 95 Resp: 114471

Ion	Ratio	Lower	Upper
95	100		
130	100.9	74.4	134.4
132	99.0	69.6	129.6

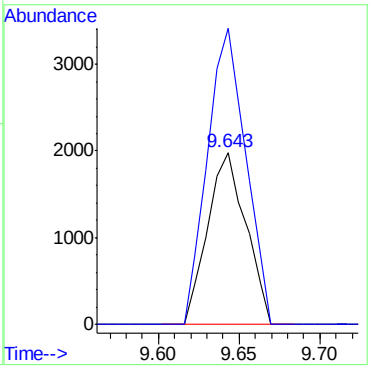


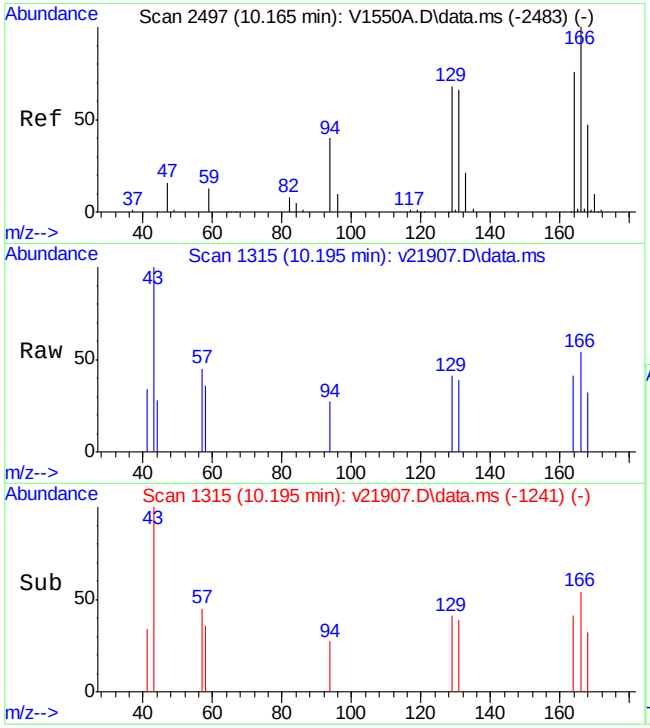


#62
toluene
Concen: 0.37 ug/L
RT: 9.643 min Scan# 1233
Delta R.T. -0.000 min
Lab File: v21907.D
Acq: 14 Aug 2013 4:47 pm

Tgt Ion: 92 Resp: 3263

Ion	Ratio	Lower	Upper
92	100		
91	172.0	141.2	201.2

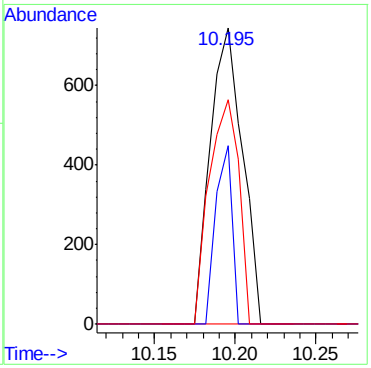




#67
tetrachloroethene
Concen: 0.23 ug/L
RT: 10.195 min Scan# 1315
Delta R.T. -0.000 min
Lab File: v21907.D
Acq: 14 Aug 2013 4:47 pm

Tgt Ion:166 Resp: 1025

Ion	Ratio	Lower	Upper
166	100		
168	60.1	17.6	77.6
129	75.7	42.6	102.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21908.D
Acq On : 14 Aug 2013 5:13 pm
Operator : amym
Sample : mc23378-6
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 15 08:39:25 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

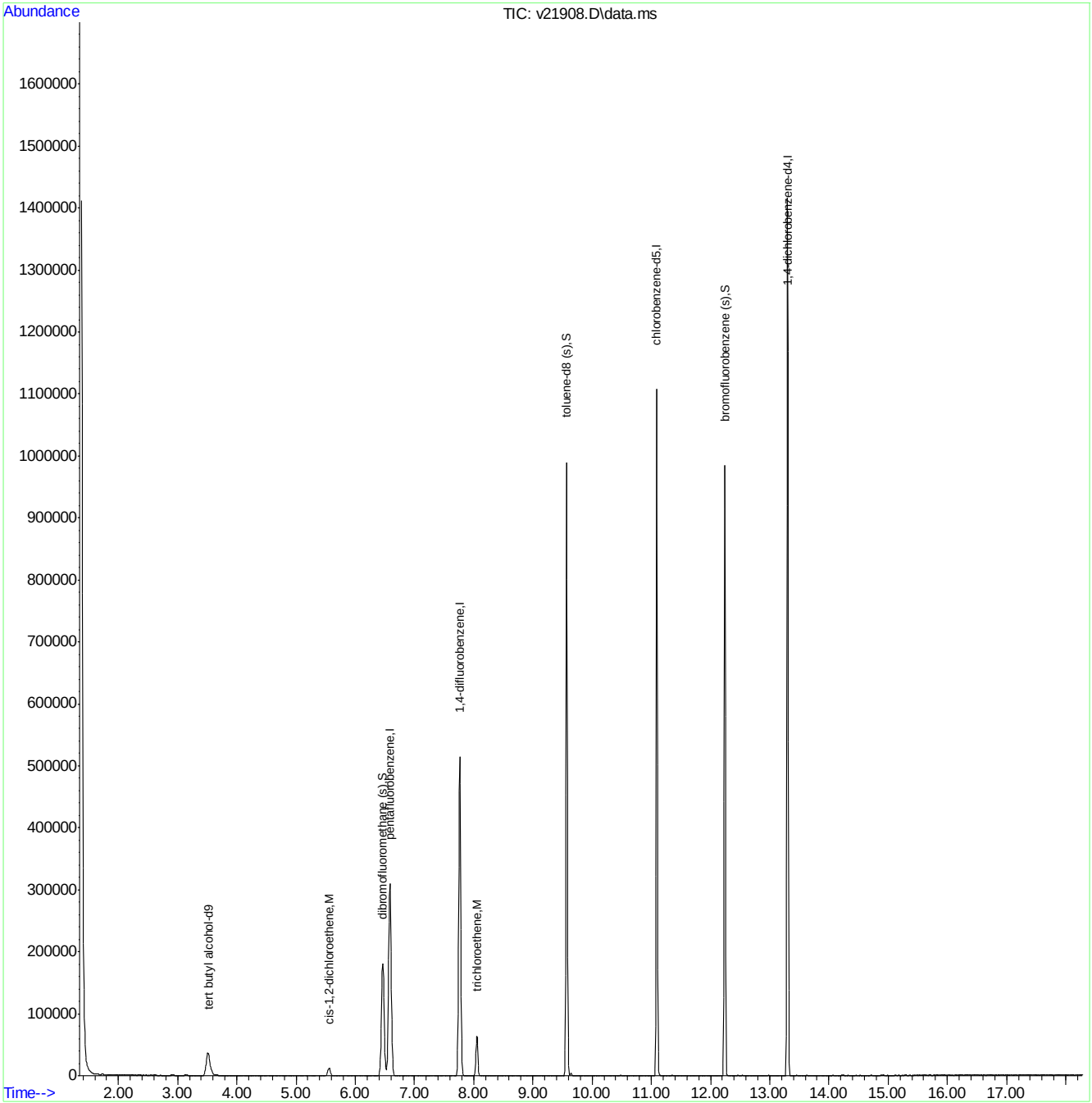
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.522	65	86240	500.00	ug/L	# 0.00
4) pentafluorobenzene	6.586	168	361999	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.765	114	542727	50.00	ug/L	0.00
66) chlorobenzene-d5	11.092	82	287744	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.303	152	317781	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.465	113	184234	50.46	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 100.92%			
60) toluene-d8 (s)	9.569	98	634041	50.58	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.16%			
82) bromofluorobenzene (s)	12.240	95	272688	46.70	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.40%			
Target Compounds						Qvalue
36) cis-1,2-dichloroethene	5.557	96	10651	3.13	ug/L	92
51) trichloroethene	8.055	95	26803	6.60	ug/L	98

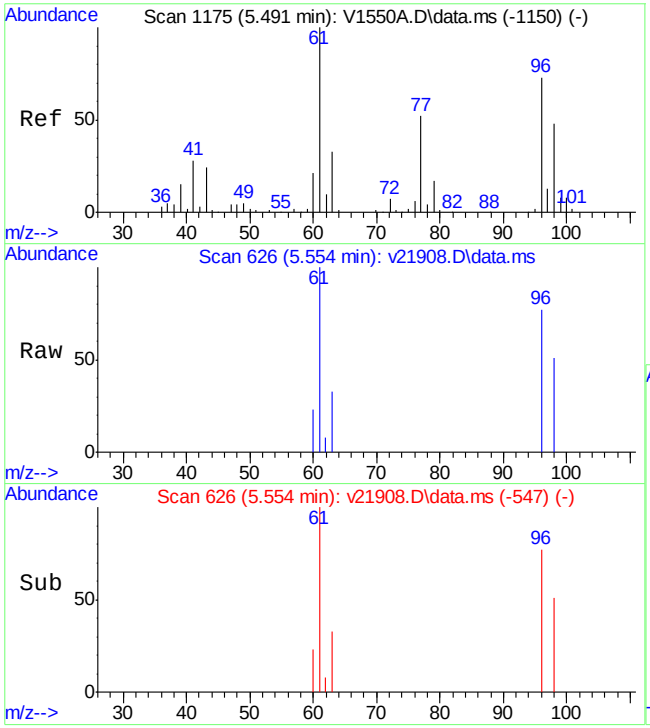
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21908.D
Acq On : 14 Aug 2013 5:13 pm
Operator : amym
Sample : mc23378-6
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 15 08:39:25 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

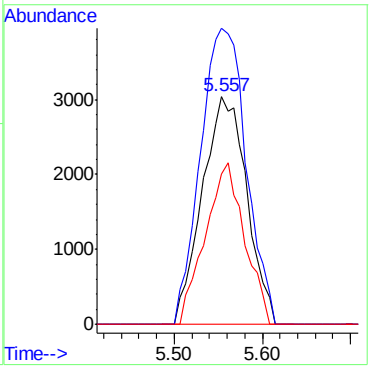


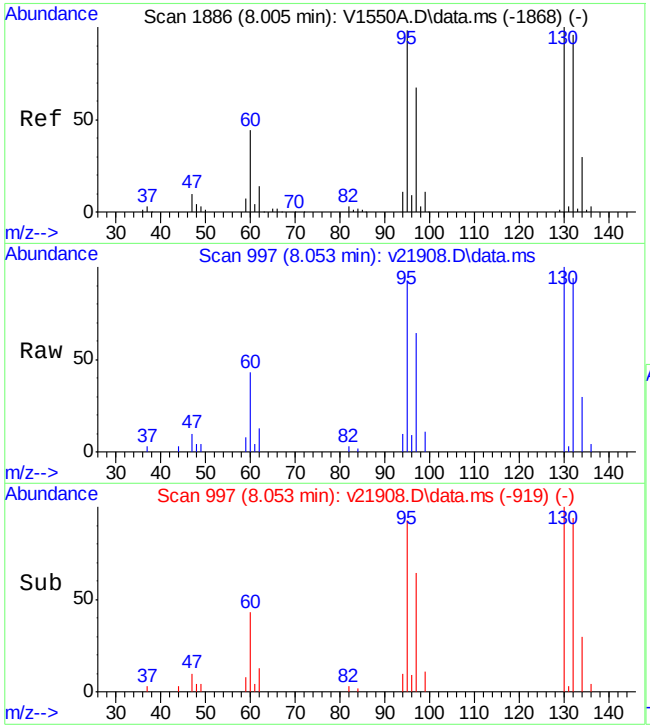


#36
cis-1,2-dichloroethene
Concen: 3.13 ug/L
RT: 5.557 min Scan# 626
Delta R.T. 0.002 min
Lab File: v21908.D
Acq: 14 Aug 2013 5:13 pm

Tgt Ion: 96 Resp: 10651

Ion	Ratio	Lower	Upper
96	100		
61	129.9	112.2	172.2
98	65.8	33.6	93.6

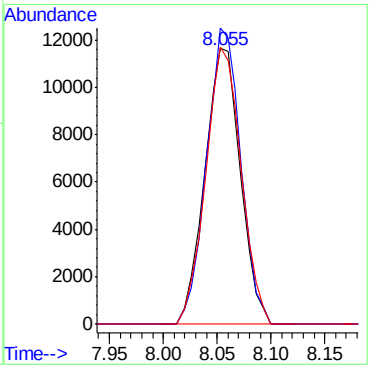




#51
trichloroethene
Concen: 6.60 ug/L
RT: 8.055 min Scan# 997
Delta R.T. 0.005 min
Lab File: v21908.D
Acq: 14 Aug 2013 5:13 pm

Tgt Ion: 95 Resp: 26803

Ion	Ratio	Lower	Upper
95	100		
130	107.4	74.4	134.4
132	100.5	69.6	129.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21879.D
Acq On : 13 Aug 2013 3:39 pm
Operator : amym
Sample : mc23378-7
Misc : MS29650,MSV845,,,,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 13 16:16:34 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

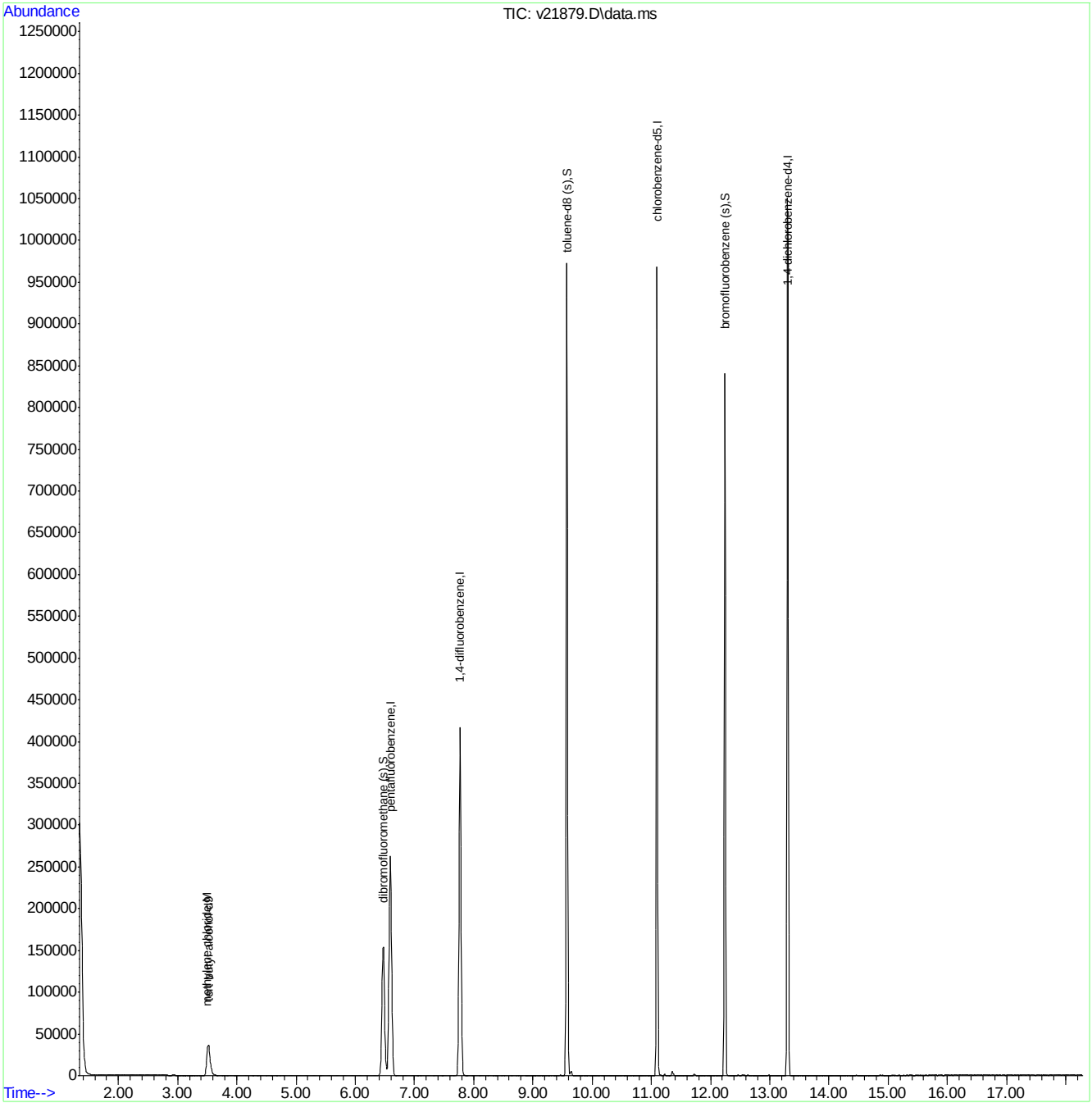
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.525	65	71966	500.00	ug/L	# 0.00
4) pentafluorobenzene	6.594	168	298743	50.00	ug/L	0.01
43) 1,4-difluorobenzene	7.771	114	431987	50.00	ug/L	0.01
66) chlorobenzene-d5	11.095	82	254773	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.304	152	248307	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.473	113	154282	51.20	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.40%			
60) toluene-d8 (s)	9.573	98	646180	64.77	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 129.54%			
82) bromofluorobenzene (s)	12.242	95	226470	49.64	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.28%			
Target Compounds						Qvalue
18) methylene chloride	3.498	84	1926	0.58	ug/L	89

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

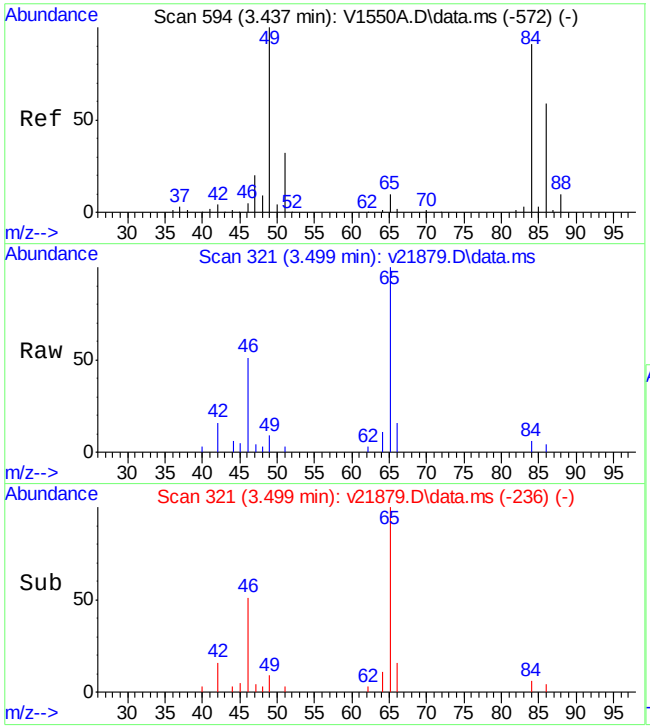
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21879.D
Acq On : 13 Aug 2013 3:39 pm
Operator : amym
Sample : mc23378-7
Misc : MS29650,MSV845,,,,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 13 16:16:34 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



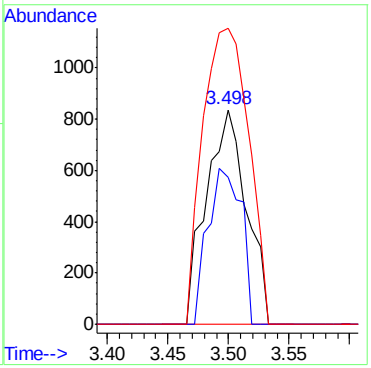
v130801w.m Tue Aug 13 16:16:43 2013 Page: 2



#18
methylene chloride
Concen: 0.58 ug/L
RT: 3.498 min Scan# 321
Delta R.T. 0.013 min
Lab File: v21879.D
Acq: 13 Aug 2013 3:39 pm

Tgt Ion: 84 Resp: 1926

Ion	Ratio	Lower	Upper
84	100		
86	68.7	34.9	94.9
49	138.0	91.3	151.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21871.D
Acq On : 13 Aug 2013 12:01 pm
Operator : amym
Sample : mb
Misc : MS29650,MSV845,,,,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 15:33:46 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

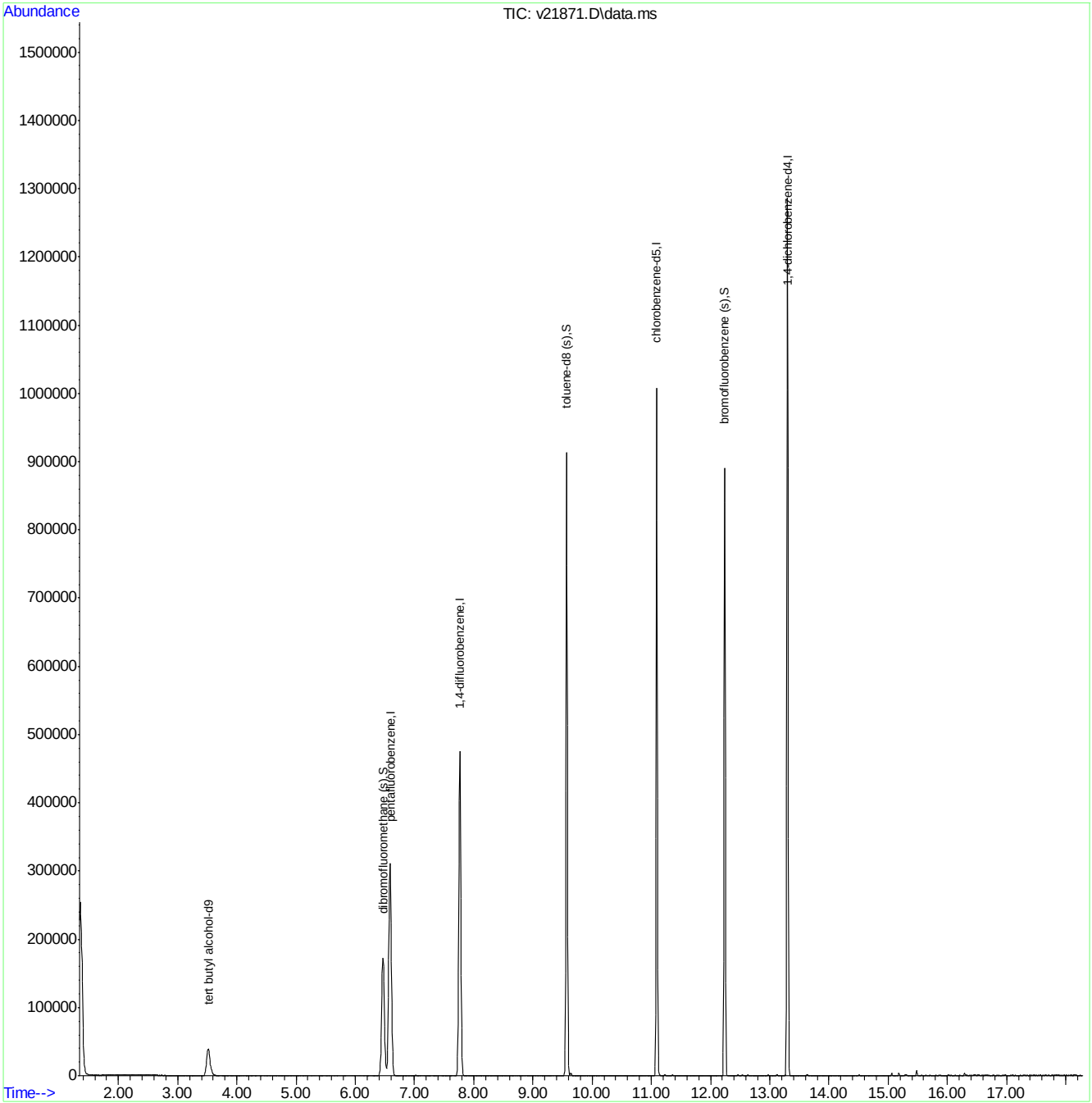
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.523	65	87013	500.00	ug/L	0.00
4) pentafluorobenzene	6.589	168	372762	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.767	114	518226	50.00	ug/L	0.00
66) chlorobenzene-d5	11.092	82	264261	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.301	152	292057	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.469	113	179383	47.71	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.42%			
60) toluene-d8 (s)	9.570	98	611127	51.06	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.12%			
82) bromofluorobenzene (s)	12.239	95	254157	47.36	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.72%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21871.D
Acq On : 13 Aug 2013 12:01 pm
Operator : amym
Sample : mb
Misc : MS29650,MSV845,,,,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 15:33:46 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21893.D
Acq On : 14 Aug 2013 10:36 am
Operator : amym
Sample : mb
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 14 15:53:44 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

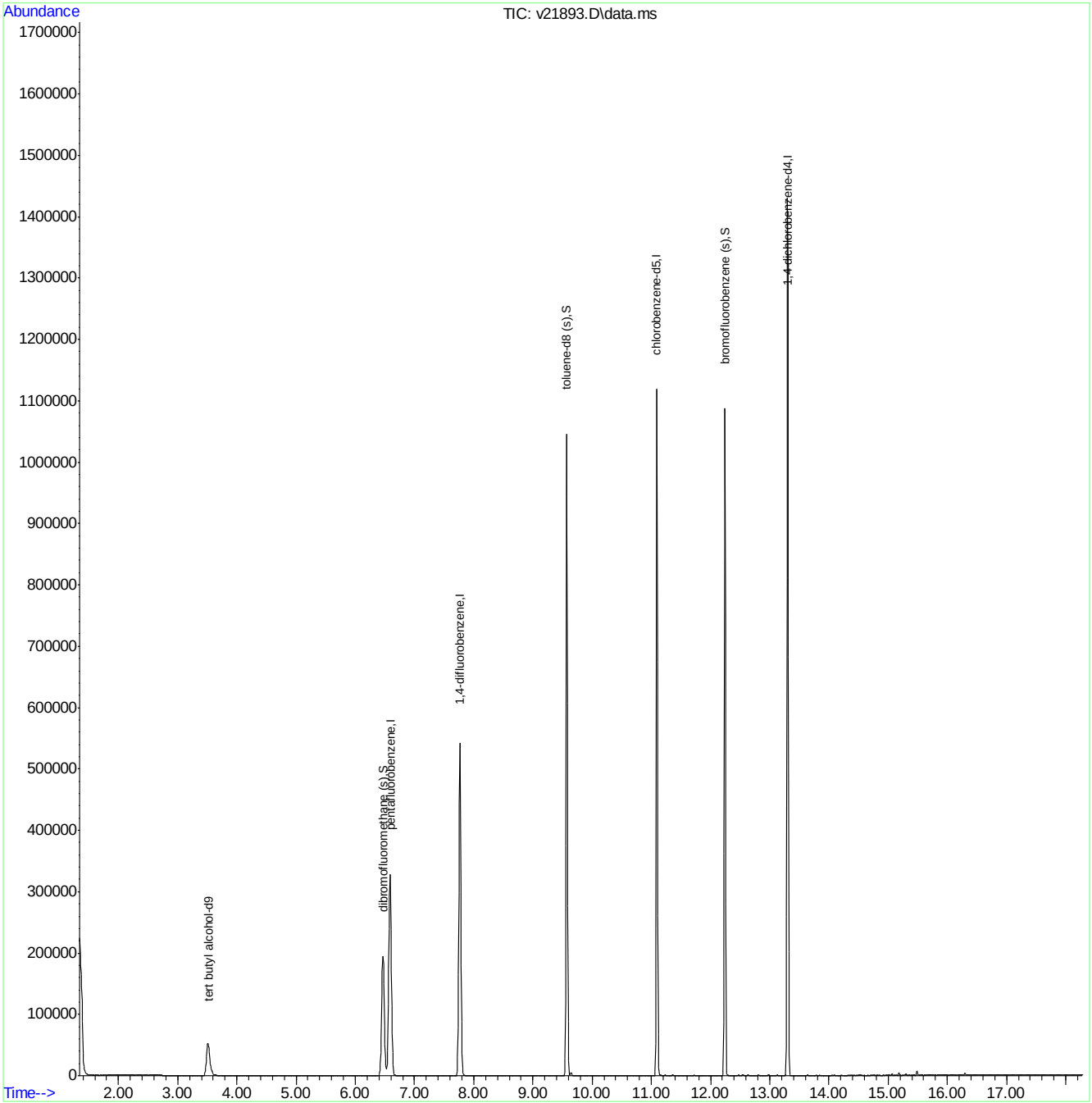
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.520	65	106407	500.00	ug/L	# 0.00
4) pentafluorobenzene	6.589	168	388946	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.768	114	581990	50.00	ug/L	0.00
66) chlorobenzene-d5	11.094	82	306552	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.304	152	335196	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.469	113	196604	50.11	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 100.22%			
60) toluene-d8 (s)	9.571	98	682368	50.77	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.54%			
82) bromofluorobenzene (s)	12.242	95	290498	47.17	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.34%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21893.D
Acq On : 14 Aug 2013 10:36 am
Operator : amym
Sample : mb
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 14 15:53:44 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/14/13 10:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21868.D
Acq On : 13 Aug 2013 10:42 am
Operator : amym
Sample : bs
Misc : MS29644,MSV845,,,,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 15:32:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.511	65	91207	500.00	ug/L		0.00
4) pentafluorobenzene	6.580	168	375460	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.761	114	649953	50.00	ug/L		0.00
66) chlorobenzene-d5	11.090	82	328410	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.299	152	351782	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.460	113	178343	47.09	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.18%				
60) toluene-d8 (s)	9.566	98	762733	50.81	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.62%				
82) bromofluorobenzene (s)	12.237	95	318007	49.20	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 98.40%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.623	59	115508	515.26	ug/L		94
3) Ethanol	2.507	45	94733	5656.52	ug/L	#	100
5) dichlorodifluoromethane	1.488	85	208617	43.50	ug/L		97
6) chloromethane	1.634	50	173549	54.27	ug/L		99
7) vinyl chloride	1.735	62	166414	43.30	ug/L		99
8) bromomethane	2.030	96	151063	61.17	ug/L		100
9) chloroethane	2.125	64	102611	61.53	ug/L		99
10) ethyl ether	2.617	59	128696	55.71	ug/L		100
11) acetonitrile	3.307	41	219735	56.08	ug/L		96
12) trichlorofluoromethane	2.356	101	319267	55.03	ug/L		100
13) freon-113	2.929	101	182192	58.82	ug/L		98
14) acrolein	2.768	56	91854	444.40	ug/L		99
15) 1,1-dichloroethene	2.881	96	162116	59.01	ug/L		99
16) acetone	2.914	58	16207	49.30	ug/L		96
17) Methyl Acetate	3.293	43	108917	40.24	ug/L		96
18) methylene chloride	3.482	84	177391	53.68	ug/L		98
19) methyl tert butyl ether	3.850	73	408025	52.11	ug/L		98
20) acrylonitrile	3.792	53	51772	53.51	ug/L		96
21) allyl chloride	3.307	41	219740	56.08	ug/L		98
22) trans-1,2-dichloroethene	3.852	96	176951	53.46	ug/L		97
23) iodomethane	3.050	142	345118	52.53	ug/L		99
24) carbon disulfide	3.134	76	514207	57.48	ug/L		100
25) propionitrile	5.668	54	19174	50.20	ug/L		100
26) vinyl acetate	4.593	43	424060	46.36	ug/L		98
27) chloroprene	4.641	53	263930	60.23	ug/L		100
28) di-isopropyl ether	4.622	45	473147	53.23	ug/L		98
29) methacrylonitrile	5.941	41	86707	52.45	ug/L		97
30) 2-butanone	5.556	72	15567	50.10	ug/L		87
31) Hexane	4.269	41	139851	57.01	ug/L		100
32) 1,1-dichloroethane	4.529	63	306566	57.42	ug/L		98
33) tert-butyl ethyl ether	5.293	59	467546	55.00	ug/L		99
34) isobutyl alcohol	4.593	43	424060	231.81	ug/L		93
35) 2,2-dichloropropane	5.566	77	218665	64.05	ug/L		99
36) cis-1,2-dichloroethene	5.551	96	189565	53.79	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21868.D
Acq On : 13 Aug 2013 10:42 am
Operator : amym
Sample : bs
Misc : MS29644,MSV845,,,,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 15:32:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) ethyl acetate	4.591	43	424077m	46.42	ug/L	
38) bromochloromethane	5.973	128	106684	59.85	ug/L	98
39) chloroform	6.188	83	335179	53.57	ug/L	99
41) Tetrahydrofuran	5.979	42	32231	51.64	ug/L	96
42) 1,1,1-trichloroethane	6.431	97	294094	59.03	ug/L	98
44) Cyclohexane	6.539	56	259152	43.72	ug/L	96
45) carbon tetrachloride	6.685	117	272669	47.69	ug/L	100
46) 1,1-dichloropropene	6.705	75	237037	42.39	ug/L	100
47) benzene	7.024	78	720209	46.27	ug/L	100
48) 1,2-dichloroethane	7.148	62	268574	40.62	ug/L	99
49) tert-amyl methyl ether	7.307	73	481528	54.37	ug/L	99
50) heptane	7.577	43	204512	60.54	ug/L	99
51) trichloroethene	8.052	95	239899	49.30	ug/L	99
52) 1,2-dichloropropane	8.399	63	231261	54.36	ug/L	99
53) dibromomethane	8.503	93	146541	55.65	ug/L	98
54) bromodichloromethane	8.753	83	297429	51.75	ug/L	98
55) Methylcyclohexane	8.351	83	321020	61.49	ug/L	99
56) 2-chloroethyl vinyl ether	9.127	63	38324	33.28	ug/L	98
57) methyl methacrylate	8.531	69	113049	55.61	ug/L	99
58) 1,4-dioxane	8.513	88	8537	260.08	ug/L	100
59) cis-1,3-dichloropropene	9.279	75	332824	47.60	ug/L	100
61) 4-methyl-2-pentanone	9.460	43	154448	54.22	ug/L	99
62) toluene	9.642	92	566611	53.42	ug/L	99
63) trans-1,3-dichloropropene	9.928	75	295325	48.53	ug/L	99
64) 1,1,2-trichloroethane	10.134	83	174782	52.12	ug/L	99
65) ethyl methacrylate	10.007	69	238192	50.72	ug/L	98
67) tetrachloroethene	10.193	166	290930	55.84	ug/L	98
68) 1,3-dichloropropane	10.295	76	317200	49.81	ug/L	98
69) dibromochloromethane	10.515	129	248192	47.21	ug/L	99
70) 1,2-dibromoethane	10.624	107	216566	51.80	ug/L	100
71) 2-hexanone	10.365	43	116355	51.77	ug/L	100
72) chlorobenzene	11.119	112	689376	46.97	ug/L	99
73) 1,1,1,2-tetrachloroethane	11.218	131	242855	50.47	ug/L	97
74) ethylbenzene	11.224	91	1099002	50.10	ug/L	99
75) m,p-xylene	11.354	106	861126	99.34	ug/L	96
76) o-xylene	11.721	106	419578	50.88	ug/L	97
77) styrene	11.742	104	707714	55.51	ug/L	95
78) bromoform	11.916	173	144400	47.66	ug/L	100
79) trans-1,4-dichloro-2-b...	12.132	53	42688	35.80	ug/L	85
81) isopropylbenzene	12.073	105	1083542	52.92	ug/L	100
83) bromobenzene	12.363	156	319702	50.98	ug/L	99
84) 1,1,2,2-tetrachloroethane	12.367	83	247002	51.61	ug/L	99
85) 1,2,3-trichloropropane	12.408	75	263333	50.81	ug/L	100
86) n-propylbenzene	12.461	91	1228884	52.16	ug/L	98
87) 2-chlorotoluene	12.540	91	742282	46.87	ug/L	97
88) 4-chlorotoluene	12.651	91	864066	47.68	ug/L	97
89) 1,3,5-trimethylbenzene	12.630	105	903025	50.99	ug/L	100
90) tert-butylbenzene	12.916	91	505548	50.70	ug/L	94
91) 1,2,4-trimethylbenzene	12.970	105	945630	50.30	ug/L	98
92) sec-butylbenzene	13.119	105	1103945	53.38	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21868.D
Acq On : 13 Aug 2013 10:42 am
Operator : amym
Sample : bs
Misc : MS29644,MSV845,,,,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 15:32:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

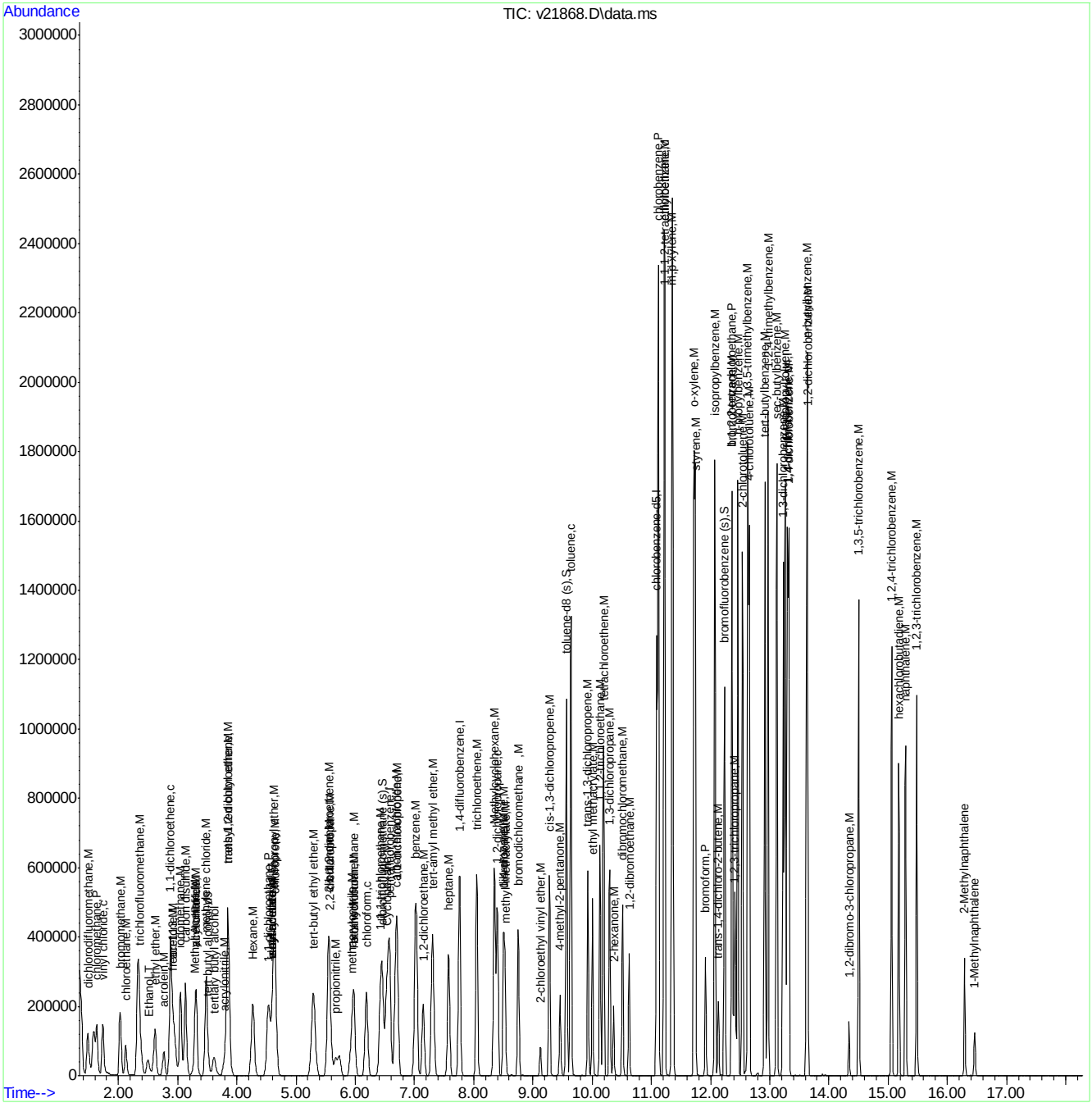
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) 1,3-dichlorobenzene	13.227	146	550942	45.88	ug/L	99
94) p-isopropyltoluene	13.259	119	888040	54.77	ug/L	98
95) 1,4-dichlorobenzene	13.322	146	555575	44.84	ug/L	98
96) 1,2-dichlorobenzene	13.639	146	509412	43.88	ug/L	99
97) n-butylbenzene	13.624	91	768991	51.11	ug/L	100
98) 1,2-dibromo-3-chloropr...	14.340	75	32334	44.89	ug/L	96
99) 1,3,5-trichlorobenzene	14.504	180	424092	54.89	ug/L	99
100) 1,2,4-trichlorobenzene	15.060	180	362223	48.06	ug/L	99
101) hexachlorobutadiene	15.181	225	161492	47.86	ug/L	99
102) naphthalene	15.294	128	662318	45.48	ug/L	100
103) 1,2,3-trichlorobenzene	15.483	180	319204	47.75	ug/L	98
104) 2-Methylnaphthalene	16.293	142	140781	23.99	ug/L	100
105) 1-Methylnaphthalene	16.463	142	57588	13.41	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21868.D
Acq On : 13 Aug 2013 10:42 am
Operator : amym
Sample : bs
Misc : MS29644,MSV845,,,,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 15:32:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/15/13 09:53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21889.D
Acq On : 14 Aug 2013 8:50 am
Operator : amym
Sample : bs
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 14 15:50:22 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.513	65	103265	500.00	ug/L		0.00
4) pentafluorobenzene	6.584	168	435992	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.764	114	623182	50.00	ug/L		0.00
66) chlorobenzene-d5	11.094	82	324109	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.304	152	370027	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.465	113	210318	47.82	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.64%				
60) toluene-d8 (s)	9.570	98	736691	51.18	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.36%				
82) bromofluorobenzene (s)	12.241	95	323457	47.57	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.14%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.626	59	125640	495.01	ug/L		90
3) Ethanol	2.508	45	88387	4661.35	ug/L	#	100
5) dichlorodifluoromethane	1.488	85	221879	39.84	ug/L		97
6) chloromethane	1.635	50	194694	52.43	ug/L		100
7) vinyl chloride	1.735	62	172555	38.67	ug/L		99
8) bromomethane	2.031	96	145024	50.57	ug/L		98
9) chloroethane	2.127	64	97660	50.43	ug/L		98
10) ethyl ether	2.617	59	112318	41.87	ug/L		98
11) acetonitrile	3.311	41	268342	58.97	ug/L		96
12) trichlorofluoromethane	2.358	101	324199	48.12	ug/L		97
13) freon-113	2.932	101	218923	60.86	ug/L		98
14) acrolein	2.770	56	112202	467.48	ug/L		99
15) 1,1-dichloroethene	2.884	96	192009	60.19	ug/L		99
16) acetone	2.917	58	24107	65.11	ug/L		92
17) Methyl Acetate	3.296	43	125336	39.88	ug/L		97
18) methylene chloride	3.487	84	209994	54.72	ug/L		94
19) methyl tert butyl ether	3.854	73	446168	49.07	ug/L		95
20) acrylonitrile	3.796	53	61799	55.01	ug/L		98
21) allyl chloride	3.311	41	268342	58.97	ug/L		97
22) trans-1,2-dichloroethene	3.857	96	207575	54.01	ug/L		96
23) iodomethane	3.053	142	395152	51.80	ug/L		98
24) carbon disulfide	3.137	76	616726	59.37	ug/L		99
25) propionitrile	5.671	54	22190	50.04	ug/L		100
26) vinyl acetate	4.597	43	495965	46.70	ug/L		95
27) chloroprene	4.646	53	314244	61.76	ug/L		98
28) di-isopropyl ether	4.627	45	568156	55.05	ug/L		97
29) methacrylonitrile	5.945	41	99857	52.02	ug/L		100
30) 2-butanone	5.560	72	20010	56.03	ug/L	#	85
31) Hexane	4.273	41	174316	61.19	ug/L		99
32) 1,1-dichloroethane	4.535	63	365388	58.94	ug/L		100
33) tert-butyl ethyl ether	5.299	59	530816	53.78	ug/L		98
34) isobutyl alcohol	4.597	43	495955	233.47	ug/L		83
35) 2,2-dichloropropane	5.571	77	266988	67.34	ug/L		99
36) cis-1,2-dichloroethene	5.558	96	221896	54.22	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21889.D
Acq On : 14 Aug 2013 8:50 am
Operator : amym
Sample : bs
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 14 15:50:22 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) ethyl acetate	4.597	43	495981m	46.75	ug/L	
38) bromochloromethane	5.978	128	121062	58.49	ug/L	96
39) chloroform	6.194	83	388382	53.45	ug/L	100
41) Tetrahydrofuran	5.983	42	36981	51.03	ug/L	92
42) 1,1,1-trichloroethane	6.437	97	338045	58.43	ug/L	98
44) Cyclohexane	6.545	56	318648	56.06	ug/L	95
45) carbon tetrachloride	6.691	117	312817	57.07	ug/L	99
46) 1,1-dichloropropene	6.709	75	277217	51.70	ug/L	99
47) benzene	7.028	78	763671	51.18	ug/L	99
48) 1,2-dichloroethane	7.152	62	289624	45.68	ug/L	100
49) tert-amyl methyl ether	7.312	73	436568	51.41	ug/L	98
50) heptane	7.580	43	208174	64.27	ug/L	97
51) trichloroethene	8.055	95	226655	48.58	ug/L	99
52) 1,2-dichloropropane	8.402	63	218893	53.66	ug/L	99
53) dibromomethane	8.507	93	139299	55.17	ug/L	95
54) bromodichloromethane	8.756	83	286841	52.05	ug/L	99
55) Methylcyclohexane	8.355	83	309603	61.85	ug/L	97
56) 2-chloroethyl vinyl ether	9.131	63	31488	29.14	ug/L	98
57) methyl methacrylate	8.535	69	102743	52.71	ug/L	98
58) 1,4-dioxane	8.514	88	7694	246.98	ug/L	79
59) cis-1,3-dichloropropene	9.283	75	319955	47.72	ug/L	99
61) 4-methyl-2-pentanone	9.464	43	143318	52.48	ug/L	98
62) toluene	9.645	92	540847	53.18	ug/L	100
63) trans-1,3-dichloropropene	9.932	75	284017	48.67	ug/L	98
64) 1,1,2-trichloroethane	10.138	83	164325	51.11	ug/L	98
65) ethyl methacrylate	10.011	69	215811	48.05	ug/L	98
67) tetrachloroethene	10.197	166	280919	54.63	ug/L	99
68) 1,3-dichloropropane	10.299	76	300306	47.78	ug/L	98
69) dibromochloromethane	10.519	129	239337	46.19	ug/L	100
70) 1,2-dibromoethane	10.628	107	202276	49.02	ug/L	99
71) 2-hexanone	10.369	43	123531	55.69	ug/L	98
72) chlorobenzene	11.124	112	662519	45.74	ug/L	98
73) 1,1,1,2-tetrachloroethane	11.223	131	235516	49.60	ug/L	99
74) ethylbenzene	11.228	91	1072241	49.52	ug/L	99
75) m,p-xylene	11.359	106	837928	97.95	ug/L	97
76) o-xylene	11.725	106	408258	50.16	ug/L	98
77) styrene	11.746	104	685409	54.47	ug/L	99
78) bromoform	11.920	173	140565	47.08	ug/L	98
79) trans-1,4-dichloro-2-b...	12.136	53	55653	45.59	ug/L	85
81) isopropylbenzene	12.077	105	1058521	49.15	ug/L	99
83) bromobenzene	12.367	156	317123	48.07	ug/L	97
84) 1,1,2,2-tetrachloroethane	12.371	83	243335	48.34	ug/L	98
85) 1,2,3-trichloropropane	12.412	75	270666	49.65	ug/L	99
86) n-propylbenzene	12.465	91	1247782	50.35	ug/L	99
87) 2-chlorotoluene	12.544	91	758457	45.53	ug/L	96
88) 4-chlorotoluene	12.656	91	908960	47.68	ug/L	99
89) 1,3,5-trimethylbenzene	12.634	105	919903	49.38	ug/L	100
90) tert-butylbenzene	12.920	91	503499	48.00	ug/L	96
91) 1,2,4-trimethylbenzene	12.974	105	945359	47.80	ug/L	98
92) sec-butylbenzene	13.123	105	1114608	51.24	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21889.D
Acq On : 14 Aug 2013 8:50 am
Operator : amym
Sample : bs
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 14 15:50:22 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

