Atmospheric Analysis & Consulting, Inc.

CLIENT	: Soil Water Air Protection Enterprise
PROJECT NAME	: Bridgeton Sanitary Landfill Air Quality Assessment
AAC PROJECT NO.	: 131082
REPORT DATE	: 08/16/2013

On August 15, 2013, Atmospheric Analysis & Consulting, Inc. received four (4) Six-Liter Summa Canisters for Volatile Organic Compounds analysis by EPA method TO-15. Upon receipt each sample was assigned a unique Laboratory ID number as follows:

Client ID	Lab ID	Return Pressure (mmHga)
U-1 W2-Canister	131082-65502	650.9
U-2 Virbac-Canister	131082-65503	653.4
D-1 W8-Canister	131082-65504	668.0
D-2 W6-Canister	131082-65505	655.9

An initial reading of each canister's vacuum was taken and recorded. Subsequently, each canister was brought to positive pressure using UHP-He and the final pressure was recorded.

TO-15 Analysis - Up to a 500 mL aliquot of sample is concentrated, put through a water and CO_2 management system, cryofocused and injected into the GC/MS (full scan mode) for analysis following EPA Method TO-15 as specified in the SOW.

No problems were encountered during receiving, preparation and/ or analysis of these samples. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# TO.15.10.

I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized the release of the data contained in this hardcopy data package.

If you have any questions or require further explanation of data results, please contact the undersigned.

Marcus Hueppe
Laboratory Director

This report consists of 61 pages.

ACCREDITED IN ACCORDANCE WITH nelac Certificate#E87837

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

SAMPLE RECEIPT / LOG-IN REPORT

AAC Project **131082** **Received By: J. Zachman**

Sample Receipt Date	Project Desc	Clients ID	Matrix	Sampling Date/Time	Sampled By	Sample #	Analysis Requested
8/15/2013 1130	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	U-1 W2 Canister	Summa Canister	8/10/2013	Client	65502	TO15 ASTM D5504
8/15/2013 1130	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	U-2 Virbac Canister	Summa Canister	8/10/2013	Client	65503	TO15 ASTM D5504
8/15/2013 1130	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	D-1 W8 Canister	Summa Canister	8/10/2013	Client	65504	TO15 ASTM D5504
8/15/2013 1130	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	D-2 W6 Canister	Summa Canister	8/10/2013	Client	65505	TO15 ASTM D5504

TURN AROUND TIME: Normal (10days)

Lab Due Date: 8/22/2013

Total Samples: 4

REMARKS:

Client returned 4 x Summa canisters + 4 x Flows. "Standard TAT for all analyses. If possible deliver report within 2 weeks. Provide Level IV QC package for all analyses."

CANISTER PRESSURE LOG

Client: Soil Water Air Protection Ent Project No.: 131082

Date: 8/15/2013

Canister #	Sample #	Initial Pressure	Final Pressure
668	65502	650.9	1022.0
703	65503	653.4	1021.5
723	65504	668.0	1020.3
669	65505	655.9	1017.9

1

AAC#13082

CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE

Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011

Date: **August 10th 2013**

Project Manager: PAUL ROSENFELD, PH.D.

Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401

Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT

Sampled By: John Blank

Sampler Signature: John Blank

LAB ID	SAMPLE ID NUMBER	Type	Date	Time	VOCS - EPA TO-15	Reduced Sulfur Compounds - ASTM D5504	Carbonyls - EPA TO-11A	Carboxlyic Acids - Tube GC-MS	HCL - NIOSH 7903	Ammonia - OSHA ID-188	SO2 - OSHA ID-200	HCN - NIOSH 6010	Amines - NIOSH 2010M	Fixed Gases - EPA 3C	PAHs / Dioxins EPA TO-13A / 9A	Mercury - NIOSH 6009	Gdor Evaluation	Special Instructions / Conditions of Receipt
655502	U-1 W2	Canister	August 10th	4 Hr	X	X												Canister # 668
655503	U-2 Virbac	Canister	August 10th	4 Hr	X	X												Canister # 703
655504	D-1 W8	Canister	August 10th	4 Hr	X	X												Canister # 723
655505	D-2 W6	Canister	August 10th	4 Hr	X	X												Canister # 669

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.

QC Requirements: Provide Level IV QC Package for all Analyses.

Relinquished By: John Blank	Date: August 10th	12 Noon	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 8/15/13	Time: 1130

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: **Bridgeton Sanitary Landfill**

Site Address and/or ID No: **13570 St Charles Rock Rd, Bridgeton, MO 63044**

Sample Name and/or ID No.: **U- 1 W2** **Canister #668** **Flow Control #710**

AAC Batch ID: 131082 AAC Sample ID: 65502

SAMPLING INFORMATION

Start Date/Time: **Aug 10th, 2013 – 7:15 AM** Stop Date/Time: **Aug 10th, 2013 – 12:30 PM**

Start Temp/Pressure*: **23 C / 30.02 inHg** Stop Temp/Pressure*: **28 C / 30.14 inHg**

Initial Can Pressure**: **- 30 inHg** Final Can Pressure**: **- 4 inHg**

** Ambient Barometric Reading where sample is being taken (C / inHg) ** Flow Controller Gauge Reading (inHg)*

Comments: _____

John A Blank

John Blank **August 10th, 2013**

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

Canister Size: 6 – Liter Sampling Period: **315 Minutes**

Canister Serial No.: **668** Flow Controller Serial No: **710**

Initial Pressure: 2.6 Certified Flow Rate: 18.0

Return Pressure: 650.9 Certified By/Date: FF 8/1/13

Final Pressure: 1023.0 Flow Rate upon Return: 17.9

Date Shipped From Lab: 8/1/13 Shipped By: FF

Date Returned to Lab: 8/15/13 Received By: FF

Flow Controller Certification File ID: M503/071713/0

Canister Certification File ID: M503/072313/04

Certification Type: SIM ____ SCAN ✓ NJLL ____ PAMS ____ Other ____

08/16/13 8/21/13

Chemist Signature/Date *Lab Manager Signature/Date*

Sampler is required to fill out all highlighted sections during sampling.
All remaining sections will be completed upon return by the laboratory.

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: **Bridgeton Sanitary Landfill**

Site Address and/or ID No: **13570 St Charles Rock Rd, Bridgeton, MO 63044**

Sample Name and/or ID No.: **U- 2 Virbac** **Canister # 703** **Flow Control # 805**

AAC Batch ID: 131082 AAC Sample ID: 605503

SAMPLING INFORMATION

Start Date/Time: **Aug 10th, 2013 – 7:30 AM** Stop Date/Time: **Aug 10th, 2013 – 12:35 PM**

Start Temp/Pressure*: **23 C / 30.02 inHg** Stop Temp/Pressure*: **28 C / 30.14 inHg**

Initial Can Pressure**: **- 31 inHg** Final Can Pressure**: **- 5 inHg**

** Ambient Barometric Reading where sample is being taken (C / inHg) ** Flow Controller Gauge Reading (inHg)*

Comments: _____

John Blank

John Blank **August 10th, 2013**
Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

Canister Size: 6 – Liter Sampling Period: **305 Minutes**

Canister Serial No: **703** Flow Controller Serial No: **805**

Initial Pressure: 2.5 Certified Flow Rate: 18.0

Return Pressure: 653.4 Certified By/Date: FJ 8/1/13

Final Pressure: 1021.5 Flow Rate upon Return: 18.4

Date Shipped From Lab: 8/1/13 Shipped By: FJ

Date Returned to Lab: 8/15/13 Received By: FJ

Flow Controller Certification File ID: 1502/0627/1305

Canister Certification File ID: 1603/0723/1304

Certification Type: SIM ___ SCAN ✓ NJLL ___ PAMS ___ Other ___

8/16/13 MW 8/21/13

Chemist Signature/Date *Lab Manager Signature/Date*

Sampler is required to fill out all highlighted sections during sampling.
All remaining sections will be completed upon return by the laboratory.

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: **Bridgeton Sanitary Landfill**

Site Address and/or ID No: **13570 St Charles Rock Rd, Bridgeton, MO 63044**

Sample Name and/or ID No.: **D-1 W2** **Canister # 723** **Flow Control # 806**

AAC Batch ID: 131082 AAC Sample ID: 65504

SAMPLING INFORMATION

Start Date/Time: **Aug 10th, 2013 – 7:55 AM** Stop Date/Time: **Aug 10th, 2013 – 12:35 PM**

Start Temp/Pressure*: **23 C / 30.02 inHg** Stop Temp/Pressure*: **28 C / 30.14 inHg**

Initial Can Pressure**: **- 29 inHg** Final Can Pressure**: **- 3 inHg**

Ambient Barometric Reading where sample is being taken (C / inHg)** ****Flow Controller Gauge Reading (inHg)

Comments: _____

John Blank
Sampler Name (Print)

August 10th, 2013
Sampler Signature/Date

LABORATORY INFORMATION

Canister Size: 6 – Liter Sampling Period: 280 Minutes

Canister Serial No.: **723** Flow Controller Serial No: **806**

Initial Pressure: 2.4 Certified Flow Rate: 18.0

Return Pressure: 668.0 Certified By/Date: FF 8/1/13

Final Pressure: 1020.3 Flow Rate upon Return: 20.0

Date Shipped From Lab: 8/1/13 Shipped By: FF

Date Returned to Lab: 8/15/13 Received By: FF

Flow Controller Certification File ID: M603/073113I0

Canister Certification File ID: M603/060113I29

Certification Type: SIM ___ SCAN ✓ NJLL ___ PAMS ___ Other ___

08/16/13 MH 8/21/13

Chemist Signature/Date ***Lab Manager Signature/Date***

Sampler is required to fill out all highlighted sections during sampling.
All remaining sections will be completed upon return by the laboratory.

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: **Bridgeton Sanitary Landfill**

Site Address and/or ID No: **13570 St Charles Rock Rd, Bridgeton, MO 63044**

Sample Name and/or ID No.: **D- 2 W6** **Canister # 669** **Flow Control # 717**

AAC Batch ID: 131082 AAC Sample ID: 655505

SAMPLING INFORMATION

Start Date/Time: **Aug 10th, 2013 – 8:10 AM** Stop Date/Time: **Aug 10th, 2013 – 12:55 PM**

Start Temp/Pressure*: **23 C / 30.02 inHg** Stop Temp/Pressure*: **28 C / 30.14 inHg**

Initial Can Pressure**: **- 31 inHg** Final Can Pressure**: **- 5 inHg**

** Ambient Barometric Reading where sample is being taken (C / inHg) ** Flow Controller Gauge Reading (inHg)*

Comments: _____

John Blank
Sampler Name (Print)

August 10th, 2013
Sampler Signature/Date

LABORATORY INFORMATION

Canister Size: 6 – Liter Sampling Period: **285 Minutes**

Canister Serial No.: **669** Flow Controller Serial No: **717**

Initial Pressure: 2.3 Certified Flow Rate: 18.0

Return Pressure: 655.9 Certified By/Date: FF 8/1/13

Final Pressure: 1017.9 Flow Rate upon Return: 16.9

Date Shipped From Lab: 8/1/13 Shipped By: FF

Date Returned to Lab: 8/15/13 Received By: FF

Flow Controller Certification File ID: M503/07773/0

Canister Certification File ID: M503/06111330

Certification Type: SIM ___ SCAN ✓ NJLL ___ PAMS ___ Other ___

08/16/13
Chemist Signature/Date

MM 8/21/13
Lab Manager Signature/Date

Sampler is required to fill out all highlighted sections during sampling.
All remaining sections will be completed upon return by the laboratory.

American Environmental Laboratories

ISO 9001:2000 Certification #A1836US

MDNR **Bridgeton Landfill** **Date:** **August 10th, 2013**

Field Data Work Sheet - Weekly Event

4 Hour Test Time

Air Sampler calibrated for 1 Liter per Minute Flow Rate **Aldehydes Tube #226-20**

SUMMA Canister with a 4 hour flow valve

Prepared by:

	Temperature C		Pressure	
Start	23	Centigrade	30.02	inHg
Stop	28	Centigrade	30.14	inHg

Canister Stop 12:30 PM U-1

			Start		Stop		Total
Sample Point ID	U-1 W2	Time	7:15:00		11:15:00		4:00:00 Hr
Canister Serial #	668	Vacuum	-30	inHg	-4	inHg	315 min
Flow Control #	710	Flow Rate	1.125	L/M	1.195	L/M	278.4 L
Sample Pump #	71526	Sample Tube #	4440600656				

Canister Stop 12:35 PM U-2

			Start		Stop		Total
Sample Point ID	U-2 Virbac	Time	7:30:00		11:50:00		4:20:00 Hr
Canister Serial #	703	Vacuum	-31	inHg	-5	inHg	305 min
Flow Control #	805	Flow Rate	1.096	L/M	1.253	L/M	281.88 L
Sample Pump #	59912	Sample Tube #	4440600655				

Canister Stop 12:35 PM D-1

			Start		Stop		Total
Sample Point ID	D-1 W2	Time	7:55:00		11:55:00		4:00:00 Hr
Canister Serial #	723	Vacuum	-29	inHg	-3	inHg	280 min
Flow Control #	806	Flow Rate	1.172	L/M	1.213	L/M	286.2 L
Sample Pump #	67835	Sample Tube #	4440600653				

Canister Stop 12:55 PM D-2

			Start		Stop		Total
Sample Point ID	D-2 W6	Time	8:10:00		12:10:00		4:00:00 Hr
Canister Serial #	669	Vacuum	-31	inHg	-5	inHg	285 min
Flow Control #	717	Flow Rate	1.183	L/M	1.164	L/M	281.64 L
Sample Pump #	67385	Sample Tube #	4440600654				

TO-15 REPORTS

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 131082
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 08/15/2013
DATE REPORTED : 08/16/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 Virbac-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	131082-65502				131082-65503				
Date Sampled	08/10/2013				08/10/2013				
Date Analyzed	08/16/2013				08/16/2013				
Can Dilution Factor	1.57				1.56				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	0.28	J	1.0	0.79	0.28	J	1.0	0.78	0.5
Propene	1.30	J	1.0	1.57	0.81	J	1.0	1.56	1.0
Dichlorodifluoromethane	0.53	J	1.0	0.79	0.56	J	1.0	0.78	0.5
Chloromethane	0.42	J	1.0	0.79	0.45	J	1.0	0.78	0.5
Dichlorotetrafluoroethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Vinyl Chloride	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Methanol	22.1		1.0	7.85	12.5		1.0	7.82	5.0
1,3-Butadiene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Bromomethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Chloroethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Dichlorofluoromethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Ethanol	3.45		1.0	3.14	4.05		1.0	3.13	2.0
Vinyl Bromide	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Acetone	4.18		1.0	3.14	4.53		1.0	3.13	2.0
Trichlorofluoromethane	0.25	J	1.0	0.79	0.25	J	1.0	0.78	0.5
2-Propanol (IPA)	0.91	J	1.0	3.14	1.88	J	1.0	3.13	2.0
Acrylonitrile	<SRL	U	1.0	1.57	<SRL	U	1.0	1.56	1.0
1,1-Dichloroethene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Methylene Chloride (DCM)	0.60	J	1.0	1.57	<SRL	U	1.0	1.56	1.0
Allyl Chloride	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Carbon Disulfide	NR	U	1.0	0.79	NR	U	1.0	0.78	0.5
Trichlorotrifluoroethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
trans-1,2-Dichloroethene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,1-Dichloroethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Vinyl Acetate	<SRL	U	1.0	1.57	<SRL	U	1.0	1.56	1.0
2-Butanone (MEK)	<SRL	U	1.0	1.57	<SRL	U	1.0	1.56	1.0
cis-1,2-Dichloroethene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Hexane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Chloroform	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Ethyl Acetate	0.20	J	1.0	0.79	0.22	J	1.0	0.78	0.5
Tetrahydrofuran	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,2-Dichloroethane	0.11	J	1.0	0.79	0.13	J	1.0	0.78	0.5
1,1,1-Trichloroethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5

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Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : **Soil Water Air Protection Enterprise**
PROJECT NO : **131082**
MATRIX : **AIR**
UNITS : **PPB (v/v)**

DATE RECEIVED : **08/15/2013**
DATE REPORTED : **08/16/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 Virbac-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	131082-65502				131082-65503				
Date Sampled	08/10/2013				08/10/2013				
Date Analyzed	08/16/2013				08/16/2013				
Can Dilution Factor	1.57				1.56				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	0.39	J	1.0	0.79	0.36	J	1.0	0.78	0.5
Carbon Tetrachloride	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Cyclohexane	0.22	J	1.0	0.79	0.16	J	1.0	0.78	0.5
1,2-Dichloropropane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Bromodichloromethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,4-Dioxane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Trichloroethene (TCE)	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
2,2,4-Trimethylpentane	0.14	J	1.0	0.79	0.14	J	1.0	0.78	0.5
Heptane	0.27	J	1.0	0.79	<SRL	U	1.0	0.78	0.5
cis-1,3-Dichloropropene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	0.79	0.14	J	1.0	0.78	0.5
trans-1,3-Dichloropropene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,1,2-Trichloroethane	0.08	J	1.0	0.79	0.09	J	1.0	0.78	0.5
Toluene	1.99		1.0	0.79	1.78		1.0	0.78	0.5
2-Hexanone (MBK)	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Dibromochloromethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,2-Dibromoethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Tetrachloroethene (PCE)	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Chlorobenzene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Ethylbenzene	0.13	J	1.0	0.79	0.13	J	1.0	0.78	0.5
m & p-Xylenes	0.35	J	1.0	1.57	0.31	J	1.0	1.56	1.0
Bromoform	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Styrene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
o-Xylene	0.14	J	1.0	0.79	0.13	J	1.0	0.78	0.5
4-Ethyltoluene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,2,4-Trimethylbenzene	0.16	J	1.0	0.79	0.14	J	1.0	0.78	0.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,3-Dichlorobenzene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,4-Dichlorobenzene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,2-Dichlorobenzene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
1,2,4-Trichlorobenzene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
Hexachlorobutadiene	<SRL	U	1.0	0.79	<SRL	U	1.0	0.78	0.5
BFB-Surrogate Std. % Recovery	104%				100%				70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.
J - Analyte was detected. However the analyte concentration is an estimated value, which is between the Sample Reporting Limit (SRL) and the Sample Quantitation Limit (SQL).
SQL - Sample Quantitation Limit is the Limit Of Quantitation (LOQ) x Dilution Factors.
NR - Not Reported on these analysis.

