Atmospheric Analysis & Consulting, Inc.

CLIENT	: Soil Water Air Protection Enterprise
PROJECT NAME	: Bridgeton Sanitary Landfill Air Quality Assessment
AAC PROJECT NO.	: 130653
REPORT DATE	: 06/03/2013

On May 31, 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 W4-Canister	130653-63265	474.0
U-2 K-Canister	130653-63266	548.9
D-1 W6-Canister	130653-63267	583.7
D-2 W6E-Canister	130653-63268	525.3

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 82 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

CANISTER PRESSURE LOG

Client: Soil Water Air Protection Ent Project No.: 130653

Date: 5/31/2013

Canister #	Sample #	Initial Pressure	Final Pressure
800	63265	474.0	1014.1
732	63266	548.9	1014.7
741	63267	583.7	1015.2
672	63268	525.3	1015.7

1

AAC# 130653

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: **May 24th**
Project Manager: PAUL ROSENFELD, PH.D.			Page 1 of 1
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	Odor Evaluation	Special Instructions / Conditions of Receipt
63265	U-1 W4	Canister		May 24th	4 Hr	X	X												Canister # 800
63266	U-2 K	Canister		May 24th	4 Hr	X	X												Canister # 732
63267	D-1 W6	Canister		May 24th	4 Hr	X	X												Canister # 741
63268	D-2 W6E	Canister		May 24th	4 Hr	X	X												Canister # 672

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: **May 24th**	12 Noon	Received By:	Date:	**Time:**
Relinquished By:	Date:	Time:	Received By:	Date:	**Time:**
Relinquished By:	Date:	Time:	Received By:	Date: 5/31/13	**Time:** 1235

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: SWAPE Project: 601 Bridgeton Landfill

Site Address and/or ID No: Bridgeton Sanitary Landfill, Bridgeton, Missouri

Sample Name and/or ID No.: V-1 W4 Canister

AAC Batch ID: 130653 AAC Sample ID: 632605

SAMPLING INFORMATION

Start Date/Time: 5/24/13 9:25 Stop Date/Time: 5/24/13 13:25

Start Temp/Pressure*: 14°C / 30.43 Stop Temp/Pressure*: 19°C / 30.40

Initial Can Pressure**: -30 Final Can Pressure**: -13

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

Comments:

Morton Blank
Sampler Name (Print)

Sampler Signature/Date

LABORATORY INFORMATION

Canister Size: 6-Liter Sampling Period: 4-Hour

Canister Serial No.: 800 Flow Controller Serial No: 717

Initial Pressure: 4.2 Certified Flow Rate: 18.0

Return Pressure: 474.0 Certified By/Date: JJ 5/20/2013

Final Pressure: 1014.1 Flow Rate upon Return: 16.3

Date Shipped From Lab: 05/16/2013 Shipped By: JJ

Date Returned to Lab: 05/31/2013 Received By: JJ

Flow Controller Certification File ID: 4503/05201310

Canister Certification File ID: 4503/05151328

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

06/03/13
Chemist Signature/Date

6/5/13
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.

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: SWAPE Project: 601 Bridgeton Landfill

Site Address and/or ID No: Bridgeton Sanitary Landfill, Bridgeton, Missouri

Sample Name and/or ID No.: U-2 K Canister

AAC Batch ID: 130653 AAC Sample ID: 632666

SAMPLING INFORMATION

Start Date/Time: 5/24/13 9:40 Stop Date/Time: 5/24/13 13:40

Start Temp/Pressure*: 14°C / 30.43 Stop Temp/Pressure*: 19°C / 30.40

Initial Can Pressure**: -29.5 Final Can Pressure**: -9

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

Comments:

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

Canister Size: 6-Liter Sampling Period: 4-Hour

Canister Serial No.: 782 Flow Controller Serial No: 710

Initial Pressure: 4.2 Certified Flow Rate: 18.2

Return Pressure: 548.9 Certified By/Date: JJ 5/20/2013

Final Pressure: 1014.7 Flow Rate upon Return: 17.5

Date Shipped From Lab: 05/16/2013 Shipped By: JJ

Date Returned to Lab: 05/31/2013 Received By: JJ

Flow Controller Certification File ID: M503/05201310

Canister Certification File ID: M503/05151323

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

06/3/13 6/5/13

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.: SWAPE Project: 601 Bridgeton Landfill

Site Address and/or ID No: Bridgeton Sanitary Landfill, Bridgeton, Missouri

Sample Name and/or ID No.: D-1 W/G Canister

AAC Batch ID: 130653 AAC Sample ID: 63267

SAMPLING INFORMATION

Start Date/Time: 5/24/13 11:00 Stop Date/Time: 5/24/13 15:00

Start Temp/Pressure*: 14°C/30.43 Stop Temp/Pressure*: 20°C/30.4

Initial Can Pressure**: -29 Final Can Pressure**: -7

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

Comments:

JOHN BLANK
Sampler Name (Print)

Sampler Signature/Date

LABORATORY INFORMATION

Canister Size: 6-Liter Sampling Period: 4-Hour

Canister Serial No.: 741 Flow Controller Serial No: 715

Initial Pressure: 4.2 Certified Flow Rate: 18.0

Return Pressure: 583.7 Certified By/Date: 5/20/2013

Final Pressure: 1015.2 Flow Rate upon Return: 18.4

Date Shipped From Lab: 05/16/2013 Shipped By:

Date Returned to Lab: 05/31/2013 Received By:

Flow Controller Certification File ID: MFC03/05201310

Canister Certification File ID: M503/05153125

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

06/03/13
Chemist Signature/Date

6/5/13
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.

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: SWAPE Project: 601 Bridgeton Landfill

Site Address and/or ID No: Bridgeton Sanitary Landfill, Bridgeton, Missouri

Sample Name and/or ID No.: D-2 W6E Canister2

AAC Batch ID: 130653 AAC Sample ID: 63268

SAMPLING INFORMATION

Start Date/Time: 5/24/13 11:05 Stop Date/Time: 5/24/13 15:05

Start Temp/Pressure*: 14°C/30.43 Stop Temp/Pressure*: 20°C/30.4

Initial Can Pressure**: -29.5 Final Can Pressure**: -9

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

Comments:

John Black
Sampler Name (Print)

Sampler Signature/Date

LABORATORY INFORMATION

Canister Size: 6-Liter Sampling Period: 4-Hour

Canister Serial No.: 672 Flow Controller Serial No: 694

Initial Pressure: 4.2 Certified Flow Rate: 18.0

Return Pressure: 525.3 Certified By/Date: 5/20/2013

Final Pressure: 1015.7 Flow Rate upon Return: 18.8

Date Shipped From Lab: 05/14/2013 Shipped By:

Date Returned to Lab: 05/31/2013 Received By:

Flow Controller Certification File ID: 4503/05201310

Canister Certification File ID: 4503/05151722

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

06/2/13
Chemist Signature/Date

6/5/13
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.

TO-15 REPORTS

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130653
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 05/31/2013
DATE REPORTED : 06/03/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W4-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 K-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130653-63265				130653-63266				
Date Sampled	05/24/2013				05/24/2013				
Date Analyzed	05/31/2013				05/31/2013				
Can Dilution Factor	2.14				1.85				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	0.51	J	1.0	1.07	0.33	J	1.0	0.92	0.5
Propene	0.98	J	1.0	2.14	3.33		1.0	1.85	1.0
Dichlorodifluoromethane	0.56	J	1.0	1.07	0.55	J	1.0	0.92	0.5
Chloromethane	0.43	J	1.0	1.07	0.48	J	1.0	0.92	0.5
Dichlorotetrafluoroethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Vinyl Chloride	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Methanol	9.76	J	1.0	10.7	5.08	J	1.0	9.24	5.0
1,3-Butadiene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Bromomethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Chloroethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Dichlorofluoromethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Ethanol	2.61	J	1.0	4.28	5.75		1.0	3.70	2.0
Vinyl Bromide	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Acetone	3.49	J	1.0	4.28	3.07	J	1.0	3.70	2.0
Trichlorofluoromethane	0.28	J	1.0	1.07	0.26	J	1.0	0.92	0.5
2-Propanol (IPA)	1.05	J	1.0	4.28	0.72	J	1.0	3.70	2.0
Acrylonitrile	<SRL	U	1.0	2.14	<SRL	U	1.0	1.85	1.0
1,1-Dichloroethene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Methylene Chloride (DCM)	<SRL	U	1.0	2.14	<SRL	U	1.0	1.85	1.0
Allyl Chloride	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Carbon Disulfide	NR	U	1.0	1.07	NR	U	1.0	0.92	0.5
Trichlorotrifluoroethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
trans-1,2-Dichloroethene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,1-Dichloroethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Vinyl Acetate	<SRL	U	1.0	2.14	<SRL	U	1.0	1.85	1.0
2-Butanone (MEK)	<SRL	U	1.0	2.14	<SRL	U	1.0	1.85	1.0
cis-1,2-Dichloroethene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Hexane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Chloroform	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Ethyl Acetate	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Tetrahydrofuran	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,2-Dichloroethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,1,1-Trichloroethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5

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Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : **Soil Water Air Protection Enterprise**
PROJECT NO : **130653**
MATRIX : **AIR**
UNITS : **PPB (v/v)**

DATE RECEIVED : **05/31/2013**
DATE REPORTED : **06/03/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W4-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 K-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130653-63265				130653-63266				
Date Sampled	05/24/2013				05/24/2013				
Date Analyzed	05/31/2013				05/31/2013				
Can Dilution Factor	2.14				1.85				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Carbon Tetrachloride	<SRL	U	1.0	1.07	0.09	J	1.0	0.92	0.5
Cyclohexane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,2-Dichloropropane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Bromodichloromethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,4-Dioxane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Trichloroethene (TCE)	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
2,2,4-Trimethylpentane	0.36	J	1.0	1.07	0.30	J	1.0	0.92	0.5
Heptane	0.15	J	1.0	1.07	0.11	J	1.0	0.92	0.5
cis-1,3-Dichloropropene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
trans-1,3-Dichloropropene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,1,2-Trichloroethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Toluene	0.60	J	1.0	1.07	0.52	J	1.0	0.92	0.5
2-Hexanone (MBK)	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Dibromochloromethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,2-Dibromoethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Tetrachloroethene (PCE)	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Chlorobenzene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Ethylbenzene	0.13	J	1.0	1.07	0.15	J	1.0	0.92	0.5
m & p-Xylenes	0.36	J	1.0	2.14	0.41	J	1.0	1.85	1.0
Bromoform	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Styrene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
o-Xylene	0.17	J	1.0	1.07	0.17	J	1.0	0.92	0.5
4-Ethyltoluene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,2,4-Trimethylbenzene	0.21	J	1.0	1.07	0.17	J	1.0	0.92	0.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,3-Dichlorobenzene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,4-Dichlorobenzene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,2-Dichlorobenzene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
1,2,4-Trichlorobenzene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
Hexachlorobutadiene	<SRL	U	1.0	1.07	<SRL	U	1.0	0.92	0.5
BFB-Surrogate Std. % Recovery	100%				104%				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 : 130653
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 05/31/2013
DATE REPORTED : 06/03/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W6E-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130653-63267				130653-63268				
Date Sampled	05/24/2013				05/24/2013				
Date Analyzed	05/31/2013				05/31/2013				
Can Dilution Factor	1.74				1.93				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	0.33	J	1.0	0.87	0.33	J	1.0	0.97	0.5
Propene	2.61		1.0	1.74	2.13		1.0	1.93	1.0
Dichlorodifluoromethane	0.54	J	1.0	0.87	0.56	J	1.0	0.97	0.5
Chloromethane	0.50	J	1.0	0.87	0.46	J	1.0	0.97	0.5
Dichlorotetrafluoroethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Vinyl Chloride	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Methanol	92.0		5.0	43.5	27.1		1.0	9.67	5.0
1,3-Butadiene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Bromomethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Chloroethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Dichlorofluoromethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Ethanol	8.85		1.0	3.48	4.83		1.0	3.87	2.0
Vinyl Bromide	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Acetone	8.90		1.0	3.48	4.76		1.0	3.87	2.0
Trichlorofluoromethane	0.28	J	1.0	0.87	0.29	J	1.0	0.97	0.5
2-Propanol (IPA)	1.86	J	1.0	3.48	0.75	J	1.0	3.87	2.0
Acrylonitrile	<SRL	U	1.0	1.74	<SRL	U	1.0	1.93	1.0
1,1-Dichloroethene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Methylene Chloride (DCM)	<SRL	U	1.0	1.74	<SRL	U	1.0	1.93	1.0
Allyl Chloride	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Carbon Disulfide	NR	U	1.0	0.87	NR	U	1.0	0.97	0.5
Trichlorotrifluoroethane	0.10	J	1.0	0.87	<SRL	U	1.0	0.97	0.5
trans-1,2-Dichloroethene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,1-Dichloroethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Vinyl Acetate	<SRL	U	1.0	1.74	<SRL	U	1.0	1.93	1.0
2-Butanone (MEK)	4.35		1.0	1.74	1.39	J	1.0	1.93	1.0
cis-1,2-Dichloroethene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Hexane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Chloroform	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Ethyl Acetate	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Tetrahydrofuran	2.19		1.0	0.87	0.83	J	1.0	0.97	0.5
1,2-Dichloroethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,1,1-Trichloroethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5

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Laboratory Analysis Report

CLIENT	**: Soil Water Air Protection Enterprise**	**DATE RECEIVED**	**: 05/31/2013**
PROJECT NO	**: 130653**	**DATE REPORTED**	**: 06/03/2013**
MATRIX	**: AIR**		
UNITS	**: PPB (v/v)**		

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W6E-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130653-63267				130653-63268				
Date Sampled	05/24/2013				05/24/2013				
Date Analyzed	05/31/2013				05/31/2013				
Can Dilution Factor	1.74				1.93				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	6.28		1.0	0.87	3.48		1.0	0.97	0.5
Carbon Tetrachloride	0.09	J	1.0	0.87	0.10	J	1.0	0.97	0.5
Cyclohexane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,2-Dichloropropane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Bromodichloromethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,4-Dioxane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Trichloroethene (TCE)	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
2,2,4-Trimethylpentane	0.23	J	1.0	0.87	0.25	J	1.0	0.97	0.5
Heptane	0.17	J	1.0	0.87	0.15	J	1.0	0.97	0.5
cis-1,3-Dichloropropene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
4-Methyl-2-pentanone (MiBK)	0.10	J	1.0	0.87	<SRL	U	1.0	0.97	0.5
trans-1,3-Dichloropropene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,1,2-Trichloroethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Toluene	1.39		1.0	0.87	1.02		1.0	0.97	0.5
2-Hexanone (MBK)	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Dibromochloromethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,2-Dibromoethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Tetrachloroethene (PCE)	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Chlorobenzene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Ethylbenzene	0.42	J	1.0	0.87	0.25	J	1.0	0.97	0.5
m & p-Xylenes	0.85	J	1.0	1.74	0.54	J	1.0	1.93	1.0
Bromoform	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Styrene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
o-Xylene	0.33	J	1.0	0.87	0.21	J	1.0	0.97	0.5
4-Ethyltoluene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,3,5-Trimethylbenzene	0.09	J	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,2,4-Trimethylbenzene	0.30	J	1.0	0.87	0.23	J	1.0	0.97	0.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,3-Dichlorobenzene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,4-Dichlorobenzene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,2-Dichlorobenzene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
1,2,4-Trichlorobenzene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
Hexachlorobutadiene	<SRL	U	1.0	0.87	<SRL	U	1.0	0.97	0.5
BFB-Surrogate Std. % Recovery	105%				104%				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 : 05/31/2013 **INSTRUMENT ID** : GC/MS-03
ANALYST : JJG **CALIBRATION STD ID** : PS040413-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15
Continuing Calibration Verification of the 05/15/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
4-BFB (surrogate standard)	10.00	9.62	96
Chlorodifluoromethane	10.10	9.72	96
Propene	11.00	10.37	94
Dichlorodifluoromethane	9.80	9.67	99
Chloromethane	10.10	10.04	99
Dichlorotetrafluoroethane	10.10	10.14	100
Vinyl Chloride	10.20	9.66	95
Methanol	4.90	4.94	101
1,3-Butadiene	10.50	9.53	91
Bromomethane	10.20	8.75	86
Chloroethane	10.00	9.67	97
Dichlorofluoromethane	10.00	10.24	102
Ethanol	9.80	10.10	103
Vinyl Bromide	10.20	10.40	102
Acetone	10.80	9.57	89
Trichlorofluoromethane	10.10	10.69	106
2-Propanol (IPA)	11.00	10.12	92
Acrylonitrile	10.50	10.83	103
1,1-Dichloroethene	10.50	10.20	97
Methylene Chloride (DCM)	10.40	9.74	94
Allyl Chloride	11.00	10.88	99
Carbon Disulfide	10.50	9.63	92
Trichlorotrifluoroethane	10.40	10.25	99
trans-1,2-Dichloroethene	10.40	10.15	98
1,1-Dichloroethane	10.40	9.86	95
Methyl Tert Butyl Ether (MTBE)	10.60	10.57	100
Vinyl Acetate	9.70	9.68	100
2-Butanone (MEK)	10.60	10.85	102
cis-1,2-Dichloroethene	10.60	10.22	96
Hexane	10.70	9.70	91
Chloroform	10.60	10.56	100
Ethyl Acetate	11.00	11.00	100
Tetrahydrofuran	10.80	10.41	96
1,2-Dichloroethane	10.40	10.70	103
1,1,1-Trichloroethane	10.50	10.83	103

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ANALYSIS DATE : 05/31/2013 **INSTRUMENT ID : GC/MS-03**
ANALYST : JJG **CALIBRATION STD ID : PS040413-01**

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15
Continuing Calibration Verification of the 05/15/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
Benzene	10.50	9.97	95
Carbon Tetrachloride	10.10	10.65	105
Cyclohexane	10.50	9.92	94
1,2-Dichloropropane	10.50	10.24	98
Bromodichloromethane	10.30	10.68	104
1,4-Dioxane	10.30	10.25	100
Trichloroethene (TCE)	10.30	10.38	101
2,2,4-Trimethylpentane	10.90	10.62	97
Heptane	10.70	10.55	99
cis-1,3-Dichloropropene	11.00	10.95	100
4-Methyl-2-pentanone (MiBK)	10.30	10.36	101
trans-1,3-Dichloropropene	9.80	9.96	102
1,1,2-Trichloroethane	10.60	10.83	102
Toluene	10.60	10.46	99
2-Hexanone (MBK)	10.80	10.89	101
Dibromochloromethane	11.00	11.62	106
1,2-Dibromoethane	10.40	10.42	100
Tetrachloroethene (PCE)	10.40	10.54	101
Chlorobenzene	10.60	10.05	95
Ethylbenzene	10.50	9.94	95
m & p-Xylenes	20.60	18.61	90
Bromoform	10.30	10.01	97
Styrene	10.40	9.76	94
1,1,2,2-Tetrachloroethane	10.60	9.68	91
o-Xylene	10.60	9.52	90
4-Ethyltoluene	10.40	9.88	95
1,3,5-Trimethylbenzene	10.20	9.40	92
1,2,4-Trimethylbenzene	10.20	9.80	96
Benzyl Chloride (a-Chlorotoluene)	10.00	10.07	101
1,3-Dichlorobenzene	10.00	9.57	96
1,4-Dichlorobenzene	10.00	9.31	93
1,2-Dichlorobenzene	10.00	9.41	94
1,2,4-Trichlorobenzene	9.30	9.03	97
Hexachlorobutadiene	9.80	9.40	96

* - %REC should be 70-130%

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Laboratory Director

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Quality Control/Quality Assurance Report

CLIENT ID	**: Laboratory Control Spike**	**DATE ANALYZED**	**: 05/31/2013**
AAC ID	**: LCS/LCSD**	**DATE REPORTED**	**: 05/31/2013**
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	10.20	10.00	97	95	2.0
Methylene Chloride (DCM)	0.0	10.40	9.74	9.75	94	94	0.1
Benzene	0.0	10.50	9.97	9.80	95	93	1.7
Trichloroethene (TCE)	0.0	10.30	10.38	10.12	101	98	2.5
Toluene	0.0	10.60	10.46	10.34	99	98	1.2
Tetrachloroethene (PCE)	0.0	10.40	10.54	10.24	101	98	2.9
Chlorobenzene	0.0	10.60	10.05	10.37	95	98	3.1
Ethylbenzene	0.0	10.50	9.94	10.11	95	96	1.7
m & p-Xylenes	0.0	20.60	18.61	19.96	90	97	7.0
o-Xylene	0.0	10.60	9.52	9.87	90	93	3.6