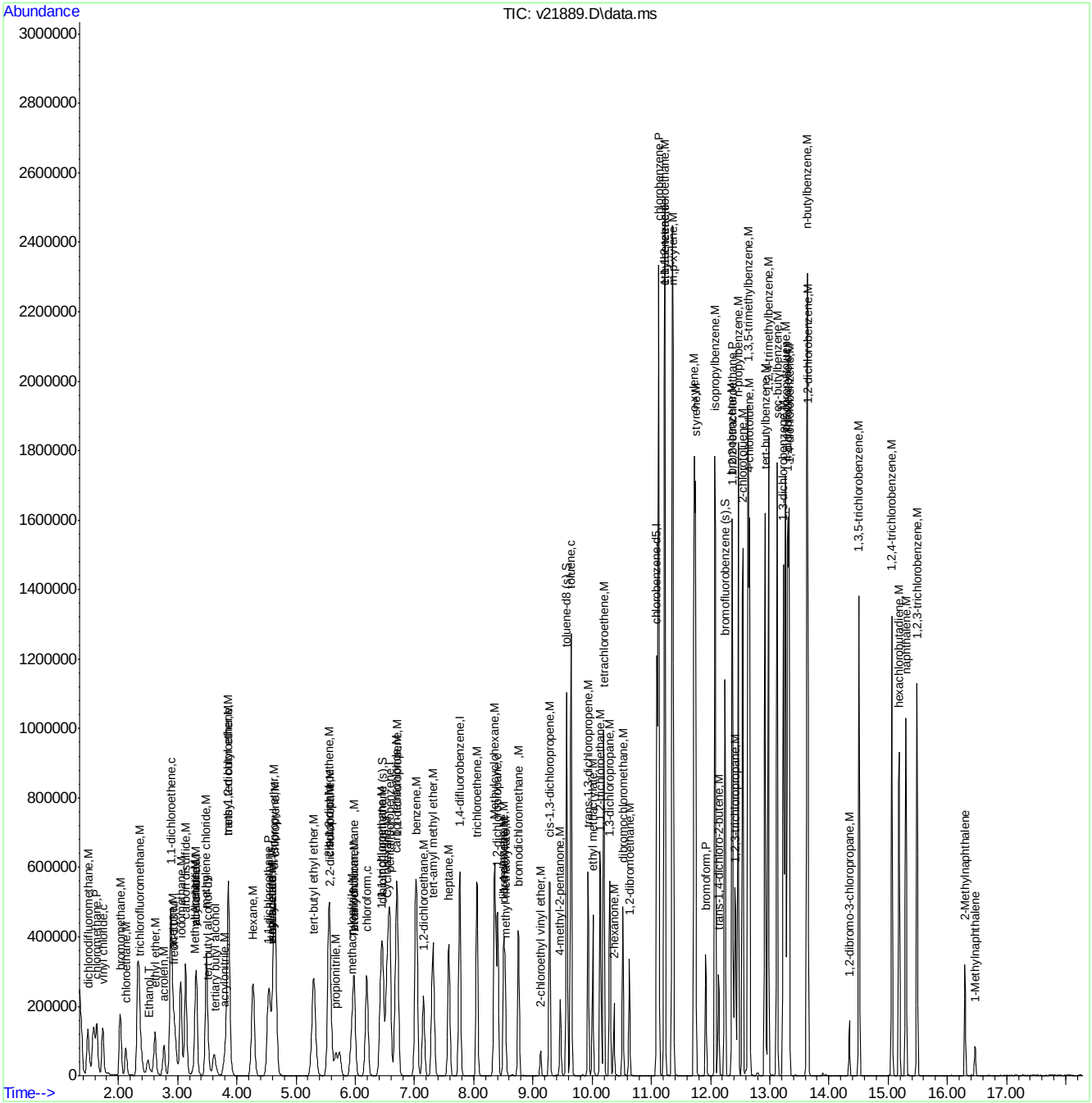
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) 1,3-dichlorobenzene	13.231	146	573681	45.41	ug/L	98
94) p-isopropyltoluene	13.264	119	942181	55.24	ug/L	98
95) 1,4-dichlorobenzene	13.327	146	589695	45.25	ug/L	98
96) 1,2-dichlorobenzene	13.644	146	546553	44.76	ug/L	98
97) n-butylbenzene	13.629	91	852537	53.87	ug/L	98
98) 1,2-dibromo-3-chloropr...	14.345	75	31431	42.07	ug/L	99
99) 1,3,5-trichlorobenzene	14.509	180	417185	51.33	ug/L	100
100) 1,2,4-trichlorobenzene	15.064	180	386744	48.78	ug/L	98
101) hexachlorobutadiene	15.186	225	173588	48.91	ug/L	99
102) naphthalene	15.299	128	716281	46.70	ug/L	100
103) 1,2,3-trichlorobenzene	15.487	180	344281	48.96	ug/L	99
104) 2-Methylnaphthalene	16.299	142	132775	21.96	ug/L	100
105) 1-Methylnaphthalene	16.469	142	39328	9.72	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21889.D
Acq On : 14 Aug 2013 8:50 am
Operator : amym
Sample : bs
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 14 15:50:22 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/15/13 09:53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21890.D
Acq On : 14 Aug 2013 9:17 am
Operator : amym
Sample : bsd
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 14 15:52:34 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.518	65	108724	500.00	ug/L		0.00
4) pentafluorobenzene	6.588	168	436419	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.767	114	620905	50.00	ug/L		0.00
66) chlorobenzene-d5	11.094	82	324333	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.304	152	366322	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.468	113	208920	47.46	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.92%				
60) toluene-d8 (s)	9.571	98	732190	51.06	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.12%				
82) bromofluorobenzene (s)	12.241	95	321774	47.80	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.60%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.631	59	133457	499.41	ug/L		90
3) Ethanol	2.511	45	86372	4326.37	ug/L	#	100
5) dichlorodifluoromethane	1.495	85	221771	39.78	ug/L		99
6) chloromethane	1.640	50	190026	51.13	ug/L		99
7) vinyl chloride	1.740	62	166017	37.16	ug/L		98
8) bromomethane	2.036	96	139334	48.54	ug/L		98
9) chloroethane	2.132	64	94313	48.65	ug/L		98
10) ethyl ether	2.624	59	138193	51.47	ug/L		94
11) acetonitrile	3.316	41	265395	58.27	ug/L		94
12) trichlorofluoromethane	2.363	101	309596	45.91	ug/L		97
13) freon-113	2.937	101	210714	58.52	ug/L		97
14) acrolein	2.775	56	115154	479.31	ug/L		100
15) 1,1-dichloroethene	2.889	96	185450	58.08	ug/L		100
16) acetone	2.922	58	23853	64.27	ug/L		95
17) Methyl Acetate	3.301	43	130772	41.57	ug/L		98
18) methylene chloride	3.491	84	209854	54.63	ug/L		96
19) methyl tert butyl ether	3.859	73	458900	50.42	ug/L		98
20) acrylonitrile	3.801	53	63519	56.48	ug/L		100
21) allyl chloride	3.316	41	265395	58.27	ug/L		98
22) trans-1,2-dichloroethene	3.861	96	204327	53.11	ug/L		98
23) iodomethane	3.058	142	389120	50.96	ug/L		98
24) carbon disulfide	3.142	76	596902	57.41	ug/L		99
25) propionitrile	5.678	54	23876	53.61	ug/L		100
26) vinyl acetate	4.602	43	501696	47.19	ug/L		95
27) chloroprene	4.651	53	304437	59.77	ug/L		99
28) di-isopropyl ether	4.632	45	565494	54.73	ug/L		96
29) methacrylonitrile	5.950	41	103411	53.82	ug/L		95
30) 2-butanone	5.565	72	20551	57.63	ug/L		88
31) Hexane	4.278	41	167103	58.60	ug/L		96
32) 1,1-dichloroethane	4.539	63	360850	58.15	ug/L		98
33) tert-butyl ethyl ether	5.303	59	536154	54.26	ug/L		98
34) isobutyl alcohol	4.602	43	501679	235.94	ug/L		84
35) 2,2-dichloropropane	5.575	77	257180	64.81	ug/L		99
36) cis-1,2-dichloroethene	5.562	96	219864	53.67	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21890.D
Acq On : 14 Aug 2013 9:17 am
Operator : amym
Sample : bsd
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 14 15:52:34 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
37) ethyl acetate	4.604	43	501660m	47.24 ug/L	
38) bromochloromethane	5.982	128	120729	58.27 ug/L	94
39) chloroform	6.198	83	379866	52.23 ug/L	98
41) Tetrahydrofuran	5.988	42	38898	53.62 ug/L	97
42) 1,1,1-trichloroethane	6.440	97	329559	56.90 ug/L	98
44) Cyclohexane	6.548	56	305664	53.98 ug/L	95
45) carbon tetrachloride	6.694	117	302562	55.40 ug/L	100
46) 1,1-dichloropropene	6.712	75	270808	50.69 ug/L	100
47) benzene	7.031	78	756343	50.87 ug/L	98
48) 1,2-dichloroethane	7.156	62	286072	45.29 ug/L	99
49) tert-amyl methyl ether	7.314	73	446251	52.74 ug/L	97
50) heptane	7.583	43	199812	61.91 ug/L	96
51) trichloroethene	8.057	95	223172	48.01 ug/L	97
52) 1,2-dichloropropane	8.404	63	219518	54.02 ug/L	98
53) dibromomethane	8.509	93	139621	55.50 ug/L	100
54) bromodichloromethane	8.758	83	283168	51.57 ug/L	100
55) Methylcyclohexane	8.357	83	300609	60.28 ug/L	96
56) 2-chloroethyl vinyl ether	9.132	63	32755	30.23 ug/L	98
57) methyl methacrylate	8.536	69	107127	55.16 ug/L	97
58) 1,4-dioxane	8.517	88	8200	261.28 ug/L	78
59) cis-1,3-dichloropropene	9.284	75	316791	47.43 ug/L	100
61) 4-methyl-2-pentanone	9.465	43	149959	55.11 ug/L	98
62) toluene	9.647	92	532422	52.55 ug/L	99
63) trans-1,3-dichloropropene	9.933	75	282806	48.64 ug/L	98
64) 1,1,2-trichloroethane	10.139	83	167056	52.15 ug/L	100
65) ethyl methacrylate	10.012	69	223656	49.89 ug/L	99
67) tetrachloroethene	10.198	166	275448	53.53 ug/L	100
68) 1,3-dichloropropane	10.300	76	304023	48.34 ug/L	99
69) dibromochloromethane	10.520	129	239701	46.23 ug/L	100
70) 1,2-dibromoethane	10.629	107	206285	49.96 ug/L	99
71) 2-hexanone	10.369	43	126418	56.96 ug/L	97
72) chlorobenzene	11.124	112	652848	45.04 ug/L	98
73) 1,1,1,2-tetrachloroethane	11.223	131	234221	49.29 ug/L	98
74) ethylbenzene	11.228	91	1056176	48.75 ug/L	99
75) m,p-xylene	11.359	106	823934	96.25 ug/L	96
76) o-xylene	11.726	106	402221	49.39 ug/L	99
77) styrene	11.746	104	683962	54.32 ug/L	98
78) bromoform	11.920	173	142733	47.70 ug/L	99
79) trans-1,4-dichloro-2-b...	12.136	53	56734	46.34 ug/L	85
81) isopropylbenzene	12.077	105	1045476	49.03 ug/L	98
83) bromobenzene	12.367	156	312328	47.82 ug/L	95
84) 1,1,2,2-tetrachloroethane	12.371	83	250759	50.32 ug/L	99
85) 1,2,3-trichloropropane	12.413	75	279251	51.74 ug/L	99
86) n-propylbenzene	12.465	91	1231713	50.20 ug/L	99
87) 2-chlorotoluene	12.544	91	744489	45.14 ug/L	96
88) 4-chlorotoluene	12.656	91	893412	47.34 ug/L	99
89) 1,3,5-trimethylbenzene	12.634	105	897955	48.69 ug/L	100
90) tert-butylbenzene	12.921	91	493646	47.54 ug/L	93
91) 1,2,4-trimethylbenzene	12.974	105	924080	47.20 ug/L	98
92) sec-butylbenzene	13.123	105	1091731	50.69 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21890.D
Acq On : 14 Aug 2013 9:17 am
Operator : amym
Sample : bsd
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 14 15:52:34 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

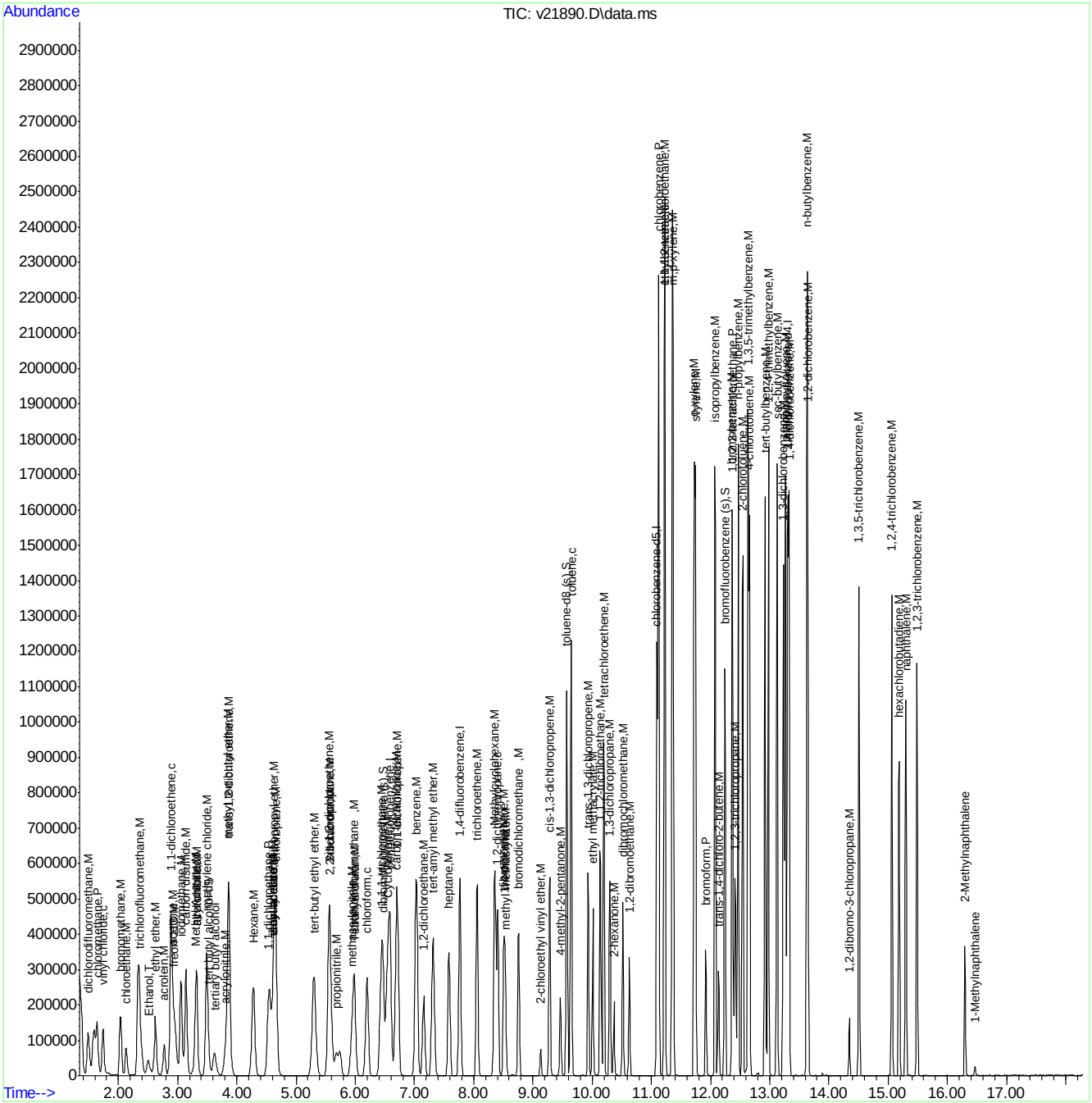
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) 1,3-dichlorobenzene	13.231	146	564670	45.15	ug/L	98
94) p-isopropyltoluene	13.264	119	922406	54.63	ug/L	98
95) 1,4-dichlorobenzene	13.326	146	588168	45.59	ug/L	97
96) 1,2-dichlorobenzene	13.643	146	545480	45.12	ug/L	98
97) n-butylbenzene	13.628	91	832022	53.10	ug/L	99
98) 1,2-dibromo-3-chloropr...	14.345	75	32852	43.98	ug/L	99
99) 1,3,5-trichlorobenzene	14.509	180	412964	51.33	ug/L	99
100) 1,2,4-trichlorobenzene	15.064	180	392715	50.03	ug/L	100
101) hexachlorobutadiene	15.185	225	167631	47.71	ug/L	98
102) naphthalene	15.298	128	746976	49.08	ug/L	100
103) 1,2,3-trichlorobenzene	15.487	180	354839	50.98	ug/L	99
104) 2-Methylnaphthalene	16.298	142	151420	24.64	ug/L	100
105) 1-Methylnaphthalene	16.468	142	12558	5.09	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21890.D
Acq On : 14 Aug 2013 9:17 am
Operator : amym
Sample : bsd
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 14 15:52:34 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/14/13 10:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21883.D
Acq On : 13 Aug 2013 5:28 pm
Operator : amym
Sample : mc23378-2ms
Misc : MS29650,MSV845,,,,5,10
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 14 08:56:55 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.530	65	72153	500.00	ug/L		0.00
4) pentafluorobenzene	6.595	168	326432	50.00	ug/L		0.01
43) 1,4-difluorobenzene	7.773	114	440536	50.00	ug/L		0.01
66) chlorobenzene-d5	11.096	82	260814	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.305	152	303064	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.475	113	157423	47.81	ug/L		0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.62%				
60) toluene-d8 (s)	9.575	98	629371	61.86	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 123.72%				
82) bromofluorobenzene (s)	12.243	95	257475	46.24	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 92.48%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.642	59	89964	507.29	ug/L		86
3) Ethanol	2.519	45	68532	5172.68	ug/L	#	100
5) dichlorodifluoromethane	1.501	85	189068	45.34	ug/L		98
6) chloromethane	1.648	50	173471	62.40	ug/L		98
7) vinyl chloride	1.749	62	204293	61.14	ug/L		99
8) bromomethane	2.045	96	145201	67.62	ug/L		95
9) chloroethane	2.139	64	97869	67.50	ug/L		99
10) ethyl ether	2.629	59	108139	53.84	ug/L		97
11) acetonitrile	3.323	41	194970	57.23	ug/L		99
12) trichlorofluoromethane	2.371	101	325260	64.49	ug/L		100
13) freon-113	2.946	101	164966	61.26	ug/L		97
14) acrolein	2.780	56	79280	441.17	ug/L		98
15) 1,1-dichloroethene	2.896	96	139446	58.39	ug/L		91
16) acetone	2.920	58	10484	35.17	ug/L		99
17) Methyl Acetate	3.308	43	90996	38.67	ug/L		97
18) methylene chloride	3.498	84	151242	52.64	ug/L		95
19) methyl tert butyl ether	3.868	73	340792	50.06	ug/L		99
20) acrylonitrile	3.809	53	43653	51.90	ug/L		100
21) allyl chloride	3.323	41	194979	57.23	ug/L		95
22) trans-1,2-dichloroethene	3.868	96	156923	54.53	ug/L		95
23) iodomethane	3.066	142	294735	51.60	ug/L		94
24) carbon disulfide	3.150	76	436425	56.12	ug/L		100
25) propionitrile	5.685	54	15693	47.41	ug/L		100
26) vinyl acetate	4.612	43	366279	46.06	ug/L		95
27) chloroprene	4.659	53	246186	64.62	ug/L		92
28) di-isopropyl ether	4.641	45	413270	53.48	ug/L		94
29) methacrylonitrile	5.958	41	74366	51.74	ug/L		94
30) 2-butanone	5.571	72	17177	65.03	ug/L	#	60
31) Hexane	4.287	41	132300	62.03	ug/L		94
32) 1,1-dichloroethane	4.547	63	271930	58.59	ug/L		100
33) tert-butyl ethyl ether	5.312	59	389775	52.74	ug/L		99
34) isobutyl alcohol	4.612	43	366287	230.30	ug/L		84
35) 2,2-dichloropropane	5.584	77	209919	70.72	ug/L		87
36) cis-1,2-dichloroethene	5.569	96	757121	247.08	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21883.D
Acq On : 13 Aug 2013 5:28 pm
Operator : amym
Sample : mc23378-2ms
Misc : MS29650,MSV845,,,,5,10
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 14 08:56:55 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) ethyl acetate	4.611	43	366285m	46.12	ug/L	
38) bromochloromethane	5.989	128	89647	57.84	ug/L	96
39) chloroform	6.204	83	304130	55.90	ug/L	99
41) Tetrahydrofuran	5.995	42	26146	48.19	ug/L	87
42) 1,1,1-trichloroethane	6.448	97	273433	63.12	ug/L	96
44) Cyclohexane	6.556	56	226425	56.35	ug/L	96
45) carbon tetrachloride	6.702	117	257783	66.52	ug/L	100
46) 1,1-dichloropropene	6.720	75	210802	55.61	ug/L	98
47) benzene	7.039	78	544613	51.63	ug/L	100
48) 1,2-dichloroethane	7.162	62	238265	53.16	ug/L	98
49) tert-amyl methyl ether	7.320	73	320044	53.31	ug/L	96
50) heptane	7.589	43	148812	64.99	ug/L	94
51) trichloroethene	8.063	95	553756	167.88	ug/L	99
52) 1,2-dichloropropane	8.409	63	184201	63.88	ug/L	99
53) dibromomethane	8.514	93	128976	72.26	ug/L	97
54) bromodichloromethane	8.762	83	265304	68.10	ug/L	99
55) Methylcyclohexane	8.361	83	241633	68.29	ug/L	94
56) 2-chloroethyl vinyl ether	9.135	63	16817	23.09	ug/L	100
57) methyl methacrylate	8.539	69	92655	67.25	ug/L	94
58) 1,4-dioxane	8.521	88	6016	268.75	ug/L	92
59) cis-1,3-dichloropropene	9.288	75	284537	59.64	ug/L	99
61) 4-methyl-2-pentanone	9.468	43	124642	64.56	ug/L	97
62) toluene	9.649	92	446320	62.08	ug/L	100
63) trans-1,3-dichloropropene	9.935	75	244035	58.73	ug/L	99
64) 1,1,2-trichloroethane	10.141	83	147534	64.91	ug/L	99
65) ethyl methacrylate	10.015	69	178846	55.97	ug/L	91
67) tetrachloroethene	10.200	166	238158	57.55	ug/L	99
68) 1,3-dichloropropane	10.302	76	264532	52.30	ug/L	99
69) dibromochloromethane	10.522	129	196683	47.12	ug/L	99
70) 1,2-dibromoethane	10.631	107	190022	57.23	ug/L	98
71) 2-hexanone	10.371	43	82115	46.01	ug/L	96
72) chlorobenzene	11.126	112	535128	45.91	ug/L	99
73) 1,1,1,2-tetrachloroethane	11.225	131	205911	53.89	ug/L	99
74) ethylbenzene	11.230	91	902158	51.78	ug/L	99
75) m,p-xylene	11.361	106	664322	96.50	ug/L	98
76) o-xylene	11.727	106	397262	60.66	ug/L	99
77) styrene	11.748	104	669788	66.15	ug/L	96
78) bromoform	11.922	173	128850	52.90	ug/L	100
79) trans-1,4-dichloro-2-b...	12.138	53	41177	42.34	ug/L	84
81) isopropylbenzene	12.079	105	913314	51.78	ug/L	100
83) bromobenzene	12.369	156	265728	49.18	ug/L	98
84) 1,1,2,2-tetrachloroethane	12.372	83	202502	49.12	ug/L	99
85) 1,2,3-trichloropropane	12.413	75	223640	50.08	ug/L	99
86) n-propylbenzene	12.466	91	989761	48.76	ug/L	97
87) 2-chlorotoluene	12.545	91	603157	44.21	ug/L	99
88) 4-chlorotoluene	12.656	91	819185	52.47	ug/L	98
89) 1,3,5-trimethylbenzene	12.635	105	861369	56.45	ug/L	100
90) tert-butylbenzene	12.923	91	434334	50.56	ug/L	95
91) 1,2,4-trimethylbenzene	12.975	105	753923	46.55	ug/L	98
92) sec-butylbenzene	13.124	105	988537	55.48	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21883.D
Acq On : 13 Aug 2013 5:28 pm
Operator : amym
Sample : mc23378-2ms
Misc : MS29650,MSV845,,,,5,10
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 14 08:56:55 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

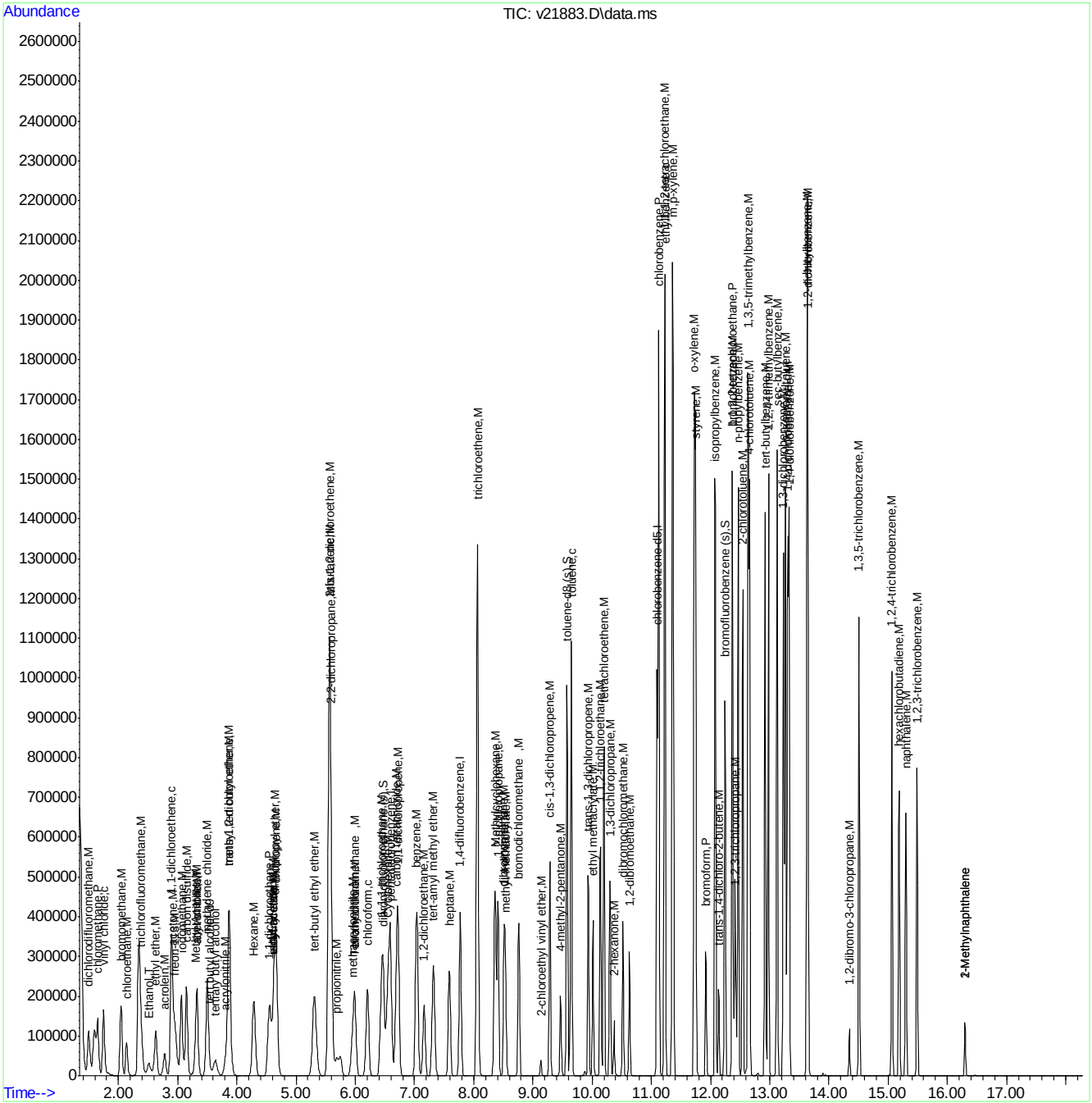
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	1,3-dichlorobenzene	13.232	146	504824	48.79	ug/L	99
94)	p-isopropyltoluene	13.265	119	797317	57.08	ug/L	99
95)	1,4-dichlorobenzene	13.327	146	497740	46.63	ug/L	99
96)	1,2-dichlorobenzene	13.644	146	524087	52.40	ug/L	99
97)	n-butylbenzene	13.630	91	760725	58.69	ug/L	100
98)	1,2-dibromo-3-chloropr...	14.345	75	24903	40.95	ug/L	90
99)	1,3,5-trichlorobenzene	14.510	180	327951	49.27	ug/L	100
100)	1,2,4-trichlorobenzene	15.065	180	283042	43.59	ug/L	99
101)	hexachlorobutadiene	15.186	225	132828	45.69	ug/L	99
102)	naphthalene	15.299	128	470224	37.85	ug/L	100
103)	1,2,3-trichlorobenzene	15.488	180	228964	39.76	ug/L	100
104)	2-Methylnaphthalene	16.300	142	57215	13.60	ug/L	99
105)	1-Methylnaphthalene	16.300	142	57211	15.03	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21883.D
Acq On : 13 Aug 2013 5:28 pm
Operator : amym
Sample : mc23378-2ms
Misc : MS29650,MSV845,,,,5,10
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 14 08:56:55 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/14/13 10:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21884.D
Acq On : 13 Aug 2013 5:54 pm
Operator : amym
Sample : mc23378-2msd
Misc : MS29650,MSV845,,,,5,10
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 14 09:14:24 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.522	65	78956	500.00	ug/L		0.00
4) pentafluorobenzene	6.592	168	327008	50.00	ug/L		0.01
43) 1,4-difluorobenzene	7.772	114	509390	50.00	ug/L		0.01
66) chlorobenzene-d5	11.096	82	312892	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.305	152	351598	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.472	113	159495	48.35	ug/L		0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 96.70%				
60) toluene-d8 (s)	9.573	98	660979	56.18	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 112.36%				
82) bromofluorobenzene (s)	12.243	95	307055	47.53	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.06%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.635	59	101276	521.87	ug/L		90
3) Ethanol	2.514	45	86013	5932.74	ug/L	#	100
5) dichlorodifluoromethane	1.496	85	200885	48.09	ug/L		100
6) chloromethane	1.641	50	174180	62.54	ug/L		100
7) vinyl chloride	1.743	62	211005	63.04	ug/L		99
8) bromomethane	2.039	96	149260	69.39	ug/L		98
9) chloroethane	2.133	64	100500	69.19	ug/L		97
10) ethyl ether	2.624	59	117228	58.26	ug/L		99
11) acetonitrile	3.318	41	199829	58.55	ug/L		98
12) trichlorofluoromethane	2.365	101	326041	64.53	ug/L		97
13) freon-113	2.939	101	167153	61.96	ug/L		99
14) acrolein	2.775	56	83716	465.04	ug/L		100
15) 1,1-dichloroethene	2.891	96	140577	58.76	ug/L		91
16) acetone	2.922	58	10215	34.06	ug/L		89
17) Methyl Acetate	3.303	43	95851	40.66	ug/L		98
18) methylene chloride	3.493	84	156827	54.49	ug/L		96
19) methyl tert butyl ether	3.862	73	358747	52.61	ug/L		99
20) acrylonitrile	3.803	53	46152	54.77	ug/L		95
21) allyl chloride	3.318	41	199834	58.55	ug/L		97
22) trans-1,2-dichloroethene	3.863	96	160655	55.73	ug/L		93
23) iodomethane	3.060	142	303944	53.12	ug/L		96
24) carbon disulfide	3.144	76	444994	57.12	ug/L		100
25) propionitrile	5.682	54	17288	51.88	ug/L		100
26) vinyl acetate	4.606	43	379046	47.58	ug/L		98
27) chloroprene	4.655	53	248032	64.99	ug/L		94
28) di-isopropyl ether	4.636	45	425135	54.92	ug/L		96
29) methacrylonitrile	5.954	41	81043	56.29	ug/L		99
30) 2-butanone	5.567	72	17691	67.01	ug/L	#	62
31) Hexane	4.283	41	132809	62.16	ug/L		96
32) 1,1-dichloroethane	4.542	63	276864	59.54	ug/L		99
33) tert-butyl ethyl ether	5.307	59	407174	55.00	ug/L		100
34) isobutyl alcohol	4.606	43	379046	237.91	ug/L		89
35) 2,2-dichloropropane	5.580	77	213786	71.90	ug/L		85
36) cis-1,2-dichloroethene	5.565	96	773228	251.90	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21884.D
Acq On : 13 Aug 2013 5:54 pm
Operator : amym
Sample : mc23378-2msd
Misc : MS29650,MSV845,,,,5,10
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 14 09:14:24 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) ethyl acetate	4.604	43	379038m	47.64	ug/L	
38) bromochloromethane	5.985	128	97512	62.81	ug/L	94
39) chloroform	6.201	83	311068	57.08	ug/L	98
41) Tetrahydrofuran	5.991	42	29598	54.45	ug/L	89
42) 1,1,1-trichloroethane	6.444	97	276004	63.60	ug/L	97
44) Cyclohexane	6.552	56	228325	49.15	ug/L	96
45) carbon tetrachloride	6.698	117	259783	57.98	ug/L	99
46) 1,1-dichloropropene	6.718	75	212116	48.40	ug/L	99
47) benzene	7.037	78	749428	61.44	ug/L	100
48) 1,2-dichloroethane	7.160	62	274820	53.03	ug/L	98
49) tert-amyl methyl ether	7.318	73	371249	53.49	ug/L	98
50) heptane	7.588	43	169932	64.18	ug/L	97
51) trichloroethene	8.062	95	702734	184.25	ug/L	99
52) 1,2-dichloropropane	8.408	63	184202	55.25	ug/L	100
53) dibromomethane	8.512	93	116942	56.66	ug/L	97
54) bromodichloromethane	8.761	83	246513	54.73	ug/L	99
55) Methylcyclohexane	8.360	83	265932	65.00	ug/L	96
56) 2-chloroethyl vinyl ether	9.134	63	5589	9.77	ug/L	92
57) methyl methacrylate	8.539	69	86652	54.39	ug/L	94
58) 1,4-dioxane	8.521	88	6239	245.35	ug/L	83
59) cis-1,3-dichloropropene	9.286	75	280180	51.01	ug/L	99
61) 4-methyl-2-pentanone	9.467	43	125107	56.04	ug/L	96
62) toluene	9.649	92	464659	55.90	ug/L	100
63) trans-1,3-dichloropropene	9.935	75	284751	59.25	ug/L	99
64) 1,1,2-trichloroethane	10.141	83	167069	63.57	ug/L	98
65) ethyl methacrylate	10.014	69	224547	60.60	ug/L	97
67) tetrachloroethene	10.200	166	277707	55.94	ug/L	98
68) 1,3-dichloropropane	10.302	76	302995	49.94	ug/L	100
69) dibromochloromethane	10.521	129	237345	47.38	ug/L	99
70) 1,2-dibromoethane	10.630	107	204596	51.36	ug/L	99
71) 2-hexanone	10.371	43	106617	49.79	ug/L	97
72) chlorobenzene	11.126	112	660618	47.24	ug/L	99
73) 1,1,1,2-tetrachloroethane	11.225	131	237720	51.86	ug/L	100
74) ethylbenzene	11.230	91	1067190	51.06	ug/L	100
75) m,p-xylene	11.360	106	835579	101.17	ug/L	97
76) o-xylene	11.727	106	408927	52.05	ug/L	98
77) styrene	11.748	104	692367	57.00	ug/L	100
78) bromoform	11.922	173	139872	48.37	ug/L	99
79) trans-1,4-dichloro-2-b...	12.137	53	50455	43.13	ug/L	81
81) isopropylbenzene	12.078	105	1061271	51.86	ug/L	100
83) bromobenzene	12.368	156	311975	49.77	ug/L	97
84) 1,1,2,2-tetrachloroethane	12.372	83	248368	51.93	ug/L	99
85) 1,2,3-trichloropropane	12.413	75	270967	52.31	ug/L	99
86) n-propylbenzene	12.466	91	1250600	53.11	ug/L	98
87) 2-chlorotoluene	12.545	91	755316	47.72	ug/L	98
88) 4-chlorotoluene	12.657	91	898410	49.60	ug/L	98
89) 1,3,5-trimethylbenzene	12.635	105	914479	51.66	ug/L	100
90) tert-butylbenzene	12.921	91	498776	50.05	ug/L	94
91) 1,2,4-trimethylbenzene	12.975	105	928867	49.43	ug/L	97
92) sec-butylbenzene	13.124	105	1103153	53.37	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21884.D
Acq On : 13 Aug 2013 5:54 pm
Operator : amym
Sample : mc23378-2msd
Misc : MS29650,MSV845,,,,5,10
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 14 09:14:24 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

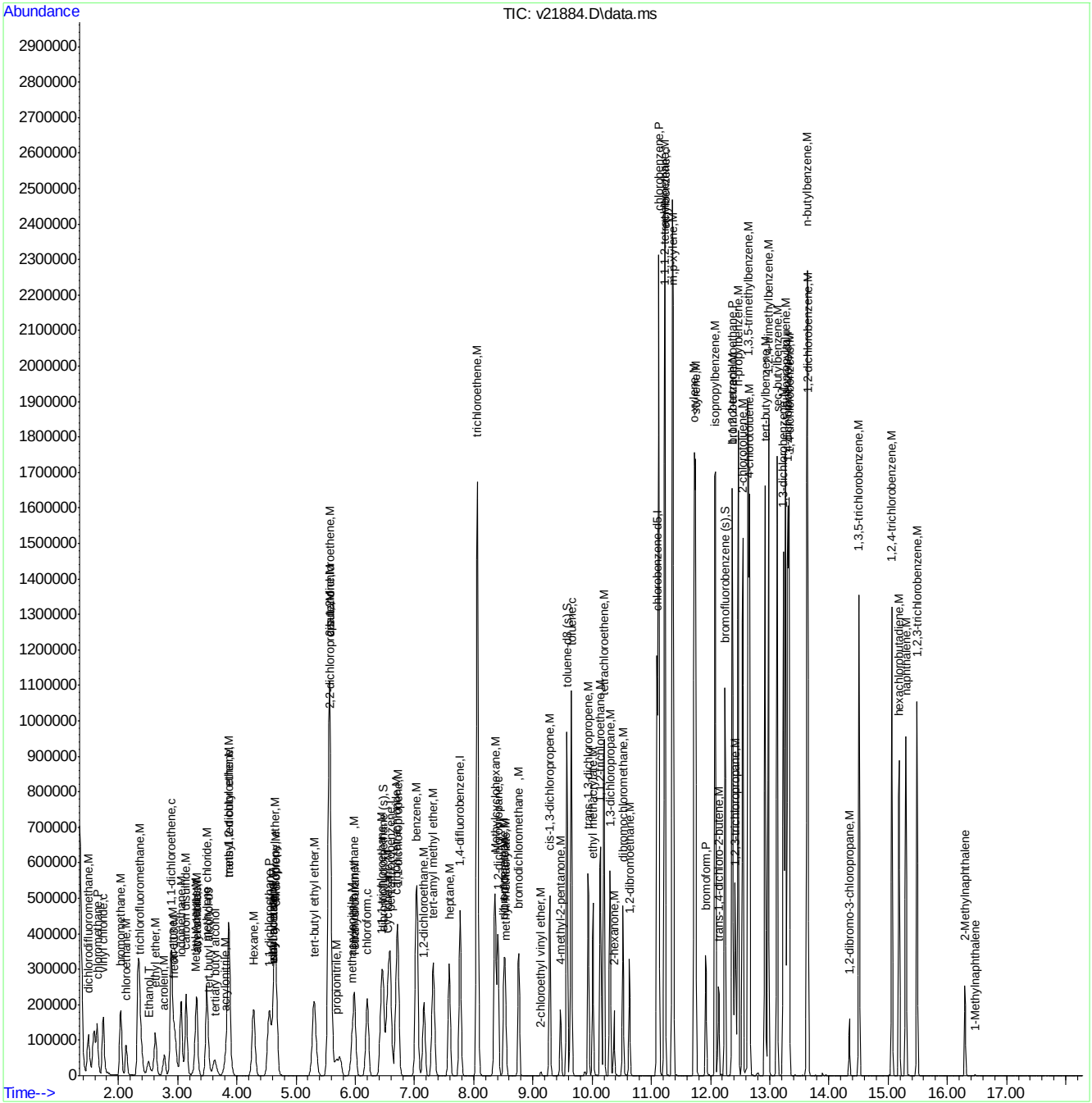
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) 1,3-dichlorobenzene	13.232	146	569755	47.47	ug/L	97
94) p-isopropyltoluene	13.265	119	932229	57.52	ug/L	98
95) 1,4-dichlorobenzene	13.327	146	585961	47.32	ug/L	98
96) 1,2-dichlorobenzene	13.644	146	545081	46.98	ug/L	99
97) n-butylbenzene	13.629	91	836723	55.64	ug/L	99
98) 1,2-dibromo-3-chloropr...	14.345	75	31666	44.14	ug/L	97
99) 1,3,5-trichlorobenzene	14.510	180	413875	53.59	ug/L	99
100) 1,2,4-trichlorobenzene	15.065	180	381894	50.69	ug/L	98
101) hexachlorobutadiene	15.186	225	164806	48.87	ug/L	99
102) naphthalene	15.299	128	690336	47.34	ug/L	100
103) 1,2,3-trichlorobenzene	15.488	180	313586	46.94	ug/L	99
104) 2-Methylnaphthalene	16.299	142	107670	19.37	ug/L	100
105) 1-Methylnaphthalene	16.466	142	1161	3.10	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21884.D
Acq On : 13 Aug 2013 5:54 pm
Operator : amym
Sample : mc23378-2msd
Misc : MS29650,MSV845,,,,5,10
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 14 09:14:24 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/15/13 09:53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21899.D
Acq On : 14 Aug 2013 1:15 pm
Operator : amym
Sample : mc23458-4ms
Misc : MS29654,MSV846,,,,5,5
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 14 15:59:37 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.515	65	100051	500.00	ug/L		0.00
4) pentafluorobenzene	6.584	168	423681	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.765	114	604661	50.00	ug/L		0.00
66) chlorobenzene-d5	11.093	82	315623	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.303	152	361116	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.465	113	204457	47.84	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.68%				
60) toluene-d8 (s)	9.569	98	718053	51.42	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.84%				
82) bromofluorobenzene (s)	12.240	95	314370	47.38	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.76%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.627	59	126636	514.96	ug/L		86
3) Ethanol	2.509	45	83057	4520.96	ug/L	#	100
5) dichlorodifluoromethane	1.489	85	222472	41.11	ug/L		100
6) chloromethane	1.636	50	191026	52.94	ug/L		98
7) vinyl chloride	1.736	62	172431	39.76	ug/L		100
8) bromomethane	2.032	96	140958	50.58	ug/L		99
9) chloroethane	2.126	64	97201	51.65	ug/L		97
10) ethyl ether	2.619	59	113925	43.70	ug/L		100
11) acetonitrile	3.311	41	258001	58.35	ug/L		96
12) trichlorofluoromethane	2.358	101	326623	49.89	ug/L		99
13) freon-113	2.932	101	218615	62.54	ug/L		99
14) acrolein	2.771	56	100337	430.19	ug/L		100
15) 1,1-dichloroethene	2.884	96	195868	63.19	ug/L		98
16) acetone	2.918	58	16288	43.23	ug/L		97
17) Methyl Acetate	3.297	43	124015	40.60	ug/L		97
18) methylene chloride	3.486	84	212999	57.13	ug/L		92
19) methyl tert butyl ether	3.855	73	458386	51.88	ug/L		98
20) acrylonitrile	3.797	53	62520	57.27	ug/L		100
21) allyl chloride	3.311	41	258001	58.35	ug/L		96
22) trans-1,2-dichloroethene	3.857	96	211028	56.50	ug/L		96
23) iodomethane	3.053	142	399721	53.92	ug/L		100
24) carbon disulfide	3.137	76	627664	62.18	ug/L		99
25) propionitrile	5.673	54	22703	52.56	ug/L		100
26) vinyl acetate	4.600	43	486573	47.14	ug/L		95
27) chloroprene	4.647	53	318899	64.49	ug/L		95
28) di-isopropyl ether	4.628	45	579564	57.78	ug/L		98
29) methacrylonitrile	5.947	41	104020	55.76	ug/L		99
30) 2-butanone	5.561	72	16293	46.08	ug/L	#	86
31) Hexane	4.274	41	146168	52.80	ug/L		96
32) 1,1-dichloroethane	4.535	63	372212	61.79	ug/L		99
33) tert-butyl ethyl ether	5.300	59	534052	55.68	ug/L		97
34) isobutyl alcohol	4.600	43	486573	235.71	ug/L		84
35) 2,2-dichloropropane	5.572	77	163054	42.32	ug/L		98
36) cis-1,2-dichloroethene	5.557	96	223861	56.29	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21899.D
Acq On : 14 Aug 2013 1:15 pm
Operator : amym
Sample : mc23458-4ms
Misc : MS29654,MSV846,,,,5,5
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 14 15:59:37 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) ethyl acetate	4.597	43	486583m	47.20	ug/L	
38) bromochloromethane	5.978	128	124252	61.77	ug/L	93
39) chloroform	6.194	83	394118	55.82	ug/L	99
41) Tetrahydrofuran	5.984	42	38578	54.78	ug/L	90
42) 1,1,1-trichloroethane	6.437	97	342747	60.96	ug/L	96
44) Cyclohexane	6.545	56	322718	58.52	ug/L	94
45) carbon tetrachloride	6.691	117	319858	60.14	ug/L	99
46) 1,1-dichloropropene	6.710	75	279731	53.77	ug/L	99
47) benzene	7.029	78	775492	53.56	ug/L	99
48) 1,2-dichloroethane	7.153	62	295646	48.06	ug/L	99
49) tert-amyl methyl ether	7.312	73	440541	53.47	ug/L	98
50) heptane	7.581	43	152300	48.46	ug/L	97
51) trichloroethene	8.056	95	229813	50.76	ug/L	99
52) 1,2-dichloropropane	8.403	63	223286	56.42	ug/L	100
53) dibromomethane	8.507	93	142597	58.21	ug/L	96
54) bromodichloromethane	8.756	83	287783	53.82	ug/L	99
55) Methylcyclohexane	8.355	83	303549	62.50	ug/L	98
57) methyl methacrylate	8.534	69	105883	55.99	ug/L	94
58) 1,4-dioxane	8.514	88	7523	248.57	ug/L	85
59) cis-1,3-dichloropropene	9.282	75	286616	44.17	ug/L	99
61) 4-methyl-2-pentanone	9.463	43	147506	55.67	ug/L	97
62) toluene	9.645	92	547877	55.52	ug/L	99
63) trans-1,3-dichloropropene	9.931	75	261781	46.33	ug/L	98
64) 1,1,2-trichloroethane	10.137	83	169712	54.40	ug/L	99
65) ethyl methacrylate	10.010	69	222564	50.94	ug/L	100
67) tetrachloroethene	10.196	166	280510	56.02	ug/L	99
68) 1,3-dichloropropane	10.298	76	307857	50.30	ug/L	98
69) dibromochloromethane	10.518	129	242362	47.93	ug/L	100
70) 1,2-dibromoethane	10.627	107	208635	51.92	ug/L	100
71) 2-hexanone	10.368	43	106675	49.39	ug/L	97
72) chlorobenzene	11.123	112	676928	47.99	ug/L	97
73) 1,1,1,2-tetrachloroethane	11.222	131	240489	52.01	ug/L	98
74) ethylbenzene	11.227	91	1089849	51.69	ug/L	100
75) m,p-xylene	11.358	106	844284	101.34	ug/L	98
76) o-xylene	11.725	106	413495	52.17	ug/L	96
77) styrene	11.745	104	695864	56.79	ug/L	98
78) bromoform	11.919	173	143670	49.16	ug/L	99
79) trans-1,4-dichloro-2-b...	12.135	53	43211	37.42	ug/L	84
81) isopropylbenzene	12.076	105	1075469	51.17	ug/L	100
83) bromobenzene	12.366	156	318800	49.52	ug/L	95
84) 1,1,2,2-tetrachloroethane	12.370	83	249433	50.77	ug/L	99
85) 1,2,3-trichloropropane	12.412	75	265546	49.91	ug/L	99
86) n-propylbenzene	12.464	91	1247647	51.59	ug/L	99
87) 2-chlorotoluene	12.543	91	768976	47.30	ug/L	96
88) 4-chlorotoluene	12.654	91	914552	49.16	ug/L	100
89) 1,3,5-trimethylbenzene	12.633	105	920667	50.64	ug/L	100
90) tert-butylbenzene	12.919	91	509768	49.80	ug/L	98
91) 1,2,4-trimethylbenzene	12.973	105	947904	49.12	ug/L	99
92) sec-butylbenzene	13.122	105	1106987	52.14	ug/L	98
93) 1,3-dichlorobenzene	13.230	146	572129	46.41	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21899.D
Acq On : 14 Aug 2013 1:15 pm
Operator : amym
Sample : mc23458-4ms
Misc : MS29654,MSV846,,,,5,5
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 14 15:59:37 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