Marcus Hueppe
Laboratoy Director

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Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 131082
MATRIX : AIR
UNITS : ug/m3

DATE RECEIVED : 08/15/2013
DATE REPORTED : 08/16/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 Virbac-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	131082-65502				131082-65503				
Date Sampled	08/10/2013				08/10/2013				
Date Analyzed	08/16/2013				08/16/2013				
Can Dilution Factor	1.57				1.56				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	1.0	J	1.0	2.8	1.0	J	1.0	2.8	1.8
Propene	2.2	J	1.0	2.7	1.4	J	1.0	2.7	1.7
Dichlorodifluoromethane	2.6	J	1.0	3.9	2.8	J	1.0	3.9	2.5
Chloromethane	0.9	J	1.0	1.6	0.9	J	1.0	1.6	1.0
Dichlorotetrafluoroethane	<SRL	U	1.0	5.5	<SRL	U	1.0	5.5	3.5
Vinyl Chloride	<SRL	U	1.0	2.0	<SRL	U	1.0	2.0	1.3
Methanol	29.0		1.0	10.3	16.4		1.0	10.2	6.6
1,3-Butadiene	<SRL	U	1.0	1.7	<SRL	U	1.0	1.7	1.1
Bromomethane	<SRL	U	1.0	3.0	<SRL	U	1.0	3.0	1.9
Chloroethane	<SRL	U	1.0	2.1	<SRL	U	1.0	2.1	1.3
Dichlorofluoromethane	<SRL	U	1.0	3.3	<SRL	U	1.0	3.3	2.1
Ethanol	6.5		1.0	5.9	7.6		1.0	5.9	3.8
Vinyl Bromide	<SRL	U	1.0	3.4	<SRL	U	1.0	3.4	2.2
Acetone	9.9		1.0	7.5	10.8		1.0	7.4	4.8
Trichlorofluoromethane	1.4	J	1.0	4.4	1.4	J	1.0	4.4	2.8
2-Propanol (IPA)	2.2	J	1.0	7.7	4.6	J	1.0	7.7	4.9
Acrylonitrile	<SRL	U	1.0	3.4	<SRL	U	1.0	3.4	2.2
1,1-Dichloroethene	<SRL	U	1.0	3.1	<SRL	U	1.0	3.1	2.0
Methylene Chloride (DCM)	2.1	J	1.0	5.5	<SRL	U	1.0	5.4	3.5
Allyl Chloride	<SRL	U	1.0	2.5	<SRL	U	1.0	2.4	1.6
Carbon Disulfide	NR	U	1.0	2.4	NR	U	1.0	2.4	1.6
Trichlorotrifluoroethane	<SRL	U	1.0	6.0	<SRL	U	1.0	6.0	3.8
trans-1,2-Dichloroethene	<SRL	U	1.0	3.1	<SRL	U	1.0	3.1	2.0
1,1-Dichloroethane	<SRL	U	1.0	3.2	<SRL	U	1.0	3.2	2.0
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	2.8	<SRL	U	1.0	2.8	1.8
Vinyl Acetate	<SRL	U	1.0	5.5	<SRL	U	1.0	5.5	3.5
2-Butanone (MEK)	<SRL	U	1.0	4.6	<SRL	U	1.0	4.6	2.9
cis-1,2-Dichloroethene	<SRL	U	1.0	3.1	<SRL	U	1.0	3.1	2.0
Hexane	<SRL	U	1.0	2.8	<SRL	U	1.0	2.8	1.8
Chloroform	<SRL	U	1.0	3.8	<SRL	U	1.0	3.8	2.4
Ethyl Acetate	0.7	J	1.0	2.8	0.8	J	1.0	2.8	1.8
Tetrahydrofuran	<SRL	U	1.0	2.3	<SRL	U	1.0	2.3	1.5
1,2-Dichloroethane	0.4	J	1.0	3.2	0.5	J	1.0	3.2	2.0
1,1,1-Trichloroethane	<SRL	U	1.0	4.3	<SRL	U	1.0	4.3	2.7

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 131082
MATRIX : AIR
UNITS : ug/m3

DATE RECEIVED : 08/15/2013
DATE REPORTED : 08/16/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 Virbac-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	131082-65502				131082-65503				
Date Sampled	08/10/2013				08/10/2013				
Date Analyzed	08/16/2013				08/16/2013				
Can Dilution Factor	1.57				1.56				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	1.3	J	1.0	2.5	1.2	J	1.0	2.5	1.6
Carbon Tetrachloride	<SRL	U	1.0	4.9	<SRL	U	1.0	4.9	3.1
Cyclohexane	0.8	J	1.0	2.7	0.5	J	1.0	2.7	1.7
1,2-Dichloropropane	<SRL	U	1.0	3.6	<SRL	U	1.0	3.6	2.3
Bromodichloromethane	<SRL	U	1.0	5.3	<SRL	U	1.0	5.2	3.4
1,4-Dioxane	<SRL	U	1.0	2.8	<SRL	U	1.0	2.8	1.8
Trichloroethene (TCE)	<SRL	U	1.0	4.2	<SRL	U	1.0	4.2	2.7
2,2,4-Trimethylpentane	0.7	J	1.0	3.7	0.7	J	1.0	3.7	2.3
Heptane	1.1	J	1.0	3.2	<SRL	U	1.0	3.2	2.0
cis-1,3-Dichloropropene	<SRL	U	1.0	3.6	<SRL	U	1.0	3.5	2.3
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	3.2	0.6	J	1.0	3.2	2.0
trans-1,3-Dichloropropene	<SRL	U	1.0	3.6	<SRL	U	1.0	3.5	2.3
1,1,2-Trichloroethane	0.4	J	1.0	4.3	0.5	J	1.0	4.3	2.7
Toluene	7.5		1.0	3.0	6.7		1.0	2.9	1.9
2-Hexanone (MBK)	<SRL	U	1.0	3.2	<SRL	U	1.0	3.2	2.0
Dibromochloromethane	<SRL	U	1.0	6.7	<SRL	U	1.0	6.7	4.3
1,2-Dibromoethane	<SRL	U	1.0	6.0	<SRL	U	1.0	6.0	3.8
Tetrachloroethene (PCE)	<SRL	U	1.0	5.3	<SRL	U	1.0	5.3	3.4
Chlorobenzene	<SRL	U	1.0	3.6	<SRL	U	1.0	3.6	2.3
Ethylbenzene	0.6	J	1.0	3.4	0.5	J	1.0	3.4	2.2
m & p-Xylenes	1.5	J	1.0	6.8	1.4	J	1.0	6.8	4.3
Bromoform	<SRL	U	1.0	8.1	<SRL	U	1.0	8.1	5.2
Styrene	<SRL	U	1.0	3.3	<SRL	U	1.0	3.3	2.1
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	5.4	<SRL	U	1.0	5.4	3.4
o-Xylene	0.6	J	1.0	3.4	0.5	J	1.0	3.4	2.2
4-Ethyltoluene	<SRL	U	1.0	3.9	<SRL	U	1.0	3.8	2.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	3.9	<SRL	U	1.0	3.8	2.5
1,2,4-Trimethylbenzene	0.8	J	1.0	3.9	0.7	J	1.0	3.8	2.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	4.1	<SRL	U	1.0	4.0	2.6
1,3-Dichlorobenzene	<SRL	U	1.0	4.7	<SRL	U	1.0	4.7	3.0
1,4-Dichlorobenzene	<SRL	U	1.0	4.7	<SRL	U	1.0	4.7	3.0
1,2-Dichlorobenzene	<SRL	U	1.0	4.7	<SRL	U	1.0	4.7	3.0
1,2,4-Trichlorobenzene	<SRL	U	1.0	5.8	<SRL	U	1.0	5.8	3.7
Hexachlorobutadiene	<SRL	U	1.0	8.4	<SRL	U	1.0	8.3	5.3
BFB-Surrogate Std. % Recovery	104%				100%				70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.
J - Analyte was detected. However the analyte concentration is an estimated value, which is between the Sample Reporting Limit (SRL) and the Sample Quantitation Limit (SQL).
SQL - Sample Quantitation Limit is the Limit Of Quantitation (LOQ) x Dilution Factors.
NR - Not Reported on these analysis.

Marcus Hueppe
Laboratoy Director

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 131082
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 08/15/2013
DATE REPORTED : 08/16/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W8-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	131082-65504				131082-65505				
Date Sampled	08/10/2013				08/10/2013				
Date Analyzed	08/16/2013				08/16/2013				
Can Dilution Factor	1.53				1.55				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	0.38	J	1.0	0.76	0.37	J	1.0	0.78	0.5
Carbon Tetrachloride	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Cyclohexane	0.18	J	1.0	0.76	0.17	J	1.0	0.78	0.5
1,2-Dichloropropane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Bromodichloromethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,4-Dioxane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Trichloroethene (TCE)	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
2,2,4-Trimethylpentane	0.14	J	1.0	0.76	0.14	J	1.0	0.78	0.5
Heptane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
cis-1,3-Dichloropropene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
4-Methyl-2-pentanone (MiBK)	0.12	J	1.0	0.76	<SRL	U	1.0	0.78	0.5
trans-1,3-Dichloropropene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,1,2-Trichloroethane	0.11	J	1.0	0.76	0.11	J	1.0	0.78	0.5
Toluene	2.23		1.0	0.76	2.19		1.0	0.78	0.5
2-Hexanone (MBK)	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Dibromochloromethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,2-Dibromoethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Tetrachloroethene (PCE)	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Chlorobenzene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Ethylbenzene	0.15	J	1.0	0.76	0.17	J	1.0	0.78	0.5
m & p-Xylenes	0.34	J	1.0	1.53	0.36	J	1.0	1.55	1.0
Bromoform	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Styrene	0.08	J	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
o-Xylene	0.14	J	1.0	0.76	0.16	J	1.0	0.78	0.5
4-Ethyltoluene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,2,4-Trimethylbenzene	0.15	J	1.0	0.76	0.16	J	1.0	0.78	0.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,3-Dichlorobenzene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,4-Dichlorobenzene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,2-Dichlorobenzene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,2,4-Trichlorobenzene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Hexachlorobutadiene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
BFB-Surrogate Std. % Recovery	106%				103%				70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.
J - Analyte was detected. However the analyte concentration is an estimated value, which is between the Sample Reporting Limit (SRL) and the Sample Quantitation Limit (SQL).
SQL - Sample Quantitation Limit is the Limit Of Quantitation (LOQ) x Dilution Factors.
NR - Not Reported on these analysis.

Marcus Hueppe
Laboratoy Director

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 131082
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 08/15/2013
DATE REPORTED : 08/16/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W8-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	131082-65504				131082-65505				
Date Sampled	08/10/2013				08/10/2013				
Date Analyzed	08/16/2013				08/16/2013				
Can Dilution Factor	1.53				1.55				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	0.32	J	1.0	0.76	0.29	J	1.0	0.78	0.5
Propene	0.76	J	1.0	1.53	0.81	J	1.0	1.55	1.0
Dichlorodifluoromethane	0.64	J	1.0	0.76	0.57	J	1.0	0.78	0.5
Chloromethane	0.53	J	1.0	0.76	0.48	J	1.0	0.78	0.5
Dichlorotetrafluoroethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Vinyl Chloride	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Methanol	14.7		1.0	7.64	13.6		1.0	7.76	5.0
1,3-Butadiene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Bromomethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Chloroethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Dichlorofluoromethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Ethanol	4.69		1.0	3.05	4.14		1.0	3.10	2.0
Vinyl Bromide	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Acetone	5.06		1.0	3.05	5.66		1.0	3.10	2.0
Trichlorofluoromethane	0.31	J	1.0	0.76	0.28	J	1.0	0.78	0.5
2-Propanol (IPA)	1.42	J	1.0	3.05	2.48	J	1.0	3.10	2.0
Acrylonitrile	<SRL	U	1.0	1.53	<SRL	U	1.0	1.55	1.0
1,1-Dichloroethene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Methylene Chloride (DCM)	<SRL	U	1.0	1.53	0.67	J	1.0	1.55	1.0
Allyl Chloride	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Carbon Disulfide	NR	U	1.0	0.76	NR	U	1.0	0.78	0.5
Trichlorotrifluoroethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
trans-1,2-Dichloroethene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,1-Dichloroethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Vinyl Acetate	<SRL	U	1.0	1.53	<SRL	U	1.0	1.55	1.0
2-Butanone (MEK)	0.89	J	1.0	1.53	0.74	J	1.0	1.55	1.0
cis-1,2-Dichloroethene	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Hexane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Chloroform	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
Ethyl Acetate	0.29	J	1.0	0.76	0.28	J	1.0	0.78	0.5
Tetrahydrofuran	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5
1,2-Dichloroethane	0.15	J	1.0	0.76	0.16	J	1.0	0.78	0.5
1,1,1-Trichloroethane	<SRL	U	1.0	0.76	<SRL	U	1.0	0.78	0.5

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 131082
MATRIX : AIR
UNITS : ug/m3

DATE RECEIVED : 08/15/2013
DATE REPORTED : 08/16/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W8-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	131082-65504				131082-65505				
Date Sampled	08/10/2013				08/10/2013				
Date Analyzed	08/16/2013				08/16/2013				
Can Dilution Factor	1.53				1.55				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	1.1	J	1.0	2.7	1.0	J	1.0	2.7	1.8
Propene	1.3	J	1.0	2.6	1.4	J	1.0	2.7	1.7
Dichlorodifluoromethane	3.2	J	1.0	3.8	2.8	J	1.0	3.8	2.5
Chloromethane	1.1	J	1.0	1.6	1.0	J	1.0	1.6	1.0
Dichlorotetrafluoroethane	<SRL	U	1.0	5.3	<SRL	U	1.0	5.4	3.5
Vinyl Chloride	<SRL	U	1.0	2.0	<SRL	U	1.0	2.0	1.3
Methanol	19.3		1.0	10.0	17.9		1.0	10.2	6.6
1,3-Butadiene	<SRL	U	1.0	1.7	<SRL	U	1.0	1.7	1.1
Bromomethane	<SRL	U	1.0	3.0	<SRL	U	1.0	3.0	1.9
Chloroethane	<SRL	U	1.0	2.0	<SRL	U	1.0	2.0	1.3
Dichlorofluoromethane	<SRL	U	1.0	3.2	<SRL	U	1.0	3.3	2.1
Ethanol	8.8		1.0	5.8	7.8		1.0	5.8	3.8
Vinyl Bromide	<SRL	U	1.0	3.3	<SRL	U	1.0	3.4	2.2
Acetone	12.0		1.0	7.3	13.5		1.0	7.4	4.8
Trichlorofluoromethane	1.7	J	1.0	4.3	1.6	J	1.0	4.4	2.8
2-Propanol (IPA)	3.5	J	1.0	7.5	6.1	J	1.0	7.6	4.9
Acrylonitrile	<SRL	U	1.0	3.3	<SRL	U	1.0	3.4	2.2
1,1-Dichloroethene	<SRL	U	1.0	3.0	<SRL	U	1.0	3.1	2.0
Methylene Chloride (DCM)	<SRL	U	1.0	5.3	2.3	J	1.0	5.4	3.5
Allyl Chloride	<SRL	U	1.0	2.4	<SRL	U	1.0	2.4	1.6
Carbon Disulfide	NR	U	1.0	2.4	NR	U	1.0	2.4	1.6
Trichlorotrifluoroethane	<SRL	U	1.0	5.9	<SRL	U	1.0	5.9	3.8
trans-1,2-Dichloroethene	<SRL	U	1.0	3.0	<SRL	U	1.0	3.1	2.0
1,1-Dichloroethane	<SRL	U	1.0	3.1	<SRL	U	1.0	3.1	2.0
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	2.8	<SRL	U	1.0	2.8	1.8
Vinyl Acetate	<SRL	U	1.0	5.4	<SRL	U	1.0	5.5	3.5
2-Butanone (MEK)	2.6	J	1.0	4.5	2.2	J	1.0	4.6	2.9
cis-1,2-Dichloroethene	<SRL	U	1.0	3.0	<SRL	U	1.0	3.1	2.0
Hexane	<SRL	U	1.0	2.7	<SRL	U	1.0	2.7	1.8
Chloroform	<SRL	U	1.0	3.7	<SRL	U	1.0	3.8	2.4
Ethyl Acetate	1.1	J	1.0	2.8	1.0	J	1.0	2.8	1.8
Tetrahydrofuran	<SRL	U	1.0	2.3	<SRL	U	1.0	2.3	1.5
1,2-Dichloroethane	0.6	J	1.0	3.1	0.6	J	1.0	3.1	2.0
1,1,1-Trichloroethane	<SRL	U	1.0	4.2	<SRL	U	1.0	4.2	2.7