* Must be 70-130%

** Must be < 25%

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Method Blank Analysis Report

MATRIX	**: AIR**	**ANALYSIS DATE**	**: 05/31/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 05/31/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	Method Blank	RL
AAC ID	MB 053113	
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**	**: 05/31/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 05/31/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	Method Blank	RL
AAC ID	MB 053113	
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	102%	--

RL - Reporting Limit

Marcus Hueppe
Laboratory Director

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Quality Control/Quality Assurance Report

AAC ID	**: 130647-63190**	**DATE ANALYZED**	**: 05/31/2013**
MATRIX	**: Air**	**DATE REPORTED**	**: 05/31/2013**
		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	14.4	14.7	2.1
1,3-Butadiene	<SRL	<SRL	0.0
Bromomethane	<SRL	<SRL	0.0
Chloroethane	<SRL	<SRL	0.0
Dichlorofluoromethane	<SRL	<SRL	0.0
Ethanol	5.80	5.59	3.7
Vinyl Bromide	<SRL	<SRL	0.0
Acetone	5.12	5.02	2.0
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	**: 130647-63190**	**DATE ANALYZED**	**: 05/31/2013**
MATRIX	**: Air**	**DATE REPORTED**	**: 05/31/2013**
		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	<SRL	<SRL	0.0
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	102%	105%	2.8

SRL - Sample Reporting Limit

Marcus Hueppe
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ANALYSIS DATE : 06/03/2013
ANALYST : JJG
INSTRUMENT ID : GC/MS-03
CALIBRATION STD ID : PS040413-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 05/15/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
4-BFB (surrogate standard)	10.00	10.05	101
Chlorodifluoromethane	10.10	9.47	94
Propene	11.00	9.92	90
Dichlorodifluoromethane	9.80	9.57	98
Chloromethane	10.10	10.06	100
Dichlorotetrafluoroethane	10.10	10.14	100
Vinyl Chloride	10.20	10.07	99
Methanol	4.90	5.21	106
1,3-Butadiene	10.50	9.50	90
Bromomethane	10.20	8.28	81
Chloroethane	10.00	9.63	96
Dichlorofluoromethane	10.00	10.06	101
Ethanol	9.80	10.44	107
Vinyl Bromide	10.20	10.33	101
Acetone	10.80	9.50	88
Trichlorofluoromethane	10.10	10.68	106
2-Propanol (IPA)	11.00	10.27	93
Acrylonitrile	10.50	10.19	97
1,1-Dichloroethene	10.50	10.18	97
Methylene Chloride (DCM)	10.40	9.95	96
Allyl Chloride	11.00	11.09	101
Carbon Disulfide	10.50	9.76	93
Trichlorotrifluoroethane	10.40	10.15	98
trans-1,2-Dichloroethene	10.40	10.03	96
1,1-Dichloroethane	10.40	10.15	98
Methyl Tert Butyl Ether (MTBE)	10.60	10.78	102
Vinyl Acetate	9.70	10.02	103
2-Butanone (MEK)	10.60	10.87	103
cis-1,2-Dichloroethene	10.60	10.37	98
Hexane	10.70	9.94	93
Chloroform	10.60	10.65	100
Ethyl Acetate	11.00	11.09	101
Tetrahydrofuran	10.80	10.41	96
1,2-Dichloroethane	10.40	10.81	104
1,1,1-Trichloroethane	10.50	10.89	104

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ANALYSIS DATE : 06/03/2013 **INSTRUMENT ID** : GC/MS-03
ANALYST : JJG **CALIBRATION STD ID** : PS040413-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 05/15/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
Benzene	10.50	9.97	95
Carbon Tetrachloride	10.10	10.48	104
Cyclohexane	10.50	10.08	96
1,2-Dichloropropane	10.50	10.01	95
Bromodichloromethane	10.30	10.26	100
1,4-Dioxane	10.30	9.91	96
Trichloroethene (TCE)	10.30	10.18	99
2,2,4-Trimethylpentane	10.90	10.61	97
Heptane	10.70	10.20	95
cis-1,3-Dichloropropene	11.00	10.96	100
4-Methyl-2-pentanone (MiBK)	10.30	10.30	100
trans-1,3-Dichloropropene	9.80	9.83	100
1,1,2-Trichloroethane	10.60	10.46	99
Toluene	10.60	10.37	98
2-Hexanone (MBK)	10.80	10.33	96
Dibromochloromethane	11.00	11.43	104
1,2-Dibromoethane	10.40	10.33	99
Tetrachloroethene (PCE)	10.40	10.25	99
Chlorobenzene	10.60	10.52	99
Ethylbenzene	10.50	10.65	101
m & p-Xylenes	20.60	20.34	99
Bromoform	10.30	10.46	102
Styrene	10.40	10.11	97
1,1,2,2-Tetrachloroethane	10.60	10.31	97
o-Xylene	10.60	10.12	95
4-Ethyltoluene	10.40	10.62	102
1,3,5-Trimethylbenzene	10.20	9.91	97
1,2,4-Trimethylbenzene	10.20	10.36	102
Benzyl Chloride (a-Chlorotoluene)	10.00	10.98	110
1,3-Dichlorobenzene	10.00	10.24	102
1,4-Dichlorobenzene	10.00	9.74	97
1,2-Dichlorobenzene	10.00	9.86	99
1,2,4-Trichlorobenzene	9.30	9.46	102
Hexachlorobutadiene	9.80	9.67	99

* - %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**	**: 06/03/2013**
AAC ID	**: LCS/LCSD**	**DATE REPORTED**	**: 06/03/2013**
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	10.18	10.08	97	96	1.0
Methylene Chloride (DCM)	0.0	10.40	9.95	10.06	96	97	1.1
Benzene	0.0	10.50	9.97	9.78	95	93	1.9
Trichloroethene (TCE)	0.0	10.30	10.18	10.05	99	98	1.3
Toluene	0.0	10.60	10.37	9.99	98	94	3.7
Tetrachloroethene (PCE)	0.0	10.40	10.25	10.17	99	98	0.8
Chlorobenzene	0.0	10.60	10.52	10.31	99	97	2.0
Ethylbenzene	0.0	10.50	10.65	10.34	101	98	3.0
m & p-Xylenes	0.0	20.60	20.34	19.51	99	95	4.2
o-Xylene	0.0	10.60	10.12	9.92	95	94	2.0

* Must be 70-130%

** Must be < 25%

Marcus Hueppe
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Method Blank Analysis Report

MATRIX	**: AIR**	**ANALYSIS DATE**	**: 06/03/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 06/03/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	Method Blank	RL
AAC ID	MB 060313	
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**	**: 06/03/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 06/03/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 060313	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	101%	--

RL - Reporting Limit

Marcus Hueppe
Laboratory Director

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Quality Control/Quality Assurance Report

AAC ID	**: 130650-63200**	**DATE ANALYZED**	**: 06/03/2013**
MATRIX	**: Air**	**DATE REPORTED**	**: 06/03/2013**
		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	143	142	0.7
1,3-Butadiene	<SRL	<SRL	0.0
Bromomethane	<SRL	<SRL	0.0
Chloroethane	<SRL	<SRL	0.0
Dichlorofluoromethane	<SRL	<SRL	0.0
Ethanol	<SRL	<SRL	0.0
Vinyl Bromide	<SRL	<SRL	0.0
Acetone	<SRL	<SRL	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	**: 130650-63200**	**DATE ANALYZED**	**: 06/03/2013**
MATRIX	**: Air**	**DATE REPORTED**	**: 06/03/2013**
		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	<SRL	<SRL	0.0
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	102%	103%	1.2

SRL - Sample Reporting Limit

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Laboratory Director

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TO-15 RAW DATA

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311320.D
Acq On : 31 May 2013 23:42
Operator : JJG
Sample : 130653-63265 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 03 10:30:32 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	12.350	128	142866	10.00	ppbv		0.00
36) 1,4-Difluorobenzene	14.579	114	787200	10.00	ppbv		0.00
55) Chlorobenzene-d5	20.285	117	727144	10.00	ppbv		0.00
System Monitoring Compounds							
63) 4-Bromofluorobenzene(BFB)	22.711	174	456383	10.03	ppbv		0.00
Spiked Amount 10.000			Recovery = 100.30%				
Target Compounds							Qvalue
2) Chlorodifluoromethane	4.836	51	6929	0.24	ppbv	#	99
3) Propene	4.799	42	3389	0.46	ppbv	#	66
4) Dichlorodifluoromethane	4.908	85	12790	0.26	ppbv		97
5) Chloromethane	5.306	52	914	0.20	ppbv	#	1
6) Dichlorotetrafluoroethane	5.324	135	118	N.D.			
7) VinylChloride	0.000		0	N.D.			
8) Methanol	5.849	31	21090m	4.56	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	7403	1.22	ppbv	#	87
14) VinylBromide	0.000		0	N.D.			
15) Acetone	7.984	58	12591	1.63	ppbv	#	83
16) Trichlorofluoromethane	7.659	103	3750	0.13	ppbv	#	92
17) 2-Propanol(IPA)	8.220	45	12890m	0.49	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	9.251	39	236	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	1345	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	12.511	83	308	N.D.			
32) EthylAcetate	0.000		0	N.D.	d		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311320.D
Acq On : 31 May 2013 23:42
Operator : JJG
Sample : 130653-63265 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 03 10:30:32 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 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. d	
39) Cyclohexane	14.027	69	289	N.D.	
40) 1,2-Dichloropropane	15.275	63	217	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	14.758	57	17209	0.17 ppbv	97
45) Heptane	15.096	71	1372	0.07 ppbv	89
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	17.682	75	501	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	20862	0.28 ppbv #	96
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	20.285	114	135	N.D.	
57) Ethylbenzene	20.713	91	5717	0.06 ppbv #	91
58) m&p-Xylene	20.963	106	6513	0.17 ppbv #	93
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.694	104	466	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	6346	0.08 ppbv #	94
64) 4-Ethyltoluene	23.691	120	937	N.D.	
65) 1,3,5-Trimethylbenzene	23.781	120	1424	N.D.	
66) 1,2,4-Trimethylbenzene	24.547	120	4373	0.10 ppbv #	77
67) BenzylChloride(a-Chlor...	0.000		0	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	0.000		0	N.D.	
70) 1,2-Dichlorobenzene	0.000		0	N.D.	
71) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
72) Hexachlorobutadiene	0.000		0	N.D.	

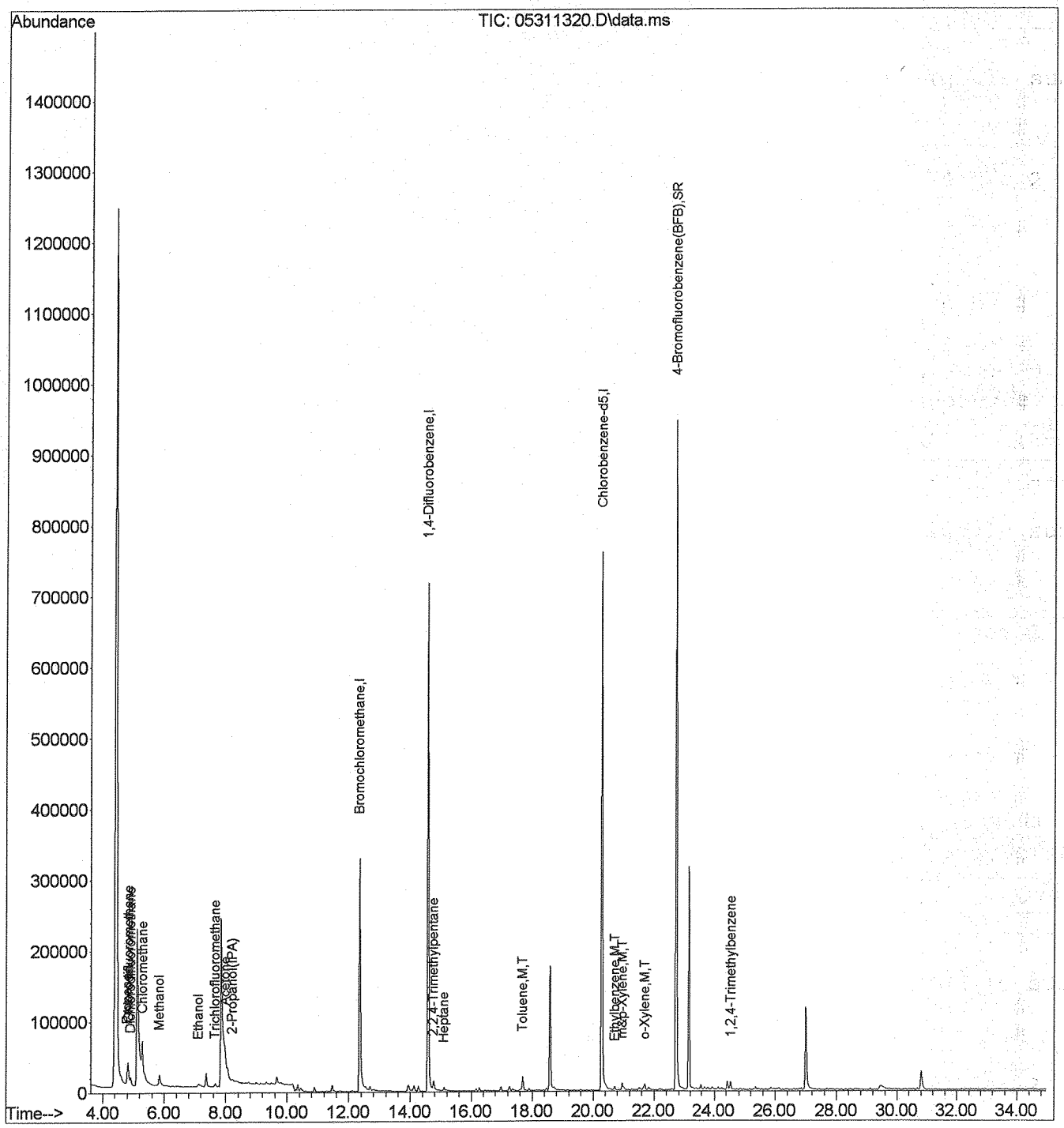
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6/6/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311320.D
Acq On : 31 May 2013 23:42
Operator : JJG
Sample : 130653-63265 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 03 10:30:32 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311321.D
Acq On : 1 Jun 2013 00:30
Operator : JJG
Sample : 130653-63266 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 03 10:32:03 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	141549	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	763762	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	722248	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	467901	10.35	ppbv	0.00
Spiked Amount 10.000			Recovery = 103.50%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.835	51	4934	0.18	ppbv #	95
3) Propene	4.781	42	13293	1.80	ppbv	95
4) Dichlorodifluoromethane	4.908	85	14410	0.30	ppbv	98
5) Chloromethane	5.288	52	1180	0.26	ppbv #	1
6) Dichlorotetrafluoroethane	0.000		0	N.D.		
7) VinylChloride	0.000		0	N.D.		
8) Methanol	5.867	31	12664m	2.75	ppbv	
9) 1,3-Butadiene	0.000		0	N.D.		
10) Bromomethane	6.428	96	347	N.D.		
11) Chloroethane	0.000		0	N.D.	d	
12) Dichlorofluoromethane	0.000		0	N.D.		
13) Ethanol	7.116	45	18768m	3.11	ppbv	
14) VinylBromide	0.000		0	N.D.		
15) Acetone	8.020	58	12715	1.66	ppbv #	92
16) Trichlorofluoromethane	7.659	103	3940	0.14	ppbv #	87
17) 2-Propanol(IPA)	8.238	45	10255m	0.39	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	9.233	39	115	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	1140	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	12.493	83	352	N.D.		
32) EthylAcetate	0.000		0	N.D.	d	

06/02/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311321.D
Acq On : 1 Jun 2013 00:30
Operator : JJG
Sample : 130653-63266 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 03 10:32:03 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

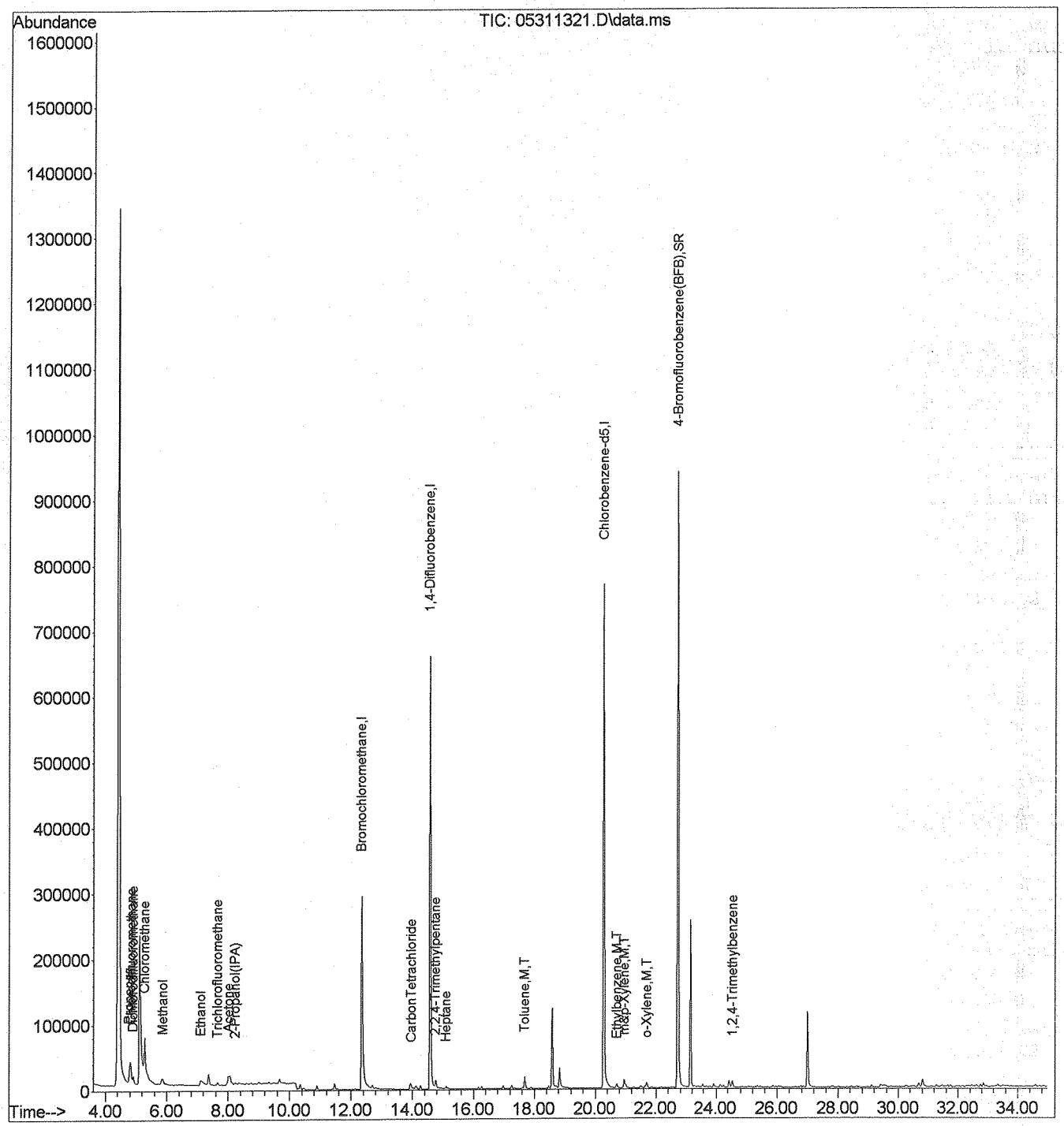
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.	
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D. d	
38) CarbonTetrachloride	13.973	117	2495	0.05 ppbv #	96
39) Cyclohexane	14.026	69	107	N.D.	
40) 1,2-Dichloropropane	0.000		0	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	14.757	57	16005	0.16 ppbv	97
45) Heptane	15.096	71	1031	0.06 ppbv #	85
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	17.682	75	170	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	20162	0.28 ppbv #	95
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	20.285	114	267	N.D.	
57) Ethylbenzene	20.713	91	7179	0.08 ppbv #	95
58) m&p-Xylene	20.963	106	8395	0.22 ppbv #	78
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.694	104	395	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	6885	0.09 ppbv #	94
64) 4-Ethyltoluene	23.691	120	717	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1044	N.D.	
66) 1,2,4-Trimethylbenzene	24.547	120	4122	0.09 ppbv #	96
67) BenzylChloride(a-Chlor...	0.000		0	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	0.000		0	N.D.	
70) 1,2-Dichlorobenzene	0.000		0	N.D.	
71) 1,2,4-Trichlorobenzene	0.000		0	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\053113\
Data File : 05311321.D
Acq On : 1 Jun 2013 00:30
Operator : JJG
Sample : 130653-63266 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 03 10:32:03 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311322.D
Acq On : 1 Jun 2013 1:18
Operator : JJG
Sample : 130653-63267 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 03 10:36:18 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	142202	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	771983	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.285	117	727354	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	479036	10.52 ppbv	0.00
Spiked Amount 10.000			Recovery = 105.20%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.817	51	5268	0.19 ppbv #	95
3) Propene	4.781	42	11071	1.50 ppbv	93
4) Dichlorodifluoromethane	4.908	85	15208	0.31 ppbv	99
5) Chloromethane	5.288	52	1326	0.29 ppbv #	18
6) Dichlorotetrafluoroethane	5.324	135	136	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.795	31	202010m	52.14 ppbv	
9) 1,3-Butadiene	5.849	54	222	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	7.061	45	30863m	5.09 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.966	58	39461m	5.12 ppbv	
16) Trichlorofluoromethane	7.659	103	4483	0.16 ppbv	96
17) 2-Propanol(IPA)	8.183	45	28175m	1.07 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	9.233	39	132	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	8.980	103	1297	0.06 ppbv	89
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	1229	N.D.	
28) 2-Butanone(MEK)	11.441	72	19660	2.50 ppbv #	81
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	12.493	83	358	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311322.D
Acq On : 1 Jun 2013 1:18
Operator : JJG
Sample : 130653-63267 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 03 10:36:18 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.707	72	9984	1.26 ppbv	90
34) 1,2-Dichloroethane	13.616	62	116	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	205441	3.61 ppbv	99
38) CarbonTetrachloride	13.973	117	2443	0.05 ppbv	96
39) Cyclohexane	14.026	69	297	N.D.	
40) 1,2-Dichloropropane	15.328	63	423	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	15.685	88	116	N.D.	
43) Trichloroethene(TCE)	0.000		0	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	12882	0.13 ppbv #	87
45) Heptane	15.114	71	1759	0.10 ppbv #	72
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.558	58	1248	0.06 ppbv #	88
48) trans-1,3-Dichloropropene	17.682	75	349	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D. d	
50) Toluene	17.682	91	57977m	0.80 ppbv	
51) 2-Hexanone(MBK)	0.000		0	N.D. d	
52) Dibromochloromethane	19.019	129	120	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	0.000		0	N.D.	
56) Chlorobenzene	20.374	114	257	N.D.	
57) Ethylbenzene	20.713	91	23284	0.24 ppbv	97
58) m&p-Xylene	20.945	106	18628	0.49 ppbv #	90
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.676	104	1357	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	14610	0.19 ppbv #	96
64) 4-Ethyltoluene	0.000		0	N.D. d	
65) 1,3,5-Trimethylbenzene	23.780	120	2373	0.05 ppbv #	90
66) 1,2,4-Trimethylbenzene	24.529	120	7667	0.17 ppbv #	90
67) BenzylChloride(a-Chlor...	25.118	91	448	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	0.000		0	N.D. d	
70) 1,2-Dichlorobenzene	0.000		0	N.D.	
71) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
72) Hexachlorobutadiene	0.000		0	N.D.	