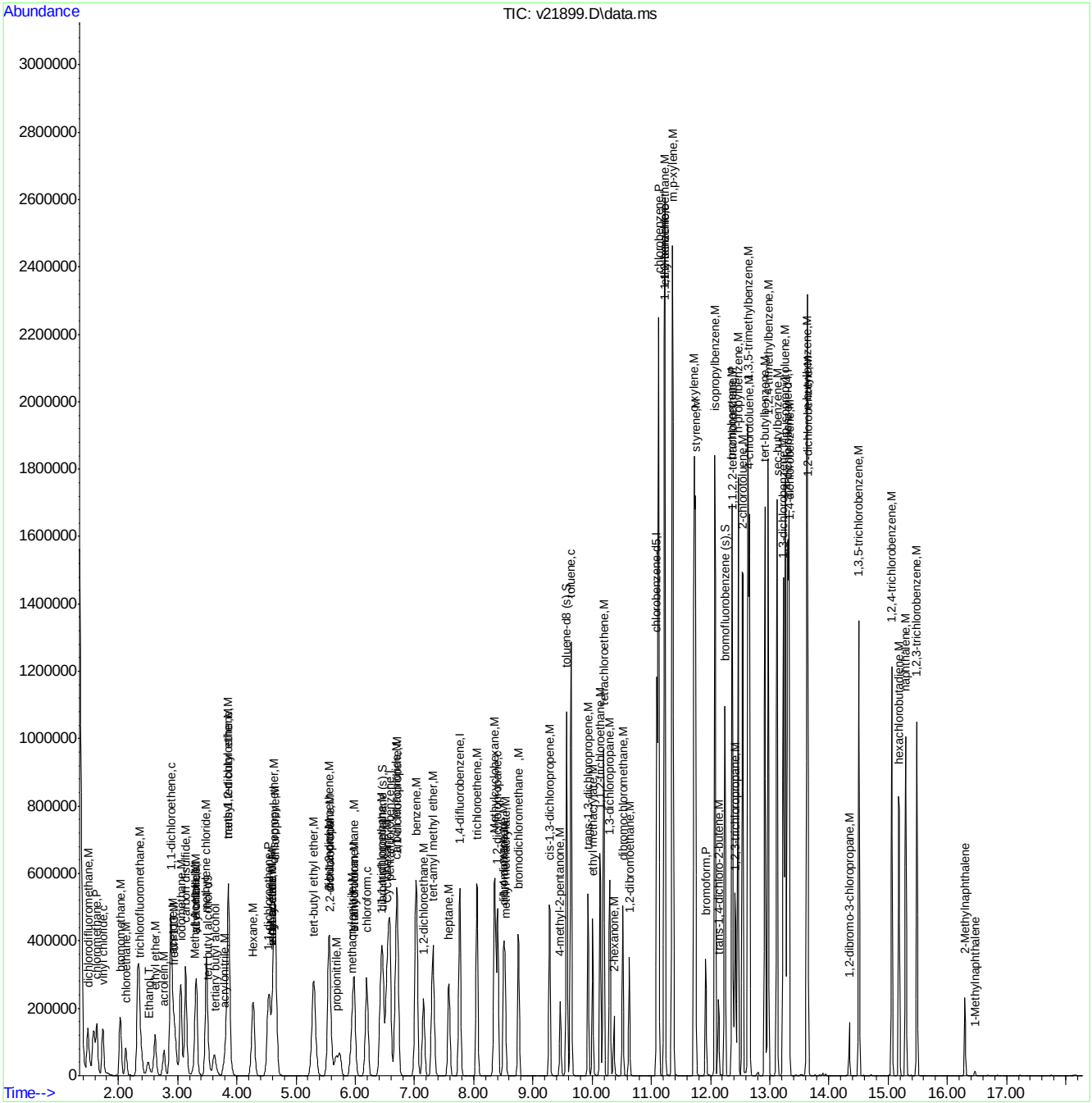
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94) p-isopropyltoluene	13.263	119	933539	56.08	ug/L	99
95) 1,4-dichlorobenzene	13.325	146	585601	46.04	ug/L	98
96) 1,2-dichlorobenzene	13.642	146	551078	46.24	ug/L	98
97) n-butylbenzene	13.627	91	810036	52.44	ug/L	97
98) 1,2-dibromo-3-chloropr...	14.343	75	30550	41.93	ug/L	96
99) 1,3,5-trichlorobenzene	14.508	180	395700	49.89	ug/L	100
100) 1,2,4-trichlorobenzene	15.063	180	363087	46.92	ug/L	97
101) hexachlorobutadiene	15.184	225	157000	45.33	ug/L	97
102) naphthalene	15.297	128	678752	45.41	ug/L	100
103) 1,2,3-trichlorobenzene	15.486	180	303889	44.29	ug/L	100
104) 2-Methylnaphthalene	16.298	142	97499	17.59	ug/L	100
105) 1-Methylnaphthalene	16.467	142	7451	4.22	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21899.D
Acq On : 14 Aug 2013 1:15 pm
Operator : amym
Sample : mc23458-4ms
Misc : MS29654,MSV846,,,,5,5
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 14 15:59:37 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/15/13 09:53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21900.D
Acq On : 14 Aug 2013 1:41 pm
Operator : amym
Sample : mc23458-4msd
Misc : MS29654,MSV846,,,,5,5
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 14 16:00:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.524	65	108240	500.00	ug/L		0.00
4) pentafluorobenzene	6.591	168	432098	50.00	ug/L		0.01
43) 1,4-difluorobenzene	7.770	114	611788	50.00	ug/L		0.01
66) chlorobenzene-d5	11.094	82	319552	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.303	152	365196	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.471	113	207526	47.61	ug/L		0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.22%				
60) toluene-d8 (s)	9.572	98	727760	51.51	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 103.02%				
82) bromofluorobenzene (s)	12.241	95	319036	47.54	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.08%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.636	59	137050	515.15	ug/L		88
3) Ethanol	2.516	45	86050	4329.52	ug/L	#	100
5) dichlorodifluoromethane	1.500	85	208211	37.72	ug/L		100
6) chloromethane	1.646	50	184601	50.16	ug/L		99
7) vinyl chloride	1.746	62	167038	37.77	ug/L		98
8) bromomethane	2.042	96	138657	48.78	ug/L		99
9) chloroethane	2.137	64	94668	49.32	ug/L		99
10) ethyl ether	2.630	59	148739	55.95	ug/L		95
11) acetonitrile	3.321	41	253796	56.28	ug/L		96
12) trichlorofluoromethane	2.369	101	312871	46.86	ug/L		98
13) freon-113	2.943	101	208894	58.60	ug/L		99
14) acrolein	2.781	56	101790	427.92	ug/L		100
15) 1,1-dichloroethene	2.894	96	191191	60.48	ug/L		100
16) acetone	2.927	58	16096	41.70	ug/L		94
17) Methyl Acetate	3.306	43	127680	40.99	ug/L		97
18) methylene chloride	3.497	84	213874	56.24	ug/L		96
19) methyl tert butyl ether	3.865	73	466457	51.76	ug/L		97
20) acrylonitrile	3.806	53	64984	58.36	ug/L		92
21) allyl chloride	3.321	41	253807	56.28	ug/L		97
22) trans-1,2-dichloroethene	3.867	96	207272	54.42	ug/L		97
23) iodomethane	3.063	142	397394	52.56	ug/L		99
24) carbon disulfide	3.147	76	614928	59.73	ug/L		100
25) propionitrile	5.681	54	24559	55.59	ug/L		100
26) vinyl acetate	4.609	43	488824	46.44	ug/L		94
27) chloroprene	4.656	53	310417	61.56	ug/L		97
28) di-isopropyl ether	4.638	45	577763	56.48	ug/L		96
29) methacrylonitrile	5.954	41	106591	56.03	ug/L		98
30) 2-butanone	5.569	72	17074	47.50	ug/L		96
31) Hexane	4.284	41	137906	48.85	ug/L		99
32) 1,1-dichloroethane	4.545	63	365241	59.45	ug/L		99
33) tert-butyl ethyl ether	5.309	59	540052	55.21	ug/L		98
34) isobutyl alcohol	4.609	43	488824	232.19	ug/L		81
35) 2,2-dichloropropane	5.580	77	157571	40.10	ug/L		98
36) cis-1,2-dichloroethene	5.566	96	222754	54.92	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21900.D
Acq On : 14 Aug 2013 1:41 pm
Operator : amym
Sample : mc23458-4msd
Misc : MS29654,MSV846,,,,5,5
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 14 16:00:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) ethyl acetate	4.611	43	488834m	46.50	ug/L	
38) bromochloromethane	5.985	128	123097	60.00	ug/L	95
39) chloroform	6.201	83	387210	53.77	ug/L	100
41) Tetrahydrofuran	5.991	42	41177	57.33	ug/L	88
42) 1,1,1-trichloroethane	6.444	97	336879	58.75	ug/L	97
44) Cyclohexane	6.551	56	312852	56.07	ug/L	98
45) carbon tetrachloride	6.697	117	312776	58.12	ug/L	99
46) 1,1-dichloropropene	6.716	75	276283	52.49	ug/L	98
47) benzene	7.035	78	770207	52.57	ug/L	99
48) 1,2-dichloroethane	7.159	62	293890	47.22	ug/L	99
49) tert-amyl methyl ether	7.316	73	445560	53.45	ug/L	98
50) heptane	7.586	43	147533	46.39	ug/L	97
51) trichloroethene	8.060	95	227505	49.67	ug/L	100
52) 1,2-dichloropropane	8.406	63	221427	55.30	ug/L	98
53) dibromomethane	8.510	93	143981	58.09	ug/L	97
54) bromodichloromethane	8.759	83	287709	53.18	ug/L	100
55) Methylcyclohexane	8.358	83	290913	59.20	ug/L	96
57) methyl methacrylate	8.537	69	109531	57.24	ug/L	97
58) 1,4-dioxane	8.516	88	8086	261.45	ug/L	91
59) cis-1,3-dichloropropene	9.285	75	290184	44.20	ug/L	99
61) 4-methyl-2-pentanone	9.465	43	153692	57.32	ug/L	98
62) toluene	9.647	92	540882	54.18	ug/L	99
63) trans-1,3-dichloropropene	9.933	75	264310	46.23	ug/L	99
64) 1,1,2-trichloroethane	10.139	83	171271	54.26	ug/L	98
65) ethyl methacrylate	10.012	69	229024	51.77	ug/L	98
67) tetrachloroethene	10.198	166	275717	54.38	ug/L	99
68) 1,3-dichloropropane	10.300	76	312053	50.36	ug/L	99
69) dibromochloromethane	10.520	129	245044	47.87	ug/L	100
70) 1,2-dibromoethane	10.628	107	211330	51.94	ug/L	100
71) 2-hexanone	10.369	43	112179	51.30	ug/L	96
72) chlorobenzene	11.124	112	669702	46.90	ug/L	98
73) 1,1,1,2-tetrachloroethane	11.223	131	238673	50.98	ug/L	99
74) ethylbenzene	11.228	91	1075614	50.39	ug/L	99
75) m,p-xylene	11.358	106	841441	99.76	ug/L	96
76) o-xylene	11.725	106	411832	51.33	ug/L	97
77) styrene	11.746	104	693441	55.90	ug/L	99
78) bromoform	11.920	173	146747	49.55	ug/L	98
79) trans-1,4-dichloro-2-b...	12.136	53	43920	37.55	ug/L	87
81) isopropylbenzene	12.076	105	1070677	50.37	ug/L	99
83) bromobenzene	12.367	156	318885	48.98	ug/L	96
84) 1,1,2,2-tetrachloroethane	12.370	83	258239	51.98	ug/L	99
85) 1,2,3-trichloropropane	12.412	75	271507	50.46	ug/L	100
86) n-propylbenzene	12.464	91	1236569	50.56	ug/L	99
87) 2-chlorotoluene	12.543	91	764050	46.47	ug/L	96
88) 4-chlorotoluene	12.655	91	901448	47.91	ug/L	100
89) 1,3,5-trimethylbenzene	12.634	105	908471	49.41	ug/L	99
90) tert-butylbenzene	12.919	91	503208	48.61	ug/L	98
91) 1,2,4-trimethylbenzene	12.973	105	929495	47.62	ug/L	99
92) sec-butylbenzene	13.122	105	1104487	51.44	ug/L	99
93) 1,3-dichlorobenzene	13.230	146	567335	45.51	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21900.D
Acq On : 14 Aug 2013 1:41 pm
Operator : amym
Sample : mc23458-4msd
Misc : MS29654,MSV846,,,,5,5
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 14 16:00:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

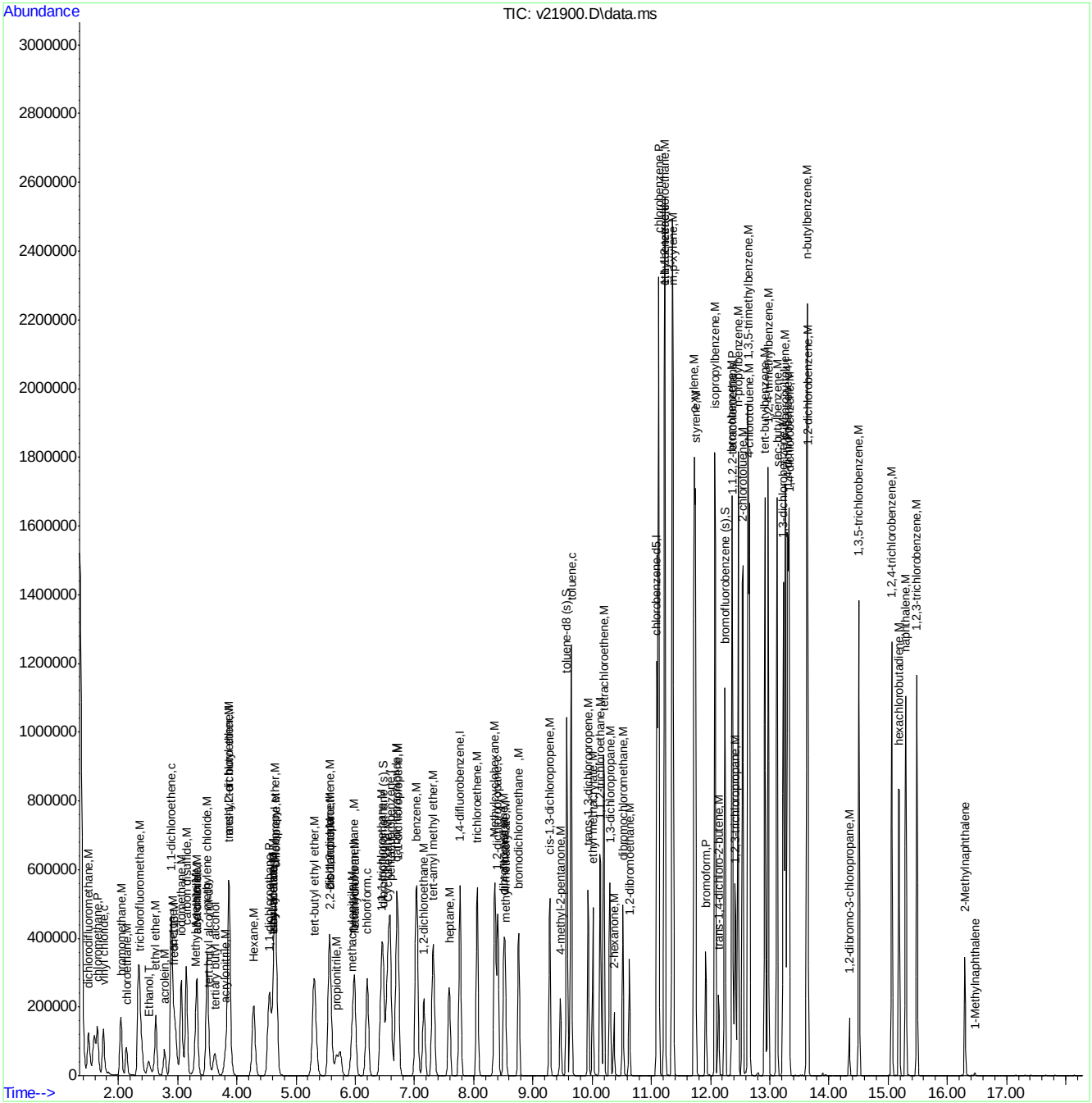
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94) p-isopropyltoluene	13.263	119	926308	55.03	ug/L	99
95) 1,4-dichlorobenzene	13.325	146	583690	45.38	ug/L	98
96) 1,2-dichlorobenzene	13.642	146	559412	46.42	ug/L	98
97) n-butylbenzene	13.627	91	805374	51.56	ug/L	98
98) 1,2-dibromo-3-chloropr...	14.343	75	34639	46.07	ug/L	99
99) 1,3,5-trichlorobenzene	14.508	180	406205	50.64	ug/L	100
100) 1,2,4-trichlorobenzene	15.063	180	388521	49.65	ug/L	98
101) hexachlorobutadiene	15.184	225	160936	45.94	ug/L	96
102) naphthalene	15.297	128	769183	50.63	ug/L	100
103) 1,2,3-trichlorobenzene	15.486	180	351679	50.68	ug/L	100
104) 2-Methylnaphthalene	16.297	142	142494	23.50	ug/L	99
105) 1-Methylnaphthalene	16.467	142	4349	3.66	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21900.D
Acq On : 14 Aug 2013 1:41 pm
Operator : amym
Sample : mc23458-4msd
Misc : MS29654,MSV846,,,,5,5
ALS Vial : 14 Sample Multiplier: 1

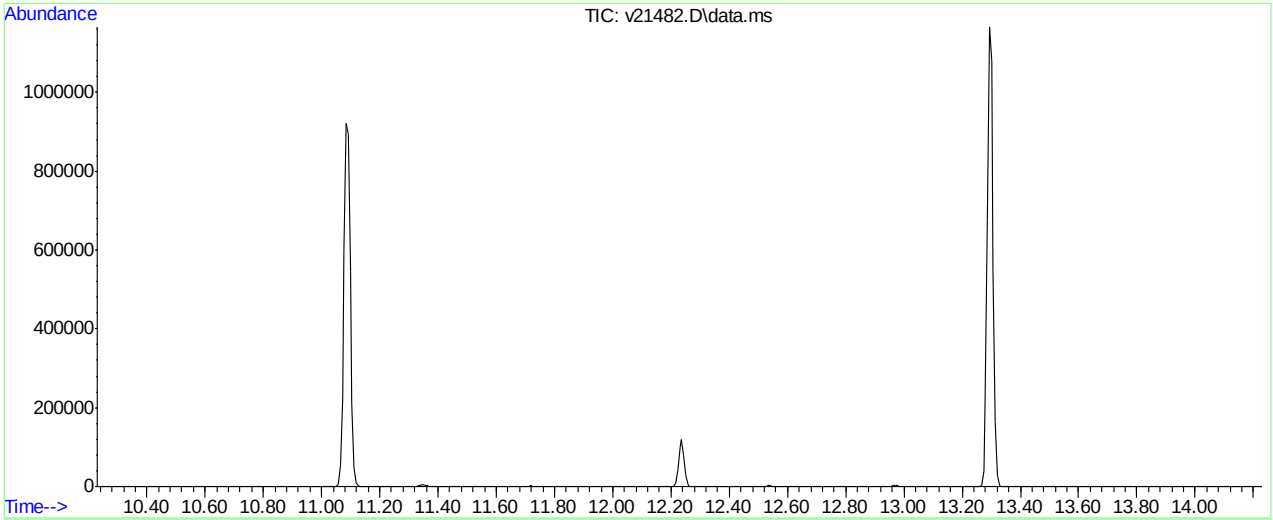
Quant Time: Aug 14 16:00:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

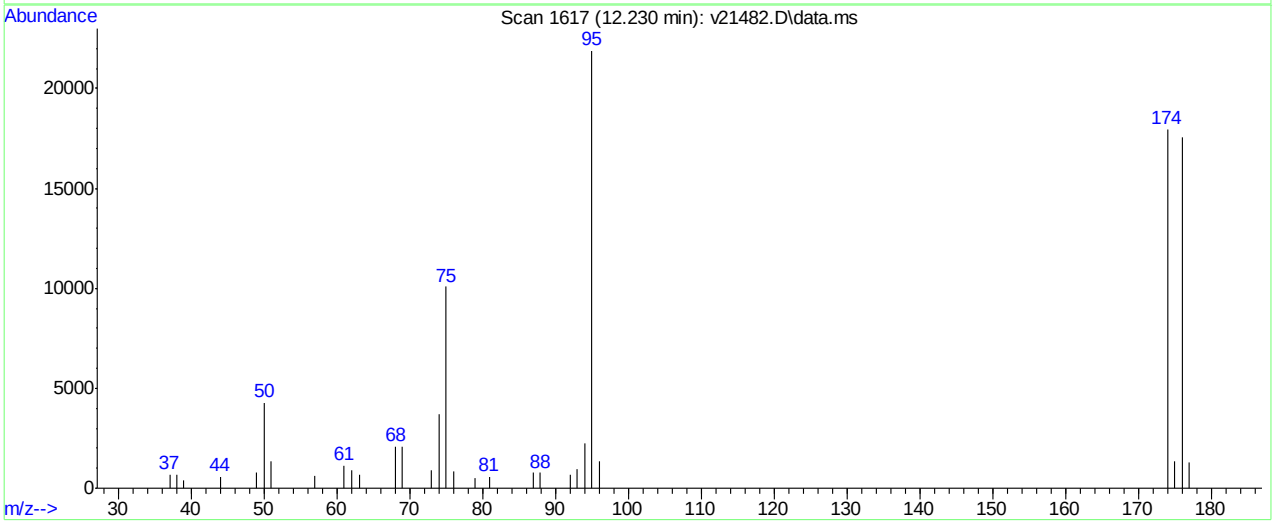


SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V130801\v21482.D Vial: 4
Acq On : 1 Aug 2013 7:13 pm Operator: amym
Sample : bfb Inst : MSV
Misc : MS29563,MSV832,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\v130801w.m (RTE Integrator)
Title : SW-846 Method 8260





Spectrum Information: Scan 1617

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.6	4285	PASS
75	95	30	60	46.0	10074	PASS
95	95	100	100	100.0	21904	PASS
96	95	5	9	6.2	1361	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	82.0	17960	PASS
175	174	5	9	7.6	1360	PASS
176	174	95	101	97.8	17568	PASS
177	176	5	9	7.3	1291	PASS

v21482.D v130801w.m Fri Aug 02 12:57:08 2013

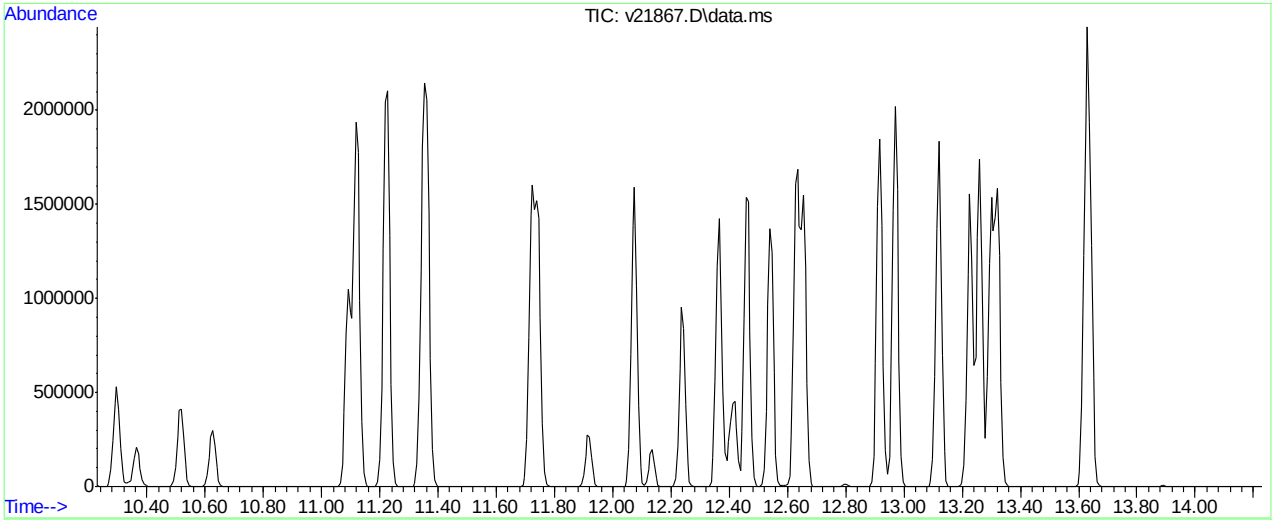
Scan 1617 (12.230 min): v21482.D\data.ms
bfb

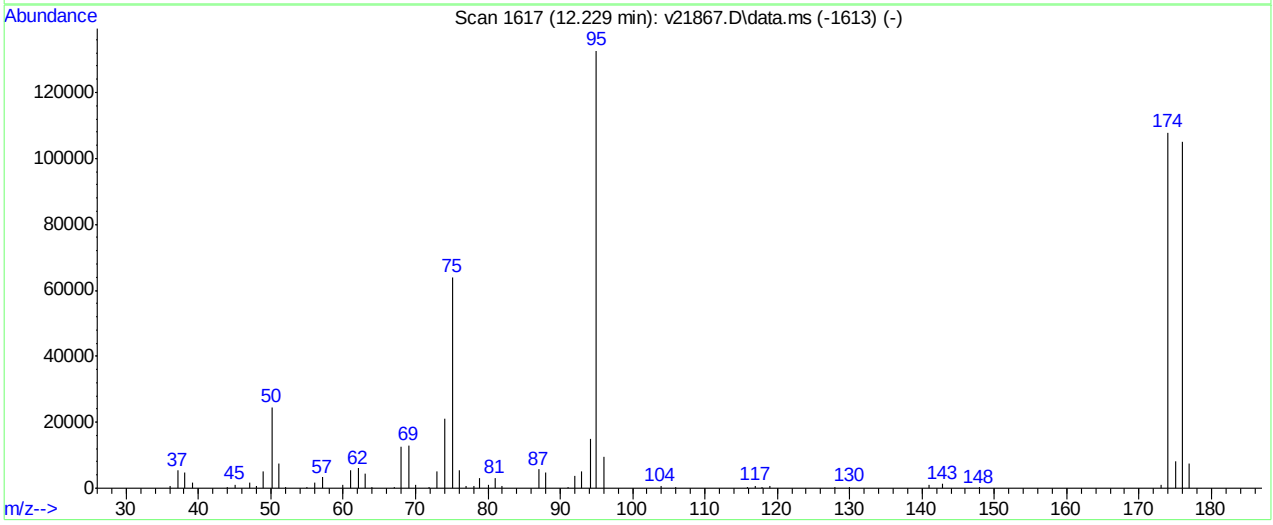
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.10	701	68.10	2086	93.00	946		
38.00	681	69.00	2075	94.00	2248		
39.00	367	73.00	889	95.00	21904		
44.00	563	74.00	3679	96.00	1361		
49.00	799	75.00	10074	174.00	17960		
50.10	4285	76.00	849	175.00	1360		
51.00	1327	78.90	531	176.00	17568		
57.00	617	80.90	574	177.00	1291		
61.00	1148	87.00	775				
62.10	925	87.90	782				
63.10	666	92.00	669				

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V130813\v21867.D Vial: 1
Acq On : 13 Aug 2013 10:16 am Operator: amym
Sample : bfb Inst : MSV
Misc : MS29644,MSV845,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\v130801w.m (RTE Integrator)
Title : SW-846 Method 8260





Spectrum Information: Scan 1617

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.6	24632	PASS
75	95	30	60	48.2	64040	PASS
95	95	100	100	100.0	132736	PASS
96	95	5	9	7.2	9593	PASS
173	174	0.00	2	0.9	1022	PASS
174	95	50	100	81.3	107856	PASS
175	174	5	9	7.7	8251	PASS
176	174	95	101	97.2	104880	PASS
177	176	5	9	7.2	7525	PASS

v21867.D v130801w.m Tue Aug 13 15:29:05 2013

Scan 1617 (12.229 min): v21867.D\data.ms (-1613)
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	810	52.10	321	69.00	13094	81.00	3159
37.10	5386	55.00	349	70.00	1038	81.90	658
38.10	4690	56.10	1704	71.90	493	87.00	5700
39.10	1833	57.10	3284	73.00	5245	88.00	4790
44.00	469	60.00	1071	74.00	21016	91.00	422
45.00	1065	61.00	5522	75.10	64040	92.00	3707
47.00	1792	62.10	5995	76.00	5583	93.00	5261
48.00	648	63.10	4563	77.00	848	94.10	15119
49.00	5071	64.00	416	78.00	609	95.00	132736
50.10	24632	67.00	351	78.90	3031	96.10	9593
51.10	7413	68.00	12654	80.00	1051	103.90	652

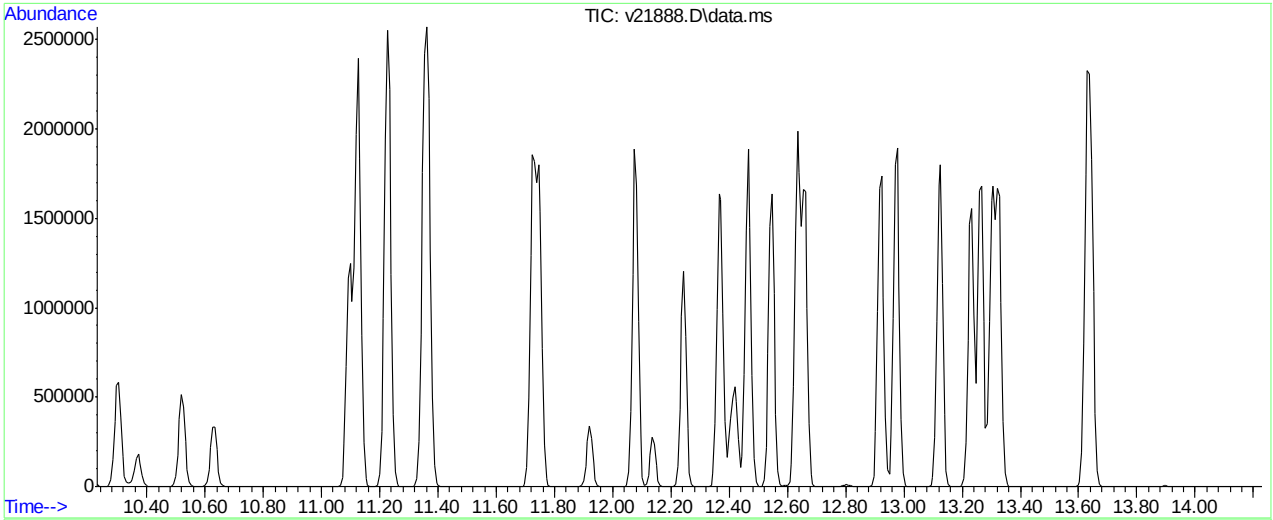
Scan 1617 (12.229 min): v21867.D\data.ms (-1613)
bfb
Modified:subtracted

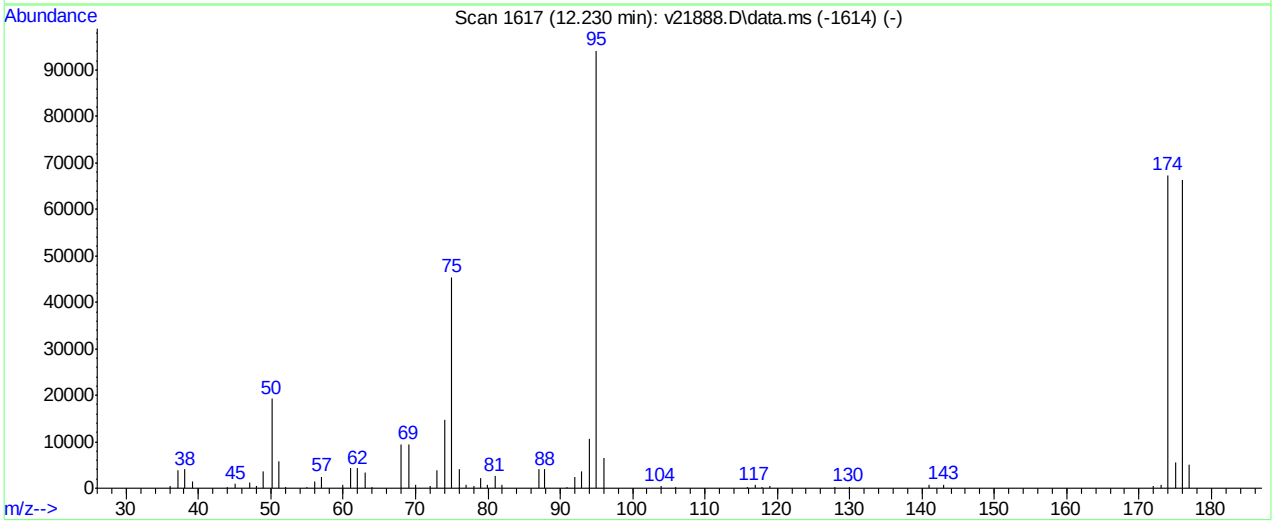
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
105.90	491	174.00	107856				
115.90	420	175.00	8251				
117.00	814	176.00	104880				
117.90	466	177.00	7525				
118.90	569						
127.90	501						
130.00	517						
140.90	1009						
142.90	1242						
147.90	320						
173.00	1022						

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V130814\v21888.D Vial: 2
Acq On : 14 Aug 2013 8:24 am Operator: amym
Sample : bfb Inst : MSV
Misc : MS29650,MSV846,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\v130801w.m (RTE Integrator)
Title : SW-846 Method 8260





Spectrum Information: Scan 1617

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.4	19200	PASS
75	95	30	60	48.2	45392	PASS
95	95	100	100	100.0	94197	PASS
96	95	5	9	7.0	6624	PASS
173	174	0.00	2	1.0	664	PASS
174	95	50	100	71.5	67304	PASS
175	174	5	9	8.2	5516	PASS
176	174	95	101	98.8	66464	PASS
177	176	5	9	7.5	4970	PASS

v21888.D v130801w.m Wed Aug 14 15:47:42 2013

Scan 1617 (12.230 min): v21888.D\data.ms (-1614)
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	529	52.00	328	70.00	803	81.90	667
37.10	3974	55.00	311	72.00	410	87.00	3992
38.10	4098	56.10	1526	73.00	3981	87.90	3997
39.10	1525	57.00	2468	74.00	14661	90.90	335
44.00	345	60.00	830	75.00	45392	92.00	2429
45.10	914	61.00	4237	76.00	4198	93.00	3647
47.10	1279	62.00	4266	76.90	681	94.00	10589
48.00	600	63.10	3354	78.00	441	95.00	94197
49.00	3647	64.00	345	79.00	2294	96.00	6624
50.10	19200	68.00	9305	79.90	689	103.90	464
51.10	5870	69.00	9425	81.00	2551	105.90	364

Scan 1617 (12.230 min): v21888.D\data.ms (-1614)
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
115.90	327	175.00	5516				
116.90	640	176.00	66464				
117.90	322	177.00	4970				
119.00	404						
127.90	321						
129.90	343						
140.90	763						
143.00	798						
172.00	550						
173.00	664						
174.00	67304						

Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/02/13 13:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21486.D
Acq On : 1 Aug 2013 9:00 pm
Operator : amym
Sample : ic832-0.25
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 02 10:34:47 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.521	65	79431	500.00	ug/L	0.00
4) pentafluorobenzene	6.582	168	349495	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.761	114	496356	50.00	ug/L	0.00
66) chlorobenzene-d5	11.088	82	245822	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.297	152	263614	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	0.000	113	0	0.00	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#		
60) toluene-d8 (s)	0.000	98	0	0.00	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#		
82) bromofluorobenzene (s)	0.000	95	0	0.00	ug/L	
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#		
Target Compounds						Qvalue
42) 1,1,1-trichloroethane	6.430	97	865m	0.17	ug/L	
51) trichloroethene	8.046	95	814m	0.22	ug/L	
67) tetrachloroethene	10.188	166	933m	0.25	ug/L	

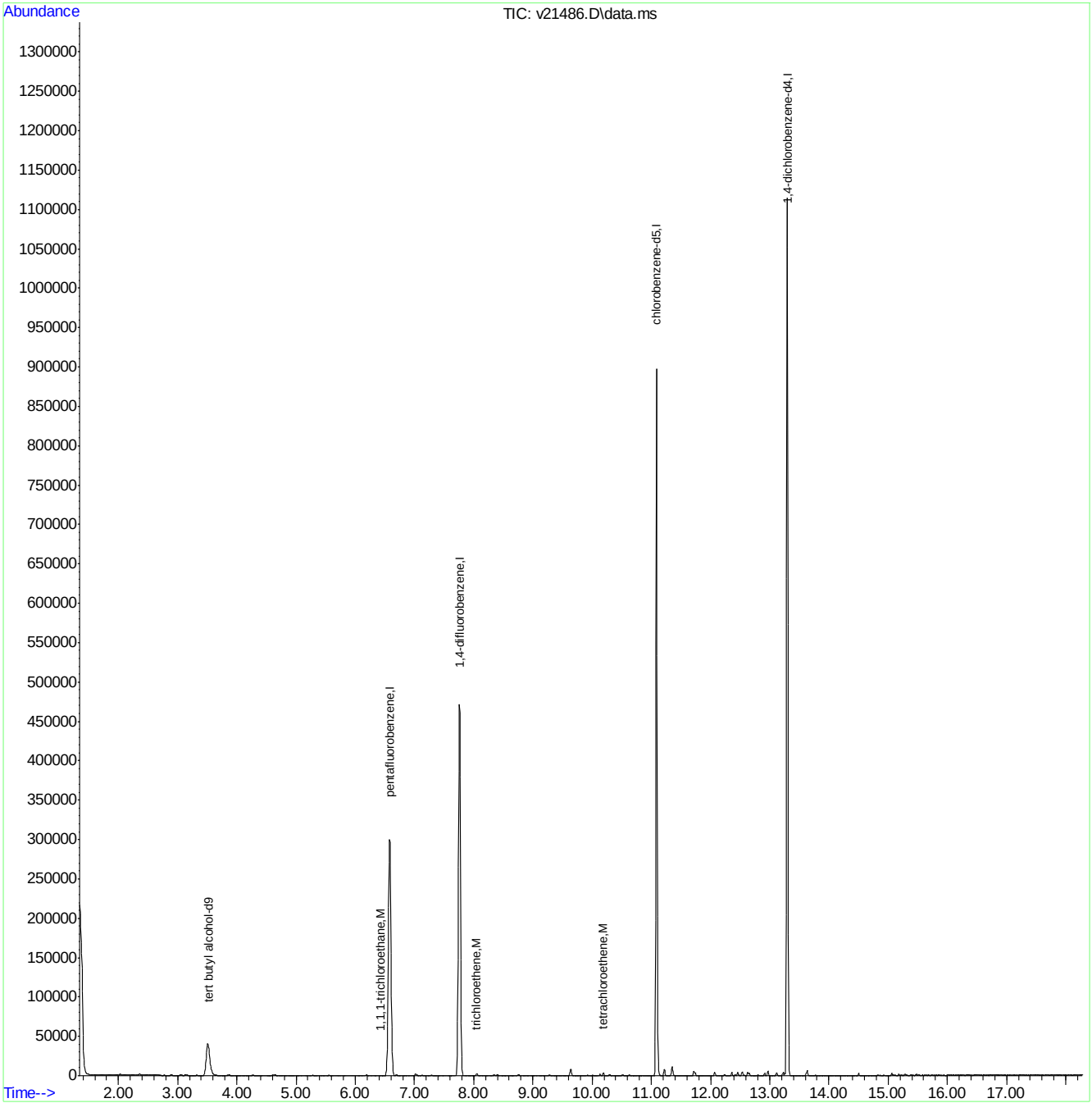
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21486.D
Acq On : 1 Aug 2013 9:00 pm
Operator : amym
Sample : ic832-0.25
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 02 10:34:47 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21487.D
Acq On : 1 Aug 2013 9:26 pm
Operator : amym
Sample : ic832-0.5
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 02 10:40:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.520	65	82286	500.00	ug/L		0.00
4) pentafluorobenzene	6.581	168	339797	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.760	114	480956	50.00	ug/L		0.00
66) chlorobenzene-d5	11.087	82	239248	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.297	152	259176	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	0.000	113	0	0.00	ug/L		
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#			
60) toluene-d8 (s)	0.000	98	0	0.00	ug/L		
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#			
82) bromofluorobenzene (s)	0.000	95	0	0.00	ug/L		
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#			
Target Compounds							Qvalue
5) dichlorodifluoromethane	1.499	85	2599	0.59	ug/L		94
12) trichlorofluoromethane	2.358	101	2778	0.55	ug/L		91
15) 1,1-dichloroethene	2.886	96	1053	0.41	ug/L		95
19) methyl tert butyl ether	3.853	73	3660	0.49	ug/L		74
22) trans-1,2-dichloroethene	3.859	96	1626	0.56	ug/L		89
23) iodomethane	3.054	142	3310	0.57	ug/L		90
24) carbon disulfide	3.139	76	4505	0.52	ug/L		74
27) chloroprene	4.648	53	1689	0.40	ug/L		96
28) di-isopropyl ether	4.625	45	3938	0.49	ug/L		63
36) cis-1,2-dichloroethene	5.551	96	1587	0.48	ug/L	#	74
39) chloroform	6.192	83	3184	0.59	ug/L		94
42) 1,1,1-trichloroethane	6.430	97	2507	0.51	ug/L		94
45) carbon tetrachloride	6.683	117	2144	0.46	ug/L		82
46) 1,1-dichloropropene	6.705	75	2255	0.56	ug/L		90
47) benzene	7.024	78	6989	0.64	ug/L		98
51) trichloroethene	8.050	95	2082	0.59	ug/L		83
54) bromodichloromethane	8.751	83	2033	0.44	ug/L		93
59) cis-1,3-dichloropropene	9.276	75	1953	0.37	ug/L		50
62) toluene	9.639	92	5797	0.78	ug/L		92
63) trans-1,3-dichloropropene	9.926	75	1354	0.29	ug/L		50
64) 1,1,2-trichloroethane	10.129	83	1249	0.51	ug/L		99
67) tetrachloroethene	10.189	166	2255	0.63	ug/L		92
68) 1,3-dichloropropane	10.292	76	2444	0.55	ug/L		91
69) dibromochloromethane	10.511	129	1314	0.33	ug/L		94
70) 1,2-dibromoethane	10.620	107	1419	0.45	ug/L		98
72) chlorobenzene	11.117	112	6710	0.73	ug/L		96
73) 1,1,1,2-tetrachloroethane	11.217	131	1770	0.51	ug/L		96
74) ethylbenzene	11.221	91	9734	0.68	ug/L		77
75) m,p-xylene	11.352	106	7739	1.38	ug/L	#	39
76) o-xylene	11.719	106	3294	0.57	ug/L		84
77) styrene	11.740	104	3969	0.41	ug/L		100
81) isopropylbenzene	12.070	105	7475	0.47	ug/L		88
83) bromobenzene	12.360	156	2401	0.53	ug/L		91
84) 1,1,2,2-tetrachloroethane	12.365	83	1880	0.55	ug/L		88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21487.D
Acq On : 1 Aug 2013 9:26 pm
Operator : amym
Sample : ic832-0.5
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 02 10:40:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

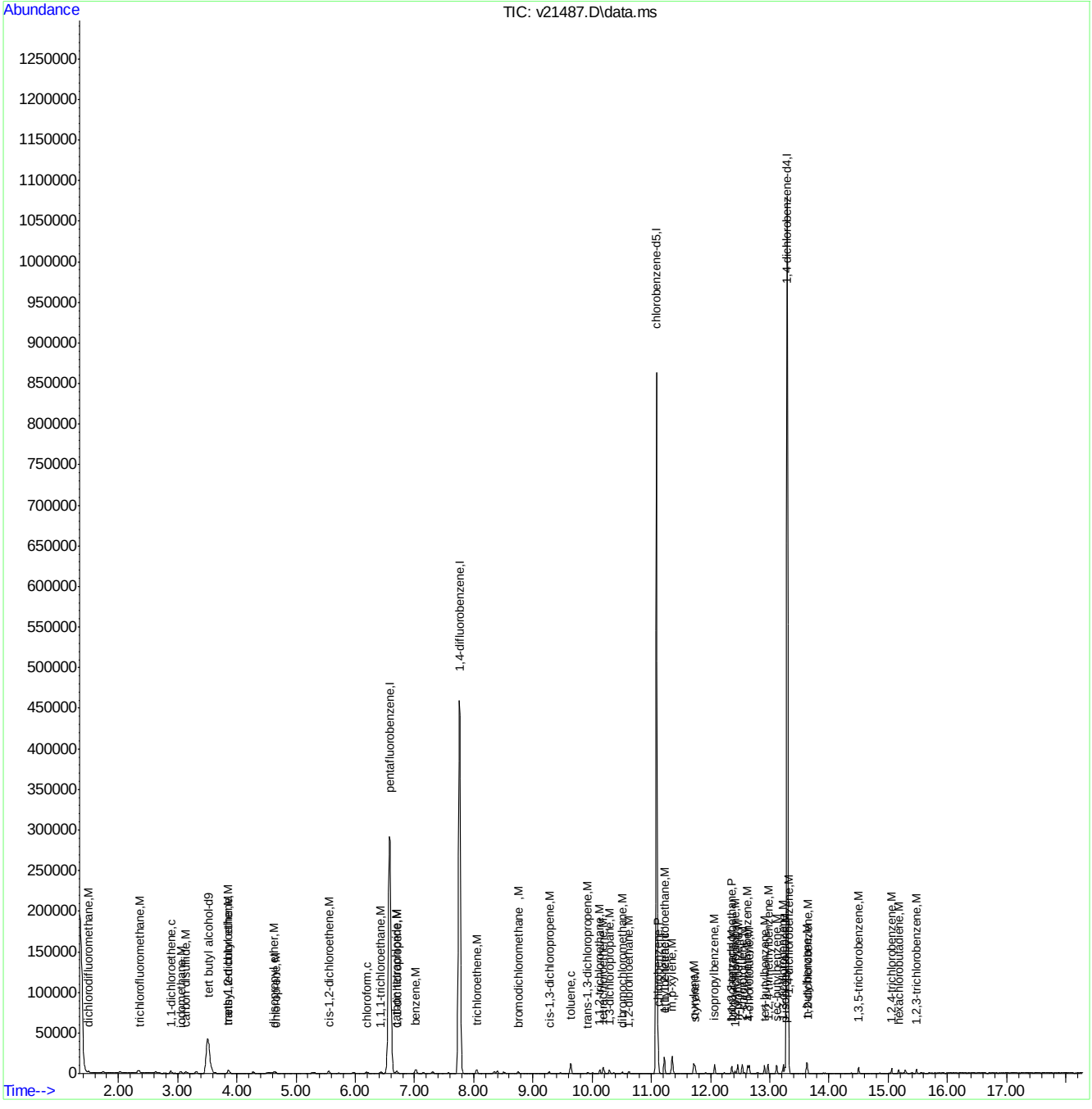
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
85) 1,2,3-trichloropropane	12.412	75	1523	0.35	ug/L	96
86) n-propylbenzene	12.458	91	8657	0.49	ug/L	71
87) 2-chlorotoluene	12.537	91	6187	0.55	ug/L	90
88) 4-chlorotoluene	12.649	91	6651	0.52	ug/L	95
89) 1,3,5-trimethylbenzene	12.628	105	6146	0.46	ug/L	79
90) tert-butylbenzene	12.913	91	3376	0.44	ug/L	92
91) 1,2,4-trimethylbenzene	12.968	105	7181	0.52	ug/L	84
92) sec-butylbenzene	13.115	105	7001	0.44	ug/L	73
93) 1,3-dichlorobenzene	13.224	146	4816	0.57	ug/L	98
94) p-isopropyltoluene	13.257	119	5272	0.41	ug/L	84
95) 1,4-dichlorobenzene	13.319	146	5585	0.68	ug/L	95
96) 1,2-dichlorobenzene	13.636	146	4563	0.58	ug/L	91
97) n-butylbenzene	13.621	91	5367	0.47	ug/L	84
99) 1,3,5-trichlorobenzene	14.502	180	2973	0.52	ug/L	83
100) 1,2,4-trichlorobenzene	15.057	180	2700	0.46	ug/L	90
101) hexachlorobutadiene	15.177	225	1309	0.54	ug/L	92
103) 1,2,3-trichlorobenzene	15.481	180	2412	0.48	ug/L	90

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21487.D
Acq On : 1 Aug 2013 9:26 pm
Operator : amym
Sample : ic832-0.5
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 02 10:40:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21488.D
Acq On : 1 Aug 2013 9:52 pm
Operator : amym
Sample : ic832-1
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 02 10:42:58 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.514	65	85946	500.00	ug/L		0.00
4) pentafluorobenzene	6.577	168	344837	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.758	114	489115	50.00	ug/L		0.00
66) chlorobenzene-d5	11.087	82	243552	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.297	152	267994	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	0.000	113	0	0.00	ug/L		
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#			
60) toluene-d8 (s)	0.000	98	0	0.00	ug/L		
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#			
82) bromofluorobenzene (s)	0.000	95	0	0.00	ug/L		
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#			
Target Compounds							Qvalue
5) dichlorodifluoromethane	1.495	85	5754	1.30	ug/L		95
6) chloromethane	1.619	50	3160	1.07	ug/L		88
7) vinyl chloride	1.731	62	3901	1.11	ug/L		94
8) bromomethane	2.019	96	2476	1.21	ug/L		82
9) chloroethane	2.124	64	2004	1.41	ug/L	#	43
10) ethyl ether	2.616	59	2597	1.35	ug/L		87
11) acetonitrile	3.308	41	3428	0.91	ug/L		84
12) trichlorofluoromethane	2.354	101	5952	1.17	ug/L		99
13) freon-113	2.918	101	2904	0.97	ug/L		80
15) 1,1-dichloroethene	2.880	96	2809	1.08	ug/L	#	75
18) methylene chloride	3.480	84	5962	1.97	ug/L		92
19) methyl tert butyl ether	3.848	73	7091	0.94	ug/L		96
21) allyl chloride	3.308	41	3428	0.91	ug/L		84
22) trans-1,2-dichloroethene	3.850	96	3128	1.06	ug/L	#	78
23) iodomethane	3.048	142	6345	1.08	ug/L		88
24) carbon disulfide	3.132	76	8405	0.96	ug/L		74
27) chloroprene	4.638	53	3802	0.89	ug/L		89
28) di-isopropyl ether	4.619	45	7854	0.96	ug/L		98
31) Hexane	4.266	41	2393	1.05	ug/L	#	96
32) 1,1-dichloroethane	4.524	63	5200	1.07	ug/L		89
33) tert-butyl ethyl ether	5.288	59	7118	0.81	ug/L		98
36) cis-1,2-dichloroethene	5.549	96	3174	0.95	ug/L		95
38) bromochloromethane	5.969	128	1548	0.92	ug/L		90
39) chloroform	6.186	83	6314	1.14	ug/L		91
42) 1,1,1-trichloroethane	6.425	97	4424	0.88	ug/L		96
45) carbon tetrachloride	6.677	117	3885	0.83	ug/L		93
46) 1,1-dichloropropene	6.701	75	4563	1.11	ug/L		91
47) benzene	7.020	78	12721	1.15	ug/L		97
48) 1,2-dichloroethane	7.144	62	5590	1.22	ug/L		81
49) tert-amyl methyl ether	7.303	73	6068	0.81	ug/L		95
50) heptane	7.573	43	2338	0.87	ug/L		92
51) trichloroethene	8.048	95	4000	1.11	ug/L		95
52) 1,2-dichloropropane	8.396	63	2993	0.94	ug/L		90
53) dibromomethane	8.501	93	1917	0.97	ug/L		91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21488.D
Acq On : 1 Aug 2013 9:52 pm
Operator : amym
Sample : ic832-1
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 02 10:42:58 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