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Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : **Soil Water Air Protection Enterprise**
PROJECT NO : **131082**
MATRIX : **AIR**
UNITS : **ug/m3**

DATE RECEIVED : **08/15/2013**
DATE REPORTED : **08/16/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W8-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	131082-65504				131082-65505				
Date Sampled	08/10/2013				08/10/2013				
Date Analyzed	08/16/2013				08/16/2013				
Can Dilution Factor	1.53				1.55				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	1.2	J	1.0	2.4	1.2	J	1.0	2.5	1.6
Carbon Tetrachloride	<SRL	U	1.0	4.8	<SRL	U	1.0	4.9	3.1
Cyclohexane	0.6	J	1.0	2.6	0.6	J	1.0	2.7	1.7
1,2-Dichloropropane	<SRL	U	1.0	3.5	<SRL	U	1.0	3.6	2.3
Bromodichloromethane	<SRL	U	1.0	5.1	<SRL	U	1.0	5.2	3.4
1,4-Dioxane	<SRL	U	1.0	2.8	<SRL	U	1.0	2.8	1.8
Trichloroethene (TCE)	<SRL	U	1.0	4.1	<SRL	U	1.0	4.2	2.7
2,2,4-Trimethylpentane	0.6	J	1.0	3.6	0.7	J	1.0	3.6	2.3
Heptane	<SRL	U	1.0	3.1	<SRL	U	1.0	3.2	2.0
cis-1,3-Dichloropropene	<SRL	U	1.0	3.5	<SRL	U	1.0	3.5	2.3
4-Methyl-2-pentanone (MiBK)	0.5	J	1.0	3.1	<SRL	U	1.0	3.2	2.0
trans-1,3-Dichloropropene	<SRL	U	1.0	3.5	<SRL	U	1.0	3.5	2.3
1,1,2-Trichloroethane	0.6	J	1.0	4.2	0.6	J	1.0	4.2	2.7
Toluene	8.4		1.0	2.9	8.3		1.0	2.9	1.9
2-Hexanone (MBK)	<SRL	U	1.0	3.1	<SRL	U	1.0	3.2	2.0
Dibromochloromethane	<SRL	U	1.0	6.5	<SRL	U	1.0	6.6	4.3
1,2-Dibromoethane	<SRL	U	1.0	5.9	<SRL	U	1.0	6.0	3.8
Tetrachloroethene (PCE)	<SRL	U	1.0	5.2	<SRL	U	1.0	5.3	3.4
Chlorobenzene	<SRL	U	1.0	3.5	<SRL	U	1.0	3.6	2.3
Ethylbenzene	0.7	J	1.0	3.3	0.7	J	1.0	3.4	2.2
m & p-Xylenes	1.5	J	1.0	6.6	1.6	J	1.0	6.7	4.3
Bromoform	<SRL	U	1.0	7.9	<SRL	U	1.0	8.0	5.2
Styrene	0.3	J	1.0	3.3	<SRL	U	1.0	3.3	2.1
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	5.2	<SRL	U	1.0	5.3	3.4
o-Xylene	0.6	J	1.0	3.3	0.7	J	1.0	3.4	2.2
4-Ethyltoluene	<SRL	U	1.0	3.8	<SRL	U	1.0	3.8	2.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	3.8	<SRL	U	1.0	3.8	2.5
1,2,4-Trimethylbenzene	0.8	J	1.0	3.8	0.8	J	1.0	3.8	2.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	4.0	<SRL	U	1.0	4.0	2.6
1,3-Dichlorobenzene	<SRL	U	1.0	4.6	<SRL	U	1.0	4.7	3.0
1,4-Dichlorobenzene	<SRL	U	1.0	4.6	<SRL	U	1.0	4.7	3.0
1,2-Dichlorobenzene	<SRL	U	1.0	4.6	<SRL	U	1.0	4.7	3.0
1,2,4-Trichlorobenzene	<SRL	U	1.0	5.7	<SRL	U	1.0	5.8	3.7
Hexachlorobutadiene	<SRL	U	1.0	8.1	<SRL	U	1.0	8.3	5.3
BFB-Surrogate Std. % Recovery	106%				103%				70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.
J - Analyte was detected. However the analyte concentration is an estimated value, which is between the Sample Reporting Limit (SRL) and the Sample Quantitation Limit (SQL).
SQL - Sample Quantitation Limit is the Limit Of Quantitation (LOQ) x Dilution Factors.
NR - Not Reported on these analysis.

Marcus Hueppe
Laboratoy Director

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TO-15 QC REPORT

ANALYSIS DATE : 08/16/2013 **INSTRUMENT ID** : GC/MS-03
ANALYST : JJG **CALIBRATION STD ID** : PS071613-02

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 07/22/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
4-BFB (surrogate standard)	10.00	10.01	100
Chlorodifluoromethane	10.10	10.18	101
Propene	11.00	11.16	101
Dichlorodifluoromethane	9.80	10.07	103
Chloromethane	10.10	9.66	96
Dichlorotetrafluoroethane	10.10	10.35	102
Vinyl Chloride	10.20	10.11	99
Methanol	4.90	5.25	107
1,3-Butadiene	10.50	11.07	105
Bromomethane	10.20	9.00	88
Chloroethane	10.00	10.83	108
Dichlorofluoromethane	10.00	10.23	102
Ethanol	9.80	10.29	105
Vinyl Bromide	10.20	10.29	101
Acetone	10.80	9.86	91
Trichlorofluoromethane	10.10	10.85	107
2-Propanol (IPA)	11.00	10.75	98
Acrylonitrile	10.50	10.41	99
1,1-Dichloroethene	10.50	9.93	95
Methylene Chloride (DCM)	10.40	9.38	90
Allyl Chloride	11.00	9.95	90
Carbon Disulfide	10.50	9.54	91
Trichlorotrifluoroethane	10.40	10.10	97
trans-1,2-Dichloroethene	10.40	10.07	97
1,1-Dichloroethane	10.40	10.42	100
Methyl Tert Butyl Ether (MTBE)	10.60	11.46	108
Vinyl Acetate	9.70	9.87	102
2-Butanone (MEK)	10.60	10.60	100
cis-1,2-Dichloroethene	10.60	10.33	97
Hexane	10.70	10.33	97
Chloroform	10.60	10.84	102
Ethyl Acetate	11.00	11.28	103
Tetrahydrofuran	10.80	10.35	96
1,2-Dichloroethane	10.40	11.05	106
1,1,1-Trichloroethane	10.50	10.86	103

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ANALYSIS DATE : 08/16/2013 **INSTRUMENT ID** : GC/MS-03
ANALYST : JJG **CALIBRATION STD ID** : PS071613-02

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 07/22/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
Benzene	10.50	10.18	97
Carbon Tetrachloride	10.10	10.71	106
Cyclohexane	10.50	10.02	95
1,2-Dichloropropane	10.50	10.06	96
Bromodichloromethane	10.30	10.41	101
1,4-Dioxane	10.30	9.88	96
Trichloroethene (TCE)	10.30	10.38	101
2,2,4-Trimethylpentane	10.90	10.81	99
Heptane	10.70	10.65	100
cis-1,3-Dichloropropene	11.00	10.88	99
4-Methyl-2-pentanone (MiBK)	10.30	10.39	101
trans-1,3-Dichloropropene	9.80	9.63	98
1,1,2-Trichloroethane	10.60	10.18	96
Toluene	10.60	10.57	100
2-Hexanone (MBK)	10.80	10.77	100
Dibromochloromethane	11.00	11.49	104
1,2-Dibromoethane	10.40	10.18	98
Tetrachloroethene (PCE)	10.40	10.29	99
Chlorobenzene	10.60	10.30	97
Ethylbenzene	10.50	10.37	99
m & p-Xylenes	20.60	19.31	94
Bromoform	10.30	10.15	99
Styrene	10.40	10.26	99
1,1,2,2-Tetrachloroethane	10.60	10.15	96
o-Xylene	10.60	10.28	97
4-Ethyltoluene	10.40	10.32	99
1,3,5-Trimethylbenzene	10.20	9.92	97
1,2,4-Trimethylbenzene	10.20	10.10	99
Benzyl Chloride (a-Chlorotoluene)	10.00	10.45	105
1,3-Dichlorobenzene	10.00	10.03	100
1,4-Dichlorobenzene	10.00	9.73	97
1,2-Dichlorobenzene	10.00	9.48	95
1,2,4-Trichlorobenzene	9.30	9.30	100
Hexachlorobutadiene	9.80	10.24	104

* - %REC should be 70-130%

Marcus Hueppe
Laboratory Director

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Quality Control/Quality Assurance Report

CLIENT ID	**: Laboratory Control Spike**	**DATE ANALYZED**	**: 08/16/2013**
AAC ID	**: LCS/LCSD**	**DATE REPORTED**	**: 08/16/2013**
MEDIA	**: Air**	**UNITS**	**: ppbv**

TO-15 Laboratory Control Spike Recovery

Compound	Sample Conc.	Spike Added	Spike Res	Dup Spike Res	Spike % Rec *	Spike Dup % Rec *	RPD** %
1,1-Dichloroethene	0.0	10.50	9.93	9.95	95	95	0.2
Methylene Chloride (DCM)	0.0	10.40	9.38	9.40	90	90	0.2
Benzene	0.0	10.50	10.18	10.16	97	97	0.2
Trichloroethene (TCE)	0.0	10.30	10.38	10.18	101	99	1.9
Toluene	0.0	10.60	10.57	10.46	100	99	1.0
Tetrachloroethene (PCE)	0.0	10.40	10.29	10.30	99	99	0.1
Chlorobenzene	0.0	10.60	10.30	10.34	97	98	0.4
Ethylbenzene	0.0	10.50	10.37	10.42	99	99	0.5
m & p-Xylenes	0.0	20.60	19.31	19.97	94	97	3.4
o-Xylene	0.0	10.60	10.28	10.51	97	99	2.2

* Must be 70-130%

** Must be < 25%

Marcus Hueppe
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Method Blank Analysis Report

MATRIX	**: AIR**	**ANALYSIS DATE**	**: 08/16/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 08/16/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 081613	RL
Chlorodifluoromethane	<RL	0.5
Propene	<RL	1.0
Dichlorodifluoromethane	<RL	0.5
Chloromethane	<RL	0.5
Dichlorotetrafluoroethane	<RL	0.5
Vinyl Chloride	<RL	0.5
Methanol	<RL	5.0
1,3-Butadiene	<RL	0.5
Bromomethane	<RL	0.5
Chloroethane	<RL	0.5
Dichlorofluoromethane	<RL	0.5
Ethanol	<RL	2.0
Vinyl Bromide	<RL	0.5
Acetone	<RL	2.0
Trichlorofluoromethane	<RL	0.5
2-Propanol (IPA)	<RL	2.0
Acrylonitrile	<RL	1.0
1,1-Dichloroethene	<RL	0.5
Methylene Chloride (DCM)	<RL	1.0
Allyl Chloride	<RL	0.5
Carbon Disulfide	<RL	0.5
Trichlorotrifluoroethane	<RL	0.5
trans-1,2-Dichloroethene	<RL	0.5
1,1-Dichloroethane	<RL	0.5
Methyl Tert Butyl Ether (MTBE)	<RL	0.5
Vinyl Acetate	<RL	1.0
2-Butanone (MEK)	<RL	1.0
cis-1,2-Dichloroethene	<RL	0.5
Hexane	<RL	0.5
Chloroform	<RL	0.5
Ethyl Acetate	<RL	0.5
Tetrahydrofuran	<RL	0.5
1,2-Dichloroethane	<RL	0.5
1,1,1-Trichloroethane	<RL	0.5
Benzene	<RL	0.5
Carbon Tetrachloride	<RL	0.5
Cyclohexane	<RL	0.5
1,2-Dichloropropane	<RL	0.5
Bromodichloromethane	<RL	0.5
1,4-Dioxane	<RL	0.5
Trichloroethene (TCE)	<RL	0.5
2,2,4-Trimethylpentane	<RL	0.5
Heptane	<RL	0.5

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Method Blank Analysis Report

MATRIX	**: AIR**	**ANALYSIS DATE**	**: 08/16/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 08/16/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 081613	RL
cis-1,3-Dichloropropene	<RL	0.5
4-Methyl-2-pentanone (MiBK)	<RL	0.5
trans-1,3-Dichloropropene	<RL	0.5
1,1,2-Trichloroethane	<RL	0.5
Toluene	<RL	0.5
2-Hexanone (MBK)	<RL	0.5
Dibromochloromethane	<RL	0.5
1,2-Dibromoethane	<RL	0.5
Tetrachloroethene (PCE)	<RL	0.5
Chlorobenzene	<RL	0.5
Ethylbenzene	<RL	0.5
m & p-Xylenes	<RL	1.0
Bromoform	<RL	0.5
Styrene	<RL	0.5
1,1,2,2-Tetrachloroethane	<RL	0.5
o-Xylene	<RL	0.5
4-Ethyltoluene	<RL	0.5
1,3,5-Trimethylbenzene	<RL	0.5
1,2,4-Trimethylbenzene	<RL	0.5
Benzyl Chloride (a-Chlorotoluene)	<RL	0.5
1,3-Dichlorobenzene	<RL	0.5
1,4-Dichlorobenzene	<RL	0.5
1,2-Dichlorobenzene	<RL	0.5
1,2,4-Trichlorobenzene	<RL	0.5
Hexachlorobutadiene	<RL	0.5
System Monitoring Compounds		
BFB-Surrogate Std. % Recovery	104%	--

RL - Reporting Limit

Marcus Hueppe
Laboratory Director

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Quality Control/Quality Assurance Report

AAC ID	**: 131082-65502**	**DATE ANALYZED**	**: 08/16/2013**
MATRIX	**: Air**	**DATE REPORTED**	**: 08/16/2013**
		UNITS	**: ppbv**

TO-15 Duplicate Analysis

Compound	Sample Conc	Duplicate Conc	% RPD
Chlorodifluoromethane	<SRL	<SRL	0.0
Propene	<SRL	<SRL	0.0
Dichlorodifluoromethane	<SRL	<SRL	0.0
Chloromethane	<SRL	<SRL	0.0
Dichlorotetrafluoroethane	<SRL	<SRL	0.0
Vinyl Chloride	<SRL	<SRL	0.0
Methanol	22.1	21.0	5.1
1,3-Butadiene	<SRL	<SRL	0.0
Bromomethane	<SRL	<SRL	0.0
Chloroethane	<SRL	<SRL	0.0
Dichlorofluoromethane	<SRL	<SRL	0.0
Ethanol	3.45	3.63	5.1
Vinyl Bromide	<SRL	<SRL	0.0
Acetone	4.18	4.18	0.0
Trichlorofluoromethane	<SRL	<SRL	0.0
2-Propanol (IPA)	<SRL	<SRL	0.0
Acrylonitrile	<SRL	<SRL	0.0
1,1-Dichloroethene	<SRL	<SRL	0.0
Methylene Chloride (DCM)	<SRL	<SRL	0.0
Allyl Chloride	<SRL	<SRL	0.0
Carbon Disulfide	<SRL	<SRL	0.0
Trichlorotrifluoroethane	<SRL	<SRL	0.0
trans-1,2-Dichloroethene	<SRL	<SRL	0.0
1,1-Dichloroethane	<SRL	<SRL	0.0
Methyl Tert Butyl Ether (MTBE)	<SRL	<SRL	0.0
Vinyl Acetate	<SRL	<SRL	0.0
2-Butanone (MEK)	<SRL	<SRL	0.0
cis-1,2-Dichloroethene	<SRL	<SRL	0.0
Hexane	<SRL	<SRL	0.0
Chloroform	<SRL	<SRL	0.0
Ethyl Acetate	<SRL	<SRL	0.0
Tetrahydrofuran	<SRL	<SRL	0.0
1,2-Dichloroethane	<SRL	<SRL	0.0
1,1,1-Trichloroethane	<SRL	<SRL	0.0
Benzene	<SRL	<SRL	0.0
Carbon Tetrachloride	<SRL	<SRL	0.0

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Quality Control/Quality Assurance Report

AAC ID	**: 131082-65502**	**DATE ANALYZED**	**: 08/16/2013**
MATRIX	**: Air**	**DATE REPORTED**	**: 08/16/2013**
		UNITS	**: ppbv**

TO-15 Duplicate Analysis

Compound	Sample Conc	Duplicate Conc	% RPD
Cyclohexane	<SRL	<SRL	0.0
1,2-Dichloropropane	<SRL	<SRL	0.0
Bromodichloromethane	<SRL	<SRL	0.0
1,4-Dioxane	<SRL	<SRL	0.0
Trichloroethene (TCE)	<SRL	<SRL	0.0
2,2,4-Trimethylpentane	<SRL	<SRL	0.0
Heptane	<SRL	<SRL	0.0
cis-1,3-Dichloropropene	<SRL	<SRL	0.0
4-Methyl-2-pentanone (MiBK)	<SRL	<SRL	0.0
trans-1,3-Dichloropropene	<SRL	<SRL	0.0
1,1,2-Trichloroethane	<SRL	<SRL	0.0
Toluene	1.99	2.01	1.0
2-Hexanone (MBK)	<SRL	<SRL	0.0
Dibromochloromethane	<SRL	<SRL	0.0
1,2-Dibromoethane	<SRL	<SRL	0.0
Tetrachloroethene (PCE)	<SRL	<SRL	0.0
Chlorobenzene	<SRL	<SRL	0.0
Ethylbenzene	<SRL	<SRL	0.0
m & p-Xylenes	<SRL	<SRL	0.0
Bromoform	<SRL	<SRL	0.0
Styrene	<SRL	<SRL	0.0
1,1,2,2-Tetrachloroethane	<SRL	<SRL	0.0
o-Xylene	<SRL	<SRL	0.0
4-Ethyltoluene	<SRL	<SRL	0.0
1,3,5-Trimethylbenzene	<SRL	<SRL	0.0
1,2,4-Trimethylbenzene	<SRL	<SRL	0.0
Benzyl Chloride (a-Chlorotoluene)	<SRL	<SRL	0.0
1,3-Dichlorobenzene	<SRL	<SRL	0.0
1,4-Dichlorobenzene	<SRL	<SRL	0.0
1,2-Dichlorobenzene	<SRL	<SRL	0.0
1,2,4-Trichlorobenzene	<SRL	<SRL	0.0
Hexachlorobutadiene	<SRL	<SRL	0.0
System Monitoring Compounds			
BFB-Surrogate Std. % Recovery	104%	102%	1.8