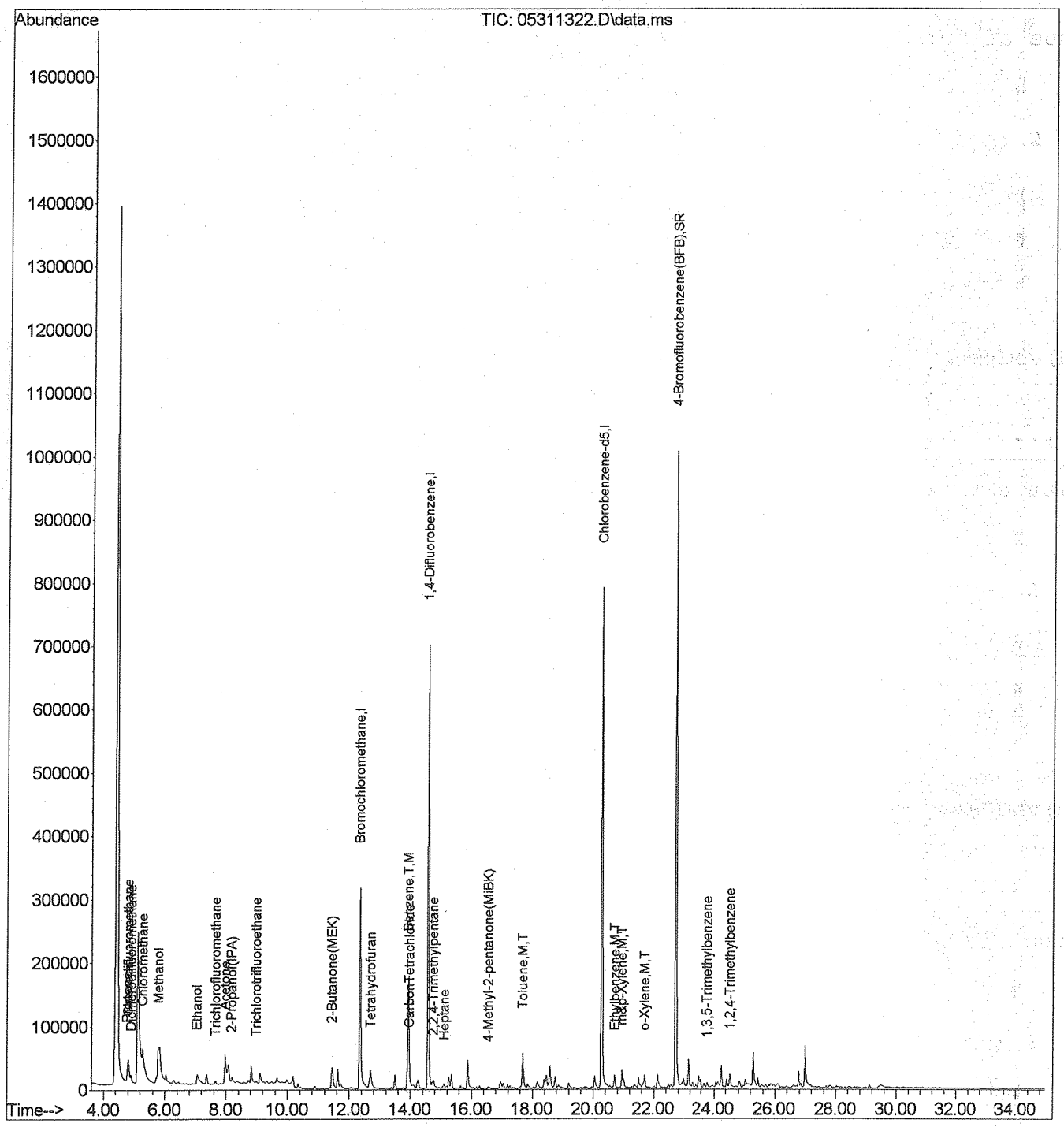
(#) = qualifier out of range (m) = manual integration (+) = signals summed

06/03/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311322.D
Acq On : 1 Jun 2013 1:18
Operator : JJG
Sample : 130653-63267 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 03 10:36:18 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



06/03/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031308.D
Acq On : 3 Jun 2013 13:56
Operator : JJG
Sample : 130653-63267 x5
Misc : IS/Surr: PS082712-02 + 100mL
ALS Vial : 4 Sample Multiplier: 5

Quant Time: Jun 03 14:30:51 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	148490	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	812924	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	745782	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.711	174	473718	10.15	ppbv	0.00
Spiked Amount 10.000			Recovery = 101.50%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.836	51	1151	N.D.		
3) Propene	4.799	42	2325	N.D.		
4) Dichlorodifluoromethane	4.926	85	3139	N.D.		
5) Chloromethane	5.306	52	227	N.D.		
6) Dichlorotetrafluoroethane	0.000		0	N.D.		
7) VinylChloride	0.000		0	N.D.		
8) Methanol	5.867	31	49795m	52.90	ppbv	
9) 1,3-Butadiene	0.000		0	N.D.		
10) Bromomethane	6.446	96	342	N.D.		
11) Chloroethane	0.000		0	N.D.		
12) Dichlorofluoromethane	0.000		0	N.D.		
13) Ethanol	7.170	45	6771	N.D.		
14) VinylBromide	0.000		0	N.D.		
15) Acetone	8.039	58	9349	N.D.		
16) Trichlorofluoromethane	7.677	103	786	N.D.		
17) 2-Propanol(IPA)	8.256	45	7650	N.D.		
18) Acrylonitrile	0.000		0	N.D.		
19) 1,1-Dichloroethene	0.000		0	N.D.		
20) MethyleneChloride(DCM)	9.342	84	1386	N.D.		
21) AllylChloride	0.000		0	N.D.		
22) CarbonDisulfide	9.504	76	3310	N.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	10.906	43	112	N.D.		
28) 2-Butanone(MEK)	11.512	72	3128	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	12.118	43	2186	N.D.		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031308.D
Acq On : 3 Jun 2013 13:56
Operator : JJG
Sample : 130653-63267 x5
Misc : IS/Surr: PS082712-02 + 100mL
ALS Vial : 4 Sample Multiplier: 5

Quant Time: Jun 03 14:30:51 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

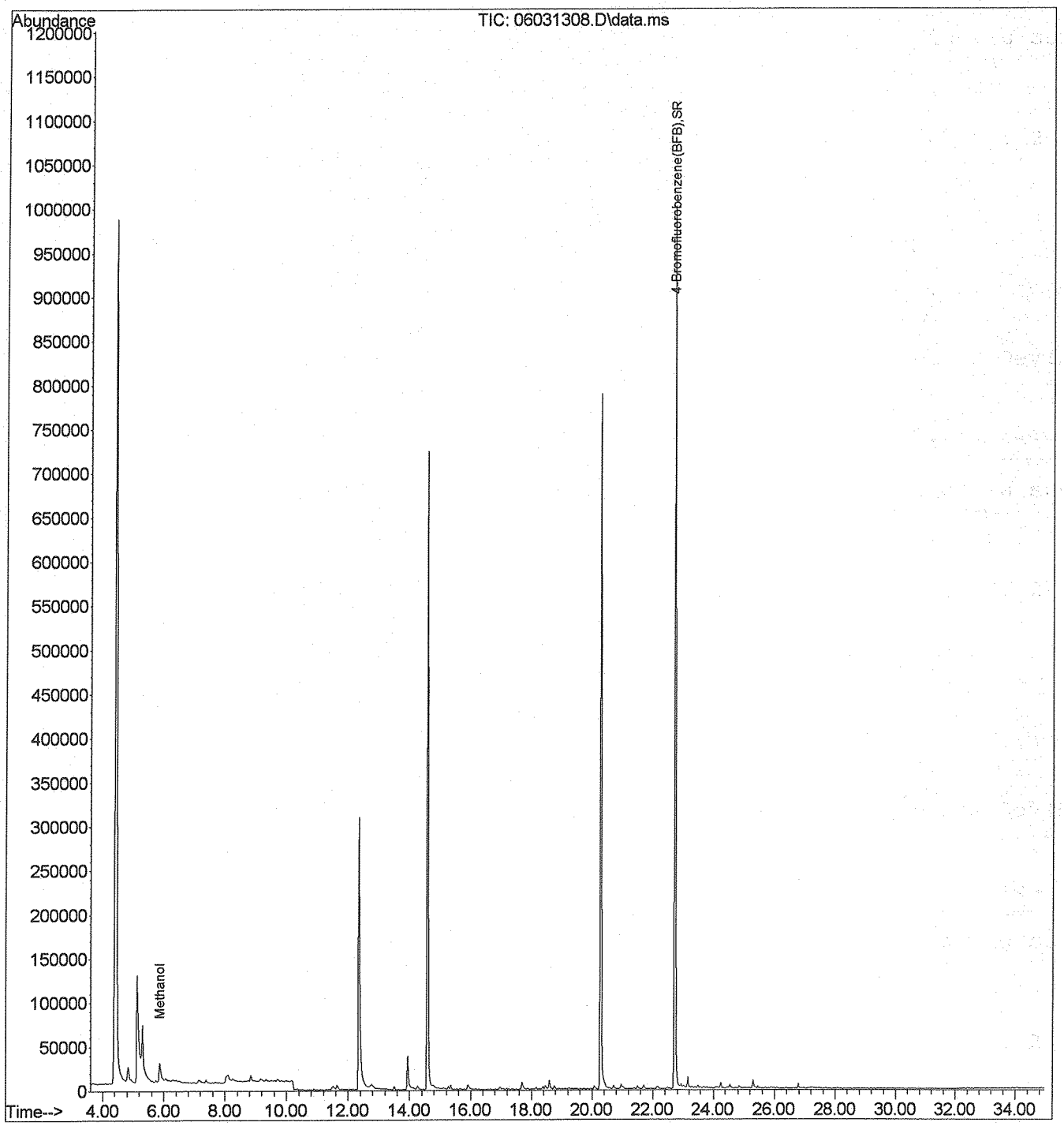
Compound	R.T.	QIon	Response	Conc Units
33) Tetrahydrofuran	12.778	72	1775	N.D.
34) 1,2-Dichloroethane	0.000		0	N.D.
35) 1,1,1-Trichloroethane	0.000		0	N.D.
37) Benzene	13.937	78	46630	N.D.
38) CarbonTetrachloride	13.955	117	488	N.D.
39) Cyclohexane	0.000		0	N.D.
40) 1,2-Dichloropropane	0.000		0	N.D.
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	14.775	57	3478	N.D.
45) Heptane	15.096	71	144	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	17.860	97	1317	N.D.
50) Toluene	17.682	91	12061	N.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	20.285	114	247	N.D.
57) Ethylbenzene	20.713	91	4802	N.D.
58) m&p-Xylene	20.963	106	3519	N.D.
59) Bromoform	0.000		0	N.D.
60) Styrene	0.000		0	N.D.
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.
62) o-Xylene	21.712	91	3042	N.D.
64) 4-Ethyltoluene	23.691	120	164	N.D.
65) 1,3,5-Trimethylbenzene	23.798	120	393	N.D.
66) 1,2,4-Trimethylbenzene	24.547	120	1337	N.D.
67) BenzylChloride(a-Chlor...	25.296	91	1686	N.D.
68) 1,3-Dichlorobenzene	0.000		0	N.D.
69) 1,4-Dichlorobenzene	25.296	146	768	N.D.
70) 1,2-Dichlorobenzene	0.000		0	N.D.
71) 1,2,4-Trichlorobenzene	0.000		0	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\060313\
Data File : 06031308.D
Acq On : 3 Jun 2013 13:56
Operator : JJG
Sample : 130653-63267 x5
Misc : IS/Surr: PS082712-02 + 100mL
ALS Vial : 4 Sample Multiplier: 5

Quant Time: Jun 03 14:30:51 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



06/03/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311323.D
Acq On : 1 Jun 2013 2:06
Operator : JJG
Sample : 130653-63268 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 03 10:38:17 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	136783	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	765481	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.285	117	716314	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	464955	10.37 ppbv	0.00
Spiked Amount 10.000			Recovery = 103.70%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.817	51	4593	0.17 ppbv #	95
3) Propene	4.781	42	7826	1.10 ppbv	86
4) Dichlorodifluoromethane	4.890	85	13490	0.29 ppbv	97
5) Chloromethane	5.288	52	1035	0.24 ppbv #	1
6) Dichlorotetrafluoroethane	5.324	135	166	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.849	31	60057m	14.01 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.	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.116	45	14605m	2.50 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	8.002	58	18207m	2.46 ppbv	
16) Trichlorofluoromethane	7.659	103	3992	0.15 ppbv #	93
17) 2-Propanol(IPA)	8.220	45	9924	0.39 ppbv #	25
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	9.197	39	116	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	1038	N.D.	
28) 2-Butanone(MEK)	11.476	72	5424	0.72 ppbv #	10
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	12.493	83	296	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311323.D
Acq On : 1 Jun 2013 2:06
Operator : JJG
Sample : 130653-63268 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 03 10:38:17 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

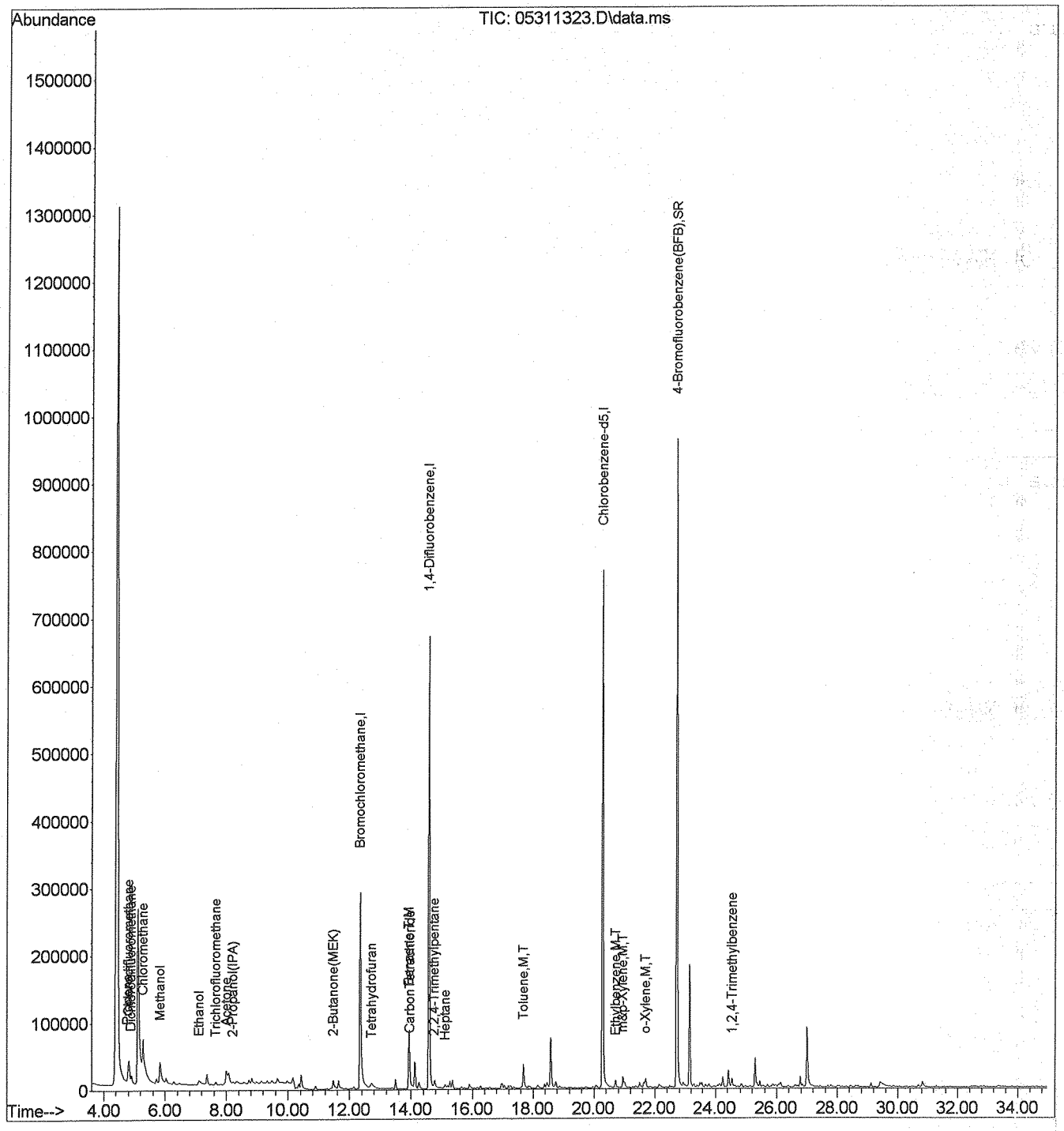
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.725	72	3312	0.43 ppbv	85
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	101718	1.80 ppbv	99
38) CarbonTetrachloride	13.973	117	2400	0.05 ppbv #	97
39) Cyclohexane	14.008	69	262	N.D.	
40) 1,2-Dichloropropane	15.346	63	123	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	14.757	57	13384	0.13 ppbv #	92
45) Heptane	15.114	71	1479	0.08 ppbv #	78
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.612	58	539	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	173	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D. d	
50) Toluene	17.682	91	38071	0.53 ppbv #	98
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	0.000		0	N.D.	
57) Ethylbenzene	20.713	91	12090	0.13 ppbv #	93
58) m&p-Xylene	20.945	106	10504	0.28 ppbv #	84
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.676	104	969	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	8528	0.11 ppbv #	92
64) 4-Ethyltoluene	23.691	120	914	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1640	N.D.	
66) 1,2,4-Trimethylbenzene	24.547	120	5143	0.12 ppbv #	93
67) BenzylChloride(a-Chlor...	25.100	91	251	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	0.000		0	N.D. d	
70) 1,2-Dichlorobenzene	0.000		0	N.D.	
71) 1,2,4-Trichlorobenzene	0.000		0	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\053113\
Data File : 05311323.D
Acq On : 1 Jun 2013 2:06
Operator : JJG
Sample : 130653-63268 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 03 10:38:17 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