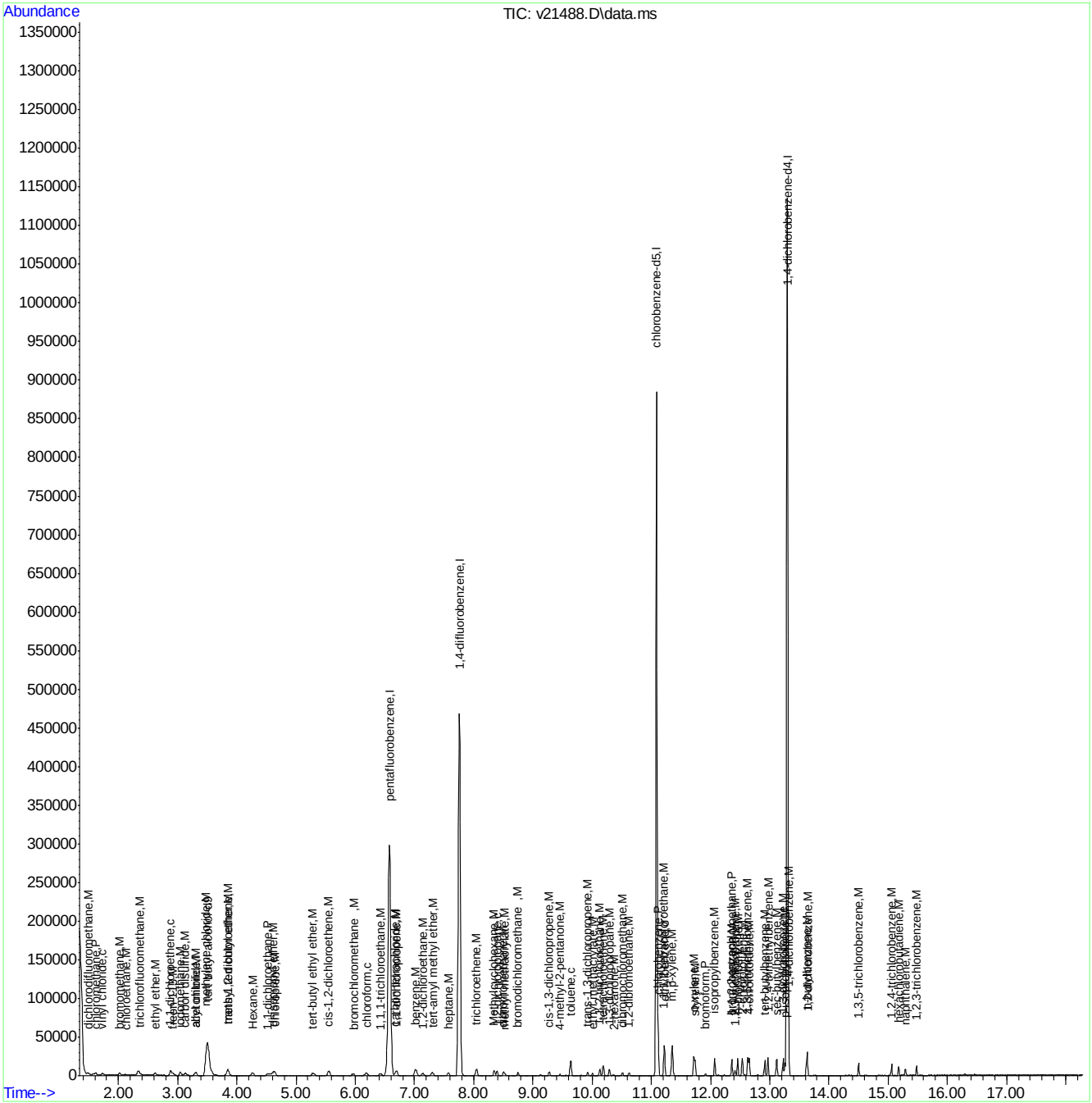
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
54) bromodichloromethane	8.749	83	4184	0.89	ug/L		93
55) Methylcyclohexane	8.346	83	3646	0.83	ug/L	#	84
57) methyl methacrylate	8.528	69	1250	0.72	ug/L	#	85
59) cis-1,3-dichloropropene	9.276	75	3645	0.68	ug/L		98
61) 4-methyl-2-pentanone	9.457	43	1789	0.77	ug/L	#	42
62) toluene	9.639	92	9230	1.22	ug/L		92
63) trans-1,3-dichloropropene	9.924	75	3053	0.65	ug/L		90
64) 1,1,2-trichloroethane	10.130	83	2638	1.07	ug/L		93
65) ethyl methacrylate	10.005	69	2180	0.60	ug/L		90
67) tetrachloroethene	10.190	166	4146	1.13	ug/L		99
68) 1,3-dichloropropane	10.292	76	4793	1.06	ug/L		99
69) dibromochloromethane	10.511	129	2734	0.67	ug/L		93
70) 1,2-dibromoethane	10.622	107	3107	0.96	ug/L		99
71) 2-hexanone	10.363	43	1324	0.82	ug/L	#	23
72) chlorobenzene	11.117	112	12218	1.31	ug/L		98
73) 1,1,1,2-tetrachloroethane	11.216	131	3496	0.99	ug/L		91
74) ethylbenzene	11.221	91	17123	1.17	ug/L		81
75) m,p-xylene	11.352	106	13838	2.43	ug/L	#	50
76) o-xylene	11.718	106	6061	1.02	ug/L		100
77) styrene	11.740	104	8217	0.83	ug/L		99
78) bromoform	11.913	173	1495	0.60	ug/L		92
81) isopropylbenzene	12.070	105	14361	0.88	ug/L		82
83) bromobenzene	12.361	156	4838	1.03	ug/L		95
84) 1,1,2,2-tetrachloroethane	12.363	83	3630	1.02	ug/L		93
85) 1,2,3-trichloropropane	12.411	75	3299	0.73	ug/L		98
86) n-propylbenzene	12.459	91	15832	0.86	ug/L		74
87) 2-chlorotoluene	12.537	91	12199	1.04	ug/L		95
88) 4-chlorotoluene	12.650	91	13415	1.01	ug/L		100
89) 1,3,5-trimethylbenzene	12.628	105	12041	0.87	ug/L		76
90) tert-butylbenzene	12.914	91	6766	0.86	ug/L		95
91) 1,2,4-trimethylbenzene	12.968	105	13781	0.97	ug/L		72
92) sec-butylbenzene	13.116	105	14100	0.85	ug/L		83
93) 1,3-dichlorobenzene	13.224	146	9683	1.11	ug/L		96
94) p-isopropyltoluene	13.257	119	10094	0.77	ug/L		92
95) 1,4-dichlorobenzene	13.319	146	10789	1.27	ug/L		94
96) 1,2-dichlorobenzene	13.637	146	9633	1.19	ug/L		96
97) n-butylbenzene	13.622	91	10498	0.89	ug/L		85
99) 1,3,5-trichlorobenzene	14.502	180	5944	1.01	ug/L		99
100) 1,2,4-trichlorobenzene	15.057	180	5508	0.91	ug/L		96
101) hexachlorobutadiene	15.178	225	2734	1.09	ug/L		98
102) naphthalene	15.292	128	7035	0.61	ug/L		100
103) 1,2,3-trichlorobenzene	15.480	180	5202	1.00	ug/L		93

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21488.D
Acq On : 1 Aug 2013 9:52 pm
Operator : amym
Sample : ic832-1
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 02 10:42:58 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/02/13 13:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21489.D
Acq On : 1 Aug 2013 10:19 pm
Operator : amym
Sample : ic832-2
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 02 10:44:38 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.523	65	87044	500.00	ug/L		0.00
4) pentafluorobenzene	6.581	168	359263	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.760	114	503888	50.00	ug/L		0.00
66) chlorobenzene-d5	11.088	82	253450	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.298	152	280225	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	0.000	113	0	0.00	ug/L		
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#			
60) toluene-d8 (s)	0.000	98	0	0.00	ug/L		
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#			
82) bromofluorobenzene (s)	0.000	95	0d	0.00	ug/L		
Spiked Amount 50.000	Range 70 - 130		Recovery =	0.00%#			
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.631	59	4063	17.95	ug/L	#	57
3) Ethanol	2.522	45	3667	246.93	ug/L	#	100
5) dichlorodifluoromethane	1.502	85	11443	2.47	ug/L		99
6) chloromethane	1.630	50	6760	2.19	ug/L		99
7) vinyl chloride	1.742	62	8521	2.33	ug/L		99
8) bromomethane	2.031	96	5518	2.59	ug/L		91
9) chloroethane	2.135	64	4048	2.73	ug/L		92
10) ethyl ether	2.624	59	4817	2.40	ug/L		96
11) acetonitrile	3.317	41	7369	1.88	ug/L		95
12) trichlorofluoromethane	2.364	101	13265	2.50	ug/L		88
13) freon-113	2.928	101	7096	2.27	ug/L		97
14) acrolein	2.780	56	1784	8.32	ug/L		93
15) 1,1-dichloroethene	2.888	96	6130	2.26	ug/L		89
17) Methyl Acetate	3.300	43	5653	2.24	ug/L	#	88
18) methylene chloride	3.490	84	9735	3.09	ug/L		89
19) methyl tert butyl ether	3.858	73	15332	1.94	ug/L		91
20) acrylonitrile	3.793	53	1185	0.27	ug/L	#	1
21) allyl chloride	3.317	41	7369	1.88	ug/L		93
22) trans-1,2-dichloroethene	3.858	96	7149	2.32	ug/L		93
23) iodomethane	3.058	142	13754	2.24	ug/L		95
24) carbon disulfide	3.141	76	17236	1.89	ug/L		98
27) chloroprene	4.645	53	8687	1.96	ug/L		99
28) di-isopropyl ether	4.627	45	17446	2.05	ug/L		93
29) methacrylonitrile	5.943	41	2688	1.60	ug/L	#	76
31) Hexane	4.273	41	5479	2.30	ug/L	#	86
32) 1,1-dichloroethane	4.533	63	11086	2.19	ug/L		92
33) tert-butyl ethyl ether	5.297	59	15702	1.73	ug/L		95
34) isobutyl alcohol	4.273	43	4228	10.77	ug/L		95
35) 2,2-dichloropropane	5.566	77	6679	1.90	ug/L		98
36) cis-1,2-dichloroethene	5.555	96	7046	2.03	ug/L		90
38) bromochloromethane	5.974	128	3619	2.06	ug/L		91
39) chloroform	6.190	83	12877	2.24	ug/L		92
42) 1,1,1-trichloroethane	6.432	97	9866	1.89	ug/L		95
44) Cyclohexane	6.556	56	14694	3.07	ug/L	#	40

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21489.D
Acq On : 1 Aug 2013 10:19 pm
Operator : amym
Sample : ic832-2
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 02 10:44:38 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45)	carbon tetrachloride	6.685	117	8852	1.83	ug/L		92
46)	1,1-dichloropropene	6.705	75	9236	2.18	ug/L		98
47)	benzene	7.023	78	25462	2.24	ug/L		98
48)	1,2-dichloroethane	7.148	62	11161	2.36	ug/L		96
49)	tert-amyl methyl ether	7.307	73	12636	1.63	ug/L		96
50)	heptane	7.576	43	5558	2.02	ug/L		98
51)	trichloroethene	8.050	95	8327	2.25	ug/L		94
52)	1,2-dichloropropane	8.397	63	7161	2.18	ug/L		90
53)	dibromomethane	8.501	93	4278	2.10	ug/L		84
54)	bromodichloromethane	8.750	83	8476	1.74	ug/L		87
55)	Methylcyclohexane	8.349	83	8414	1.85	ug/L		89
56)	2-chloroethyl vinyl ether	9.125	63	1169	1.16	ug/L	#	47
57)	methyl methacrylate	8.530	69	2870	1.60	ug/L		96
59)	cis-1,3-dichloropropene	9.276	75	8432	1.52	ug/L		97
61)	4-methyl-2-pentanone	9.459	43	4006	1.68	ug/L	#	84
62)	toluene	9.640	92	17000	2.18	ug/L		95
63)	trans-1,3-dichloropropene	9.926	75	6528	1.34	ug/L		97
64)	1,1,2-trichloroethane	10.131	83	5420	2.12	ug/L		88
65)	ethyl methacrylate	10.006	69	4829	1.29	ug/L		96
67)	tetrachloroethene	10.191	166	8693	2.28	ug/L		95
68)	1,3-dichloropropane	10.293	76	10816	2.31	ug/L		100
69)	dibromochloromethane	10.513	129	6339	1.49	ug/L		96
70)	1,2-dibromoethane	10.622	107	6505	1.94	ug/L		98
71)	2-hexanone	10.365	43	3612	2.14	ug/L		93
72)	chlorobenzene	11.117	112	25129	2.59	ug/L		99
73)	1,1,1,2-tetrachloroethane	11.216	131	7245	1.98	ug/L		93
74)	ethylbenzene	11.222	91	35453	2.33	ug/L		77
75)	m,p-xylene	11.353	106	28162	4.76	ug/L	#	40
76)	o-xylene	11.719	106	12367	2.01	ug/L		95
77)	styrene	11.740	104	18895	1.84	ug/L		98
78)	bromoform	11.913	173	3055	1.17	ug/L		91
81)	isopropylbenzene	12.070	105	31463	1.84	ug/L		84
83)	bromobenzene	12.361	156	9986	2.04	ug/L		97
84)	1,1,2,2-tetrachloroethane	12.364	83	8061	2.17	ug/L		91
85)	1,2,3-trichloropropane	12.407	75	8061	1.71	ug/L		99
86)	n-propylbenzene	12.459	91	36349	1.89	ug/L		78
87)	2-chlorotoluene	12.538	91	26414	2.15	ug/L		98
88)	4-chlorotoluene	12.650	91	30406	2.18	ug/L		98
89)	1,3,5-trimethylbenzene	12.628	105	28211	1.95	ug/L		77
90)	tert-butylbenzene	12.914	91	15925	1.93	ug/L		91
91)	1,2,4-trimethylbenzene	12.969	105	30203	2.04	ug/L		76
92)	sec-butylbenzene	13.117	105	33713	1.95	ug/L		80
93)	1,3-dichlorobenzene	13.225	146	20330	2.22	ug/L		99
94)	p-isopropyltoluene	13.258	119	25533	1.86	ug/L		88
95)	1,4-dichlorobenzene	13.320	146	21617	2.43	ug/L		98
96)	1,2-dichlorobenzene	13.637	146	20335	2.40	ug/L		99
97)	n-butylbenzene	13.623	91	22841	1.85	ug/L		86
98)	1,2-dibromo-3-chloropr...	14.338	75	836m	1.23	ug/L		
99)	1,3,5-trichlorobenzene	14.502	180	12749	2.07	ug/L		99
100)	1,2,4-trichlorobenzene	15.058	180	11275	1.78	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21489.D
Acq On : 1 Aug 2013 10:19 pm
Operator : amym
Sample : ic832-2
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 02 10:44:38 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

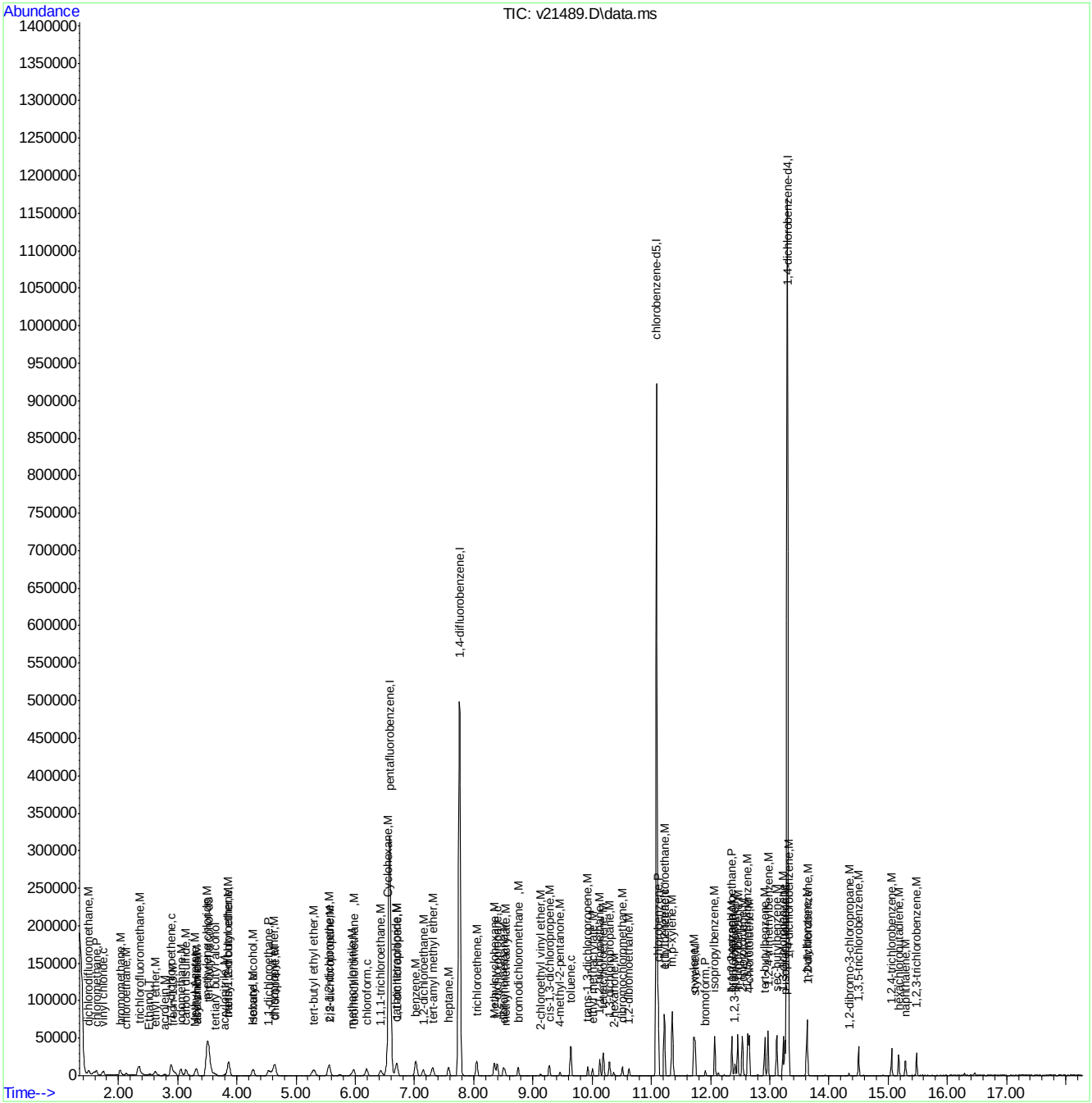
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
101) hexachlorobutadiene	15.179	225	5796	2.20	ug/L	95
102) naphthalene	15.292	128	14846	1.24	ug/L	100
103) 1,2,3-trichlorobenzene	15.481	180	10486	1.94	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21489.D
Acq On : 1 Aug 2013 10:19 pm
Operator : amym
Sample : ic832-2
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 02 10:44:38 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/02/13 13:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21490.D
Acq On : 1 Aug 2013 10:46 pm
Operator : amym
Sample : ic832-5
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 02 10:46:23 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.515	65	80721	500.00	ug/L		0.00
4) pentafluorobenzene	6.576	168	343066	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.758	114	477709	50.00	ug/L		0.00
66) chlorobenzene-d5	11.087	82	239221	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.297	152	264924	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.456	113	15987	4.59	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	9.18%#			
60) toluene-d8 (s)	9.563	98	48288	4.39	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	8.78%#			
82) bromofluorobenzene (s)	12.235	95	22212	4.54	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	9.08%#			
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.623	59	8536	40.67	ug/L	#	82
3) Ethanol	2.513	45	7158	519.77	ug/L	#	100
5) dichlorodifluoromethane	1.494	85	22552	5.10	ug/L		99
6) chloromethane	1.623	50	14166	4.81	ug/L		98
7) vinyl chloride	1.733	62	16945	4.85	ug/L		93
8) bromomethane	2.023	96	11235	5.52	ug/L		97
9) chloroethane	2.125	64	7880	5.56	ug/L		100
10) ethyl ether	2.616	59	10483	5.47	ug/L		92
11) acetonitrile	3.308	41	16266	4.34	ug/L		93
12) trichlorofluoromethane	2.356	101	25924	5.11	ug/L		98
13) freon-113	2.919	101	13119	4.40	ug/L		83
14) acrolein	2.767	56	4039	19.73	ug/L		93
15) 1,1-dichloroethene	2.879	96	11677	4.51	ug/L		95
16) acetone	2.914	58	1457	6.74	ug/L		99
17) Methyl Acetate	3.292	43	11548	4.80	ug/L		95
18) methylene chloride	3.482	84	17349	5.78	ug/L		99
19) methyl tert butyl ether	3.849	73	31866	4.22	ug/L		99
20) acrylonitrile	3.786	53	3627	0.86	ug/L	#	1
21) allyl chloride	3.308	41	16266	4.34	ug/L		97
22) trans-1,2-dichloroethene	3.851	96	14384	4.90	ug/L		91
23) iodomethane	3.049	142	27613	4.71	ug/L		94
24) carbon disulfide	3.133	76	36497	4.19	ug/L		99
25) propionitrile	5.655	54	873m	2.41	ug/L		
26) vinyl acetate	4.589	43	37704	4.39	ug/L		83
27) chloroprene	4.637	53	18575	4.38	ug/L		98
28) di-isopropyl ether	4.619	45	38256	4.72	ug/L		88
29) methacrylonitrile	5.941	41	6729	4.20	ug/L		93
30) 2-butanone	5.554	72	773m	3.01	ug/L		
31) Hexane	4.265	41	10548	4.64	ug/L	#	91
32) 1,1-dichloroethane	4.525	63	22993	4.75	ug/L		97
33) tert-butyl ethyl ether	5.290	59	33121	3.81	ug/L		95
34) isobutyl alcohol	4.590	43	37703m	100.61	ug/L		
35) 2,2-dichloropropane	5.559	77	13571	4.04	ug/L		79
36) cis-1,2-dichloroethene	5.547	96	15374	4.65	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21490.D
Acq On : 1 Aug 2013 10:46 pm
Operator : amym
Sample : ic832-5
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 02 10:46:23 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) bromochloromethane	5.968	128	7447	4.45	ug/L		100
39) chloroform	6.184	83	26676	4.86	ug/L		99
41) Tetrahydrofuran	5.979	42	2268	3.84	ug/L	#	35
42) 1,1,1-trichloroethane	6.427	97	20839	4.17	ug/L		95
44) Cyclohexane	6.544	56	23832	5.25	ug/L	#	73
45) carbon tetrachloride	6.679	117	19469	4.24	ug/L		86
46) 1,1-dichloropropene	6.701	75	19219	4.78	ug/L		95
47) benzene	7.020	78	52854	4.90	ug/L		96
48) 1,2-dichloroethane	7.145	62	23488	5.23	ug/L		100
49) tert-amyl methyl ether	7.304	73	27593	3.75	ug/L		94
50) heptane	7.573	43	11142	4.27	ug/L		96
51) trichloroethene	8.049	95	16555	4.72	ug/L		99
52) 1,2-dichloropropane	8.396	63	15031	4.82	ug/L		90
53) dibromomethane	8.500	93	9139	4.73	ug/L		90
54) bromodichloromethane	8.750	83	18410	3.99	ug/L		96
55) Methylcyclohexane	8.347	83	16518	3.83	ug/L		97
56) 2-chloroethyl vinyl ether	9.124	63	3122	3.26	ug/L	#	47
57) methyl methacrylate	8.528	69	6092	3.58	ug/L		98
59) cis-1,3-dichloropropene	9.275	75	18123	3.45	ug/L		94
61) 4-methyl-2-pentanone	9.457	43	8791	3.88	ug/L	#	88
62) toluene	9.639	92	37203	5.02	ug/L		98
63) trans-1,3-dichloropropene	9.926	75	14999	3.25	ug/L		97
64) 1,1,2-trichloroethane	10.130	83	11568	4.78	ug/L		94
65) ethyl methacrylate	10.005	69	11174	3.15	ug/L		94
67) tetrachloroethene	10.190	166	17754	4.93	ug/L		90
68) 1,3-dichloropropane	10.292	76	21891	4.95	ug/L		97
69) dibromochloromethane	10.512	129	13599	3.39	ug/L		94
70) 1,2-dibromoethane	10.621	107	13782	4.35	ug/L		96
71) 2-hexanone	10.363	43	7350	4.62	ug/L		98
72) chlorobenzene	11.117	112	50488	5.51	ug/L		99
73) 1,1,1,2-tetrachloroethane	11.216	131	15893	4.59	ug/L		97
74) ethylbenzene	11.221	91	72864	5.07	ug/L		83
75) m,p-xylene	11.352	106	58572	10.48	ug/L	#	34
76) o-xylene	11.719	106	27169	4.68	ug/L		90
77) styrene	11.740	104	43885	4.53	ug/L		100
78) bromoform	11.913	173	7102	2.89	ug/L		97
79) trans-1,4-dichloro-2-b...	12.130	53	2472	2.47	ug/L	#	67
81) isopropylbenzene	12.071	105	68990	4.27	ug/L		85
83) bromobenzene	12.360	156	22567	4.87	ug/L		94
84) 1,1,2,2-tetrachloroethane	12.364	83	16393	4.66	ug/L		98
85) 1,2,3-trichloropropane	12.406	75	17985	4.05	ug/L		96
86) n-propylbenzene	12.459	91	82930	4.55	ug/L		76
87) 2-chlorotoluene	12.537	91	56140	4.84	ug/L		99
88) 4-chlorotoluene	12.649	91	68131	5.17	ug/L		94
89) 1,3,5-trimethylbenzene	12.628	105	62482	4.57	ug/L		76
90) tert-butylbenzene	12.914	91	34424	4.41	ug/L		100
91) 1,2,4-trimethylbenzene	12.968	105	66393	4.74	ug/L		77
92) sec-butylbenzene	13.117	105	71964	4.41	ug/L		85
93) 1,3-dichlorobenzene	13.224	146	42868	4.96	ug/L		98
94) p-isopropyltoluene	13.258	119	56610	4.36	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21490.D
Acq On : 1 Aug 2013 10:46 pm
Operator : amym
Sample : ic832-5
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 02 10:46:23 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration

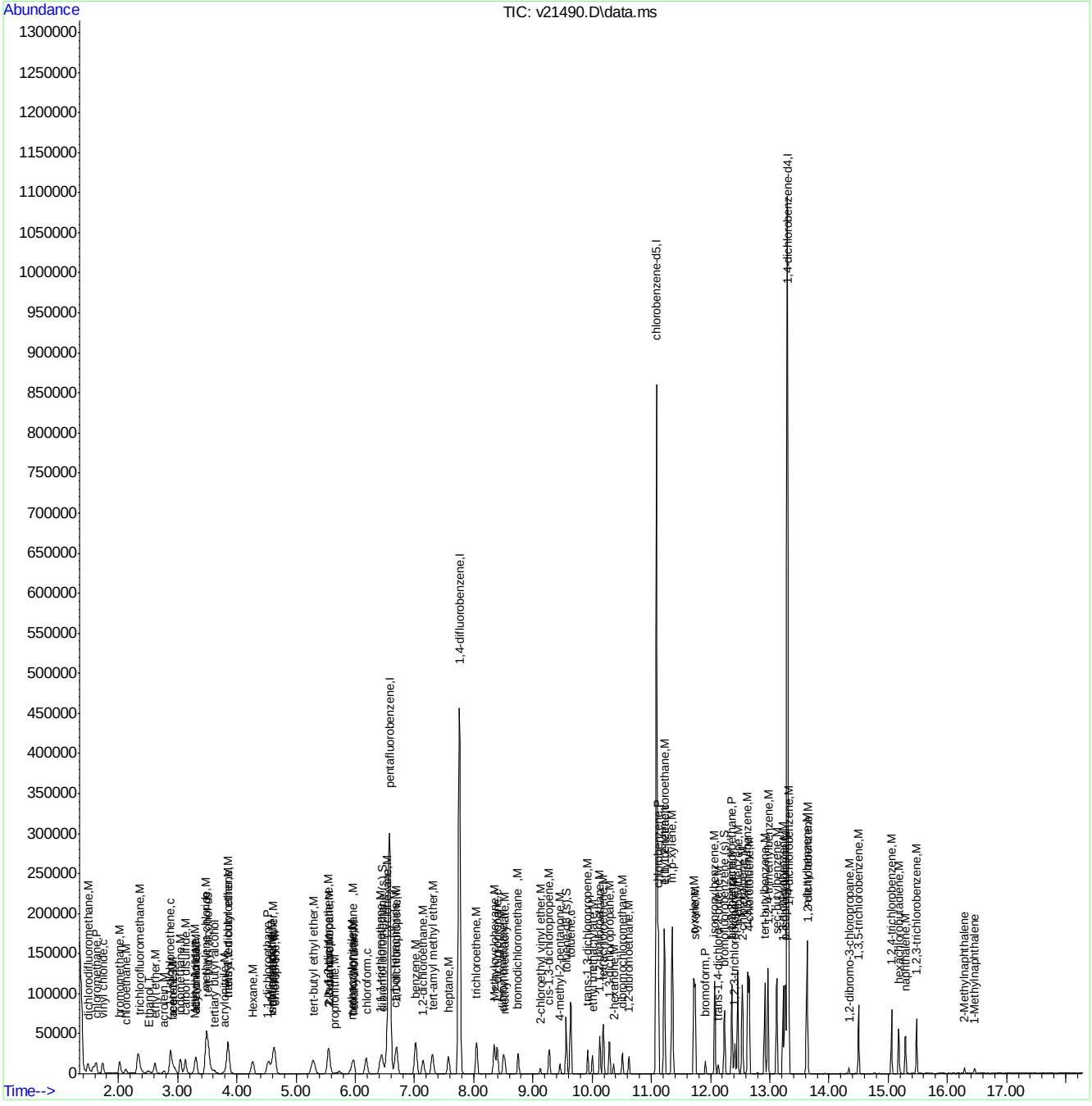
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
95) 1,4-dichlorobenzene	13.320	146	43747	5.20	ug/L		100
96) 1,2-dichlorobenzene	13.636	146	42348	5.30	ug/L		100
97) n-butylbenzene	13.622	91	50621	4.33	ug/L		88
98) 1,2-dibromo-3-chloropr...	14.337	75	1858	2.88	ug/L	#	78
99) 1,3,5-trichlorobenzene	14.502	180	26105	4.49	ug/L		98
100) 1,2,4-trichlorobenzene	15.058	180	24587	4.10	ug/L		98
101) hexachlorobutadiene	15.179	225	11275	4.53	ug/L		89
102) naphthalene	15.292	128	34565	3.05	ug/L		100
103) 1,2,3-trichlorobenzene	15.481	180	22180	4.33	ug/L		96
104) 2-Methylnaphthalene	16.289	142	4244	0.81	ug/L		100
105) 1-Methylnaphthalene	16.461	142	3580	0.89	ug/L		99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21490.D
Acq On : 1 Aug 2013 10:46 pm
Operator : amym
Sample : ic832-5
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 02 10:46:23 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:29:27 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/02/13 13:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21491.D
Acq On : 1 Aug 2013 11:12 pm
Operator : amym
Sample : ic832-25
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 02 10:48:10 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:47:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.516	65	82099	500.00	ug/L		0.00
4) pentafluorobenzene	6.578	168	353063	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.760	114	483908	50.00	ug/L		0.00
66) chlorobenzene-d5	11.088	82	242137	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.297	152	267305	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.458	113	84017	24.44	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 48.88%#				
60) toluene-d8 (s)	9.564	98	267155	25.53	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 51.06%#				
82) bromofluorobenzene (s)	12.235	95	117641	24.99	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 49.98%#				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.627	59	50433	261.44	ug/L	#	80
3) Ethanol	2.511	45	36352	2378.01	ug/L	#	100
5) dichlorodifluoromethane	1.493	85	100976	19.34	ug/L		100
6) chloromethane	1.632	50	71420	22.85	ug/L		96
7) vinyl chloride	1.735	62	82467	21.61	ug/L		100
8) bromomethane	2.028	96	56418	23.37	ug/L		98
9) chloroethane	2.125	64	36789	20.67	ug/L		100
10) ethyl ether	2.616	59	48579	21.22	ug/L		88
11) acetonitrile	3.307	41	89856	25.07	ug/L		96
12) trichlorofluoromethane	2.356	101	119670	20.68	ug/L		99
13) freon-113	2.925	101	62706	20.52	ug/L		97
14) acrolein	2.768	56	23333	126.76	ug/L		93
15) 1,1-dichloroethene	2.880	96	60511	23.02	ug/L		95
16) acetone	2.916	58	9095	34.81	ug/L		86
17) Methyl Acetate	3.294	43	62255	24.47	ug/L		94
18) methylene chloride	3.482	84	76769	17.50	ug/L		94
19) methyl tert butyl ether	3.851	73	174060	23.70	ug/L		96
20) acrylonitrile	3.792	53	22890	12.07	ug/L	#	1
21) allyl chloride	3.307	41	89856	25.07	ug/L		96
22) trans-1,2-dichloroethene	3.851	96	73418	22.83	ug/L		99
23) iodomethane	3.049	142	144504	22.68	ug/L		100
24) carbon disulfide	3.133	76	190434	22.19	ug/L		98
25) propionitrile	5.665	54	7804	28.22	ug/L		100
26) vinyl acetate	4.590	43	205845	24.79	ug/L		95
27) chloroprene	4.639	53	102412	25.79	ug/L		98
28) di-isopropyl ether	4.622	45	208570	25.42	ug/L		95
29) methacrylonitrile	5.941	41	38611	26.60	ug/L		98
30) 2-butanone	5.554	72	7724	36.46	ug/L	#	84
31) Hexane	4.267	41	49060	20.33	ug/L		91
32) 1,1-dichloroethane	4.527	63	121140	23.66	ug/L		99
33) tert-butyl ethyl ether	5.293	59	191592	24.91	ug/L		98
34) isobutyl alcohol	4.590	43	205840	262.41	ug/L	#	11
35) 2,2-dichloropropane	5.563	77	75624	23.80	ug/L		96
36) cis-1,2-dichloroethene	5.549	96	80974	24.42	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21491.D
Acq On : 1 Aug 2013 11:12 pm
Operator : amym
Sample : ic832-25
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 02 10:48:10 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:47:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) ethyl acetate	4.591	43	205645m	26.50	ug/L		
38) bromochloromethane	5.970	128	41511	25.09	ug/L		94
39) chloroform	6.186	83	138516	22.67	ug/L		99
41) Tetrahydrofuran	5.980	42	14738	27.43	ug/L		92
42) 1,1,1-trichloroethane	6.429	97	113393	24.73	ug/L		98
44) Cyclohexane	6.538	56	96874	17.64	ug/L		96
45) carbon tetrachloride	6.682	117	99336	23.65	ug/L		98
46) 1,1-dichloropropene	6.703	75	95441	22.24	ug/L		99
47) benzene	7.022	78	270271	22.34	ug/L		99
48) 1,2-dichloroethane	7.147	62	119664	23.70	ug/L		97
49) tert-amyl methyl ether	7.306	73	159650	25.43	ug/L		97
50) heptane	7.575	43	54914	22.22	ug/L		97
51) trichloroethene	8.050	95	85578	23.10	ug/L		99
52) 1,2-dichloropropane	8.398	63	78254	24.84	ug/L		98
53) dibromomethane	8.502	93	48164	24.83	ug/L		93
54) bromodichloromethane	8.751	83	104073	25.14	ug/L		99
55) Methylcyclohexane	8.349	83	83991	21.87	ug/L		95
56) 2-chloroethyl vinyl ether	9.126	63	18702	25.93	ug/L		96
57) methyl methacrylate	8.529	69	37072	26.60	ug/L		99
58) 1,4-dioxane	8.507	88	2344	82.01	ug/L	#	39
59) cis-1,3-dichloropropene	9.277	75	114649	27.85	ug/L		100
61) 4-methyl-2-pentanone	9.459	43	53173	27.37	ug/L		99
62) toluene	9.640	92	193182	21.95	ug/L		97
63) trans-1,3-dichloropropene	9.926	75	95833	28.88	ug/L		99
64) 1,1,2-trichloroethane	10.132	83	61377	24.51	ug/L		97
65) ethyl methacrylate	10.005	69	77692	30.07	ug/L		97
67) tetrachloroethene	10.191	166	89531	22.62	ug/L		96
68) 1,3-dichloropropane	10.293	76	113235	23.80	ug/L		100
69) dibromochloromethane	10.513	129	84467	27.75	ug/L		97
70) 1,2-dibromoethane	10.622	107	76243	25.30	ug/L		100
71) 2-hexanone	10.363	43	46861	30.52	ug/L		100
72) chlorobenzene	11.117	112	255019	22.28	ug/L		98
73) 1,1,1,2-tetrachloroethane	11.217	131	89385	25.93	ug/L		98
74) ethylbenzene	11.222	91	390245	23.52	ug/L		82
75) m,p-xylene	11.353	106	310152	46.96	ug/L	#	36
76) o-xylene	11.719	106	154834	25.82	ug/L		87
77) styrene	11.740	104	250365	28.50	ug/L		98
78) bromoform	11.914	173	43987	25.59	ug/L		99
79) trans-1,4-dichloro-2-b...	12.130	53	18522	24.48	ug/L		77
81) isopropylbenzene	12.071	105	391115	26.09	ug/L		84
83) bromobenzene	12.361	156	116911	24.59	ug/L		94
84) 1,1,2,2-tetrachloroethane	12.365	83	88067	24.19	ug/L		100
85) 1,2,3-trichloropropane	12.406	75	99580	27.07	ug/L		100
86) n-propylbenzene	12.459	91	457342	26.56	ug/L		77
87) 2-chlorotoluene	12.537	91	298167	24.62	ug/L		98
88) 4-chlorotoluene	12.649	91	343935	25.05	ug/L		99
89) 1,3,5-trimethylbenzene	12.628	105	345175	26.74	ug/L		80
90) tert-butylbenzene	12.914	91	193476	26.78	ug/L		100
91) 1,2,4-trimethylbenzene	12.968	105	358721	25.44	ug/L		77
92) sec-butylbenzene	13.117	105	392155	25.95	ug/L		82

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21491.D
Acq On : 1 Aug 2013 11:12 pm
Operator : amym
Sample : ic832-25
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 02 10:48:10 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:47:22 2013
Response via : Initial Calibration

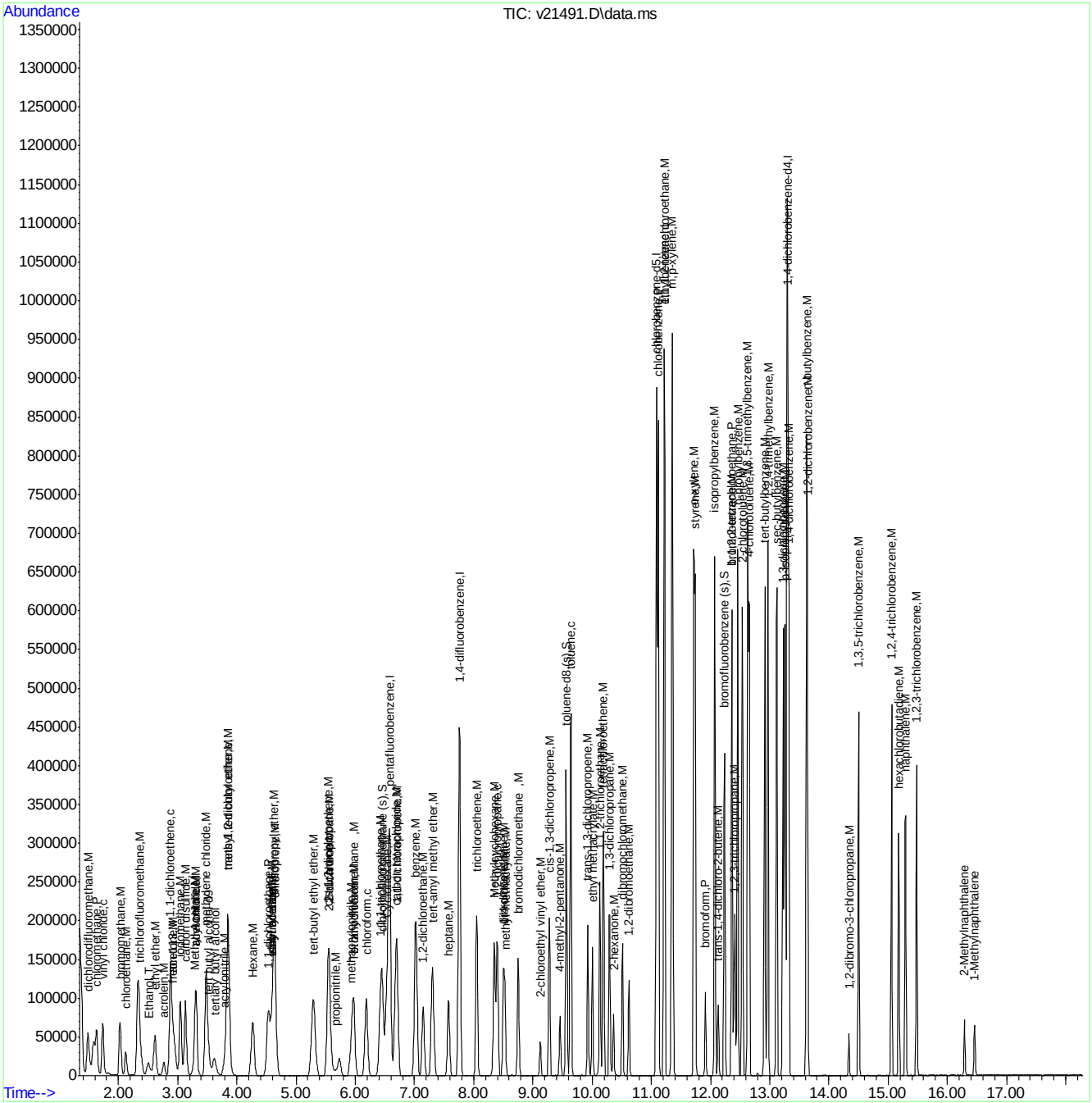
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	1,3-dichlorobenzene	13.225	146	219533	23.53	ug/L	99
94)	p-isopropyltoluene	13.257	119	318871	27.65	ug/L	86
95)	1,4-dichlorobenzene	13.320	146	215679	21.61	ug/L	99
96)	1,2-dichlorobenzene	13.637	146	213068	23.50	ug/L	98
97)	n-butylbenzene	13.622	91	284011	26.09	ug/L	90
98)	1,2-dibromo-3-chloropr...	14.338	75	11476	24.18	ug/L	96
99)	1,3,5-trichlorobenzene	14.502	180	138877	23.71	ug/L	97
100)	1,2,4-trichlorobenzene	15.058	180	137975	25.13	ug/L	99
101)	hexachlorobutadiene	15.179	225	57774	22.26	ug/L	98
102)	naphthalene	15.292	128	234640	28.88	ug/L	100
103)	1,2,3-trichlorobenzene	15.481	180	121212	24.43	ug/L	99
104)	2-Methylnaphthalene	16.291	142	33380	9.57	ug/L	99
105)	1-Methylnaphthalene	16.462	142	30265	11.02	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21491.D
Acq On : 1 Aug 2013 11:12 pm
Operator : amym
Sample : ic832-25
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 02 10:48:10 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:47:22 2013
Response via : Initial Calibration



V21492.D

Manual Integrations APPROVED (compounds with "m" flag)

Tomasz Torski
08/02/13 13:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21492.D
Acq On : 1 Aug 2013 11:39 pm
Operator : amym
Sample : icc832-50
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 02 10:55:01 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:54:12 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.522	65	84178	500.00	ug/L		0.00
4) pentafluorobenzene	6.582	168	349753	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.762	114	480764	50.00	ug/L		0.00
66) chlorobenzene-d5	11.089	82	242836	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.298	152	263759	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.462	113	185649	54.92	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 109.84%				
60) toluene-d8 (s)	9.566	98	598606	57.17	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 114.34%				
82) bromofluorobenzene (s)	12.236	95	256717	55.27	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 110.54%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.634	59	107702	538.37	ug/L	#	82
3) Ethanol	2.519	45	78402	5063.86	ug/L	#	100
5) dichlorodifluoromethane	1.498	85	177496	35.67	ug/L		100
6) chloromethane	1.642	50	129470	42.54	ug/L		99
7) vinyl chloride	1.743	62	155751	42.34	ug/L		100
8) bromomethane	2.036	96	107109	45.39	ug/L		99
9) chloroethane	2.132	64	69984	41.11	ug/L		99
10) ethyl ether	2.623	59	95839	43.58	ug/L		92
11) acetonitrile	3.313	41	179615	50.57	ug/L		95
12) trichlorofluoromethane	2.363	101	219081	39.34	ug/L		98
13) freon-113	2.932	101	118072	40.45	ug/L		95
14) acrolein	2.775	56	49922	272.81	ug/L		99
15) 1,1-dichloroethene	2.887	96	115715	45.04	ug/L		93
16) acetone	2.922	58	14863	50.78	ug/L		89
17) Methyl Acetate	3.299	43	123692	49.34	ug/L		96
18) methylene chloride	3.488	84	147373	36.07	ug/L		93
19) methyl tert butyl ether	3.858	73	351384	48.72	ug/L		99
20) acrylonitrile	3.799	53	44920	27.45	ug/L	#	1
21) allyl chloride	3.313	41	179615	50.56	ug/L		92
22) trans-1,2-dichloroethene	3.857	96	141043	44.93	ug/L		96
23) iodomethane	3.056	142	283044	45.56	ug/L		97
24) carbon disulfide	3.139	76	376424	45.12	ug/L		100
25) propionitrile	5.673	54	17422	60.98	ug/L		100
26) vinyl acetate	4.594	43	422568	51.52	ug/L		98
27) chloroprene	4.645	53	202129	51.11	ug/L		95
28) di-isopropyl ether	4.628	45	411845	50.53	ug/L		97
29) methacrylonitrile	5.945	41	78823	53.96	ug/L		99
30) 2-butanone	5.559	72	14091	58.25	ug/L		99
31) Hexane	4.274	41	99572	43.27	ug/L		97
32) 1,1-dichloroethane	4.534	63	234124	46.66	ug/L		99
33) tert-butyl ethyl ether	5.300	59	391732	51.45	ug/L		97
34) isobutyl alcohol	4.594	43	422568	426.57	ug/L	#	11
35) 2,2-dichloropropane	5.569	77	150707	48.46	ug/L		93
36) cis-1,2-dichloroethene	5.555	96	157008	47.99	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21492.D
Acq On : 1 Aug 2013 11:39 pm
Operator : amym
Sample : icc832-50
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 02 10:55:01 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:54:12 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) ethyl acetate	4.597	43	421894m	53.28	ug/L		
38) bromochloromethane	5.975	128	81148	49.47	ug/L		93
39) chloroform	6.191	83	267506	44.89	ug/L		99
41) Tetrahydrofuran	5.983	42	29048	52.86	ug/L		93
42) 1,1,1-trichloroethane	6.434	97	222077	48.96	ug/L		99
44) Cyclohexane	6.541	56	188176	37.22	ug/L		96
45) carbon tetrachloride	6.687	117	194387	47.00	ug/L		100
46) 1,1-dichloropropene	6.706	75	185884	44.42	ug/L		99
47) benzene	7.025	78	524143	44.39	ug/L		99
48) 1,2-dichloroethane	7.150	62	234323	47.21	ug/L		98
49) tert-amyl methyl ether	7.309	73	327008	52.25	ug/L		98
50) heptane	7.577	43	120363	50.14	ug/L		99
51) trichloroethene	8.052	95	165734	45.52	ug/L		98
52) 1,2-dichloropropane	8.399	63	152139	48.67	ug/L		99
53) dibromomethane	8.503	93	96368	50.07	ug/L		91
54) bromodichloromethane	8.753	83	210947	51.24	ug/L		99
55) Methylcyclohexane	8.351	83	176446	47.44	ug/L		96
56) 2-chloroethyl vinyl ether	9.127	63	41081	56.80	ug/L		98
57) methyl methacrylate	8.531	69	78660	56.10	ug/L		93
58) 1,4-dioxane	8.513	88	6436	273.73	ug/L	#	40
59) cis-1,3-dichloropropene	9.278	75	237385	56.96	ug/L		99
61) 4-methyl-2-pentanone	9.459	43	112224	57.07	ug/L		99
62) toluene	9.641	92	369520	43.14	ug/L		97
63) trans-1,3-dichloropropene	9.927	75	203737	60.24	ug/L		100
64) 1,1,2-trichloroethane	10.133	83	120308	48.52	ug/L		97
65) ethyl methacrylate	10.006	69	164586	61.62	ug/L		98
67) tetrachloroethene	10.192	166	173556	44.32	ug/L		93
68) 1,3-dichloropropane	10.294	76	224264	47.38	ug/L		99
69) dibromochloromethane	10.514	129	176836	56.89	ug/L		98
70) 1,2-dibromoethane	10.623	107	154296	50.95	ug/L		99
71) 2-hexanone	10.364	43	85781	53.36	ug/L		100
72) chlorobenzene	11.118	112	487130	43.22	ug/L		100
73) 1,1,1,2-tetrachloroethane	11.217	131	176348	50.69	ug/L		99
74) ethylbenzene	11.222	91	756930	45.95	ug/L		84
75) m,p-xylene	11.353	106	594441	90.66	ug/L	#	38
76) o-xylene	11.720	106	296991	49.12	ug/L		86
77) styrene	11.740	104	494336	54.84	ug/L		98
78) bromoform	11.914	173	96002	55.43	ug/L		96
79) trans-1,4-dichloro-2-b...	12.130	53	42355	56.21	ug/L		86
81) isopropylbenzene	12.071	105	769615	51.65	ug/L		86
83) bromobenzene	12.361	156	229119	48.97	ug/L		98
84) 1,1,2,2-tetrachloroethane	12.365	83	178068	49.84	ug/L		99
85) 1,2,3-trichloropropane	12.406	75	203476	55.30	ug/L		98
86) n-propylbenzene	12.459	91	893154	52.02	ug/L		76
87) 2-chlorotoluene	12.538	91	572230	48.00	ug/L		97
88) 4-chlorotoluene	12.649	91	664384	49.02	ug/L		97
89) 1,3,5-trimethylbenzene	12.628	105	679124	52.71	ug/L		78
90) tert-butylbenzene	12.915	91	381873	52.94	ug/L		99
91) 1,2,4-trimethylbenzene	12.968	105	697745	50.00	ug/L		77
92) sec-butylbenzene	13.117	105	781348	52.06	ug/L		82