SRL - Sample Reporting Limit

Marcus Hueppe
Laboratory Director

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TO-15 RAW DATA

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161305.D
Acq On : 16 Aug 2013 11:50
Operator : JJG
Sample : 131082-65502 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 15:38:34 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	186793m	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	963748	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.267	117	889813	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	529152	10.35 ppbv	0.00
Spiked Amount 10.000			Recovery = 103.50%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	8372	0.18 ppbv #	98
3) Propene	4.799	42	12058	0.83 ppbv #	73
4) Dichlorodifluoromethane	4.908	85	22772	0.34 ppbv	99
5) Chloromethane	5.306	52	2471	0.27 ppbv #	5
6) Dichlorotetrafluoroethane	5.342	135	305	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	159887m	14.10 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.116	45	27523m	2.20 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.984	58	37765m	2.66 ppbv	
16) Trichlorofluoromethane	7.659	103	6186	0.16 ppbv #	97
17) 2-Propanol(IPA)	8.238	45	26288m	0.58 ppbv	
18) Acrylonitrile	8.980	52	127	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	9.324	84	8758	0.38 ppbv #	95
21) AllylChloride	9.360	39	206	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	10.888	63	123	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	10.888	43	2867	N.D.	
28) 2-Butanone(MEK)	0.000		0	N.D. d	
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	0.000		0	N.D. d	
32) EthylAcetate	12.065	43	9693	0.13 ppbv #	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161305.D
Acq On : 16 Aug 2013 11:50
Operator : JJG
Sample : 131082-65502 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 15:38:34 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

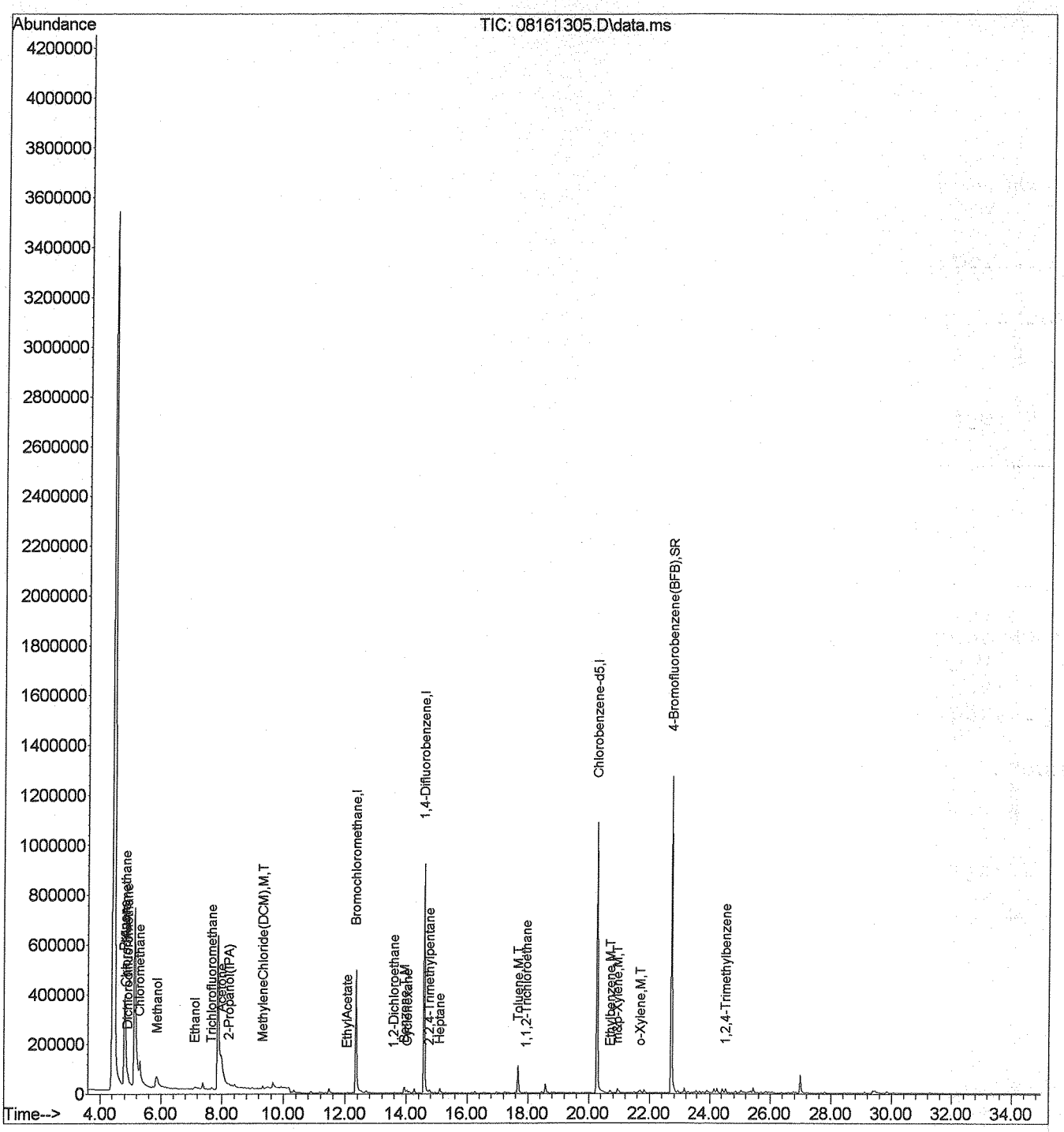
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.760	72	454	N.D.	
34) 1,2-Dichloroethane	13.598	62	2958	0.07 ppbv #	73
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	20928	0.25 ppbv	96
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	14.026	69	1764	0.14 ppbv #	82
40) 1,2-Dichloropropane	15.399	63	1224	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	15.292	130	695	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	15050	0.09 ppbv	94
45) Heptane	15.096	71	4607	0.17 ppbv	96
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.576	58	912	N.D.	
48) trans-1,3-Dichloropropene	17.664	75	864	N.D.	
49) 1,1,2-Trichloroethane	17.949	97	1814	0.05 ppbv #	92
50) Toluene	17.682	91	126785	1.27 ppbv	98
51) 2-Hexanone(MBK)	18.235	58	236	N.D.	
52) Dibromochloromethane	19.001	129	270	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	327	N.D.	
56) Chlorobenzene	20.267	114	277	N.D.	
57) Ethylbenzene	20.713	91	10346	0.08 ppbv #	97
58) m&p-Xylene	20.945	106	10555	0.22 ppbv #	94
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	2842	N.D.	
61) 1,1,2,2-Tetrachloroethane	22.354	83	122	N.D.	
62) o-Xylene	21.694	91	8585	0.09 ppbv #	95
64) 4-Ethyltoluene	23.691	120	1425	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1756	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	5535	0.10 ppbv	88
67) BenzylChloride(a-Chlor...	25.189	91	923	N.D.	
68) 1,3-Dichlorobenzene	25.046	146	791	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	1593	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	696	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	2094	N.D.	
72) Hexachlorobutadiene	30.057	225	509	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161305.D
Acq On : 16 Aug 2013 11:50
Operator : JJG
Sample : 131082-65502 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 15:38:34 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161307.D
Acq On : 16 Aug 2013 13:26
Operator : JJG
Sample : 131082-65503 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 17:35:48 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	169257m	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	933097	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.267	117	875087	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	502941	10.00 ppbv	0.00
Spiked Amount 10.000			Recovery = 100.00%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	7958	0.18 ppbv #	96
3) Propene	4.817	42	6797	0.52 ppbv #	76
4) Dichlorodifluoromethane	4.908	85	22255	0.36 ppbv	99
5) Chloromethane	5.306	52	2402	0.29 ppbv #	1
6) Dichlorotetrafluoroethane	5.342	135	314	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.885	31	82156m	8.00 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.116	45	29389m	2.59 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.984	58	37291m	2.90 ppbv	
16) Trichlorofluoromethane	7.659	103	5720	0.16 ppbv #	91
17) 2-Propanol(IPA)	8.220	45	49538m	1.20 ppbv	
18) Acrylonitrile	0.000		0	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	0.000		0	N.D. d	
21) AllylChloride	9.269	39	267	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	0.000		0	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	10.888	43	2365	N.D.	
28) 2-Butanone(MEK)	0.000		0	N.D. d	
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	0.000		0	N.D. d	
32) EthylAcetate	12.065	43	9308	0.14 ppbv #	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161307.D
Acq On : 16 Aug 2013 13:26
Operator : JJG
Sample : 131082-65503 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 17:35:48 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.742	72	244	N.D.	
34) 1,2-Dichloroethane	13.598	62	2959	0.08 ppbv #	71
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	18891	0.23 ppbv #	90
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	14.008	69	1311	0.10 ppbv #	63
40) 1,2-Dichloropropane	15.399	63	1184	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	15.292	130	626	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	13939	0.09 ppbv #	96
45) Heptane	15.096	71	952	N.D.	
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.558	58	3048	0.09 ppbv #	83
48) trans-1,3-Dichloropropene	17.664	75	821	N.D.	
49) 1,1,2-Trichloroethane	17.949	97	1972	0.06 ppbv #	95
50) Toluene	17.682	91	110451	1.14 ppbv #	99
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	122	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	120	N.D.	
56) Chlorobenzene	20.267	114	286	N.D.	
57) Ethylbenzene	20.713	91	9817	0.08 ppbv #	91
58) m&p-Xylene	20.945	106	9336	0.20 ppbv #	91
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	2419	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	7764	0.08 ppbv #	96
64) 4-Ethyltoluene	23.673	120	1095	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1247	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	4914	0.09 ppbv #	95
67) BenzylChloride(a-Chlor...	25.171	91	246	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	159	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	781	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	121	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	684	N.D.	
72) Hexachlorobutadiene	30.075	225	113	N.D.	

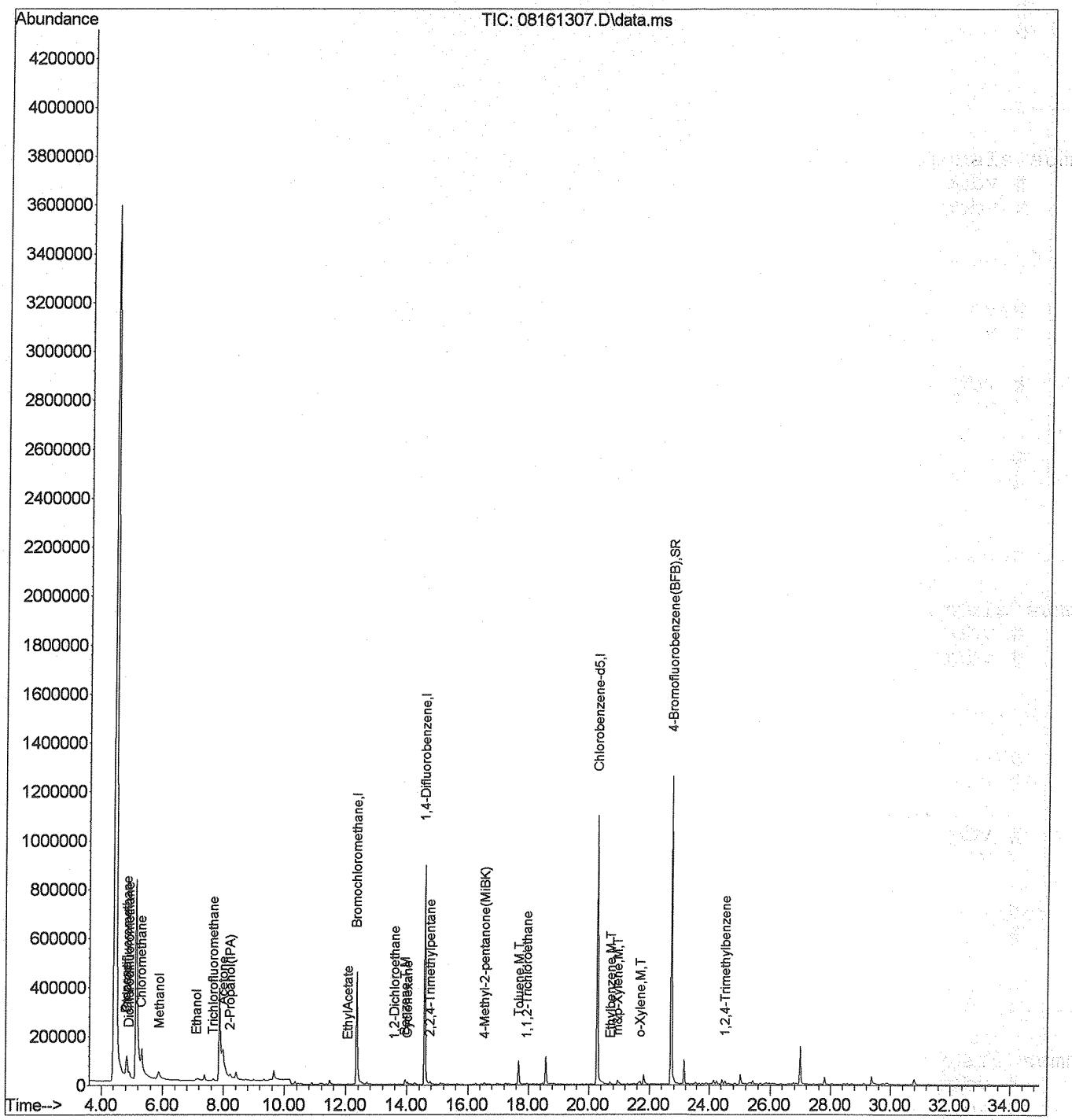
(#) = qualifier out of range (m) = manual integration (+) = signals summed

8/16/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161307.D
Acq On : 16 Aug 2013 13:26
Operator : JJG
Sample : 131082-65503 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 17:35:48 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161308.D
Acq On : 16 Aug 2013 14:14
Operator : JJG
Sample : 131082-65504 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 17:38:46 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	153913	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	911436	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.267	117	830288	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	503297	10.55 ppbv	0.00
Spiked Amount 10.000			Recovery = 105.50%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	8224	0.21 ppbv #	99
3) Propene	4.799	42	5978	0.50 ppbv #	85
4) Dichlorodifluoromethane	4.908	85	23132	0.42 ppbv	98
5) Chloromethane	5.306	52	2647	0.35 ppbv #	30
6) Dichlorotetrafluoroethane	5.324	135	420	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.885	31	89850m	9.62 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.134	45	31633m	3.07 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	8.021	58	38730m	3.31 ppbv	
16) Trichlorofluoromethane	7.659	103	6173	0.20 ppbv	91
17) 2-Propanol(IPA)	8.238	45	35026m	0.93 ppbv	
18) Acrylonitrile	9.088	52	226	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	0.000		0	N.D. d	
21) AllylChloride	9.287	39	553	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	10.906	63	127	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	10.888	43	2581	N.D.	
28) 2-Butanone(MEK)	11.476	72	6228	0.58 ppbv #	40
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	0.000		0	N.D. d	
32) EthylAcetate	12.065	43	11517	0.19 ppbv #	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161308.D
Acq On : 16 Aug 2013 14:14
Operator : JJG
Sample : 131082-65504 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 17:38:46 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