TO-15 RAW QC & ICAL SUMMARY

MS #3 Instrument Logbook

Sequence Name: C:\msdchem\1\sequence\2013\053113.S
Comment: GCMS-03
Operator: JJG
Data Path: C:\MSDCHEM\1\MS03\2013\053113\
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	05311301 TO15-5MS TO15 BFB 053113
2)	Sample	1	05311302 TO15-5MS TO15 CCV 053113
3)	Sample	1	05311303 TO15-5MS TO15 LCSD 053113
4)	Sample	1	05311304 TO15-5MS TO15 MB 053113
5)	Sample	2	05311305 TO15-5MS 130647-63190 x1
6)	Sample	2	05311306 TO15-5MS 130647-63190 x1 dp
7)	Sample	3	05311307 TO15-5MS 130647-63191 x1
8)	Sample	4	05311308 TO15-5MS 130647-63192 x1
9)	Sample	5	05311309 TO15-5MS 130647-63193 x1
10)	Sample	6	05311310 TO15-5MS 130647-63194 x1
11)	Sample	7	05311311 TO15-5MS 130647-63195 x1
12)	Sample	8	05311312 TO15-5MS 130647-63196 x1
13)	Sample	9	05311313 TO15-5MS 130647-63197 x1
14)	Sample	10	05311314 TO15-5MS 130650-63200 x1
15)	Sample	11	05311315 TO15-5MS 130650-63209 x1
16)	Sample	12	05311316 TO15-5MS 130650-63218 x1
17)	Sample	13	05311317 TO15-5MS 130650-63227 x1
18)	Sample	14	05311318 TO15-5MS 130650-63236 x1
19)	Sample	15	05311319 TO15-5MS 130650-63245 x1
20)	Sample	16	05311320 TO15-5MS 130653-63265 x1
21)	Sample	2	05311321 TO15-5MS 130653-63266 x1
22)	Sample	3	05311322 TO15-5MS 130653-63267 x1
23)	Sample	4	05311323 TO15-5MS 130653-63268 x1
24)	Sample	5	05311324 TO15-5MS 130647-63193 x2
25)	Sample	7	05311325 TO15-5MS 130647-63195 x5
26)	Sample	6	05311326 TO15-5MS Flow Check#053113-01
27)	Sample	1	05311327 TO15-5MS Can Check#000529

06/03/13

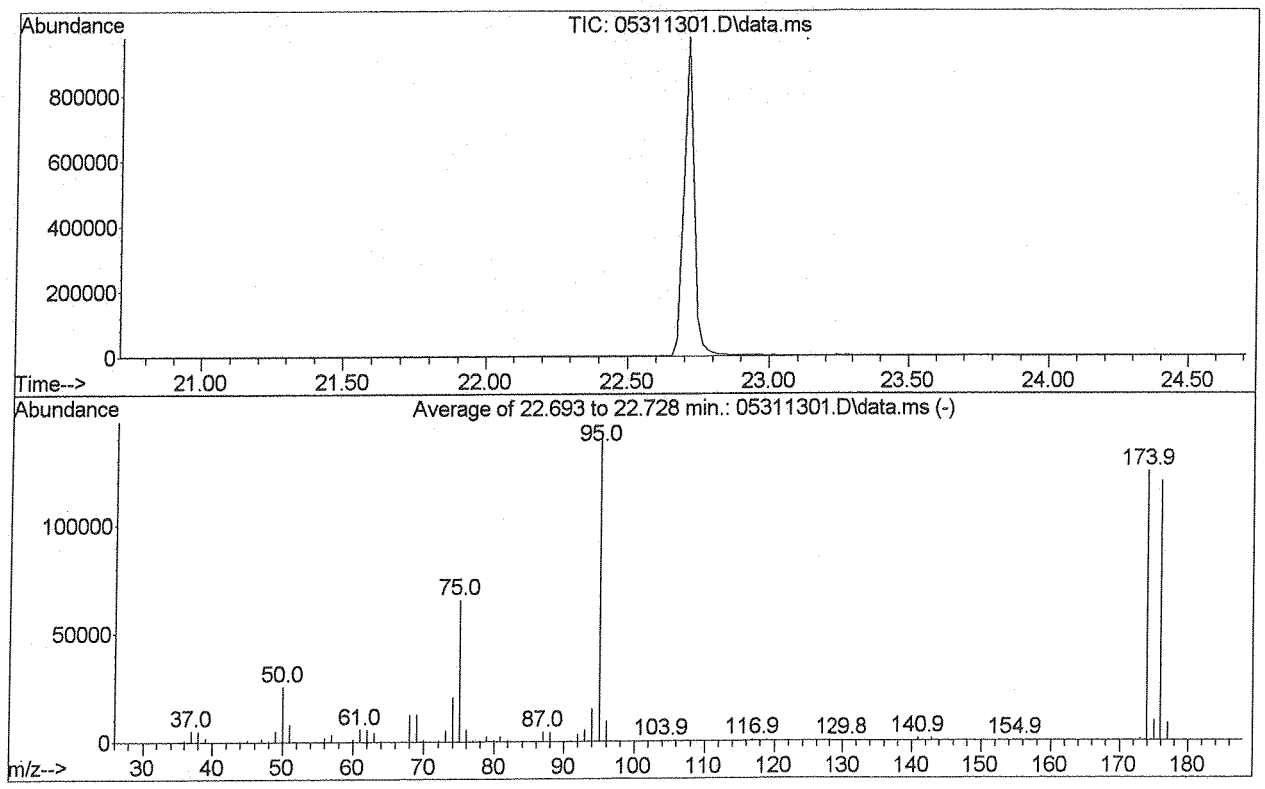
Comments: _____

Analyst: _____ **Date:** 06/03/13

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311301.D
Acq On : 31 May 2013 8:32 am
Operator : JJG
Sample : TO15 BFB 053113
Misc : IS/Surr: PS082712-02 + 50mL
ALS Vial : 1 Sample Multiplier: 1

Integration File: PAMS.P

Method : C:\msdchem\1\METHODS\2013\051513.M
Title : TO-15/TO-14
Last Update : Thu May 16 10:13:39 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	18.1	25488	PASS
75	95	30	60	46.4	65440	PASS
95	95	100	100	100.0	141003	PASS
96	95	5	9	6.6	9311	PASS
173	174	0.00	2	0.9	1137	PASS
174	95	50	100	88.2	124371	PASS
175	174	5	9	7.3	9107	PASS
176	174	95	101	96.6	120152	PASS
177	176	5	9	6.8	8113	PASS

5/31/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311302.D
Acq On : 31 May 2013 9:19
Operator : JJG
Sample : TO15 CCV 053113
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 31 15:58:54 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	146685	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	752301	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	756486	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.711	174	455206	9.62	ppbv	0.00
Spiked Amount 10.000			Recovery = 96.20%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	282455	9.72	ppbv	100
3) Propene	4.781	42	79110m	10.37	ppbv	
4) Dichlorodifluoromethane	4.908	85	485056	9.67	ppbv	99
5) Chloromethane	5.288	52	47233m	10.04	ppbv	
6) Dichlorotetrafluoroethane	5.324	135	346658	10.14	ppbv	89
7) VinylChloride	5.668	62	161122m	9.66	ppbv	
8) Methanol	5.849	31	23428m	4.94	ppbv	
9) 1,3-Butadiene	5.849	54	100966m	9.53	ppbv	
10) Bromomethane	6.446	96	105092m	8.75	ppbv	
11) Chloroethane	6.736	66	26251	9.67	ppbv	98
12) Dichlorofluoromethane	7.007	67	367549m	10.24	ppbv	
13) Ethanol	7.043	45	63181m	10.10	ppbv	
14) VinylBromide	7.261	108	146782m	10.40	ppbv	
15) Acetone	7.966	58	76006m	9.57	ppbv	
16) Trichlorofluoromethane	7.677	103	313168	10.69	ppbv	99
17) 2-Propanol(IPA)	8.147	45	275368m	10.12	ppbv	
18) Acrylonitrile	8.962	52	128832m	10.83	ppbv	
19) 1,1-Dichloroethene	8.726	96	170377	10.20	ppbv	96
20) MethyleneChloride(DCM)	9.323	84	149386m	9.74	ppbv	
21) AllylChloride	9.305	39	146219m	10.88	ppbv	
22) CarbonDisulfide	9.486	76	477553m	9.63	ppbv	
23) Trichlorotrifluoroethane	8.998	103	246483	10.25	ppbv	97
24) trans-1,2-Dichloroethene	10.424	96	182437m	10.15	ppbv	
25) 1,1-Dichloroethane	10.906	63	361184	9.86	ppbv	100
26) MethylTertButylEther(M...	10.442	73	514412	10.57	ppbv	99
27) VinylAcetate	10.888	43	438278m	9.68	ppbv	
28) 2-Butanone(MEK)	11.423	72	88194m	10.85	ppbv	
29) cis-1,2-Dichloroethene	11.905	96	197672	10.22	ppbv	99
30) Hexane	11.477	86	37597	9.70	ppbv	84
31) Chloroform	12.493	83	429780	10.56	ppbv	97
32) EthylAcetate	12.011	43	450464	11.00	ppbv	97

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311302.D
Acq On : 31 May 2013 9:19
Operator : JJG
Sample : TO15 CCV 053113
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 31 15:58:54 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

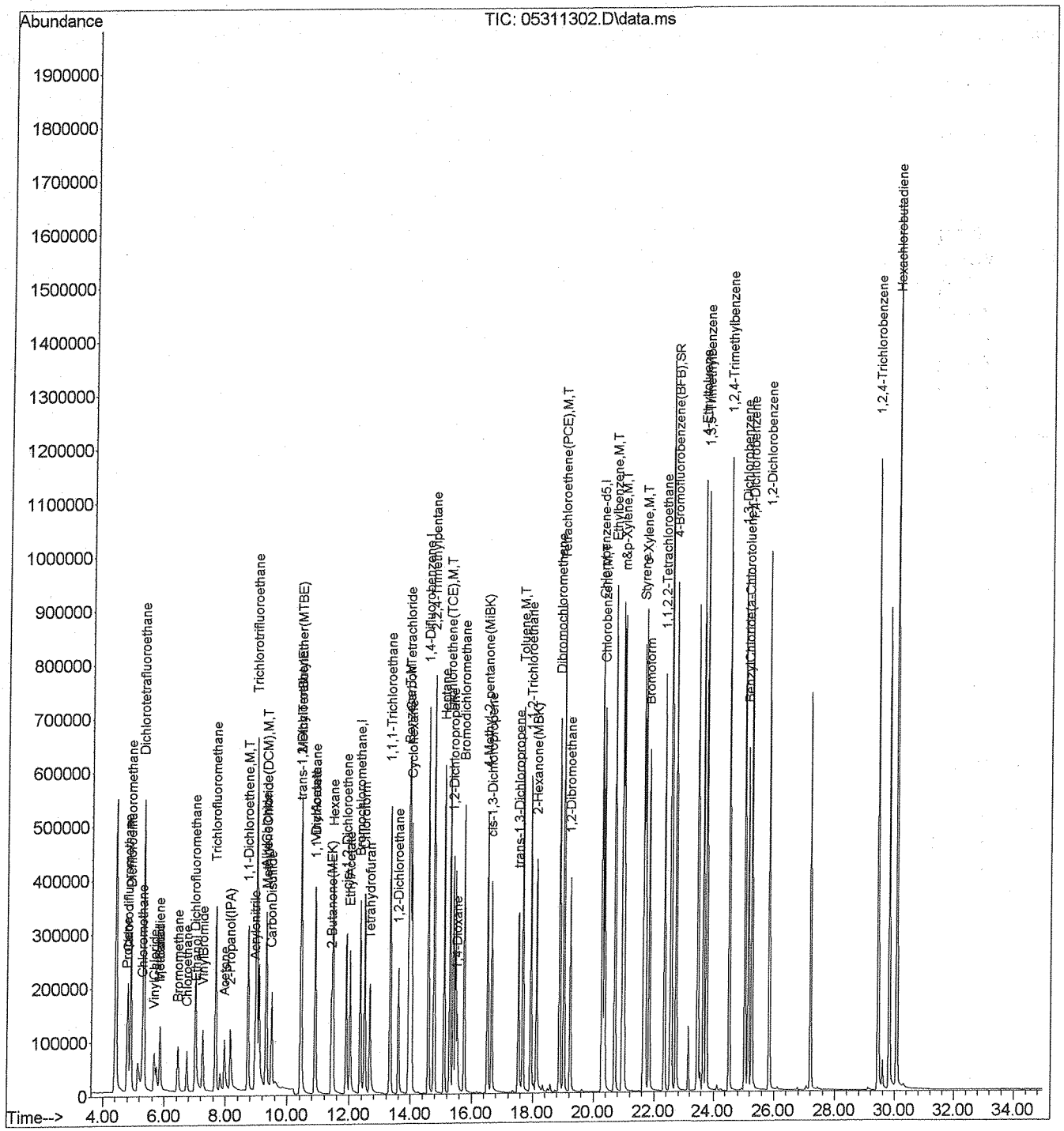
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
33) Tetrahydrofuran	12.671	72	85231m	10.41	ppbv		
34) 1,2-Dichloroethane	13.599	62	315891	10.70	ppbv		97
35) 1,1,1-Trichloroethane	13.331	97	487892	10.83	ppbv		99
37) Benzene	13.937	78	552734	9.97	ppbv		99
38) CarbonTetrachloride	13.973	117	487943	10.65	ppbv		99
39) Cyclohexane	14.026	69	81482	9.92	ppbv		95
40) 1,2-Dichloropropane	15.400	63	228251	10.24	ppbv		96
41) Bromodichloromethane	15.756	85	305276	10.68	ppbv		99
42) 1,4-Dioxane	15.524	88	134023m	10.25	ppbv		
43) Trichloroethene(TCE)	15.293	130	278715	10.38	ppbv		99
44) 2,2,4-Trimethylpentane	14.775	57	1047326	10.62	ppbv		99
45) Heptane	15.114	71	185741	10.55	ppbv		99
46) cis-1,3-Dichloropropene	16.648	75	347585	10.95	ppbv		98
47) 4-Methyl-2-pentanone(M...	16.523	58	209434	10.36	ppbv		98
48) trans-1,3-Dichloropropene	17.539	75	322018	9.96	ppbv		99
49) 1,1,2-Trichloroethane	17.932	97	268071	10.83	ppbv		99
50) Toluene	17.682	91	735162	10.46	ppbv		99
51) 2-Hexanone(MBK)	18.128	58	272743	10.89	ppbv		97
52) Dibromochloromethane	18.877	129	552160	11.62	ppbv		99
53) 1,2-Dibromoethane	19.233	107	422672	10.42	ppbv		99
54) Tetrachloroethene(PCE)	19.019	166	415184	10.54	ppbv		99
56) Chlorobenzene	20.357	114	197607	10.05	ppbv		99
57) Ethylbenzene	20.696	91	992383	9.94	ppbv		100
58) m&p-Xylene	20.999	106	731019	18.61	ppbv		98
59) Bromoform	21.819	173	527500	10.01	ppbv	#	96
60) Styrene	21.641	104	619961	9.76	ppbv		100
61) 1,1,2,2-Tetrachloroethane	22.336	83	550882	9.68	ppbv		99
62) o-Xylene	21.694	91	760234	9.52	ppbv		99
64) 4-Ethyltoluene	23.674	120	324083	9.88	ppbv		99
65) 1,3,5-Trimethylbenzene	23.781	120	450315	9.40	ppbv		99
66) 1,2,4-Trimethylbenzene	24.529	120	457427	9.80	ppbv		99
67) BenzylChloride(a-Chlor...	25.154	91	707251	10.07	ppbv		100
68) 1,3-Dichlorobenzene	25.047	146	703212	9.57	ppbv		99
69) 1,4-Dichlorobenzene	25.261	146	687499m	9.31	ppbv		
70) 1,2-Dichlorobenzene	25.831	146	722735m	9.41	ppbv		
71) 1,2,4-Trichlorobenzene	29.433	180	686176m	9.03	ppbv		
72) Hexachlorobutadiene	30.075	225	578384m	9.40	ppbv		

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311302.D
Acq On : 31 May 2013 9:19
Operator : JJG
Sample : TO15 CCV 053113
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 31 15:58:54 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311303.D
Acq On : 31 May 2013 10:05
Operator : JJG
Sample : TO15 LCSD 053113
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 31 16:01:04 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	148225	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	769764	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	730036	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	462255	10.12	ppbv	0.00
Spiked Amount 10.000			Recovery = 101.20%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	277483m	9.45	ppbv	
3) Propene	4.781	42	78550m	10.19	ppbv	
4) Dichlorodifluoromethane	4.908	85	473004	9.33	ppbv	99
5) Chloromethane	5.288	52	46073m	9.69	ppbv	
6) Dichlorotetrafluoroethane	5.324	135	340828	9.87	ppbv	92
7) VinylChloride	5.650	62	165177m	9.80	ppbv	
8) Methanol	5.849	31	22878m	4.78	ppbv	
9) 1,3-Butadiene	5.849	54	105277m	9.84	ppbv	
10) Bromomethane	6.446	96	111831m	9.21	ppbv	
11) Chloroethane	6.736	66	26950	9.83	ppbv	
12) Dichlorofluoromethane	7.007	67	350375	9.66	ppbv	
13) Ethanol	7.043	45	59358m	9.39	ppbv	
14) VinylBromide	7.260	108	148341m	10.40	ppbv	
15) Acetone	7.966	58	77767m	9.69	ppbv	
16) Trichlorofluoromethane	7.677	103	307607	10.39	ppbv	99
17) 2-Propanol(IPA)	8.147	45	272676m	9.92	ppbv	
18) Acrylonitrile	8.961	52	126782m	10.55	ppbv	
19) 1,1-Dichloroethene	8.726	96	168791	10.00	ppbv	97
20) MethyleneChloride(DCM)	9.323	84	151145m	9.75	ppbv	
21) AllylChloride	9.305	39	148303m	10.92	ppbv	
22) CarbonDisulfide	9.486	76	486256m	9.70	ppbv	
23) Trichlorotrifluoroethane	8.998	103	248277	10.22	ppbv	97
24) trans-1,2-Dichloroethene	10.424	96	185793m	10.23	ppbv	
25) 1,1-Dichloroethane	10.906	63	360683	9.74	ppbv	100
26) MethylTertButylEther(M...	10.442	73	515449m	10.48	ppbv	
27) VinylAcetate	10.888	43	436529m	9.54	ppbv	
28) 2-Butanone(MEK)	11.423	72	87320m	10.63	ppbv	
29) cis-1,2-Dichloroethene	11.904	96	200309	10.25	ppbv	99
30) Hexane	11.476	86	38543	9.84	ppbv	87
31) Chloroform	12.493	83	433724	10.54	ppbv	97
32) EthylAcetate	12.011	43	444177	10.73	ppbv	97

05/31/13

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311303.D
Acq On : 31 May 2013 10:05
Operator : JJG
Sample : TO15 LCSD 053113
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