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21492.D
Acq On : 1 Aug 2013 11:39 pm
Operator : amym
Sample : icc832-50
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 02 10:55:01 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:54:12 2013
Response via : Initial Calibration

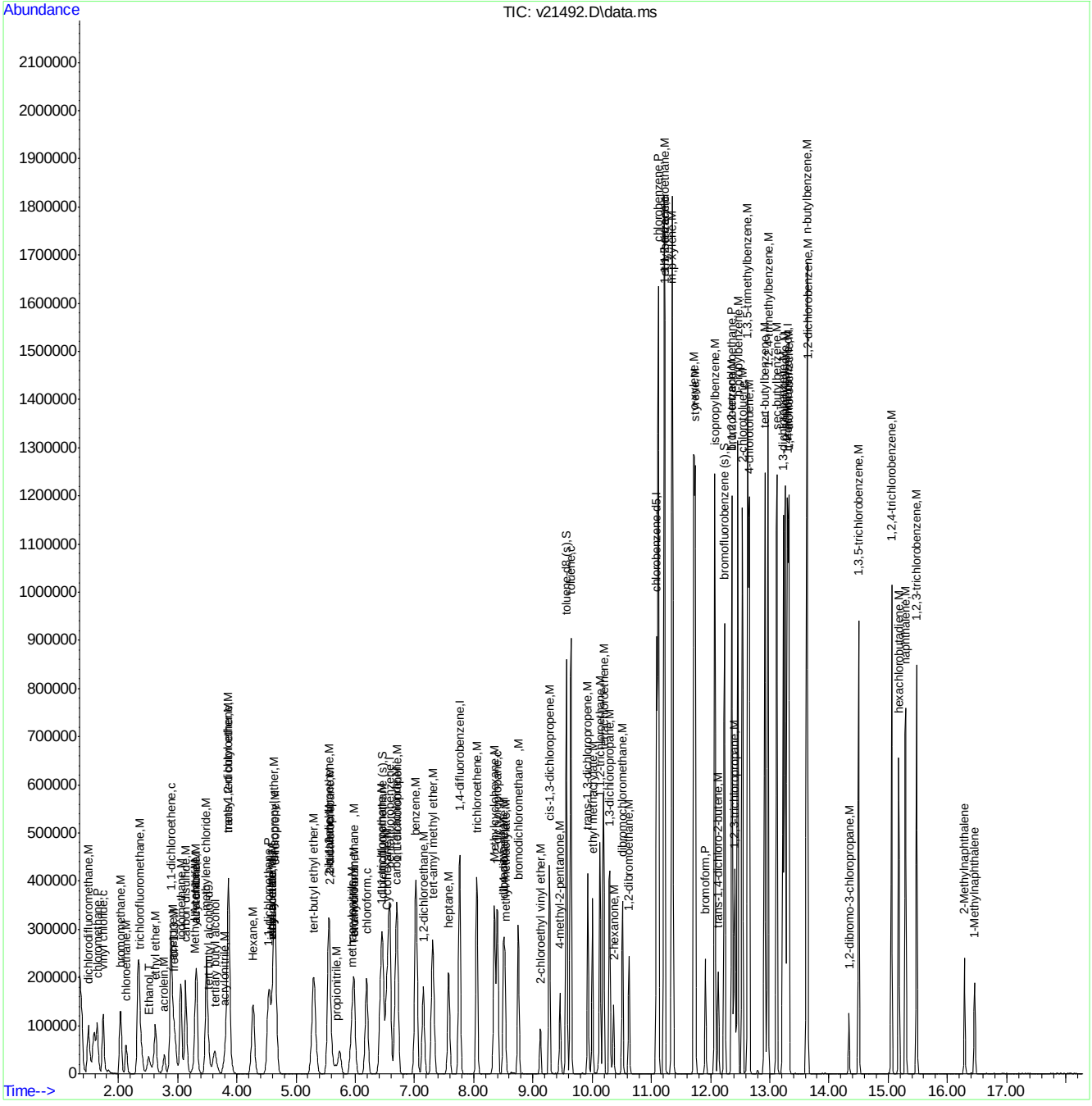
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	1,3-dichlorobenzene	13.225	146	425344	46.65	ug/L	98
94)	p-isopropyltoluene	13.258	119	638976	55.18	ug/L	86
95)	1,4-dichlorobenzene	13.320	146	418864	43.51	ug/L	100
96)	1,2-dichlorobenzene	13.637	146	414674	46.82	ug/L	99
97)	n-butylbenzene	13.622	91	586238	54.18	ug/L	89
98)	1,2-dibromo-3-chloropr...	14.338	75	26409	56.85	ug/L	92
99)	1,3,5-trichlorobenzene	14.503	180	281409	49.12	ug/L	98
100)	1,2,4-trichlorobenzene	15.058	180	288871	53.27	ug/L	100
101)	hexachlorobutadiene	15.180	225	121705	48.41	ug/L	100
102)	naphthalene	15.293	128	531043	64.25	ug/L	100
103)	1,2,3-trichlorobenzene	15.481	180	253588	51.99	ug/L	99
104)	2-Methylnaphthalene	16.292	142	99320	31.30	ug/L	100
105)	1-Methylnaphthalene	16.462	142	84208	32.36	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21492.D
Acq On : 1 Aug 2013 11:39 pm
Operator : amym
Sample : icc832-50
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 02 10:55:01 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:54:12 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/02/13 13:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21493.D
Acq On : 2 Aug 2013 12:05 am
Operator : amym
Sample : ic832-100
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 02 10:56:11 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:55:46 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.524	65	87018	500.00	ug/L		0.00
4) pentafluorobenzene	6.584	168	360499	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.763	114	497960	50.00	ug/L		0.00
66) chlorobenzene-d5	11.089	82	248617	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.299	152	272446	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.464	113	385755	108.06	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 216.12%#				
60) toluene-d8 (s)	9.567	98	1232856	109.75	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 219.50%#				
82) bromofluorobenzene (s)	12.236	95	529202	107.47	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 214.94%#				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.636	59	220201	1048.70	ug/L	#	85
3) Ethanol	2.520	45	156029	9723.92	ug/L	#	100
5) dichlorodifluoromethane	1.500	85	466943	94.92	ug/L		100
6) chloromethane	1.652	50	306260	100.12	ug/L		100
7) vinyl chloride	1.746	62	363272	98.33	ug/L		99
8) bromomethane	2.040	96	229582	95.86	ug/L		98
9) chloroethane	2.134	64	153010	89.87	ug/L		100
10) ethyl ether	2.625	59	223460	100.73	ug/L		96
11) acetonitrile	3.315	41	396868	108.19	ug/L		97
12) trichlorofluoromethane	2.365	101	556785	100.06	ug/L		97
13) freon-113	2.937	101	311458	106.92	ug/L		96
14) acrolein	2.777	56	105052	546.99	ug/L		99
15) 1,1-dichloroethene	2.888	96	268459	102.83	ug/L		94
16) acetone	2.924	58	31959	105.53	ug/L		87
17) Methyl Acetate	3.301	43	263279	102.16	ug/L		96
18) methylene chloride	3.490	84	312632	77.86	ug/L		92
19) methyl tert butyl ether	3.860	73	774826	104.61	ug/L		96
20) acrylonitrile	3.800	53	97755	63.71	ug/L	#	1
21) allyl chloride	3.315	41	397009	108.22	ug/L		93
22) trans-1,2-dichloroethene	3.859	96	308907	96.87	ug/L		97
23) iodomethane	3.057	142	616787	97.55	ug/L		98
24) carbon disulfide	3.141	76	872293	102.87	ug/L		100
25) propionitrile	5.674	54	37751	121.53	ug/L		100
26) vinyl acetate	4.596	43	912975	107.17	ug/L		97
27) chloroprene	4.648	53	458282	112.07	ug/L		95
28) di-isopropyl ether	4.631	45	888000	105.55	ug/L		97
29) methacrylonitrile	5.946	41	171278	111.98	ug/L		97
30) 2-butanone	5.561	72	30921	119.10	ug/L		98
31) Hexane	4.275	41	244264	105.34	ug/L		99
32) 1,1-dichloroethane	4.537	63	507056	99.14	ug/L		98
33) tert-butyl ethyl ether	5.302	59	874932	110.95	ug/L		97
34) isobutyl alcohol	4.596	43	913008	783.51	ug/L	#	9
35) 2,2-dichloropropane	5.572	77	342617	107.55	ug/L		96
36) cis-1,2-dichloroethene	5.557	96	343425	102.42	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21493.D
Acq On : 2 Aug 2013 12:05 am
Operator : amym
Sample : ic832-100
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 02 10:56:11 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:55:46 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) ethyl acetate	4.597	43	911349m	109.27	ug/L		
38) bromochloromethane	5.977	128	175407	103.93	ug/L		93
39) chloroform	6.193	83	577068	95.34	ug/L		99
41) Tetrahydrofuran	5.984	42	64731	112.67	ug/L		96
42) 1,1,1-trichloroethane	6.436	97	515419	110.54	ug/L		99
44) Cyclohexane	6.543	56	476828	95.97	ug/L		95
45) carbon tetrachloride	6.689	117	473228	111.42	ug/L		99
46) 1,1-dichloropropene	6.708	75	428914	100.56	ug/L		99
47) benzene	7.027	78	1138861	94.63	ug/L		99
48) 1,2-dichloroethane	7.152	62	495894	97.36	ug/L		98
49) tert-amyl methyl ether	7.311	73	730988	111.92	ug/L		97
50) heptane	7.579	43	287605	115.62	ug/L		95
51) trichloroethene	8.053	95	366108	98.19	ug/L		98
52) 1,2-dichloropropane	8.401	63	331781	102.93	ug/L		99
53) dibromomethane	8.505	93	206514	103.56	ug/L		94
54) bromodichloromethane	8.754	83	471617	110.20	ug/L		100
55) Methylcyclohexane	8.352	83	443838	116.19	ug/L		95
56) 2-chloroethyl vinyl ether	9.128	63	95269	123.80	ug/L		98
57) methyl methacrylate	8.532	69	173489	117.07	ug/L		99
58) 1,4-dioxane	8.519	88	13511	537.77	ug/L	#	48
59) cis-1,3-dichloropropene	9.280	75	536906	121.96	ug/L		99
61) 4-methyl-2-pentanone	9.460	43	243794	116.94	ug/L		99
62) toluene	9.642	92	795367	91.45	ug/L		97
63) trans-1,3-dichloropropene	9.928	75	465750	129.18	ug/L		99
64) 1,1,2-trichloroethane	10.134	83	258388	101.03	ug/L		97
65) ethyl methacrylate	10.006	69	366243	127.44	ug/L		98
67) tetrachloroethene	10.193	166	390632	98.84	ug/L		93
68) 1,3-dichloropropane	10.295	76	484646	100.77	ug/L		99
69) dibromochloromethane	10.515	129	398973	122.95	ug/L		100
70) 1,2-dibromoethane	10.624	107	332499	106.96	ug/L		99
71) 2-hexanone	10.364	43	186234	111.89	ug/L		99
72) chlorobenzene	11.119	112	1046041	92.45	ug/L		100
73) 1,1,1,2-tetrachloroethane	11.218	131	389296	109.09	ug/L		99
74) ethylbenzene	11.224	91	1642795	98.54	ug/L		83
75) m,p-xylene	11.354	106	1271125	191.92	ug/L	#	37
76) o-xylene	11.720	106	648888	105.08	ug/L		86
77) styrene	11.741	104	1061336	113.43	ug/L		97
78) bromoform	11.915	173	228369	126.51	ug/L		99
79) trans-1,4-dichloro-2-b...	12.131	53	98780	124.18	ug/L		89
81) isopropylbenzene	12.072	105	1699300	109.89	ug/L		85
83) bromobenzene	12.362	156	492581	102.23	ug/L		98
84) 1,1,2,2-tetrachloroethane	12.366	83	372502	100.99	ug/L		99
85) 1,2,3-trichloropropane	12.407	75	443118	114.85	ug/L		100
86) n-propylbenzene	12.460	91	1949789	109.31	ug/L		76
87) 2-chlorotoluene	12.539	91	1224374	100.00	ug/L		98
88) 4-chlorotoluene	12.650	91	1416194	101.45	ug/L		98
89) 1,3,5-trimethylbenzene	12.629	105	1467813	109.45	ug/L		79
90) tert-butylbenzene	12.915	91	838344	111.58	ug/L		97
91) 1,2,4-trimethylbenzene	12.969	105	1490759	103.42	ug/L		77
92) sec-butylbenzene	13.118	105	1722840	110.48	ug/L		82

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21493.D
Acq On : 2 Aug 2013 12:05 am
Operator : amym
Sample : ic832-100
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 02 10:56:11 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:55:46 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) 1,3-dichlorobenzene	13.226	146	909234	97.48	ug/L	100
94) p-isopropyltoluene	13.259	119	1386322	114.22	ug/L	86
95) 1,4-dichlorobenzene	13.321	146	892731	91.48	ug/L	100
96) 1,2-dichlorobenzene	13.638	146	866389	95.57	ug/L	99
97) n-butylbenzene	13.623	91	1265458	111.88	ug/L	89
98) 1,2-dibromo-3-chloropr...	14.339	75	58666	119.01	ug/L	97
99) 1,3,5-trichlorobenzene	14.503	180	612969	103.84	ug/L	99
100) 1,2,4-trichlorobenzene	15.059	180	630675	111.55	ug/L	100
101) hexachlorobutadiene	15.180	225	263239	101.82	ug/L	97
102) naphthalene	15.293	128	1155533	129.21	ug/L	100
103) 1,2,3-trichlorobenzene	15.482	180	543406	107.25	ug/L	99
104) 2-Methylnaphthalene	16.292	142	242989	69.73	ug/L	100
105) 1-Methylnaphthalene	16.462	142	197406	68.41	ug/L	100

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

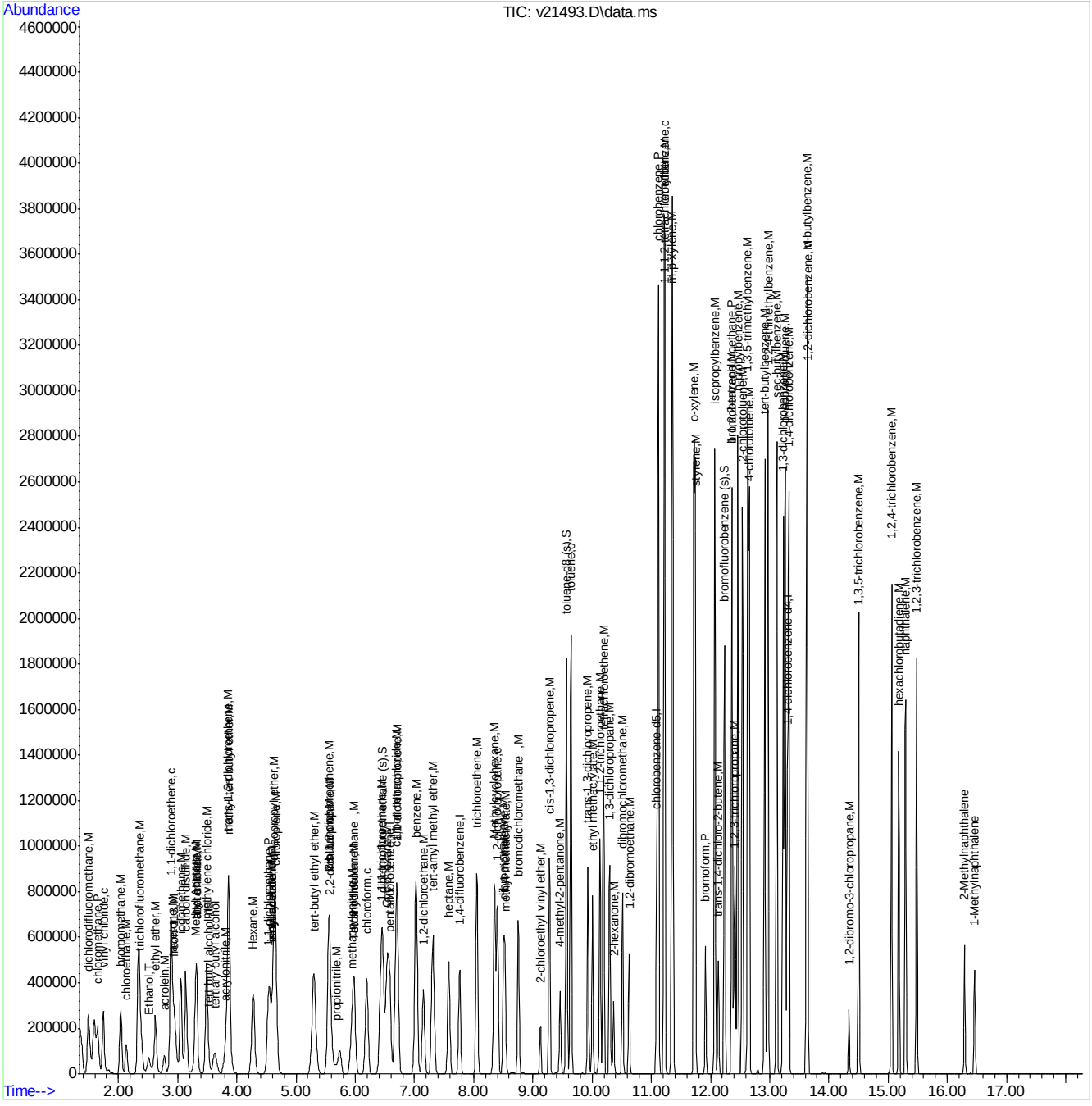
7.6.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21493.D
Acq On : 2 Aug 2013 12:05 am
Operator : amym
Sample : ic832-100
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 02 10:56:11 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:55:46 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/02/13 13:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21494.D
Acq On : 2 Aug 2013 12:32 am
Operator : amym
Sample : ic832-200
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 02 10:57:39 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:56:57 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.526	65	91235	500.00	ug/L	0.00
4) pentafluorobenzene	6.584	168	366902	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.762	114	506842	50.00	ug/L	0.00
66) chlorobenzene-d5	11.090	82	256580	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.299	152	275797	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.465	113	749377	202.99	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 405.98%#			
60) toluene-d8 (s)	9.567	98	2390484	205.07	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 410.14%#			
82) bromofluorobenzene (s)	12.237	95	1020849	201.78	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 403.56%#			
Target Compounds						Qvalue
2) tertiary butyl alcohol	3.637	59	476491	2146.95	ug/L	89
3) Ethanol	2.522	45	324065	19351.69	ug/L #	100
5) dichlorodifluoromethane	1.501	85	948470	190.64	ug/L	100
6) chloromethane	1.657	50	640225	205.61	ug/L	99
7) vinyl chloride	1.748	62	757426	201.92	ug/L	98
8) bromomethane	2.043	96	469090	193.59	ug/L	100
9) chloroethane	2.136	64	317306	185.80	ug/L	99
10) ethyl ether	2.627	59	447843	198.15	ug/L	93
11) acetonitrile	3.316	41	838640	222.04	ug/L	98
12) trichlorofluoromethane	2.366	101	1142341	201.68	ug/L	99
13) freon-113	2.940	101	651613	217.63	ug/L	98
14) acrolein	2.778	56	222710	1121.81	ug/L	99
15) 1,1-dichloroethene	2.889	96	565666	212.14	ug/L	93
16) acetone	2.925	58	52419	168.21	ug/L	95
17) Methyl Acetate	3.302	43	544130	206.71	ug/L	96
18) methylene chloride	3.491	84	655524	165.64	ug/L	90
19) methyl tert butyl ether	3.863	73	1641583	216.51	ug/L	96
20) acrylonitrile	3.802	53	203704	138.84	ug/L #	1
21) allyl chloride	3.316	41	838314	221.93	ug/L	93
22) trans-1,2-dichloroethene	3.861	96	649169	200.80	ug/L	95
23) iodomethane	3.058	142	1291196	201.27	ug/L	98
24) carbon disulfide	3.141	76	1875691	216.56	ug/L	100
25) propionitrile	5.674	54	79505	241.09	ug/L	100
26) vinyl acetate	4.595	43	1931446	219.62	ug/L	99
27) chloroprene	4.649	53	948076	224.41	ug/L	94
28) di-isopropyl ether	4.633	45	1839684	213.37	ug/L	97
29) methacrylonitrile	5.946	41	356283	224.39	ug/L	96
30) 2-butanone	5.561	72	57718	210.39	ug/L	96
31) Hexane	4.276	41	506391	212.94	ug/L	99
32) 1,1-dichloroethane	4.538	63	1068673	205.56	ug/L	98
33) tert-butyl ethyl ether	5.305	59	1878408	230.44	ug/L	97
34) isobutyl alcohol	4.595	43	1931529	1488.01	ug/L #	8
35) 2,2-dichloropropane	5.574	77	731358	222.77	ug/L	95
36) cis-1,2-dichloroethene	5.559	96	722821	211.17	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21494.D
Acq On : 2 Aug 2013 12:32 am
Operator : amym
Sample : ic832-200
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 02 10:57:39 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:56:57 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) ethyl acetate	4.597	43	1928831m	222.09	ug/L		
38) bromochloromethane	5.979	128	368814	213.52	ug/L		93
39) chloroform	6.194	83	1207798	197.22	ug/L		100
41) Tetrahydrofuran	5.983	42	132304	220.68	ug/L		91
42) 1,1,1-trichloroethane	6.438	97	1095853	228.25	ug/L		98
44) Cyclohexane	6.544	56	997227	198.52	ug/L		93
45) carbon tetrachloride	6.691	117	1008116	229.92	ug/L		100
46) 1,1-dichloropropene	6.708	75	898760	206.88	ug/L		99
47) benzene	7.027	78	2379232	195.55	ug/L		99
48) 1,2-dichloroethane	7.151	62	1019308	197.35	ug/L		97
49) tert-amyl methyl ether	7.313	73	1584852	234.41	ug/L		97
50) heptane	7.578	43	591416	228.49	ug/L		96
51) trichloroethene	8.053	95	772174	203.87	ug/L		99
52) 1,2-dichloropropane	8.401	63	695513	211.11	ug/L		99
53) dibromomethane	8.504	93	429559	210.57	ug/L		93
54) bromodichloromethane	8.754	83	1009113	228.75	ug/L		99
55) Methylcyclohexane	8.354	83	944544	237.45	ug/L		93
56) 2-chloroethyl vinyl ether	9.128	63	210020	257.90	ug/L		97
57) methyl methacrylate	8.532	69	373180	241.52	ug/L		96
58) 1,4-dioxane	8.521	88	28952	1111.18	ug/L	#	53
59) cis-1,3-dichloropropene	9.280	75	1153941	250.65	ug/L		98
61) 4-methyl-2-pentanone	9.460	43	511363	235.29	ug/L		98
62) toluene	9.643	92	1664457	190.05	ug/L		98
63) trans-1,3-dichloropropene	9.929	75	1013679	266.51	ug/L		99
64) 1,1,2-trichloroethane	10.135	83	537025	206.04	ug/L		98
65) ethyl methacrylate	10.007	69	783994	257.92	ug/L		98
67) tetrachloroethene	10.194	166	809841	198.80	ug/L		93
68) 1,3-dichloropropane	10.296	76	1007511	202.79	ug/L		99
69) dibromochloromethane	10.515	129	878346	254.96	ug/L		99
70) 1,2-dibromoethane	10.624	107	702820	217.18	ug/L		100
71) 2-hexanone	10.364	43	364036	208.39	ug/L		98
72) chlorobenzene	11.120	112	2133797	184.47	ug/L		99
73) 1,1,1,2-tetrachloroethane	11.219	131	807172	216.70	ug/L		99
74) ethylbenzene	11.225	91	3377026	196.64	ug/L		84
75) m,p-xylene	11.355	106	2620033	385.25	ug/L	#	37
76) o-xylene	11.721	106	1336809	208.45	ug/L		90
77) styrene	11.742	104	2221921	226.30	ug/L		98
78) bromoform	11.916	173	519267	268.56	ug/L		100
79) trans-1,4-dichloro-2-b...	12.132	53	220274	255.95	ug/L		98
81) isopropylbenzene	12.072	105	3533269	222.95	ug/L		86
83) bromobenzene	12.363	156	1022840	209.11	ug/L		99
84) 1,1,2,2-tetrachloroethane	12.367	83	770911	206.21	ug/L		99
85) 1,2,3-trichloropropane	12.408	75	948148	238.34	ug/L		99
86) n-propylbenzene	12.461	91	4016750	219.89	ug/L		76
87) 2-chlorotoluene	12.540	91	2522521	203.52	ug/L		96
88) 4-chlorotoluene	12.651	91	2920620	206.30	ug/L		99
89) 1,3,5-trimethylbenzene	12.630	105	3010791	219.18	ug/L		79
90) tert-butylbenzene	12.916	91	1723935	223.42	ug/L		96
91) 1,2,4-trimethylbenzene	12.970	105	3081124	210.26	ug/L		76
92) sec-butylbenzene	13.119	105	3593966	224.73	ug/L		81

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21494.D
Acq On : 2 Aug 2013 12:32 am
Operator : amym
Sample : ic832-200
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 02 10:57:39 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:56:57 2013
Response via : Initial Calibration

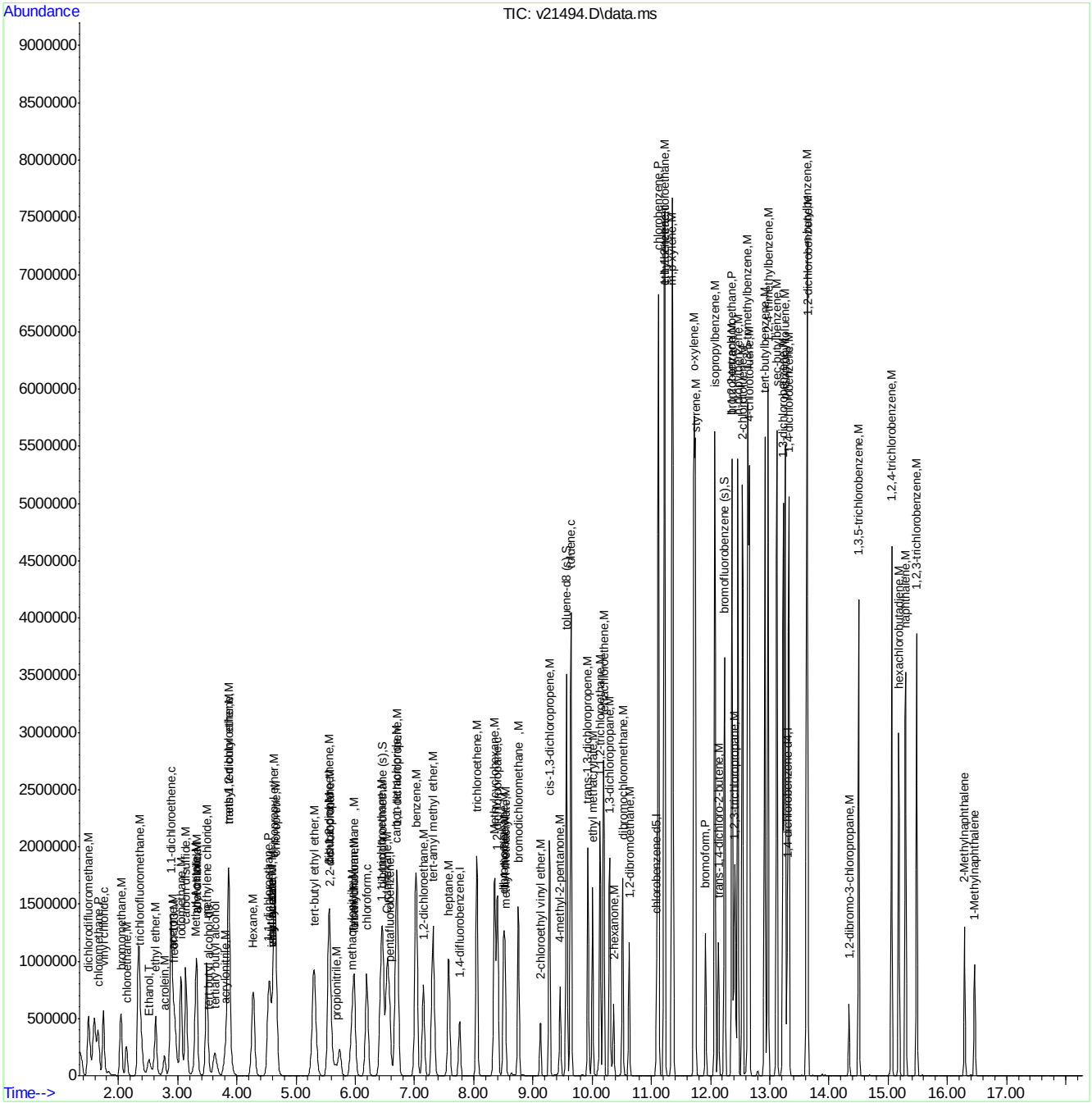
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	1,3-dichlorobenzene	13.227	146	1884747	200.24	ug/L	99
94)	p-isopropyltoluene	13.259	119	2870620	229.56	ug/L	87
95)	1,4-dichlorobenzene	13.322	146	1843773	188.64	ug/L	100
96)	1,2-dichlorobenzene	13.639	146	1778372	194.86	ug/L	99
97)	n-butylbenzene	13.623	91	2638032	227.02	ug/L	88
98)	1,2-dibromo-3-chloropr...	14.339	75	131087	254.62	ug/L	99
99)	1,3,5-trichlorobenzene	14.504	180	1295039	215.69	ug/L	100
100)	1,2,4-trichlorobenzene	15.059	180	1346249	231.88	ug/L	99
101)	hexachlorobutadiene	15.180	225	564089	215.05	ug/L	96
102)	naphthalene	15.293	128	2461106	260.96	ug/L	100
103)	1,2,3-trichlorobenzene	15.482	180	1151031	222.40	ug/L	99
104)	2-Methylnaphthalene	16.292	142	566418	148.83	ug/L	100
105)	1-Methylnaphthalene	16.462	142	440100	140.32	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21494.D
Acq On : 2 Aug 2013 12:32 am
Operator : amym
Sample : ic832-200
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 02 10:57:39 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:56:57 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/02/13 13:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21495.D
Acq On : 2 Aug 2013 12:58 am
Operator : amym
Sample : ic832-400
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 02 10:58:38 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:58:13 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.521	65	93798	500.00	ug/L	0.00
4) pentafluorobenzene	6.580	168	372299	50.00	ug/L	0.00
43) 1,4-difluorobenzene	7.759	114	520821	50.00	ug/L	0.00
66) chlorobenzene-d5	11.091	82	263436	50.00	ug/L	0.00
80) 1,4-dichlorobenzene-d4	13.300	152	277194	50.00	ug/L	0.00
System Monitoring Compounds						
40) dibromofluoromethane (s)	6.461	113	1512089	402.65	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 805.30%#			
60) toluene-d8 (s)	9.567	98	4798571	398.92	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 797.84%#			
82) bromofluorobenzene (s)	12.238	95	2048891	402.35	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 804.70%#			
Target Compounds						Qvalue
2) tertiary butyl alcohol	3.633	59	974893	4228.22	ug/L	93
3) Ethanol	2.519	45	664329	38766.23	ug/L #	100
5) dichlorodifluoromethane	1.496	85	1917827	381.88	ug/L	99
6) chloromethane	1.653	50	1278666	403.28	ug/L	99
7) vinyl chloride	1.742	62	1517415	398.18	ug/L	98
8) bromomethane	2.036	96	883931	360.94	ug/L	100
9) chloroethane	2.129	64	614716	357.91	ug/L	100
10) ethyl ether	2.622	59	832398	363.39	ug/L	90
11) acetonitrile	3.311	41	1626855	418.71	ug/L	96
12) trichlorofluoromethane	2.360	101	2201338	382.66	ug/L	99
13) freon-113	2.933	101	1292598	420.82	ug/L	98
14) acrolein	2.772	56	444204	2167.34	ug/L	99
15) 1,1-dichloroethene	2.882	96	1122656	412.14	ug/L	90
16) acetone	2.921	58	93896	305.02	ug/L	99
17) Methyl Acetate	3.296	43	1045264	389.47	ug/L	94
18) methylene chloride	3.485	84	1303990	331.84	ug/L	88
19) methyl tert butyl ether	3.858	73	3274880	421.80	ug/L	96
20) acrylonitrile	3.796	53	401602	282.07	ug/L #	1
21) allyl chloride	3.311	41	1626855	418.70	ug/L	90
22) trans-1,2-dichloroethene	3.856	96	1274825	388.45	ug/L	92
23) iodomethane	3.052	142	2544838	390.66	ug/L	97
24) carbon disulfide	3.134	76	3784301	426.66	ug/L	100
25) propionitrile	5.668	54	157472	455.01	ug/L	100
26) vinyl acetate	4.589	43	3731166	411.39	ug/L	99
27) chloroprene	4.645	53	1840017	423.48	ug/L	91
28) di-isopropyl ether	4.629	45	3521098	399.49	ug/L	97
29) methacrylonitrile	5.940	41	695168	424.09	ug/L	93
30) 2-butanone	5.555	72	111580	397.39	ug/L	88
31) Hexane	4.269	41	986998	405.75	ug/L	98
32) 1,1-dichloroethane	4.534	63	2099387	396.58	ug/L	99
33) tert-butyl ethyl ether	5.301	59	3773368	447.68	ug/L	97
34) isobutyl alcohol	4.589	43	3731166	2648.13	ug/L #	8
35) 2,2-dichloropropane	5.571	77	1457819	430.61	ug/L	95
36) cis-1,2-dichloroethene	5.555	96	1435637	410.79	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21495.D
Acq On : 2 Aug 2013 12:58 am
Operator : amym
Sample : ic832-400
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 02 10:58:38 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:58:13 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) ethyl acetate	4.590	43	3725900m	413.65	ug/L		
38) bromochloromethane	5.975	128	726585	411.07	ug/L		92
39) chloroform	6.191	83	2384170	384.26	ug/L		100
41) Tetrahydrofuran	5.978	42	256386	414.30	ug/L		89
42) 1,1,1-trichloroethane	6.435	97	2168523	438.92	ug/L		98
44) Cyclohexane	6.542	56	1978421	383.68	ug/L		91
45) carbon tetrachloride	6.688	117	2005464	437.84	ug/L		99
46) 1,1-dichloropropene	6.704	75	1753741	391.35	ug/L		99
47) benzene	7.023	78	4700345	376.88	ug/L		99
48) 1,2-dichloroethane	7.148	62	1957563	369.45	ug/L		97
49) tert-amyl methyl ether	7.312	73	3208191	452.05	ug/L		96
50) heptane	7.575	43	1138884	420.69	ug/L		95
51) trichloroethene	8.050	95	1530372	392.45	ug/L		99
52) 1,2-dichloropropane	8.399	63	1358918	398.63	ug/L		99
53) dibromomethane	8.503	93	842918	399.47	ug/L		91
54) bromodichloromethane	8.752	83	2011161	436.69	ug/L		99
55) Methylcyclohexane	8.353	83	1879960	449.40	ug/L		91
56) 2-chloroethyl vinyl ether	9.128	63	417702	479.34	ug/L		97
57) methyl methacrylate	8.531	69	742651	455.91	ug/L		93
58) 1,4-dioxane	8.521	88	61522	2247.86	ug/L	#	46
59) cis-1,3-dichloropropene	9.279	75	2292250	471.28	ug/L		100
61) 4-methyl-2-pentanone	9.460	43	987797	432.76	ug/L		96
62) toluene	9.643	92	3229560	360.85	ug/L		99
63) trans-1,3-dichloropropene	9.929	75	2011562	496.33	ug/L		100
64) 1,1,2-trichloroethane	10.135	83	1054893	392.55	ug/L		98
65) ethyl methacrylate	10.008	69	1548108	478.31	ug/L		96
67) tetrachloroethene	10.195	166	1583917	378.94	ug/L		94
68) 1,3-dichloropropane	10.296	76	1946300	380.97	ug/L		99
69) dibromochloromethane	10.515	129	1765122	484.24	ug/L		99
70) 1,2-dibromoethane	10.625	107	1394937	415.86	ug/L		100
71) 2-hexanone	10.365	43	700683	388.62	ug/L		96
72) chlorobenzene	11.121	112	4031651	342.43	ug/L		99
73) 1,1,1,2-tetrachloroethane	11.220	131	1522326	394.40	ug/L		98
74) ethylbenzene	11.226	91	6320723	359.15	ug/L		84
75) m,p-xylene	11.357	106	4920433	707.57	ug/L	#	38
76) o-xylene	11.722	106	2557268	386.56	ug/L		88
77) styrene	11.743	104	4262792	416.77	ug/L		99
78) bromoform	11.916	173	1083362	523.29	ug/L		100
79) trans-1,4-dichloro-2-b...	12.133	53	440402	476.21	ug/L		94
81) isopropylbenzene	12.073	105	6766124	419.45	ug/L		86
83) bromobenzene	12.364	156	1943177	393.27	ug/L		99
84) 1,1,2,2-tetrachloroethane	12.369	83	1474335	391.03	ug/L		99
85) 1,2,3-trichloropropane	12.409	75	1862739	456.16	ug/L		100
86) n-propylbenzene	12.463	91	7636492	411.40	ug/L		78
87) 2-chlorotoluene	12.542	91	4847400	388.37	ug/L		96
88) 4-chlorotoluene	12.652	91	5522577	386.78	ug/L		100
89) 1,3,5-trimethylbenzene	12.631	105	5725499	410.33	ug/L		80
90) tert-butylbenzene	12.917	91	3268604	416.06	ug/L		95
91) 1,2,4-trimethylbenzene	12.971	105	5874540	396.60	ug/L		77
92) sec-butylbenzene	13.120	105	6840079	419.78	ug/L		82

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21495.D
Acq On : 2 Aug 2013 12:58 am
Operator : amym
Sample : ic832-400
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 02 10:58:38 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:58:13 2013
Response via : Initial Calibration

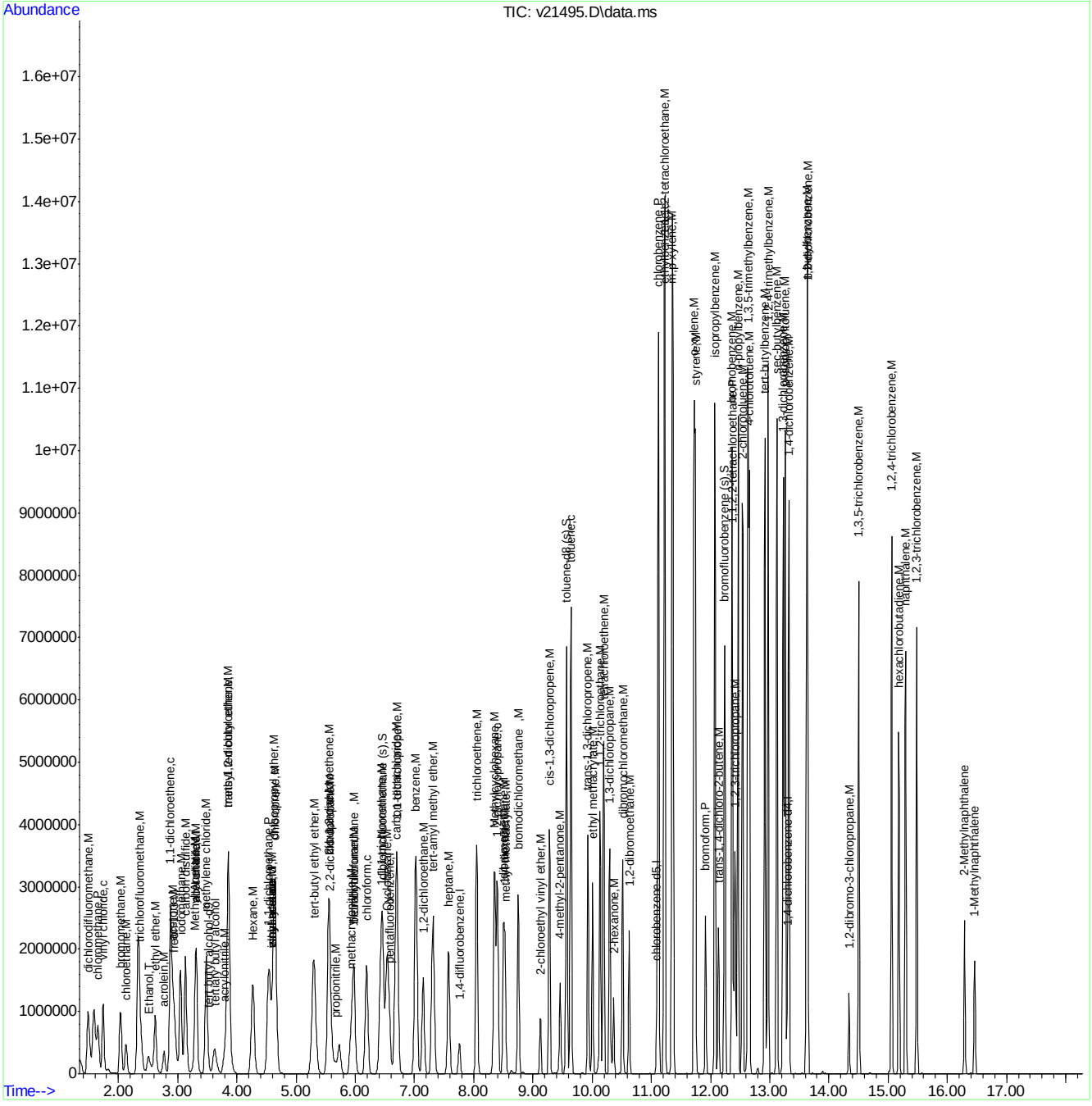
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	1,3-dichlorobenzene	13.228	146	3621741	382.79	ug/L	99
94)	p-isopropyltoluene	13.261	119	5444811	426.22	ug/L	87
95)	1,4-dichlorobenzene	13.323	146	3525375	361.16	ug/L	99
96)	1,2-dichlorobenzene	13.640	146	3351533	366.44	ug/L	99
97)	n-butylbenzene	13.624	91	4896689	413.08	ug/L	88
98)	1,2-dibromo-3-chloropr...	14.340	75	270127	502.44	ug/L	99
99)	1,3,5-trichlorobenzene	14.505	180	2439145	400.70	ug/L	99
100)	1,2,4-trichlorobenzene	15.060	180	2513562	423.27	ug/L	98
101)	hexachlorobutadiene	15.181	225	1042866	392.30	ug/L	97
102)	naphthalene	15.294	128	4745432	482.27	ug/L	100
103)	1,2,3-trichlorobenzene	15.483	180	2146733	407.62	ug/L	99
104)	2-Methylnaphthalene	16.292	142	1093562	264.38	ug/L	100
105)	1-Methylnaphthalene	16.462	142	840219	249.76	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130801\
Data File : v21495.D
Acq On : 2 Aug 2013 12:58 am
Operator : amym
Sample : ic832-400
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 02 10:58:38 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 10:58:13 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Amy Min Yang
08/04/13 11:23

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130802\
Data File : v21506.D
Acq On : 2 Aug 2013 10:17 am
Operator : amym
Sample : icv832-50
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 02 13:01:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.517	65	80178	500.00	ug/L		0.00
4) pentafluorobenzene	6.582	168	355939	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.763	114	490875	50.00	ug/L		0.00
66) chlorobenzene-d5	11.091	82	251477	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.300	152	276942	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.462	113	170571	47.51	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.02%				
60) toluene-d8 (s)	9.568	98	569582	50.24	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 100.48%				
82) bromofluorobenzene (s)	12.238	95	246163	48.37	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 96.74%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.629	59	103510	525.25	ug/L		92
3) Ethanol	2.507	45	62311	4232.39	ug/L	#	100
5) dichlorodifluoromethane	1.488	85	262804	57.80	ug/L		99
6) chloromethane	1.637	50	190194	62.74	ug/L		98
7) vinyl chloride	1.735	62	163358	44.84	ug/L		100
8) bromomethane	2.031	96	134733	57.55	ug/L		99
9) chloroethane	2.123	64	87683	55.46	ug/L		99
10) ethyl ether	2.614	59	99252	45.32	ug/L		97
11) acetonitrile	3.307	41	211253	56.87	ug/L		98
12) trichlorofluoromethane	2.354	101	304290	55.33	ug/L		100
13) freon-113	2.925	101	180029	61.31	ug/L		97
14) acrolein	2.767	56	85208	434.86	ug/L		99
15) 1,1-dichloroethene	2.879	96	154476	59.32	ug/L		97
16) acetone	2.916	58	19710	65.22	ug/L		89
17) Methyl Acetate	3.293	43	97807	38.12	ug/L		98
18) methylene chloride	3.481	84	164636	52.55	ug/L		95
19) methyl tert butyl ether	3.852	73	378835	51.04	ug/L		99
20) acrylonitrile	3.792	53	46465	50.66	ug/L		96
21) allyl chloride	3.307	41	211253	56.87	ug/L		98
22) trans-1,2-dichloroethene	3.851	96	166982	53.22	ug/L		95
23) iodomethane	3.049	142	332022	53.31	ug/L		98
24) carbon disulfide	3.133	76	486375	57.35	ug/L		100
25) propionitrile	5.671	54	16908	46.87	ug/L		100
26) vinyl acetate	4.595	43	400384	46.17	ug/L		95
27) chloroprene	4.642	53	265050	63.81	ug/L		95
28) di-isopropyl ether	4.624	45	446223	52.95	ug/L		95
29) methacrylonitrile	5.944	41	80693	51.49	ug/L		88
30) 2-butanone	5.559	72	16613	57.07	ug/L	#	87
31) Hexane	4.270	41	140484	60.41	ug/L		98
32) 1,1-dichloroethane	4.529	63	294127	58.12	ug/L		99
33) tert-butyl ethyl ether	5.295	59	442602	54.92	ug/L		98
34) isobutyl alcohol	4.595	43	400384	230.87	ug/L		86
35) 2,2-dichloropropane	5.567	77	223250	68.98	ug/L		97
36) cis-1,2-dichloroethene	5.552	96	178195	53.33	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130802\
Data File : v21506.D
Acq On : 2 Aug 2013 10:17 am
Operator : amym
Sample : icv832-50
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 02 13:01:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37)	ethyl acetate	4.597	43	399691m	46.15	ug/L	
38)	bromochloromethane	5.973	128	97375	57.62	ug/L	95
39)	chloroform	6.190	83	322884	54.43	ug/L	98
41)	Tetrahydrofuran	5.983	42	28790	48.66	ug/L	90
42)	1,1,1-trichloroethane	6.433	97	297681	63.02	ug/L	99
44)	Cyclohexane	6.540	56	250273	55.90	ug/L	94
45)	carbon tetrachloride	6.688	117	272332	63.07	ug/L	98
46)	1,1-dichloropropene	6.708	75	230519	54.58	ug/L	98
47)	benzene	7.027	78	597898	50.87	ug/L	100
48)	1,2-dichloroethane	7.152	62	252741	50.61	ug/L	98
49)	tert-amyl methyl ether	7.309	73	360874	53.95	ug/L	99
50)	heptane	7.579	43	158349	62.06	ug/L	97
51)	trichloroethene	8.054	95	188708	51.34	ug/L	99
52)	1,2-dichloropropane	8.401	63	168674	52.50	ug/L	99
53)	dibromomethane	8.505	93	111594	56.11	ug/L	98
54)	bromodichloromethane	8.755	83	238441	54.93	ug/L	100
55)	Methylcyclohexane	8.352	83	239968	60.86	ug/L	93
56)	2-chloroethyl vinyl ether	9.128	63	28385	32.72	ug/L	100
57)	methyl methacrylate	8.532	69	81132	52.85	ug/L	95
58)	1,4-dioxane	8.513	88	5481	227.37	ug/L	86
59)	cis-1,3-dichloropropene	9.280	75	254716	48.21	ug/L	99
61)	4-methyl-2-pentanone	9.461	43	112753	52.41	ug/L	98
62)	toluene	9.643	92	425070	53.06	ug/L	100
63)	trans-1,3-dichloropropene	9.929	75	233330	50.67	ug/L	99
64)	1,1,2-trichloroethane	10.135	83	127193	50.22	ug/L	100
65)	ethyl methacrylate	10.009	69	169568	47.93	ug/L	96
67)	tetrachloroethene	10.194	166	227828	57.10	ug/L	100
68)	1,3-dichloropropane	10.296	76	238147	48.84	ug/L	99
69)	dibromochloromethane	10.516	129	195078	48.40	ug/L	99
70)	1,2-dibromoethane	10.625	107	163742	51.14	ug/L	100
71)	2-hexanone	10.366	43	102170	59.37	ug/L	98
72)	chlorobenzene	11.121	112	529724	47.14	ug/L	100
73)	1,1,1,2-tetrachloroethane	11.220	131	197853	53.70	ug/L	99
74)	ethylbenzene	11.225	91	866677	51.59	ug/L	98
75)	m,p-xylene	11.355	106	660666	99.53	ug/L	98
76)	o-xylene	11.722	106	326544	51.71	ug/L	99
77)	styrene	11.743	104	542761	55.59	ug/L	99
78)	bromoform	11.917	173	115931	49.72	ug/L	100
79)	trans-1,4-dichloro-2-b...	12.133	53	49089	51.10	ug/L	87
81)	isopropylbenzene	12.073	105	872151	54.11	ug/L	99
83)	bromobenzene	12.364	156	257407	52.13	ug/L	98
84)	1,1,2,2-tetrachloroethane	12.368	83	180815	47.99	ug/L	98
85)	1,2,3-trichloropropane	12.408	75	217471	53.30	ug/L	99
86)	n-propylbenzene	12.461	91	988382	53.29	ug/L	98
87)	2-chlorotoluene	12.540	91	619202	49.66	ug/L	99
88)	4-chlorotoluene	12.652	91	735078	51.52	ug/L	100
89)	1,3,5-trimethylbenzene	12.631	105	752503	53.97	ug/L	100
90)	tert-butylbenzene	12.916	91	423120	53.90	ug/L	98
91)	1,2,4-trimethylbenzene	12.971	105	765534	51.72	ug/L	99
92)	sec-butylbenzene	13.120	105	879671	54.03	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130802\
Data File : v21506.D
Acq On : 2 Aug 2013 10:17 am
Operator : amym
Sample : icv832-50
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 02 13:01:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