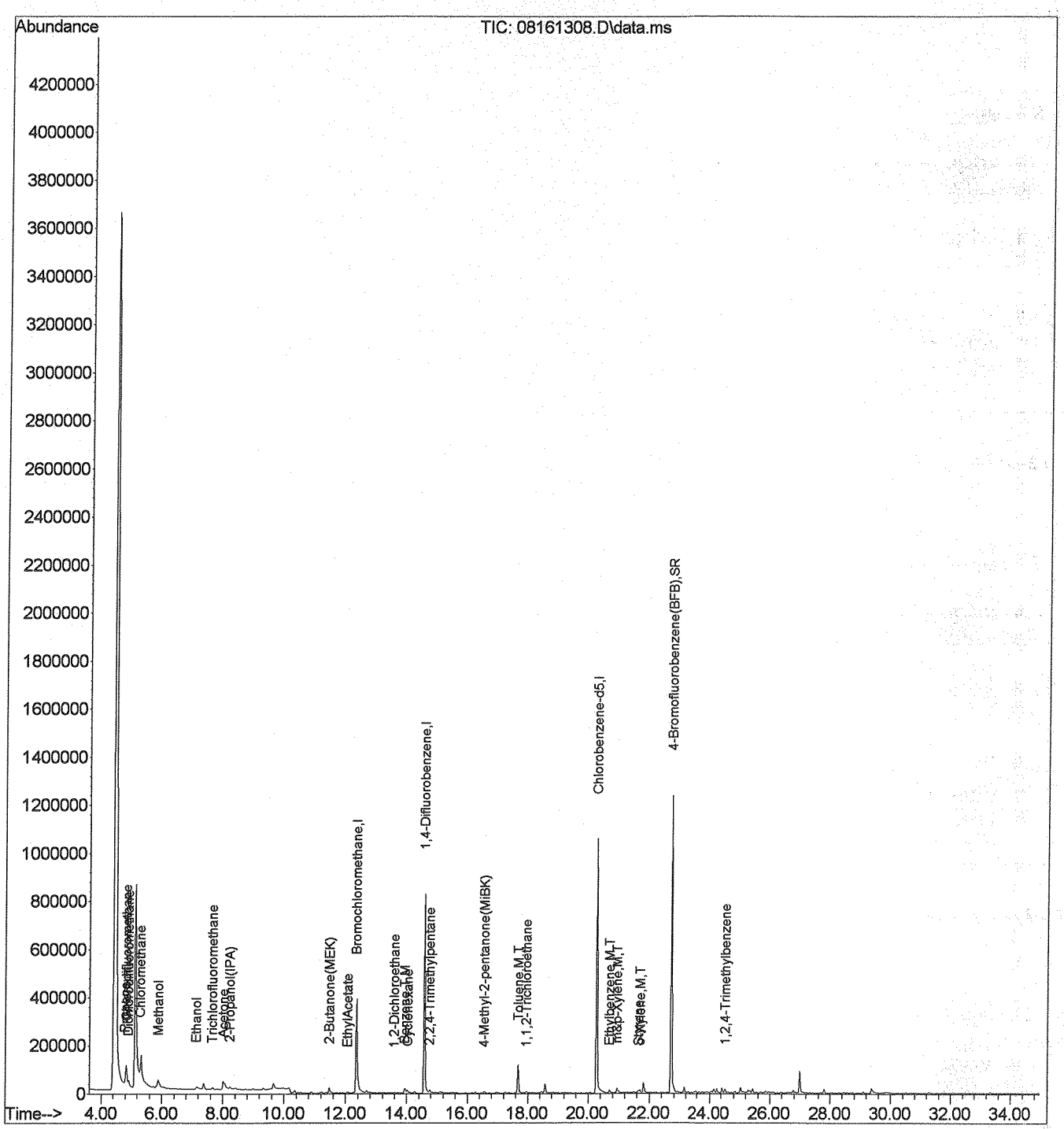
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D. d	
34) 1,2-Dichloroethane	13.598	62	3399	0.10 ppbv #	66
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	20218	0.25 ppbv	98
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	14.026	69	1427	0.12 ppbv #	69
40) 1,2-Dichloropropane	0.000		0	N.D. d	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	15.292	130	812	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	13213	0.09 ppbv #	92
45) Heptane	0.000		0	N.D. d	
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.558	58	2576	0.08 ppbv #	77
48) trans-1,3-Dichloropropene	17.664	75	981	N.D.	
49) 1,1,2-Trichloroethane	17.949	97	2427	0.07 ppbv #	97
50) Toluene	17.682	91	138425m	1.46 ppbv	
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	187	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	308	N.D.	
56) Chlorobenzene	20.267	114	263	N.D.	
57) Ethylbenzene	20.695	91	11815	0.10 ppbv #	95
58) m&p-Xylene	20.945	106	9602	0.22 ppbv #	82
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	3825	0.05 ppbv #	90
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	8101	0.09 ppbv #	94
64) 4-Ethyltoluene	23.673	120	975	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1137	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	5246	0.10 ppbv #	91
67) BenzylChloride(a-Chlor...	25.296	91	2293	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	1939	N.D.	
70) 1,2-Dichlorobenzene	25.831	146	127	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	560	N.D.	
72) Hexachlorobutadiene	0.000		0	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161308.D
Acq On : 16 Aug 2013 14:14
Operator : JJG
Sample : 131082-65504 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 17:38:46 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161309.D
Acq On : 16 Aug 2013 15:02
Operator : JJG
Sample : 131082-65505 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 16 17:41:13 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	164402m	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	907259	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.267	117	836994	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	493349	10.25 ppbv	0.00
Spiked Amount 10.000			Recovery = 102.50%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.835	51	7894	0.19 ppbv #	95
3) Propene	4.799	42	6637	0.52 ppbv #	71
4) Dichlorodifluoromethane	4.908	85	21833	0.37 ppbv	97
5) Chloromethane	5.306	52	2516	0.31 ppbv #	2
6) Dichlorotetrafluoroethane	5.342	135	276	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.885	31	87735m	8.79 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.152	45	29382m	2.67 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	8.002	58	45500m	3.65 ppbv	
16) Trichlorofluoromethane	7.659	103	6108	0.18 ppbv	97
17) 2-Propanol(IPA)	8.220	45	64115m	1.60 ppbv	
18) Acrylonitrile	9.070	52	118	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	9.323	84	8669	0.43 ppbv	92
21) AllylChloride	9.305	39	136	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	10.906	63	239	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	10.888	43	2113	N.D.	
28) 2-Butanone(MEK)	11.476	72	5497	0.48 ppbv #	35
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	0.000		0	N.D. d	
32) EthylAcetate	12.065	43	11500	0.18 ppbv #	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161309.D
Acq On : 16 Aug 2013 15:02
Operator : JJG
Sample : 131082-65505 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 16 17:41:13 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D. d	
34) 1,2-Dichloroethane	13.598	62	3720	0.10 ppbv #	74
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	19414	0.24 ppbv #	94
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	14.008	69	1367	0.11 ppbv #	12
40) 1,2-Dichloropropane	0.000		0	N.D. d	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	15.292	130	787	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	13152	0.09 ppbv #	94
45) Heptane	0.000		0	N.D. d	
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	0.000		0	N.D. d	
48) trans-1,3-Dichloropropene	17.682	75	1307	N.D.	
49) 1,1,2-Trichloroethane	17.949	97	2271	0.07 ppbv #	94
50) Toluene	17.682	91	132437m	1.41 ppbv	
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.001	129	318	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.001	166	327	N.D.	
56) Chlorobenzene	20.356	114	123	N.D.	
57) Ethylbenzene	20.695	91	12540	0.11 ppbv #	96
58) m&p-Xylene	20.945	106	10470	0.23 ppbv #	91
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	2678	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	9151	0.10 ppbv #	98
64) 4-Ethyltoluene	23.691	120	1138	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1102	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	5204	0.10 ppbv #	95
67) BenzylChloride(a-Chlor...	25.171	91	235	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	626	N.D.	
70) 1,2-Dichlorobenzene	0.000		0	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	381	N.D.	
72) Hexachlorobutadiene	0.000		0	N.D.	

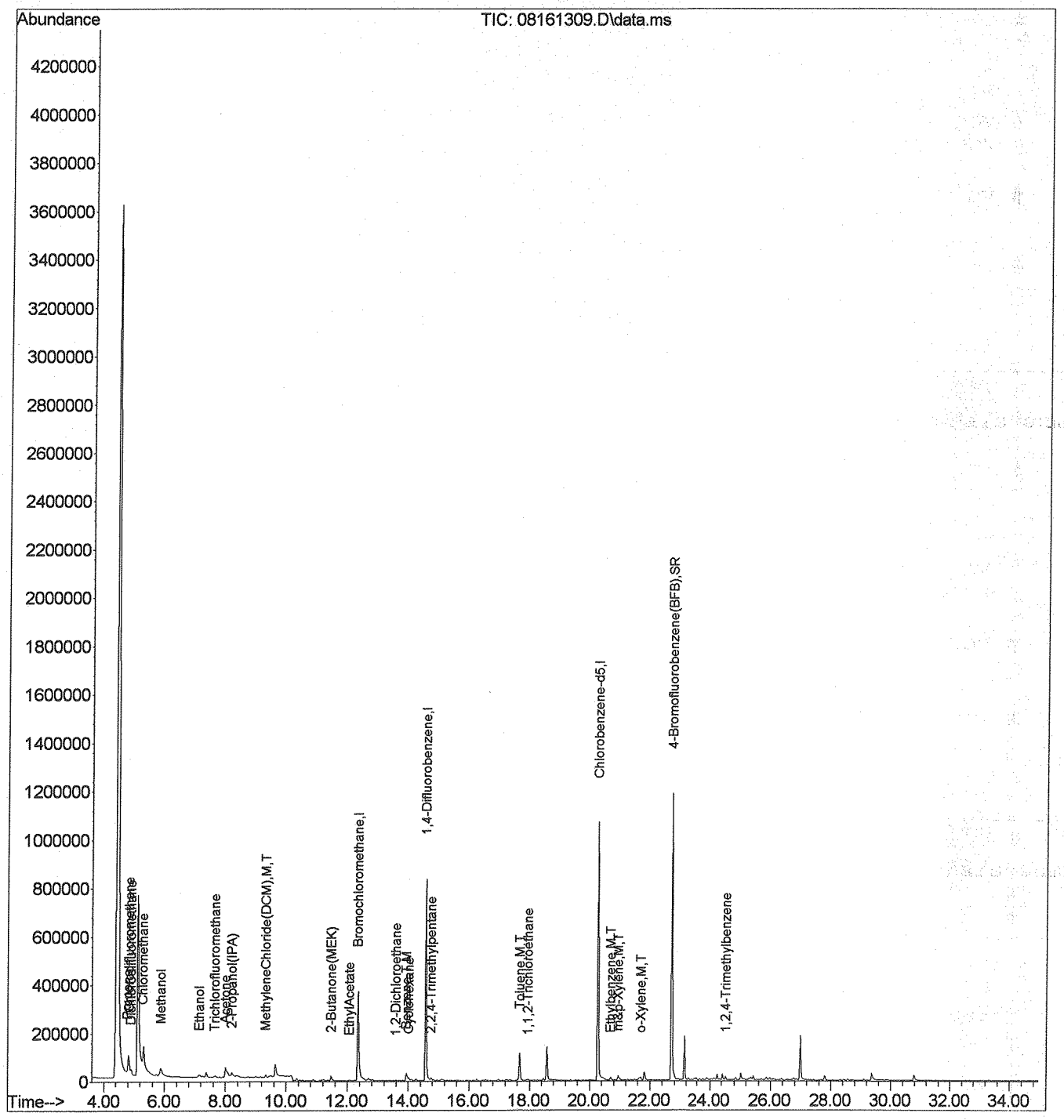
(#) = qualifier out of range (m) = manual integration (+) = signals summed

08/16/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161309.D
Acq On : 16 Aug 2013 15:02
Operator : JJG
Sample : 131082-65505 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 16 17:41:13 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration



TO-15 RAW QC & ICAL SUMMARY

MS #3 Instrument Logbook

Sequence Name: C:\msdchem\1\sequence\2013\081613.S
Comment: GCMS-03
Operator: JJG
Data Path: C:\MSDCHEM\1\MS03\2013\081613\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info
1)	Sample	1	08161301 TO15-5MS TO15 BFB 081613
2)	Sample	1	08161302 TO15-5MS TO15 CCV 081613
3)	Sample	1	08161303 TO15-5MS TO15 LCSD 081613
4)	Sample	1	08161304 TO15-5MS TO15 MB 081613
5)	Sample	2	08161305 TO15-5MS 131082-65502 x1
6)	Sample	2	08161306 TO15-5MS 131082-65502 x1 dp
7)	Sample	3	08161307 TO15-5MS 131082-65503 x1
8)	Sample	4	08161308 TO15-5MS 131082-65504 x1
9)	Sample	5	08161309 TO15-5MS 131082-65505 x1
10)	Sample	6	08161310 TO15-5MS 131080-65499 x1
11)	Sample	8	08161311 TO15-5MS Flow Check#081513-01
12)	Sample	6	08161312 TO15-5MS 131080-65499 x2
13)	Sample	10	08161313 TO15-5MS 131085-65518 x2
14)	Sample	11	08161314 TO15-5MS 131085-65517 x2
15)	Sample	12	08161315 TO15-5MS 131085-65516 x10
16)	Sample	12	08161316 TO15-5MS 131085-65516 x10 dp
17)	Sample	13	08161317 TO15-5MS Lab Air 081613 x1
18)	Sample	12	08161318 TO15-5MS Lab Air 081613 x1
19)	Sample	11	08161319 TO15-5MS Lab Air 081613 x1
20)	Sample	1	08161320 TO15-5MS Can Check#000097

8/16/13

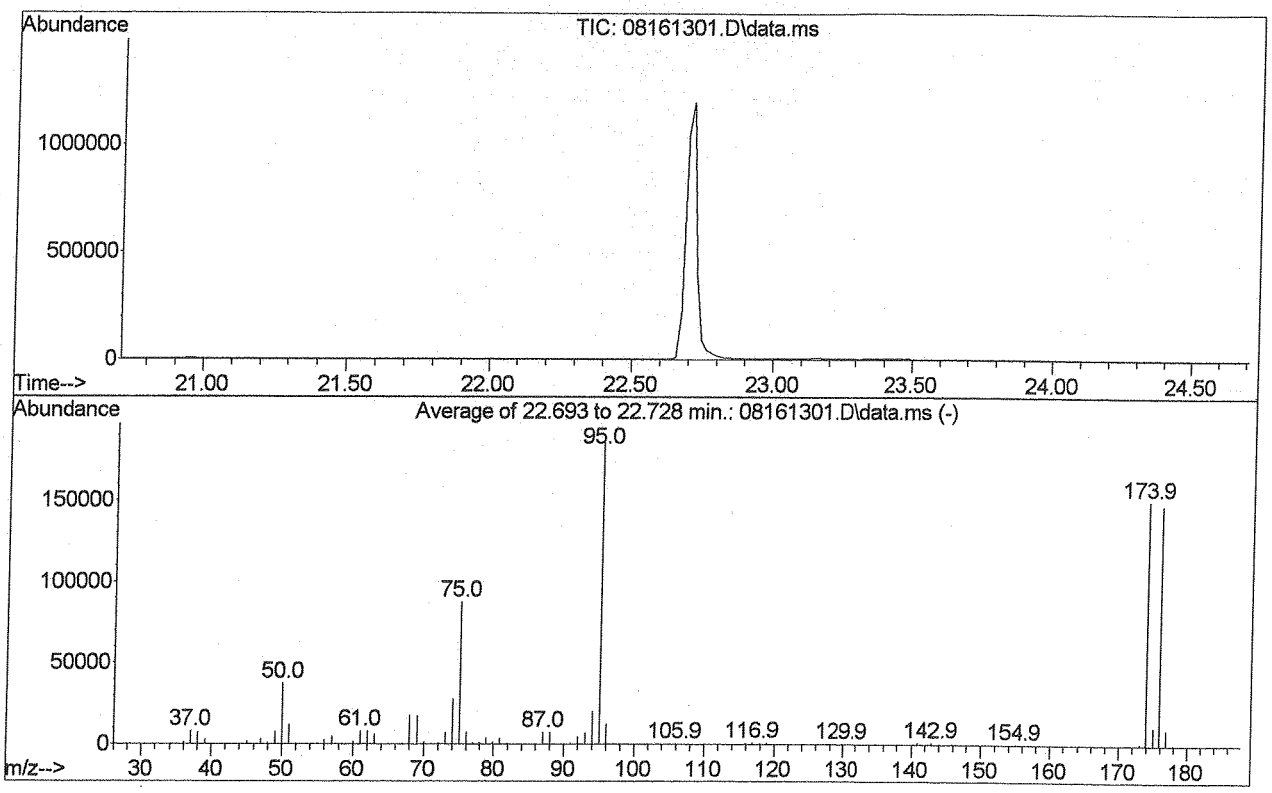
Comments:

Analyst: **Date:** 8/16/13

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161301.D
Acq On : 16 Aug 2013 8:43 am
Operator : JJG
Sample : TO15 BFB 081613
Misc : IS/Surr: PS082212-01 + 500mL cc#000551
ALS Vial : 1 Sample Multiplier: 1

Integration File: PAMS.P

Method : C:\msdchem\1\METHODS\2013\072213.M
Title : TO-15/TO-14
Last Update : Tue Jul 23 12:50:49 2013



AutoFind: Scans 1064, 1065, 1066; Background Corrected with Scan 1059

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.9	37476	PASS
75	95	30	60	46.4	87363	PASS
95	95	100	100	100.0	188211	PASS
96	95	5	9	6.6	12440	PASS
173	174	0.00	2	0.8	1156	PASS
174	95	50	100	79.9	150376	PASS
175	174	5	9	7.3	11000	PASS
176	174	95	101	98.2	147675	PASS
177	176	5	9	6.6	9788	PASS