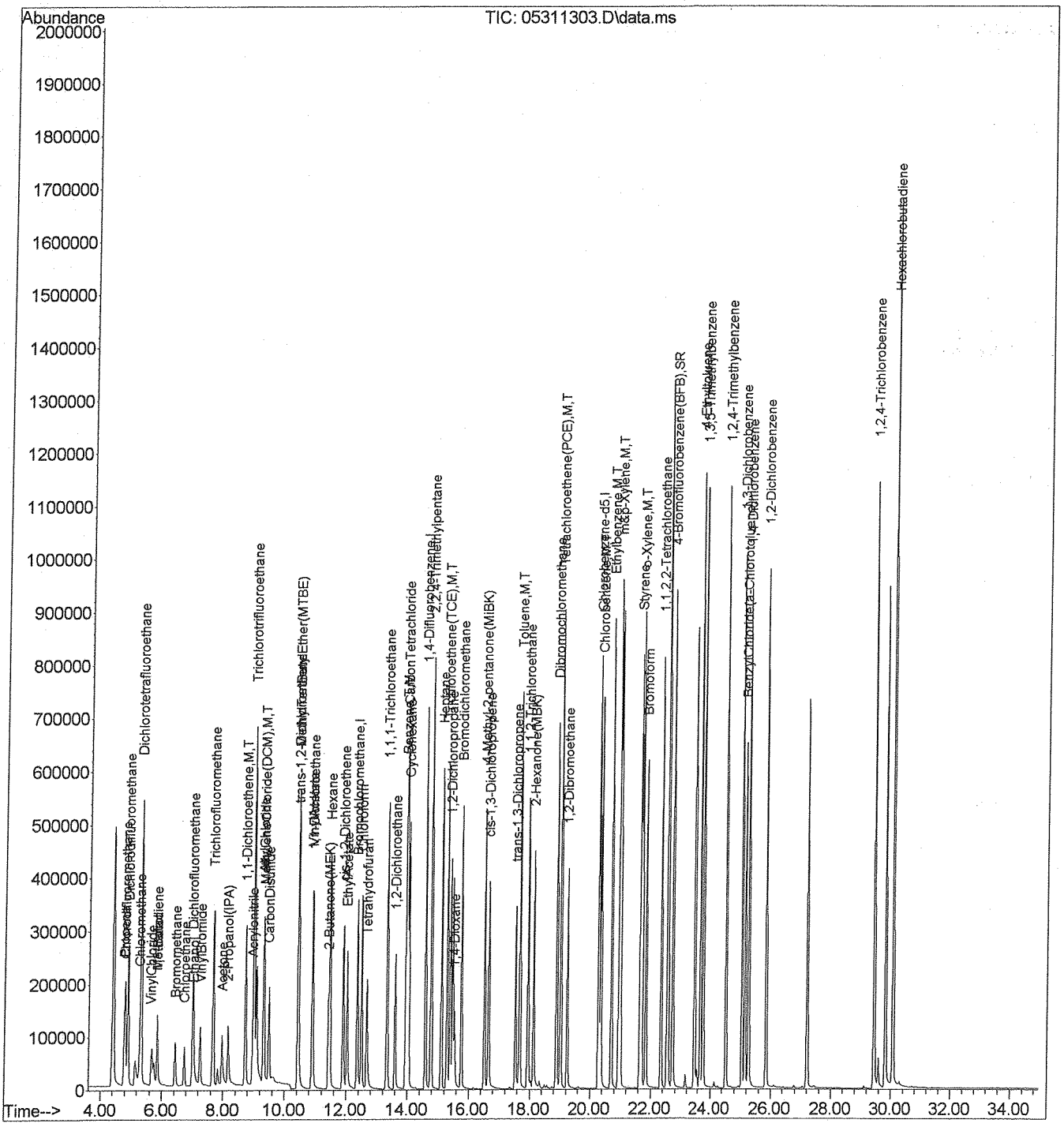
Quant Time: May 31 16:01:04 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) Tetrahydrofuran	12.671	72	86404m	10.44	ppbv	
34) 1,2-Dichloroethane	13.598	62	316194	10.60	ppbv	99
35) 1,1,1-Trichloroethane	13.331	97	486237	10.68	ppbv	99
37) Benzene	13.937	78	555998	9.80	ppbv	99
38) CarbonTetrachloride	13.973	117	490779	10.47	ppbv	99
39) Cyclohexane	14.026	69	83350	9.92	ppbv	94
40) 1,2-Dichloropropane	15.399	63	225436	9.89	ppbv	97
41) Bromodichloromethane	15.756	85	306686	10.48	ppbv	98
42) 1,4-Dioxane	15.524	88	134724m	10.07	ppbv	
43) Trichloroethene(TCE)	15.292	130	278045	10.12	ppbv	98
44) 2,2,4-Trimethylpentane	14.775	57	1051308	10.41	ppbv	99
45) Heptane	15.114	71	179210	9.95	ppbv	97
46) cis-1,3-Dichloropropene	16.647	75	355245	10.94	ppbv	98
47) 4-Methyl-2-pentanone(M...	16.523	58	209891	10.15	ppbv	98
48) trans-1,3-Dichloropropene	17.539	75	321126	9.71	ppbv	99
49) 1,1,2-Trichloroethane	17.931	97	266677	10.53	ppbv	99
50) Toluene	17.682	91	743636	10.34	ppbv	100
51) 2-Hexanone(MBK)	18.127	58	268499	10.48	ppbv	97
52) Dibromochloromethane	18.876	129	558658	11.49	ppbv	99
53) 1,2-Dibromoethane	19.233	107	428542	10.33	ppbv	99
54) Tetrachloroethene(PCE)	19.019	166	413007	10.24	ppbv	99
56) Chlorobenzene	20.356	114	196745	10.37	ppbv	98
57) Ethylbenzene	20.695	91	974128	10.11	ppbv	100
58) m&p-Xylene	20.945	106	756674	19.96	ppbv	95
59) Bromoform	21.836	173	518783	10.20	ppbv	100
60) Styrene	21.640	104	623918	10.17	ppbv	100
61) 1,1,2,2-Tetrachloroethane	22.336	83	563905	10.26	ppbv	98
62) o-Xylene	21.694	91	760674	9.87	ppbv	100
64) 4-Ethyltoluene	23.673	120	329642	10.42	ppbv	100
65) 1,3,5-Trimethylbenzene	23.780	120	456676	9.88	ppbv	99
66) 1,2,4-Trimethylbenzene	24.529	120	454079	10.08	ppbv	98
67) BenzylChloride(a-Chlor...	25.153	91	721619	10.65	ppbv	99
68) 1,3-Dichlorobenzene	25.046	146	714472	10.08	ppbv	99
69) 1,4-Dichlorobenzene	25.260	146	708397m	9.94	ppbv	
70) 1,2-Dichlorobenzene	25.831	146	723618m	9.76	ppbv	
71) 1,2,4-Trichlorobenzene	29.433	180	694134m	9.47	ppbv	
72) Hexachlorobutadiene	30.075	225	576795m	9.72	ppbv	

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

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311303.D
Acq On : 31 May 2013 10:05
Operator : JJG
Sample : TO15 LCSD 053113
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 31 16:01:04 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311304.D
Acq On : 31 May 2013 10:53
Operator : JJG
Sample : TO15 MB 053113
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 31 16:01:41 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	138528	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	768901	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	714667	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.711	174	457690	10.23	ppbv	0.00
Spiked Amount 10.000			Recovery = 102.30%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	0.000		0	N.D.		
3) Propene	4.836	42	129	N.D.		
4) Dichlorodifluoromethane	0.000		0	N.D.		
5) Chloromethane	0.000		0	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.		
12) Dichlorofluoromethane	0.000		0	N.D.		
13) Ethanol	0.000		0	N.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)	8.328	45	241	N.D.		
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	0.000		0	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	0.000		0	N.D.		

5/31/13

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311304.D
Acq On : 31 May 2013 10:53
Operator : JJG
Sample : TO15 MB 053113
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 31 16:01:41 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

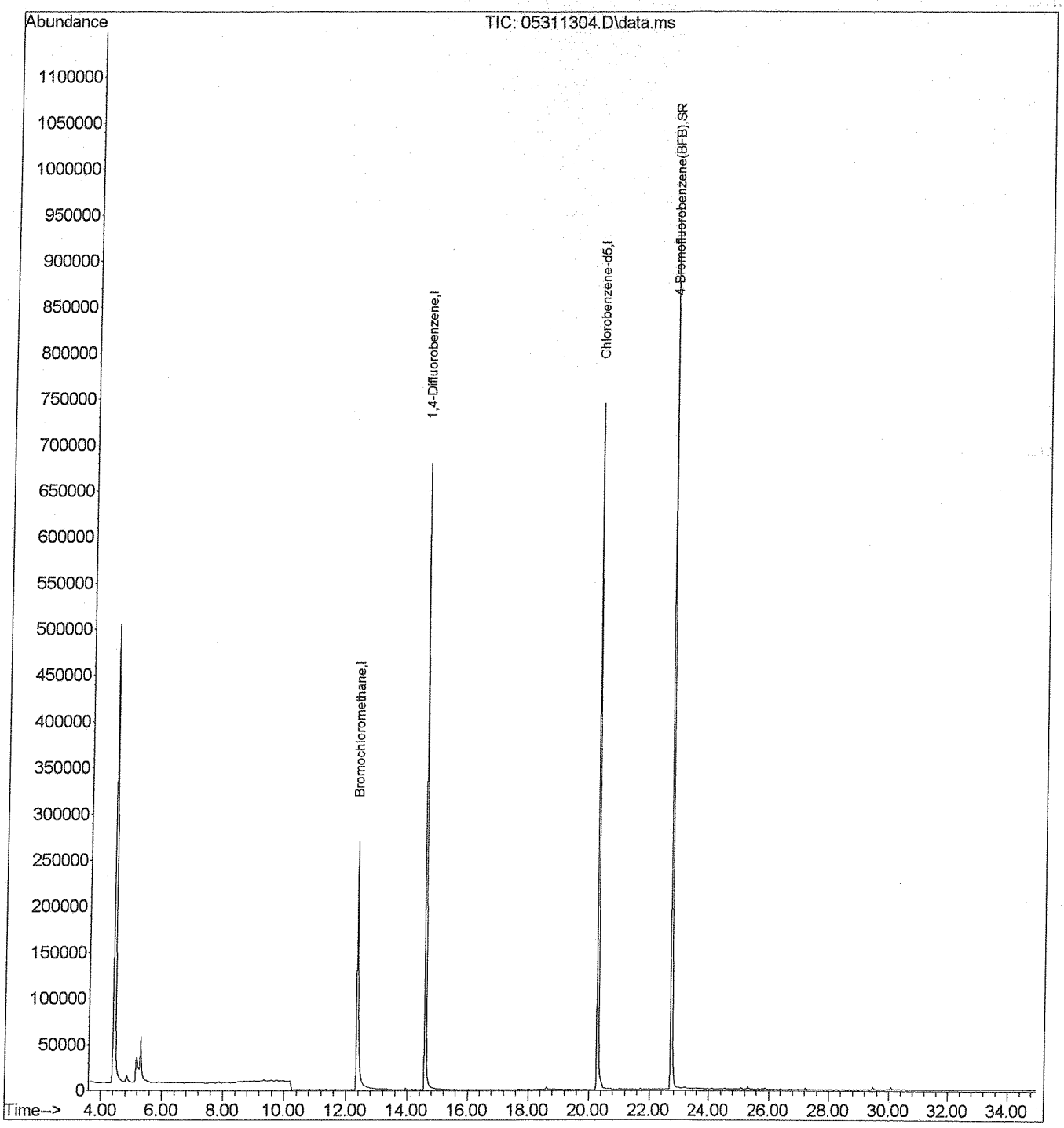
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.		
34) 1,2-Dichloroethane	0.000		0	N.D.		
35) 1,1,1-Trichloroethane	0.000		0	N.D.		
37) Benzene	13.937	78	2127	N.D.		
38) CarbonTetrachloride	0.000		0	N.D.		
39) Cyclohexane	0.000		0	N.D.		
40) 1,2-Dichloropropane	0.000		0	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	17.700	91	769	N.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	20.357	114	123	N.D.		
57) Ethylbenzene	20.731	91	740	N.D.		
58) m&p-Xylene	21.017	106	120	N.D.		
59) Bromoform	0.000		0	N.D.		
60) Styrene	21.694	104	296	N.D.		
61) 1,1,2,2-Tetrachloroethane	22.354	83	175	N.D.		
62) o-Xylene	21.712	91	581	N.D.		
64) 4-Ethyltoluene	23.691	120	254	N.D.		
65) 1,3,5-Trimethylbenzene	23.798	120	381	N.D.		
66) 1,2,4-Trimethylbenzene	24.565	120	306	N.D.		
67) BenzylChloride(a-Chlor...	25.207	91	770	N.D.		
68) 1,3-Dichlorobenzene	25.064	146	2005	N.D.		
69) 1,4-Dichlorobenzene	25.296	146	2609	N.D.		
70) 1,2-Dichlorobenzene	25.867	146	1342	N.D.		
71) 1,2,4-Trichlorobenzene	0.000		0	N.D.	d	
72) Hexachlorobutadiene	30.075	225	1188	N.D.		

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311304.D
Acq On : 31 May 2013 10:53
Operator : JJG
Sample : TO15 MB 053113
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 31 16:01:41 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311305.D
Acq On : 31 May 2013 11:41
Operator : JJG
Sample : 130647-63190 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 31 16:03:57 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	141154	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	774304	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.285	117	740604	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	470787	10.16 ppbv	0.00
Spiked Amount 10.000			Recovery = 101.60%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.835	51	4423	0.16 ppbv #	96
3) Propene	0.000		0	N.D. d	
4) Dichlorodifluoromethane	4.908	85	13542	0.28 ppbv	98
5) Chloromethane	5.306	52	1042	0.23 ppbv #	6
6) Dichlorotetrafluoroethane	5.324	135	228	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	33313m	7.37 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	17815m	2.96 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	8.002	58	19956m	2.61 ppbv	
16) Trichlorofluoromethane	7.658	103	3831	0.14 ppbv	97
17) 2-Propanol(IPA)	8.219	45	22036m	0.84 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	9.233	39	128	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	1152	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	12.493	83	396	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

5/31/13

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311305.D
Acq On : 31 May 2013 11:41
Operator : JJG
Sample : 130647-63190 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

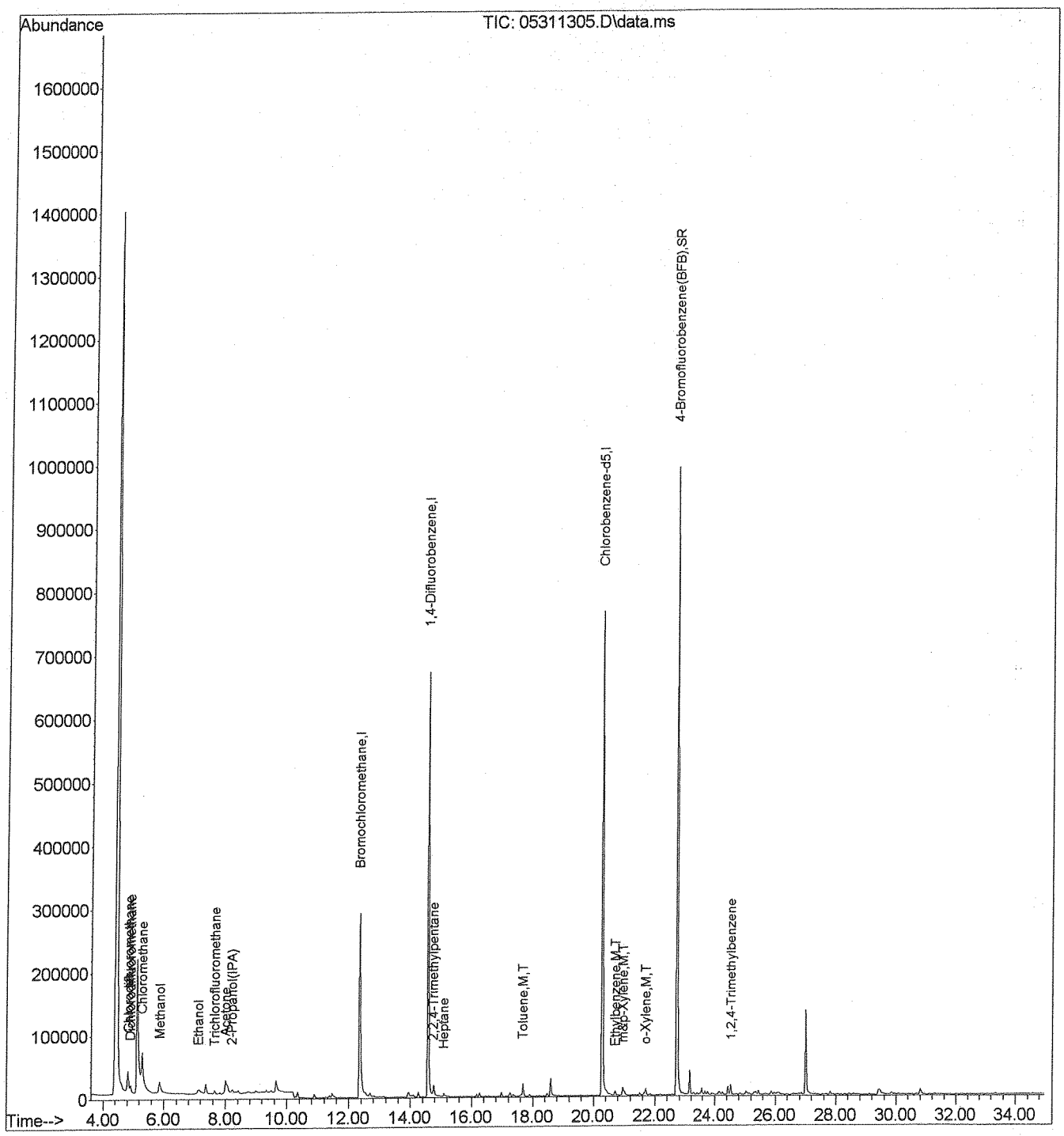
Quant Time: May 31 16:03:57 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

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. d	
39) Cyclohexane	14.008	69	282	N.D.	
40) 1,2-Dichloropropane	0.000		0	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	14.757	57	22408	0.22 ppbv #	98
45) Heptane	15.096	71	1229	0.07 ppbv #	83
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	17.682	75	120	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	22183	0.31 ppbv	97
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	20.285	114	147	N.D.	
57) Ethylbenzene	20.713	91	7119	0.07 ppbv #	96
58) m&p-Xylene	20.963	106	9179	0.24 ppbv #	97
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.676	104	595	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	8412	0.11 ppbv	95
64) 4-Ethyltoluene	0.000		0	N.D. d	
65) 1,3,5-Trimethylbenzene	0.000		0	N.D. d	
66) 1,2,4-Trimethylbenzene	24.547	120	7269	0.16 ppbv #	96
67) BenzylChloride(a-Chlor...	25.207	91	379	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	586	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	1078	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	614	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	1944	N.D.	
72) Hexachlorobutadiene	30.075	225	613	N.D.	