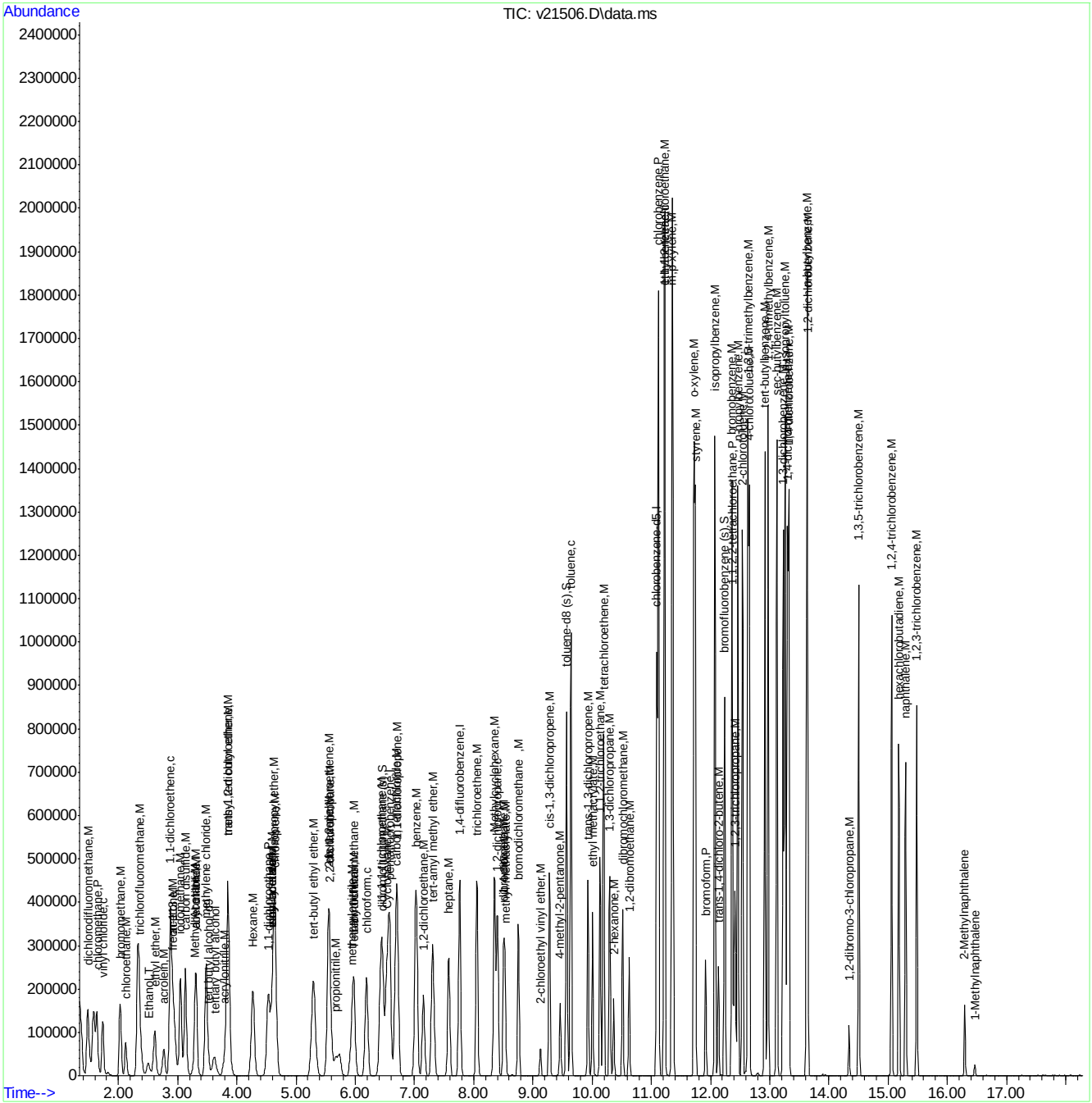
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	1,3-dichlorobenzene	13.227	146	456503	48.29	ug/L	100
94)	p-isopropyltoluene	13.260	119	760943	59.61	ug/L	100
95)	1,4-dichlorobenzene	13.323	146	468779	48.06	ug/L	99
96)	1,2-dichlorobenzene	13.640	146	430198	47.07	ug/L	99
97)	n-butylbenzene	13.625	91	668329	56.42	ug/L	99
98)	1,2-dibromo-3-chloropr...	14.341	75	24989	44.21	ug/L	93
99)	1,3,5-trichlorobenzene	14.505	180	337788	55.53	ug/L	99
100)	1,2,4-trichlorobenzene	15.060	180	306072	51.58	ug/L	98
101)	hexachlorobutadiene	15.182	225	141857	53.40	ug/L	98
102)	naphthalene	15.295	128	483283	42.31	ug/L	100
103)	1,2,3-trichlorobenzene	15.483	180	246189	46.78	ug/L	100
104)	2-Methylnaphthalene	16.295	142	72233	17.14	ug/L	99
105)	1-Methylnaphthalene	16.464	142	12940	5.89	ug/L	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130802\
Data File : v21506.D
Acq On : 2 Aug 2013 10:17 am
Operator : amym
Sample : icv832-50
Misc : MS29563,MSV832,,,,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 02 13:01:42 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/14/13 10:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21867.D
Acq On : 13 Aug 2013 10:16 am
Operator : amym
Sample : cc832-50
Misc : MS29644,MSV845,,,,5,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 13 15:29:54 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.518	65	91071	500.00	ug/L		0.00
4) pentafluorobenzene	6.584	168	374056	50.00	ug/L		0.00
43) 1,4-difluorobenzene	7.764	114	648858	50.00	ug/L		0.00
66) chlorobenzene-d5	11.091	82	274720	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.300	152	337563	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.464	113	177758	47.11	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.22%				
60) toluene-d8 (s)	9.567	98	685396	45.74	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 91.48%				
82) bromofluorobenzene (s)	12.238	95	272014	43.85	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 87.70%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.630	59	109685	490.01	ug/L		94
3) Ethanol	2.512	45	101929	6095.28	ug/L	#	100
5) dichlorodifluoromethane	1.496	85	242753	50.80	ug/L		98
6) chloromethane	1.640	50	156362	49.08	ug/L		100
7) vinyl chloride	1.743	62	205376	53.64	ug/L		100
8) bromomethane	2.038	96	143748	58.42	ug/L		99
9) chloroethane	2.132	64	98446	59.25	ug/L		99
10) ethyl ether	2.622	59	118949	51.68	ug/L		97
11) acetonitrile	3.314	41	216236	55.39	ug/L		97
12) trichlorofluoromethane	2.364	101	323946	56.05	ug/L		99
13) freon-113	2.937	101	171649	55.62	ug/L		99
14) acrolein	2.774	56	56414	273.96	ug/L		100
15) 1,1-dichloroethene	2.888	96	148397	54.22	ug/L		98
16) acetone	2.919	58	23008	73.35	ug/L		95
17) Methyl Acetate	3.300	43	139475	51.72	ug/L		98
18) methylene chloride	3.490	84	174933	53.13	ug/L		97
19) methyl tert butyl ether	3.858	73	406356	52.09	ug/L		99
20) acrylonitrile	3.799	53	51110	53.03	ug/L		98
21) allyl chloride	3.314	41	216236	55.39	ug/L		96
22) trans-1,2-dichloroethene	3.859	96	170942	51.84	ug/L		94
23) iodomethane	3.057	142	333010	50.88	ug/L		99
24) carbon disulfide	3.141	76	485245	54.45	ug/L		100
25) propionitrile	5.674	54	19661	51.60	ug/L		100
26) vinyl acetate	4.595	43	489506	53.72	ug/L		99
27) chloroprene	4.648	53	241336	55.28	ug/L		95
28) di-isopropyl ether	4.630	45	483562	54.61	ug/L		98
29) methacrylonitrile	5.946	41	86841	52.73	ug/L		99
30) 2-butanone	5.561	72	18785	61.82	ug/L	#	84
31) Hexane	4.276	41	133933	54.80	ug/L		99
32) 1,1-dichloroethane	4.537	63	275079	51.72	ug/L		99
33) tert-butyl ethyl ether	5.300	59	457201	53.99	ug/L		99
34) isobutyl alcohol	4.595	43	489532	268.61	ug/L		98
35) 2,2-dichloropropane	5.572	77	209968	61.73	ug/L		98
36) cis-1,2-dichloroethene	5.558	96	188469	53.68	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21867.D
Acq On : 13 Aug 2013 10:16 am
Operator : amym
Sample : cc832-50
Misc : MS29644,MSV845,,,,5,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 13 15:29:54 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37)	ethyl acetate	4.597	43	489348m	53.77	ug/L	
38)	bromochloromethane	5.978	128	95142	53.57	ug/L	98
39)	chloroform	6.194	83	309074	49.58	ug/L	99
41)	Tetrahydrofuran	5.985	42	32416	52.14	ug/L	100
42)	1,1,1-trichloroethane	6.437	97	269615	54.32	ug/L	99
44)	Cyclohexane	6.544	56	261283	44.15	ug/L	98
45)	carbon tetrachloride	6.690	117	247215	43.31	ug/L	99
46)	1,1-dichloropropene	6.709	75	231825	41.52	ug/L	99
47)	benzene	7.028	78	636136	40.94	ug/L	100
48)	1,2-dichloroethane	7.152	62	255011	38.63	ug/L	100
49)	tert-amyl methyl ether	7.310	73	384202	43.45	ug/L	99
50)	heptane	7.581	43	183595	54.44	ug/L	99
51)	trichloroethene	8.054	95	240173	49.44	ug/L	99
52)	1,2-dichloropropane	8.401	63	230773	54.34	ug/L	100
53)	dibromomethane	8.505	93	131871	50.16	ug/L	97
54)	bromodichloromethane	8.754	83	289926	50.53	ug/L	99
55)	Methylcyclohexane	8.353	83	307396	58.98	ug/L	98
56)	2-chloroethyl vinyl ether	9.128	63	67586	55.42	ug/L	99
57)	methyl methacrylate	8.533	69	111984	55.18	ug/L	99
58)	1,4-dioxane	8.513	88	8240	252.85	ug/L	92
59)	cis-1,3-dichloropropene	9.280	75	344656	49.32	ug/L	100
61)	4-methyl-2-pentanone	9.460	43	141332	49.70	ug/L	99
62)	toluene	9.643	92	492248	46.49	ug/L	100
63)	trans-1,3-dichloropropene	9.929	75	262664	43.44	ug/L	100
64)	1,1,2-trichloroethane	10.134	83	154787	46.23	ug/L	98
65)	ethyl methacrylate	10.007	69	240083	51.19	ug/L	99
67)	tetrachloroethene	10.194	166	234285	53.75	ug/L	99
68)	1,3-dichloropropane	10.296	76	282025	52.94	ug/L	99
69)	dibromochloromethane	10.516	129	215302	48.87	ug/L	99
70)	1,2-dibromoethane	10.625	107	185037	52.90	ug/L	99
71)	2-hexanone	10.365	43	120276	63.98	ug/L	98
72)	chlorobenzene	11.120	112	590050	48.06	ug/L	100
73)	1,1,1,2-tetrachloroethane	11.220	131	210216	52.23	ug/L	100
74)	ethylbenzene	11.225	91	911077	49.65	ug/L	100
75)	m,p-xylene	11.355	106	722902	99.69	ug/L	99
76)	o-xylene	11.722	106	366308	53.10	ug/L	96
77)	styrene	11.743	104	606092	56.83	ug/L	96
78)	bromoform	11.916	173	116378	46.11	ug/L	97
79)	trans-1,4-dichloro-2-b...	12.132	53	37984	37.74	ug/L	91
81)	isopropylbenzene	12.073	105	950832	48.40	ug/L	99
83)	bromobenzene	12.364	156	275526	45.78	ug/L	98
84)	1,1,2,2-tetrachloroethane	12.368	83	207655	45.22	ug/L	99
85)	1,2,3-trichloropropane	12.409	75	227403	45.72	ug/L	100
86)	n-propylbenzene	12.461	91	1113704	49.26	ug/L	97
87)	2-chlorotoluene	12.541	91	705175	46.40	ug/L	97
88)	4-chlorotoluene	12.652	91	831565	47.82	ug/L	99
89)	1,3,5-trimethylbenzene	12.631	105	845603	49.76	ug/L	99
90)	tert-butylbenzene	12.916	91	545225	56.98	ug/L	95
91)	1,2,4-trimethylbenzene	12.971	105	1006012	55.76	ug/L	98
92)	sec-butylbenzene	13.119	105	1160049	58.45	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21867.D
Acq On : 13 Aug 2013 10:16 am
Operator : amym
Sample : cc832-50
Misc : MS29644,MSV845,,,,5,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 13 15:29:54 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

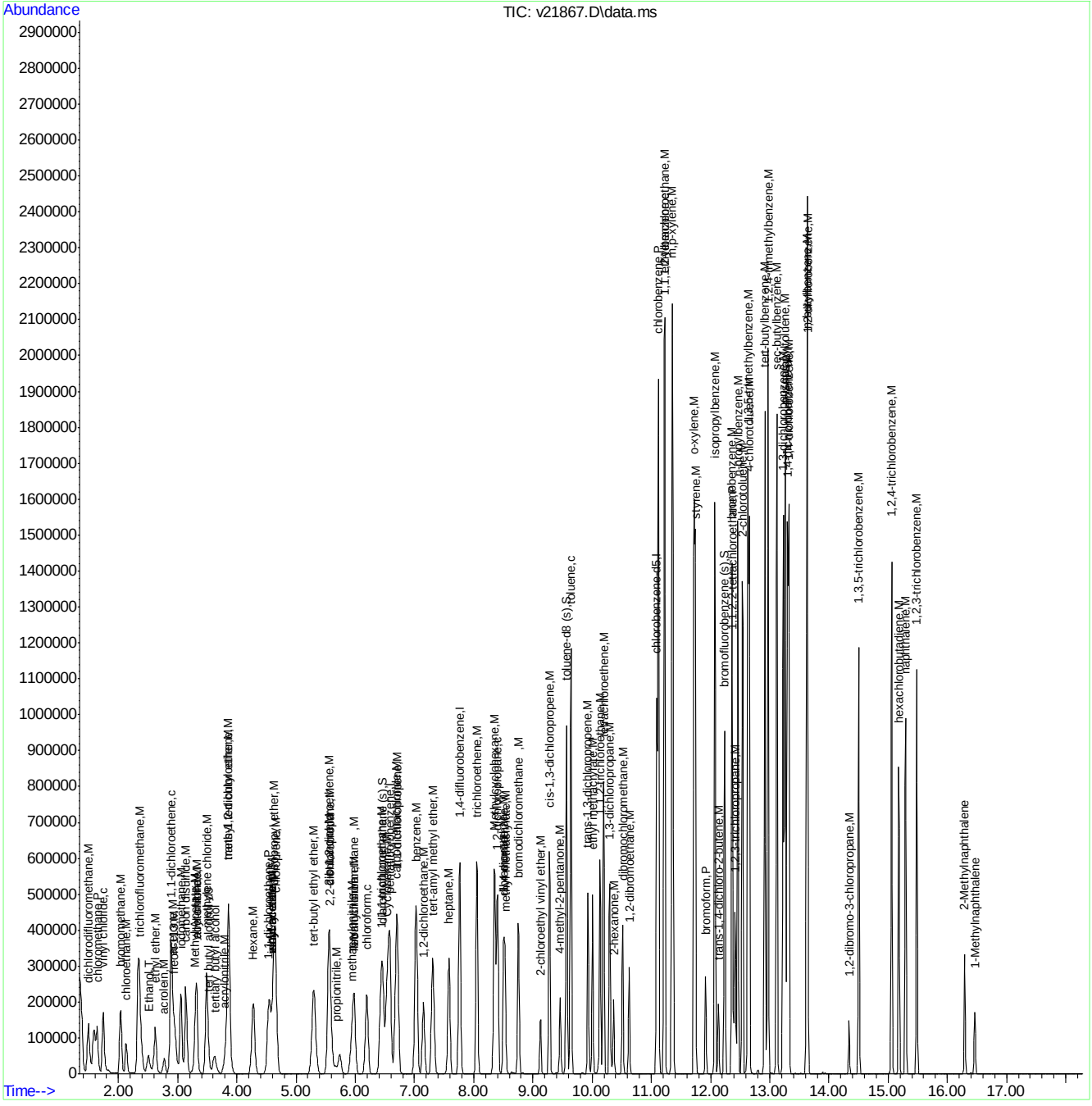
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) 1,3-dichlorobenzene	13.227	146	576626	50.04	ug/L	99
94) p-isopropyltoluene	13.260	119	876886	56.36	ug/L	98
95) 1,4-dichlorobenzene	13.322	146	551864	46.42	ug/L	99
96) 1,2-dichlorobenzene	13.639	146	536974	48.20	ug/L	99
97) n-butylbenzene	13.625	91	793592	54.96	ug/L	100
98) 1,2-dibromo-3-chloropr...	14.341	75	30366	44.09	ug/L	99
99) 1,3,5-trichlorobenzene	14.505	180	371289	50.08	ug/L	98
100) 1,2,4-trichlorobenzene	15.060	180	421717	58.30	ug/L	98
101) hexachlorobutadiene	15.181	225	160456	49.56	ug/L	99
102) naphthalene	15.294	128	679957	48.51	ug/L	100
103) 1,2,3-trichlorobenzene	15.484	180	323955	50.50	ug/L	98
104) 2-Methylnaphthalene	16.294	142	140730	24.81	ug/L	100
105) 1-Methylnaphthalene	16.464	142	79453	18.02	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130813\
Data File : v21867.D
Acq On : 13 Aug 2013 10:16 am
Operator : amym
Sample : cc832-50
Misc : MS29644,MSV845,,,,5,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 13 15:29:54 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Tomasz Torski
08/15/13 09:53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21888.D
Acq On : 14 Aug 2013 8:24 am
Operator : amym
Sample : cc832-50
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 14 15:48:50 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	3.526	65	76412	500.00	ug/L		0.00
4) pentafluorobenzene	6.593	168	337380	50.00	ug/L		0.01
43) 1,4-difluorobenzene	7.771	114	525391	50.00	ug/L		0.01
66) chlorobenzene-d5	11.095	82	328524	50.00	ug/L		0.00
80) 1,4-dichlorobenzene-d4	13.304	152	381652	50.00	ug/L		0.00
System Monitoring Compounds							
40) dibromofluoromethane (s)	6.474	113	166745	49.00	ug/L		0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 98.00%				
60) toluene-d8 (s)	9.572	98	601820	49.60	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.20%				
82) bromofluorobenzene (s)	12.242	95	331157	47.22	ug/L		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.44%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	3.638	59	94771	504.61	ug/L		91
3) Ethanol	2.517	45	96874	6904.34	ug/L	#	100
5) dichlorodifluoromethane	1.502	85	235893	54.73	ug/L		100
6) chloromethane	1.652	50	166003	57.77	ug/L		100
7) vinyl chloride	1.749	62	200435	58.04	ug/L		100
8) bromomethane	2.045	96	131316	59.17	ug/L		100
9) chloroethane	2.139	64	90326	60.27	ug/L		100
10) ethyl ether	2.631	59	118238	56.96	ug/L		95
11) acetonitrile	3.324	41	187162	53.15	ug/L		99
12) trichlorofluoromethane	2.371	101	347764	66.71	ug/L		98
13) freon-113	2.942	101	156527	56.24	ug/L		99
14) acrolein	2.783	56	60051	323.33	ug/L		99
15) 1,1-dichloroethene	2.896	96	136861	55.44	ug/L		94
16) acetone	2.929	58	12910	43.00	ug/L		97
17) Methyl Acetate	3.309	43	122037	50.18	ug/L		96
18) methylene chloride	3.499	84	149808	50.44	ug/L		92
19) methyl tert butyl ether	3.867	73	359184	51.05	ug/L		100
20) acrylonitrile	3.809	53	45060	51.83	ug/L		95
21) allyl chloride	3.324	41	187167	53.16	ug/L		93
22) trans-1,2-dichloroethene	3.869	96	148986	50.10	ug/L		93
23) iodomethane	3.066	142	288681	48.90	ug/L		94
24) carbon disulfide	3.150	76	419225	52.15	ug/L		100
25) propionitrile	5.684	54	16599	48.46	ug/L		100
26) vinyl acetate	4.608	43	435314	52.96	ug/L		97
27) chloroprene	4.659	53	231305	58.75	ug/L		92
28) di-isopropyl ether	4.639	45	458154	57.36	ug/L		95
29) methacrylonitrile	5.957	41	88509	59.58	ug/L		92
30) 2-butanone	5.571	72	12486	44.15	ug/L		90
31) Hexane	4.287	41	112881	51.21	ug/L		94
32) 1,1-dichloroethane	4.548	63	250003	52.11	ug/L		99
33) tert-butyl ethyl ether	5.310	59	408992	53.55	ug/L		99
34) isobutyl alcohol	4.608	43	435314	264.82	ug/L		87
35) 2,2-dichloropropane	5.582	77	137912	44.95	ug/L		99
36) cis-1,2-dichloroethene	5.569	96	162987	51.46	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21888.D
Acq On : 14 Aug 2013 8:24 am
Operator : amym
Sample : cc832-50
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 14 15:48:50 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) ethyl acetate	4.611	43	435312m	53.03	ug/L	
38) bromochloromethane	5.988	128	94509	59.00	ug/L	95
39) chloroform	6.203	83	289321	51.46	ug/L	100
41) Tetrahydrofuran	5.994	42	32634	58.19	ug/L	91
42) 1,1,1-trichloroethane	6.446	97	259344	57.93	ug/L	98
44) Cyclohexane	6.553	56	234354	48.91	ug/L	94
45) carbon tetrachloride	6.699	117	248967	53.87	ug/L	99
46) 1,1-dichloropropene	6.718	75	210430	46.55	ug/L	99
47) benzene	7.037	78	676619	53.78	ug/L	99
48) 1,2-dichloroethane	7.161	62	270673	50.64	ug/L	100
49) tert-amyl methyl ether	7.318	73	438159	61.20	ug/L	99
50) heptane	7.586	43	142858	52.31	ug/L	96
51) trichloroethene	8.060	95	176786	44.94	ug/L	99
52) 1,2-dichloropropane	8.407	63	162519	47.26	ug/L	100
53) dibromomethane	8.511	93	99938	46.95	ug/L	98
54) bromodichloromethane	8.760	83	236193	50.84	ug/L	99
55) Methylcyclohexane	8.360	83	210112	49.79	ug/L	92
56) 2-chloroethyl vinyl ether	9.133	63	54506	55.22	ug/L	98
57) methyl methacrylate	8.538	69	76629	46.63	ug/L	91
58) 1,4-dioxane	8.517	88	5408	212.87	ug/L	97
59) cis-1,3-dichloropropene	9.285	75	269513	47.68	ug/L	100
61) 4-methyl-2-pentanone	9.465	43	119341	51.83	ug/L	95
62) toluene	9.648	92	455962	53.18	ug/L	98
63) trans-1,3-dichloropropene	9.934	75	236220	48.04	ug/L	100
64) 1,1,2-trichloroethane	10.139	83	173662	64.06	ug/L	99
65) ethyl methacrylate	10.011	69	180202	47.61	ug/L	95
67) tetrachloroethene	10.199	166	256389	49.19	ug/L	98
68) 1,3-dichloropropane	10.301	76	316781	49.73	ug/L	99
69) dibromochloromethane	10.520	129	252021	47.89	ug/L	100
70) 1,2-dibromoethane	10.630	107	210560	50.34	ug/L	98
71) 2-hexanone	10.370	43	106821	47.51	ug/L	96
72) chlorobenzene	11.125	112	700182	47.69	ug/L	99
73) 1,1,1,2-tetrachloroethane	11.224	131	248011	51.53	ug/L	99
74) ethylbenzene	11.229	91	1080858	49.25	ug/L	99
75) m,p-xylene	11.360	106	861742	99.38	ug/L	97
76) o-xylene	11.726	106	429100	52.02	ug/L	99
77) styrene	11.747	104	715057	56.07	ug/L	99
78) bromoform	11.921	173	138273	45.84	ug/L	97
79) trans-1,4-dichloro-2-b...	12.137	53	52705	42.94	ug/L	85
81) isopropylbenzene	12.077	105	1111669	50.05	ug/L	99
83) bromobenzene	12.368	156	321068	47.19	ug/L	95
84) 1,1,2,2-tetrachloroethane	12.371	83	246236	47.43	ug/L	99
85) 1,2,3-trichloropropane	12.413	75	275112	48.92	ug/L	99
86) n-propylbenzene	12.465	91	1309436	51.23	ug/L	98
87) 2-chlorotoluene	12.544	91	811095	47.21	ug/L	96
88) 4-chlorotoluene	12.656	91	936577	47.64	ug/L	100
89) 1,3,5-trimethylbenzene	12.635	105	951815	49.54	ug/L	99
90) tert-butylbenzene	12.921	91	530345	49.02	ug/L	94
91) 1,2,4-trimethylbenzene	12.975	105	979227	48.01	ug/L	98
92) sec-butylbenzene	13.123	105	1154637	51.46	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21888.D
Acq On : 14 Aug 2013 8:24 am
Operator : amym
Sample : cc832-50
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 14 15:48:50 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration

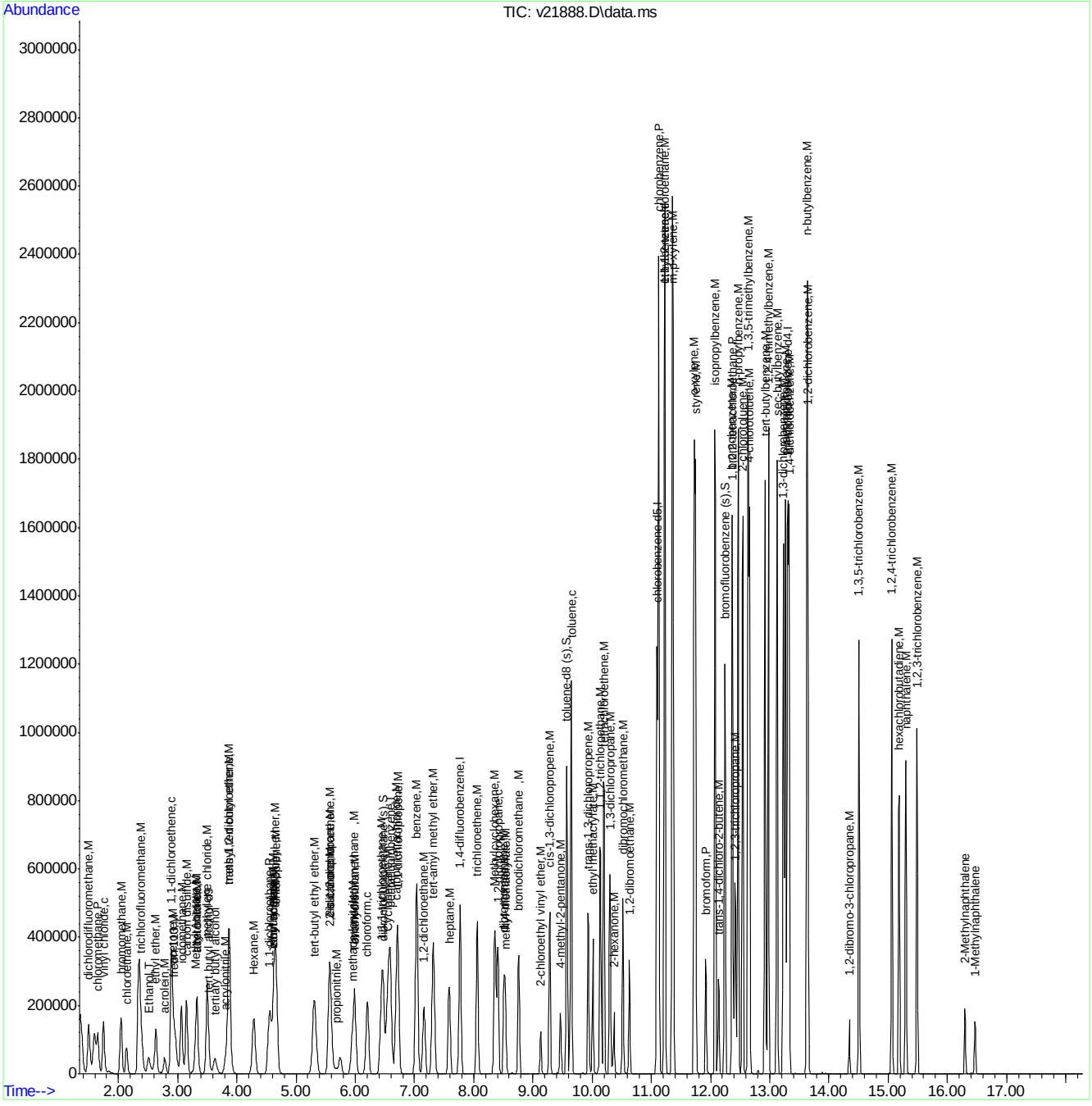
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	1,3-dichlorobenzene	13.231	146	600269	46.07	ug/L	98
94)	p-isopropyltoluene	13.264	119	897517	51.02	ug/L	98
95)	1,4-dichlorobenzene	13.326	146	593445	44.15	ug/L	98
96)	1,2-dichlorobenzene	13.643	146	581150	46.14	ug/L	98
97)	n-butylbenzene	13.629	91	828066	50.73	ug/L	98
98)	1,2-dibromo-3-chloropr...	14.344	75	31457	41.05	ug/L	97
99)	1,3,5-trichlorobenzene	14.509	180	373801	44.59	ug/L	99
100)	1,2,4-trichlorobenzene	15.064	180	371059	45.37	ug/L	100
101)	hexachlorobutadiene	15.185	225	154954	42.33	ug/L	98
102)	naphthalene	15.298	128	642743	40.90	ug/L	100
103)	1,2,3-trichlorobenzene	15.487	180	309258	42.64	ug/L	99
104)	2-Methylnaphthalene	16.299	142	83694	15.10	ug/L	100
105)	1-Methylnaphthalene	16.469	142	70255	14.72	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V130814\
Data File : v21888.D
Acq On : 14 Aug 2013 8:24 am
Operator : amym
Sample : cc832-50
Misc : MS29650,MSV846,,,,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 14 15:48:50 2013
Quant Method : C:\msdchem\1\METHODS\v130801w.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Aug 02 11:17:48 2013
Response via : Initial Calibration



Accutest Laboratories of New England, Inc. **Instrument: GCMS V**

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS 9327	V 8260 Cal STD	200 ug/mL
9311	V 8260 BS(mds)	↓
9307	V 8260 ISS	↓
↓ 9330	V 8260 2S	250 ug/mL

Daily Saved File

Tune file 1:	V21482
Tune file 2:	NA
Initial Cal:	08/01/13
ID File:	V130801W
ICAL Verified:	V21506
Sequence verified:	

Date: 8/1/13

Batch ID: MSV832

Analysts Ag Yang

Signature:

*Note: If sample matrix is soil – method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
V21479	blk	NA	NA	NA	1	NA	5ml	NA	1:1	NA	
80	↓				2						
81	↓				3						
82	BFB				4						
83	blk				5						
84	↓				6						
85	↓	↓	↓		7	↓					
86	ic 832-0.25	1	MS 9327		8						
87	-0.5				9						
88	-1				10						
89	-2				11						
90	-5		MS 9327+9307		12						
91	-25				13						
92	ICC832-50				14						
93	ic 832-100				15						
94	-200				16						
95	-400				17						
96	blk	NA	NA		18						
97	↓	↓	↓		19						
98	ICV 832-50	2	MS 9311+9307		20						
↓ 99	ICV 832-50	↓	↓		21						
V21500	blk	NA	NA		22						
↓ 01	↓	↓	↓	↓	23	↓	↓	↓	↓	↓	

8/2/13

MTX = Matrix: Designate **W** for water, **S** for soil, **O** for oil.
Sample amount is reported in grams (wet) for soil and oil, mls for water.

Review:_____

Accutest Laboratories of New England, Inc. **Instrument: GCMS V**

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS 9327	V 8260 Cal STD	200 ug/ml
9311	V 8260 BS/mds	200
9280	V 8260 25/55	250

Daily Saved File

Tune file 1:	V21867
Tune file 2:	NA
Initial Cal:	08/01/13
ID File:	V13080.W
ICAL Verified:	y
Sequence verified:	ICR

Date: 8/13/13

Batch ID: MSV845

Analysts Amy Yang

Signature: Amy

*Note: If sample matrix is soil – method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
V21867	cc 832-10	2	MS 9327	NA	1	NA	5ml	NA	1:1	NA	
68	BS	↓	MS 9311		2						
69	MBK	NA	NA		3						
70	↓				4						
71	MB				5						
72	MC23259-7	2	MS 29633	V8260 RCP	6	WTB				<2	
73	-1	2			7	GW					
74	-2	1			8						
75	-3	6			9						
76	-4	6			10						
77	-5	1			11						
78	-6	1			12						
79	MC23378-7	1	MS 29650	V8260 TCL42	13	WTB					
80	MC23430-2	1		V8260 SL+	14	↓					
81	MC23378-2	1		V8260 TCL42	15	GW					RR = 1:50
82	MC23430-1	1		V8260 SL+	16				1:300		
83	MC23378-2MS	8			17				1:10		
84	↓ -2MSD	↓			18				↓		
85	MC23252-5	3	MS 29637	V8260 TCL42	19				1:100		
86	↓ -13	4	↓	↓	20				1:50	↓	
X87	MC23378-1	4	MS 29650	V8260 TCL42	21				1:1	NA	Lost vial. dilution run
X88	-3	1			22						
X89	-4				23						
X90	-5				24						
X91	↓ -6	↓			25				↓		
X92	MC23378-2	6			26				1:150		
X93	MC23430-1	1		V8260 SL+	27				1:50		
94	MBK	NA	NA	NA	28	NA	NA	NA	NA		
95	↓	↓	↓	↓	29	↓	↓	↓	↓	↓	

8/14/13

MTX = Matrix: Designate W for water, S for soil, O for oil.
Sample amount is reported in grams (wet) for soil and oil, mls for water.

MS001-04 Date: 12/02/08

Review:_____

Accutest Laboratories of New England, Inc. **Instrument: GCMS V**

VOLATILE ORGANICS BY GC/MS ANALYSIS LOG

Standards Data

Lot #	Description	Conc
MS 9327	V 8260 Cal STD	200 ug/ml
9311	V 8260 BS (2nds)	200
9280	V 8260 25/55	250

Daily Saved File

Tune file 1:	V21888
Tune file 2:	NA
Initial Cal:	08/01/13
ID File:	V130801W
ICAL Verified:	☑
Sequence verified:	KR

Date: 8/14/13

Batch ID: MSV846

Analysts: Amy Yang

Signature:

*Note: If sample matrix is soil – method SW846 5035 used for preparation. SW846 5030 is purge and trap method for soil and water

Data File	Sample ID	Bot No.	Work Group	Test	ALS #	*MTX	Samp Amt.	% Sol	Dil. Fact.	pH	Comments
V21887	MBK	NA	NA	NA	1	NA	5ml	NA	1:1	NA	
88	CC 832-50	2	MS 9327		2						
89	BS		MS 9311		3						
90	BSD				4						
91	MBK	NA	NA		5						
92					6						
93	MB				7						
94	MC 23458-4	1	MS 29654	V8260STAR	8	GW				<2	
95	-3	1			9						
96	MC 23308-1		MS 29657	V8260SL	10						
97	MC 23458-2	1	MS 29654	V8260STAR	11						
98	-1				12				1:5		
99	-4MS				13				1:5		
V21900	-4MSD				14						
01	MC 23378-2	6	MS 29650	V8260TCL4x	15				1:50		
02	MC 23430-1	1		V8260SL+	16				1:50		
03	MC 23498-1	1	MS 29657	V8260MCP	17				1:1		RR=1:10
04	MC 23378-1	4	MS 29650	V8260TCL4x	18						RR=1:10
05	-3	1			19						RR=1:20
X 06	-4				20					>2	C.O.
07	-5				21					<2	
08	-6				22						
09	MC 23498-1	1	MS 29657	V8260MCP	23				1:10		
10	MC 23378-1	4	MS 29650	V8260TCL4x	24				1:10		
11	-3	1			25				1:20		
12	MC 23378-4	2		MSMS	26				1:1	>2	
13	MC 23452-2	1	MS 29657	V8260RCP	27					<2	MC 23452-12
14	MC 23267-2	3			28						MC 23267-2
15	-8	2			29						-8
16	MBK				30						
17					31						8/15/13

MTX = Matrix: Designate W for water, S for soil, O for oil.
Sample amount is reported in grams (wet) for soil and oil, mls for water.

Review:

New England ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: MC23378
Account: WSPNYA WSP Environmental & Energy
Project: EPT Ithaca, Ithica, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34506-MB	BG40977.D	1	08/21/13	KN	08/21/13	OP34506	GBG1547

The QC reported here applies to the following samples: **Method:** NYDOH 310-13

MC23378-1

CAS No.	Compound	Result	RL	Units	Q
	Gasoline (C4-C12)	No Match			
	Turpentine (C9-C11)	No Match			
	Mineral Spirits (C9-C12)	No Match			
	Kerosene (C9-C18)	No Match			
	Diesel Fuel (C9-C22)	No Match			
	Fuel Oil #2 (C11-C22)	No Match			
	Fuel Oil #4 (C11-C24)	No Match			
	Fuel Oil #6 (C11-C26)	No Match			
	Lubricating Oil (C14-C40)	No Match			
	Other Patterns	No Match			

New England ACCUTEST LABORATORIES

GC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\BG130821.SEC\
Data File : BG40983.D
Signal(s) : FID2B.ch
Acq On : 21 Aug 2013 10:20 pm
Operator : kimmien
Sample : mc23378-1,op34506
Misc : op34506,gbg1547,10,,,5,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 22 15:21:39 2013
Quant Method : G:\1\METHODS\BGR1130123ALK.m
Quant Title : n-C8 - n-C40 normal alkanes w/ isoprenoids

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	5a-Androstane	0.000	0	N.D.	µg/mLd
	System Monitoring Compounds				
2) S	o-Terphenyl	0.000	0	N.D.	µg/mLd
	Target Compounds				
3)	C-8	0.000	0	N.D.	µg/mLd
4)	C-9	0.000	0	N.D.	µg/mLd
5)	C-10	0.000	0	N.D.	µg/mLd
6)	C-11	0.000	0	N.D.	µg/mLd
7)	C-12	0.000	0	N.D.	µg/mLd
8)	C-13	0.000	0	N.D.	µg/mLd
9)	2,6,10-trimethyldodec...	0.000	0	N.D.	µg/mLd
10)	C-14	0.000	0	N.D.	µg/mLd
11)	2,6,10-trimethyltride...	0.000	0	N.D.	µg/mLd
12)	C-15	0.000	0	N.D.	µg/mLd
13)	C-16	0.000	0	N.D.	µg/mLd
14)	2,6,10-trimethylpenta...	0.000	0	N.D.	µg/mLd
15)	C-17	0.000	0	N.D.	µg/mLd
16)	Pristane	0.000	0	N.D.	µg/mLd
17)	C-18	0.000	0	N.D.	µg/mLd
18)	Phytane	0.000	0	N.D.	µg/mLd
19)	C-19	0.000	0	N.D.	µg/mLd
20)	C-20	0.000	0	N.D.	µg/mLd
21)	C-21	0.000	0	N.D.	µg/mLd
22)	C-22	0.000	0	N.D.	µg/mLd
23)	C-23	0.000	0	N.D.	µg/mLd
24)	C-24	0.000	0	N.D.	µg/mLd
25)	C-25	0.000	0	N.D.	µg/mLd
26)	C-26	0.000	0	N.D.	µg/mLd
27)	C-27	0.000	0	N.D.	µg/mLd
28)	C-28	0.000	0	N.D.	µg/mLd
29)	C-29	0.000	0	N.D.	µg/mLd
30)	C-30	0.000	0	N.D.	µg/mLd
31)	C-31	0.000	0	N.D.	µg/mLd
32)	C-32	0.000	0	N.D.	µg/mLd
33)	C-33	0.000	0	N.D.	µg/mLd
34)	C-34	0.000	0	N.D.	µg/mLd
35)	C-35	0.000	0	N.D.	µg/mLd
36)	C-36	0.000	0	N.D.	µg/mLd
37)	C-37	0.000	0	N.D.	µg/mLd
38)	C-38	0.000	0	N.D.	µg/mLd
39)	C-39	0.000	0	N.D.	µg/mLd
40)	C-40	0.000	0	N.D.	µg/mLd
41) H	TPH (C8-C40)	0.000	0	N.D.	µg/mLd

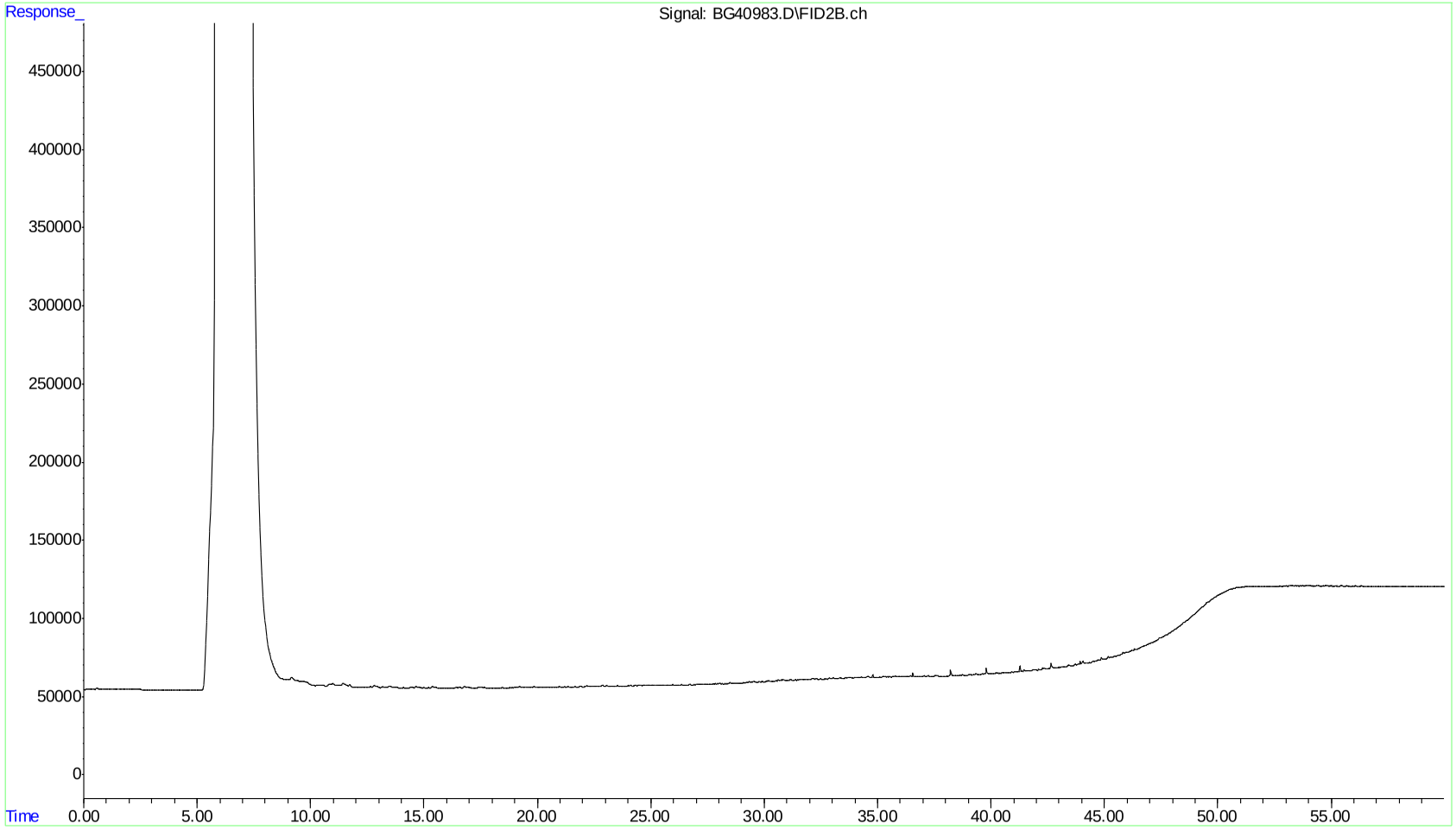
SemiQuant Compounds - Not Calibrated on this Instrument

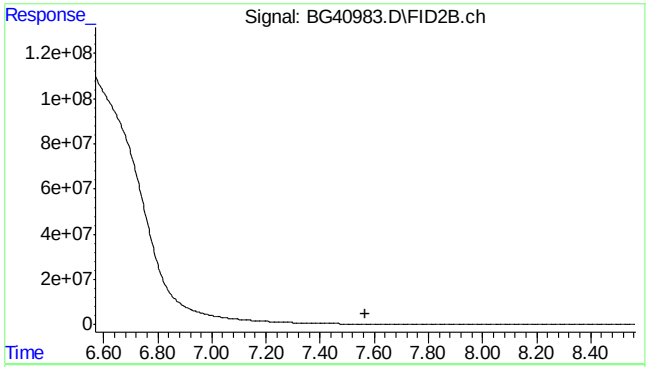
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\BG130821.SEC\
Data File : BG40983.D
Signal(s) : FID2B.ch
Acq On : 21 Aug 2013 10:20 pm
Operator : kimmien
Sample : mc23378-1,op34506
Misc : op34506,gbg1547,10,,,5,,
ALS Vial : 6 Sample Multiplier: 1

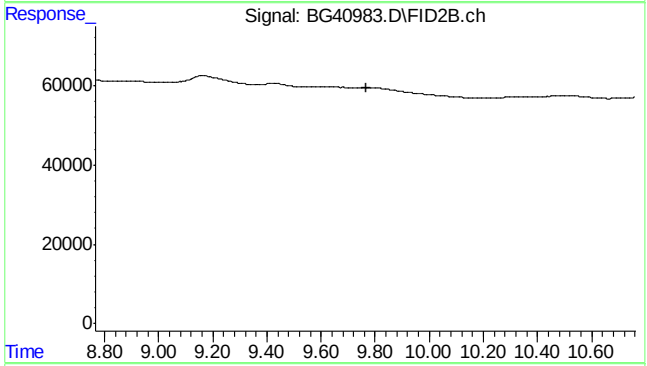
Quant Time: Aug 22 15:21:39 2013
Quant Method : G:\1\METHODS\BGR1130123ALK.m
Quant Title : n-C8 - n-C40 normal alkanes w/ isoprenoids





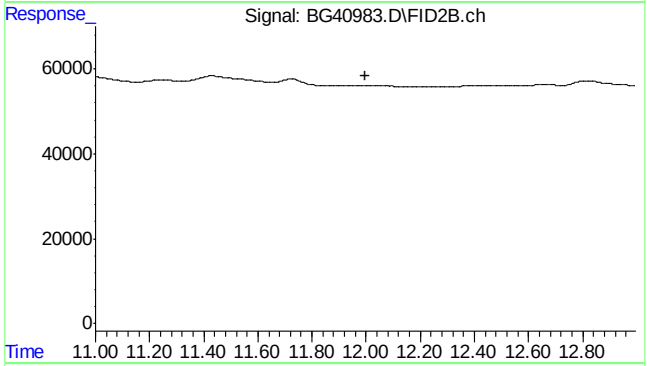
#3 C-8

R.T.: 0.000 min
Exp R.T. : 7.568 min
Response: 0
Conc: N.D.