8/16/13

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161302.D
Acq On : 16 Aug 2013 9:29
Operator : JJG
Sample : TO15 CCV 081613
Misc : IS/Surr: PS082212-01 + Cal: PS071613-02
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 16 10:05:17 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	185100	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	985512	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.267	117	964282	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	554850	10.01	ppbv	0.00
Spiked Amount 10.000			Recovery = 100.10%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	482770	10.18	ppbv	99
3) Propene	4.799	42	160076m	11.16	ppbv	
4) Dichlorodifluoromethane	4.908	85	671758	10.07	ppbv	99
5) Chloromethane	5.306	52	88909m	9.66	ppbv	
6) Dichlorotetrafluoroethane	5.342	135	410140	10.35	ppbv	96
7) VinylChloride	5.668	62	285117m	10.11	ppbv	
8) Methanol	5.867	31	58985m	5.25	ppbv	
9) 1,3-Butadiene	5.867	54	207916m	11.07	ppbv	
10) Bromomethane	6.446	96	169541m	9.00	ppbv	
11) Chloroethane	6.754	66	44647	10.83	ppbv	97
12) Dichlorofluoromethane	7.025	67	557327	10.23	ppbv	100
13) Ethanol	7.061	45	127665m	10.29	ppbv	
14) VinylBromide	7.260	108	202314m	10.29	ppbv	
15) Acetone	7.966	58	138500m	9.86	ppbv	
16) Trichlorofluoromethane	7.677	103	412499	10.85	ppbv	99
17) 2-Propanol(IPA)	8.165	45	485495	10.75	ppbv	98
18) Acrylonitrile	8.961	52	215313m	10.41	ppbv	
19) 1,1-Dichloroethene	8.726	96	219363	9.93	ppbv	98
20) MethyleneChloride(DCM)	9.323	84	213674m	9.38	ppbv	
21) AllylChloride	9.305	39	231332m	9.95	ppbv	
22) CarbonDisulfide	9.486	76	732038m	9.54	ppbv	
23) Trichlorotrifluoroethane	8.998	103	317677	10.10	ppbv	96
24) trans-1,2-Dichloroethene	10.424	96	252108	10.07	ppbv	94
25) 1,1-Dichloroethane	10.906	63	594423	10.42	ppbv	100
26) MethylTertButylEther(M...	10.442	73	708413	11.46	ppbv	99
27) VinylAcetate	10.888	43	847183m	9.87	ppbv	
28) 2-Butanone(MEK)	11.423	72	137600	10.60	ppbv	94
29) cis-1,2-Dichloroethene	11.904	96	284180	10.33	ppbv	97
30) Hexane	11.476	86	59004	10.33	ppbv	89
31) Chloroform	12.493	83	608404	10.84	ppbv	99
32) EthylAcetate	12.011	43	832477	11.28	ppbv	98

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Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161302.D
Acq On : 16 Aug 2013 9:29
Operator : JJG
Sample : TO15 CCV 081613
Misc : IS/Surr: PS082212-01 + Cal: PS071613-02
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 16 10:05:17 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

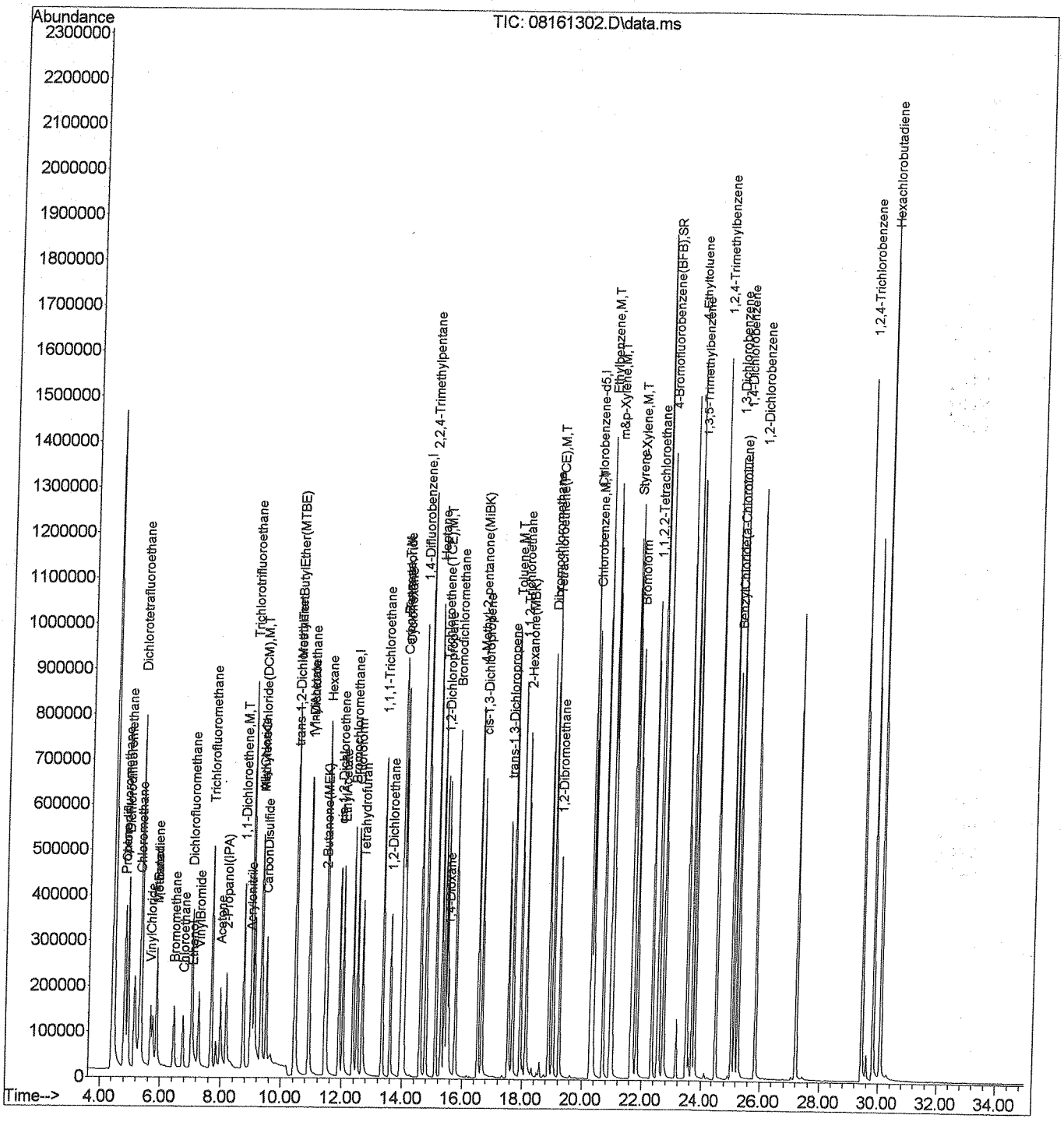
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
33) Tetrahydrofuran	12.671	72	135986	10.35	ppbv		95
34) 1,2-Dichloroethane	13.598	62	453251	11.05	ppbv		98
35) 1,1,1-Trichloroethane	13.331	97	634954	10.86	ppbv		99
37) Benzene	13.937	78	878530	10.18	ppbv		99
38) CarbonTetrachloride	13.973	117	621432	10.71	ppbv		100
39) Cyclohexane	14.026	69	132545	10.02	ppbv		96
40) 1,2-Dichloropropane	15.399	63	379376	10.06	ppbv		97
41) Bromodichloromethane	15.756	85	432999	10.41	ppbv		99
42) 1,4-Dioxane	15.524	88	202680m	9.88	ppbv		
43) Trichloroethene(TCE)	15.292	130	365258	10.38	ppbv		99
44) 2,2,4-Trimethylpentane	14.775	57	1796917	10.81	ppbv		100
45) Heptane	15.096	71	297189	10.65	ppbv		97
46) cis-1,3-Dichloropropene	16.647	75	528853	10.88	ppbv		98
47) 4-Methyl-2-pentanone(M...	16.523	58	352565	10.39	ppbv		98
48) trans-1,3-Dichloropropene	17.521	75	466845	9.63	ppbv		99
49) 1,1,2-Trichloroethane	17.931	97	371291	10.18	ppbv		98
50) Toluene	17.682	91	1082073	10.57	ppbv		99
51) 2-Hexanone(MBK)	18.110	58	454691	10.77	ppbv		97
52) Dibromochloromethane	18.876	129	695252	11.49	ppbv		99
53) 1,2-Dibromoethane	19.233	107	570841	10.18	ppbv		100
54) Tetrachloroethene(PCE)	19.019	166	481084	10.29	ppbv		99
56) Chlorobenzene	20.339	114	263578	10.30	ppbv	#	88
57) Ethylbenzene	20.695	91	1417725	10.37	ppbv		99
58) m&p-Xylene	20.945	106	993910	19.31	ppbv		99
59) Bromoform	21.819	173	664188	10.15	ppbv		99
60) Styrene	21.640	104	847002	10.26	ppbv		100
61) 1,1,2,2-Tetrachloroethane	22.336	83	873162	10.15	ppbv		99
62) o-Xylene	21.694	91	1093023	10.28	ppbv		99
64) 4-Ethyltoluene	23.673	120	432209	10.32	ppbv		96
65) 1,3,5-Trimethylbenzene	23.780	120	590252	9.92	ppbv		97
66) 1,2,4-Trimethylbenzene	24.529	120	592463	10.10	ppbv		99
67) BenzylChloride(a-Chlor...	25.153	91	1005718	10.45	ppbv		99
68) 1,3-Dichlorobenzene	25.028	146	859685	10.03	ppbv		99
69) 1,4-Dichlorobenzene	25.260	146	839541m	9.73	ppbv		
70) 1,2-Dichlorobenzene	25.831	146	851700m	9.48	ppbv		
71) 1,2,4-Trichlorobenzene	29.433	180	790592m	9.30	ppbv		
72) Hexachlorobutadiene	30.075	225	677182m	10.24	ppbv		

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

Page 2

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161302.D
Acq On : 16 Aug 2013 9:29
Operator : JJG
Sample : TO15 CCV 081613
Misc : IS/Surr: PS082212-01 + Cal: PS071613-02
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 16 10:05:17 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration



072213.M Fri Aug 16 10:05:24 2013

08/16/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161303.D
Acq On : 16 Aug 2013 10:15
Operator : JJG
Sample : TO15 LCSD 081613
Misc : IS/Surr: PS082212-01 + Cal: PS071613-02
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 16 11:33:28 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	186169	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	973198	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.267	117	937932	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	544627	10.10	ppbv	0.00
Spiked Amount 10.000			Recovery = 101.00%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	485978	10.19	ppbv	98
3) Propene	4.781	42	160031	11.10	ppbv	99
4) Dichlorodifluoromethane	4.908	85	677617	10.10	ppbv	100
5) Chloromethane	5.288	52	91677m	9.91	ppbv	
6) Dichlorotetrafluoroethane	5.342	135	412684	10.35	ppbv	91
7) VinylChloride	5.668	62	281283m	9.92	ppbv	
8) Methanol	5.867	31	59240m	5.24	ppbv	
9) 1,3-Butadiene	5.867	54	209188m	11.07	ppbv	
10) Bromomethane	6.446	96	178724m	9.43	ppbv	
11) Chloroethane	6.736	66	43801	10.56	ppbv	97
12) Dichlorofluoromethane	7.025	67	557807	10.18	ppbv	99
13) Ethanol	7.061	45	129317m	10.37	ppbv	
14) VinylBromide	7.260	108	203990m	10.32	ppbv	
15) Acetone	7.966	58	136913m	9.69	ppbv	
16) Trichlorofluoromethane	7.677	103	411664	10.77	ppbv	98
17) 2-Propanol(IPA)	8.165	45	490120	10.79	ppbv	99
18) Acrylonitrile	8.962	52	213870m	10.28	ppbv	
19) 1,1-Dichloroethene	8.726	96	221185m	9.95	ppbv	
20) MethyleneChloride(DCM)	9.323	84	215387m	9.40	ppbv	
21) AllylChloride	9.305	39	234257m	10.02	ppbv	
22) CarbonDisulfide	9.486	76	737480m	9.56	ppbv	
23) Trichlorotrifluoroethane	8.998	103	315785	9.98	ppbv	97
24) trans-1,2-Dichloroethene	10.424	96	263947m	10.48	ppbv	
25) 1,1-Dichloroethane	10.906	63	587483	10.24	ppbv	100
26) MethylTertButylEther(M...	10.442	73	709367	11.41	ppbv	99
27) VinylAcetate	10.888	43	853773m	9.89	ppbv	
28) 2-Butanone(MEK)	11.423	72	139415	10.68	ppbv #	98
29) cis-1,2-Dichloroethene	11.904	96	280844	10.15	ppbv	98
30) Hexane	11.476	86	60152	10.47	ppbv	92
31) Chloroform	12.493	83	598813	10.60	ppbv	99
32) EthylAcetate	12.011	43	845618	11.39	ppbv	98

8/16/13

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161303.D
Acq On : 16 Aug 2013 10:15
Operator : JJG
Sample : TO15 LCSD 081613
Misc : IS/Surr: PS082212-01 + Cal: PS071613-02
ALS Vial : 1 Sample Multiplier: 1

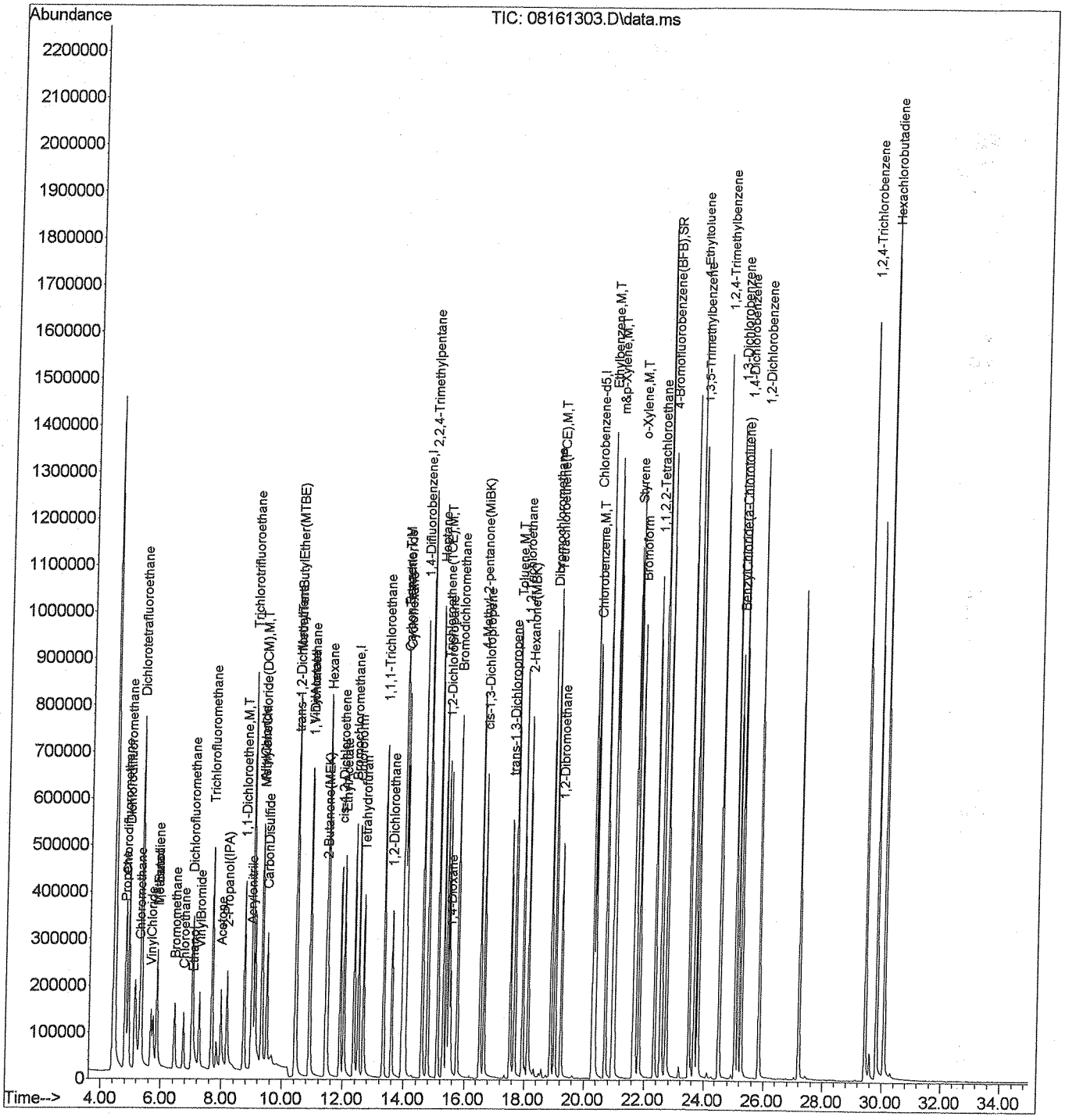
Quant Time: Aug 16 11:33:28 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.671	72	137519	10.40 ppbv	96
34) 1,2-Dichloroethane	13.580	62	450496	10.92 ppbv	99
35) 1,1,1-Trichloroethane	13.331	97	640976	10.90 ppbv	99
37) Benzene	13.937	78	865923	10.16 ppbv	99
38) CarbonTetrachloride	13.973	117	617312	10.77 ppbv	100
39) Cyclohexane	14.026	69	125179	9.58 ppbv	94
40) 1,2-Dichloropropane	15.399	63	378424	10.16 ppbv	97
41) Bromodichloromethane	15.756	85	439043	10.69 ppbv	100
42) 1,4-Dioxane	15.524	88	198690m	9.81 ppbv	
43) Trichloroethene(TCE)	15.292	130	354044	10.18 ppbv	99
44) 2,2,4-Trimethylpentane	14.757	57	1757551	10.71 ppbv	99
45) Heptane	15.096	71	288023	10.45 ppbv	95
46) cis-1,3-Dichloropropene	16.647	75	530343	11.05 ppbv	98
47) 4-Methyl-2-pentanone(M...	16.523	58	350721	10.47 ppbv	96
48) trans-1,3-Dichloropropene	17.521	75	458152	9.57 ppbv	99
49) 1,1,2-Trichloroethane	17.931	97	372611	10.34 ppbv	98
50) Toluene	17.682	91	1057341	10.46 ppbv	100
51) 2-Hexanone(MBK)	18.110	58	460064	11.04 ppbv	96
52) Dibromochloromethane	18.876	129	700443	11.72 ppbv	100
53) 1,2-Dibromoethane	19.215	107	581126	10.49 ppbv	100
54) Tetrachloroethene(PCE)	19.019	166	475731	10.30 ppbv	97
56) Chlorobenzene	20.357	114	257378	10.34 ppbv	98
57) Ethylbenzene	20.695	91	1385278	10.42 ppbv	98
58) m&p-Xylene	20.945	106	999779	19.97 ppbv	98
59) Bromoform	21.819	173	675165	10.61 ppbv	100
60) Styrene	21.640	104	827707	10.31 ppbv	99
61) 1,1,2,2-Tetrachloroethane	22.336	83	870418	10.41 ppbv	99
62) o-Xylene	21.694	91	1086445	10.51 ppbv	100
64) 4-Ethyltoluene	23.673	120	427882	10.51 ppbv	94
65) 1,3,5-Trimethylbenzene	23.780	120	593806	10.26 ppbv	98
66) 1,2,4-Trimethylbenzene	24.529	120	587758	10.30 ppbv	97
67) BenzylChloride(a-Chlor...	25.153	91	1047007	11.18 ppbv	99
68) 1,3-Dichlorobenzene	25.028	146	873554	10.48 ppbv	99
69) 1,4-Dichlorobenzene	25.260	146	824514m	9.83 ppbv	
70) 1,2-Dichlorobenzene	25.831	146	868649m	9.94 ppbv	
71) 1,2,4-Trichlorobenzene	29.433	180	799349m	9.67 ppbv	
72) Hexachlorobutadiene	30.075	225	662153m	10.29 ppbv	