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

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311305.D
Acq On : 31 May 2013 11:41
Operator : JJG
Sample : 130647-63190 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 31 16:03:57 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311306.D
Acq On : 31 May 2013 12:29
Operator : JJG
Sample : 130647-63190 x1 dp
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 31 16:06:29 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	139450	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	768342	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.285	117	721337	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.711	174	471546	10.45 ppbv	0.00
Spiked Amount 10.000			Recovery = 104.50%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	4269	0.15 ppbv #	96
3) Propene	0.000		0	N.D. d	
4) Dichlorodifluoromethane	4.908	85	13742	0.29 ppbv #	98
5) Chloromethane	5.306	52	1085	0.24 ppbv #	13
6) Dichlorotetrafluoroethane	5.324	135	113	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	33394m	7.48 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.	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.134	45	16964m	2.85 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	8.002	58	19353m	2.56 ppbv	
16) Trichlorofluoromethane	7.659	103	3946	0.14 ppbv	95
17) 2-Propanol(IPA)	8.220	45	22233m	0.86 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	9.251	39	237	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	8.998	103	910	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	10.888	43	1305	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	12.493	83	322	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311306.D
Acq On : 31 May 2013 12:29
Operator : JJG
Sample : 130647-63190 x1 dp
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

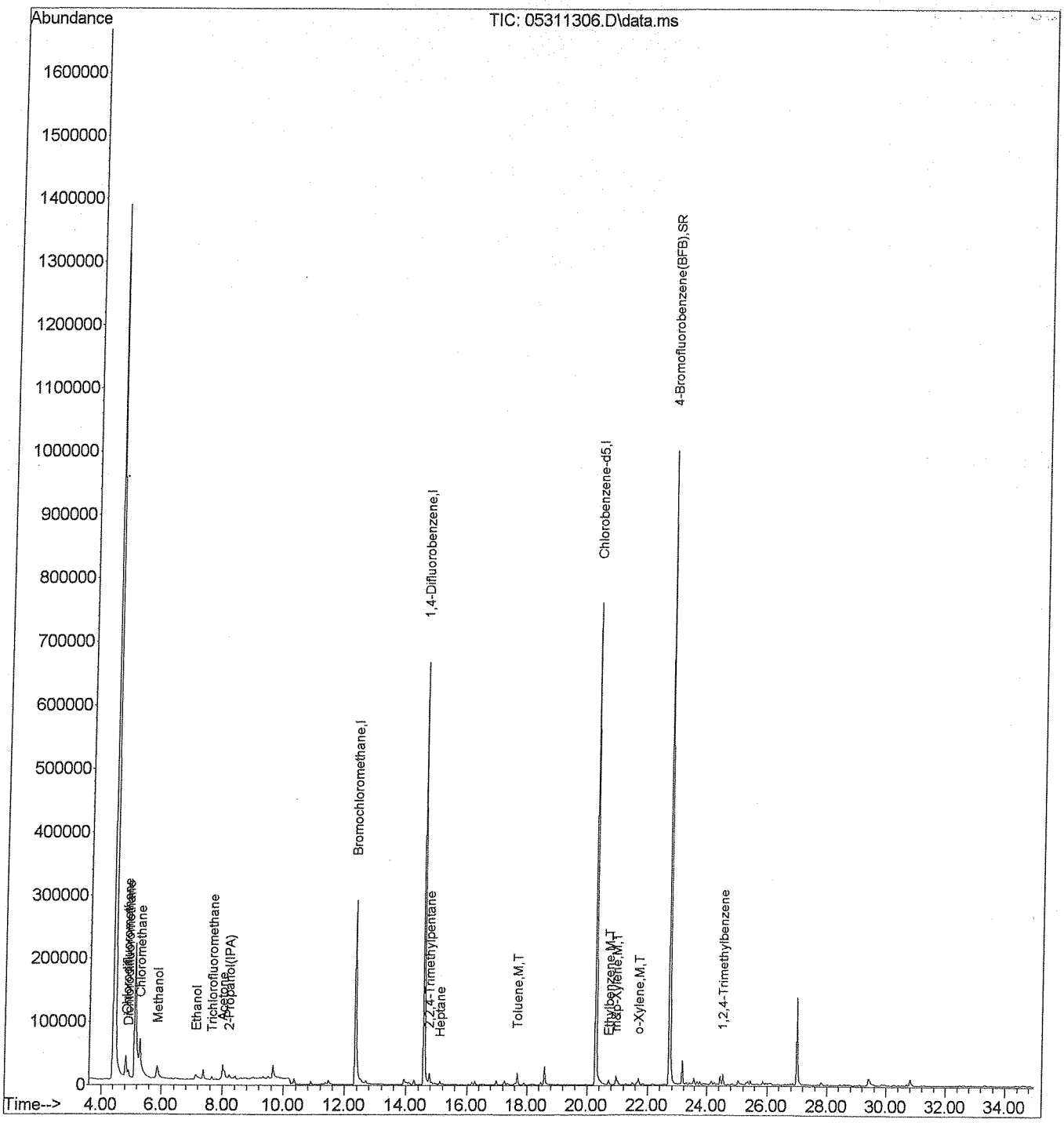
Quant Time: May 31 16:06:29 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

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. d	
39) Cyclohexane	14.026	69	297	N.D.	
40) 1,2-Dichloropropane	15.275	63	117	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	14.758	57	21428	0.21 ppbv	95
45) Heptane	15.114	71	1228	0.07 ppbv #	89
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	17.682	75	132	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	20636m	0.29 ppbv	
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	20.268	114	256	N.D.	
57) Ethylbenzene	20.713	91	7287	0.08 ppbv #	96
58) m&p-Xylene	20.945	106	8927	0.24 ppbv #	94
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.676	104	657	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	8082	0.11 ppbv #	92
64) 4-Ethyltoluene	0.000		0	N.D. d	
65) 1,3,5-Trimethylbenzene	0.000		0	N.D. d	
66) 1,2,4-Trimethylbenzene	24.529	120	7104	0.16 ppbv	97
67) BenzylChloride(a-Chlor...	25.189	91	112	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	149	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	505	N.D.	
70) 1,2-Dichlorobenzene	25.867	146	303	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	1067	N.D.	
72) Hexachlorobutadiene	30.075	225	267	N.D.	

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

Data Path : C:\msdchem\1\MS03\2013\053113\
Data File : 05311306.D
Acq On : 31 May 2013 12:29
Operator : JJG
Sample : 130647-63190 x1 dp
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 31 16:06:29 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



05/31/13

MS #3 Instrument Logbook

06/03/13

Sequence Name: C:\msdchem\1\sequence\2013\060313.S
Comment: GCMS-03
Operator: JJG
Data Path: C:\MSDCHEM\1\MS03\2013\060313\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

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

Line			Sample Name/Misc Info
1)	Sample	1	06031301 TO15-5MS TO15 BFB 060313
2)	Sample	1	06031302 TO15-5MS TO15 CCV 060313
3)	Sample	1	06031303 TO15-5MS TO15 LCSD 060313
4)	Sample	1	06031304 TO15-5MS TO15 MB 060313
5)	Sample	2	06031305 TO15-5MS 130650-63200 x10
6)	Sample	2	06031306 TO15-5MS 130650-63200 x10 dp
7)	Sample	3	06031307 TO15-5MS 130650-63209 x10
8)	Sample	4	06031308 TO15-5MS 130653-63267 x5
9)	Sample	5	06031309 TO15-5MS 130638-63167 x10
10)	Sample	6	06031310 TO15-5MS 130637-63164 x10
11)	Sample	7	06031311 TO15-5MS 130638-63165 x10
12)	Sample	8	06031312 TO15-5MS 130637-63162 x10
13)	Sample	9	06031313 TO15-5MS 130656-63280 x20
14)	Sample	9	06031314 TO15-5MS 130656-63280 x50
15)	Sample	9	06031315 TO15-5MS 130656-63280 x100
16)	Sample	8	06031316 TO15-5MS 130637-63162 x25
17)	Sample	7	06031317 TO15-5MS 130638-63165 x25
18)	Sample	6	06031318 TO15-5MS 130637-63164 x25
19)	Sample	8	06031319 TO15-5MS 130637-63162 x50
20)	Sample	9	06031320 TO15-5MS 130656-63280 x50 rr
21)	Sample	10	06031321 TO15-5MS 130656-63280 x100
22)	Sample	10	06031322 TO15-5MS 130656-63280 x100 dp
23)	Sample	11	06031323 TO15-5MS 130637-63162 x100
24)	Sample	12	06031324 TO15-5MS 130637-63164 x100
25)	Sample	13	06031325 TO15-5MS 130638-63165 x100
26)	Sample	14	06031326 TO15-5MS 130638-63167 x100
27)	Sample	15	06031327 TO15-5MS Lab Air 060313 x1
28)	Sample	16	06031328 TO15-5MS Lab Air 060313 x1
29)	Sample	16	06031329 TO15-5MS Lab Air 060313 x1
30)	Sample	16	06031330 TO15-5MS Lab Air 060313 x1
31)	Sample	16	06031331 TO15-5MS Lab Air 060313 x1

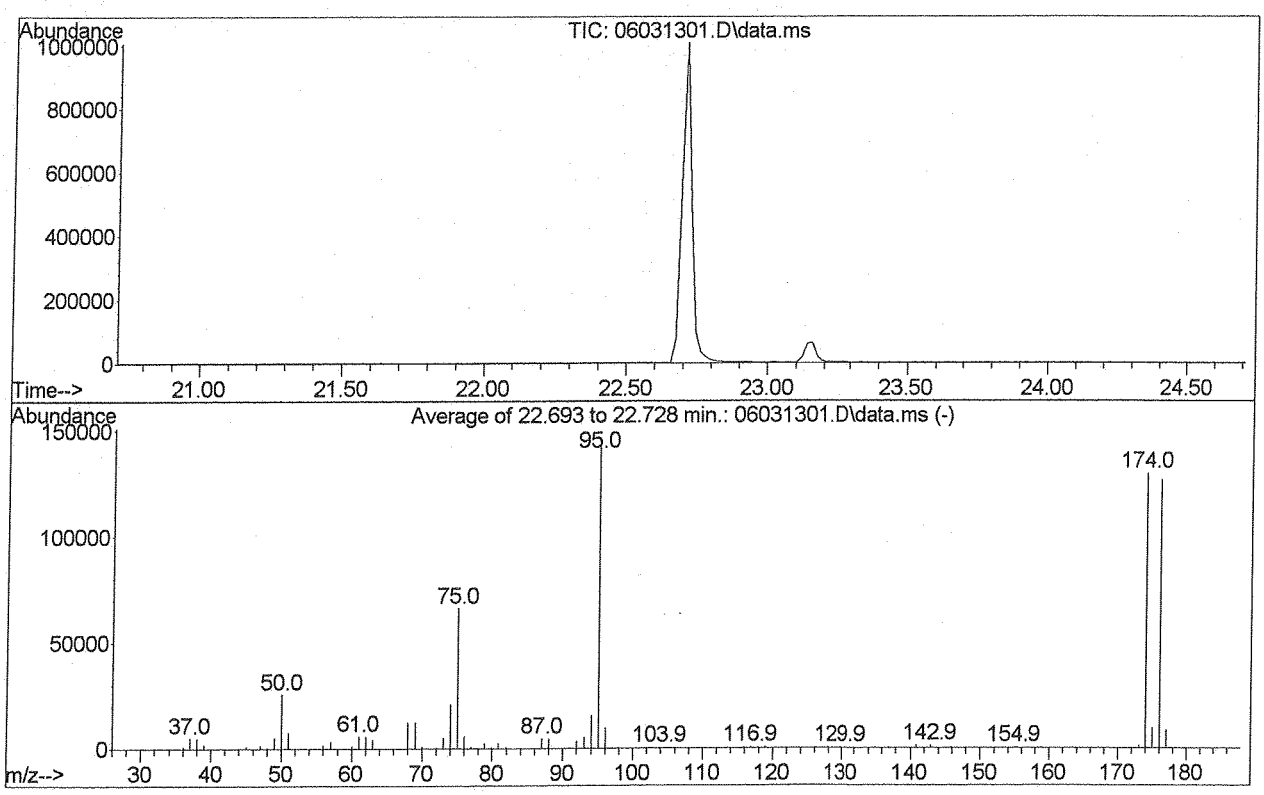
Comments: Calibration

Analyst: [signature] **Date:** 06/03/13

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031301.D
Acq On : 3 Jun 2013 8:31 am
Operator : JJG
Sample : TO15 BFB 060313
Misc : IS/Surr: PS082712-02 + 50mL
ALS Vial : 1 Sample Multiplier: 1

Integration File: PAMS.P

Method : C:\msdchem\1\METHODS\2013\051513.M
Title : TO-15/TO-14
Last Update : Thu May 16 10:13:39 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	17.8	25633	PASS
75	95	30	60	46.0	66285	PASS
95	95	100	100	100.0	144131	PASS
96	95	5	9	6.7	9589	PASS
173	174	0.00	2	0.9	1151	PASS
174	95	50	100	90.0	129768	PASS
175	174	5	9	7.4	9580	PASS
176	174	95	101	97.5	126579	PASS
177	176	5	9	6.7	8458	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031302.D
Acq On : 3 Jun 2013 9:17
Operator : JJG
Sample : TO15 CCV 060313
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 12:30:29 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	150793	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	783130	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	731958	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.711	174	460513	10.05	ppbv	0.00
Spiked Amount 10.000			Recovery = 100.50%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	282780	9.47	ppbv	100
3) Propene	4.781	42	77829m	9.92	ppbv	
4) Dichlorodifluoromethane	4.908	85	493281	9.57	ppbv	99
5) Chloromethane	5.288	52	48654m	10.06	ppbv	
6) Dichlorotetrafluoroethane	5.342	135	356314	10.14	ppbv	98
7) VinylChloride	5.668	62	172667m	10.07	ppbv	
8) Methanol	5.849	31	25351m	5.21	ppbv	
9) 1,3-Butadiene	5.867	54	103467m	9.50	ppbv	
10) Bromomethane	6.446	96	102263m	8.28	ppbv	
11) Chloroethane	6.736	66	26873	9.63	ppbv	98
12) Dichlorofluoromethane	7.025	67	371073	10.06	ppbv	99
13) Ethanol	7.043	45	67120m	10.44	ppbv	
14) VinylBromide	7.260	108	149796m	10.33	ppbv	
15) Acetone	7.966	58	77626m	9.50	ppbv	
16) Trichlorofluoromethane	7.677	103	321560	10.68	ppbv	97
17) 2-Propanol(IPA)	8.165	45	287042m	10.27	ppbv	
18) Acrylonitrile	8.961	52	124545m	10.19	ppbv	
19) 1,1-Dichloroethene	8.726	96	174866	10.18	ppbv	94
20) MethyleneChloride(DCM)	9.323	84	156913m	9.95	ppbv	
21) AllylChloride	9.305	39	153252m	11.09	ppbv	
22) CarbonDisulfide	9.486	76	497528m	9.76	ppbv	
23) Trichlorotrifluoroethane	8.998	103	250889	10.15	ppbv	95
24) trans-1,2-Dichloroethene	10.424	96	185329	10.03	ppbv	99
25) 1,1-Dichloroethane	10.906	63	382225	10.15	ppbv	100
26) MethylTertButylEther(M...	10.442	73	539250	10.78	ppbv	98
27) VinylAcetate	10.888	43	466423m	10.02	ppbv	
28) 2-Butanone(MEK)	11.423	72	90852m	10.87	ppbv	
29) cis-1,2-Dichloroethene	11.904	96	206277	10.37	ppbv	99
30) Hexane	11.476	86	39621	9.94	ppbv	85
31) Chloroform	12.493	83	445666	10.65	ppbv	97
32) EthylAcetate	12.011	43	466969	11.09	ppbv	97

6/6/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031302.D
Acq On : 3 Jun 2013 9:17
Operator : JJG
Sample : TO15 CCV 060313
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 12:30:29 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

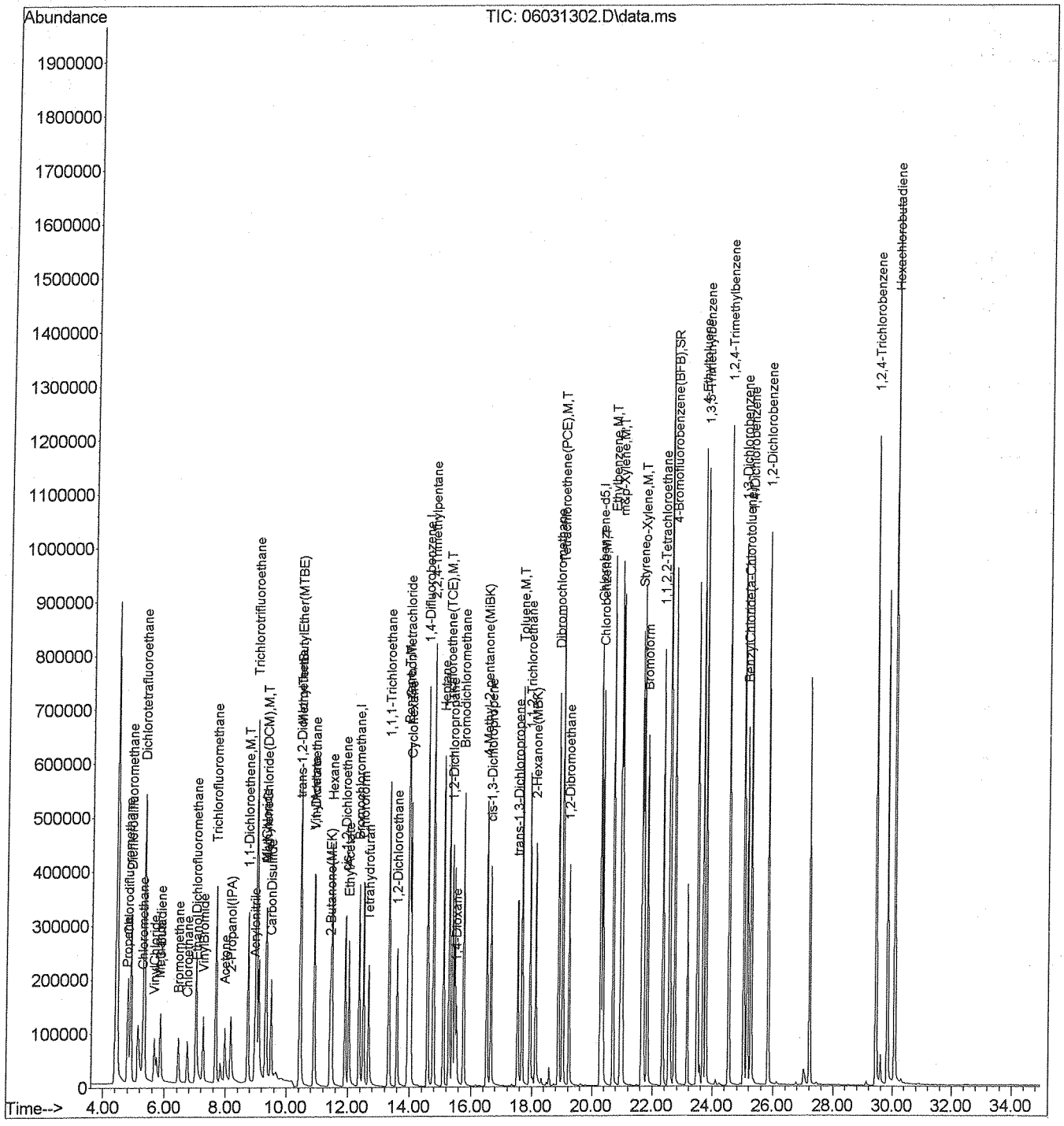
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
33) Tetrahydrofuran	12.671	72	87643	10.41	ppbv		90
34) 1,2-Dichloroethane	13.598	62	328345	10.81	ppbv		98
35) 1,1,1-Trichloroethane	13.331	97	504547	10.89	ppbv		99
37) Benzene	13.937	78	575311	9.97	ppbv		99
38) CarbonTetrachloride	13.973	117	499891	10.48	ppbv		99
39) Cyclohexane	14.026	69	86234	10.08	ppbv		95
40) 1,2-Dichloropropane	15.399	63	232322	10.01	ppbv		96
41) Bromodichloromethane	15.756	85	305477	10.26	ppbv		99
42) 1,4-Dioxane	15.524	88	134834m	9.91	ppbv		
43) Trichloroethene(TCE)	15.292	130	284459	10.18	ppbv		99
44) 2,2,4-Trimethylpentane	14.775	57	1090124	10.61	ppbv		99
45) Heptane	15.114	71	186909	10.20	ppbv		98
46) cis-1,3-Dichloropropene	16.648	75	361949	10.96	ppbv		99
47) 4-Methyl-2-pentanone(M...	16.523	58	216602	10.30	ppbv		96
48) trans-1,3-Dichloropropene	17.539	75	330786	9.83	ppbv		99
49) 1,1,2-Trichloroethane	17.932	97	269506	10.46	ppbv		99
50) Toluene	17.682	91	759202	10.37	ppbv		100
51) 2-Hexanone(MBK)	18.128	58	269319	10.33	ppbv		97
52) Dibromochloromethane	18.877	129	565442	11.43	ppbv		99
53) 1,2-Dibromoethane	19.233	107	435865	10.33	ppbv		100
54) Tetrachloroethene(PCE)	19.019	166	420229	10.25	ppbv		99
56) Chlorobenzene	20.357	114	200167	10.52	ppbv		99
57) Ethylbenzene	20.695	91	1028425	10.65	ppbv		100
58) m&p-Xylene	20.945	106	773279	20.34	ppbv		98
59) Bromoform	21.819	173	533326	10.46	ppbv	#	95
60) Styrene	21.641	104	621590	10.11	ppbv		99
61) 1,1,2,2-Tetrachloroethane	22.336	83	568157	10.31	ppbv		99
62) o-Xylene	21.694	91	781733	10.12	ppbv		100
64) 4-Ethyltoluene	23.673	120	337038	10.62	ppbv		100
65) 1,3,5-Trimethylbenzene	23.780	120	459329	9.91	ppbv		98
66) 1,2,4-Trimethylbenzene	24.529	120	467805	10.36	ppbv		99
67) BenzylChloride(a-Chlor...	25.153	91	746115	10.98	ppbv		99
68) 1,3-Dichlorobenzene	25.046	146	728004	10.24	ppbv		99
69) 1,4-Dichlorobenzene	25.260	146	696508m	9.74	ppbv		
70) 1,2-Dichlorobenzene	25.831	146	732920m	9.86	ppbv		
71) 1,2,4-Trichlorobenzene	29.433	180	695325m	9.46	ppbv		
72) Hexachlorobutadiene	30.075	225	575537m	9.67	ppbv		