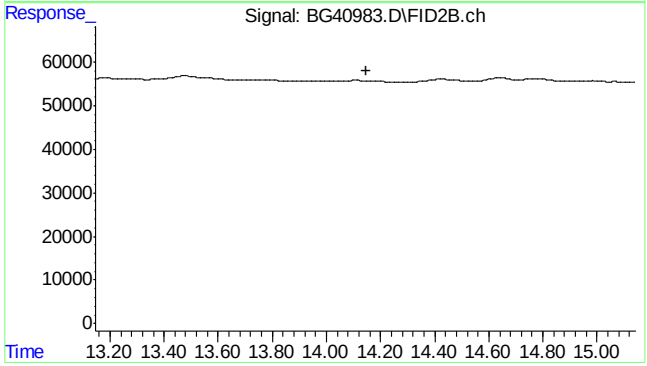
#4 C-9

R.T.: 0.000 min
Exp R.T. : 9.766 min
Response: 0
Conc: N.D.



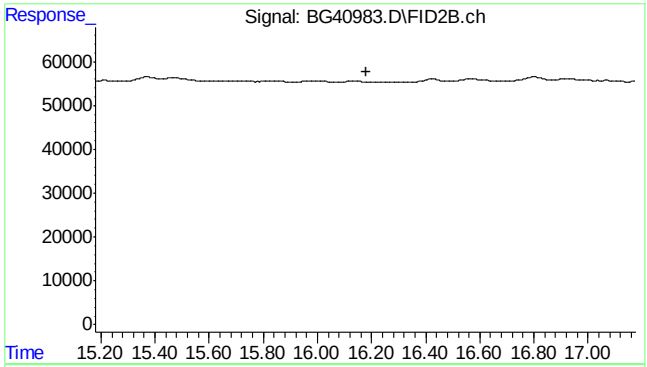
#5 C-10

R.T.: 0.000 min
Exp R.T. : 11.998 min
Response: 0
Conc: N.D.



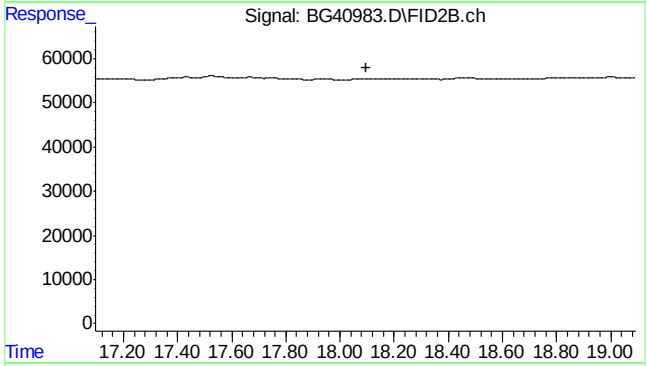
#6 C-11

R.T.: 0.000 min
Exp R.T. : 14.146 min
Response: 0
Conc: N.D.



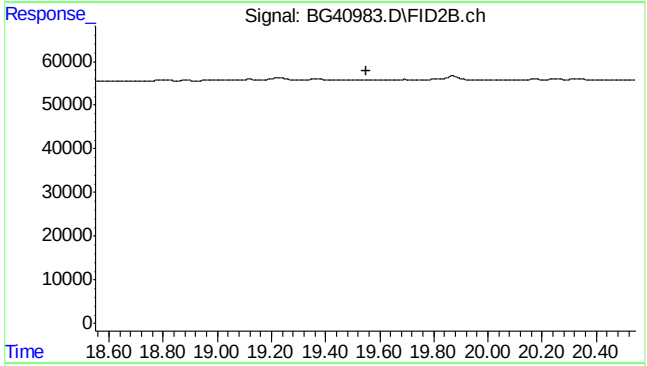
#7 C-12

R.T.: 0.000 min
Exp R.T. : 16.179 min
Response: 0
Conc: N.D.



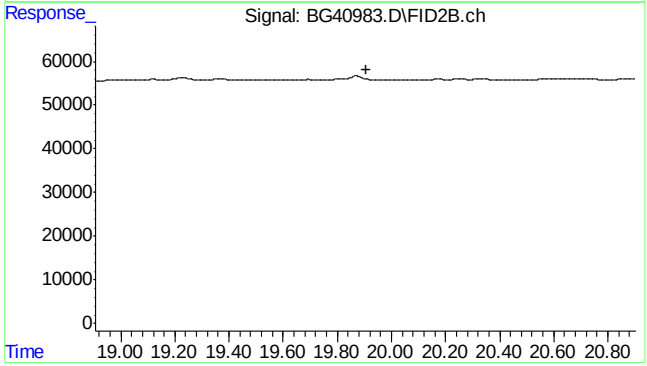
#8 C-13

R.T.: 0.000 min
Exp R.T. : 18.097 min
Response: 0
Conc: N.D.



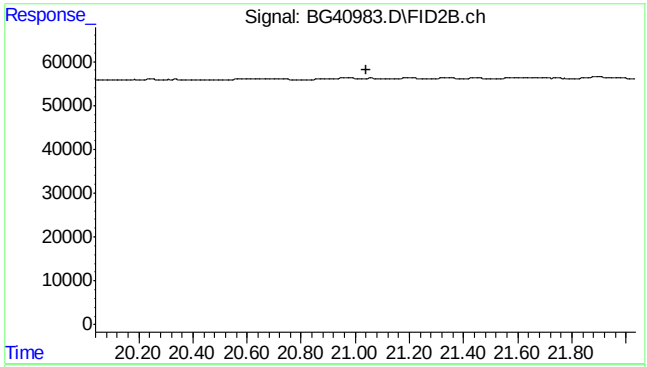
#9 2,6,10-trimethyldodecane (1380)

R.T.: 0.000 min
Exp R.T. : 19.549 min
Response: 0
Conc: N.D.



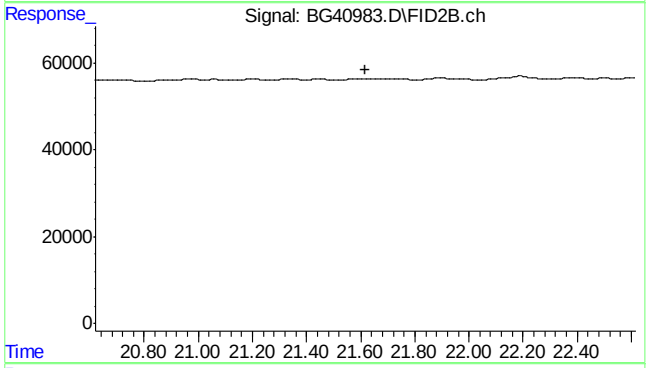
#10 C-14

R.T.: 0.000 min
Exp R.T. : 19.906 min
Response: 0
Conc: N.D.



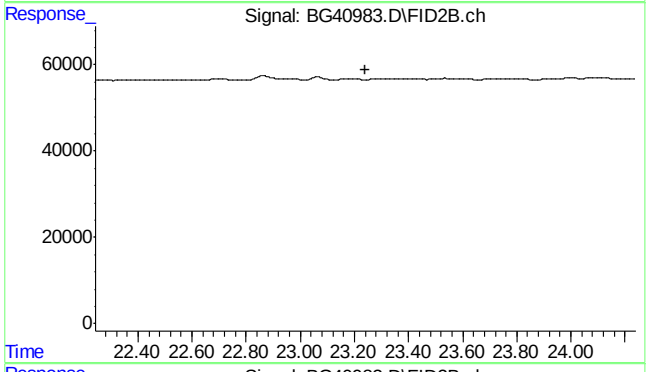
#11 2,6,10-trimethyltridecane (1470)

R.T.: 0.000 min
Exp R.T. : 21.040 min
Response: 0
Conc: N.D.



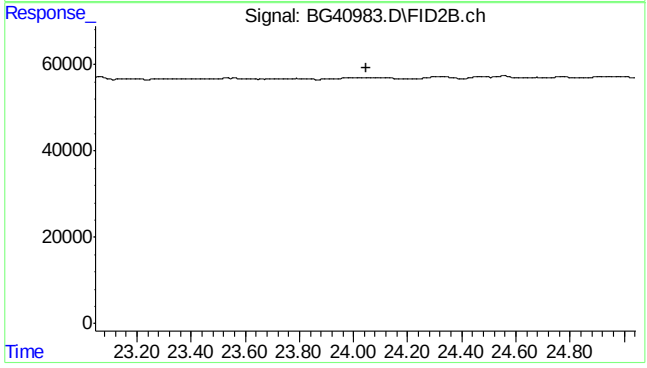
#12 C-15

R.T.: 0.000 min
Exp R.T. : 21.618 min
Response: 0
Conc: N.D.



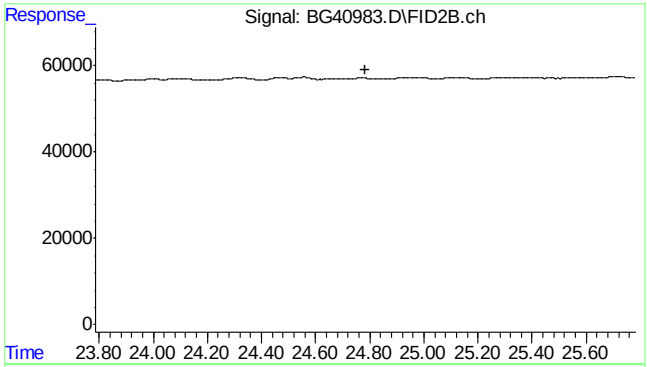
#13 C-16

R.T.: 0.000 min
Exp R.T. : 23.241 min
Response: 0
Conc: N.D.



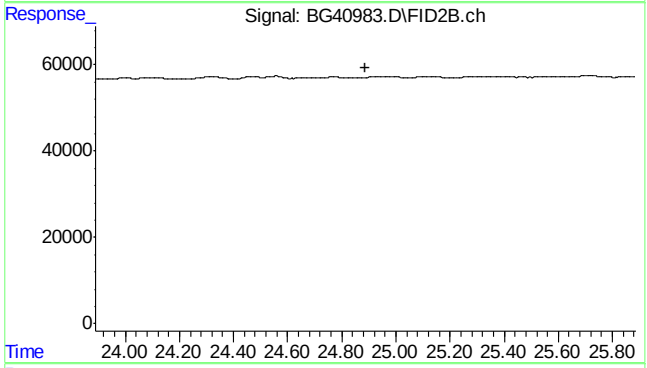
#14 2,6,10-trimethylpentadecane (1650)

R.T.: 0.000 min
Exp R.T. : 24.046 min
Response: 0
Conc: N.D.



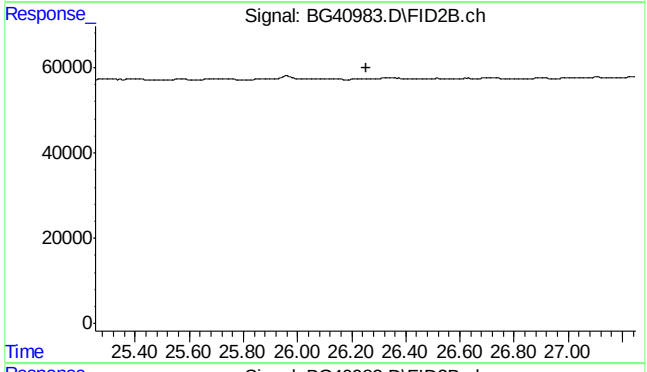
#15 C-17

R.T.: 0.000 min
Exp R.T. : 24.785 min
Response: 0
Conc: N.D.



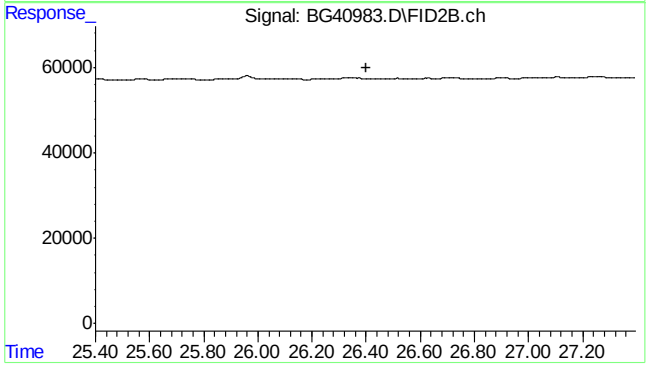
#16 Pristane

R.T.: 0.000 min
Exp R.T. : 24.887 min
Response: 0
Conc: N.D.



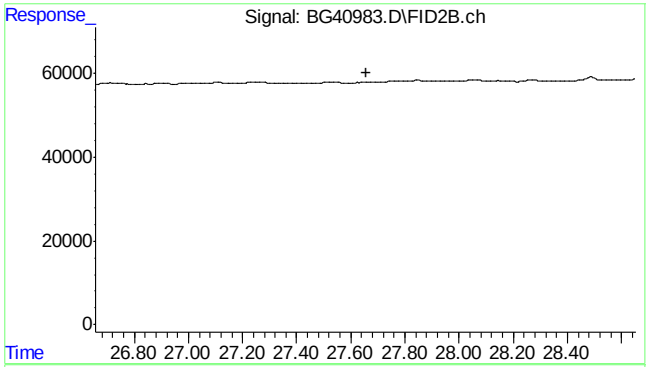
#17 C-18

R.T.: 0.000 min
Exp R.T. : 26.253 min
Response: 0
Conc: N.D.



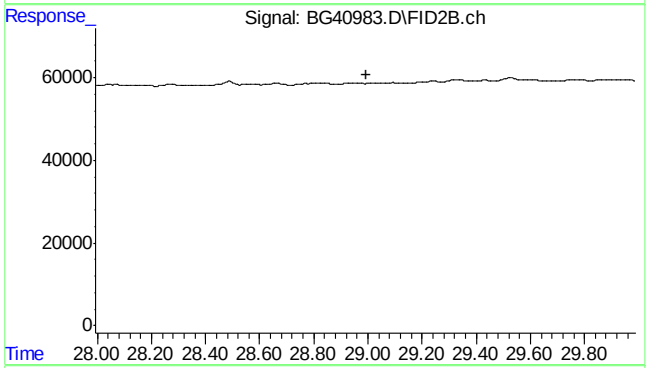
#18 Phytane

R.T.: 0.000 min
Exp R.T. : 26.399 min
Response: 0
Conc: N.D.



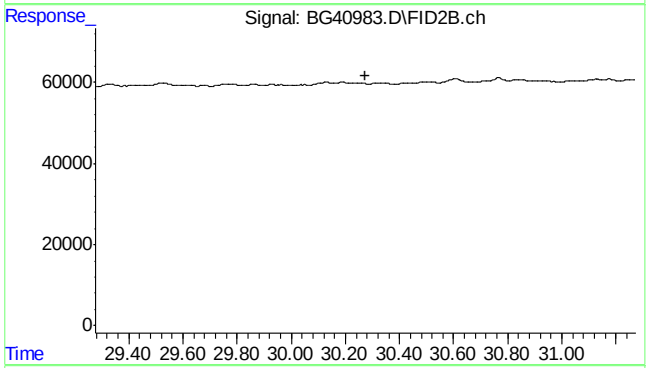
#19 C-19

R.T.: 0.000 min
Exp R.T. : 27.656 min
Response: 0
Conc: N.D.



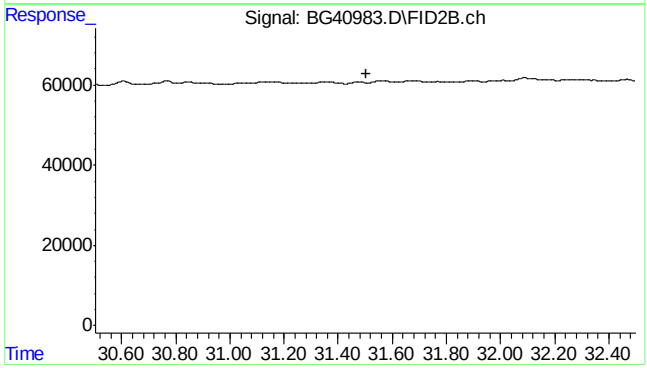
#20 C-20

R.T.: 0.000 min
Exp R.T. : 28.993 min
Response: 0
Conc: N.D.



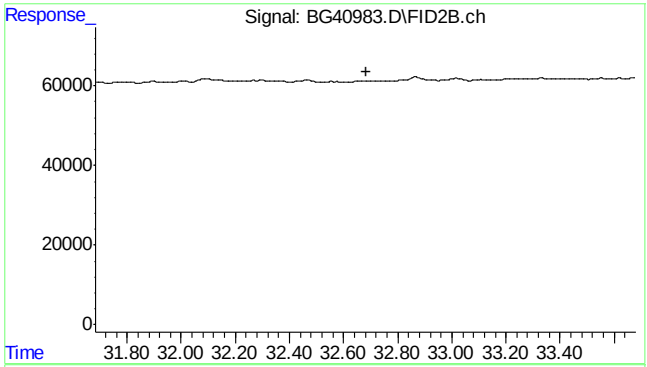
#21 C-21

R.T.: 0.000 min
Exp R.T. : 30.274 min
Response: 0
Conc: N.D.



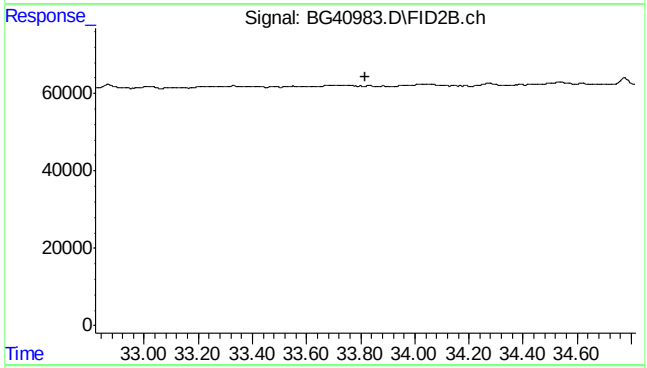
#22 C-22

R.T.: 0.000 min
Exp R.T. : 31.502 min
Response: 0
Conc: N.D.



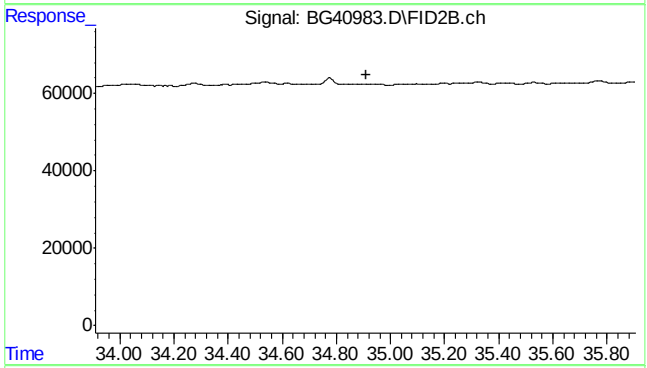
#23 C-23

R.T.: 0.000 min
Exp R.T. : 32.682 min
Response: 0
Conc: N.D.



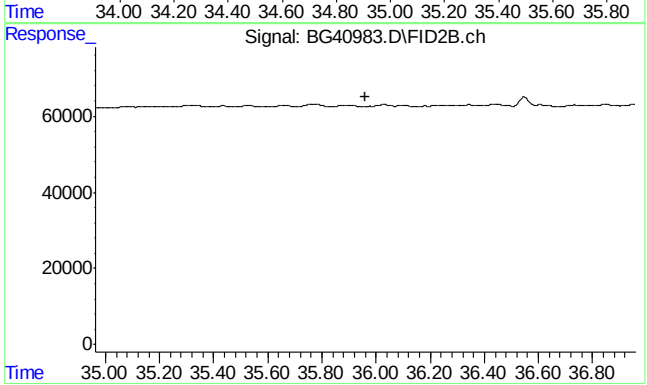
#24 C-24

R.T.: 0.000 min
Exp R.T. : 33.817 min
Response: 0
Conc: N.D.



#25 C-25

R.T.: 0.000 min
Exp R.T. : 34.909 min
Response: 0
Conc: N.D.

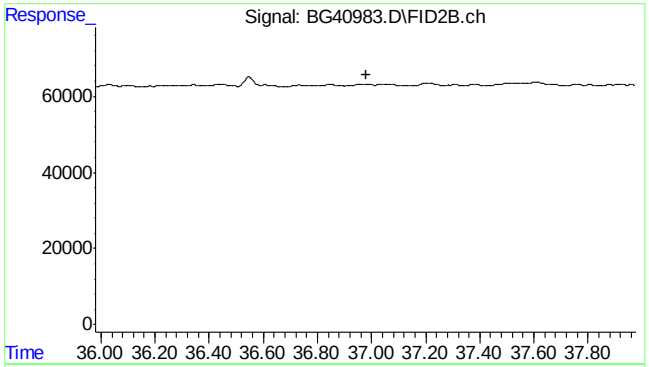


#26 C-26

R.T.: 0.000 min
Exp R.T. : 35.961 min
Response: 0
Conc: N.D.

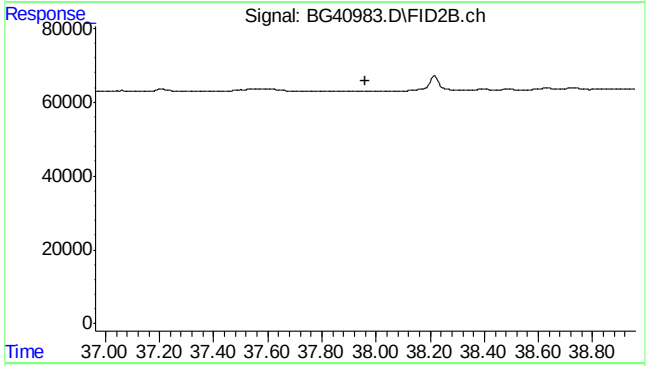
9.1.1

9



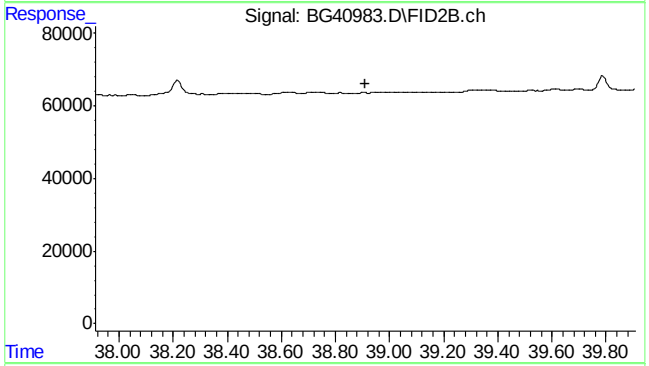
#27 C-27

R.T.: 0.000 min
Exp R.T. : 36.978 min
Response: 0
Conc: N.D.



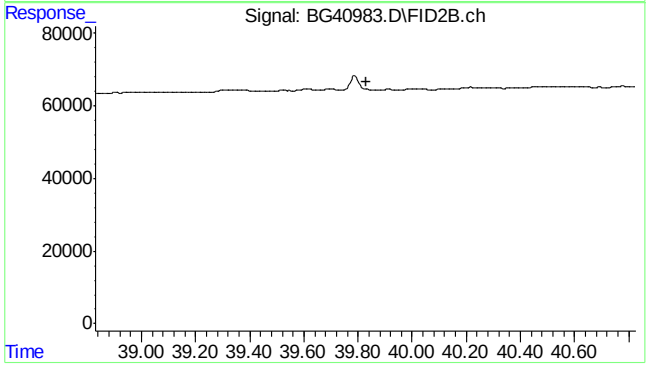
#28 C-28

R.T.: 0.000 min
Exp R.T. : 37.961 min
Response: 0
Conc: N.D.



#29 C-29

R.T.: 0.000 min
Exp R.T. : 38.911 min
Response: 0
Conc: N.D.

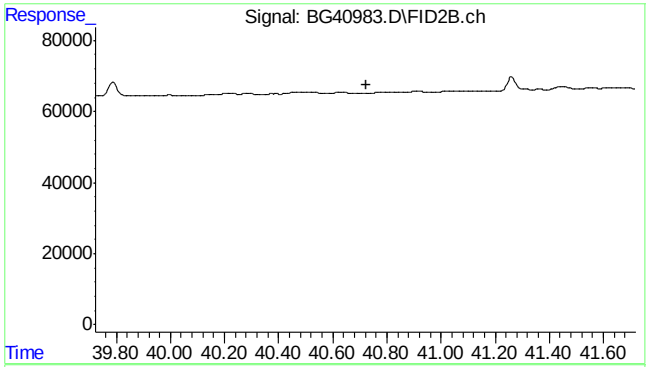


#30 C-30

R.T.: 0.000 min
Exp R.T. : 39.829 min
Response: 0
Conc: N.D.

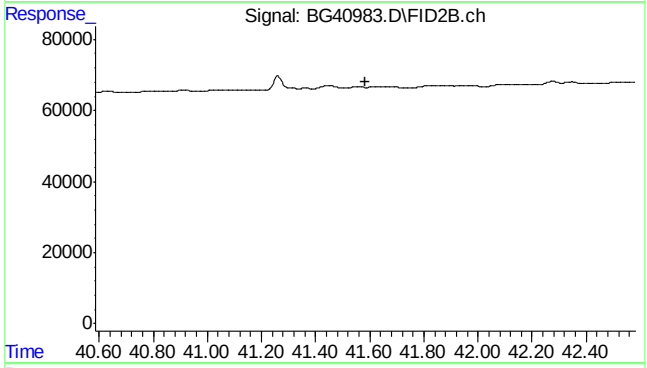
9.1.1

9



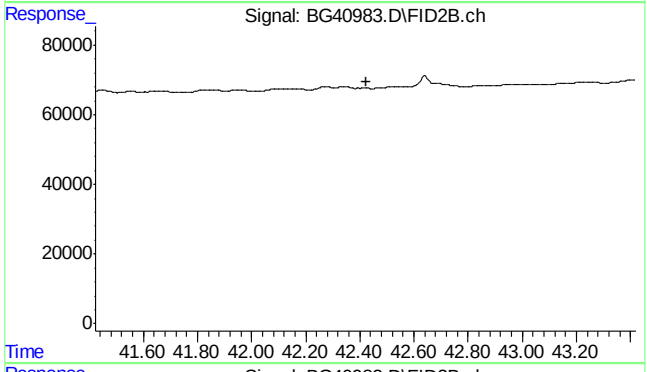
#31 C-31

R.T.: 0.000 min
Exp R.T. : 40.722 min
Response: 0
Conc: N.D.



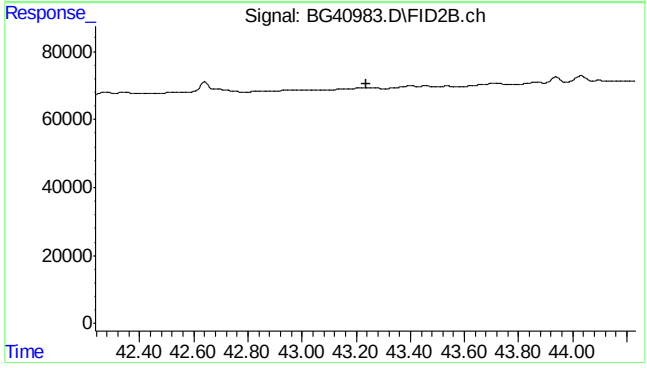
#32 C-32

R.T.: 0.000 min
Exp R.T. : 41.583 min
Response: 0
Conc: N.D.



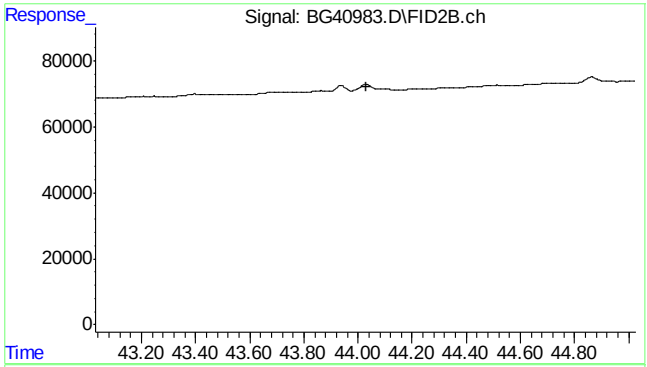
#33 C-33

R.T.: 0.000 min
Exp R.T. : 42.422 min
Response: 0
Conc: N.D.



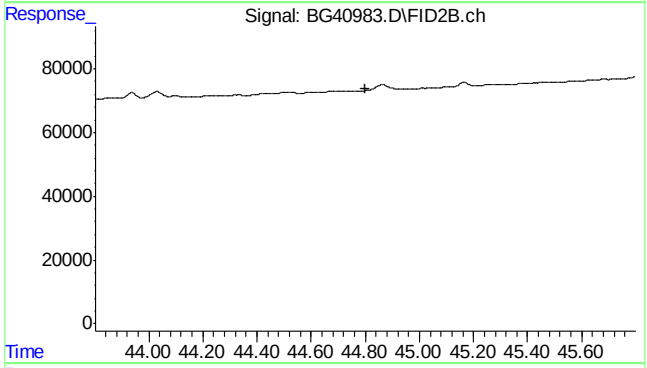
#34 C-34

R.T.: 0.000 min
Exp R.T. : 43.237 min
Response: 0
Conc: N.D.



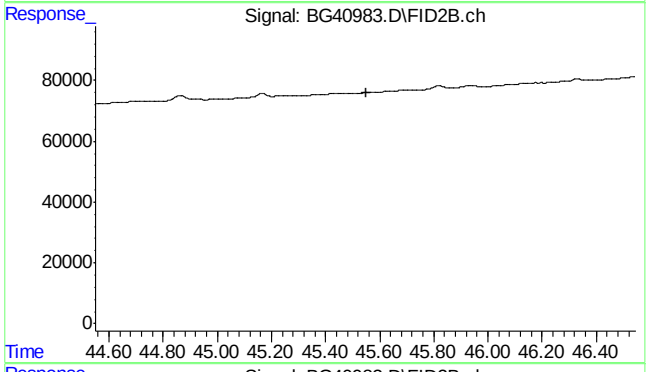
#35 C-35

R.T.: 0.000 min
Exp R.T. : 44.029 min
Response: 0
Conc: N.D.



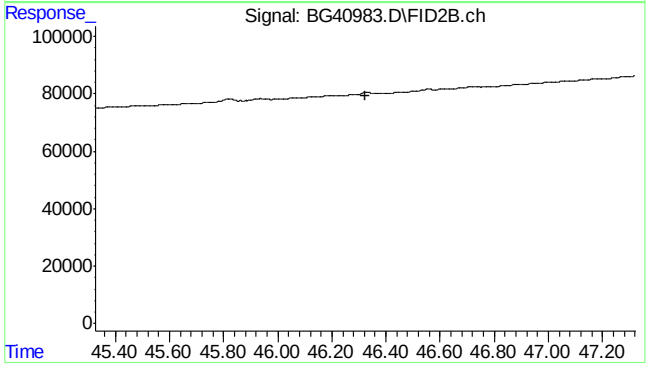
#36 C-36

R.T.: 0.000 min
Exp R.T. : 44.800 min
Response: 0
Conc: N.D.



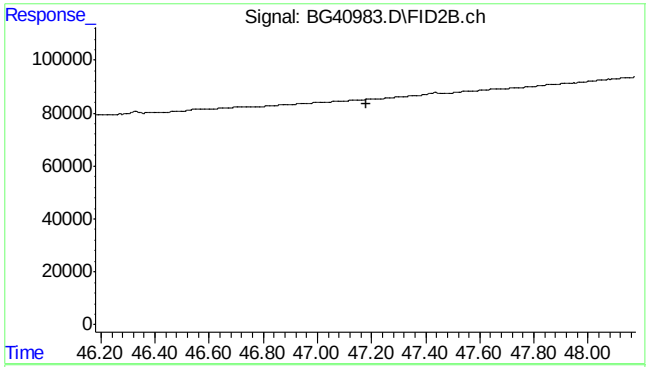
#37 C-37

R.T.: 0.000 min
Exp R.T. : 45.549 min
Response: 0
Conc: N.D.



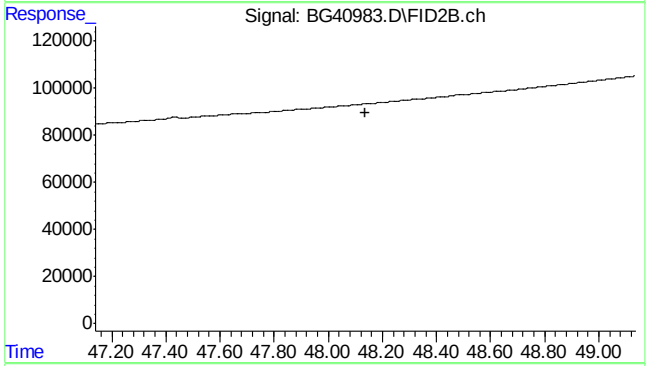
#38 C-38

R.T.: 0.000 min
Exp R.T. : 46.324 min
Response: 0
Conc: N.D.



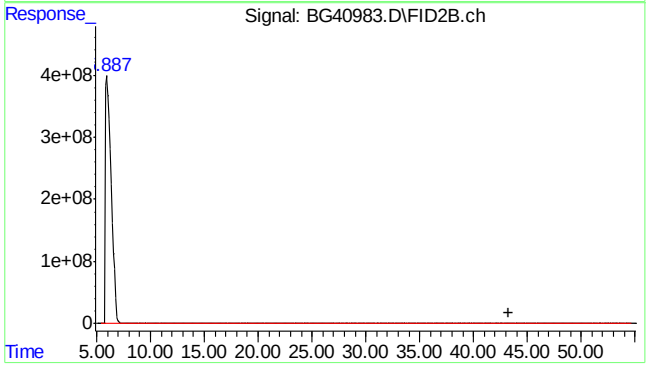
#39 C-39

R.T.: 0.000 min
Exp R.T. : 47.180 min
Response: 0
Conc: N.D.



#40 C-40

R.T.: 0.000 min
Exp R.T. : 48.138 min
Response: 0
Conc: N.D.



#41 TPH (C8-C40)

R.T.: 0.000 min
Exp R.T. : 43.218 min
Response: 16614
Conc: N.D. d

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\BG130821.SEC\
Data File : BG40977.D
Signal(s) : FID2B.ch
Acq On : 21 Aug 2013 7:00 pm
Operator : kimmien
Sample : op34506-mb,op34506
Misc : op34506,gbg1547,10,,,5,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 22 15:19:37 2013
Quant Method : G:\1\METHODS\BGR1130123ALK.m
Quant Title : n-C8 - n-C40 normal alkanes w/ isoprenoids

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	5a-Androstane	0.000	0	N.D.	µg/mLd
	System Monitoring Compounds				
2) S	o-Terphenyl	0.000	0	N.D.	µg/mLd
	Target Compounds				
3)	C-8	0.000	0	N.D.	µg/mLd
4)	C-9	0.000	0	N.D.	µg/mLd
5)	C-10	0.000	0	N.D.	µg/mLd
6)	C-11	0.000	0	N.D.	µg/mLd
7)	C-12	0.000	0	N.D.	µg/mLd
8)	C-13	0.000	0	N.D.	µg/mLd
9)	2,6,10-trimethyldodec...	0.000	0	N.D.	µg/mLd
10)	C-14	0.000	0	N.D.	µg/mLd
11)	2,6,10-trimethyltride...	0.000	0	N.D.	µg/mLd
12)	C-15	0.000	0	N.D.	µg/mLd
13)	C-16	0.000	0	N.D.	µg/mLd
14)	2,6,10-trimethylpenta...	0.000	0	N.D.	µg/mLd
15)	C-17	0.000	0	N.D.	µg/mLd
16)	Pristane	0.000	0	N.D.	µg/mLd
17)	C-18	0.000	0	N.D.	µg/mLd
18)	Phytane	0.000	0	N.D.	µg/mLd
19)	C-19	0.000	0	N.D.	µg/mLd
20)	C-20	0.000	0	N.D.	µg/mLd
21)	C-21	0.000	0	N.D.	µg/mLd
22)	C-22	0.000	0	N.D.	µg/mLd
23)	C-23	0.000	0	N.D.	µg/mLd
24)	C-24	0.000	0	N.D.	µg/mLd
25)	C-25	0.000	0	N.D.	µg/mLd
26)	C-26	0.000	0	N.D.	µg/mLd
27)	C-27	0.000	0	N.D.	µg/mLd
28)	C-28	0.000	0	N.D.	µg/mLd
29)	C-29	0.000	0	N.D.	µg/mLd
30)	C-30	0.000	0	N.D.	µg/mLd
31)	C-31	0.000	0	N.D.	µg/mLd
32)	C-32	0.000	0	N.D.	µg/mLd
33)	C-33	0.000	0	N.D.	µg/mLd
34)	C-34	0.000	0	N.D.	µg/mLd
35)	C-35	0.000	0	N.D.	µg/mLd
36)	C-36	0.000	0	N.D.	µg/mLd
37)	C-37	0.000	0	N.D.	µg/mLd
38)	C-38	0.000	0	N.D.	µg/mLd
39)	C-39	0.000	0	N.D.	µg/mLd
40)	C-40	0.000	0	N.D.	µg/mLd
41) H	TPH (C8-C40)	0.000	0	N.D.	µg/mLd

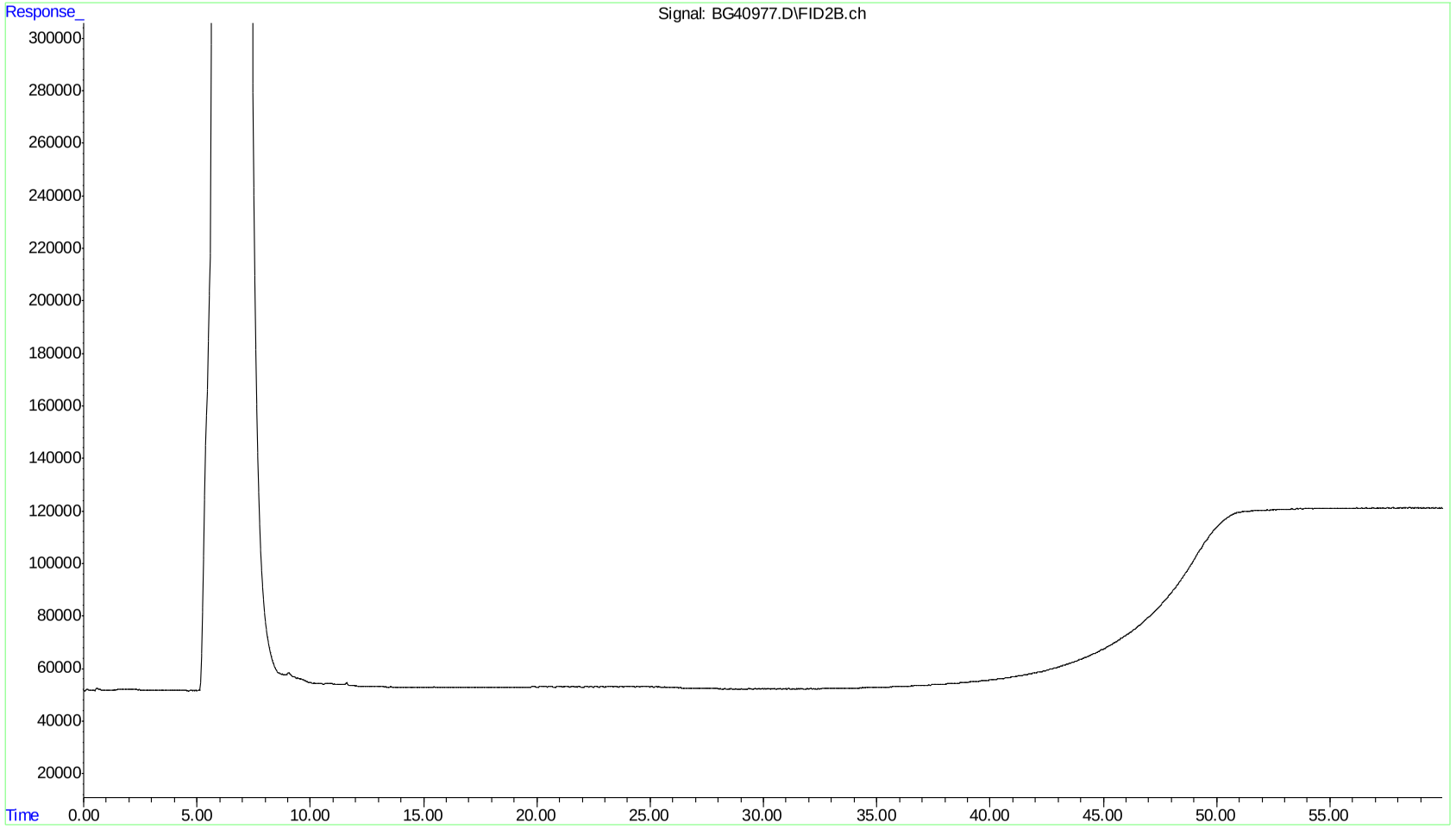
SemiQuant Compounds - Not Calibrated on this Instrument

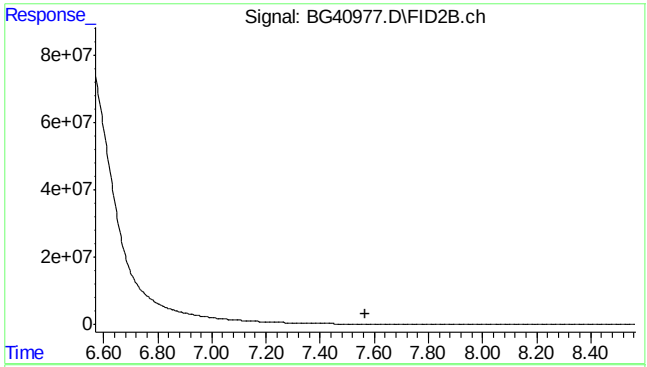
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\BG130821.SEC\
Data File : BG40977.D
Signal(s) : FID2B.ch
Acq On : 21 Aug 2013 7:00 pm
Operator : kimmien
Sample : op34506-mb,op34506
Misc : op34506,gbg1547,10,,,5,,
ALS Vial : 3 Sample Multiplier: 1

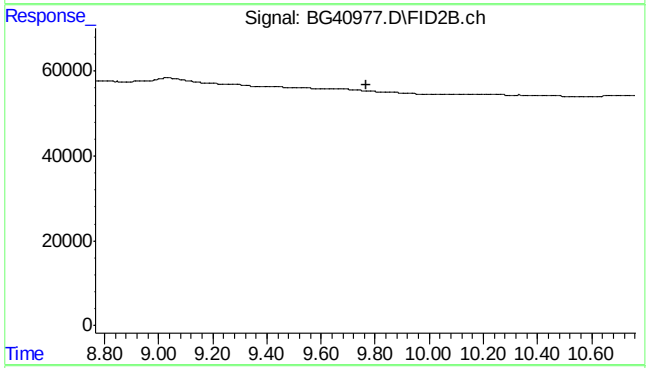
Quant Time: Aug 22 15:19:37 2013
Quant Method : G:\1\METHODS\BGR1130123ALK.m
Quant Title : n-C8 - n-C40 normal alkanes w/ isoprenoids





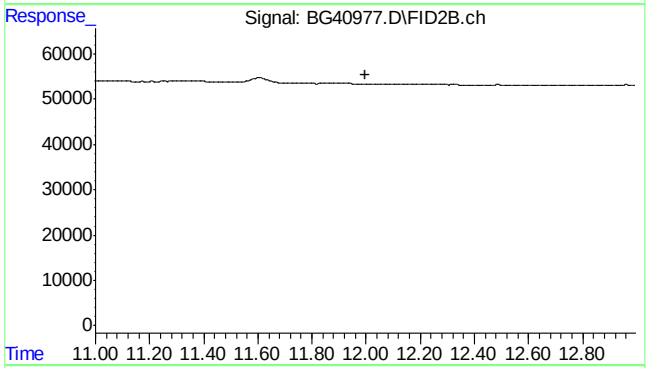
#3 C-8

R.T.: 0.000 min
Exp R.T. : 7.568 min
Response: 0
Conc: N.D.



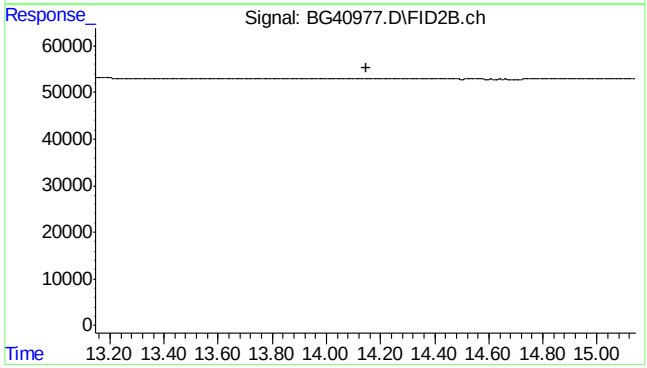
#4 C-9

R.T.: 0.000 min
Exp R.T. : 9.766 min
Response: 0
Conc: N.D.



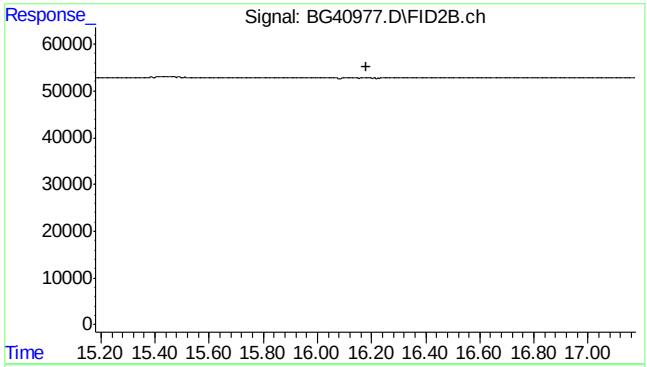
#5 C-10

R.T.: 0.000 min
Exp R.T. : 11.998 min
Response: 0
Conc: N.D.



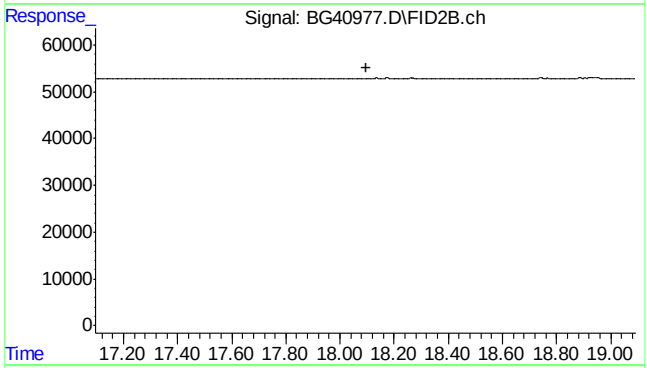
#6 C-11

R.T.: 0.000 min
Exp R.T. : 14.146 min
Response: 0
Conc: N.D.



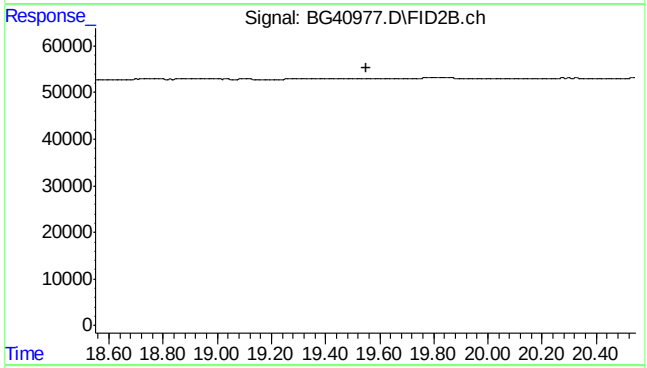
#7 C-12

R.T.: 0.000 min
Exp R.T. : 16.179 min
Response: 0
Conc: N.D.



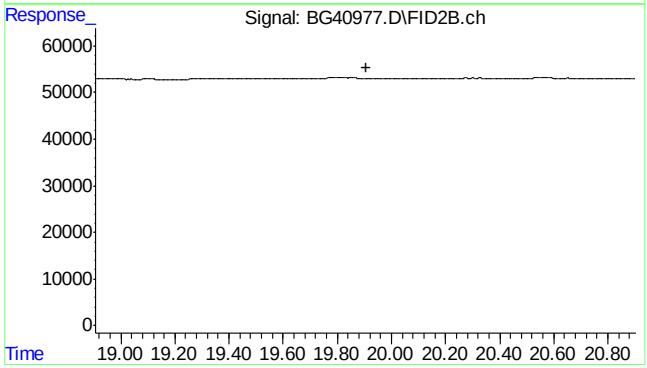
#8 C-13

R.T.: 0.000 min
Exp R.T. : 18.097 min
Response: 0
Conc: N.D.