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

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161303.D
Acq On : 16 Aug 2013 10:15
Operator : JJG
Sample : TO15 LCSD 081613
Misc : IS/Surr: PS082212-01 + Cal: PS071613-02
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 16 11:33:28 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration



08/16/13

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161304.D
Acq On : 16 Aug 2013 11:02
Operator : JJG
Sample : TO15 MB 081613
Misc : IS/Surr: PS082212-01 + 500mL cc#000541
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 16 11:35:33 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	178615	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	999855	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.267	117	910800	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	544428	10.40	ppbv	0.00
Spiked Amount 10.000			Recovery = 104.00%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	0.000		0	N.D.		
3) Propene	0.000		0	N.D.	d	
4) Dichlorodifluoromethane	0.000		0	N.D.		
5) Chloromethane	5.306	52	113	N.D.		
6) Dichlorotetrafluoroethane	0.000		0	N.D.		
7) VinylChloride	0.000		0	N.D.		
8) Methanol	0.000		0	N.D.	d	
9) 1,3-Butadiene	0.000		0	N.D.		
10) Bromomethane	0.000		0	N.D.	d	
11) Chloroethane	0.000		0	N.D.	d	
12) Dichlorofluoromethane	0.000		0	N.D.		
13) Ethanol	0.000		0	N.D.	d	
14) VinylBromide	0.000		0	N.D.		
15) Acetone	0.000		0	N.D.	d	
16) Trichlorofluoromethane	0.000		0	N.D.		
17) 2-Propanol(IPA)	8.201	45	518	N.D.		
18) Acrylonitrile	9.106	52	362	N.D.		
19) 1,1-Dichloroethene	0.000		0	N.D.		
20) MethyleneChloride(DCM)	0.000		0	N.D.	d	
21) AllylChloride	9.305	39	110	N.D.		
22) CarbonDisulfide	0.000		0	N.D.	d	
23) Trichlorotrifluoroethane	0.000		0	N.D.		
24) trans-1,2-Dichloroethene	0.000		0	N.D.		
25) 1,1-Dichloroethane	0.000		0	N.D.		
26) MethylTertButylEther(M...	0.000		0	N.D.		
27) VinylAcetate	0.000		0	N.D.		
28) 2-Butanone(MEK)	0.000		0	N.D.		
29) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Hexane	0.000		0	N.D.		
31) Chloroform	0.000		0	N.D.		
32) EthylAcetate	12.136	43	1208	N.D.		

08/16/13

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161304.D
Acq On : 16 Aug 2013 11:02
Operator : JJG
Sample : TO15 MB 081613
Misc : IS/Surr: PS082212-01 + 500mL cc#000541
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 16 11:35:33 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

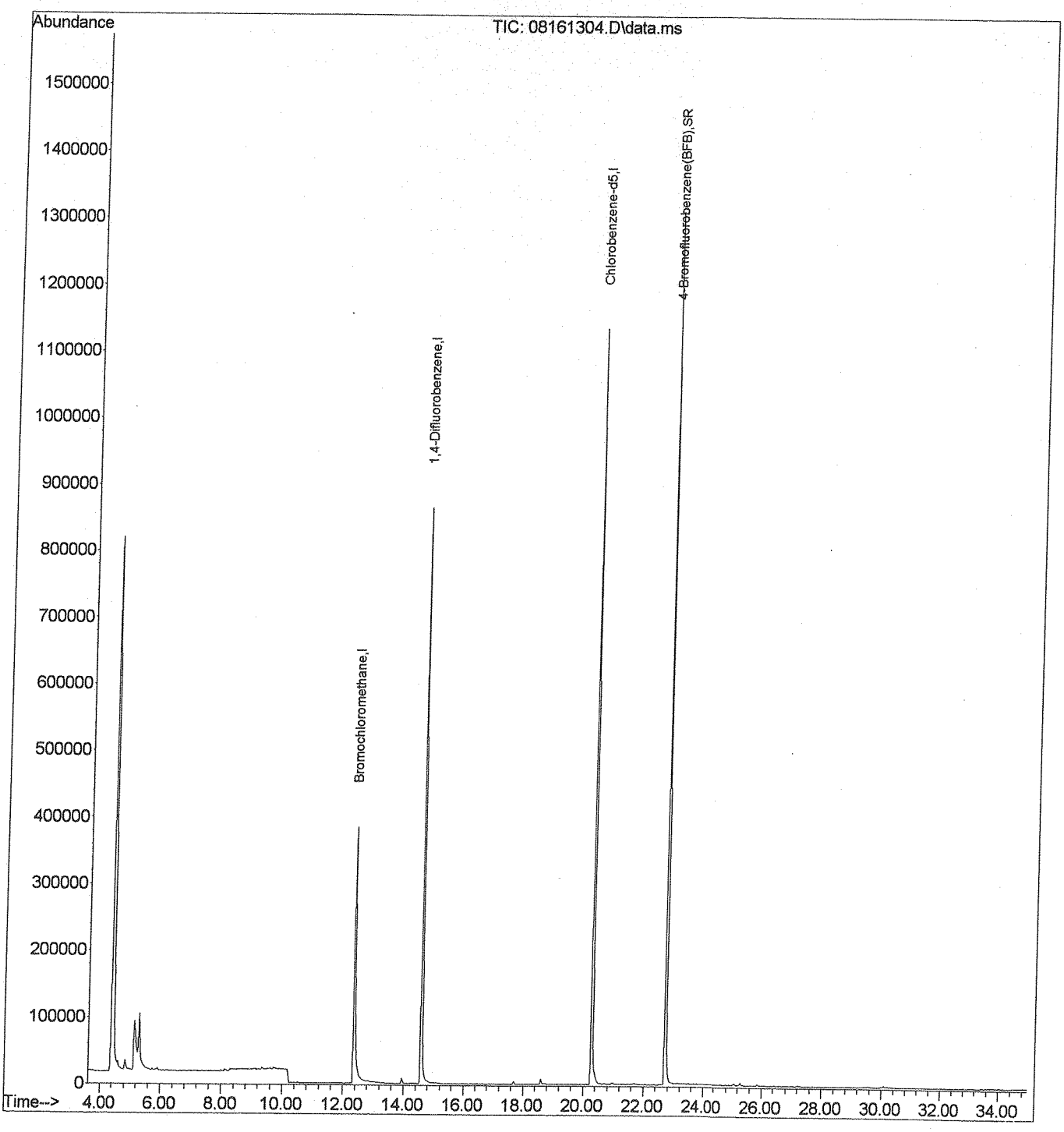
Compound	R.T.	QIon	Response	Conc Units Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.
34) 1,2-Dichloroethane	0.000		0	N.D.
35) 1,1,1-Trichloroethane	0.000		0	N.D.
37) Benzene	0.000		0	N.D. d
38) CarbonTetrachloride	0.000		0	N.D.
39) Cyclohexane	0.000		0	N.D.
40) 1,2-Dichloropropane	15.274	63	221	N.D.
41) Bromodichloromethane	0.000		0	N.D.
42) 1,4-Dioxane	0.000		0	N.D.
43) Trichloroethene(TCE)	0.000		0	N.D.
44) 2,2,4-Trimethylpentane	0.000		0	N.D.
45) Heptane	0.000		0	N.D.
46) cis-1,3-Dichloropropene	0.000		0	N.D.
47) 4-Methyl-2-pentanone(M...	0.000		0	N.D.
48) trans-1,3-Dichloropropene	0.000		0	N.D.
49) 1,1,2-Trichloroethane	0.000		0	N.D.
50) Toluene	0.000		0	N.D. d
51) 2-Hexanone(MBK)	0.000		0	N.D.
52) Dibromochloromethane	0.000		0	N.D.
53) 1,2-Dibromoethane	0.000		0	N.D.
54) Tetrachloroethene(PCE)	0.000		0	N.D.
56) Chlorobenzene	20.356	114	479	N.D.
57) Ethylbenzene	20.713	91	1066	N.D.
58) m&p-Xylene	20.963	106	1601	N.D.
59) Bromoform	0.000		0	N.D.
60) Styrene	21.694	104	1150	N.D.
61) 1,1,2,2-Tetrachloroethane	22.354	83	348	N.D.
62) o-Xylene	21.712	91	958	N.D.
64) 4-Ethyltoluene	23.709	120	311	N.D.
65) 1,3,5-Trimethylbenzene	23.798	120	411	N.D.
66) 1,2,4-Trimethylbenzene	24.547	120	326	N.D.
67) BenzylChloride(a-Chlor...	25.189	91	1258	N.D.
68) 1,3-Dichlorobenzene	25.064	146	2297	N.D.
69) 1,4-Dichlorobenzene	25.296	146	2868	N.D.
70) 1,2-Dichlorobenzene	25.849	146	1623	N.D.
71) 1,2,4-Trichlorobenzene	29.469	180	771	N.D.
72) Hexachlorobutadiene	30.075	225	858	N.D.

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

08/16/13

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161304.D
Acq On : 16 Aug 2013 11:02
Operator : JJG
Sample : TO15 MB 081613
Misc : IS/Surr: PS082212-01 + 500mL cc#000541
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 16 11:35:33 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration



072213.M Fri Aug 16 11:35:41 2013

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161305.D
Acq On : 16 Aug 2013 11:50
Operator : JJG
Sample : 131082-65502 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 15:38:34 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	186793m	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	963748	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.267	117	889813	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	529152	10.35 ppbv	0.00
Spiked Amount 10.000			Recovery = 103.50%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	8372	0.18 ppbv #	98
3) Propene	4.799	42	12058	0.83 ppbv #	73
4) Dichlorodifluoromethane	4.908	85	22772	0.34 ppbv	99
5) Chloromethane	5.306	52	2471	0.27 ppbv #	5
6) Dichlorotetrafluoroethane	5.342	135	305	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	159887m	14.10 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.116	45	27523m	2.20 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.984	58	37765m	2.66 ppbv	
16) Trichlorofluoromethane	7.659	103	6186	0.16 ppbv #	97
17) 2-Propanol(IPA)	8.238	45	26288m	0.58 ppbv	
18) Acrylonitrile	8.980	52	127	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	9.324	84	8758	0.38 ppbv #	95
21) AllylChloride	9.360	39	206	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	10.888	63	123	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	10.888	43	2867	N.D.	
28) 2-Butanone(MEK)	0.000		0	N.D. d	
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	0.000		0	N.D. d	
32) EthylAcetate	12.065	43	9693	0.13 ppbv #	93

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161305.D
Acq On : 16 Aug 2013 11:50
Operator : JJG
Sample : 131082-65502 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 2 Sample Multiplier: 1

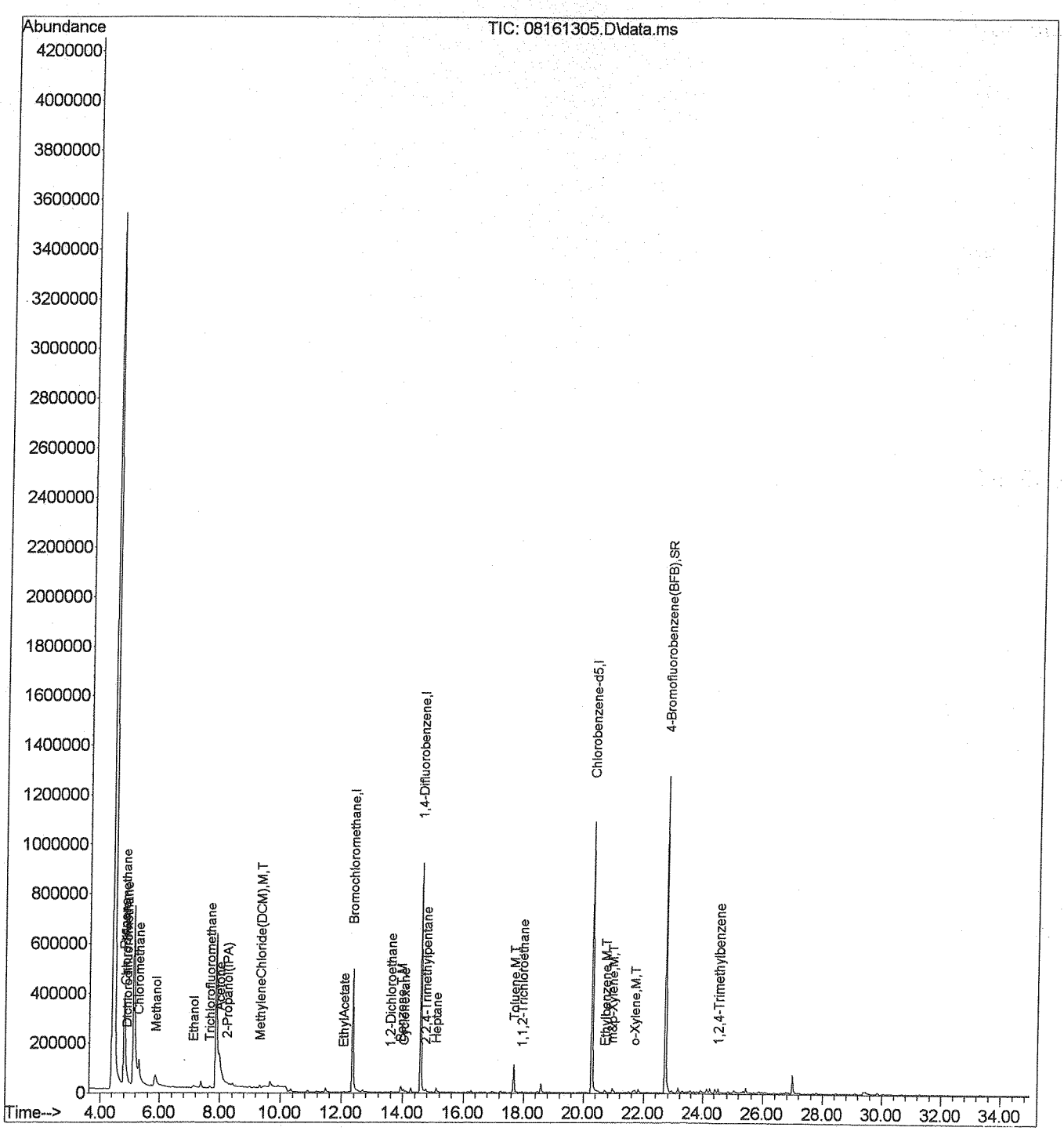
Quant Time: Aug 16 15:38:34 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.760	72	454	N.D.	
34) 1,2-Dichloroethane	13.598	62	2958	0.07 ppbv #	73
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	20928	0.25 ppbv	96
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	14.026	69	1764	0.14 ppbv #	82
40) 1,2-Dichloropropane	15.399	63	1224	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	15.292	130	695	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	15050	0.09 ppbv	94
45) Heptane	15.096	71	4607	0.17 ppbv	96
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.576	58	912	N.D.	
48) trans-1,3-Dichloropropene	17.664	75	864	N.D.	
49) 1,1,2-Trichloroethane	17.949	97	1814	0.05 ppbv #	92
50) Toluene	17.682	91	126785	1.27 ppbv	98
51) 2-Hexanone(MBK)	18.235	58	236	N.D.	
52) Dibromochloromethane	19.001	129	270	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	327	N.D.	
56) Chlorobenzene	20.267	114	277	N.D.	
57) Ethylbenzene	20.713	91	10346	0.08 ppbv #	97
58) m&p-Xylene	20.945	106	10555	0.22 ppbv #	94
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	2842	N.D.	
61) 1,1,2,2-Tetrachloroethane	22.354	83	122	N.D.	
62) o-Xylene	21.694	91	8585	0.09 ppbv #	95
64) 4-Ethyltoluene	23.691	120	1425	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1756	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	5535	0.10 ppbv	88
67) BenzylChloride(a-Chlor...	25.189	91	923	N.D.	
68) 1,3-Dichlorobenzene	25.046	146	791	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	1593	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	696	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	2094	N.D.	
72) Hexachlorobutadiene	30.057	225	509	N.D.	