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031302.D
Acq On : 3 Jun 2013 9:17
Operator : JJG
Sample : TO15 CCV 060313
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 12:30:29 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031303.D
Acq On : 3 Jun 2013 10:03
Operator : JJG
Sample : TO15 LCSD 060313
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 12:32:31 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	147894	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	793680	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	750236	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.711	174	459525	9.79	ppbv	0.00
Spiked Amount 10.000			Recovery = 97.90%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	272820	9.31	ppbv	99
3) Propene	4.781	42	76964m	10.00	ppbv	
4) Dichlorodifluoromethane	4.908	85	481319	9.52	ppbv	100
5) Chloromethane	5.288	52	46927m	9.89	ppbv	
6) Dichlorotetrafluoroethane	5.342	135	346447	10.05	ppbv	99
7) VinylChloride	5.668	62	169751m	10.09	ppbv	
8) Methanol	5.849	31	23820m	4.99	ppbv	
9) 1,3-Butadiene	5.867	54	103101m	9.65	ppbv	
10) Bromomethane	6.446	96	108005m	8.92	ppbv	
11) Chloroethane	6.736	66	25388	9.28	ppbv	
12) Dichlorofluoromethane	7.025	67	371407m	10.26	ppbv	
13) Ethanol	7.043	45	61505m	9.75	ppbv	
14) VinylBromide	7.260	108	148456m	10.43	ppbv	
15) Acetone	7.966	58	74522m	9.30	ppbv	
16) Trichlorofluoromethane	7.677	103	312619	10.58	ppbv	99
17) 2-Propanol(IPA)	8.165	45	281595m	10.27	ppbv	
18) Acrylonitrile	8.962	52	128892m	10.75	ppbv	
19) 1,1-Dichloroethene	8.726	96	169853	10.08	ppbv	
20) MethyleneChloride(DCM)	9.323	84	155569m	10.06	ppbv	
21) AllylChloride	9.305	39	147031m	10.85	ppbv	
22) CarbonDisulfide	9.486	76	485132m	9.70	ppbv	
23) Trichlorotrifluoroethane	8.998	103	249249	10.28	ppbv	96
24) trans-1,2-Dichloroethene	10.424	96	187597m	10.36	ppbv	
25) 1,1-Dichloroethane	10.906	63	368954	9.99	ppbv	99
26) MethylTertButylEther(M...	10.442	73	523521	10.67	ppbv	98
27) VinylAcetate	10.888	43	455161m	9.97	ppbv	
28) 2-Butanone(MEK)	11.423	72	87961	10.73	ppbv	93
29) cis-1,2-Dichloroethene	11.904	96	204956	10.51	ppbv	99
30) Hexane	11.476	86	40772	10.43	ppbv	89
31) Chloroform	12.511	83	442508	10.78	ppbv	99
32) EthylAcetate	12.011	43	466192	11.29	ppbv	97

6/03/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031303.D
Acq On : 3 Jun 2013 10:03
Operator : JJG
Sample : TO15 LCSD 060313
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 12:32:31 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
33) Tetrahydrofuran	12.671	72	87286	10.57	ppbv		95
34) 1,2-Dichloroethane	13.598	62	319521	10.73	ppbv		99
35) 1,1,1-Trichloroethane	13.331	97	497848	10.96	ppbv		99
37) Benzene	13.937	78	572047	9.78	ppbv		99
38) CarbonTetrachloride	13.973	117	497821	10.30	ppbv		99
39) Cyclohexane	14.026	69	84658	9.77	ppbv		96
40) 1,2-Dichloropropane	15.400	63	234351	9.97	ppbv		97
41) Bromodichloromethane	15.756	85	312316	10.35	ppbv		99
42) 1,4-Dioxane	15.524	88	137235m	9.95	ppbv		
43) Trichloroethene(TCE)	15.293	130	284633	10.05	ppbv		99
44) 2,2,4-Trimethylpentane	14.775	57	1067684	10.26	ppbv		99
45) Heptane	15.114	71	188762	10.16	ppbv		98
46) cis-1,3-Dichloropropene	16.648	75	360975	10.78	ppbv		99
47) 4-Methyl-2-pentanone(M...	16.523	58	214533	10.06	ppbv		97
48) trans-1,3-Dichloropropene	17.539	75	329615	9.67	ppbv		99
49) 1,1,2-Trichloroethane	17.932	97	268572	10.29	ppbv		99
50) Toluene	17.682	91	740907	9.99	ppbv		99
51) 2-Hexanone(MBK)	18.128	58	280958	10.63	ppbv		97
52) Dibromochloromethane	18.877	129	569001	11.35	ppbv		100
53) 1,2-Dibromoethane	19.233	107	438905	10.26	ppbv		100
54) Tetrachloroethene(PCE)	19.019	166	422591	10.17	ppbv		99
56) Chlorobenzene	20.357	114	201094	10.31	ppbv		99
57) Ethylbenzene	20.696	91	1023973	10.34	ppbv		100
58) m&p-Xylene	20.945	106	760135	19.51	ppbv		94
59) Bromoform	21.819	173	537006	10.27	ppbv	#	96
60) Styrene	21.641	104	622726	9.88	ppbv		100
61) 1,1,2,2-Tetrachloroethane	22.336	83	575151	10.19	ppbv		99
62) o-Xylene	21.694	91	786079	9.92	ppbv		100
64) 4-Ethyltoluene	23.673	120	333591	10.26	ppbv		100
65) 1,3,5-Trimethylbenzene	23.780	120	456220	9.60	ppbv		99
66) 1,2,4-Trimethylbenzene	24.529	120	453390	9.79	ppbv		98
67) BenzylChloride(a-Chlor...	25.154	91	749691	10.76	ppbv		99
68) 1,3-Dichlorobenzene	25.047	146	731849	10.05	ppbv		99
69) 1,4-Dichlorobenzene	25.261	146	693750m	9.47	ppbv		
70) 1,2-Dichlorobenzene	25.831	146	734503m	9.64	ppbv		
71) 1,2,4-Trichlorobenzene	29.433	180	713464m	9.47	ppbv		
72) Hexachlorobutadiene	30.075	225	593007m	9.72	ppbv		

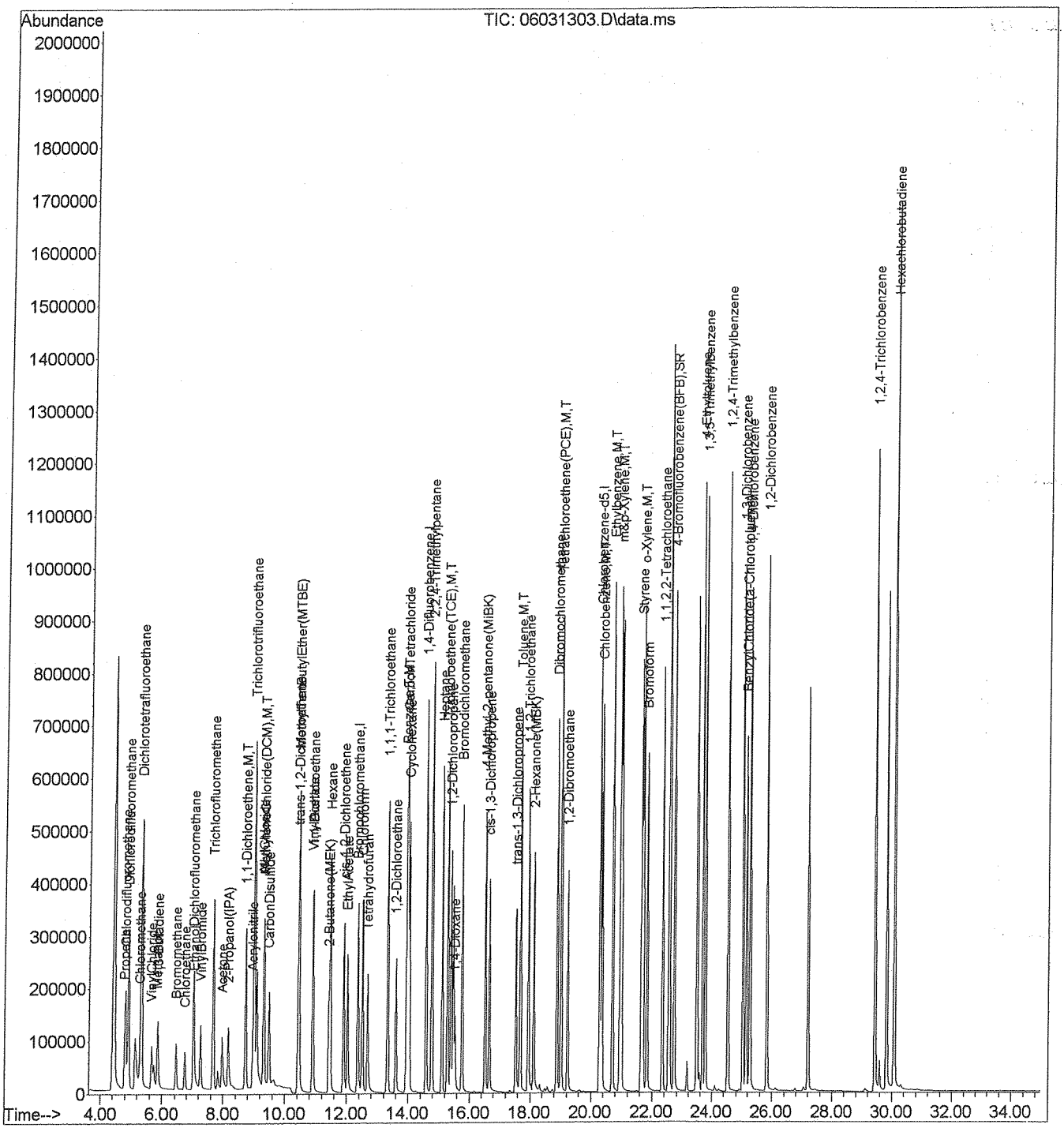
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6/3/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031303.D
Acq On : 3 Jun 2013 10:03
Operator : JJG
Sample : TO15 LCSD 060313
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 12:32:31 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031304.D
Acq On : 3 Jun 2013 10:51
Operator : JJG
Sample : TO15 MB 060313
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 11:50:22 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	145761	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	785623	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	751249	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.711	174	473021	10.06	ppbv	0.00
Spiked Amount 10.000			Recovery = 100.60%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	0.000		0	N.D.		
3) Propene	4.817	42	224	N.D.		
4) Dichlorodifluoromethane	0.000		0	N.D.		
5) Chloromethane	0.000		0	N.D.		
6) Dichlorotetrafluoroethane	0.000		0	N.D.		
7) VinylChloride	0.000		0	N.D.		
8) Methanol	5.903	31	1306	N.D.		
9) 1,3-Butadiene	0.000		0	N.D.		
10) Bromomethane	6.446	96	1169	N.D.		
11) Chloroethane	0.000		0	N.D.		
12) Dichlorofluoromethane	0.000		0	N.D.		
13) Ethanol	7.188	45	109	N.D.		
14) VinylBromide	0.000		0	N.D.		
15) Acetone	8.129	58	1454	N.D.		
16) Trichlorofluoromethane	0.000		0	N.D.		
17) 2-Propanol(IPA)	8.310	45	340	N.D.		
18) Acrylonitrile	0.000		0	N.D.		
19) 1,1-Dichloroethene	0.000		0	N.D.		
20) MethyleneChloride(DCM)	9.341	84	1490	N.D.		
21) AllylChloride	0.000		0	N.D.		
22) CarbonDisulfide	9.486	76	4581	N.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)	11.405	72	316	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	248	N.D.		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031304.D
Acq On : 3 Jun 2013 10:51
Operator : JJG
Sample : TO15 MB 060313
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 11:50:22 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

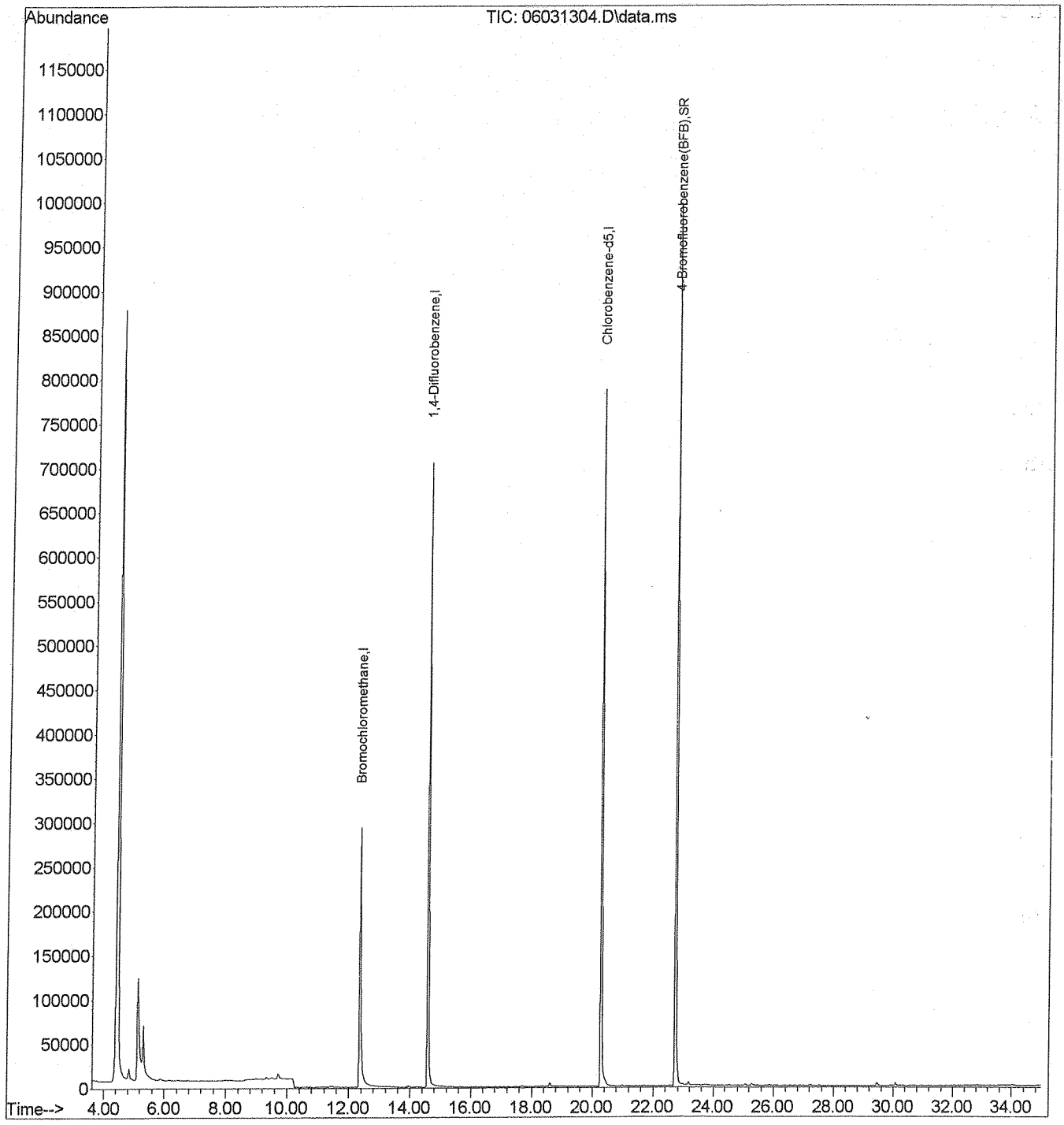
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.	
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	2965	N.D.	
38) CarbonTetrachloride	0.000		0	N.D.	
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	15.292	63	113	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	17.682	91	1987	N.D.	
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	172	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	154	N.D.	
56) Chlorobenzene	20.375	114	112	N.D.	
57) Ethylbenzene	20.713	91	987	N.D.	
58) m&p-Xylene	21.016	106	517	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.694	104	562	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.712	91	536	N.D.	
64) 4-Ethyltoluene	23.709	120	151	N.D.	
65) 1,3,5-Trimethylbenzene	23.798	120	181	N.D.	
66) 1,2,4-Trimethylbenzene	24.565	120	266	N.D.	
67) BenzylChloride(a-Chlor...	25.207	91	854	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	1959	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	2252	N.D.	
70) 1,2-Dichlorobenzene	25.867	146	1319	N.D.	
71) 1,2,4-Trichlorobenzene	29.469	180	3546	N.D.	
72) Hexachlorobutadiene	30.075	225	1269	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031304.D
Acq On : 3 Jun 2013 10:51
Operator : JJG
Sample : TO15 MB 060313
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 11:50:22 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031305.D
Acq On : 3 Jun 2013 11:37
Operator : JJG
Sample : 130650-63200 x10
Misc : IS/Surr: PS082712-02 + 50mL
ALS Vial : 2 Sample Multiplier: 10

Quant Time: Jun 03 12:38:11 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	145756	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	793394	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.285	117	753276	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	480401	10.19 ppbv	0.00
Spiked Amount 10.000			Recovery = 101.90%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.835	51	566	N.D.	
3) Propene	4.817	42	841	N.D.	
4) Dichlorodifluoromethane	4.926	85	1412	N.D.	
5) Chloromethane	0.000		0	N.D.	
6) Dichlorotetrafluoroethane	0.000		0	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	38306m	82.26 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	6.446	96	701	N.D.	
11) Chloroethane	0.000		0	N.D.	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.152	45	5921	N.D.	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	8.057	58	6425	N.D.	
16) Trichlorofluoromethane	7.658	103	339	N.D.	
17) 2-Propanol(IPA)	8.256	45	6108	N.D.	
18) Acrylonitrile	0.000		0	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	9.341	84	1281	N.D.	
21) AllylChloride	0.000		0	N.D.	
22) CarbonDisulfide	9.504	76	3786	N.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	10.888	43	120	N.D.	
28) 2-Butanone(MEK)	11.512	72	1776	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	12.118	43	1289	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031305.D
Acq On : 3 Jun 2013 11:37
Operator : JJG
Sample : 130650-63200 x10
Misc : IS/Surr: PS082712-02 + 50mL
ALS Vial : 2 Sample Multiplier: 10

Quant Time: Jun 03 12:38:11 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