#9 2,6,10-trimethyldodecane (1380)

R.T.: 0.000 min
Exp R.T. : 19.549 min
Response: 0
Conc: N.D.

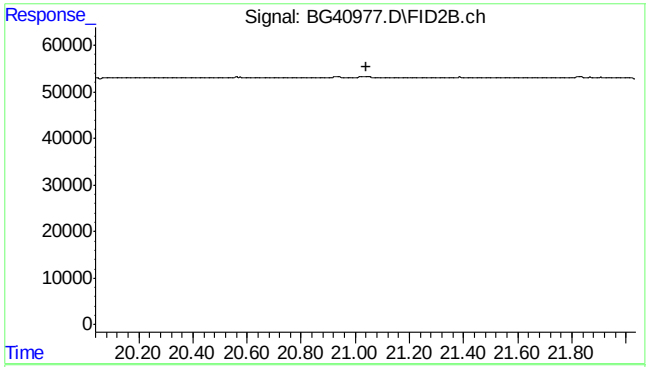


#10 C-14

R.T.: 0.000 min
Exp R.T. : 19.906 min
Response: 0
Conc: N.D.

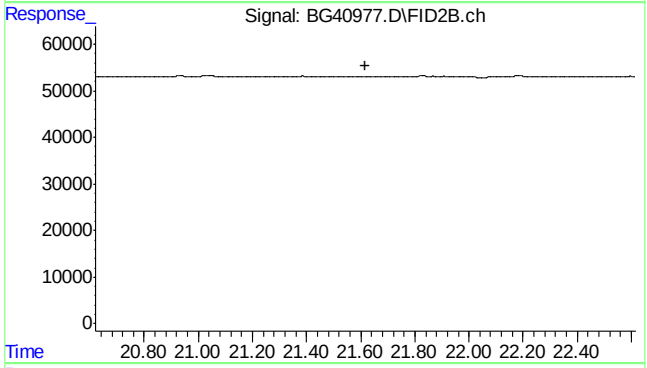
9.2.1

9



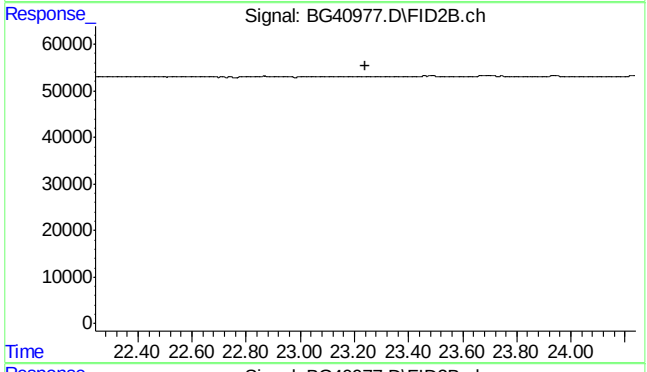
#11 2,6,10-trimethyltridecane (1470)

R.T.: 0.000 min
Exp R.T. : 21.040 min
Response: 0
Conc: N.D.



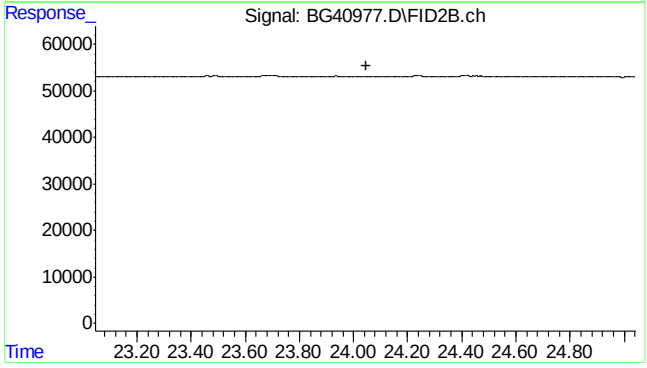
#12 C-15

R.T.: 0.000 min
Exp R.T. : 21.618 min
Response: 0
Conc: N.D.



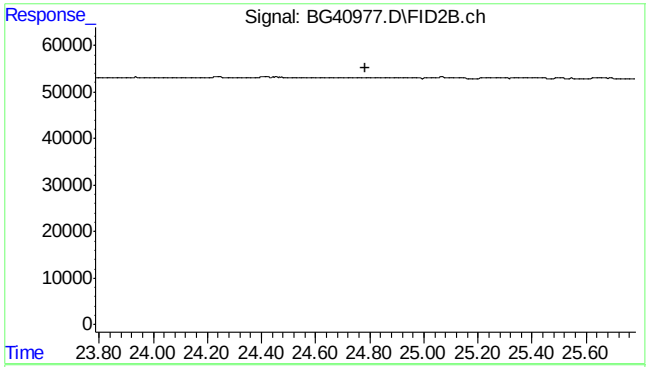
#13 C-16

R.T.: 0.000 min
Exp R.T. : 23.241 min
Response: 0
Conc: N.D.



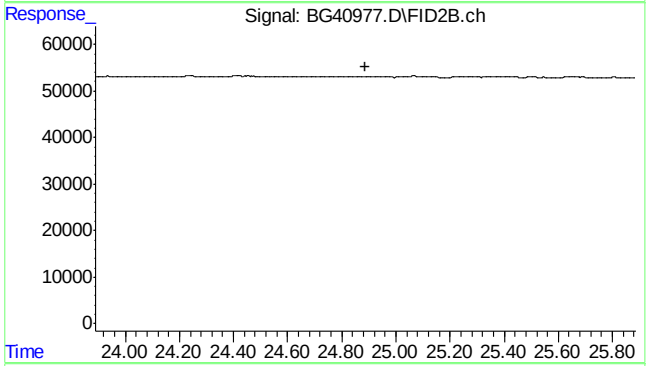
#14 2,6,10-trimethylpentadecane (1650)

R.T.: 0.000 min
Exp R.T. : 24.046 min
Response: 0
Conc: N.D.



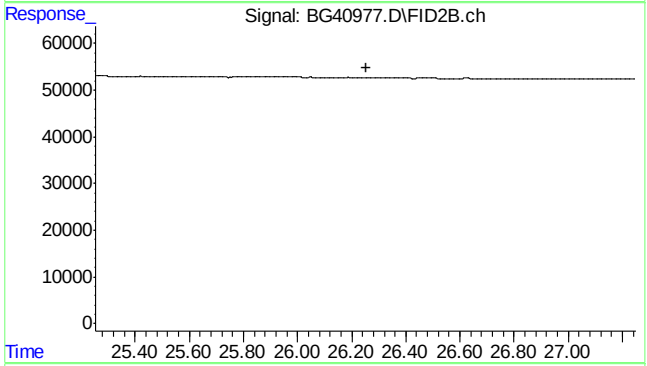
#15 C-17

R.T.: 0.000 min
Exp R.T. : 24.785 min
Response: 0
Conc: N.D.



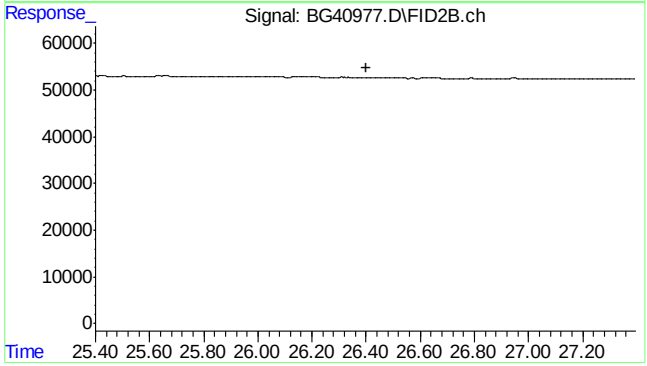
#16 Pristane

R.T.: 0.000 min
Exp R.T. : 24.887 min
Response: 0
Conc: N.D.



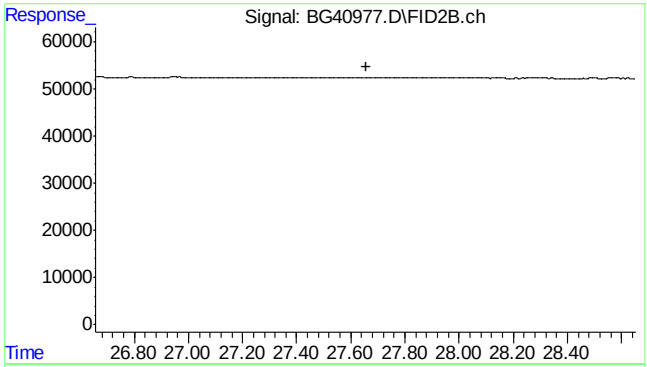
#17 C-18

R.T.: 0.000 min
Exp R.T. : 26.253 min
Response: 0
Conc: N.D.



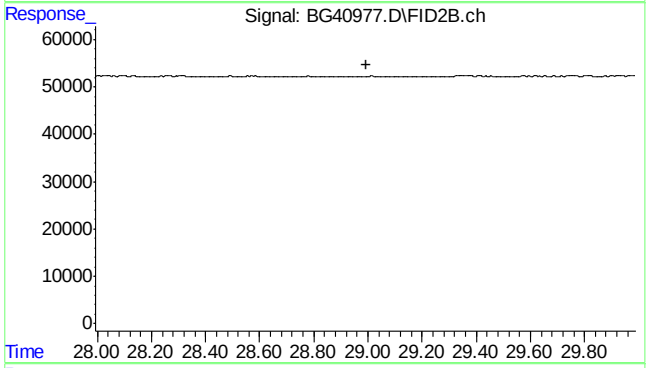
#18 Phytane

R.T.: 0.000 min
Exp R.T. : 26.399 min
Response: 0
Conc: N.D.



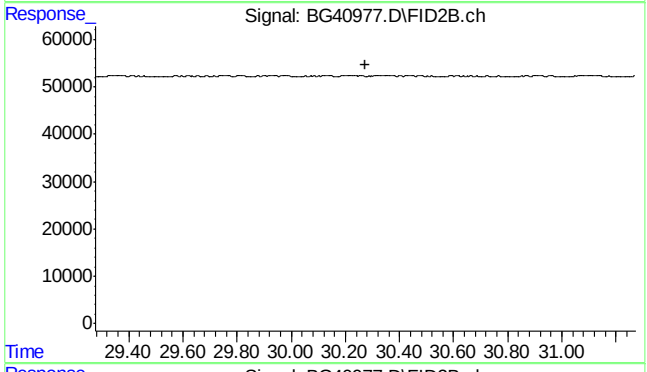
#19 C-19

R.T.: 0.000 min
Exp R.T. : 27.656 min
Response: 0
Conc: N.D.



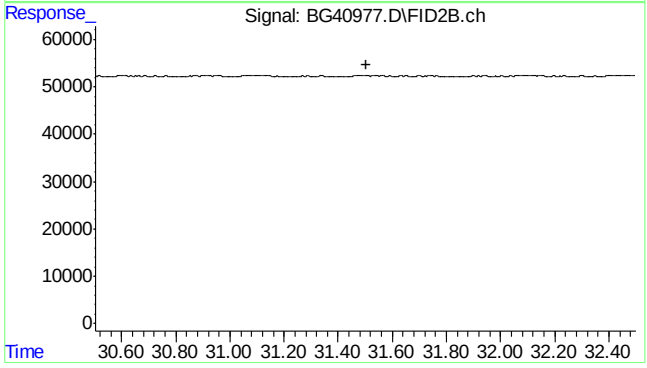
#20 C-20

R.T.: 0.000 min
Exp R.T. : 28.993 min
Response: 0
Conc: N.D.



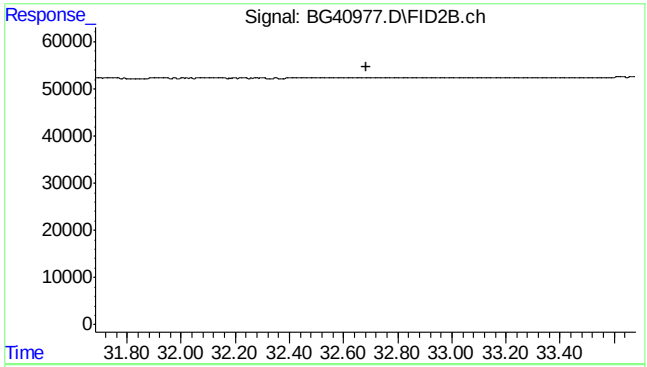
#21 C-21

R.T.: 0.000 min
Exp R.T. : 30.274 min
Response: 0
Conc: N.D.



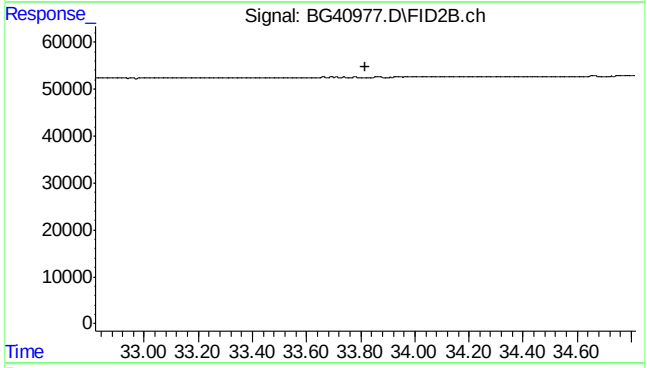
#22 C-22

R.T.: 0.000 min
Exp R.T. : 31.502 min
Response: 0
Conc: N.D.



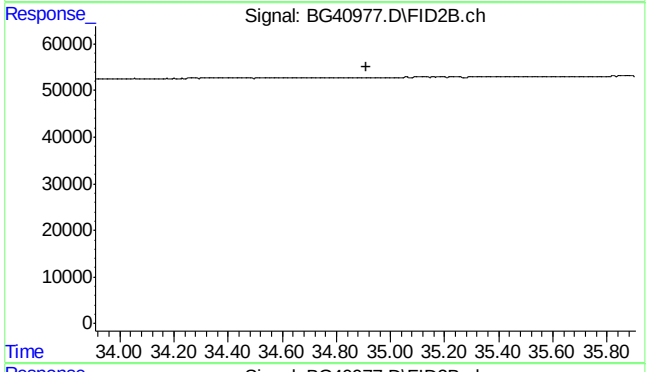
#23 C-23

R.T.: 0.000 min
Exp R.T. : 32.682 min
Response: 0
Conc: N.D.



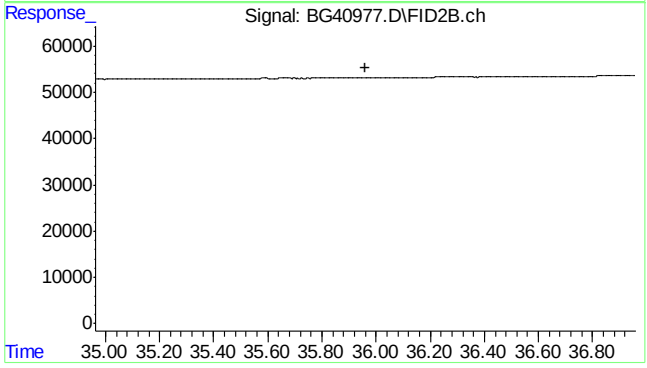
#24 C-24

R.T.: 0.000 min
Exp R.T. : 33.817 min
Response: 0
Conc: N.D.



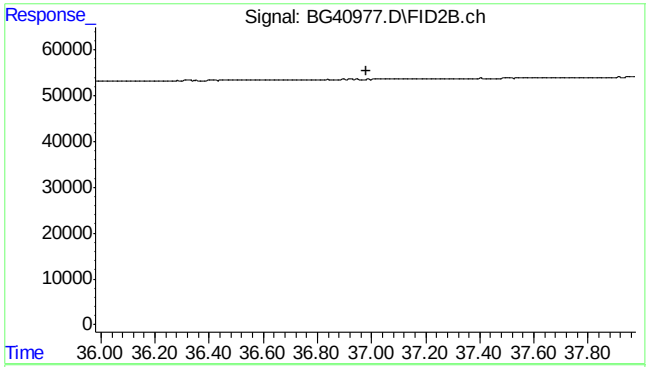
#25 C-25

R.T.: 0.000 min
Exp R.T. : 34.909 min
Response: 0
Conc: N.D.



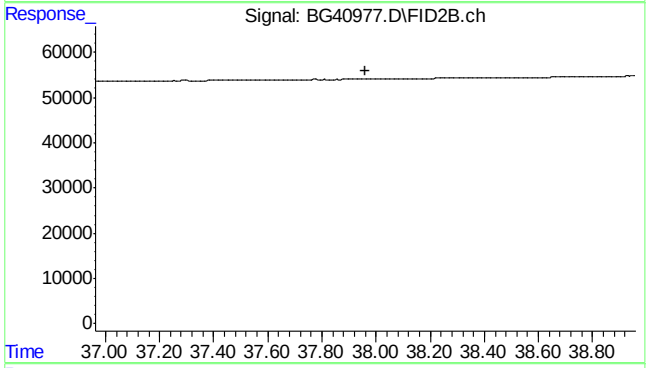
#26 C-26

R.T.: 0.000 min
Exp R.T. : 35.961 min
Response: 0
Conc: N.D.



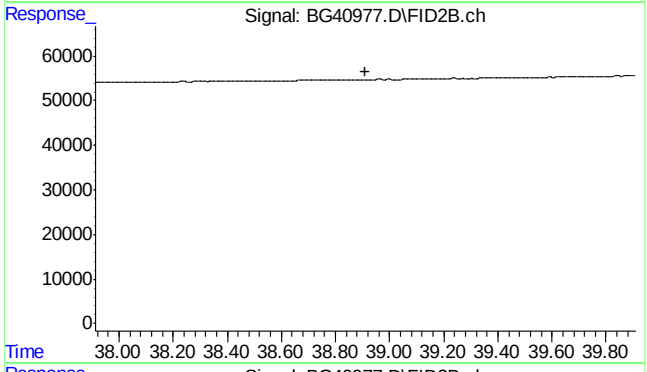
#27 C-27

R.T.: 0.000 min
Exp R.T. : 36.978 min
Response: 0
Conc: N.D.



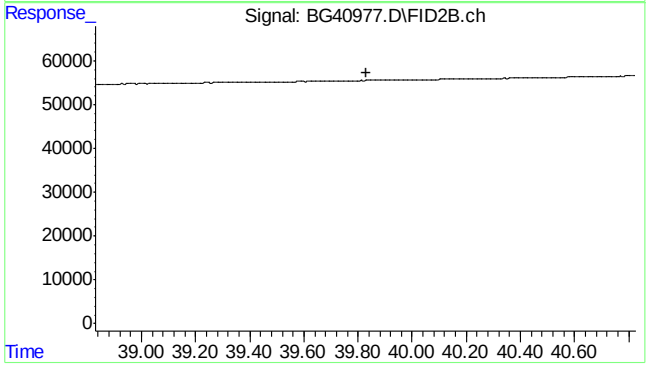
#28 C-28

R.T.: 0.000 min
Exp R.T. : 37.961 min
Response: 0
Conc: N.D.



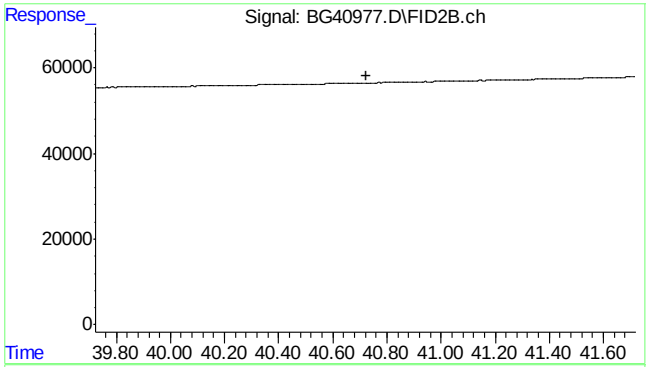
#29 C-29

R.T.: 0.000 min
Exp R.T. : 38.911 min
Response: 0
Conc: N.D.



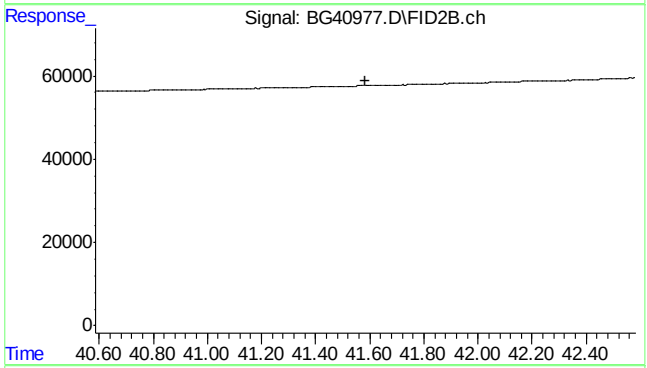
#30 C-30

R.T.: 0.000 min
Exp R.T. : 39.829 min
Response: 0
Conc: N.D.



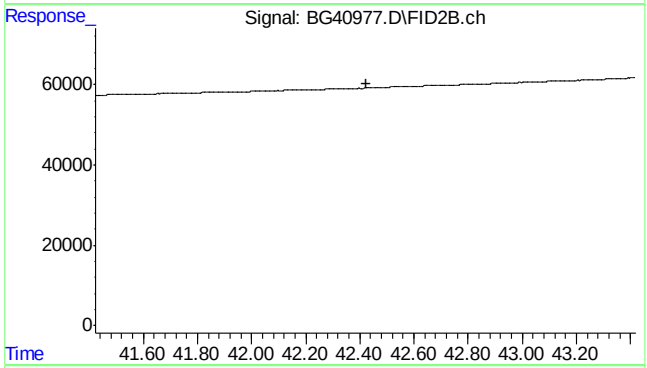
#31 C-31

R.T.: 0.000 min
Exp R.T. : 40.722 min
Response: 0
Conc: N.D.



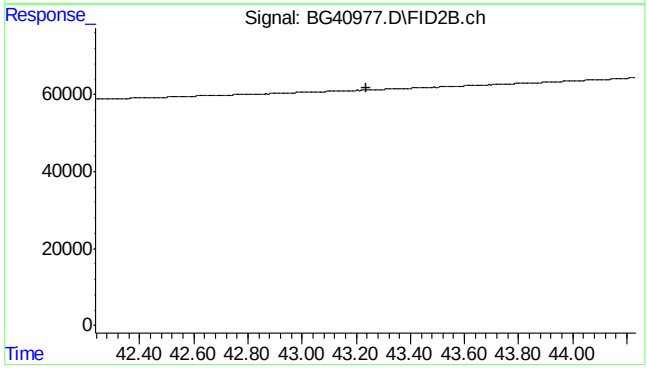
#32 C-32

R.T.: 0.000 min
Exp R.T. : 41.583 min
Response: 0
Conc: N.D.



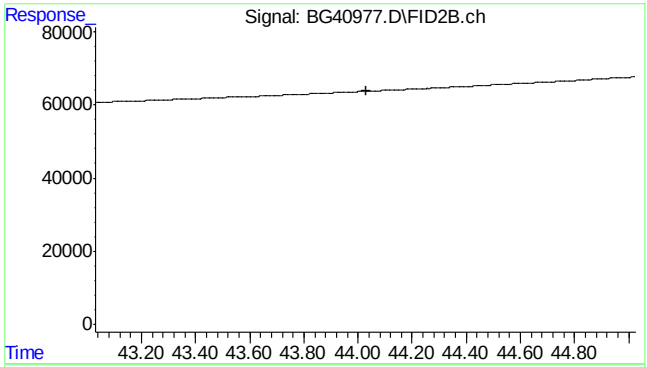
#33 C-33

R.T.: 0.000 min
Exp R.T. : 42.422 min
Response: 0
Conc: N.D.



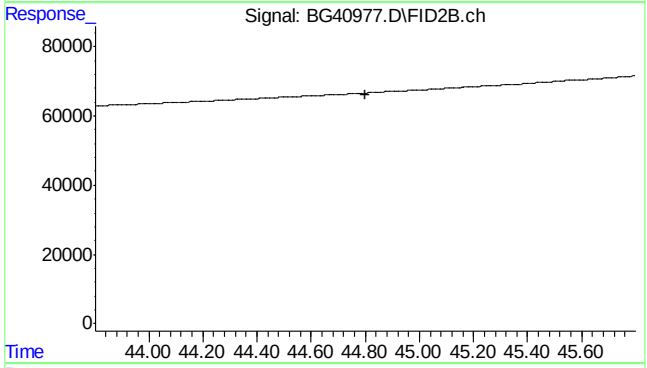
#34 C-34

R.T.: 0.000 min
Exp R.T. : 43.237 min
Response: 0
Conc: N.D.



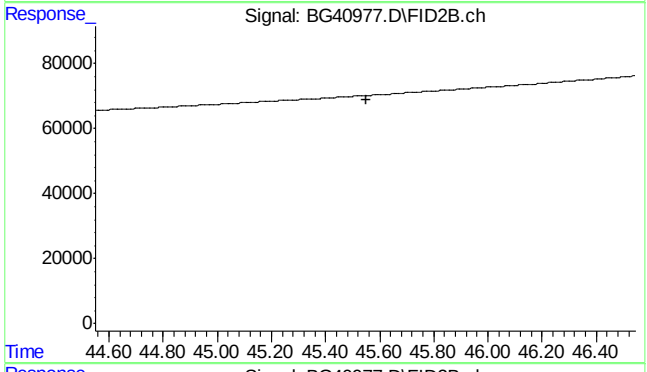
#35 C-35

R.T.: 0.000 min
Exp R.T. : 44.029 min
Response: 0
Conc: N.D.



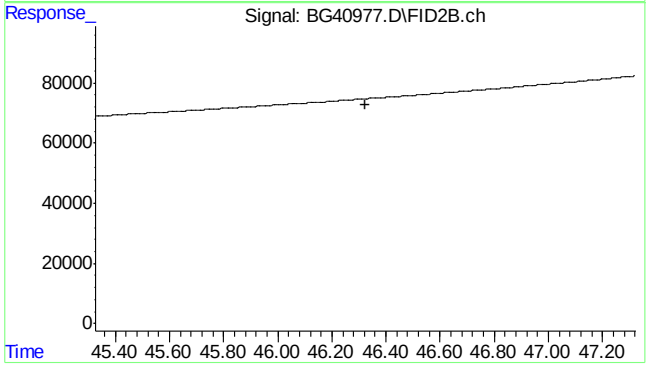
#36 C-36

R.T.: 0.000 min
Exp R.T. : 44.800 min
Response: 0
Conc: N.D.



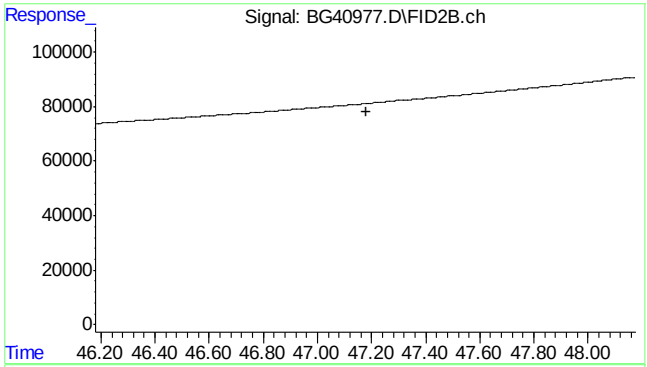
#37 C-37

R.T.: 0.000 min
Exp R.T. : 45.549 min
Response: 0
Conc: N.D.



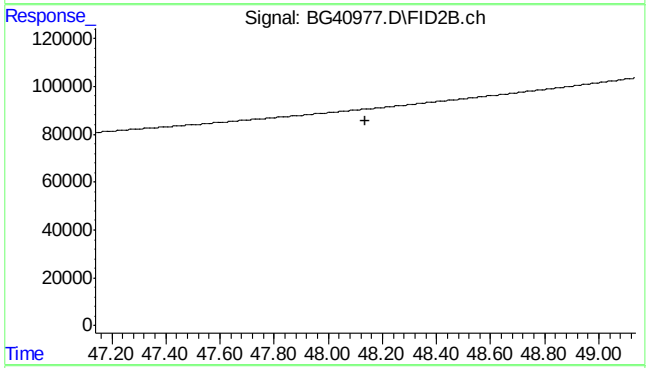
#38 C-38

R.T.: 0.000 min
Exp R.T. : 46.324 min
Response: 0
Conc: N.D.



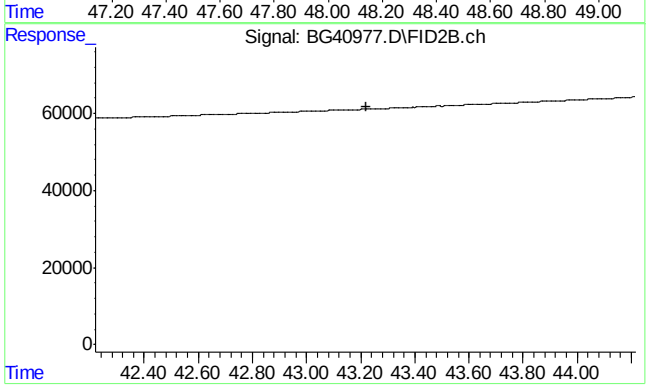
#39 C-39

R.T.: 0.000 min
Exp R.T. : 47.180 min
Response: 0
Conc: N.D.



#40 C-40

R.T.: 0.000 min
Exp R.T. : 48.138 min
Response: 0
Conc: N.D.



#41 TPH (C8-C40)

R.T.: 0.000 min
Exp R.T. : 43.218 min
Response: 0
Conc: N.D.

Accutest Laboratories of New England, Inc. Instrument: GC 27 (BG)

GC Analysis Log - Extractables

Run Date: 08-21-13 Analyst Signature: A.P.

Standard Data

Lot #	Description	Conc

8/21/13

Column Information: Front : RTX-5 Alternate:
Rear : RTX-5 Alternate:
Sequence File: 130821
Quantitation Methods: BGR130821
Instrument Run Batches: GBG1547
Data Acquisition Methods: FORENSICDUAL Inj. Vol: 1µl
Inj. Vol:

Date of ICAL: ICAL Verified √ Sample positions verified against sequence: √

Vial #	Data File ID	Sample ID	Ext.Batch	Analysis	Matrix	Dilution	Comments
1	BG40974.D	solicheck	NA	8141360TPH	NA	NA	
2	75	OP34505-mb	OP34505		S		
3	77	OP34506-mb	OP34506		W		
4	79	mc73660-1	OP34505		S		
5	81	↓	↓		↓	1:10	not needed
6	83	mc73378-1	OP34506		W	NA	mc73378-1
7	85	mc73378-1	↓		↓	1:10	not needed

08/21/13

MTX = Matrix: Designate **W** for water, **S** for soil, **O** for oil. Dilution Solvent: DCM Lot#: D1975

GC011-01
Date: 02/26/07

Review:

ACCUTEST LABORATORIES

Extracted by: BJ
Spike Witness:
Concentrated by:
Fractionated by:
Extraction Method: SW846 3580

Date/Time: 8/21/13 1600
Date/Time:
Batch: OP34506
Matrix: Aqueous
Analysis Method: BNY310 TPH

pH paper lot: C-396

Sample	Spike Addition Check (ID)	Bottle No.	Initial Volume (ml)	Final Volume (ml)	Acid pH	Base pH	*Cleanup/Comments (3660B, 3630, 3665, other)	Received by: Date:
BJ 8/21 OP34506 -MB	✓	N/A	~~5~~ 10.0	5.0	N/A	N/A		
MC23378-1	✓	2	10.0	1	1	1		

Fraction	Spike ID	Bottle #	Lot #	Concentration	Vol (ml)
Surrogate:					
Surrogate:					
Spike:					
Spike:					
Spike:					
Spike:					
Spike:					
Hexane Frac Volume:		NA	NA	NA	
Spike ID Witness Initials		Filter Paper Lot #		Filtered By	
Form. Deriv. Oven in time:		Out Time:			

H2SO4:	
Ether:	
MeCl2:	DI802
Hexane:	
Acetone:	
Acetonitrile:	
Na Sulfate:	
Silica:	
SPE MFG	
Copper:	
Hydromatrix:	
HCL:	
NaOH:	
Florisil:	

Concentrator Temp:
Concentrator ID:
Tray #: LC-9
Lab Percent Humidity:
Reviewed By:

OP002-12 (03/27/13)

*Circle as applicable: 3660B = Cu cleanup; 3630 = Silica gel cleanup; 3665 = Acid cleanup; 3620 = Florisil Cleanup

25

9.4.1 9

Enclosure D

ECT.CON INC.
Environmental and Computer
Technology Consultants

Data Validation Report

SDG#	MC23378
Validation Report Date	September 10, 2013
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP
Project Name	EPT – Ithaca, NY
Laboratory	Accutest
Method(s) Utilized	SW-846 8260B
Analytical Fraction	Volatile Organic Compounds (VOCs)

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	Matrix	VOCs
8/6/2013	MW-37B	MC23378-1	Aqueous	X
8/6/2013	MW-36B	MC23378-2	Aqueous	X
8/6/2013	MW-0813	MC23378-3	Aqueous	X
8/6/2013	MW-33B	MC23378-4	Aqueous	X
8/6/2013	MW-34B	MC23378-5	Aqueous	X
8/6/2013	MW-35B	MC23378-6	Aqueous	X
8/6/2013	TB080613	MC23378-7	Aqueous	X

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT – Ithaca, NY site consists of 6 aqueous field samples and 1 trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

* • Data Completeness
  • Holding Times
  • Calibration (Initial and Continuing)
* • Blanks
* • System Monitoring Compounds (Surrogate Spikes)
* • Laboratory Control Sample (LCS)
  • Matrix Spike/Matrix Spike Duplicates
* • Internal Standards
* • Target Compound Identification
  • Compound Quantification and Reported Contract Quantitation Limits
* • System Performance

* Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Holding Times

The laboratory noted that the pH of sample MW-33B was greater than 2 at the time of analysis. In sample MW-33B, nondetected and positive results were qualified as estimated, UJ and J.

2. Calibration

Initial calibration average relative response factors (RRFs) fell below the 0.05 quality control limit on instrument GCMSV for acetone and 2-butanone. In the following samples, nondetected results for acetone and 2-butanone were rejected, UR, and positive results were qualified as estimated, J.

MW-37B	MW-36B	MW-0813	MW-33B
MW-34B	MW-35B	TB080613	

A continuing calibration percent difference (%D) exceeded the 25% quality control limit for 2-hexanone on 08/13/13. In the following samples, nondetected results for 2-hexanone were qualified as estimated, UJ.

MW-36B	TB080613

A continuing calibration %D exceeded the 25% quality control limit for trichlorofluoromethane on 08/14/13. In the following samples, nondetected results for trichlorofluoromethane were qualified as estimated, UJ.

MW-37B MW-0813 MW-33B MW-34B
MW-35B

3. **Matrix Spike/Matrix Spike Duplicate Results**

Recovery of cis-1,2-dichloroethene (38% and 48%) fell below the lower quality control limit for MW-36B MS/MSD. Positive results for cis-1,2-dichloroethene in the unspiked sample MW-36B and the field duplicate MW-0813 were qualified as estimated, J.

4. **Compound Quantitation**

Positive results less than the reporting limit were qualified as estimated, J, due to uncertainty near the detection limit.

NOTES

VOLATILE ORGANIC COMPOUNDS

Matrix Spike/Matrix Spike Duplicate Results

Recovery of several compounds exceeded the upper quality control limit in MW-36B MS/MSD. The compounds were not detected in the unspiked sample MW-36B or field duplicate MW-0813. Data are not qualified on this basis.

Blanks

Methylene chloride as detected in the trip blank, TB080613. Methylene chloride was not detected in the associated samples. Data are not qualified on this basis.

Compound Quantitation

Several samples were re-analyzed due to the presence of target compounds above the instrument's linear calibration range. This accounts for the elevated reporting limits for the following samples:

Sample	Dilution Factor	Parameter
MW-37B	10X	cis-1,2-Dichloroethene, Trichloroethene
MW-36B	50X	cis-1,2-Dichloroethene, Trichloroethene
MW-0813	20X	cis-1,2-Dichloroethene, Trichloroethene

Field Duplicates

Calculated RPD for positive results only.

Sample ID	Duplicate ID	Parameter	RPD
MW-36B	MW-0813		
1.6	1.5	Benzene	6.5
2.5	2.3	1,1-Dichloroethane	8.3
1320 J	1570 J	cis-1,2-Dichloroethene	-17.3
19.4	17.3	trans-1,2-Dichloroethene	11.4
0.81 J	0.81 J	Tetrachloroethene	0.0
700	828	Trichlorethene	-16.8
157	127	Vinyl chloride	21.1

Data Reviewer

9/10/13
Date

Enclosure E

Standard Operating Procedure - 15

Decontamination of Drilling Equipment

Materials:

Canvas or plastic tarp(s)
4-mil polyethylene liner
Pressurized steam cleaner (steam jenny)
55-gallon steel drums with bung (closed) tops
55-gallon steel drums with open tops, rings, lids, ring-nut and ring-bolt
Hammer, nails, duct tape, extension cord(s)
Wood boards - 4" x 4", 2" x 4" or 2" x6"
Portable wet/dry vacuum
Shovel, funnel, and squeegee

Construction of Decontamination Basin:

1. Place tarp(s) on flat, firm surface in an accessible area of the site away from areas of surface contamination. Use enough tarp to accommodate the rear of the drilling rig and hollow stem augers and to prevent overspray from the steam jenny from falling onto adjacent soil surfaces. If necessary, place more than one tarp on the ground. Overlap tarp edges and secure with duct tape. Area should be slightly inclined toward one corner so that the decontamination water will pool in one corner for easier pumping to the containment drums.

2. Place a layer of polyethylene liner on top of the tarp(s). If one sheet cannot completely cover the tarp, use another one. Overlap the sheets at the edges and secure with duct tape.

3. Place 4" x 4" boards along the tarp's outer edges to form a square or rectangular basin. Roll each 4" x 4" board toward the center so the tarp and polyethylene wrap completely around it at least once. Secure the tarp and liner to the top of the boards with nails, tacks or heavy-duty staples.

4. Place the drums, steam cleaner, and wet/dry vacuum adjacent to one side of the basin on the outside.

Decontamination Procedure:

1. Unload drilling equipment from the drilling rig and place in one side of the basin.

2. Activate the steam cleaner. Personnel performing steam cleaning should don rubber boots, Tyvek or Saranex suits, rubber gloves, and a hard hat with a face shield for splash protection.

3. Clean each piece of drilling equipment, including auger bits, drill bits, portable power augers, hollow stem augers, auger holders, split spoons, rod lifters, and drilling rods, by holding the nozzle of the steam cleaner a few inches away. Wood 2" x 4"s can be placed on the basin floor to prevent drilling equipment from coming into contact with solids that will build up beneath it as it is being steam cleaned.

4. After each piece is cleaned, place it on rows of 2" x 4" boards in a separate area of the basin.

5. If space allows, position the rear of the drill rig in the basin and use the steam cleaner to clean off rig surfaces and the hoist and derrick as needed.

6. Reload drilling equipment onto rig and drive it out of the basin.

7. Vacuum up liquids on the basin floor with the flexible hose of the portable wet/dry vacuum. A long-handled squeegee can be used to pool liquid together to aid vacuuming.

8. Remove accumulated solids from the basin floor with a shovel and place in open-top drums. During removal of the accumulated solids, be careful so that the polyethylene liner is not torn, cut, or punctured with the shovel.

9. Empty the canister of the wet/dry vacuum into a bung-top drum using a funnel.

10. Secure and tighten tops of drums and apply appropriate hazardous waste or nonhazardous waste labels to each drum. The accumulation date should be placed on each drum. An inventory of all onsite drums should be entered into the field log book by field personnel. All drums should be marked, numbered, or labeled with an indelible marker for future reference.

11. On completion of onsite work, the properly labeled and inventoried drums should be stored within a newly constructed pad or basin until disposal is arranged. This containment area should be constructed of wooden boards with a polyethylene liner, as described above.

12. Materials used in construction of the decontamination basin or pad should be disassembled and placed into a properly labeled drum for future disposal.

13. All drilling equipment and the drill rig should be decontaminated on arrival onsite and before the start of any drilling activity. On completion of site work, the drilling equipment and rig should be decontaminated by the drilling contractor before departure from the site.

Standard Operating Procedure - 18

Decontamination of Interface Probe

Materials:

Field logbook
Personal protective equipment (PPE)
Nonphosphate detergent (e.g., Liquinox or Alconox)
Deionized water
Isopropanol
Two buckets
Spray bottles
Paper towels

Decontamination Procedure:

1. Use appropriate PPE as specified in the site-specific health and safety plan.

2. If the groundwater is grossly contaminated (i.e., LNAPL or DNAPL is present), the tape should be pulled out of the well, NOT reeled up, and placed directly into a bucket of nonphosphate detergent and tap water. The tape and probe should be scrubbed with a brush to remove visible contamination. The tape and probe should then be rinsed in a bucket of tap water before proceeding with Step 3. If persistent stains or oily films remain, apply isopropanol to a paper towel and wipe the tape and probe until clean.

3. Thoroughly wet a paper towel with deionized water from a spray bottle. Fold the paper towel over the tape and wipe it as the tape is reeled up.

4. The interface probe should be sprayed with deionized water and wiped dry with a clean paper towel.

5. Place the interface probe in the clean carrying case or in a clean plastic bag to prevent contamination during transportation.

6. Properly manage all PPE, used paper towels, and decontamination rinsates in accordance with state and federal requirements (See SOP 26).

Standard Operating Procedure - 19

Decontamination of Sampling Equipment

Materials:

Field logbook
Personal protective equipment (PPE)
Deionized water
10% nitric acid solution
Nylon brushes
Containers (e.g., garbage cans, buckets, plastic tubs)
Nonphosphate detergent (e.g., Liquinox or Alconox)
Isopropanol
Aluminum foil
Polyethylene sheeting
Plastic garbage bags
Paper towels
Spray bottles
Duct tape

Note: All sampling equipment must be decontaminated before shipment to the office.

Decontamination Procedure:

1. Use appropriate PPE as specified in the site-specific health and safety plan.

2. Prepare a decontamination area by spreading polyethylene sheeting on a firm, flat surface (if possible). Create a berm around the decontamination area to contain inadvertent spillage. A berm can be created by rolling under the edges of the polysheeting or by draping the plastic over a wooden frame, etc.

3. Prepare a solution of nonphosphate detergent and tap water in a container.

4. Wipe sampling equipment with paper towels to remove residual soil or gross contamination. Heavy oils or grease may be removed with paper towels soaked with isopropanol.

5. Disassemble sampling equipment (e.g., split-spoon samplers and bailers). Wash equipment thoroughly in a nonphosphate detergent and hot tap water (if available) solution. Teflon bailers must be disassembled and the inside washed with a long-handled bottle brush or short-handled brush pulled through the bailer with rope.

6. Rinse the equipment with hot tap water (if available).

7. If the equipment will be used to collect samples for metals analysis, follow the tap water rinse with a 10% nitric acid solution rinse. Carbon steel equipment (e.g., bucket augers, split-spoons) should be rinsed with 1% nitric acid solution to reduce the potential for oxidizing the metal surfaces. Collect the nitric acid rinse in a separate bucket for proper disposal. Rinse the equipment with tap water.

8. Thoroughly rinse the equipment with deionized water.

9. Spray the equipment with isopropanol and allow to completely air dry. The solvent rinse must be collected in a separate bucket. Isopropanol is the recommended solvent for organic contaminants because it is readily available and is not a Department of Transportation hazardous material. However, other solvents (e.g., acetone, hexane, methanol) may be more effective in removing certain contaminants, such as oils or PCBs. Please note that many state programs and USEPA regions specify the solvents to be used for equipment decontamination.

10. Rinse the equipment with deionized water using at least five times the volume of solvent used in the previous step.

11. After the equipment has been allowed to completely air dry, each piece must be individually wrapped with aluminum foil (shiny side out), and then wrapped in plastic.

    Note: Decontamination solvents may introduce contaminants to environmental samples. It is very important to ensure that the equipment has completely dried before use or storage.

12. After the final decontamination event on a project, label each piece of equipment with the date of decontamination, the initials of decontamination personnel, and the type of decontamination solutions used.

13. Note any discrepancies from standard decontamination procedures in the field logbook.

14. Field decontamination presents unique problems in disposal of decontamination solutions. The spent wash water and rinse water can potentially be placed in the facility's waste water treatment system. However, field personnel should obtain approval from facility personnel and from the local POTW. If no wastewater treatment system is present onsite, or if approval cannot be obtained from the facility and local POTW, the wash water should be containerized for offsite disposal in accordance with state and federal requirements. The volume of spent solvent generated during field decontamination should be minimal. Solvents should be collected in separate buckets and allowed to evaporate. See SOP 26 for information on managing investigation-derived wastes.

15. Paper towels soaked with solvent should be allowed to air dry and be disposed of with the general trash. Under no circumstances should any decontamination solution be disposed of on soil surfaces.

Standard Operating Procedure – 20

Sample Shipping Procedures

Materials:

Suitable shipping container (e.g., plastic cooler or lab supplied styrofoam cooler)
Chain-of-custody forms
Custody seals
WSP mailing labels
Strapping, clear packing, or duct tape
Ziploc® plastic bags
Knife or scissors
Permanent marker
Latex or nitrile gloves
Large plastic garbage bag
Wet ice
Bubble wrap or other packing material
Universal sorbent materials
Sample container custody seals (if required)
Federal Express form (with WSP account number)
Vermiculite (or commercially available cat litter)

Procedures:

For shipping purposes, samples are segregated into two classes; environmental samples and restricted articles (i.e., hazardous materials). Environmental samples can also be categorized based on expected or historical analyte levels (i.e., low or high). An environmental sample is one that is not defined as a hazardous material by the Department of Transportation (DOT, 49 CFR Part 171.8). The DOT defines a "hazardous material" as a substance which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. Any material of a suspected hazardous nature, previously characterized as hazardous, or known to be hazardous is considered a restricted article.

In general, the two major concerns in shipping samples are protecting the samples from incidental breakage during shipment and complying with applicable DOT and courier requirements for restricted article shipments.

Protecting the samples from incidental breakage can be achieved using "common sense." All samples should be packed in a manner that will not allow them to freely move about in the cooler or shipping container. Glass surfaces should not be allowed to contact each other. When possible, repack the samples in the same materials that they were originally received in from the laboratory. Each container should be cushioned with plastic bubble wrap, styrofoam, or other nonreactive cushioning material. Shipping hazardous materials should conform to the packaging, marking, labeling, and shipping instructions identified in 49 CFR Parts 172 & 173.

Environmental samples shall be packed for shipment using the following procedures:

1. Line the shipping container with a large, heavy-duty plastic garbage bag. Place universal sorbent materials (e.g., sorbent pads) between the cooler and the heavy-duty plastic bag. The amount of sorbent material should be sufficient to absorb the volume of wet ice and aqueous samples. If using a plastic cooler, securely tape the drain plug closed on the outside of the cooler.

2. Place 2-4 inches of bubble wrap or other packing material inside the heavy-duty plastic bag in the bottom of the cooler.

3. The sample packer should wear latex or nitrile gloves when handling the samples during the packing process.

4. Place the bottles in the cooler with sufficient space to allow for the addition of more bubble wrap or other packing material between the bottles. Large or heavy sample containers should be placed on the bottom of the cooler with lighter samples (i.e., VOAs) placed on top to eliminate breakage.

5. Place the "wet ice" inside two sealed heavy-duty zipper-style plastic bags and package the bags of ice on top of or between the samples. Pack enough ice in the cooler to chill the samples during transit. If the cooler is shipped on a Friday or Saturday for Monday delivery, double the amount of ice placed in the cooler (Monday delivery should be used only as a last resort). Fill all remaining space with bubble wrap or other packing material. Securely close and seal with tape the top of the heavy-duty plastic bag.

6. Place chain-of-custody form (and, if applicable, CLP traffic reports) into a Ziploc® plastic bag and affix to the cooler's inside lid, then close the cooler. Securely fasten the top of the cooler shut with tape. Place two signed and dated chain-of-custody seals on the top and sides of the cooler so that the cooler cannot be opened without breaking the seals.

7. Once cooler is sealed, shake test the cooler to make sure that there are no loose sample containers in the cooler. If loose samples are detected, open the cooler and repack the samples.

8. Using clear tape, affix a mailing label with WSP’s return address to the top of the cooler.

9. Ship samples via priority overnight express to the contracted analytical laboratory for next morning delivery. If applicable, check the appropriate box on the airbill for Saturday delivery.

10. Declare value of samples on the shipping form for insurance purposes. The declared value should reflect the cost to recollect the samples.

11. Record the tracking numbers from the Federal Express forms in the field notebook and on the chain of custody form. Also, retain the customer's copy of the Federal Express airbill.

Hazardous materials should be packed according to the above procedures with the following additions:

1. Place samples in individual Ziploc® plastic bags and secure with a plastic tie or tape.

2. Place samples in paint cans in a manner which would prevent bottle breakage (i.e., do not place glass against glass).

3. Place vermiculite or other absorbent packing material in the paint can around the samples. The amount of packing material used should be sufficient to absorb the entire contents of the sample if the container is broken during shipment.

4. Secure a lid to the paint can with can clips and label the outside of the can with sample numbers and quantity. Mark the paint can with "This End Up" and arrow labels that indicate the proper upward position of the paint can.

5. Package the paint cans in DOT-authorized boxes or coolers, with appropriate DOT shipping labels and markings on two adjacent sides of the box or cooler.

6. Ship the restricted articles via overnight courier following the courier's documentation requirements. A special airbill must be completed for each shipment. Retain a copy of the airbill for WSP records and tracking purposes, if necessary.