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

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161305.D
Acq On : 16 Aug 2013 11:50
Operator : JJG
Sample : 131082-65502 x1
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 15:38:34 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration



Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161306.D
Acq On : 16 Aug 2013 12:38
Operator : JJG
Sample : 131082-65502 x1 dp
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 15:42:12 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	177269m	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	949622	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.267	117	885107	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	517583	10.17 ppbv	0.00
Spiked Amount 10.000			Recovery = 101.70%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	8301	0.18 ppbv #	97
3) Propene	4.799	42	11447	0.83 ppbv #	69
4) Dichlorodifluoromethane	4.908	85	21981	0.34 ppbv	98
5) Chloromethane	5.306	52	2446	0.28 ppbv #	25
6) Dichlorotetrafluoroethane	5.342	135	356	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	144177m	13.40 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.116	45	27484m	2.31 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.984	58	35731	2.66 ppbv #	80
16) Trichlorofluoromethane	7.659	103	5897	0.16 ppbv #	90
17) 2-Propanol(IPA)	8.238	45	24533m	0.57 ppbv	
18) Acrylonitrile	8.998	52	121	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	9.324	84	9152	0.42 ppbv	91
21) AllylChloride	9.360	39	217	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	0.000		0	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	10.888	43	2399	N.D.	
28) 2-Butanone(MEK)	0.000		0	N.D. d	
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	0.000		0	N.D. d	
32) EthylAcetate	12.065	43	9048	0.13 ppbv #	93

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161306.D
Acq On : 16 Aug 2013 12:38
Operator : JJG
Sample : 131082-65502 x1 dp
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 15:42:12 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration

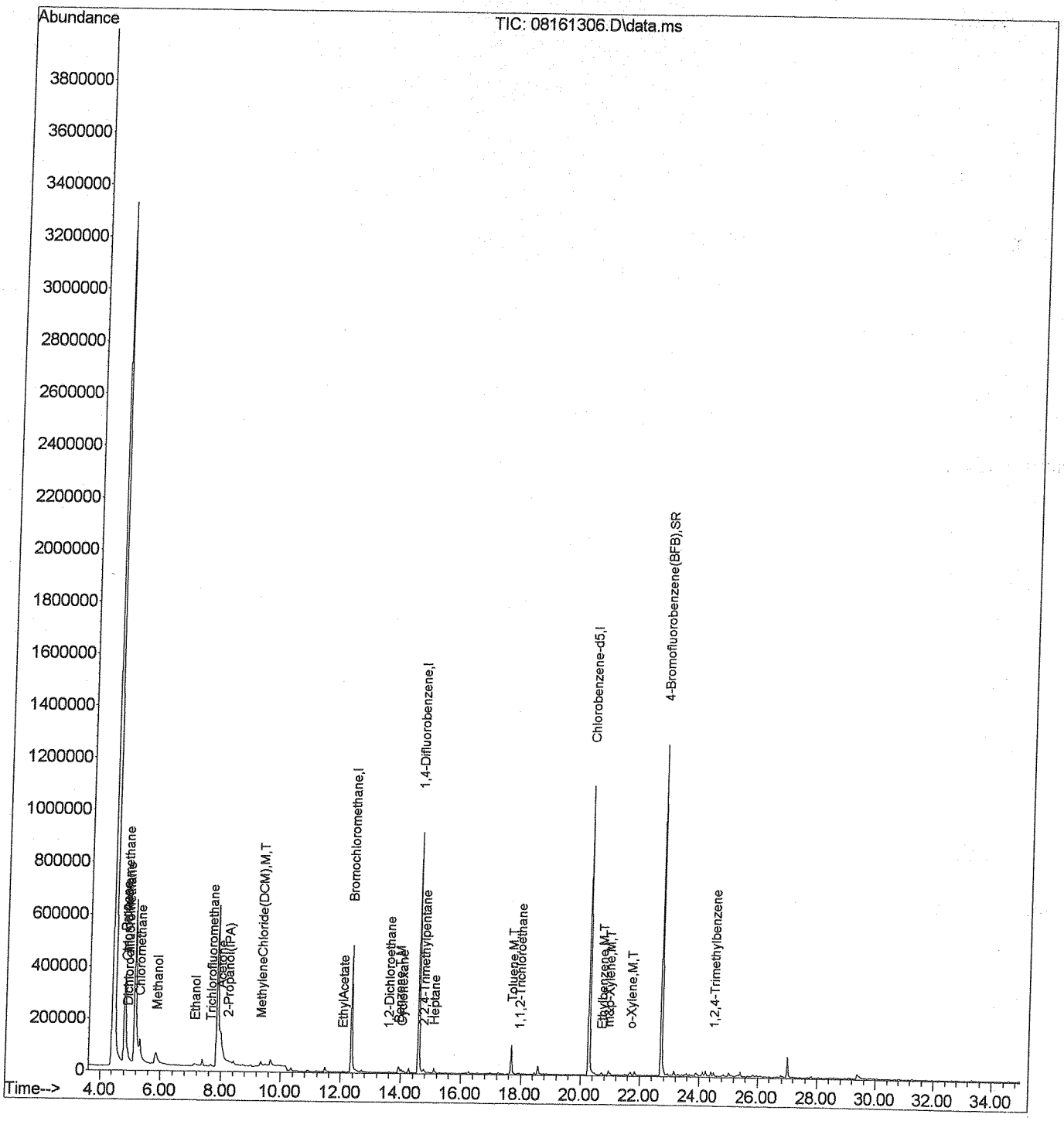
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.760	72	378	N.D.	
34) 1,2-Dichloroethane	13.598	62	2917	0.07 ppbv #	69
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	20773	0.25 ppbv	96
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	14.026	69	1677	0.13 ppbv #	76
40) 1,2-Dichloropropane	0.000		0	N.D. d	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	15.292	130	685	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	16617	0.10 ppbv	96
45) Heptane	15.096	71	4267	0.16 ppbv	86
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.576	58	677	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	851	N.D.	
49) 1,1,2-Trichloroethane	17.949	97	1764	0.05 ppbv #	96
50) Toluene	17.682	91	125955m	1.28 ppbv	
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.001	129	243	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.001	166	305	N.D.	
56) Chlorobenzene	20.232	114	107	N.D.	
57) Ethylbenzene	20.713	91	9990	0.08 ppbv #	96
58) m&p-Xylene	20.945	106	9514	0.20 ppbv #	81
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	2675	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	8706	0.09 ppbv #	91
64) 4-Ethyltoluene	23.691	120	1116	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1591	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	5460	0.10 ppbv #	86
67) BenzylChloride(a-Chlor...	25.189	91	342	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	426	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	853	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	427	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	989	N.D.	
72) Hexachlorobutadiene	30.075	225	145	N.D.	

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

08/16/13

Data Path : C:\msdchem\1\MS03\2013\081613\
Data File : 08161306.D
Acq On : 16 Aug 2013 12:38
Operator : JJG
Sample : 131082-65502 x1 dp
Misc : IS/Surr: PS082212-01 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 16 15:42:12 2013
Quant Method : C:\msdchem\1\METHODS\2013\072213.M
Quant Title : TO-15/TO-14
QLast Update : Tue Jul 23 12:50:49 2013
Response via : Initial Calibration



072213.M Fri Aug 16 15:42:37 2013

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 072213.M
Title : TO-15/TO-14
Last Update : Tue Jul 23 12:38:41 2013
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.5	1	10	C:\msdchem\1\MS03\2013\072213\07221327.D
2	1.0	1	10	C:\msdchem\1\MS03\2013\072213\07221326.D
3	2.0	2	10	C:\msdchem\1\MS03\2013\072213\07221325.D
4	5.0	5	10	C:\msdchem\1\MS03\2013\072213\07221324.D
5	10	10	10	C:\msdchem\1\MS03\2013\072213\07221323.D
6	20	20	10	C:\msdchem\1\MS03\2013\072213\07221322.D
7	50	51	10	C:\msdchem\1\MS03\2013\072213\07221321.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.5	Jul 23 09:46 2013	Jul 23 09:05 2013	23 Jul 2013 6:08
2	1.0	Jul 23 09:46 2013	Jul 23 09:02 2013	23 Jul 2013 5:21
3	2.0	Jul 23 09:46 2013	Jul 23 08:56 2013	23 Jul 2013 4:33
4	5.0	Jul 23 09:45 2013	Jul 23 08:53 2013	23 Jul 2013 3:45
5	10	Jul 23 09:45 2013	Jul 23 08:51 2013	23 Jul 2013 2:57
6	20	Jul 23 09:45 2013	Jul 23 08:48 2013	23 Jul 2013 2:09
7	50	Jul 23 09:44 2013	Jul 23 08:45 2013	23 Jul 2013 1:21

072213.M Tue Jul 23 12:40:08 2013

Response Factor Report MS03 Enhanced

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 072213.M
Title : TO-15/TO-14
Last Update : Tue Jul 23 12:50:49 2013
Response Via : Initial Calibration

Calibration Files
0.5 =07221327.D 1.0 =07221326.D 2.0 =07221325.D 5.0 =07221324.D 10 =07221323.D 20 =07221322.D
50 =07221321.D

		Compound	0.5	1.0	2.0	5.0	10	20	50	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------								
2)		Chlorodifluoro...	2.952	2.719	2.720	2.599	2.471	2.310	2.156	2.561	10.57
3)		Propene	0.814	0.743	0.820	0.802	0.755	0.763	0.727	0.775	4.74
4)		Dichlorodifluo...	4.148	3.728	3.871	3.688	3.495	3.251	3.053	3.605	10.31
5)		Chloromethane	0.674	0.529	0.574	0.494	0.458	0.415	0.334	0.497	22.24
6)		Dichlorotetraf...	2.427	2.214	2.351	2.209	2.106	1.936	1.751	2.142	10.98
7)		VinylChloride	1.683	1.535	1.640	1.564	1.507	1.399	1.332	1.523	8.19
8)		Methanol		1.022	0.934	0.765	0.706	0.628	0.597	0.775	21.89
9)		1,3-Butadiene	1.114	1.036	1.097	1.063	1.045	0.935	0.813	1.015	10.44
10)		Bromomethane	1.291	1.082	1.098	1.045	0.973	0.880	0.756	1.018	16.80
11)		Chloroethane	0.227	0.230	0.232	0.229	0.222	0.210	0.209	0.223	4.38
12)		Dichlorofluoro...	3.326	3.078	3.179	2.973	2.867	2.682	2.505	2.944	9.68
13)		Ethanol	0.733	0.689	0.652	0.772	0.690	0.612	0.543	0.670	11.40
14)		VinylBromide	1.079	1.057	1.127	1.110	1.080	1.015	0.965	1.062	5.28
15)		Acetone	1.060	0.846	0.781	0.699	0.679	0.640	0.608	0.759	20.53
16)		Trichlorofluor...	2.286	2.161	2.184	2.085	2.036	1.886	1.737	2.054	9.16
17)		2-Propanol(IPA)	3.119	2.473	2.598	2.550	2.369	2.106	1.869	2.440	16.23
18)		Acrylonitrile	1.219	1.170	1.268	1.135	1.125	1.039	0.868	1.118	11.81
19)	M,T	1,1-Dichloroet...	1.345	1.306	1.308	1.264	1.165	1.021	0.947	1.194	13.02
20)	M,T	MethyleneChlor...	1.534	1.330	1.307	1.223	1.173	1.061	0.987	1.231	14.82
21)		AllylChloride	1.657	1.353	1.313	1.281	1.157	1.017	1.011	1.256	17.84
22)		CarbonDisulfide	5.264	4.508	4.405	4.060	3.861	3.478	3.439	4.145	15.52
23)		Trichlorotrifl...	1.998	1.892	1.886	1.743	1.645	1.491	1.242	1.699	15.54
24)		trans-1,2-Dich...	1.471	1.451	1.461	1.391	1.320	1.241	1.135	1.353	9.43
25)		1,1-Dichloroet...	3.654	3.319	3.417	3.155	2.942	2.692	2.400	3.083	14.13
26)		MethylTertButy...	3.919	3.680	3.710	3.558	3.256	2.857	2.405	3.341	16.17
27)		VinylAcetate	5.168	4.915	5.159	4.848	4.602	4.189	3.580	4.637	12.43
28)		2-Butanone(MEK)	0.710	0.699	0.735	0.741	0.714	0.678	0.631	0.701	5.34

072213.M Tue Jul 23 12:52:04 2013

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Method Path : C:\msdchem\1\METHODS\2013\
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29)		cis-1,2-Dichlo...	1.634	1.584	1.572	1.509	1.454	1.363	1.289	1.486	8.44
30)		Hexane	0.370	0.338	0.332	0.315	0.303	0.261	0.240	0.309	14.59
31)		Chloroform	3.448	3.182	3.244	3.085	3.007	2.759	2.509	3.034	10.36
32)		EthylAcetate	4.276	4.147	4.376	4.275	3.968	3.679	3.189	3.987	10.62
33)		Tetrahydrofuran	0.825	0.736	0.758	0.723	0.690	0.651	0.587	0.710	10.81
34)		1,2-Dichloroet...	2.326	2.253	2.430	2.291	2.177	2.077	1.963	2.217	7.13
35)		1,1,1-Trichlor...	3.599	3.382	3.447	3.239	3.063	2.801	2.576	3.158	11.63
36)	I	1,4-Difluorobenzene	----------ISTD----------								
37)	T,M	Benzene	1.065	0.986	0.941	0.901	0.833	0.755	0.647	0.875	16.28
38)		CarbonTetrachl...	0.677	0.646	0.646	0.609	0.568	0.523	0.453	0.589	13.49
39)		Cyclohexane	0.161	0.151	0.147	0.135	0.127	0.116	0.103	0.134	15.23
40)		1,2-Dichloropr...	0.469	0.427	0.398	0.388	0.361	0.335	0.300	0.383	14.81
41)		Bromodichlorom...	0.472	0.453	0.457	0.436	0.413	0.380	0.343	0.422	11.00
42)		1,4-Dioxane	0.235	0.225	0.221	0.211	0.200	0.190	0.176	0.208	9.97
43)	M,T	Trichloroethen...	0.410	0.384	0.375	0.367	0.344	0.331	0.289	0.357	11.09
44)		2,2,4-Trimethy...	2.025	1.899	1.819	1.732	1.628	1.485	1.217	1.686	16.14
45)		Heptane	0.331	0.309	0.298	0.286	0.275	0.258	0.226	0.283	12.22
46)		cis-1,3-Dichlo...	0.538	0.531	0.513	0.508	0.490	0.455	0.417	0.493	8.81
47)		4-Methyl-2-pen...	0.365	0.363	0.369	0.359	0.349	0.321	0.284	0.344	8.99
48)		trans-1,3-Dich...	0.538	0.527	0.521	0.493	0.471	0.463	0.430	0.492	7.97
49)		1,1,2-Trichlor...	0.434	0.410	0.399	0.373	0.354	0.328	0.293	0.370	13.26
50)	M,T	Toluene	1.219	1.151	1.141	1.056	0.996	0.904	0.802	1.038	14.28
51)		2-Hexanone(MBK)	0.439	0.458	0.470	0.446	0.429	0.400	0.357	0.428	9.03
52)		Dibromochlorom...	0.667	0.662	0.659	0.642	0.606	0.575	0.489	0.614	10.55
53)		1,2-Dibromoethane	0.619	0.623	0.619	0.586	0.558	0.519	0.461	0.569	10.77
54)	M,T	Tetrachloroeth...	0.554	0.525	0.513	0.482	0.456	0.421	0.370	0.474	13.45
55)	I	Chlorobenzene-d5	----------ISTD----------								
56)	M,T	Chlorobenzene	0.296	0.300	0.279	0.262	0.261	0.246	0.215	0.265	11.14
57)	M,T	Ethylbenzene	1.632	1.611	1.568	1.425	1.409	1.223	1.054	1.418	15.13
58)	M,T	m&p-Xylene	0.633	0.598	0.574	0.540	0.512	0.474	0.406	0.534	14.48
59)		Bromoform	0.749	0.738	0.739	0.693	0.687	0.618	0.527	0.679	11.88
60)		Styrene	0.925	0.921	0.903	0.869	0.866	0.789	0.720	0.856	8.86
61)		1,1,2,2-Tetrac...	1.044	1.040	0.970	0.903	0.876	0.782	0.627	0.892	16.75
62)	M,T	o-Xylene	1.340	1.255	1.190	1.103	1.066	0.948	0.817	1.103	16.29
63)	SR	4-Bromofluorob...	0.577	0.582	0.569	0.554	0.582	0.571	0.588	0.575	1.94
64)		4-Ethyltoluene	0.498	0.492	0.467	0.443	0.444	0.398	0.337	0.434	11.81

Response Factor Report MS03 Enhanced

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 072213.M
Title : TO-15/TO-14

65)	1,3,5-Trimethy...	0.684	0.705	0.681	0.623	0.612	0.544	0.471	0.617	13.72
66)	1,2,4-Trimethy...	0.658	0.673	0.669	0.623	0.606	0.566	0.464	0.609	12.23
67)	BenzylChloride...	0.807	0.959	0.986	1.063	1.081	1.090	0.999	0.998	9.82
68)	1,3-Dichlorobe...	0.934	0.964	0.956	0.916	0.912	0.825	0.715	0.889	10.05
69)	1,4-Dichlorobe...	1.028	1.004	0.965	0.900	0.871	0.796	0.698	0.895	13.19
70)	1,2-Dichlorobe...	1.100	1.065	1.010	0.920	0.894	0.828	0.706	0.932	14.85
71)	1,2,4-Trichlor...	0.899	0.951	0.942	0.935	0.909	0.843	0.691	0.881	10.39
72)	Hexachlorobuta...	0.762	0.771	0.750	0.699	0.696	0.622	0.500	0.686	14.06

(#) = Out of Range