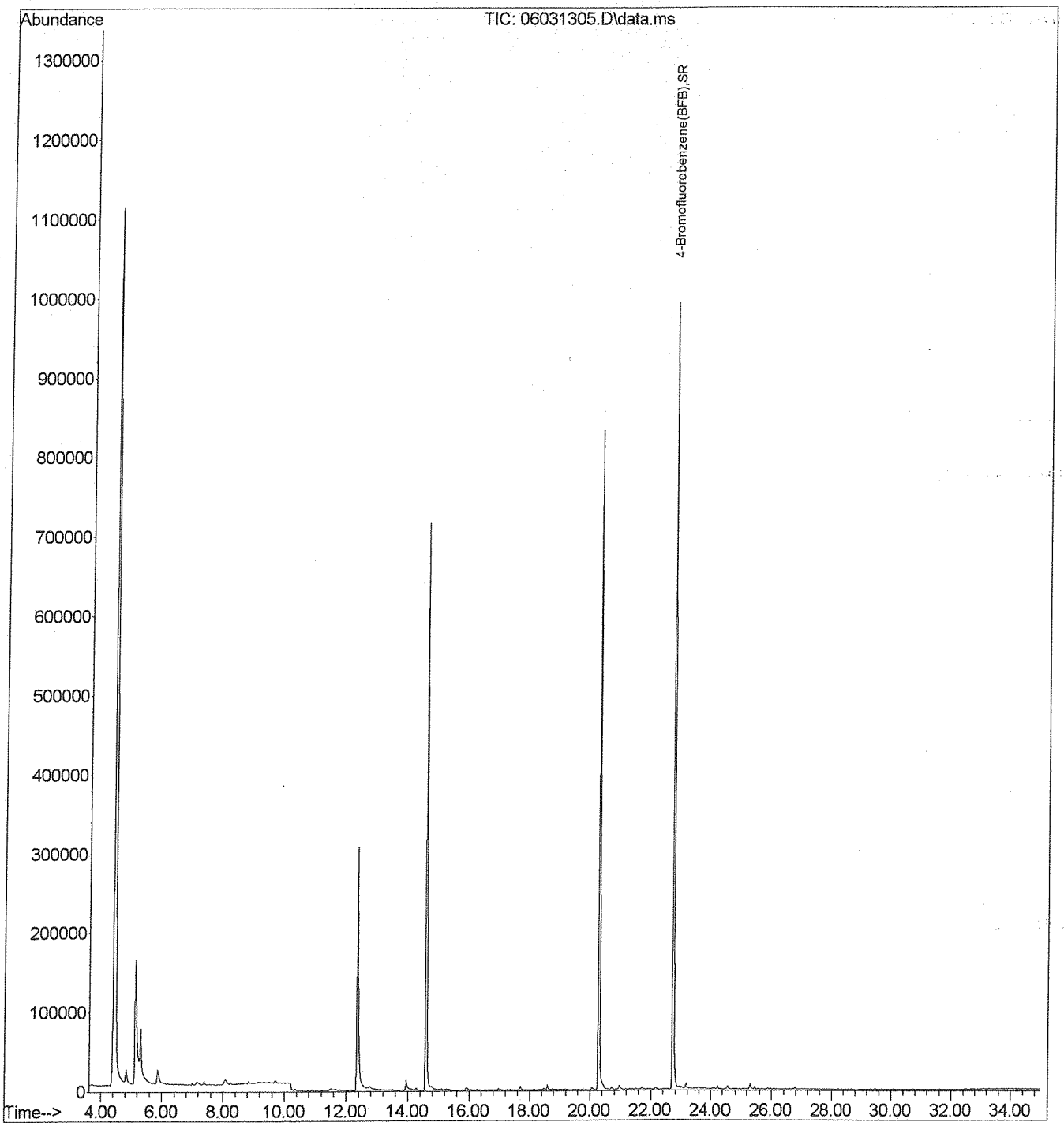
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.760	72	1372	N.D.	
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	15871	N.D.	
38) CarbonTetrachloride	0.000		0	N.D.	
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	15.275	63	113	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	14.775	57	4185	N.D.	
45) Heptane	15.114	71	125	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	17.878	97	295	N.D.	
50) Toluene	17.700	91	7109	N.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	20.267	114	234	N.D.	
57) Ethylbenzene	20.713	91	3358	N.D.	
58) m&p-Xylene	20.963	106	3210	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.694	104	109	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.712	91	2881	N.D.	
64) 4-Ethyltoluene	23.691	120	354	N.D.	
65) 1,3,5-Trimethylbenzene	23.798	120	657	N.D.	
66) 1,2,4-Trimethylbenzene	24.547	120	1686	N.D.	
67) BenzylChloride(a-Chlor...	25.225	91	110	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	372	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	1229	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	353	N.D.	
71) 1,2,4-Trichlorobenzene	29.469	180	1019	N.D.	
72) Hexachlorobutadiene	30.075	225	358	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031305.D
Acq On : 3 Jun 2013 11:37
Operator : JJG
Sample : 130650-63200 x10
Misc : IS/Surr: PS082712-02 + 50mL
ALS Vial : 2 Sample Multiplier: 10

Quant Time: Jun 03 12:38:11 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



06/03/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031306.D
Acq On : 3 Jun 2013 12:25
Operator : JJG
Sample : 130650-63200 x10 dp
Misc : IS/Surr: PS082712-02 + 50mL
ALS Vial : 2 Sample Multiplier: 10

Quant Time: Jun 03 12:57:49 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	146289	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	808196	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.285	117	747587	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	482157	10.31 ppbv	0.00
Spiked Amount 10.000			Recovery = 103.10%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	600	N.D.	
3) Propene	4.818	42	909	N.D.	
4) Dichlorodifluoromethane	4.926	85	1602	N.D.	
5) Chloromethane	0.000		0	N.D.	
6) Dichlorotetrafluoroethane	0.000		0	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	38122m	81.54 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	6.446	96	592	N.D.	
11) Chloroethane	0.000		0	N.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	8.057	58	6380	N.D.	
16) Trichlorofluoromethane	7.659	103	412	N.D.	
17) 2-Propanol(IPA)	8.256	45	6139	N.D.	
18) Acrylonitrile	0.000		0	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	9.324	84	1477	N.D.	
21) AllylChloride	0.000		0	N.D.	
22) CarbonDisulfide	9.504	76	3692	N.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	10.906	43	118	N.D.	
28) 2-Butanone(MEK)	11.512	72	1755	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	12.118	43	1247	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031306.D
Acq On : 3 Jun 2013 12:25
Operator : JJG
Sample : 130650-63200 x10 dp
Misc : IS/Surr: PS082712-02 + 50mL
ALS Vial : 2 Sample Multiplier: 10

Quant Time: Jun 03 12:57:49 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.760	72	1398	N.D.	
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	15751	N.D.	
38) CarbonTetrachloride	0.000		0	N.D.	
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	0.000		0	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	14.757	57	4392	N.D.	
45) Heptane	15.114	71	262	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	17.860	97	402	N.D.	
50) Toluene	17.682	91	6905	N.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	20.267	114	109	N.D.	
57) Ethylbenzene	20.713	91	2943	N.D.	
58) m&p-Xylene	20.963	106	3337	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Styrene	0.000		0	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.712	91	2770	N.D.	
64) 4-Ethyltoluene	23.691	120	163	N.D.	
65) 1,3,5-Trimethylbenzene	23.798	120	361	N.D.	
66) 1,2,4-Trimethylbenzene	24.547	120	1588	N.D.	
67) BenzylChloride(a-Chlor...	25.296	91	1280	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	899	N.D.	
70) 1,2-Dichlorobenzene	25.867	146	138	N.D.	
71) 1,2,4-Trichlorobenzene	29.486	180	373	N.D.	
72) Hexachlorobutadiene	30.075	225	142	N.D.	

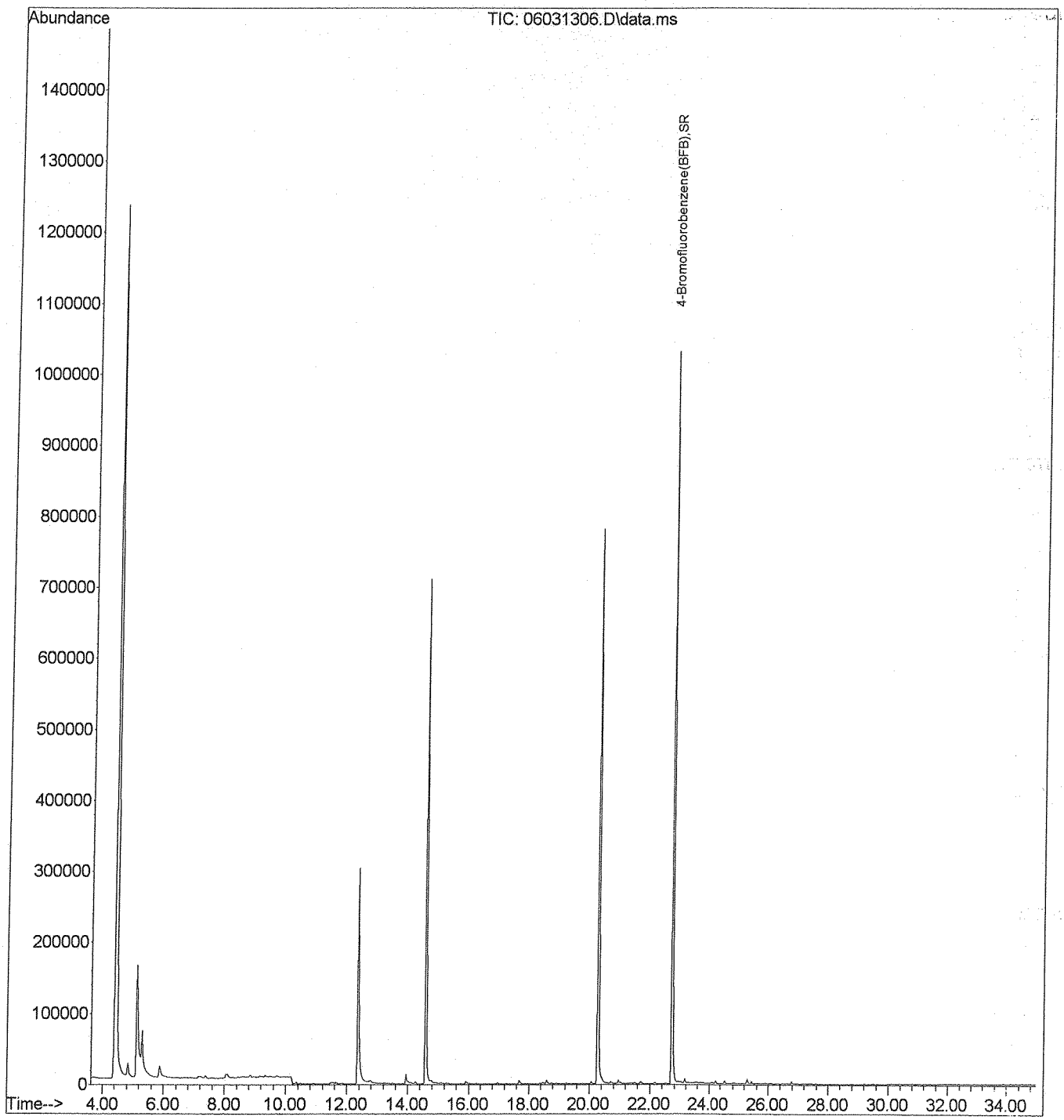
(#) = qualifier out of range (m) = manual integration (+) = signals summed

06/03/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\060313\
Data File : 06031306.D
Acq On : 3 Jun 2013 12:25
Operator : JJG
Sample : 130650-63200 x10 dp
Misc : IS/Surr: PS082712-02 + 50mL
ALS Vial : 2 Sample Multiplier: 10

Quant Time: Jun 03 12:57:49 2013
Quant Method : C:\msdchem\1\METHODS\2013\051513.M
Quant Title : TO-15/TO-14
QLast Update : Thu May 16 10:13:39 2013
Response via : Initial Calibration



06/03/13

Calibration Status Report MS03 Enhanced

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 051513.M
Title : TO-15/TO-14
Last Update : Thu May 16 10:13:39 2013
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.5	1	10	C:\msdchem\1\MS03\2013\051513\05151311.D
2	1.0	1	10	C:\msdchem\1\MS03\2013\051513\05151310.D
3	2.0	2	10	C:\msdchem\1\MS03\2013\051513\05151309.D
4	5.0	5	10	C:\msdchem\1\MS03\2013\051513\05151308.D
5	10	10	10	C:\msdchem\1\MS03\2013\051513\05151307.D
6	20	20	10	C:\msdchem\1\MS03\2013\051513\05151306.D
7	50	51	10	C:\msdchem\1\MS03\2013\051513\05151305.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.5	May 16 10:04 2013	May 15 17:01 2013	15 May 2013 16:25
2	1.0	May 16 10:04 2013	May 15 16:55 2013	15 May 2013 15:40
3	2.0	May 16 10:04 2013	May 15 16:52 2013	15 May 2013 14:53
4	5.0	May 16 10:03 2013	May 15 15:19 2013	15 May 2013 14:07
5	10	May 16 10:03 2013	May 15 13:55 2013	15 May 2013 13:21
6	20	May 16 10:03 2013	May 15 13:53 2013	15 May 2013 12:35
7	50	May 16 10:03 2013	May 15 13:50 2013	15 May 2013 11:48

051513.M Thu May 16 10:15:15 2013

Response Factor Report MS03 Enhanced

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 051513.M
Title : TO-15/TO-14
Last Update : Thu May 16 10:13:39 2013
Response Via : Initial Calibration

Calibration Files
0.5 =05151311.D 1.0 =05151310.D 2.0 =05151309.D 5.0 =05151308.D 10 =05151307.D 20 =05151306.D
50 =05151305.D

		Compound	0.5	1.0	2.0	5.0	10	20	50	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------								
2)		Chlorodifluoro...	2.089	2.153	2.101	2.025	1.904	1.810	1.786	1.981	7.44
3)		Propene	0.516	0.538	0.543	0.530	0.511	0.503	0.502	0.520	3.16
4)		Dichlorodifluo...	3.667	3.778	3.625	3.449	3.255	3.109	3.048	3.419	8.40
5)		Chloromethane	0.306	0.351	0.359	0.346	0.335	0.307	0.243	0.321	12.54
6)		Dichlorotetraf...	2.437	2.578	2.525	2.366	2.249	2.146	2.008	2.330	8.87
7)		VinylChloride	1.119	1.165	1.194	1.159	1.138	1.103	1.085	1.138	3.35
8)		Methanol		0.467	0.401	0.345	0.325	0.314	0.302	0.359	17.59
9)		1,3-Butadiene	0.661	0.757	0.783	0.769	0.750	0.696	0.638	0.722	7.88
10)		Bromomethane	0.912	0.907	0.885	0.831	0.790	0.768	0.638	0.819	11.91
11)		Chloroethane	0.201	0.195	0.200	0.184	0.171	0.177	0.167	0.185	7.45
12)		Dichlorofluoro...	2.569	2.604	2.585	2.470	2.365	2.317	2.217	2.447	6.14
13)		Ethanol	0.438	0.486	0.443	0.421	0.414	0.410	0.372	0.426	8.19
14)		VinylBromide	0.913	0.985	1.013	1.000	0.954	0.955	0.914	0.962	4.10
15)		Acetone	0.717	0.643	0.532	0.487	0.468	0.473	0.472	0.542	18.30
16)		Trichlorofluor...	2.166	2.190	2.089	1.956	1.896	1.864	1.820	1.997	7.53
17)		2-Propanol(IPA)	2.202	2.238	2.186	1.792	1.640	1.508	1.412	1.854	18.98
18)		Acrylonitrile	0.759	0.846	0.865	0.860	0.819	0.805	0.720	0.811	6.70
19)	M,T	1,1-Dichloroet...	1.126	1.244	1.222	1.158	1.131	1.093	1.000	1.139	7.17
20)	M,T	MethyleneChlor...	1.192	1.150	1.088	1.078	1.000	0.935	0.876	1.046	10.90
21)		AllylChloride	1.018	0.993	0.990	0.947	0.912	0.791	0.764	0.917	11.04
22)		CarbonDisulfide	3.799	3.684	3.581	3.365	3.184	3.094	2.965	3.382	9.36
23)		Trichlorotrifl...	1.791	1.899	1.777	1.674	1.586	1.456	1.291	1.639	12.89
24)		trans-1,2-Dich...	1.186	1.375	1.235	1.308	1.238	1.156	1.076	1.225	8.05
25)		1,1-Dichloroet...	2.829	2.839	2.719	2.571	2.383	2.197	1.949	2.498	13.53
26)		MethylTertButy...	3.471	3.740	3.529	3.441	3.284	3.047	2.705	3.317	10.38
27)		VinylAcetate	3.239	3.305	3.371	3.266	3.089	2.850	2.479	3.086	10.33
28)		2-Butanone(MEK)	0.480	0.548	0.589	0.592	0.595	0.548	0.526	0.554	7.60

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29)		cis-1,2-Dichlo...	1.339	1.387	1.385	1.382	1.308	1.264	1.167	1.319	6.17
30)		Hexane	0.270	0.298	0.295	0.272	0.256	0.239	0.219	0.264	10.89
31)		Chloroform	2.980	3.005	2.926	2.844	2.659	2.617	2.396	2.775	8.12
32)		EthylAcetate	2.836	3.052	2.959	2.914	2.819	2.582	2.380	2.792	8.36
33)		Tetrahydrofuran	0.574	0.569	0.601	0.585	0.559	0.535	0.483	0.558	7.01
34)		1,2-Dichloroet...	2.043	2.248	2.117	2.034	1.930	1.874	1.847	2.013	7.07
35)		1,1,1-Trichlor...	3.350	3.382	3.301	3.075	2.948	2.834	2.618	3.073	9.43
36)	I	1,4-Difluorobenzene	----------ISTD----------								
37)	T,M	Benzene	0.840	0.830	0.802	0.758	0.721	0.648	0.558	0.737	14.02
38)		CarbonTetrachl...	0.664	0.694	0.674	0.620	0.600	0.541	0.469	0.609	13.26
39)		Cyclohexane	0.121	0.121	0.117	0.111	0.109	0.098	0.087	0.109	11.74
40)		1,2-Dichloropr...	0.324	0.333	0.328	0.306	0.291	0.265	0.226	0.296	13.14
41)		Bromodichlorom...	0.411	0.420	0.409	0.393	0.371	0.346	0.311	0.380	10.47
42)		1,4-Dioxane	0.175	0.182	0.184	0.183	0.179	0.165	0.147	0.174	7.67
43)	M,T	Trichloroethen...	0.378	0.389	0.390	0.369	0.352	0.328	0.293	0.357	10.02
44)		2,2,4-Trimethy...	1.494	1.513	1.438	1.352	1.312	1.136	0.935	1.312	16.01
45)		Heptane	0.250	0.247	0.252	0.241	0.240	0.218	0.189	0.234	9.72
46)		cis-1,3-Dichlo...	0.443	0.456	0.446	0.443	0.425	0.389	0.351	0.422	9.07
47)		4-Methyl-2-pen...	0.264	0.293	0.298	0.287	0.277	0.248	0.212	0.269	11.25
48)		trans-1,3-Dich...	0.406	0.438	0.451	0.457	0.441	0.423	0.391	0.430	5.59
49)		1,1,2-Trichlor...	0.350	0.366	0.351	0.346	0.330	0.297	0.262	0.329	11.16
50)	M,T	Toluene	1.036	1.035	1.017	0.944	0.952	0.835	0.723	0.935	12.54
51)		2-Hexanone(MBK)	0.339	0.353	0.364	0.351	0.351	0.307	0.266	0.333	10.43
52)		Dibromochlorom...	0.667	0.684	0.678	0.663	0.647	0.577	0.504	0.632	10.56
53)		1,2-Dibromoethane	0.584	0.579	0.577	0.568	0.528	0.494	0.443	0.539	9.97
54)	M,T	Tetrachloroeth...	0.591	0.589	0.566	0.551	0.517	0.458	0.394	0.524	14.01
55)	I	Chlorobenzene-d5	----------ISTD----------								
56)	M,T	Chlorobenzene	0.280	0.286	0.275	0.270	0.258	0.243	0.208	0.260	10.37
57)	M,T	Ethylbenzene	1.493	1.508	1.428	1.373	1.283	1.189	0.964	1.320	14.66
58)	M,T	m&p-Xylene	0.595	0.611	0.556	0.534	0.502	0.455	0.383	0.519	15.49
59)		Bromoform	0.762	0.809	0.762	0.719	0.685	0.627	0.514	0.697	14.37
60)		Styrene	0.895	0.947	0.887	0.890	0.834	0.768	0.660	0.840	11.58
61)		1,1,2,2-Tetrac...	0.834	0.866	0.828	0.795	0.730	0.671	0.544	0.753	15.13
62)	M,T	o-Xylene	1.255	1.276	1.150	1.089	0.982	0.893	0.746	1.056	18.39
63)	SR	4-Bromofluorob...	0.633	0.653	0.621	0.628	0.618	0.610	0.617	0.626	2.29
64)		4-Ethyltoluene	0.453	0.499	0.463	0.465	0.439	0.394	0.321	0.433	13.60

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65)	1,3,5-Trimethy...	0.738	0.738	0.689	0.655	0.614	0.551	0.450	0.633	16.58
66)	1,2,4-Trimethy...	0.683	0.701	0.662	0.647	0.606	0.555	0.465	0.617	13.44
67)	BenzylChloride...	0.792	0.849	0.988	0.987	1.014	0.994	0.876	0.928	9.45
68)	1,3-Dichlorobe...	1.007	1.071	1.056	1.046	0.966	0.902	0.748	0.971	11.78
69)	1,4-Dichlorobe...	1.123	1.125	1.062	1.020	0.936	0.861	0.709	0.977	15.58
70)	1,2-Dichlorobe...	1.116	1.179	1.130	1.079	0.969	0.899	0.735	1.015	15.50
71)	1,2,4-Trichlor...	0.991	1.125	1.099	1.117	1.025	0.921	0.751	1.004	13.37
72)	Hexachlorobuta...	0.954	0.987	0.907	0.861	0.768	0.693	0.522	0.813	20.26

(#) = Out of Range